13	**AGENDA ITEM** **ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS**
	Deadline for Submission - Wednesday 9 a.m. – Thirteen Days Prior to BCC Meeting

12/1/2026

BCC MEETING DATE

TO: **Joy Andrews, County Administrator** **DATE:** **September 18, 2026**

FROM: **Jaime Locklear, Director, Purchasing** **PHONE:** **904 209-0158**

SUBJECT OR TITLE: **Award of Request for Qualifications (RFQ) 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects**

AGENDA TYPE: **Bid Award, Consent Agenda, Contract, Resolution**

BACKGROUND INFORMATION:

St. Johns County is undertaking a comprehensive program of water supply, treatment, and distribution improvements to address existing system constraints and accommodate projected population growth within the Mainland Utility Service Areas. Potable water demand is expected to increase significantly over the next twenty (20) years, requiring both near-term infrastructure enhancements and long-term system expansion to ensure reliable and sustainable service delivery. A 2025 Mainland Water Supply Master Plan (MWSMP) addressed projected growth in potable water demand, which is anticipated to increase from approximately 10.32 million gallons per day (MGD) to 18.32 MGD over the next 20 years. The County's water system is currently served by multiple treatment facilities, including the Northwest Water Treatment Plant ("WTP") and the County Road 214 WTP. As growth continues, these facilities will require expansion, operational improvements, and enhanced interconnectivity to meet future demand and maintain system performance. Planned improvements include increased treatment capacity, expanded transmission capabilities, and optimization of system operations through blending and transfer of finished water between service areas. To support these efforts, the County is moving forward with four water infrastructure projects including the Trout Creek Water Treatment Plan, The Northwest to CR-214 Service Area Finished Water Blend and Transfer Station, CR-214 Water Treatment Plant reliability upgrades, and a CR-214 Future Improvements Facility Plan, as depicted in the plans and specifications provided in RFQ 2902. The Trout Creek WTP project will have an initial maximum day flow (MDF) capacity of 5.0 million gallons per day (MGD) and is anticipated to be located on a 4.6-acre site at 7980 County Road 16A, St. Augustine, Florida (Parcel ID 010790 0011), adjacent to Florida Department of Transportation (FDOT) property and a planned Silverleaf residential development. The Northwest to CR-214 Service Area Finished Water Blend and Transfer Station project is intended to improve system capacity, reliability, and water quality within the CR214 service area by facilitating the transfer and blending of finished water from the northwest portion of St. Johns County. The CR214 WTP is a critical component of the St. Johns County potable water system, serving as both a primary source of supply and the primary transfer point for water from the northwest service area. Its role within the system makes reliability, redundancy, and operational capacity essential to meeting current and future demand. This project will focus on improving plant infrastructure to enhance reliability and resilience and to reduce system vulnerabilities. The final project, CR-214 Future Improvements Facility Plan is for development of a comprehensive plan to support long-term operational efficiency, reliability, and capacity of the facility. SJC Purchasing issued a Request for Qualifications (RFQ) was issued in accordance with the County Purchasing Policy and Florida Statute §287.055. Four (4) Qualifications were received and provided to the Evaluation Committee to review based upon qualifications, experience, and capacity for the project. Through the evaluation, all four (4) Respondents were shortlisted to participate in Stage 2 Technical Proposals, which were evaluated based upon approach/methodology/innovation, schedule, quality control, and cost control/budgetary compliance. Based upon evaluation of Stage 1 and Stage 2, Carollo Engineers, Inc. was determined to be the highest ranked Respondent. County staff entered into negotiations with Carollo Engineers, Inc. and came to an agreement on scope, fees, and terms and conditions for completion of the services. Staff recommends Board approval to award RFQ 2902 and execute the negotiated contract, as attached hereto, with Carollo Engineers, Inc. in the amount of $7,381,476.55 for completion of the Project. Due to the size of the Exhibits and Attachments, they are available upon request from Jaime Locklear.

1. IS FUNDING REQUIRED? Yes **2. IF YES, INDICATE IF BUDGETED.** Yes

IF FUNDING IS REQUIRED, MANDATORY OMB REVIEW IS REQUIRED:

INDICATE FUNDING SOURCE: Utility Services Fund (4444): Capital Projects 2027 WS Bond-System Improvements (4512-56302). If 2027 WS Bond not approved by BCC, the funding will be from Unrestricted Revenue Projects-System Improvements (4488-56302).

SUGGESTED MOTION/RECOMMENDATION/ACTION:

Motion to adopt Resolution 2026 – _____, authorizing the County Administrator, or designee, to award RFQ No: 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects to Carollo Engineers, Inc., as the top ranked Respondent, and to execute a contract in substantially the same form and format as attached in the amount of $7,381,476.55 to perform the required services in accordance with the negotiated contract.

For Administration Use Only:
Legal: Jalisa Ferguson 11/18/2026 **OMB: LF 11/19/2026** **Admin: JDD 11/20/2026**

RESOLUTION NO. 2026 -_____

A RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, AUTHORIZING THE COUNTY ADMINISTRATOR, OR DESIGNEE, TO AWARD RFQ NO. 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS TO CAROLLO ENGINEERS, INC. AS THE TOP RANKED FIRM, AND TO EXECUTE AN AGREEMENT FOR COMPLETION OF THE PROJECT.

RECITALS

WHEREAS, On May 22, 2026, SJC Purchasing posted a Request for Qualifications (RFQ) for Professional Engineering Services for Four (4) Water Infrastructure Projects, in accordance with the County Purchasing Policy and Florida Statute §287.055; and

WHEREAS, Four (4) responses were received and through the County's Evaluation Process, based upon qualifications and shortlisted proposals, Carollo Engineers, Inc. was identified as the highest ranked firm; and

WHEREAS, the County finds that entering into a contract for completion of the work serves a public purpose, and the contract will be in substantial conformance with the attached draft; and

WHEREAS, the project will be funded by the SJC Utility Department.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, as follows:

Section 1. The above Recitals are incorporated by reference into the body of this Resolution and such Recitals are adopted as finds of fact.

Section 2. The County Administrator, or designee, is hereby authorized to award RFQ 2902 to Carollo Engineers, Inc. as the top ranked firm based upon evaluation of qualifications.

Section 3. Upon approval by the Board of County Commissioners, the County Administrator, or designee, is further authorized to issue and execute contract, in substantially the same form and format as attached, with Carollo Engineers, Inc. for completion of the Services, as negotiated for a not-to-exceed amount of $7,381,476.55.

Section 4. To the extent that there are typographical and/or administrative errors that do not change the tone, tenor, or concept of this Resolution, then this Resolution may be revised without subsequent approval by the Board of County Commissioners.

PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, Florida, this ____ day of _____, 2026.

BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA

By:_____
Ann Taylor, Chair

ATTEST: Brandon J. Patty,
Clerk of the Circuit Court & Comptroller

By: _____
Deputy Clerk

PROFESSIONAL SERVICES AGREEMENT
BETWEEN
ST. JOHNS COUNTY AND CONSULTANT

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This Professional Services Agreement (hereafter "Agreement") is made this date of _____, 2026 (the "Effective Date") by and between **ST. JOHNS COUNTY** ("County"), a political subdivision of the State of Florida, whose principal offices are located at 500 San Sebastian View, St. Augustine, FL 32084; and **CAROLLO ENGINEERS, INC.** ("Consultant"), a company authorized to do business in the State of Florida, with its principal offices located at: 12724 Gran Bay Parkway West, Suite 410, Jacksonville, FL 32258, Phone: 407-212-8840, and E-mail: SParanjape@carollo.com, for **RFQ NO. 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects,** hereinafter referred to as the "Project".

In consideration of the mutual promises and covenants contained herein, the parties hereby agree as follows:

ARTICLE I CONTRACT DOCUMENTS

1.1 The Contract Documents

1.1.1 The Contract Documents are the documents that shall govern the performance of the Services by the Consultant, and consist of the following documents which are incorporated herein by reference:

a) Fully Executed Change Orders and Amendments to this Agreement;
b) This fully executed Professional Services Agreement and all Exhibits and/or Attachments hereto:
    i. Exhibit A – Scope of Services and Basis of Fee Estimate
c) Request for Qualifications and all issued Addenda RFQ No. 2902
d) Insurance furnished by Consultant meeting the requirements of Article XIII

1.1.2 Documents not enumerated above are not Contract Documents and do not form part of this Agreement. In interpreting the Agreement and resolving any conflicts, inconsistencies or ambiguities, the main body of this Agreement takes precedence over any of the Exhibits provided above unless expressly stated to the contrary. Fully executed documents take precedence over any unsigned drafts, and signed/sealed hard-copy documents shall take precedence over any electronic drafts of documents.

1.1.3 Any and all Contract Documents shall remain the property of the County. Consultant is granted a limited license to use and reproduce applicable portions of the Contract Documents issued by the County appropriate to, and for use in, execution of the Services. Consultant shall have the right to keep one record set weather in hard and/or electronic copy of the Contract Documents upon completion of the Services; provided, however, that in no event shall the Consultant, or the Consultant's Sub-Contractors use, or permit to be used, any or all of such Contract Documents on other projects without the specific written consent of the County.

1.1.4 Shop Drawings, Product Data, Samples, and similar submittals ("Submittals") are not Contract Documents. The County will review and take action upon Submittals but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of Submittals is not conducted for the purpose of determining accuracy and completeness of other details, such as dimensions and quantities, nor for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Consultant.

1.1.5 All Submittals, documents, drawings, specifications, reports, data, and other materials (in hard copy or electronic form) prepared by or on behalf of the Consultant in the performance of the Services ("Submittals") shall be the property of the County. Notwithstanding the foregoing, the Consultant shall retain all rights to its pre-existing and proprietary intellectual property, methodologies, and software incorporated into the Submittals ("Consultant IP"). The Consultant hereby grants the County a perpetual, irrevocable, royalty-free, non-exclusive license to use, reproduce, display, distribute, and create derivative works of the Submittals and any Consultant IP contained therein, solely for the County's governmental purposes, including but not limited to planning, permitting, tendering, procurement, installation, operation, repair, maintenance, modification, reconstruction, replacement, and/or upgrade of any equipment, systems, facilities, or improvements related to the Services. This license includes the right to assign or sublicense the County's rights, in whole or in part, to contractors, consultants, and third parties performing Services on behalf of the County. The Consultant shall not be liable for any use or modification of the Submittals by the County or third parties for purposes other than the specific project or use contemplated under the Contract Documents. Documents, including drawings and specifications, prepared by Consultant pursuant to this Agreement are not intended or represented to be suitable for reuse by County or others for this

Project or on any other project. Any reuse of completed documents or use of partially completed documents without written verification or concurrence by Consultant for the specific purpose intended will be at County's sole risk and without liability or legal exposure to Consultant.

1.1.6 Consultant shall perform no portion of the Services at any time without adequate Contract Documents. If Consultant performs any portion of the Services where Consultant knows or should know such Services involve a recognized error, inconsistency, or omission in the Contract Documents without notice to the Project Manager and the County, Consultant shall bear responsibility for such performance and shall bear the cost of correction. Consultant shall have a continuing duty to read, carefully study and compare each of the Contract Documents and the Submittals, to identify any inconsistency, ambiguity, error or omission which Consultant may discover with respect to these documents before proceeding with the affected Services. Consultant is solely responsible for requesting instructions, interpretations, or clarifications to the Contract Documents and is solely liable for any cost and/or expenses arising from its failure to do so. Any dispute relating to the Contract Documents shall be resolved through good faith efforts upon the part of the Consultant and the County. Should the Consultant have any questions concerning interpretation or clarification of the Contract Documents, Consultant shall submit to the Project Manager in writing a request for clarification that clearly and concisely sets forth the issues for which such request is sought. Such request shall be submitted to the Project Manager by the Consultant within three (3) business days of receipt of the Contract Documents, or the direction, interpretation, or clarification thereof provided by the County. The County's Project Manager will render a determination concerning such interpretation or clarification, which determination shall be considered final and conclusive unless Consultant files a written protest to the Project Manager's rendered determination within fourteen (14) calendar days of receipt thereof. Consultant's protest shall be submitted to the Purchasing Director and shall state clearly and in detail the basis thereof The County Administrator will consider the Consultant's protest and render its decision thereon, in writing, within ten (10) calendar days. If Consultant does not agree with the County Administrator's decision, Consultant shall deliver written notice to that effect to the County within three (3) business days of receipt of the County Administrator's decision.

1.1.7 Unless otherwise directed in writing, Consultant shall at all times carry on with the Services and maintain its progress schedule in accordance with the requirements of the Contract and the determination of the County, pending resolution of any Contract Document Dispute. In no event will a dispute, the filing of a protest, claim or appeal, or the resolution or litigation thereof, relieve Consultant from its obligations to timely perform the Services required by the Contract and to maintain the progress schedule in accordance with the Contract.

ARTICLE II AGREEMENT TERM

2.1 Term

This Agreement shall become effective upon the date of execution by all parties and shall be in effect for a Contract Term of Three (3) calendar years ("Agreement Term). Consultant shall perform the Services within the time periods specified in Exhibit A. Consultant's Services shall commence upon receipt of the fully executed Agreement. This Agreement may only be extended in whole or in part upon written Amendment and/or Change Order signed by both parties.

2.2 Schedule

2.2.1 Consultant shall commence and complete all Services as described in accordance with Exhibit A.

2.2.2 The Consultant is not responsible for damage or delay in performance caused by Force Majeure events. In the event Consultant's services are suspended, delayed or interrupted for the convenience of the County, or Force Majeure, an equitable adjustment in Consultant's time of performance and cost of Consultant's personnel and Sub-Contractors may be made.

2.2.3 If Services are scheduled to end due to the expiration of this Agreement, at the request of the County, Consultant agrees to continue to provide Services for an extension period defined by the County, upon the same terms and conditions as contained in this Agreement. The County will issue an Amendment or Change Order prior to the expiration of this Agreement authorizing any such extension period. Consultant shall be compensated for such Services at the rate in effect when the extension is invoked by the County.

ARTICLE III DEFINITIONS

3.1 Definitions

Terms used within this Agreement shall have the meaning as set forth in the SJC Purchasing Policy, or as specifically provided herein. Terms defined herein for specific application to this Agreement shall govern over definitions of terms provided in the SJC Purchasing Policy.

3.1.1 Acceptance of Services: Written acceptance of the Services performed by Consultant by the County's Project Manager.

3.1.2 Amendment: A document providing the written modification to a previously issued Contract, adding, revising, replacing, or removing terms and conditions or provisions of the Contract.

3.1.3 Applicable Laws: All local, state, and federal laws, statutes, codes, ordinances, rules and regulations in effect at the time Services are performed under this Agreement.

3.1.4 Authorized Representative: The County Project Manager and the Consultant employee assigned to the Project, or any part thereof, to observe the Services and perform certain other obligations of the County and Consultant.

3.1.5 Change Order: A document providing the written modification to a previously issued Contract, adjusting contract price, scope of services or completion time.

3.1.6 Claim: Any claim, liability, loss, demand, demand for arbitration, damage, lien, cause of action of any kind, obligation, responsibility, cost, expense, royalty, fee, assessment, penalty, fine, judgment, interest or award, pending or threatened, whether arising by law, contract, tort, voluntary settlement or otherwise.

3.1.7 Compensation Method:

3.1.7.1 Lump Sum. Compensation may be determined as a lump sum amount. The lump sum amount shall constitute full payment for satisfactory performance of the Services including all direct and indirect labor, personnel related costs, taxes, expenses, costs, fees, overhead and profit, services of Subconsultants and/or subcontractors, and any other expense or cost of whatever nature incurred by Consultant as may be required and/or necessary to complete the Services and agreed to in writing by both parties to this Agreement.

3.1.7.2 Hourly Rate. Compensation may be determined as a Not-To-Exceed (NTE) amount. It is mutually understood and agreed that such compensation for Services satisfactorily performed will be made on the following hourly rate basis:

3.1.7.2(A) Actual Hours. Actual hours necessary, required, and expended by the Consultant's and/or Subconsultant's professional and technical personnel, shall be multiplied by the applicable hourly rates for each classification or position as set forth in Exhibit A. The hourly rates shall constitute full payment for satisfactory performance of the Services including but not limited to all payroll costs and taxes, insurances, fees, overhead and profit, and any and all other costs or expenses of whatever nature incurred by Consultant except for Expenses approved in writing by the County pursuant to paragraph 3.1.6.2(B) below.

3.1.7.2(B) Reimbursable Expenses. In addition to the hourly rates, the Consultant shall also be reimbursed for travel and travel-related expenses, or other direct non-salary expenses directly attributable to the Services ("Expenses") provided such Expenses incurred by Consultant are approved in writing, in advance. Unless otherwise mutually agreed in writing in advance, any and all such Expenses shall comply with Section 112.061, Florida Statutes. The County shall not be liable for any such Expenses that have not been approved in writing in advance by the County. All requests for payment of such Expenses shall include copies of paid receipts, invoices, or other documentation acceptable the County. Consultant acknowledges and agrees that failure to furnish the required documentation may result in the County's denying all or part of the Expenses for which reimbursement is sought. Reimbursable Sub-Contractor expenses must also comply with the requirements of this section.

3.1.8 Consultant: The Supplier with which the County is contracting to perform the Services in accordance with the Contract Documents.

3.1.9 Contract Price: The sums set forth herein under Article V, shall constitute the Contract Price, as may be amended by Change Order. Unless otherwise approved by the County in writing, the Contract Price includes all taxes, including

without limitation, income and withholding tax of any kind and sales tax imposed by the State or by the County and paid by the Consultant or any Sub-Contractor with respect to sales of goods purchased for the performance of the Services.

3.1.10 Contract Term: The number of calendar days between the Effective Date and completion of all Services, established in Article II of this Agreement, as may be amended.

3.1.11 Force Majeure Events: Those events that are not reasonably foreseeable and are beyond the control of both the Contractor and the County, including acts of war, terrorist attacks, labor strikes, floods, earthquakes, epidemics, pandemics, riots, adverse weather conditions, and other acts of God.

3.1.12 Project: The total undertaking to be accomplished for the County by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Services to be performed by Consultant are a part.

3.1.13 Product Data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Consultant to illustrate materials or equipment for some portions of the Project.

3.1.14 Project Manager: The County's Authorized Representative assigned to the Project, or any part thereof, to observe the Services and perform certain other obligations of the County as defined in this Agreement.

3.1.15 Services: The Services described in Exhibit A or a subsequently issued Change Order including engineering services, architectural services and other professional services as applicable for the Project and procured under this Agreement.

3.1.16 Shop Drawings: Drawings, diagrams, schedules, and other data specifically issued for the Project by Consultant or a Sub-Contractor, to illustrate some portion of the Project.

3.1.17 Sub-Contractor: Any entity or individual engaged by Consultant to provide Services to the County for which Consultant is contractually obligated, responsible, and liable to provide and perform under this Agreement.

ARTICLE IV SERVICES

4.1 Scope of Services

4.1.1 Consultant shall provide all services as set forth in the Contract Documents, including all necessary activities required for full and complete performance of this Agreement (the "Services").

4.1.2 Services provided by the Consultant shall be under the general direction of the St. Johns County Utilities Department, or the St. Johns County Purchasing Department, who shall act as the County's representative during the performance of Services under this Agreement.

4.1.3 The Consultant shall provide and perform all Services pursuant to this Agreement with the degree of care and skill ordinarily exercised by, and consistent with the standards of competent professional engineers practicing in the same or similar locality, under the same or similar circumstances at the time Services are performed. The Consultant shall perform the Services in a manner consistent with the County's stated Project intent, intended use, operational needs, budgetary considerations, schedule requirements, and performance objectives. Consultant shall perform all Services in accordance with all Applicable Laws, applicable codes, regulations, permitting requirements.

4.1.4 The Consultant shall be responsible for the professional quality, technical adequacy and accuracy, timely completion, and the coordination of all data, studies, reports, memoranda, other documents and other services, and materials performed, provided, or furnished by the Consultant. The Consultant shall, at its sole cost and without additional compensation, correct or revise any errors, omissions, or other deficiencies in such data, studies, and other services, and materials resulting from Consultant's failure to meet the standard of care set forth in Section 4.1.3 above, as well as negligent acts, errors, omissions, or intentional misconduct of the Consultant, including but not limited to design deficiencies, calculation errors, conflicts between drawings and specifications, code compliance failures, and gaps in scope necessary for the Project to be constructed as intended. In addition to making corrections, Consultant shall reimburse the County for any increased construction costs, including but not limited to Change Order costs or delay costs incurred by the County as a

direct result of errors, omissions, or ambiguities in the data, studies, reports memoranda or other documents attributable to Consultant's failure to meet the standard of care.

4.1.5 Prior to each submission of any Services Product, as defined in Article VI herein, Consultant shall perform and document an internal quality assurance/quality control ("QA/QC") review, including interdisciplinary coordination review, and shall certify in writing that such review has been completed. County's acceptance of any Services Product is expressly conditioned upon receipt of this certification.

4.1.6 Review, approval, or acceptance by the County of data, studies, reports, memoranda, and incidental professional services, and materials furnished by the Consultant under this Agreement shall not relieve the Consultant of responsibility for the adequacy, completeness, and accuracy of its Services and materials. Neither the County's review, approval, or acceptance of, nor payment for, any part of the Consultant's Services, and materials shall be construed to operate as a waiver of any of the County's rights under this Agreement, or any cause of action it may have arising out of the performance of this Agreement.

4.1.6.1 County reserves the right, at its own expense, to retain an independent engineer to review the Services Product submitted by Consultant at any phase of design. Consultant shall cooperate with such review and shall address, in writing, any and all comments generated by such independent reviewer. Such independent review shall not relieve Consultant of any obligation or liability under this Contract.

4.1.7 The County shall furnish Consultant any available studies, reports, and other data necessary for the Consultant to perform the required Services as specified herein, provided Consultant shall review such information for completeness and consistency with other project data and shall promptly notify the County in writing of any errors, omissions, or conflicts it discovers or reasonably should have discovered in the exercise of the professional standard of care required within this Agreement. Consultant shall not be entitled to rely on information that is facially incomplete or inconsistent, or on information Consultant is obligated to verify or develop under this Agreement. The County does not warrant the accuracy or completeness of any furnished information except as expressly stated in writing. Nothing in this section relieves Consultant of its responsibility for the accuracy and adequacy of its own services and Work Product.

4.1.8 The County shall arrange for access to and make all provisions for Consultant to enter upon public and private property as required for Consultant to perform the required Services.

ARTICLE V COMPENSATION

5.1 Contract Price

5.1.1 As full and complete compensation for satisfactory performance of the Services by Consultant, the County shall pay to Consultant compensation, in accordance with the pricing set forth in Exhibit A, a not to exceed amount of **Seven Million Three Hundred Eighty-One Thousand Four Hundred Seventy-Six Dollars and Fifty-Five Cents ($7,381,476.55)**, (hereinafter the "Contract Price"). The Contract Price includes the Lump Sum Amount of Four Million three Hundred Eighty-Nine Thousand Five Hundred Forty-One Dollars and Fifty-Eight Cents ($4,389,541.58), Time and Materials Amount of Two Million Six Hundred Nine Thousand Six Hundred Fourteen Dollars and Fifty-One Cents ($2,609,614.51), and Allowance Amount of Three Hundred Eighty-Two Thousand Three Hundred Twenty Dollars and Forty-Six Cents ($382,320.46).

5.1.2 Unit prices included in the Contract Price are "all-inclusive", including labor, material, supervision, tools, equipment, insurance, taxes, fringe benefits, coordination, engineering, overhead, profit, performance and payment bonds, and all other items incidental to or necessary for the completion of the Services. Unit prices are fixed for the duration of the Contract and are not subject to escalation for any cause.

5.1.3 The Contract Price shall remain firm throughout the Contract Term.

5.2 Progress Payments

5.2.1 Prior to Consultant's submittal of the initial Application for Payment, Consultant shall have delivered Insurance Certificate(s) evidencing coverages in accordance with Article XII. The County will not make any payment to Consultant until Consultant has complied with this requirement.

5.2.2 On or after the first (1st) day and before the tenth (10th) day of each calendar month, Consultant shall submit an Application for Payment to the County Representative in such form and manner, and with such supporting data and content, as the County Representative may require. Such Application for Payment shall be based on the amount of Services completed during the payment period which is defined as the first day of the preceding calendar month through the last day of the preceding calendar month. The County Representative will review the Application for Payment to determine whether the quantity and quality of the Services is as represented in the Application for Payment and thereafter confirm to the County the amount properly owing to Consultant. Upon receipt by the County of the County Representative's recommendation for payment, payments will be made in accordance with the Local Government Prompt Payment Act (Sections 218.70-218.80 of the Florida Statutes) less such amounts, if any, otherwise owing by Consultant to the County or which the County shall have the right to withhold. Any Application for Payment determined by the County not to be suitable for payment shall be modified and processed in accordance with the County's assessment.

5.2.3 In the event any dispute with respect to any payment or Application for Payment cannot be resolved between Consultant and the County Representative, Consultant may demand in writing a meeting with and review by the County's Director of Purchasing and Contracts. Such meeting and review shall occur within ten (10) business days of receipt by the County of Consultant's written demand. The Director of Purchasing and Contracts shall issue a written decision on the dispute within ten (10) business days of such meeting. This decision shall be deemed the County's final decision for the purpose of the Local Government Prompt Payment Act.

5.3 Application for Payment

5.3.1 Consultant may make Application for Payment, at intervals of not more than once a month for Services satisfactorily completed. Each Application for Payment shall clearly include:

a) The Contract Number.
b) A unique Application for Payment number.
c) Consultant's legal name and address.
d) Taxpayer identification number (Consultant's federal employer identification number).
e) Brief description of the completed Services, in accordance with Consultant's Schedule of Values.
f) The original Contract Price including approved Change Order amounts; and,
g) Preferred remittance address, if different from the mailing address.

5.3.2 The County may require any other information from Consultant that the County deems necessary to verify Consultant's Application for Payment. No later than ten (10) days after execution of this Contract or Notice to Proceed has been issued, the County will identify in a separate written notice the submittal requirements for Consultant's payment requests.

5.3.3 Each Application for Payment shall be signed by Consultant and shall constitute Consultant's representation that the Services have been performed for which payment is requested, that the Services has been properly installed or performed in full accordance with this Contract, and that Consultant knows of no reason why payment should not be made as requested. Consultant's final Application for Payment shall also be accompanied by a full and complete release and/or waiver of all liens complying with Section 713.20 of the Florida Statutes.

5.3.4 Consultant must remit undisputed payment due for labor, services, or materials furnished by Sub-Contractor and suppliers hired by Consultant, within ten (10) days after receipt of each progress payment from the County pursuant to Section 218.735 of the Florida Statutes. If necessary for the protection of the County, the County shall have the right, at its sole option, to make payment by joint check or by direct check to Consultant's Sub-Contractor or suppliers without advance notice to or consent of Consultant. If joint checks are issued following claims by Consultant's Sub-Contractor or suppliers, the County shall be entitled to an administrative fee of $50.00 per check for the expense of processing each joint check. Any amounts paid directly to a Sub-Contractor or supplier will be deducted from payments made to, or amounts due or that may become due to, Consultant. The issuance of a joint check shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit the County to repeat the procedure in the future.

5.3.5 No progress payment shall be interpreted to constitute approval or acceptance of any Services under this Contract, nor be considered a waiver by Consultant of any of the terms of this Contract.

5.3.6 The County's performance and obligation to pay under this Contract is contingent upon an appropriation of lawfully available funds by the Board of County Commissioners. The County shall promptly notify Consultant if the necessary appropriation is not made.

5.4 Withheld Payment

5.4.1 The County may decline to make payment, may withhold funds otherwise payable and, if necessary, may demand the return of some or all of the amounts previously paid to Consultant, if:

a) Any Claims are made against Consultant by the County or third parties, including Claims for liquidated damages or if reasonable evidence indicates the probability of the making of any such Claim.
b) Any Claims are made against the County, the County's property or any other party indemnified hereunder which is or might be covered by Consultants Indemnification obligations under Section 12.2 below.
c) Consultant fails to pay Sub-Contractor or others in full and on-time.
d) Consultant fails to submit schedules, reports, or other information required under the Contract.
e) Consultant fails to diligently prosecute the Services and maintain progress to assure completion within the Contract Time.
f) Consultant persistently fails to fully and timely perform the Services in accordance with the Contract Documents.
g) Defective or nonconforming Services is not remedied; or
h) Consultant is in default of any other representation, warranty, covenant or performance obligation of this Contract.

5.4.2 If Claims or liens filed against Consultant or property of the County connected with performance under this Contract are not promptly removed by Consultant after receipt of written notice from the County to do so, the County may remove such Claims or liens and all costs in connection with such removal shall be deducted from withheld payments or other monies due, or which may become due, to Consultant. If the amount of such withheld payments or other monies due Consultant under the Contract is insufficient to meet such cost, or if any Claim or lien against Consultant is discharged by the County after final payment is made, Consultant and its surety or sureties shall promptly pay the County all costs (including attorney's fees) incurred thereby regardless of when such Claim or lien arose.

5.5 Final Payment

Before being eligible for final payment of any amounts due, the Consultant shall deliver to the County all Services Product (as defined in Paragraph 6.1 below) prepared by and for the County under this Agreement. The Consultant shall clearly state "Final Invoice" on the Consultant's final/last billing to the County. This shall constitute Consultant's certification that all Services have been properly performed and all charges, costs and Expenses have been invoiced to the County. Any other charges, costs or Expenses not properly included on this Final Invoice are waived by Consultant.

5.6 Availability of Funds

The County's obligations under this Agreement are subject to the availability of lawfully appropriated County funds. While the County will make all reasonable efforts, in order to provide funds needed to perform under this Agreement, the County makes no express commitment to provide such funds in any given County Fiscal Year. Moreover, it is expressly noted that the Consultant cannot demand that the County provide any such funds in any given County Fiscal Year.

ARTICLE VI OWNERSHIP OF SERVICES PRODUCT AND CONFIDENTIALITY

6.1 Ownership of Services Product

6.1.1 All concepts, products, processes (patentable or otherwise) and copyrightable material (including but not limited to documents, specifications, calculations, maps, sketches, notes, reports, studies, proposals, data, models, samples, surveys, drawings, designs, electronic software, and any other results of the Services), first developed, produced or reduced to practice by Consultant or Sub-contractor, or purchased under this Agreement, or at the County's expense ("Services Product"), shall be and remains the County's property upon creation. At the County's request, Consultant shall provide the County with copies of supporting computations, analyses, sketches, or similar items pertaining to the Consultant's Services Product.

6.1.2 All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to, any representations made herein relating to disclosure or ownership of

documents, shall survive the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

6.2 Confidentiality

Subject to Chapter 119, Florida Statutes (Public Records Law), Consultant shall keep all information not in the public domain or not previously known, and all information and data obtained, developed, or supplied by the County, or at its expense, confidential. Such information shall not be disclosed to any other party, directly or indirectly, without the County's prior written consent, unless required by a lawful order or as required to perform the Services pursuant to this Agreement.

ARTICLE VII
AUTHORIZED REPRESENTATIVE AND PERSONNEL

7.1 Authorized Representative

Prior to commencing Services, Consultant shall designate in writing a competent, authorized representative(s) acceptable to the County to represent and act for Consultant ("Authorized Representative"). Such Authorized Representative shall be authorized to receive and accept any and all communications from the County. All communications given to the Authorized Representative shall be binding upon Consultant. An Authorized Representative may be added, removed or changed upon prior written notice given in the manner provided in this Agreement.

7.2 Personnel

7.2.1 The Consultant represents that it has, or shall secure at its own expense, all necessary personnel required to perform the Services as described in the Contract Documents. It is expressly understood that such personnel shall not be employees of, or have any contractual relationship with, the County. All of the Services required hereunder shall be performed by the Consultant, or under its supervision.

7.2.2 In the event Consultant wishes to substitute personnel for the key personnel identified in Consultant's proposal and selection presentation, the Consultant shall notify the County in writing and request written approval for the substitution at least ten (10) business days prior to effecting such substitution.

7.3 Project Manager Responsibilities

7.3.1 The County shall designate as its Authorized Representative a Project Manager who shall be fully acquainted with the Project. The Project Manager shall be the County's representative from the Effective Date of this Contract until final payment has been made. The Project Manager shall be authorized to act on behalf of the County only to the extent provided in this Article VII.

7.3.2 The County and Consultant shall communicate with each other in the first instance through the Project Manager.

7.3.3 The Project Manager shall be the initial interpreter of the requirements of the Drawings and Specifications and the judge of the performance there under by Consultant. The Project Manager shall render written or graphic interpretations necessary for the proper execution or progress of the Services with reasonable promptness on request of Consultant.

7.3.4 The Project Manager shall review Consultant's Applications for Payment and shall confirm to the County for payment to Consultant, those amounts then due to Consultant as provided in this Contract.

7.3.5 The Project Manager shall have authority to reject Services, which is defective or does not conform to the requirements of this Contract. If the Project Manager deems it necessary or advisable, the Project Manager shall have authority to require additional inspection or testing of the Services for compliance with Contract requirements at Consultant's expense.

7.3.6 The Project Manager shall review and accept, or take other appropriate action as necessary, concerning Consultant's submittals including but not limited to Shop Drawings, Product Data and Samples. Such review, acceptance or other action shall be for the sole purpose of determining conformance with the design concept and information given through the Contract Documents.

7.3.7 The Project Manager shall, upon written request from Consultant, conduct inspections to determine the date of Final Completion, shall receive and forward to the County for the County's review and records, and related documents

required by this Contract and shall issue a Final Certificate for Payment upon compliance with the requirements of this Contract.

7.3.8 The Project Manager's decision in matters relating to aesthetic effect shall be final if consistent with the intent of this Contract.

ARTICLE VIII SUB-CONTRACTOR

8.1 Sub-Contractors

8.1.1 Consultant may obtain the assistance of other design professionals ("Sub-Contractors") by subcontract for the performance of a portion of these Services, provided that any such Sub-Contractor shall perform its services to the standards set forth herein for Consultant's Services, and that Consultant obtains written approval of Sub-Contractor(s) from the County. The Consultant is encouraged to seek minority and women business enterprises for participation in subcontracting opportunities. The County hereby approves those Sub-Contractor specifically named by Consultant in Consultant's proposal.

8.1.2 The County reserves the right to disqualify any Sub-Contractor based upon unsatisfactory performance. If a Sub-Contractor fails to satisfactorily perform in accordance with the Contract Documents, and it is necessary to replace the Sub-Contractor to complete the Services in a timely fashion, the Consultant shall promptly do so, subject to approval by the County.

8.1.3 The use of any such Sub-Contractor shall not relieve the Consultant from any liability or responsibility assumed under this Agreement.

ARTICLE IX CHANGES IN THE SERVICES

9.1 Changes in the Services

9.1.1 The County reserves the right to make changes to the Services, including alterations, reductions therein or additions thereto. Upon receipt by the Consultant of the County's notification of a contemplated change, the Consultant shall: (1) if requested by the County, provide an estimate for the increase or decrease in cost due to the contemplated change; (2) notify the County of any estimated change in the completion date; and (3) advise the County in writing if the contemplated change shall effect the Consultant's ability to meet the completion dates or schedules of this Agreement. If the County instructs in writing, the Consultant shall suspend Services on that portion of the Project, pending the County's decision to proceed with the change. If the County elects to make the change, the County shall issue a Change Order. The Consultant shall not commence Services on any such change until such Change Order has been issued and signed by both parties.

9.1.2 Consultant's written acceptance of a Change Order shall constitute a final and binding contract to the provisions thereof and a waiver of all claims in connection therewith, whether direct, indirect, or consequential in nature.

ARTICLE X DISPUTES / CONTRACT CLAIMS

10.1 If any dispute between the County and Consultant arises under this Contract and such dispute cannot be resolved by good faith negotiations at the field level between the Project Managers of the Consultant and County, such dispute shall be promptly escalated to the Senior Representatives of the Parties, upon request of either party, who shall meet as soon as conveniently possible, but in no case later than fourteen (14) calendar days after such a request is made, to attempt to resolve such dispute or disagreement. Five (5) calendar days prior to any meetings between the Senior Representatives of the Consultant and County, the parties will exchange relevant information that will assist the parties in resolving the dispute or disagreement.

10.2 The Senior Representative for the County shall be the Director, or designee, of the County's Utilities Department.

10.3 The Senior Representative for the Consultant shall be the supervisor of the Senior Project Manager or a principal of the Consultant.

10.4 If after meeting, the Senior Representatives determine that the dispute or disagreement cannot be resolved on terms satisfactory to both parties, the Consultant shall submit a Contract Claim as provided herein.

10.5 Prior to filing a Contract Claim, Consultant shall first exhaust all remedies set forth in the Contract Documents. Claims arising from this Contract shall be filed with the Purchasing Director within five (5) business days of exhausting all remedies set forth above. Pending final resolution of a dispute or claim, unless otherwise agreed in writing by both parties, the Consultant is required to proceed with performance of the Services and maintain effective progress to compete the Services within the Contract Time as set forth herein. The Contract Claim shall include, at a minimum, the following:

a) The name and address of the Consultant and any legal counsel; and
b) The Consultant address to which the County's rendered decisions shall be sent; and
c) Identification, and a copy, of the final adverse decision or document that is the subject of the Contract Claim and any exhibits, evidence or documents which the Consultant deems applicable to the issues raised in the Claim; and
d) Identification of the administrative remedies provided for in the Contract that were pursued prior to the Claim and the outcome; and
e) A statement of the grounds for each issue raised in the Contract Claim to be reviewed and the applicable provisions of the Contract, as well as any applicable Laws, or other legal authorities which the Consultant deems applicable to the Claim.

10.6 During the Purchasing Director's review of the Contract Claim, the Purchasing Director may request additional information from the representatives of both parties. The parties must provide the requested information within the time period set forth in the request. Failure of either party to timely comply may result in resolution of the Claim without consideration of the requested information.

10.7 The Purchasing Director shall render a decision on the Contract Claim within twenty-one (21) calendar days of the deadline for receipt of all requested information. The written decision of the Purchasing Director shall be sent to the Consultant at the address provided in the Contract Claim, or as otherwise agreed to by the parties.

10.8 The decision for any Contract Claim by the Purchasing Director may be appealed by the Consultant to the County Administrator. Consultant must submit their appeal to the County Administrator, including any and all information, documentation, backup data, or other supplemental facts or figures within five (5) business days of receipt of the Purchasing Director's decision. Failure by the Consultant to submit an appeal within the prescribed timeframe shall be a waiver of a right to appeal the rendered decision. The appeal shall include any and all information, documentation, and data relative to the Contract Claim and subsequent appeal. The County Administrator shall render a decision within thirty (30) calendar days of receipt of all information. The County Administrator's decision shall be considered final, unless Consultant takes legal action in Circuit Court.

ARTICLE XI TERMINATION

11.1 TERMINATION

11.1.1 The County may terminate this Agreement, in whole or in part, for its convenience upon thirty (30) calendar days written notice to the Consultant. In such event, Consultant will be entitled to compensation for Services previously authorized and satisfactorily performed up through the date of termination identified in the County's notice. Consultant shall not be entitled to compensation or profit for Services not performed.

11.1.2 Consultant may terminate this Agreement for any reason upon sixty (60) calendar days written notice, provided that any outstanding authorized Services are completed by Consultant. Consultant further agrees to cooperate and provide assistance to the County upon request in order to complete any Service or Project. In such event, the County shall compensate Consultant at its hourly rates set forth in Exhibit B for Services provided after termination.

11.1.3 The County may terminate this Agreement, in whole or in part, for cause or default. In the event of Consultant's default, the County shall issue a Notice of Default to the Consultant, articulating the obligations under this Contract which the Consultant has defaulted, or failed to perform. Consultant shall have no less than fourteen (14) calendar days from the receipt of the Notice of Default to cure the default, or submit, in writing, an acceptable plan, as determined by the County, to cure the default identified in the County's Notice. If Consultant fails to cure the default, or to submit an acceptable plan to cure the default, to the satisfaction of the County, within the stated time period, the County shall issue a Notice of Termination, stating the date this Contract shall terminate for cause. The County may take over and perform the Services to completion. In such case, Consultant shall be liable to the County for reasonable additional costs incurred by the County in completing the Services.

11.1.4 Upon receipt of a Notice of Termination, except as otherwise directed by the County in writing, the Consultant shall:

(1) Stop Services on the date and to the extent specified in the notice of termination;
(2) Terminate and settle all orders and subcontracts relating to the performance of the terminated Services;
(3) Transfer all Services Product, including Services in process, and any other materials related to the terminated Services to the County; and
(4) Continue and complete all parts of the Services that have not been terminated.

11.1.5 In the event Consultant changes names, merges with another company, becomes a subsidiary, or makes any other substantial change in structure or in principals, the County reserves the right to terminate this Agreement subject to the terms described above.

11.1.6 The rights and remedies of the County provided in this Section 11.1 are in addition to any other rights and remedies provided by law or under this Agreement.

ARTICLE XII WARRANTY, INDEMNIFICATION, AND INFRINGEMENT

12.1 Warranty of Performance

12.1.1 The Consultant hereby represents and warrants that it is fully experienced and properly qualified, licensed, and financed to perform the Services under this Agreement and that it shall continue to maintain all licenses and approvals required to conduct its business and that it shall conduct its business activities in a reputable manner at all times.

12.1.2 Consultant represents and warrants that it possesses the knowledge, skill, experience, and financial capability required to perform and provide all required and optional Services under this Agreement in accordance with the standard of care, and that each person and entity that will provide Services is duly qualified to perform such Services by all appropriate governmental authorities, where required, and is sufficiently experienced and skilled in the area(s) for which such person or entity will render such Services. Consultant represents and warrants that the Services shall be performed skillful and respectful manner, and that the quality of all such Services shall equal or exceed prevailing industry standards for the provision of such Services.

12.1.3 The Consultant represents that it has, or shall secure at its own expense, all necessary personnel required to perform the Services as noted in the Contract Documents. It is expressly understood that such personnel shall not be employees of, or have any contractual relationship with, the County. All of the Services required hereunder shall be performed by the Consultant, or under its supervision. All personnel engaged in performing the Services shall be fully qualified and, if required, authorized or permitted under federal, state and local law to perform such Services.

12.1.4 The Consultant shall not be responsible for warranties, guarantees, fitness for a particular purpose, , loss of anticipated profits or for economic, incidental, liquidated, or consequential damages to the County or any third party arising out of breach of contract, delay, termination provided, however that nothing in this provision shall be construed to limit or waive Consultant's liability for damages arising from Consultant's negligence, gross negligence, willful misconduct, fraud, or breach of the standard of care set forth in this Agreement. . Additionally, Consultant shall not be responsible for acts and decisions of third parties, including governmental agencies, other than Consultant's subcontractors, that are beyond the reasonable control and cannot be reasonably avoided or mitigated through the exercise of the standard of care, provided Consultant provides prompt written notice to the County of any such event and takes commercially reasonable steps to minimize its impact. Nothing in this Section shall limit Consultant's indemnification obligations under Section 12.2 below.

12.2 Indemnification

12.2.1 Consultant shall indemnify and hold harmless the County and its officers and employees ("Indemnified Party"), from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, errors, omissions, or intentionally wrongful conduct of Consultant or other persons employed or utilized by Consultant in the performance of this Agreement.

12.2.2 To the extent permitted by, and in accordance with Florida Statute § 725.08, Consultant further agrees that "damages, losses and costs", includes fines, citations, court judgments, insurance claims, restoration costs or other liability, to the extent caused by the negligence, recklessness, errors, omissions, or intentionally wrongful conduct of Consultant and persons employed or utilized by Consultant in the performance of this Agreement.

12.2.3 To the extent permitted by, and in accordance with Florida Statute § 725.08, for purposes of indemnity, the "persons employed or utilized by Consultant shall be construed to include, but not be limited to, Consultant, its staff, employees, sub-contractors, all deliverers, suppliers, furnishers of materials or services or anyone acting for, on behalf of, or at the request of Consultant.

12.2.4 This indemnification will not be valid in the instance where the loss is caused by the gross negligence, or willful, wanton or intentional misconduct of any Indemnified Party.

12.2.5 If any provision(s), or portion(s) of a provision(s) of this Section, or the application thereof to any person or circumstance shall, to any extent, be held to be invalid, illegal or unenforceable for any reason whatsoever, the validity, legality and enforceability of the remaining provision(s), or part of the provision(s), shall not in any way be affected or impaired thereby; and shall be interpreted to the fullest extent possible to be enforceable and to give effect to the intent manifested by the provision(s), or portion(s) thereof, held invalid, illegal or unenforceable.

12.3 Infringement

Consultant shall not infringe upon any patents, trademarks or copyrights ("Intellectual Property") in performance of the Services. In the event that Consultant is alleged to have infringed upon such Intellectual Property, in addition to Consultant's obligations under the Indemnity provisions in Section 12.2 above, Consultant shall, at the sole discretion of County and at Consultant's sole expense: (i) procure for County the right to continue using the infringing subject matter; (ii) replace or modify the infringing subject matter so that it becomes non-infringing but still complies with the requirements of the Contract; or (iii) reimburse County for all payments made to Consultant relating to or impacted by the infringing material and all costs incurred by County resulting from such infringement.

ARTICLE XIII INSURANCE

13.1 Consultant's Insurance Requirements

13.1.1 Consultant shall, at its sole expense, obtain and maintain the minimum insurance coverages stated herein. All insurance policies shall be satisfactory to the County and be issued by companies authorized and duly licensed to transact business in the State of Florida. Consultant shall furnish proof of insurance to the County prior to performance of Services. No Services shall commence until Consultant has obtained all insurance coverages required under this section. The County will not make any payment to Consultant until Consultant has complied with the requirements of this Article XIII. Certificates of insurance shall clearly indicate Consultant has obtained insurance of the type, amount, and classification as required by this Agreement. Required insurance coverage shall be maintained in force, including coverage for Additional Insureds, for the duration of the Agreement and until all performance required by Consultant has been completed, as determined by the County. Consultant shall maintain insurance coverage against Claims relating to any act or omission by Consultant, its agents, representatives, employees, or Subconsultants in connection with this Agreement.

13.1.2 No less than ten (10) days written notice shall be provided to the County prior to cancellation, non-renewal or any material change of required insurance policies. Yearly renewal certificates shall be provided to the County within thirty (30) days of expiration of the current policy.

13.1.3 The types and amounts of insurance required under this Agreement do not in any way limit the liability of Consultant including under any warranty or indemnity provision of this Agreement or any other obligation whatsoever Consultant may have to the County or others. Nothing in this Agreement limits Consultant to the minimum required insurance coverages found in this Article XIII.

13.2 Additional Insured Endorsements and Certificate Holder

The term "Additional Insured", as used in this Agreement, shall mean St. John's County, its elected officials, officers, employees, agents and representatives. Certificates of insurance shall specifically name each Additional Insured for all policies of insurance except Workers' Compensation and Professional Liability. A copy of the endorsement showing the required coverages must accompany the certificate of insurance**.**

Certificate Holder Address: St. Johns County, a political subdivision of the State of Florida
4040 Lewis Speedway
St. Augustine, FL 32084

Attn: Purchasing

13.3 Workers Compensation

Consultant shall procure and maintain during the life of this Agreement, adequate Workers' Compensation Insurance in at least such amounts as is required by law for all of its employees per Chapter 440, FS. In claims against any person or entity indemnified under this Paragraph by an employee of the Consultant, a Subconsultant, any one directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Consultant or a Subconsultant under workers' compensation acts, disability benefits acts or other employee benefit acts.

13.4 Commercial General Liability

Consultant shall procure and maintain during the life of this Agreement, Comprehensive General Liability Insurance with minimum limits of $2,000,000 per occurrence, $4,000,000 aggregate, including bodily injury (including wrongful death), property damage, products, personal & advertising injury, and completed operations. This insurance must provide coverage for all Claims that may arise from the Services and/or operations completed under this Agreement, whether such Services or operations are by Consultant or anyone directly or indirectly employed by them. Such insurance(s) shall also be primary and non-contributory with regard to insurance carried by the Additional Insureds.

13.5 Automobile Liability

Consultant shall procure and maintain during the life of this Agreement, Comprehensive Automobile Liability Insurance with minimum limits of $1,000,000 combined single limit for bodily injury and property damage liability and insuring liability arising out of or in any way related directly or indirectly to the ownership, maintenance or use of any owned, non-owned or rented/hired automobiles.

13.6 Professional Liability

13.6.1 Consultant shall procure and maintain, during the life of this Agreement, Professional Liability or Errors and Omissions Insurance with minimum limits of $5,000,000 with 4-year tail coverage starting upon completion of all Services, as determined by the County. Consultant's professional liability policy should not have an exclusion for environmental compliance management or construction management professionals.

13.6.2 In the event that Consultant employs professional engineering or land surveyor services for performing field engineering or preparing design calculations, plans, and specifications, Consultant shall require the retained engineers and land surveyors to carry professional liability insurance with limits not less than $1,000,000 each claim with respect to negligent acts, errors, or omissions in connection with professional services to be provided under this Contract.

13.7 Other Requirements

13.7.1 The required insurance limits identified in Sections 13.4 and 13.5, above may be satisfied by a combination of a primary policy and/or Umbrella or Excess Liability Insurance policy with a minimum limit of $5,000,000.00 per occurrence. Consultant shall require each lower-tier subconsultant to comply with all insurance requirements appropriate for its scope of Services, and any deficiency shall not relieve Consultant of its responsibility herein. Upon written request, Consultant shall provide County with copies of lower-tier subconsultant certificates of insurance.

13.7.2 Providing and maintaining adequate insurance coverage is a material obligation of Consultant. County has no obligation or duty to advise Consultant of any non-compliance with the insurance requirements contained in this Section. If Consultant fails to obtain and maintain all of the insurance coverages required herein, Consultant shall indemnify and hold harmless the Additional Insureds from and against any and all Claims that would have been covered by such insurance had Consultant complied with its obligations herein.

13.7.3 County reserves the right to adjust the above minimum insurance requirements or require additional insurance coverages to address other insurable hazards.

ARTICLE XIV GENERAL CONSIDERATIONS

14.1 Independent Contractor

Consultant shall act as an independent contractor and not as an employee, agent or servant of the County in performing all Services and activities under this Agreement. Consultant shall at all times and in all places maintain complete control over

its employees and all of its Subconsultants. Nothing contained in this Agreement shall create any contractual relationship between any such Subconsultant and the County. Consultant shall perform all Services in accordance with the requirements of this Agreement and in accordance with its own means and methods subject to compliance with this Agreement. The Consultant does not have the power or authority to bind the County in any promise, agreement or representation other than specifically provided for in this Agreement.

14.2 Taxes

14.2.1 Consultant shall pay and be solely responsible for any and all taxes, levies, duties and assessments of every nature which may be applicable to any Services performed under this Agreement, including, without limitation, any tax that Consultant is required to deduct or withhold from any amount payable under this Agreement and shall make all payroll deductions and withholdings required by law. Consultant herein indemnifies and holds the County harmless from any liability on account of any and all such taxes, levies, duties and assessments. The indemnity provision of this Paragraph 14.2 shall survive the expiration or earlier termination of this Agreement. Consultant may not use County's tax-exempt status unless specifically authorized in writing in advance.

14.2.2 Foreign Entity Tax Withholding. Amounts due to certain foreign persons or entities may be subject to backup withholding taxes under federal law. If Consultant is a foreign person or entity that is required to complete Internal Revenue Service ("IRS") Form W-8ECI, Consultant shall provide County a copy of Consultant's current Form W-8ECI prior to issuance of any invoice or payment under this Agreement. If Consultant fails to timely provide a completed, current Form W-8ECI, County will withhold all backup withholding taxes from the amounts due Consultant, remit such sums to the IRS, and pay Consultant only the remainder. County makes no representation regarding the tax treatment of amounts due to Consultant, and Consultant releases and holds County harmless from any claims or damages in any way relating to or arising from any tax withholding by County pursuant to this section.

14.3 Publicity and Advertising

14.3.1 Consultant shall not make any announcement or release any information or publish any photographs concerning this Agreement, or the Services or any part thereof, to any member of the public, press or any official body, unless prior written consent is obtained from the County.

14.3.2 Use of the County Seal or County Logo is strictly prohibited. In accordance with, County Ordinance 92-2 and County Administrative Policy 101.3, Consultant may not manufacture, use, display, or otherwise use any facsimile or reproduction of the County Seal or Logo without express written approval of the Board of County Commissioners of St. Johns County, Florida.

14.4 Examination of Consultant's Records

The County or its authorized representative shall, for a minimum of five (5) years after expiration or termination of this Agreement (or until resolution of any audit findings, whichever is longer), have access to, and the right to examine any directly pertinent books, documents, papers and records of Consultant involving transactions relating to this Agreement, and to make copies, excerpts and transcriptions thereof. If any such examination reveals that Consultant has overstated any component price, Change Order, Claim, or any other County payment obligation arising out of this Agreement, then Consultant shall, at the election of the County, either immediately reimburse to the County or offset against payments otherwise due Consultant, the overstated amount plus interest. The foregoing remedy shall be in addition to any other rights or remedies the County may have.

14.5 Governing Law & Venue

This Agreement shall be governed by the laws of the State of Florida. Venue for any administrative and/or legal action arising under the Agreement shall be St. Johns County, Florida.

14.6 Arbitration

The County shall not be obligated to arbitrate or permit any arbitration binding on the County under any of the Contract Documents or in connection with this Agreement in any manner whatsoever.

14.7 Assignment and Arrears

14.7.1 Neither the County nor the Consultant shall assign, transfer, or encumber its interest in this Agreement without the written consent of the other Party. Any assignment, transfer, encumbrance or subcontract in violation of this section shall be void and ineffective, constitute a breach of this Agreement, and permit the non-assigning Party to immediately terminate

this Agreement, in addition to any other remedies available to the non-assigning Party at law or in equity. County reserves the right to condition its approval of any assignment, transfer, encumbrance, or subcontract upon further due diligence and an additional fee paid to the County to reasonably compensate it for the performance of any such due diligence.

14.7.2 The Consultant shall not pledge the County's credit, or make it a guarantor of payment, or surety for any contract, debt, obligation, judgment, lien, or any form of indebtedness. The Consultant further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

14.8 Severability

If a court deems any provision of the Agreement void, invalid or unenforceable, that provision shall be enforced only to the extent that it is not in violation of law or is not otherwise unenforceable and all other provisions shall remain in full force and effect.

14.9 Section Headings

The heading preceding the articles and sections herein are solely for convenience of reference and shall not constitute a part of this Agreement, or affect its meaning, construction or effect.

14.10 Disclaimer of Third-Party Beneficiaries

The services to be performed by Consultant are intended solely for the benefit of the County. Except that the County may authorize reliance by its contractors, sub-contractors, lenders, grantors, or successor agencies in specified deliverables, no person or entity not a signatory to this Agreement shall be entitled to rely on the Consultant's performance of its services hereunder, and no right to assert a claim against the Consultant by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this Agreement or the performance of the Consultant's services hereunder. Both the County and the Consultant explicitly agree, and this Agreement explicitly states that no third-party beneficiary status or interest is conferred to, or inferred to, any other person or entity.

14.11 No Waiver; Course of Dealing

The delay or failure by the County to exercise or enforce any of its rights or remedies under this Agreement shall not constitute or be deemed a waiver of the County's right thereafter to enforce those rights or remedies, nor shall any single or partial exercise of any such right or remedy preclude any other or further exercise thereof or the exercise of any other right or remedy. The conduct of the parties to this Agreement after the Effective Date shall not be deemed a waiver or modification of this Agreement. In any action brought by either party for the enforcement of the obligations of the other party, the prevailing party shall be entitled to recover reasonable attorney's fees.

14.12 No Waiver of Sovereign Immunity

Nothing herein is intended to serve as a waiver of sovereign immunity by any agency or political subdivision to which sovereign immunity may be applicable or of any rights or limits to liability existing under Section 768.28, Florida Statutes. This section shall survive the termination of all performance and obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

14.13 Conflict of Interest

The Consultant represents that it presently has no interest and shall acquire no interest, either directly or indirectly, which would conflict in any manner with the performance of Services required hereunder. The Consultant further represents that no person having any interest shall be employed for said performance.

The Consultant shall promptly notify the County in writing by certified mail of all potential conflicts of interest for any prospective business association, interest or other circumstance, which may influence or appear to influence the Consultant's judgment or quality of Services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of Services that the Consultant may undertake and request an opinion of the County, whether such association, interest, or circumstance constitutes a conflict of interest if entered into by the Consultant.

The County agrees to notify the Consultant of its opinion by certified mail within 30 days of receipt of notification by the Consultant. If, in the opinion of the County, the prospective business association, interest or circumstance would not constitute a conflict of interest by the Consultant, the County shall so state in the notification and the Consultant shall, at his/her option enter into said association, interest or circumstance and it shall be deemed not in conflict of interest with respect to Services provided to the County by the Consultant under the terms of this Agreement.

14.14 Execution in Counterparts

This Agreement may be executed in counterparts, each of which shall be an original document, and all of which together shall constitute a single instrument. The parties may deliver executed counterparts by e-mail transmission, which shall be binding. In the event this Agreement is executed through a County-approved electronic signature or online digital signature service (such as AdobeSign), such execution shall be valid, effective and binding upon the party so executing. Execution and delivery of an executed counterpart of this Agreement and/or a signature page of this Agreement by electronic image scan transmission (such as a "pdf" file) or through a County approved electronic signature service will be valid and effective as delivery of a manually executed counterpart of this Agreement.

14.15 Entire Agreement

This Agreement, together with the Contract Documents for the Services, constitutes the entire Agreement between County and Consultant relating to the subject matter hereof and supersedes all prior or contemporaneous Contracts, negotiations, discussions and understandings, oral or written.

14.16 Modifications, Amendments, Waivers and Extensions

This Agreement may not be modified, amended, changed or supplemented, nor may any obligations hereunder be waived or extensions of time for performance granted, except by written instrument signed by Authorized Representatives of both parties. No waiver of any default or breach of any agreement or provision herein contained shall be deemed a waiver of any preceding or succeeding default or breach thereof or of any other agreement or provision herein contained. No extension of time for performance of any obligations or acts shall be deemed an extension of the time for performance of any other obligations or acts.

14.17 Survival

The provisions of the Contract Documents which by their nature survive termination of the Contract, including without limitation all warranties, indemnities, insurance, taxes, enforcement costs, payment obligations, and the County's right to audit Consultant's books and records, shall in all cases survive the expiration or earlier termination of this Agreement. The obligations set forth in Sections 4.1 and 12.1 herein shall survive completion of Services, termination of this Contract, and final payment, and shall remain in effect for the duration of the applicable statute of repose or statute of limitations under Applicable Laws.

14.18 Convicted and Discriminatory Vendor Lists

Consultant warrants that neither it nor any Subconsultant is currently on the convicted vendor list or the discriminatory vendor list maintained pursuant to Sections 287.133 and 287.134 of the Florida Statutes, or on any similar list maintained by any other state or the federal government. Consultant shall immediately notify the County in writing if its ability to perform is compromised in any manner during the term of this Agreement.

14.19 Scrutinized Companies Lists

Section 287.135 of the Florida Statutes prohibits agencies from contracting with companies for goods or services that are on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel, and from contracting with companies for goods or services of $1,000,000 or more that are on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or are engaged in business operations in Cuba or Syria. The lists are created pursuant to §215.473 and §215.4725, F.S. By execution of this Agreement, Consultant certifies that it is not listed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and is not engaged in a boycott of Israel or engaged in business operations in Cuba or Syria, and understands that pursuant to §287.135, F.S., the submission of a false certification may subject Consultant to civil penalties, attorney's fees, and/or costs. In accordance with §287.135, F.S., the County may terminate this Agreement if a false certification has been made, or the Consultant is subsequently placed on any of these lists, or engages in a boycott of Israel or is engaged in business operations in Cuba or Syria.

14.20 Employment Eligibility and Mandatory Use of E-Verify

As a condition precedent to entering into this Agreement, and in accordance with section 448.095, F.S., Consultant and its Sub-Contractor shall register with and use the E-Verify system to verify the work authorization status of all employees hired on or after July 1, 2023.

a. Consultant shall require each of its Sub-Contractor to provide Consultant with an affidavit stating that the Sub-Contractor does not employ, contract with, or subcontract with an unauthorized alien. Consultant shall maintain a copy of such affidavit for the duration of this Agreement.

b. The County, Consultant, or any Sub-Contractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated section 448.09(1), F.S. or these provisions regarding employment eligibility shall terminate the contract with the person or entity.

c. The County, upon good faith belief that a Sub-Contractor knowingly violated these provisions regarding employment eligibility, but Consultant otherwise complied, shall promptly notify Consultant and Consultant shall immediately terminate the contract with the Sub-Contractor.

d. Consultant acknowledges that, in the event that the County terminates this Agreement for Consultant's breach of these provisions regarding employment eligibility, then Consultant may not be awarded a public contract for at least one (1) year after such termination. Consultant further acknowledges that Consultant is liable for any additional costs incurred by the County as a result of the County's termination of this Agreement for breach of these provisions regarding employment eligibility.

14.21 Nondiscrimination

The Consultant warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, political affiliation, disability, age, or sex (including sexual orientation and gender identity/expression) pregnancy, marital status or national origin (including limited English proficiency). Consultant shall include the foregoing or similar language in its contracts with any Subconsultants.

14.22 Drug Free Workplace

To the extent required under the Drug-Free Workplace Act (Chapter 112, Florida State Statutes), Consultant certifies that it has and will maintain a drug-free workplace program for the duration of this Agreement.

14.23 Public Records

14.23.1 To the extent Consultant is acting on behalf of the County, Consultant shall comply and shall require all of its Sub-Contractors to comply with the State of Florida's Public Records Statute (Chapter 119), specifically to:

(1) Keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the Services;

(2) Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost as provided in Chapter 119, Florida Statutes, or as otherwise provided by Applicable Law;

(3) Ensure that public records related to this Agreement that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by Applicable Law for the duration of this Agreement and following expiration of this Agreement, or earlier termination thereof, if Consultant does not transfer the records to the County; and

(4) Upon completion of this Agreement, or earlier termination thereof, transfer, at no cost, to the County all public records in possession of Consultant or keep and maintain for inspection and copying all public records required by the County to perform the Services.

14.23.2 If Consultant, upon expiration of this Agreement or earlier termination thereof: i) transfers all public records to the County, Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements; and ii) keeps and maintains public records, Consultant shall meet all Applicable Law and requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the County's information technology systems.

14.23.3 Failure by Consultant to comply with the requirements of this section shall be grounds for immediate, unilateral

termination of this Agreement by the County.

IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: (904) 209-0805, PUBLICRECORDS@SJCFL.US, 500 SAN SEBASTIAN VIEW, ST. AUGUSTINE, FLORIDA 32084

14.24 Enforcement Costs

If any legal proceeding, lawsuit, or action is instituted in connection with any dispute, breach, default, misrepresentation or controversy arising out of this Agreement or the enforcement of any right hereunder, the prevailing party will be entitled to recover, in addition to actual costs, such sums as the court may adjudge reasonable as attorney fees, including fees on any appeal.

14.25 Contingency Fee

The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Consultant, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Agreement. Failure by Consultant to comply with the requirements of this section shall be grounds for immediate, unilateral termination of this Agreement by the County.

14.26 Written Notice

Any and all notices, requests, consents, approvals, demands, determinations, instructions, and other forms of written communication ("Notices") under this Agreement shall be validly given when delivered as follows:

i. Hand delivered to Consultant's Authorized Representative or hand delivered during normal business hours and addressed as shown below, or

ii. Delivered by U.S. Mail, electronic mail or commercial express carrier, (postage prepaid, delivery receipt requested), to the following addresses:

St. Johns County
4040 Lewis Speedway
St. Augustine, FL 32084
Attn: Purchasing Director
Email Address: SJCPurchasing@sjcfl.us

Carollo Engineers, Inc.
12724 Gran Bay Parkway West, Suite 410
Jacksonville, FL 32258
Attn: Sudhan Paranjape, P.E., Vice President
Email Address: SParanjape@carollo.com

With a copy to:

St. Johns County
Office of the County Attorney
500 San Sebastian View
St. Augustine, FL 32084
Email Address: jferguson@sjcfl.us

Notices shall be deemed to have been given on the date of delivery to the location listed above without regard to actual receipt by the named addressee.

14.27 Non-Exclusive Right

Consultant has no exclusive right to provide the Services required within this Agreement. The County may at its sole discretion contract with others to perform the same duties or any part of the Services.

14.28 Truth-In-Negotiation Representation

By execution of this Agreement, Consultant hereby certifies that, in accordance with Florida

Statutes, Section 287.055(5)(a), the wage rates and other factual unit costs supporting the compensation under this Agreement are accurate, complete and current as of the date of entering into this Agreement. The Parties agree that the County may adjust the original Agreement price and any additions thereto to exclude any significant sums by which the County determines the Agreement price was increased due to inaccurate, incomplete or noncurrent wage rates and other factual unit costs.

14.29 Equal Employment Opportunity

During the performance of this Contract, Consultant agrees as follows:

14.29.1 Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, disability, age, sex (including sexual orientation and gender identity/expression), national origin (including limited English proficiency), marital status, or familial status. Consultant will take affirmative action to ensure that applicants and employees are treated during employment without regard to their race, color, religion, disability, sex, age, national origin, ancestry, marital status, sexual orientation, gender identity or expression, familial status, genetic information or political affiliation. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertisement, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

14.29.2 Consultant will, in all solicitations or advertisements for employees placed for, by, or on behalf of Consultant, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status, sexual orientation, gender identity or expression, familial status, or genetic information.

14.29.3 Consultant will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with Consultant's legal duty to furnish information.

14.29.4 Consultant will send to each labor union or representatives of workers with which it has a collective bargaining Contract or other contract or understanding, a notice to be provided by the County, advising the labor union or workers' representative of Consultant's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

14.29.6 Consultant will furnish all information and reports required by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the County and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

14.29.7 In the event of Consultant's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this Contract may be cancelled, terminated or suspended in whole or in part and Consultant may be declared ineligible for further contracts in accordance with the Secretary of Labor, or as otherwise provided by law.

14.29.8 Consultant will include the provisions of paragraphs 14.29.1 through 14.29.7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor, so that such provisions will be binding upon each subconsultant or vendor. Consultant will take such action with respect to any subconsultant or vendor as may be directed to the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event Consultant becomes involved in, or is threatened with, litigation with a subconsultant or vendor as a result of such direction, Consultant may request the United States to enter into such litigation to protect the interest of the United States.

14.30 Compliance with Florida Statute 287.138

14.30.1 Pursuant to 287.138 F.S., effective July 1, 2023, the County may not enter into contracts which grants the Consultant

access to personal identifiable information if: 1) the Consultant is owned by the government of a Foreign Country of Concern (as defined by the statute: (b) the government of a Foreign Country of Concern has a controlling interest in the entity; or (c) the Consultant is organized under the law of or has its principal place of business in a Foreign Country of Concern. The County shall be entitled to immediately terminate this Agreement with liability to ensure the County's continued compliance with the statute.

14.30.2 Pursuant to 287.138 F.S., effective January 1, 2024, if Consultant may access, receive, transmit, or maintain personal identifiable information under this Agreement, Consultant must submit a Foreign Entity Affidavit to the County. Additionally, effective July 1, 2025, Consultant shall submit a Foreign Entity Affidavit to the County prior to any renewals of this Agreement. Failure or refusal to submit a Foreign Entity Affidavit shall be cause for immediate termination of this Agreement by the County.

14.31 Anti-Bribery

Consultant and its Subcontractors shall at all times during the term of this Agreement comply with all anti-bribery and corruption laws that are applicable to the performance of this Agreement. Consultant represents that it has not, directly or indirectly, taken any action which would cause it to be in violation of Chapter 838 of the Florida Statutes. Consultant shall immediately notify the County of any violation (or alleged violation) of this provision.

****

The authorized representatives hereto have executed this Agreement effective as of the Effective Date. Consultant's authorized representative executing this Agreement represents that he or she is duly authorized to execute this Agreement on behalf of Consultant.

County	**Consultant**
St. Johns County (Seal) (Typed Name)	**Carollo Engineers, Inc.** (Seal) (Typed Name)
By: _____ (Signature of Authorized Representative)	By: _____ (Signature of Authorized Representative)
Jaime Locklear (Printed Name)	_____ (Printed Name)
Purchasing Director (Title)	_____ (Title)
_____ (Date of Execution)	_____ (Date of Execution)

Legally Sufficient:

_____
(Office of County Attorney)

_____
(Date of Execution)

CONSULTANT'S FINAL RELEASE AND WAIVER OF LIEN

Owner: St. Johns County (hereafter "County")	**County Department/Division:**
Agreement No.:	**Consultant Name:**
Project:	**Consultant Address:**
Project Address:	**Consultant License No.:**
Payment Amount:	**Amount of Disputed Claims:**

The undersigned has been paid in full for all Services provided to the Project or to the County and does hereby waive and release any notice of lien, any right to mechanic's lien, any bond right, any claim for payment and any rights under any similar ordinance, rule or statute related to a claim or payment rights the undersigned has on the above described Project, except for the payment of Disputed Claims, if any, described below.

The undersigned warrants that he or she either has already paid or will use the monies received from this final payment to promptly pay in full all of its Subconsultants or anyone else acting for, on behalf of, or at the request of Subconsultant for all Services provided for or to the above referenced Project.

Before any recipient of this document relies on it, the recipient should verify evidence of payment to the undersigned.

Disputed Claims: The following invoices, pay applications, retention, or extra Services are reserved by undersigned from this final payment (if there are no Disputed Claims enter **"None"**):

None

Signed this __day of _____, 20__

_____
Consultant Name

By: _____
Signature

_____
Printed Name

_____
Title

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT TO THE EXTENT OF THE PAYMENT AMOUNT OR THE AMOUNT RECEIVED.

NOTICE OF INTENT TO AWARD

July 27, 2026

RFQ No: 2902; Professional Engineering Services for Four (4) Infrastructure Projects

St. Johns County hereby issues this Notice of Intent to Award a contract, upon successful negotiations, with Carollo Engineers, Inc., as the highest ranked firm, based upon evaluation of submitted Qualifications and Shortlisted Proposals under RFQ 2902.

Any actual Bidder, Proposer or Supplier who is aggrieved in connection with the Notice of Intent to Award a Contract, where such grievance is asserted to be the result of a violation of the requirements of the St. Johns County Purchasing Policy and associated procedures, or any applicable provision of law by the officers, agents, or employees of the County, may file a Protest to the Director of Purchasing & Contracts. The Protest must be made in writing and filed by 4:00PM on the fifth business day following the date of the posting of the Notice of Intent to Award, and must be submitted in accordance with Section 13, SJC Purchasing Policy.

Should no Protest be received in response to this Notice, the County will proceed with negotiations, and upon successful negotiations, award of a Contract in accordance with SJC Purchasing Policy.

Please forward all correspondence, requests or inquiries directly to Diana M. Fye, BAS, NIGP-CPP, CPPB, FCCN, FCCM, Senior Procurement Coordinator, via email at dfye@sjcfl.us or phone at (904) 209-0162.

St. Johns County, FL
Board of County Commissioners
Purchasing Department

Date: 7/27/26

Bryan Matus, CPPO, FCCM
Purchasing Manager
bmatus@sjcfl.us
(904) 209-0148 - Direct

EVALUATION SUMMARY SHEET - 2ND STAGE - SHORTLIST
ST. JOHNS COUNTY, FLORIDA

Date: July 23, 2026

RFQ No: 2902; Professional Engineering Services for Four (4) Infrastructure Projects

FIRM	Stage 1: Qualifications Total Score	EVALUATOR Gordon Smith	EVALUATOR Frank Kenton	EVALUATOR Larry Miller	EVALUATOR James Galley	EVALUATOR Daniel Nowaczyk	TOTAL	RANK	COMMENTS
CDM Smith, Inc.	487	[redacted]					487	4	Withdrew from Stage 2 Evaluation
Carollo Engineers, Inc.	487	90	89	84	86	86	922	1	The Evaluation Committee recommends entering into negotiations with the top-ranked firm.
Jacobs Engineering Group, Inc.	479	76	87	86	80	83	891	2	
McKim & Creed, Inc.	459	65	83	72	76	83	838	3	

APPROVED: NEAL SHINKRE, UTILITIES DIRECTOR DATE: 7/27/26

APPROVED: BRYAN MATUS, PURCHASING MANAGER DATE: 7/27/26

Posted to Demandstar: 7/27/26

THE RANKING SHOWN ABOVE SHALL BE FOLLOWED UNLESS SPECIAL CONDITIONS MERIT A CHANGE IN THE NEGOTIATING ORDER, IN THIS CASE, THE SPECIAL CONDITIONS MUST BE EXPLAINED IN DETAIL AND ATTACHED TO THIS EVALUATION SUMMARY SHEET.

ANY ACTUAL BIDDER, PROPOSER, OR SUPPLIER WHO IS AGGRIEVED IN CONNECTION WITH THE NOTICE OF INTENT TO AWARD A CONTRACT, WHERE SUCH GRIEVANCE IS ASSERTED TO BE THE RESULT OF A VIOLATION OF THE REQUIREMENTS OF THE ST. JOHNS COUNTY PURCHASING POLICY AND ASSOCIATED PROCEDURES, OR ANY APPLICABLE PROVISION OF LAW BY THE OFFICERS, AGENTS, OR EMPLOYEES OF THE COUNTY, MAY FILE A PROTEST TO THE ASSISTANT DIRECTOR OF PURCHASING AND CONTRACTS AS PROVIDED IN SECTION 13 OF THE SJC PURCHASING POLICY.

ST. JOHNS COUNTY UTILITY DEPARTMENT

RFQ 2902

PROFESSIONAL ENGINEERING SERVICES

FOR FOUR (4) WATER INFRASTRUCTURE

PROJECTS

SCOPE OF SERVICES AND BASIS OF FEE ESTIMATE
NOVEMBER 2, 2026

EXHIBIT A
SCOPE OF SERVICES
FOUR WATER INFRASTRUCTURE PROJECTS

PROJECT BACKGROUND

The St. Johns County Utility Department (SJCUD) is advancing a strategic water infrastructure program to support continued growth, enhance system reliability, increase operational flexibility, and position the Mainland Utility Service Area to meet future water supply demands. Potable water demand within the service area is projected to increase substantially over the next two decades, requiring phased infrastructure investments to maintain reliable and sustainable water service while accommodating future development.

SJCUD's potable water system is currently served by several water treatment facilities, including the Northwest Water Treatment Plant (NW WTP) and County Road 214 Water Treatment Plant (CR 214 WTP). As system demands increase, these facilities will require capacity expansions, reliability improvements, and enhanced hydraulic connectivity to optimize system performance and maintain service levels throughout the utility service area.

To address these needs, SJCUD has selected Carollo Engineers, Inc. (Carollo) for implementing a coordinated program of capital improvements consisting of the following projects:

- Project 1: Trout Creek Water Treatment Plant
- Project 2: Northwest to CR 214 Service Area Finished Water Blend and Transfer Station
- Project 3: CR 214 Water Treatment Plant Reliability Upgrades
- Project 4: CR 214 Future Improvements Facility Plan

Collectively, these projects are intended to improve water supply reliability, provide operational redundancy, enhance system resiliency, and establish a framework for future system expansion.

The scope of services outlined herein includes planning, alternatives evaluation, facility planning, design, permitting, bidding assistance, construction administration, and post-construction support, as applicable to each project. Assumptions used in the development of this scope are identified throughout this document and have been incorporated into the associated scope and project budget. The budget amounts assigned to individual tasks and subtasks are estimates for tracking purposes. While the total project Lump Sum fee shall not be exceeded without prior written authorization, Carollo reserves the right to adjust and reallocate funds between tasks and subtasks as necessary to reflect actual level of effort and progress for monthly invoicing purposes, provided such adjustments do not increase the total contract value.

SCOPE OF SERVICES

Task 1 – Program Management

Carollo will perform program management and monitoring activities throughout the completion of the scope of services, as delineated in the following tasks and subtasks. Program Management services are distinct from the project management and administrative services separately described and budgeted

for each of the individual projects. Project management services will address the planning, coordination, administration, and delivery of each individual project, while Program Management will focus on overall coordination, monitoring, and reporting across the projects. Program Management will not duplicate project-level management or administrative activities.

Although the projects may be executed independently, Program Management will provide an integrated, program-level perspective to help the Client monitor overall progress, identify cross-project issues, and maintain alignment with the Client's overall program objectives.

Task 1.1 – Program Management, Control and Reporting

Program Management Services are intended to provide a consistent and coordinated approach across the four projects within the overall program. These services will establish common processes, expectations, and management practices so that the individual projects are planned, designed, permitted, and delivered in alignment with the County's overall program objectives. Carollo will maintain a master program schedule identifying key milestones, critical path activities, project interdependencies, and potential risks that may impact program delivery.

Monthly coordination meetings will be conducted with SJCUD staff to review progress, discuss issues requiring resolution, and monitor independencies between projects. This integrated management approach will provide SJCUD with clear visibility into program performance and support informed decision-making.

Task 1.1 Total Fee……..$47,000.00 (Lump Sum)

Task 1.2 – Program Kickoff Meeting

Carollo will attend an in-person kickoff meeting after issuance of the Notice to Proceed (NTP). The kickoff meeting will include the following:

- Prepare and distribute a kickoff meeting agenda. The agenda will be provided three (3) business days in advance of the meeting for SJCUD review, comment, and acceptance.
- Prepare and distribute the kickoff meeting minutes. Meeting minutes will be provided five (5) business days after the meeting for SJCUD review, comment, and acceptance. It is assumed that SJCUD will provide comments within five (5) business days after receipt of meeting minutes.
- Review program information.
- Confirm SJCUD preferences for proposed improvements.

Task 1.2 Total Fee……..$23,805.73 (Lump Sum)

Task 1.3 – Quality Management

A comprehensive quality management program will be implemented throughout the duration of the program to guide all planning, design, permitting, and construction-phase services to be completed in accordance with SJCUD requirements, applicable regulatory standards, and industry best practices. Carollo will utilize established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews, constructability reviews, and management oversight at key project milestones.

This task is intended to establish a program-level quality management system to be implemented consistently across all four projects, promoting uniform QA/QC practices and creating efficiencies in project-level quality reviews. The quality management system will promote consistency in design criteria, technical approaches, deliverable formats, and documentation.

This structured quality management approach is intended to reduce project risks, minimize rework, support schedule adherence, and provide SJCUD with high-quality deliverables that facilitate successful project implementation.

Task 1.3 Total Fee……..$85,394.32 (Lump Sum)

Task 1.4 – CMAR Support

Carollo will provide limited Construction Manager AT Risk (CMAR) support during the Guaranteed Maximum Price (GMP) development process. Services will include review of and responses to Requests for Information (RFIs), as well as review of construction cost estimates associated with the project improvements. It is assumed that up to three (3) cost estimate reviews will be performed at key design milestones for each of the three projects. Additional reviews or significant redesign efforts resulting from cost estimate findings will be considered Additional Services.

Task 1.4 Total Fee……..$83,168.00 (Time & Materials)

Task 1 Total Fee……..$239,368.05
$156,200.05 (Lump Sum)
$83,168.00 (Time & Materials)
$0.00 (Allowance)

Task 2 – Trout Creek Water Treatment Plant

Task 2.1 – Project Management

Task 2.1.1 – Project Management

Activities performed under this task consist of those general functions required to maintain Project 1, Trout Creek WTP, on schedule, within budget, and that the quality of the work products defined within this scope is consistent with SJCUD's standards and expectations. Activities under this task would include preparation of internal meetings, periodic engineering budget reviews, coordinating with internal QA/QC members and project team, stakeholder coordination, sub-consultant coordination, risk and change management throughout the duration of the project.

Task 2.1.1 Total Fee……..$125,597.56 (Lump Sum)

Task 2.1.2 – Progress Meetings

Carollo will schedule and prepare for several progress meetings:

- Bi-Weekly Project Manager Update Meetings – Lead bi-weekly PM update meetings that will be conducted virtually with SJCUD staff (as needed); and internal project team meetings. Carollo's

Program Manager, Project Manager (PM) and Project Engineer in attendance at minimum. These meetings are anticipated throughout the duration of the design period and on an as-needed basis during construction (especially near facility start-up and testing and for I&C integration).

- Permitting Status Update Meetings – Lead monthly permitting status update during the project manager update meetings with SJCUD staff, subcontractors and Carollo's PM. These meetings are anticipated to occur during the 60% to 90% design period, or as needed to support permitting activities.
    - Upon selection, the CMAR will be required to attend and participate in permitting status update meetings (as needed).
- Monthly Interim Design Progress Meetings – During the detailed design phase, Carollo will conduct up to 10 monthly progress meetings with SJCUD to collect relevant information, present progress to date, receive guidance on design efforts, discuss issues and concerns, and monitor the progress of the work.
    - Upon selection, the CMAR will be required to attend and participate in monthly interim design progress meetings.
- CMAR Workshop - As soon as CMAR is on board, a workshop will be scheduled to review preferred and optional equipment for the WTP and initiate the process to identify long-lead items for early procurement.
- **Interim Design Submittal Review Workshops** – Conduct a submittal review workshop with SJCUD for each of the following design submittals to facilitate timely stakeholder review of documents. Upon selection, the CMAR will be required to attend and participate in submittal review workshops.
    - Preliminary Design Report and 30 Percent Design Submittal
    - 60 Percent Design Submittal
    - 90 Percent Design Submittal
- **Owner-Direct Purchased Equipment Basis of Design Selection Workshop** – Following the 30% Design Submittal workshop, Carollo will work with the CMAR to identify and present the long lead time items for shop drawing procurement through a competitive process where multiple qualified vendors are available. SJCUD will provide preferences for vendor packages and evaluations during the Design CAMP®. Carollo will work with the CMAR to prepare appropriate bid documents. The CMAR will be responsible for bidding and procurement of shop drawings for procuring owner-direct purchases.

Carollo will provide the agenda three (3) business days in advance of the meeting for SJCUD review, comment, and acceptance. Carollo will prepare and distribute the kickoff meeting minutes. Meeting minutes will be provided five (5) business days after the meeting for SJCUD review, comment, and acceptance. It is assumed that SJCUD will provide comments five (5) business days after receipt of meeting minutes.

Task 2.1.2 Total Fee……..$153,542.64 (Lump Sum)

Task 2.1.3 – Design CAMP®

Carollo will lead a 5-day Design CAMP® during the preliminary design phase to promote decision-making and expedite the delivery of the 30 percent design. All Carollo's project leadership team members including key subcontractor (Ardurra) and discipline leads will attend the Design CAMP. This CAMP® will be held at a location close to the SJCUD office. We anticipate participation of key SJCUD staff at the

beginning of CAMP® and at an appropriate point for decision making. Other subcontractors will participate as needed. The intent of this weeklong CAMP® is to firmly establish the raw and finished water quality goals for Project 1, solidify the overall treatment process train and design criteria for each unit process, including process flow diagrams, preliminary electrical single-lines and P&IDs. Carollo will identify alternative process trains that will be evaluated during this workshop to meet or exceed the finished water quality goals and select the best cost alternative for final design. Such evaluation will include planning level cost estimates and preliminary construction schedule for screening of alternatives. The final design will only include space planning, with provisions for any plant hydraulics, structural, architectural, and electrical elements necessary to be incorporated for any additional treatment processes selected to enhance the overall treatment to meet the agreed upon water quality goals in the future. The final design shall not include detail design of the additional treatment process equipment.

Task 2.1.3 Total Fee……..$187,080.00 (Lump Sum)

Task 2.2 – Preliminary Design Report and 30% Design Submittal

Task 2.2.1 – Data Gathering

Task 2.2.1.1 – Data Request

Carollo will submit a data request via email to SJCUD. The data request may include but is not limited to items such as raw well water quality, transmission system drawings (existing and proposed), hydraulic system modeling reports, and any other documentation required for the design. Additional data may be requested later if needed. Data will be transmitted electronically where possible. Carollo will work with SJCUD staff to acquire the information. It is assumed that all available requested data will be provided within 14 calendar days. It is assumed that the raw water well will be tested for a full suite of parameters that would be required to fully assess the necessary treatment needed to meet the finished water quality goals. A complete list of such parameters is appended to this scope. It is assumed that all requested data is available and provided to Carollo before the Design CAMP®.

Task 2.2.1.1 Total Fee……..$23,363.25 (Lump Sum)

Task 2.2.1.2 – Initial Field Investigation

Carollo shall perform a site reconnaissance and investigation with SJCUD staff to identify preliminary equipment positioning and key features of the selected site. This is expected to occur during design.

Task 2.2.1.2 Total Fee……..$7,608.00 (Lump Sum)

Task 2.2.1.3 – Survey

It is understood that a survey exists for the Trout Creek site. If necessary, ETM Survey & Mapping, Inc. (ETM Survey) will provide miscellaneous survey support such as establishment of SJCUD required survey control including benchmarks, centerline control points, tank staking, as well as additional field survey staking on an as needed basis. Following completion of the geotechnical borings, ETM Survey will perform a survey of the boring locations.

Task 2.2.1.3 Total Fee……..$17,743.90 (Lump Sum)

Task 2.2.1.4 – Geotechnical Investigation

Universal Engineering Sciences (UES) will provide geotechnical investigation services for the Trout Creek site. Geotechnical soil borings shall be provided at the location of proposed major structures. Geotechnical work is anticipated to include the following:

- 4 – 35 ft borings
- 16 – 50 ft borings
- 2 – 100 ft borings

A geotechnical report shall be provided with recommendations for the structure foundations and piping.

Task 2.2.1.4 Total Fee……..$43,792.71 (Lump Sum)

Task 2.2.1.5 – Environmental Investigation (Optional)

Alpha Envirotech Consulting, Inc. (AEC) will provide environmental services for the Trout Creek site.

Task 2.2.1.5.1 – Phase I Cultural Resource Assessment Survey (Optional)

AEC will conduct cultural and historical resource investigations in the project areas to determine if archaeological and historical resources are present. Prior to field work, AEC will perform a required A Township, Range and Section (TRS) search from the Florida Master Site File (FMSF) to determine if any archaeological and historical sites have been recorded in the project area. During the fieldwork, the project area will be tested for the presence or absence of cultural resources. Archaeological shovel tests (excavations) and remote sensing (metal detectors) will be employed. Open areas, such as powerline easements, will be tested using an established linear grid. The comprehensive Phase I Cultural Resource Assessment Survey (CRAS) will satisfy the requirements of local, state, and federal permitting agencies, including the Seminole Tribe of Florida, if applicable.

Upon completion of our archaeological investigations, AEC will issue a Phase I CRAS to summarize findings of the archaeological investigation and provide recommendations regarding the mitigation of impact or preservation of sites, if found.

Task 2.2.1.5.1 Total Fee……$19,696.00 (Allowance)

Task 2.2.1.5.2 – Phase I Environmental Site Assessment (Optional)

The purpose of the Phase I Environmental Site Assessment (ESA) is to evaluate the property for the presence or likely presence of any hazardous substance or petroleum products in soil, groundwater, or surface water from on-site and off-site sources. AEC will perform our study consistent with the standards provided in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", the Standard (ASTM E 1527-21). As required by the noted Standard, our work will be conducted under the responsible charge of an Environmental Professional.

Task 2.2.1.5.2 Total Fee……..$6,296.00 (Allowance)

Task 2.2.2 – Water Quality Analysis

Carollo will perform a comprehensive review and evaluation of available raw water quality data to

assess treatment requirements and identify the most appropriate treatment train for the proposed facility. Available data will be evaluated to characterize existing water quality conditions, identify key water quality constituents of concern, and assess potential treatment challenges. The evaluation will consider parameters affecting drinking water treatment processes, including but not limited to primary and secondary maximum contaminant levels (MCLs), conductivity, bromide, potassium, sodium, magnesium, total alkalinity, total hardness, total sulfide, total organic carbon, and other constituents necessary to achieve compliance with current and anticipated regulatory requirements. It is assumed that SJCUD will provide this data or sample for these parameters to obtain the required information. Costs associated with laboratory analyses required to support the requested data collection are excluded.

Based on the findings of the water quality assessment, Carollo will develop and evaluate potential treatment process alternatives and recommend a treatment train capable of reliably meeting water quality objectives, operational requirements, permitting criteria, and future system demands. The evaluation will consider treatment performance, reliability, operational complexity, residuals management requirements, expandability, lifecycle costs, and compatibility with existing and planned system infrastructure. The results of the assessment and recommended treatment approach will be documented in a technical memorandum (TM) and utilized as the basis for subsequent facility planning and design activities. Carollo will prepare and submit a draft TM to SJCUD for review. Following receipt of comments, Carollo will revise and finalize the TM.

Task 2.2.2 Total Fee……$50,260.00 (Lump Sum)

Task 2.2.3 – Development of Design Criteria and Parameters

This task involves establishing clear and comprehensive design criteria that will be utilized in preparation of CAMP® and guide the entire project. The design criteria include fundamental parameters, assumptions, and standards that align with industry's best practices, regulatory requirements, and project goals:

1. Establish clear and comprehensive design criteria for each treatment process and its components that align with industry standards, regulatory requirements, and project goals.
2. Define design parameters for civil (yard piping, stormwater management, paving and grading), architectural, structural, mechanical, HVAC/plumbing, instrumentation/control, and electrical systems.

Task 2.2.3 Total Fee……$41,322.70 (Time & Materials)

Task 2.2.4 – Preliminary Design Report (30% Design)

Task 2.2.4.1 – Preliminary Design Report (30% Design)

Upon establishment of design criteria and receipt of information from Task 2.2, Carollo will develop a preliminary design report (PDR) with support from subconsultants. The PDR shall include the following components:

- Introduction and purpose.
- Site specific details including:
    - Site Topographic and Boundary Survey.
    - Geotechnical investigations and recommendations for foundation design.

- Design criteria including:
    - Process mechanical design criteria.
        - Process Mechanical
            - Preliminary list of equipment for major process mechanical equipment, including estimated sizes, capacities, and quantities. The list shall be accompanied by preliminary specifications and/or datasheets if available.
            - Recommend procurement process for new process equipment.
            - Establish the level of treatment required (4-log disinfection required).
            - Establish the level of redundancy required for all process equipment.
            - Design will be completed in a 3D and BIM360 environment to enhance visualization during design and construction as follows:
                - The various structures and buildings will be developed in a 3D drawing format, with applicable extractions from the associated 3D models to create 2D drawings (plans and sections) for adding applicable details and annotations as part of the Interim Review Submittals identified herein.
                - The 3D models will incorporate major design elements such as aboveground and below-grade structures; process, mechanical and electrical equipment; process piping, mechanical ductwork; electrical cable trays, major conduits and duct banks; and other critical elements.
                - The 3D models will be updated throughout design development and reviewed with SJCUD staff during regularly scheduled progress meetings. Models will be in viewable PDF format.
                - Clash detection software (Navisworks) will be used during design in conjunction with the 3D models to identify and mitigate the potential multi-discipline conflicts such as structural elements, electrical cable trays, conduits and duct banks; HVAC ductwork; and mechanical piping.
        - Byproduct Waste Disposal
            - Preliminary evaluation of byproduct waste streams generated by process mechanical equipment selection. Summary of recommendations for disposal will be provided.
    - Structural design criteria.
        - Preliminary Foundation Plan that displays the type and location of the foundation system, including footings, piles, retaining walls, and other foundation elements. It should also include preliminary sizing for these elements based on the expected loads and soil conditions. Provide coordination with the geotechnical engineer(s) for the development of the preliminary foundation plan.
        - Preliminary Structural Framing Plans that display the proposed structural system layout for the building or infrastructure. They should include the type, size, and location of columns, beams, slabs, walls, trusses, and other structural elements.
        - Preliminary Structural Sections and Details that provide an initial understanding of the proposed structural systems and their integration with other building elements.
    - Building design criteria.

- Operations Administration and Electrical Building: The new WTP will include appropriately sized operations administration and electrical building meeting all applicable local and state codes, including those for ADA compliance.
- HVAC/Plumbing:
    - System Description(s) that provide a description of the preliminary design intent, the design criteria, and the energy efficiency measures being considered.
    - Preliminary Layout(s) that show the proposed placement of major elements of the HVAC and plumbing equipment. The Preliminary Layout(s) shall also show the routing of main ductwork, pipework, and drains.
- Architectural:
    - Preliminary Building Plans showing the architectural themes, the layout of the proposed building(s) including room arrangements and sizes, door and window locations, locations of major equipment, and other key elements. It should also indicate the functional usage of different areas within the building.
    - Preliminary Building Elevations that establish a sense of what the building will look like from the outside, showing the design of the building's exterior, the number of stories, and the height of the building.
    - Preliminary Material and Finish Selections of the major materials and finishes to be used in the construction.

- Electrical/ Instrumentation and control design criteria.
    - The new WTP will include necessary electrical and instrumentation and controls equipment. Electrical design will be based on Class 1 reliability requirements. Electrical gear including appropriately sized utility transformers, switchgear, motor control centers and variable frequency drives will be housed in climate-controlled building(s).
        - Carollo will evaluate electrical power considerations for both normal utility power and emergency stand-by power for each unit process as well as load shedding, surge suppression and lightning protection. Carollo will meet with appropriate power company to determine utility power supply needs for the facilities. Carollo will evaluate and recommend appropriate locations and types of instruments necessary for process control and those required for permit compliance.
        - Controls will adhere to the SJCUD SCADA Standards Manual. All communication between PLC and other equipment shall be Ethernet/IP.
        - The power distribution system shall be main-tie-main construction however each main shall be fed from a conventional automatic transfer switch. Initially both utility feeds will be from a single pad mounted transformer. At build out a second utility company pad mounted transformer may be required. Initially both emergency feeds will be from a single standby generator sized for the initial load. At build out a second standby generator may be required or the initial standby generator could be replaced with a larger unit.
        - The standby generator fuel storage tank shall be a stand-alone concrete encased fuel storage tank with fuel level and leak monitoring.

- Emergency Power System Design for the emergency power system, including generators, automatic transfer switches, uninterruptible power supply (UPS), etc. Input from SJCUD about the Emergency Power System Design will be provided during a virtual meeting.
- Variable frequency drives (VFDs) shall be active front end type. Drives rated 125 HP and below shall be included within the motor control centers. Drives above 125 HP shall be stand-alone construction.
- Electrical Room Layout showing the proposed location of major equipment like switchgear, transformers, and motor control centers. Input from SJCUD about the Electrical Room Layout will be provided during a virtual meeting.
- Define/document requirements and concepts for special systems: Telephone (including incoming service location and scope of supply), data highway (control system), data highway (LAN, office automation), fire alarm system, paging system, security system, closed-circuit television system, cable TV system and others as required by SJCUD.
- Conceptual Control Philosophy detailing the basic operation of the system from a controls standpoint, the parameters will be measured or monitored, the high-level logic for control decisions, local control, level of automation, supervisory control, and any automatic responses to specific conditions. Input from SJCUD staff with respect to desires for Conceptual Control Philosophy shall be accomplished by conducting one virtual meeting.
- Control System Configuration for local control panels, PLC-based controls, DCS-based controls, etc. Input from SJCUD with respect to desires for Control System Configuration shall be accomplished by conducting one virtual meeting with SJCUD staff.
- SCADA Integration - Carollo's Instrumentation and Control Engineer and SCADA integration specialist will confirm site conditions and requirements for SCADA support and integration during construction.

- Hydraulics and hydraulic design criteria (including a detailed hydraulic profile).
  - Preliminary Hydraulic Profile: Carollo will prepare a preliminary hydraulic profile of the entire treatment plant to handle Day 1 and future flows under average day and peak flow conditions for the planning horizon (2050).
- Site design criteria.
  - Stormwater and Roadways: The preliminary design will estimate the pervious and impervious areas and determine the necessary stormwater conveyance, treatment and discharge requirements. The design will also include access to roadways, site security requirements such as number of entrances, gates, fences and security cameras (as desired).
  - Landscape Architectural Services:
    - Provide written summaries of applicable St. Johns County zoning, buffer, and landscape requirements, including sidewalk and streetscape standards, in support of the Master Planning Report.
    - Coordinate with the design team to confirm early alignment with Silverleaf design requirements.
    - Prepare draft landscape strategy and graphics for inclusion in the submittal. Buffer concepts are included on Site Civil site plan.

        - Develop full landscape and irrigation plans and specifications for the St. Johns County permit submittal and bid drawing deliverables.
        - Include planting layouts, irrigation zoning, schedules, and technical specifications.
    - Maintenance of Traffic (Allowance): ETM will prepare site specific maintenance of traffic (MOT) plans for the proposed driveway connection to County Road 16A. Due to the ongoing construction in the area realigning County Road 16A at the First Coast Expressway and the potential for water main installation in the right-of-way of County Road 16A, site specific MOT plans may be required.
- A written description of the materials and equipment to be incorporated into the project.
- List of required permits.
- Preliminary drawings, including:
    - Hydraulic profile.
    - Process flow diagram.
    - Site layout.
    - Mechanical plan view drawings.
    - Structural plan view drawings.
    - Electrical single-line diagrams.
    - Process and instrumentation diagrams.
- A list of the proposed design specifications.
- Equipment data sheets.
- Carollo will provide a review of the CMAR cost estimate. This task is budgeted under Task 1.4 as described above.

The Draft Trout Creek WTP PDR will be submitted to SJCUD for review. A workshop will be held with SJCUD staff to review the PDR and receive any comments. The final PDR will be finalized within two weeks of the workshop.

Task 2.2.4.1 Total Fee……..$555,839.31 (Lump Sum)
$5,125.00 (Allowance)

Task 2.2.4.2 – Ground Storage Tanks Design Criteria

Carollo will prepare a standalone Design Criteria Package (DCP) for the proposed Ground Storage Tanks (GSTs) to support a Design-Build (DB) procurement. The DCP will establish the technical, operational, and site-specific requirements necessary for DB teams to develop the final design and construction approach. The DCP will include preliminary site layout concepts; projected storage capacity requirements; yard piping criteria; preliminary pipe sizing; hydraulic design criteria; geotechnical recommendations and foundation requirements based on available subsurface information; utility considerations; site access requirements; and technical specifications defining minimum design, material, equipment, and performance requirements for the GSTs.

It is assumed that SJCUD will advertise the GST DCP as a separate DB solicitation independent of the CMAR-delivered improvements. Carollo will support coordination of the DCP with the adjacent project components to allow compatibility with the overall facility layout, hydraulic requirements, and future operational needs.

Carollo will provide limited support during the qualification-based selection phase, including responses to bidder questions, and preparation of addenda. The scope assumes up to ten bidder questions; and two addendums. Technical content for bidder questions and addendum will be developed by Carollo, but formal responses will be issued by SJCUD. Additional procurement support beyond the assumed level may be provided as an additional service.

Task 2.2.4.2 Total Fee……$18,825.97 (Lump Sum)

Task 2.3 – Early Procurement, Identification and Support of Equipment Requiring Pre-Purchasing

To address/mitigate critical path for Project 1, after the CAMP Workshop**,** Carollo will present a list of equipment that is recommended for shop-drawing and related equipment design submittal pre-purchasing by SJCUD. The selection of equipment for pre-purchase will be based on schedule impacting shop drawing or equipment delivery lead time. It is intended at PDR design workshop for SJCUD to confirm equipment selection. Carollo will accelerate the development of selected equipment specifications for procurement. It is anticipated that shop drawings will be available for review and approval at 60% and 90% design milestones as described respective design tasks below. It is assumed that SJCUD will work with CMAR on early procurement of all long-lead items

Following the PDR/30% design workshop, Carollo will assist the CMAR with the pre-procurement of selected long-lead equipment to support the project schedule. It is assumed that up to eight (8) owner-furnished equipment procurement packages will be prepared, potentially including major process and electrical equipment such as pumps, filters, switchgear, generators, and automatic transfer switches.

For each procurement package, Carollo will prepare technical specifications sufficient for CMAR to solicit pricing. Services will include:

- Recommended vendors
- Equipment sizing and design criteria

Carollo will provide limited support during the solicitation phase, including responses to bidder technical questions, preparation of addenda responses, and evaluation of vendor qualifications. The scope assumes three bidder inquiries and two addenda per package; additional procurement support beyond the assumed level may be provided as an additional service.

The early procurement will occur prior to completion of Carollo's final design; the early procurement documents will be based upon the design information available at the time of procurement. Carollo shall not be responsible for redesign or modifications to procured equipment resulting from changes in SJCUD requirements, site conditions, regulatory requirements, or other project changes occurring after SJCUD authorization of procurement, except to the extent such changes result from errors or omissions in Carollo's services. If during shop drawing reviews, it is deemed that the equipment would need to be substantially modified as the design progresses from 30% (when equipment was procured) to 90% design, CMAR may be required to issue a change order to the respective vendor of such equipment. None of the early procured equipment will be released for fabrication before final approval of the shop drawings.

Task 2.3 Total Fee……$61,500.00 (Time & Materials)

Task 2.4 – Permitting

Carollo will perform various permitting coordination and assistance activities. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permitting activities will begin at the preliminary design level but permit applications may not be submitted until after the 60% design.

2.4.1 - FDEP Permit Application

Carollo will prepare and submit the Florida Department of Environmental Protection (FDEP) Specific Permit to Construct PWS Components application for the proposed improvements in accordance with Chapter 62-555, Florida Administrative Code (F.A.C.), and all applicable FDEP design criteria and regulatory requirements. Carollo will coordinate with FDEP throughout the permitting process, including participation in pre-application meetings, preparation of supporting technical documentation, and coordination of permit application submittals. Carollo will address and respond to up to two Requests for Additional Information (RAIs) issued by FDEP and will revise permit documentation as necessary to support permit issuance. The permit application will be developed based on the approved design documents and submitted at a design milestone appropriate for agency review (assumed post 60% design). Carollo will track permit review progress and provide SJCUD with periodic updates regarding permitting status through permit issuance.

Task 2.4.1 Total Fee……..$23,318.65 (Lump Sum)

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2.4.2 - Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP)

England-Thims & Miller, Inc. (ETM) will be supporting Carollo for stormwater management and the ERP. ETM, serving as SJCUD's subconsultant, is concurrently providing design and permitting services for a joint-use stormwater management facility (SMF) to be located on the adjacent parcel owned by Trout Creek Venture LLC. The SMF will be situated southeast of the proposed Water Treatment Plant (WTP) site and will receive stormwater runoff from the WTP through a planned drainage connection. The initial phase of the SMF will be designed and permitted to accommodate runoff associated with the WTP site, with future expansion of the facility anticipated as development occurs on the adjacent parcel. The adjacent property owner will be responsible for modifying the ERP and expanding the SMF to support ultimate site development. ETM will coordinate the design of the SMF control structure to accommodate both the ultimate buildout condition and the initial WTP phase. Wetland delineation and evaluation of potential impacts associated with the isolated wetland located in the southwest portion of the site are being performed by others under a separate contract. Coordination between the WTP and SMF design efforts will be required to establish final stormwater design criteria and permit assumptions. It is anticipated that the ERP for the SMF will be obtained prior to submission of the WTP permitting package.

ERP permitting for water treatment facilities is administered by the FDEP pursuant to the operating agreement between FDEP and the Water Management District, the Trout Creek WTP project will require an ERP from FDEP. Carollo, with support from ETM, will prepare and submit the ERP application for the WTP site.

Task 2.4.2 Total Fee……..$9,524.00 (Lump Sum)

2.4.3 - Land Development Permit

ETM, with support from Carollo, will provide land development services for the Trout Creek site. ETM will prepare and submit a full permit package to the St. Johns County Development Services to permit the WTP site. This task will utilize the design documents outlined in previous tasks. ETM will prepare all permit applications, exhibits, and tables necessary for the permit application and will coordinate its processing. This task also includes meetings and negotiations with St. Johns County staff, Carollo engineering subconsultants and project surveyor, and responses to requests for additional information from St. Johns County staff.

Task 2.4.3 Total Fee……$11,039.00 (Lump Sum)

2.4.4 - Permit Assistance - FDEP Variance (OPTIONAL)

It is our understanding that an FDEP permit variance will not be required as part of this project and, therefore, variance-related services are excluded from the base scope of work. Variances are typically considered by FDEP at the state level when a public water system is unable to meet a regulatory water quality standard and requires temporary relief from compliance requirements. Based on current available information and project objectives, no permit variance is anticipated. However, should FDEP determine that a variance request is necessary during permit review or operation of the facility, Carollo can provide assistance as an Optional Service. Such services may include preparation of technical documentation, evaluation of compliance alternatives, coordination with FDEP staff, development of supporting engineering analyses, and preparation of materials necessary to support the variance request. The effort in this task is limited to the budget proposed.

Task 2.4.4 Total Fee……$16,224.00 (Allowance)

Task 2.5 – 60% Design

2.5.1 - 60% Design

Carollo will prepare 60 percent level documents for SJCUD/CMAR review and comment. The 60 percent design submittal will include all discipline plans, technical specifications, and typical details.

Carollo will attend a review meeting with SJCUD and CMAR. SJCUD and CMAR will provide review comments within 7 calendar days after submitting the design package.

Task 2.5.1 Total Fee……$713,972.40 (Lump Sum)

2.5.2 - Early Procurement, Shop Drawing Reviews

Upon receipt of vendor submittals and shop drawings, Carollo will review the information for conformance with the design intent and incorporate the selected equipment into the design documents.

Task 2.5.2 Total Fee……$61,561.24 (Time & Materials)

Task 2.6 – 90% Design

2.6.1 - 90% Design

Carollo will prepare 90 percent documents for SJCUD/CMAR review and comment. The 90 percent design submittal will include all discipline plans, technical specifications, and typical details.

Carollo will attend a review meeting with SJCUD and CMAR. SJCUD and CMAR will provide review comments 7 calendar days after submitting the design package.

Task 2.6.1 Total Fee…….$474,865.27 (Lump Sum)

Task 2.7 – 100% Design

Carollo will prepare 100 percent level documents for SJCUD review. The 100 percent design submittal will include all discipline plans, technical specifications, and typical details. Carollo will prepare “Issued for Construction” drawings by compiling bidder questions and addenda. The CMAR will be responsible for preparing and distributing the "Conformed Specifications/Project Manual."

Task 2.7 Total Fee…….$301,490.74 (Lump Sum)

Task 2.8 – Bidding Services

Carollo will provide bidding-phase support services to the CMAR throughout the procurement of construction trade packages for the Project. The CMAR will advertise for bids, maintain the bidder's log, review/submit addenda, and review and receive the bids. Carollo bidding phase services will include the following tasks.

Under the Time and Materials framework for the Bidding Services task, Carollo shall monitor and track labor hours, expended budget, and remaining funds by each subtask. These metrics will be documented in each monthly progress report. Carollo will perform routine budget forecasting to identify potential overruns early. Should a budget shortfall be projected, Carollo shall notify the SJCUD Project Manager in advance and work cooperatively to process a formal change order or contract amendment at an appropriate juncture.

Task 2.8.1 – Responses to Bidder Questions

Carollo will respond to questions related to the technical sections of the documents submitted by potential bidders. Carollo will provide drawings and specification updates, as needed, for issuance of addenda. CMAR will compile, coordinate, and issue all addenda for the project bidding.

Task 2.8.1 Total Fee…….$44,373.07 (Time & Materials)

Task 2.9 – Construction Phase Services

The following services are for the construction of the Trout Creek Water Treatment Plant. Carollo will provide discipline-specific construction inspection services as desired by SJCUD and as described in the subtask below. The overall construction duration is estimated to be approximately twenty-four (24) months. The project construction duration will be confirmed by CMAR. Review beyond the assumed construction period may be considered additional engineering services during construction.

Under the Time and Materials framework for the Construction Services task, Carollo shall monitor and track labor hours, expended budget, and remaining funds by each subtask. These metrics will be documented in each monthly progress report. Carollo will perform routine budget forecasting to identify potential overruns early. Should a budget shortfall be projected, Carollo shall notify the SJCUD Project

Manager in advance and work cooperatively to process a formal change order or contract amendment at an appropriate juncture.

Task 2.9.1 – Review Shop Drawings and RFIs

Carollo will clarify technical or design-related questions to the CMAR and will issue clarifications of the design documents as deemed appropriate to each request. In addition, Carollo will review up to three hundred (300) shop drawings with up to one resubmittal per shop drawing as well as up to a hundred (100) Requests for Information (RFIs). Carollo will track budgeted hours identified in Exhibit B. Carollo will judiciously track all hours under this task and submit for approval each month. Any additional hours beyond this budget will be submitted to SJCUD approval as part of a separate change order at a later time

Carollo's Engineer or Record will review and return shop drawings within 14 calendar days of receipt of the shop drawings. Carollo will expedite review of certain critical path shop drawings as identified by the CMAR and communicate with 14 calendar days in advance.

Task 2.9.1 Total Fee…….$776,864.51 (Time & Materials)

Task 2.9.2 – Field Change Directive and Change Order Reviews

Carollo will assist the SJCUD in issuing Field Change Directives (FCD) for changes that are identified as conflicts in the field by the CMAR and approved by the SJCUD.

At SJCUD's request, Carollo will review and evaluate change orders (CO) issued by the CMAR for conformance to the approved change.

Task 2.9.2 Total Fee…….$44,532.22 (Time & Materials)

Task 2.9.3 – Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion

Carollo will attend the following:

- One Pre-Construction Conference*.
- Up to twenty-four (24) Monthly Construction Progress Meetings (up to 2 hours each).
- Up to four (4) Pre-Installation Meetings (up to 2 hours each).
- Up to four (4) Pre-process Start-up Meetings (up to 2 hours each).
- Up to four (6) Electrical and Instrumentation Meetings (up to 2 hours each).
- One Substantial Completion walkthrough (up to 4 hours).
- One Final Completion walkthrough (Close-out Meeting).
- Post-Construction Meeting.

Carollo will prepare and distribute a meeting summary in electronic format to the attendees within one week after each meeting (denoted with *) for purposes of project documentation.

Carollo will attend one substantial completion walk and one final completion walk. Carollo will develop a substantial completion punch list and distribute accordingly within three business days after the substantial completion walk.

Carollo will conduct routine site visits to observe the construction progress. The frequency of site visits will be based upon project activity and need, within the allotted budget. In addition, Carollo will coordinate with SJCUD and the CMAR for site visits to verify installation and functionality of the electrical and instrumentation portions of the work as deemed appropriate for functional testing and start- up procedures.

Task 2.9.3 Total Fee……$207,528.25 (Time & Materials)

Task 2.9.4 – Assist with Start-up, Testing and Training

Carollo personnel will attend startup and testing activities to verify that the installed facilities are operating in general conformance with the design intent and performance requirements of the Contract Documents. Carollo will review startup and testing results, document observations, and provide recommendations regarding corrective actions, as needed, to achieve successful operation of the facilities. This scope assumes up to two (2) consecutive weeks of startup, testing, and training support, consisting of ten (10) full working days of on-site assistance by Carollo personnel. Additional startup, testing, training, troubleshooting, return visits, or extended operational support beyond the assumed two-week period will be considered additional services.

It is assumed that the CMAR will coordinate with the equipment manufacturers to provide training to SJCUD staff.

Carollo will support SJCUD with the preparation and submittal of all BacT test results to FDEP for review and approval. It is assumed that a preliminary BacT narrative will be submitted to FDEP for review prior to sample collection. This scope assumes that FDEP will provide a single round of comments or request for additional information (RAI) associated with its review of the BacT submittal.

Task 2.9.4 Total Fee……$106,107.74 (Time & Materials)

Task 2.9.5 – Limited Construction Inspection Services

Carollo will provide construction phase observation and inspection services associated with their respective areas of expertise to support quality assurance and conformance with the Contract Documents. Such inspections will be focused on concrete/structural, electrical, and instrumentation controls. Inspectors will monitor the installation, testing, and startup of project components; document specified construction progress; identify potential issues or deviations; and coordinate to facilitate timely resolution of field concerns. Inspection activities will include review of workmanship, materials, equipment installations, and compliance with project plans, specifications, permits, and applicable regulatory requirements.

Carollo is not responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions or programs, or for CMAR failure to perform their work in accordance with the construction documents.

Task 2.9.5 Total Fee……$101,408.00 (Time & Materials)

Task 2.9.6 – Post Construction Services

Carollo will review CMAR provided redlines of the construction plans and utilize the documented

information to prepare as-built record drawings for submittal to SJCUD.

Carollo will provide permit closeout services for all permits obtained by Carollo as part of Task 2; permit closeout for permits obtained by the CMAR is excluded from this scope.

Also, at SJCUD's request, Carollo will review for general contents as required by the construction documents the following documents that are to be assembled and provided by the CMAR:

- Electronic Operation and Maintenance manuals.
- Guarantees.
- Certifications of Inspection.

Task 2.9.6 Total Fee……$67,029.82 (Time & Materials)

Task 2.9.7 – Asset Management

Carollo will review the asset inventory spreadsheet developed by the CMAR for incorporation into SJCUD's asset management database. Direct entry of asset information into the asset management software is not included in this scope and will be considered an additional service.

Task 2.9.7 Total Fee……$14,436.00 (Time & Materials)

Task 2.9.8 – Facility O&M Manual

Carollo will prepare a Operations and Maintenance (O&M) Manual for the facility to support SJCUD staff in the operation, monitoring, maintenance, and troubleshooting of the installed systems. The O&M Manual will be developed using information from the final design documents, equipment submittals, manufacturer literature, startup and testing documentation, and operation and maintenance manuals provided by equipment vendors and the CMAR.

The O&M Manual will include facility descriptions, process narratives, equipment summaries, standard operating procedures, preventive maintenance recommendations, process control considerations, alarm and monitoring descriptions, and troubleshooting guidance for major treatment and support systems. Carollo will coordinate with the CMAR and equipment manufacturers to obtain and incorporate relevant information necessary to develop the manual.

A draft O&M Manual in pdf format will be submitted to SJCUD for review and comment. Carollo will incorporate one consolidated round of SJCUD comments and provide a final O&M Manual in pdf format. This scope assumes that equipment-specific operation and maintenance manuals prepared by manufacturers will be provided by the CMAR and incorporated by reference or appended to the facility O&M Manual, as appropriate.

Task 2.9.8 Total Fee……$126,383.21 (Time & Materials)

Task 2 Total Fee……$4,418,251.16
$2,717,863.40 (Lump Sum)
$1,653,046.76 (Time & Materials)
$47,341.00 (Allowance)

Task 3 – Northwest to CR 214 Service Area Finished Water Blend and Transfer Station

Carollo will provide professional engineering services to support the design and construction of the Northwest to CR 214 Service Area Finished Water Blending and Transfer Station. The project is intended to improve system capacity, reliability, and water quality within the CR 214 service area by facilitating the transfer and blending of finished water from the northwest portion of St. Johns County.

The CR 214 WTP wellfield has limited expansion potential and relies on reverse osmosis treatment due to lower raw water quality. In contrast, higher quality raw water is available in the northwest service area. System planning has identified the transfer of water from the northwest to the CR 214 service area as a preferred solution to meet increasing demand and maintain system performance.

A 2.0 MGD blending and transfer station was previously constructed at the CR 214 WTP site in 2018. This project will expand system capability through the construction of a new blending, storage, and booster pump station to provide an additional 2.5 MGD of finished water to the southern service area. Final design pressures and operating conditions shall be established based on system modeling and analysis performed as part of this project. The new facility shall be designed to integrate with existing infrastructure, including the current blending station, high service pump station, and SCADA system at the CR 214 WTP.

Carollo shall utilize and update the existing hydraulic water model to establish final design flows, pressures, and system operating conditions.

SJCUD's conceptual planning has identified a potential corridor along CR 2209 and a general location west of the CR 214 WTP for the proposed facility. Carollo shall evaluate alternative site locations, including potential property acquisition sites and existing County-owned properties, to determine the most feasible location for the project. The new blending station will include two (2) new 1.25 MG ground storage tanks, package pump station, electrical facilities and chemical feed systems.

The work associated with these engineering services is separated into the following tasks:

Task 3.1 – Project Management

Carollo shall provide project management and coordination throughout the Project 2 effort. Services shall include:

- Conduct a project kickoff meeting with SJCUD staff and applicable project stakeholders.
- Conduct monthly meetings with Carollo and SJCUD – 12 meetings are estimated.
- Conduct site visits, one (1) visit is expected for each discipline through the 90% design.
- Additional milestone workshops:
    - Conduct Workshop/Progress Meeting to review Conceptual Design.
    - Conduct Workshop/Progress Meeting to review 30% design documents.
    - Conduct Workshop/Progress Meeting to review 60% design documents.

Task 3.1 Total Fee…….$75,682.10 (Lump Sum)

Task 3.2 – Data Collection and Review

Task 3.2.1 – Data Collection and Review

Carollo shall review the available data of the existing CR214 WTP, NW WTP, Trout Creek WTP (as able) and associated systems.

The following information will be provided by SJCUD:

- Record drawings
- Previous studies, reports, master plan, and/or facility plans
- Operating/Control Narratives for existing Blend/Transfer Station
- Existing hydraulic models
- Finished Water quality data for CR214 and NW WTPs (2021-2026)
- Current Blend water quality and chemical dosing data

Task 3.2.1 Total Fee……..$13,156.92 (Lump Sum)

Task 3.2.2 – Survey

It is understood that the location of the blending station is not identified. Survey will be required if the blending station is located off the CR 214 WTP site. ETM Survey & Mapping, Inc. will provide miscellaneous survey support such as establishment of SJCUD required survey control including benchmarks, centerline control points, tank staking, as well as additional field survey staking on an as needed basis.

Task 3.2.2 Total Fee……..$39,542.63 (Lump Sum)
$13,409.00 (Allowance)

Task 3.2.3 – Geotechnical Investigation

Universal Engineering Sciences (UES) will provide geotechnical investigation services for the blending station site. Geotechnical soil borings shall be provided at the location of proposed major structures. Geotechnical work is anticipated to include the following:

- 1 – 35 ft boring for stormwater
- 3 – 50 ft borings for electrical building and pump slab
- 4 – 100 ft borings for GSTs

A geotechnical report shall be provided with recommendations for the structure foundations and piping.

Task 3.2.3 Total Fee……..$20,067.40 (Lump Sum)

Task 3.2.4 – Phase 1 Environmental Site Assessment (OPTIONAL)

The purpose of the Phase I ESA is to evaluate the property for the presence or likely presence of any hazardous substance or petroleum products in soil, groundwater, or surface water from on-site and off-site sources. AEC will perform our study consistent with the standards provided in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", the Standard (ASTM E 1527-21). As required by the noted Standard, our work will be conducted under the responsible charge of an Environmental Professional.

Task 3.2.4 Total Fee……..$9,488.62 (Allowance)

Task 3.3 – Technical Evaluation and Conceptual Design

Carollo shall provide technical memoranda for the following items for conceptual design.
Lump Sum)

Task 3.3.1 - Finished Blended Water Quality – Bench Scale Study

Bench scale testing will be conducted to validate proposed blending ratios derived from the desktop analysis. The bench-scale testing will use the water from the existing facility, and pilot plant from Project 1. Water quality parameters to be tested during bench-scale will be developed as part of the testing plan. It is assumed that water sample lab testing will be performed either at the SJCUD's lab or SJCUD's contract lab. A technical memorandum will be prepared to summarize the testing plan, water quality data, key findings, and recommendations for full-scale implementation.

Task 3.3.1 Total Fee……$80,385.74 (Lump Sum)

Task 3.3.2 - Hydraulic Modeling

The hydraulic water model shall be updated and utilized to establish blend rates and optimize system performance to establish final design flows, pressures, and system operating conditions.

Task 3.3.2 Total Fee……$28,210.14 (Lump Sum)

Task 3.3.3 - New Blending Station Site Plan and Equipment Design Criteria

Carollo shall perform a high-level assessment of up to two (2) potential locations for the blending station.. This work will include a basic level site plan to assist in the final site selection process.

Task 3.3.3 Total Fee……$25,949.98 (Lump Sum)

Task 3.4 – Detailed Design Documents and Preliminary Design Report (PDR)

Task 3.4.1 - Preliminary Design Report and 30% Design Documents

Prepare a PDR that includes the information from Tasks 3.2 and 3.3 and other necessary information required to proceed into Final Design. The PDR shall include the following components:

- Introduction and purpose.
- Site specific details including:
    - Site Topographic and Boundary Survey.
    - Geotechnical investigations and recommendations for foundation design.
    - Design criteria including:
    - Process mechanical design criteria.
        - Process Mechanical
            - Preliminary list of equipment for major process mechanical equipment, including estimated sizes, capacities, and quantities. The list shall be accompanied by preliminary specifications and/or datasheets if available.
            - Recommend procurement process for new process equipment.
            - Establish the level of redundancy required for all process equipment.

- Structural design criteria.
  - Preliminary Foundation Plan that displays the type and location of the foundation system, including footings, piles, retaining walls, and other foundation elements. It should also include preliminary sizing for these elements based on the expected loads and soil conditions. Facilitate coordination with the geotechnical engineer(s) for the development of the preliminary foundation plan.
- Electrical/ Instrumentation and control design criteria.
  - The blending PS will include necessary electrical and instrumentation and controls equipment. Electrical design will be based on Class 1 reliability requirements. Electrical gear including appropriately sized utility transformers, switchgear, motor control centers and variable frequency drives will be housed in climate-controlled building(s).
    - Carollo will evaluate electrical power considerations for both normal utility power and emergency stand-by power for each unit process as well as load shedding, surge suppression and lightning protection. Carollo will meet with appropriate power company to determine utility power supply needs for the facilities.
    - Carollo will evaluate and recommend appropriate locations and types of instruments necessary for process control and those required for permit compliance.
    - Controls will include Ethernet/IP Fiber Optic network configuration and associated communication protocols.
    - The power distribution system shall be single bus motor control center construction fed from a conventional automatic transfer switch. The utility feed will be from a single pad mounted transformer. The emergency feed will be from a single standby generator sized for the load at build out.
    - The standby generator fuel storage tank shall be a stand-alone concrete encased fuel storage tank with fuel level and leak monitoring.
    - Variable frequency drives (VFDs) shall be active front end type included within the motor control centers.
    - Electrical Room Layout showing the proposed location of major equipment like switchgear, transformers, and motor control centers. Input from SJCUD about the Electrical Room Layout will be provided during a virtual meeting.
    - Define/document requirements and concepts for special systems: Telephone (including incoming service location and scope of supply), data highway (control system), data highway (LAN, office automation), fire alarm system, paging system, security system, closed-circuit television system, cable TV system and others as required by SJCUD.
    - Conceptual Control Philosophy detailing the basic operation of the system from a controls standpoint, the parameters will be measured or monitored, the high-level logic for control decisions, local control, level of automation, supervisory control, and any automatic responses to specific conditions. Input from SJCUD staff with respect to desires for Conceptual Control Philosophy shall be accomplished by conducting one virtual meeting.
    - Control System Configuration for local control panels, PLC-based controls, DCS-based controls, etc. Input from SJCUD with respect to desires for

Control System Configuration shall be accomplished by conducting one virtual meeting with SJCUD staff.

- SCADA Integration - Carollo's Instrumentation and Control Engineer and SCADA integration specialist will confirm site conditions and requirements for SCADA support and integration during construction.

  - Hydraulics and hydraulic design criteria
    - Preliminary Hydraulic Calculations: Carollo will perform hydraulic calculations for the pump station and update the hydraulic model.
  - Site design criteria.
    - Stormwater and Roadways: The preliminary design will estimate the pervious and impervious areas and determine the necessary stormwater conveyance, treatment and discharge requirements. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security cameras (as desired).
    - Landscape Architectural Services:
      - Provide written summaries of applicable St. Johns County zoning, buffer, and landscape requirements, including sidewalk and streetscape standards, in support of the Master Planning Report.
      - Coordinate with the design team to provide early alignment with Silverleaf design requirements.
      - Prepare draft landscape strategy and graphics for inclusion in the submittal. Buffer concepts are included on Site Civil site plan.
      - Develop full landscape and irrigation plans and specifications for the St. Johns County permit submittal and bid drawing deliverables.
      - Include planting layouts, irrigation zoning, schedules, and technical specifications.
  - A written description of the materials and equipment to be incorporated into the project.
  - List of required permits.
- Preliminary drawings in AutoCAD 2026, including:
  - Hydraulic profile.
  - Process flow diagram.
  - Site layout.
  - Mechanical plan view drawings.
  - Structural plan view drawings.
  - Electrical single-line diagrams.
  - Process and instrumentation diagrams.
- A list of the proposed design specifications.
- Equipment data sheets.

The Draft Finished Water Blend and Transfer Station PDR will be submitted to SJCUD for review. A workshop will be held with SJCUD staff to review the PDR and receive any comments. The final PDR will be finalized within two weeks of the workshop.

Task 3.4.1 Total Fee……$199,960.24 (Lump Sum)

Task 3.4.2 - 60% Design

Carollo will prepare 60 percent level documents for SJCUD review and comment. The 60 percent design submittal will include all discipline plans, technical specifications, and typical details.
Carollo will attend a review meeting with SJCUD. SJCUD will provide review comments 7 calendar days after submitting the design package.

Carollo will perform various permitting coordination and assistance activities. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permit applications may not be submitted until after the 60% design.

Task 3.4.2 Total Fee……$347,613.64 (Lump Sum)

Task 3.4.3 - 100% Design

Carollo will prepare 100 percent level documents for SJCUD review and comment. The 100 percent design submittal will include all discipline plans, technical specifications, and typical details. Carollo will prepare “Issued for Construction” drawings by compiling bidder questions and addenda. The CMAR will be responsible for preparing and distributing the "Conformed Specifications/Project Manual."

Task 3.4.3 Total Fee……$243,469.62 (Lump Sum)

Task 3.5 – Construction Phase Services

Under the Time and Materials framework for the Construction Services task, Carollo shall monitor and track labor hours, expended budget, and remaining funds by each subtask. These metrics will be documented in each monthly progress report. Carollo will perform routine budget forecasting to identify potential overruns early. Should a budget shortfall be projected, Carollo shall notify the SJCUD Project Manager in advance and work cooperatively to process a formal change order or contract amendment at an appropriate juncture.

Task 3.5.1 - Project Management

Activities performed under this task consist of the general functions required to maintain that the project is on schedule, within budget, and that the quality of the work products defined within this scope are consistent with SJCUD’s standards and expectations. This task also includes monthly invoicing.

Task 3.5.1 Total Fee……$30,451.28 (Time & Materials)

Task 3.5.2 - Pre-Construction Meeting

Carollo will attend one (1) pre-construction meeting and provide assistance to SJCUD in answering technical questions during the meeting. Carollo will prepare an agenda and distribute minutes to the project team.

Task 3.5.2 Total Fee……$12,313.99 (Time & Materials)

Task 3.5.3 - Construction Progress Meetings

Carollo will attend monthly construction progress meetings and site visits. It is assumed that no more than fifteen (15) meetings will be attended by Carollo. Carollo will prepare an agenda and distribute meeting minutes to the project team.

Task 3.5.3 Total Fee…….$52,291.80 (Time & Materials)

Task 3.5.4 - Review Shop Drawings

Carollo will receive, review, evaluate, and distribute shop drawings. It is assumed that no more than thirty five (35) shop drawings will be reviewed by Carollo. No more than one resubmittal per shop drawing is assumed.

Task 3.5.4 Total Fee…….$116,559.85 (Time & Materials)

Task 3.5.5 – Assist with Start-up, Testing and Training

Carollo personnel will attend startup and testing activities to verify that the installed facilities are operating in general conformance with the design intent and performance requirements of the Contract Documents. Carollo will review startup and testing results, document observations, and provide recommendations regarding corrective actions, as needed, to achieve successful operation of the facilities. This scope assumes up to two (2) consecutive weeks of startup, testing, and training support, consisting of ten (10) full working days of on-site assistance by Carollo personnel. Additional startup, testing, training, troubleshooting, return visits, or extended operational support beyond the assumed two-week period will be considered additional services.

It is assumed that the CMAR will coordinate with the equipment manufacturers to provide training to SJCUD staff.

Carollo will support SJCUD with the preparation and submittal of all BacT test results to FDEP for review and approval. It is assumed that a preliminary BacT narrative will be submitted to FDEP for review prior to sample collection. This scope assumes that FDEP will provide a single round of comments or request for additional information (RAI) associated with its review of the BacT submittal.

Task 3.5.5 Total Fee…….$39,295.40 (Time & Materials)

Task 3.5.6 - O&M Manuals

Carollo will receive, review, evaluate, and distribute O&M manuals. It is assumed that no more than five (5) O&M manuals will be reviewed by Carollo.

Task 3.5.6 Total Fee…….$23,033.97 (Time & Materials)

Task 3.5.7 - Requests for Information (RFI)

Carollo will receive, review, and evaluate up to ten (10) RFIs. Carollo will submit RFI response to the CMAR.

Task 3.5.7 Total Fee…….$14,255.34 (Time & Materials)

Task 3.5.8 - Design Clarifications (DC)

Carollo will issue necessary designer clarifications of Contract Documents. Carollo will issue up to three (3) DCs.

Task 3.5.8 Total Fee…….$22,029.99 (Time & Materials)

Task 3.5.9 - Substantial Completion Walk-Through

Carollo will conduct one (1) walk through to assess the project at Substantial Completion. Carollo will create a punch list and distribute to the project team. Carollo will issue the Substantial Completion Certificate to the CMAR upon SJCUD approval.

Task 3.5.9 Total Fee…….$18,455.65 (Time & Materials)

Task 3.5.10 - Final Completion Walk-Through

Carollo will conduct one (1) final walk through to confirm and verify the completion of the punch list.

Task 3.5.10 Total Fee…….$16,629.62 (Time & Materials)

Task 3.5.11 - Construction Record Drawings

Carollo will update the construction record drawings upon acceptance of CMAR's construction red lines. Carollo will produce and submit construction record drawings upon project final completion for SJCUD review. Carollo will incorporate SJCUD review comments and submit final construction record drawings in electronic format (PDF) and AutoCAD.

Task 3.5.11 Total Fee…….$69,739.40 (Time & Materials)

Task 3.5.12 - Project Completion Certification

Carollo will perform the project completion certification and submit to FDEP.

Task 3.5.12 Total Fee…….$5,646.37 (Time & Materials)

Task 3.5.13 – Asset Management

Carollo will review the asset inventory spreadsheet developed by the CMAR for incorporation into SJCUD's asset management database. Direct entry of asset information into the asset management software is not included in this scope and will be considered an additional service.

Task 3.5.13 Total Fee…….$3,200.00 (Time & Materials)

Task 3.5.14 – Facility O&M Manual

Carollo will prepare a Operations and Maintenance (O&M) Manual for the facility to support SJCUD staff in the operation, monitoring, maintenance, and troubleshooting of the installed systems. The O&M Manual will be developed using information from the final design documents, equipment submittals, manufacturer literature, startup and testing documentation, and operation and maintenance manuals provided by equipment vendors and the CMAR.

The O&M Manual will include facility descriptions, process narratives, equipment summaries, standard

operating procedures, preventive maintenance recommendations, process control considerations, alarm and monitoring descriptions, and troubleshooting guidance for major treatment and support systems. Carollo will coordinate with the CMAR and equipment manufacturers to obtain and incorporate relevant information necessary to develop the manual.

A draft O&M Manual will be submitted to SJCUD for review and comment. Carollo will incorporate one consolidated round of SJCUD comments and provide a final O&M Manual in electronic format. This scope assumes that equipment-specific operation and maintenance manuals prepared by manufacturers will be provided by the CMAR and incorporated by reference or appended to the facility O&M Manual, as appropriate.

Task 3.5.14 Total Fee……$38,668.29 (Time & Materials)

Task 3 Total Fee……$1,561,506.98
$1,074,038.41 (Lump Sum)
$464,570.95 (Time & Materials)
$22,897.62 (Allowance)

Task 4 – CR 214 Water Treatment Plant Facility Plan and Reliability Upgrades

The CR 214 WTP includes two (2) 2.0 mgd reverse osmosis (RO) treatment skids that operate in conjunction with raw water blending to produce approximately 8.0 mgd of finished water. The CR 214 Facility Plan generally includes the professional engineering activities associated with the evaluation of the existing CR 214 WTP design, condition, operations, hydraulic performance, treatment processes, reliability, capacity, and operational constraints in coordination with the CR 214 Service Area Finished Water Transfer Station project and the CR 214 WTP Reliability Upgrades project for SJCUD. The Facility Plan will identify improvements to support short- and long-term operational efficiency, reliability, maintenance, and system demands.

This task will evaluate the facility to identify what improvements should be completed now versus later based on cost, timing and integration within the overall program. The improvements that are identified for final design and implementation only include the third RO skid. Additional improvements identified in the facility plan will be developed to the 30% design level. Further design beyond 30% as determined by SJCUD can be added for an additional fee, negotiated separately.

Task 4.1 – Project Management

Task 4.1.1 – Project Management

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and that the quality of the work products defined within this scope is consistent with Carollo's standards and SJCUD's expectations.

Task 4.1.1 Total Fee……$62,392.00 (Lump Sum)

Task 4.1.2 – Progress Meetings

Carollo will schedule and prepare for several progress meetings as below:

- Conduct a project kickoff meeting with SJCUD staff and applicable project stakeholders.
- Conduct Monthly Facility Plan Meetings virtually with SJCUD staff, Carollo's Program Manager, Project Manager (PM) and Project Engineer in attendance at minimum. Eight (8) meetings are estimated. The team will discuss progress updates and address any coordination required.
- Monthly Reliability Upgrades Update Meetings – Lead monthly PM update meetings that will be conducted virtually with SJCUD staff, Carollo's Program Manager, Project Manager (PM) and Project Engineer in attendance at minimum. Eight (8) meetings are estimated.
- Monthly Reliability Upgrades Design Progress Meetings – During the detailed design phase, Carollo will conduct up to 10 monthly progress meetings with the SJCUD's team to collect relevant information, present progress to date, receive guidance on design efforts, discuss issues and concerns, and monitor the progress of the work.
- **Reliability Upgrades Submittal Review Workshops** – Conduct a submittal review workshop with SJCUD for each of the following design submittals to facilitate timely stakeholder review of documents.
    - Preliminary Design Report and 30 Percent Design Submittal
    - 75 Percent Design Submittal
    - 100 Percent Design Submittal
- **Owner-Direct Purchased Equipment Basis of Design Selection Workshop** – Following the 30% Design Submittal workshop, Carollo will identify and present the long lead time items for shop drawing procurement through a competitive process where multiple qualified vendors are available. SJCUD will provide preference and proceed with handling development and issuance of documents for procuring owner-direct purchases. Upon selection, the CMAR will be required to attend and participate in selection workshop.

Task 4.1.2 Total Fee……$46,652.00 (Lump Sum)

Task 4.2 – Data Collection and Existing Conditions

Task 4.2.1 – Data Request

The purpose of this task is to collect and review the available data to complete the project. Data collection will include a variety of sources based on the best available data. The required data is anticipated to include, but not be limited to:

- Plant As-Built Record Drawings
- Existing Pump Operating Data (including pump starts, stops, run times, and cycling)
- Existing Electrical Data
- Existing SCADA and Instrumentation Data
- Previous Condition Assessments
- Existing Permits and Permit Conditions
- Existing Maintenance Records
- Proposed Projects
- Equipment and component information including RO Train Operation and Maintenance (O&M) manuals
- SCADA Logic & Screens

- Plant & RO Train Operational Data
- Raw Water Quality Historical Data
- Finished Water Quality Historical Data

The data provided will be reviewed and compiled for use in the following tasks.

Task 4.2.1 Total Fee……$17,305.99 (Lump Sum)

Task 4.2.2 – Field Investigation

Carollo will conduct a site visit and meet with SJCUD operations staff to observe existing conditions and document any potential operational deficiencies, constraints, safety concerns, and routine maintenance issues. The site visit and interviews will include process mechanical, electrical, instrumentation and controls, and structural representation. The investigation will include evaluation of available site/interior space and spatial constraints, assessment of existing treatment skid connections and interconnecting piping, and review of the existing electrical infrastructure, including power distribution and equipment interfaces. Information collected during the site visit will be used to verify existing conditions, identify potential constructability considerations, and support development of design concepts and project recommendations.

Task 4.2.2 Total Fee……$6,448.00 (Lump Sum)

Task 4.2.3 – Facility Evaluations

Carollo will assess the RO treatment system, clear well and high service pump station to identify physical, operational, and infrastructure constraints that may influence future improvements. The evaluation will include review of available site space, process layout, and existing treatment components to determine the feasibility of adding a third RO train or implementing other capacity and reliability enhancements while minimizing operational disruptions during construction and startup. Historical and projected well water quality trends will be evaluated to understand potential impacts on future treatment performance and system operation. Carollo will also assess electrical capacity, system redundancy, and available backup power to determine the facility's ability to support additional treatment equipment. Findings from the evaluation will be used to develop a technical memorandum of recommendations for system improvements that enhance reliability, operability, and long-term treatment capacity.

Each of the evaluations are detailed below:

- Hydraulic Model Update and High Service Pump Station Evaluation
- Membrane Treatment Process and Operational Evaluation

Prior to starting the evaluations, Carollo will establish and confirm the demand, capacity, and planning criteria with SJCUD.

Task 4.2.3 Total Fee……$22,468.00 (Time & Materials)

Task 4.2.3.1 – Hydraulic Model Update and High Service Pump Station Evaluation

SJCUD will provide the latest existing InfoWater Pro model for the CR 214 WTP service area. Carollo will

review the existing model, verify key assumptions and boundary conditions, and evaluate the capacity and operational adequacy of the high service pump station under projected future demand conditions. The evaluation will assess the ability of the existing pumping facilities to satisfy anticipated system demands while maintaining required pressures and operational reliability. Recommendations for improvements will be developed if deficiencies are identified.

Task 4.2.3.1 Total Fee……$33,882.96 (Lump Sum)

Task 4.2.3.2 – Membrane Treatment Process and Operational Evaluation

Carollo shall evaluate the performance and operational characteristics of the existing treatment for the CR 214 WTP and RO System. This will include evaluation of the known limited operating depth within the clearwell and transfer pump system. The evaluation shall identify the preferred approach based upon technical feasibility, operational performance, reliability, constructability, cost, and long-term system requirements.

Task 4.2.3.2 Total Fee……$50,238.02 (Time & Materials)

Task 4.3 – Development of Reliability Upgrades Design Criteria and Parameters

This task involves establishing clear and comprehensive design criteria that will guide the entire project. The design criteria include fundamental parameters, assumptions, and standards that align with industry's best practices, regulatory requirements, and project goals:

1. Establish clear and comprehensive design criteria for each treatment process and its components that align with industry standards, regulatory requirements, and project goals.
2. Define design parameters for process mechanical, instrumentation/control, and electrical systems.

Task 4.3.1 – Preliminary Design Report and 30% Submittal

Carollo will develop a PDR for Reliability Upgrades project based on scope selected during the facility plan development. The PDR shall include the following components:

- Introduction and purpose.
- Design criteria including:
    - Process mechanical design criteria.
        - Process Mechanical
            - Preliminary List of Equipment for major process mechanical equipment, including estimated sizes, capacities, and quantities. The list shall be accompanied by preliminary specifications and/or datasheets if available.
            - Recommend Procurement Process for new process equipment.
            - Design will be completed in a 3D and BIM360 environment to enhance visualization during design and construction.
    - Structural design criteria.
        - Carollo will confirm existing structure is designed to support the addition of a third RO skid.
    - Electrical/ Instrumentation and control design criteria.
        - The CR 214 WTP will include necessary modifications for electrical/instrumentation and controls associated with adding a third RO skid.

        - Existing electrical design will be evaluated for reliability class. Electrical design will be based on Class 1 reliability requirements.
    - Hydraulics and hydraulic design criteria (including a detailed hydraulic profile).
        - Preliminary Hydraulic Profile: Carollo will prepare a revised hydraulic profile of the entire treatment plant.
- A written description of the materials and equipment to be incorporated into the project.
- List of required permits.
- Preliminary drawings, including:
    - Hydraulic profile.
    - Process flow diagram.
    - Site layout.
    - Mechanical plan view drawings.
    - Structural plan view drawings.
    - Electrical single-line diagrams.
    - Process and instrumentation diagrams.
- A list of the proposed design specifications.
- Equipment data sheets.

The draft PDR will be submitted to SJCUD for review. A workshop will be held with SJCUD staff to review the PDR and receive any comments. The final PDR will be finalized within two weeks of the workshop.

Task 4.3.1 Total Fee……$54,616.17 (Lump Sum)

Task 4.4 – Permitting

Carollo will prepare and submit the Florida Department of Environmental Protection (FDEP) Specific Permit to Construct PWS Components application for the proposed improvements in accordance with Chapter 62-555, Florida Administrative Code (F.A.C.), and all applicable FDEP design criteria and regulatory requirements. Carollo will coordinate with FDEP throughout the permitting process, including participation in pre-application meetings, preparation of supporting technical documentation, and coordination of permit application submittals. Carollo will address and respond to up to two Requests for Additional Information (RAIs) issued by FDEP and will revise permit documentation as necessary to support permit issuance. The permit application will be developed based on the approved design documents and submitted at a design milestone appropriate for agency review (assumed post 75% design). Carollo will track permit review progress and provide SJCUD with periodic updates regarding permitting status through permit issuance.

It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permitting activities will begin at the preliminary design level but permit applications may not be submitted until after the 75% design.

Task 4.4 Total Fee……$28,740.00 (Lump Sum)

Task 4.5 – 75% Design

4.5.1 - 75% Design

Carollo will prepare 75 percent level documents for SJCUD review and comment. The 75 percent design

submittal will include all discipline plans, technical specifications, and typical details.

Carollo will attend a review meeting with SJCUD. SJCUD will provide review comments 7 calendar days after submitting the design package.

Task 4.5.1 Total Fee……$92,140.22 (Lump Sum)

Task 4.6 – 100% Design

Carollo will prepare 100 percent level documents for SJCUD review and comment. The 100 percent design submittal will include all discipline plans, technical specifications, and typical details. Carollo will prepare “Issued for Construction” drawings by compiling bidder questions and addenda. The CMAR will be responsible for preparing and distributing the "Conformed Specifications/Project Manual."

Task 4.6 Total Fee……$99,262.38 (Lump Sum)

Task 4.7 – Bidding Services

Carollo will provide bidding-phase support services to the CMAR throughout the procurement of construction trade packages for the Project. SJCUD will prepare the front-end bid documents (Division 00), advertise for bids, coordinate and lead the pre-bid conference, maintain the bidder's log, review/submit addenda, and review and receive the bids. Carollo bidding phase services will include the following tasks.

Under the Time and Materials framework for the Bidding Services task, Carollo shall monitor and track labor hours, expended budget, and remaining funds by each subtask. These metrics will be documented in each monthly progress report. Carollo will perform routine budget forecasting to identify potential overruns early. Should a budget shortfall be projected, Carollo shall notify the SJCUD Project Manager in advance and work cooperatively to process a formal change order or contract amendment at an appropriate juncture.

Task 4.7.1 – Responses to Bidder Questions and Bid Evaluations

Carollo will respond to questions related to the technical sections of the documents submitted by potential bidders. Carollo will provide drawings and specification updates, as needed, for issuance of addenda. SJCUD will compile, coordinate, and issue all addenda for the project bidding.

Task 4.7.1 Total Fee……$20,344.32 (Time & Materials)

Task 4.8 – Construction Services

The following services are for the construction of reliability improvements at CR 214 WTP. The overall construction duration is estimated to be a maximum of twelve (12) months. The project construction duration will be confirmed following CMAR award and final schedule submittal. Review beyond the assumed construction period may be considered additional engineering services during construction.

Under the Time and Materials framework for the Construction Services task, Carollo shall monitor and track labor hours, expended budget, and remaining funds by each subtask. These metrics will be documented in each monthly progress report. Carollo will perform routine budget forecasting to identify potential overruns early. Should a budget shortfall be projected, Carollo shall notify the SJCUD Project Manager in advance and work cooperatively to process a formal change order or contract amendment at an appropriate juncture.

Task 4.8.1 – Review Shop Drawings and RFIs

Carollo will clarify technical or design-related questions to the CMAR and will issue clarifications of the design documents as deemed appropriate to each request. In addition, Carollo will review up to twenty five (25) shop drawings with up to one resubmittal per shop drawing as well as up to ten (10) Requests for Information (RFIs). Carollo will budget 10 hours of review time per shop drawing and 4 hours of review time per RFI.

Carollo's Engineer or Record will review and return shop drawings within 14 calendar days of receipt of the shop drawings. Carollo will expedite review of certain critical path shop drawings as identified by the CMAR and communicate with 14 calendar days in advance.

Task 4.8.1 Total Fee……..$87,308.46 (Time & Materials)

Task 4.8.2 – Field Change Directive and Change Order Reviews

Carollo will assist the SJCUD in issuing Field Change Directives (FCD) for changes that are identified as conflicts in the field by the CMAR and approved by the SJCUD.

At SJCUD's request, Carollo will review and evaluate change orders (CO) issued by the CMAR for conformance to the approved change.

Task 4.8.2 Total Fee……$48,832.00 (Time & Materials)

Task 4.8.3 – Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion

Carollo will attend the following:

- One Pre-Construction Conference*.
- Up to six (6) Monthly Construction Progress Meetings.
- Up to two (2) Pre-Installation Meetings.
- Up to two (2) Pre-process Start-up Meetings.
- Up to two (2) Performance Testing Meetings.
- Up to two (2) Electrical and Instrumentation Meetings.
- One Substantial Completion walkthrough*.
- One Final Completion walkthrough (Close-out Meeting)*.
- Post-Construction Meeting*.

Carollo will prepare and distribute a meeting summary in electronic format to the attendees within one week after each meeting (denoted with *) for purposes of project documentation.

Carollo will attend one substantial completion walk and one final completion walk. A substantial completion punch list will be compiled and distributed accordingly within three business days after the substantial completion walk.

Carollo will conduct routine site visits to observe the construction progress. The frequency of site visits will be based upon project activity and need, within the allotted budget. In addition, Carollo will coordinate with SJCUD and the CMAR for site visits to verify installation and functionality of the electrical and instrumentation portions of the work as deemed appropriate for functional testing and start- up procedures.

Task 4.8.3 Total Fee…….$51,470.00 (Time & Materials)

Task 4.8.4 – Assist with Start-up, Testing and Training

Carollo personnel will attend startup and testing activities to verify that the installed facilities are operating in general conformance with the design intent and performance requirements of the Contract Documents. Carollo will review startup and testing results, document observations, and provide recommendations regarding corrective actions, as needed, to achieve successful operation of the facilities. This scope assumes up to one (1) week of startup, testing, and training support, consisting of five (5) full working days of on-site assistance by Carollo personnel. Additional startup, testing, training, troubleshooting, return visits, or extended operational support beyond the assumed two-week period will be considered additional services.

It is assumed that the CMAR will coordinate with the equipment manufacturers to provide training to SJCUD staff.

Carollo will support SJCUD with the preparation and submittal of all BacT test results to FDEP for review and approval. It is assumed that a preliminary BacT narrative will be submitted to FDEP for review prior to sample collection. This scope assumes that FDEP will provide a single round of comments or request for additional information (RAI) associated with its review of the BacT submittal.

Task 4.8.4 Total Fee…….$34,968.00 (Time & Materials)

Task 4.8.5 – Limited Construction Inspection Services

Carollo will provide construction phase observation and inspection services associated with their respective areas of expertise to support quality assurance and conformance with the Contract Documents. Such inspections will be focused on concrete/structural, electrical, and instrumentation controls. Inspectors will monitor the installation, testing, and startup of project components; document specified construction progress; identify potential issues or deviations; and coordinate to facilitate timely resolution of field concerns. Inspection activities will include review of workmanship, materials, equipment installations, and compliance with project plans, specifications, permits, and applicable regulatory requirements.

Carollo is not responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions or programs, or for CMAR failure to perform their work in accordance with the construction documents.

Task 4.8.5 Total Fee……$43,784.00 (Time & Materials)

Task 40.8.6 – Post Construction Services

Carollo will review CMAR provided markups of the construction plans and utilize the documented information to prepare as-built record drawings for submittal to SJCUD.

Carollo will provide permit closeout services for all permits obtained by Carollo as part of Task 4; permit closeout for permits obtained by the CMAR is excluded from this scope.

Also, at SJCUD's request, Carollo will review for general contents as required by the construction documents the following documents that are to be assembled and provided by the CMAR:

- Operation and Maintenance manuals.
- Guarantees.
- Certifications of Inspection.

Task 4.8.6 Total Fee……..$41,852.00 (Time & Materials)

Task 4.8.7 – Asset Management

Carollo will review the asset inventory spreadsheet developed by the CMAR for incorporation into SJCUD's asset management database. Direct entry of asset information into the asset management software is not included in this scope and will be considered an additional service.

Task 4.8.7 Total Fee……$7,564.00 (Time & Materials)

Task 4 Total Fee……..……..$850,268.52
$441,439.72 (Lump Sum)
$408,828.80 (Time & Materials)
$0.00 (Allowance)

Task 5 – Contingency

Task 5.1 - Contingency

This task includes an allowance for additional services for unforeseen conditions or requirements not included in the previous tasks of this scope. This may include, but is not limited to, additional efforts related to the planning, design, and construction for the overall program. The effort in this task is limited to the budget proposed.

Task 5.1 Total Fee……$311,989.71 (Allowance)

Task 5 Total Fee……..……..$311,989.71
$0.00 (Lump Sum)
$0.00 (Time & Materials)
$311,989.71 (Allowance)

ASSUMPTIONS

Due to the nature of this program, certain assumptions apply to this Scope of Services. To the extent possible, these assumptions are stated within this document and are reflected in the budget.

- SJCUD will provide available existing record drawings, GIS data, hydraulic models, previous studies, permits, operational data, and other pertinent information necessary to support design and permitting activities.
- Existing information provided by SJCUD will be relied upon without independent verification unless otherwise noted in the scope.
- Design criteria, regulatory requirements, and utility standards in effect at the time of design will be utilized.
- Timely review and consolidated comments from SJCUD will be provided at each project milestone. It is assumed that SJCUD will review and provide comments within 7 days.
- Meetings, workshops, and coordination efforts are limited to those specifically identified in the scope.
- Easement acquisition, property purchase, and landowner negotiations are not included.
- Environmental assessments, wetlands delineations, protected species surveys, cultural resource investigations, and other specialized environmental studies are excluded unless specifically identified in the scope.
- Utility locates and subsurface utility engineering (SUE) services beyond those identified in the scope are excluded.
- Geotechnical recommendations will be based on the findings of the geotechnical consultant and the planned boring program identified in the scope.
- Permitting agencies will review and process permit applications within their normal review timeframes.
- Permit application fees, utility fees, impact fees, and other agency fees must be paid directly by SJCUD.
- SJCUD will furnish available water quality data, pumping records, production records, and operational information necessary to support planning and design activities.
- Design will be based upon available demand projections and planning criteria provided or approved by SJCUD.
- CMAR means and methods, sequencing, temporary facilities, temporary treatment, and temporary bypass systems are the responsibility of the CMAR unless specifically included in the scope.
- Construction cost estimates are opinions of probable construction cost based on information available at the time prepared and do not constitute a guarantee of bid prices.
- Carollo will not review CMAR pay applications.
- Significant changes in project requirements, regulatory criteria, treatment processes, project delivery approach, or project schedule after authorization may constitute additional services.
- Carollo shall complete the services required hereunder in accordance with the prevailing standard of care by exercising the skill and ability ordinarily required of Carollo performing the same or similar services, under the same or similar circumstances, in the State of Florida.

- SJCUD shall furnish Carollo available studies, reports and other data pertinent to Carollo's services; obtain or authorize Carollo to obtain or provide additional reports and data as required; furnish to Carollo services of others required for the performance of Carollo's services hereunder, and Carollo shall be entitled to use and reasonably rely upon all such information and services provided by SJCUD or others in performing Carollo's services under this Agreement.
- In providing opinions of cost, financial analyses, economic feasibility projections, schedules, and quantity and/or quality estimates for potential projects, Carollo has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; the incoming water quality and/or quantity; the way SJCUD's plant(s) and/or associated processes are operated and/or maintained; and other economic and operational factors that may materially affect the ultimate project elements, including, but not limited to, cost or schedule. Therefore, Carollo makes no warranty that SJCUD's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from Carollo's opinions, analyses, projections, or estimates.
- Carollo is not responsible for damage or delay in performance caused by events beyond the reasonable control of Carollo. In the event Carollo's services are suspended, delayed or interrupted for the convenience of SJCUD or delays occur beyond the reasonable control of Carollo, an equitable adjustment in Carollo's time of performance and cost of Carollo's personnel and subcontractors may be made.
- Carollo shall not be responsible for warranties, guarantees, fitness for a particular purpose, breach of fiduciary duty, loss of anticipated profits or for economic, incidental, liquidated, or consequential damages to SJCUD or any third party arising out of breach of contract, delay, termination, or for any other reason whatsoever. Additionally, Carollo shall not be responsible for acts and decisions of third parties, including governmental agencies, other than Carollo's subconsultant's, that impact project completion and/or success.
- The services to be performed by Carollo are intended solely for the benefit of SJCUD. No person or entity not a signatory to this agreement shall be entitled to rely on Carollo's performance of its services hereunder, and no right to assert a claim against Carollo by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this agreement or the performance of Carollo's services hereunder.

SCHEDULE

The anticipated schedule by task for purposes of scope assumptions is detailed in Exhibit B. This schedule and activities shown are preliminary and we will update the schedule each month and submit as part of our monthly progress report. Carollo's services will commence upon SJCUD's issuance of a written notice-to-proceed. The proposed schedule is an estimate contingent to the CMARs' approved construction schedule and ability to complete the work for the contracted time.

PAYMENT FOR SERVICES

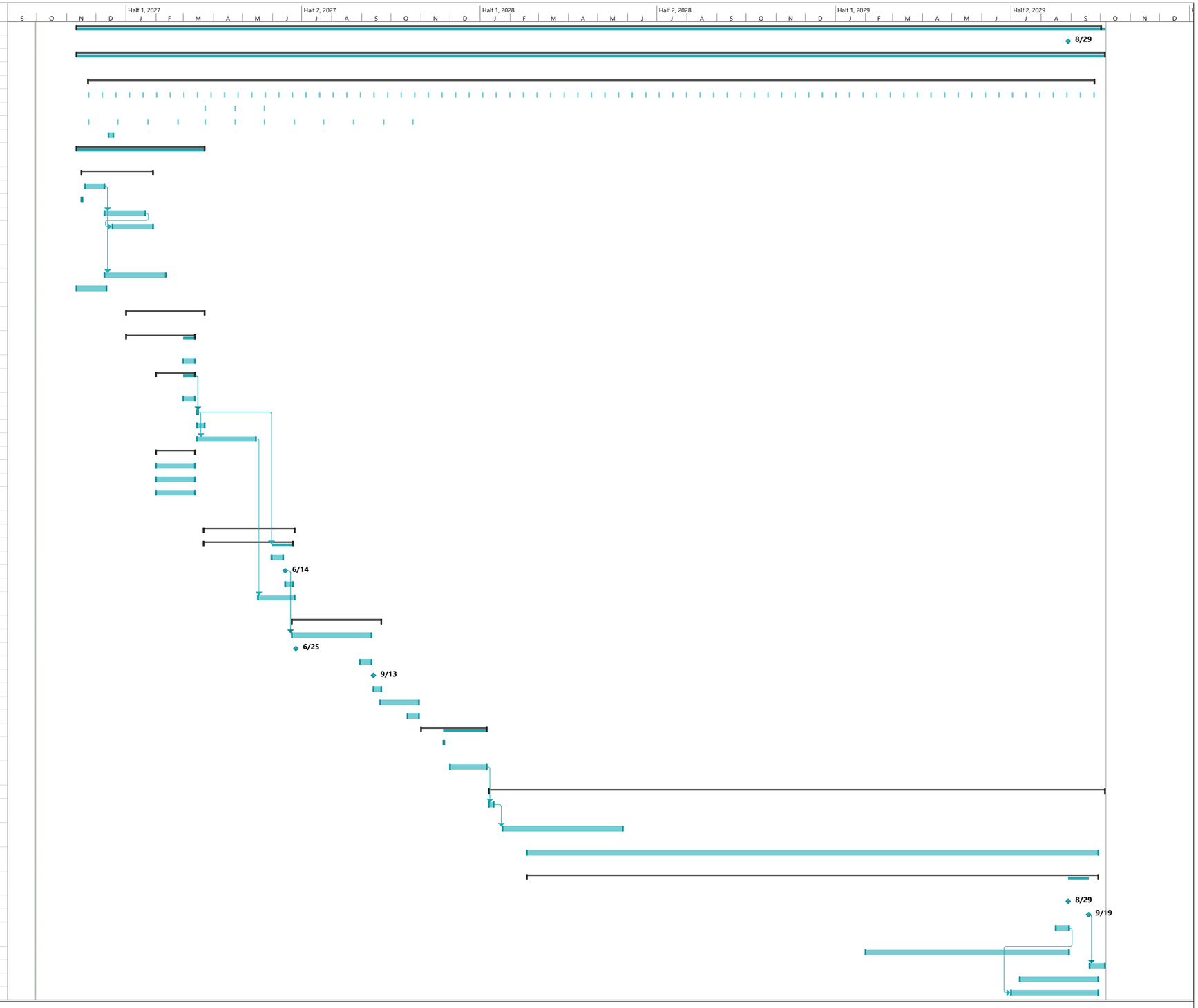
Total compensation for the Scope of Services described herein shall not exceed the value of $7,381,476.55, as detailed in Exhibit C. The fee, based upon a combination of lump sum, allowances, and time and materials, will be invoiced monthly to SJCUD. Subconsultant scopes are detailed in Exhibit D.

Project Total Fee…….....$7,381,476.55
$4,389,541.58 (Lump Sum)
$2,609,614,51 (Time & Materials)
$382,320.46 (Allowance)

The estimated budget and durations is contingent to the CMAR's ability to complete the work under the contracted schedule. In the event that the construction time or equipment delivery times extend and exhausts the available construction budget, Carollo may seek SJCUD's authorization for additional compensation over the estimated original budget.

SJCUD Water Infrastructure Program Schedule
Contents: Project 1

ID	Task Mode	Task Name	Duration	Start	Finish	Predeces	Resource Names
8		**Task 2 - Trout Creek WTP**	**754 days**	**Wed 11/11/26**	**Mon 10/1/29**		
9		Trout Creek WTP - Plant Online	0 days	Wed 8/29/29	Wed 8/29/29		
10		**Task 2.1 - Project Management**	**758 days**	**Wed 11/11/26**	**Fri 10/5/29**		
11		Task 2.1.1 - Project Management					
12		**Task 2.1.2 - Progress Meetings**	**741 days**	**Mon 11/23/26**	**Mon 9/24/29**		
13		**Project Manager Update Meetings**	**741 days**	**Mon 11/23/26**	**Mon 9/24/29**		
89		**Permitting Status Update Meetings**	**75 days**	**Mon 3/15/27**	**Fri 6/25/27**		
93		**Design Progress Meetings**	**245 days**	**Mon 11/23/26**	**Fri 10/29/27**		
106		Design CAMP	5 days	Mon 12/14/26	Fri 12/18/26		
107		**Task 2.2 - Preliminary Design Report and 30% Design Submittal**	**94 days**	**Wed 11/11/26**	**Mon 3/22/27**		
108		**Task 2.2.1 - Data Gathering**	**54 days**	**Mon 11/16/26**	**Thu 1/28/27**		
109		Task 2.2.1.1 - Data Request	14 days	Fri 11/20/26	Wed 12/9/26		
110		Task 2.2.1.2 - Initial Field Investigation	1 day	Mon 11/16/26	Mon 11/16/26		
111		Task 2.2.1.3 - Survey	30 days	Thu 12/10/26	Wed 1/20/27	109	
112		Task 2.2.1.4 - Geotechnical Investigation	30 days	Fri 12/18/26	Thu 1/28/27	111	
113		Task 2.2.1.5 - Environmental Investigation (Optional)					
114		Task 2.2.2 - Water Quality Analysis	45 days	Thu 12/10/26	Wed 2/10/27	109	
115		Task 2.2.3 - Development of Design Criteria and Prameters	23 days	Wed 11/11/26	Fri 12/11/26		
116		**Task 2.2.4 - Preliminary Design Report (30% Design)**	**57 days**	**Fri 1/1/27**	**Mon 3/22/27**		
117		**Task 2.2.4.1 - Preliminary Design Report (30% Design)**	**51 days**	**Fri 1/1/27**	**Fri 3/12/27**		
118		Internal QAQC	10 days	Mon 3/1/27	Fri 3/12/27		
119		**Task 2.2.4.2 - Ground Storage Tank Design Criteria**	**30 days**	**Mon 2/1/27**	**Fri 3/12/27**		
120		Internal QAQC	10 days	Mon 3/1/27	Fri 3/12/27		
121		30% Design Review Workshop	1 day	Mon 3/15/27	Mon 3/15/27	119	
122		SJCUD Review	6 days	Mon 3/15/27	Mon 3/22/27		
123		Task 2.3 - Early Procurement Packages	45 days	Mon 3/15/27	Fri 5/14/27	121	
124		**Task 2.4 - Permitting**	**30 days**	**Mon 2/1/27**	**Fri 3/12/27**		
125		Task 2.4.1 - FDEP Permit Application	30 days	Mon 2/1/27	Fri 3/12/27		
126		Task 2.4.2 -Stormwater Permitting	30 days	Mon 2/1/27	Fri 3/12/27		
127		Task 2.4.3 - Land Development Permitting	30 days	Mon 2/1/27	Fri 3/12/27		
128		Task 2.4.4 - FDEP Variance (Optional)					
129		**Task 2.5 - 60% Design**	**68 days**	**Mon 3/22/27**	**Wed 6/23/27**		
130		**Task 2.5.1 - 60% Design**	**66 days**	**Mon 3/22/27**	**Mon 6/21/27**	**121**	
131		Internal QAQC	10 days	Mon 5/31/27	Fri 6/11/27		
132		60% Design Review Workshop	0 days	Mon 6/14/27	Mon 6/14/27		
133		SJCUD Review	6 days	Mon 6/14/27	Mon 6/21/27		
134		Task 2.5.2 - Early Procurement Shop Drawings	28 days	Mon 5/17/27	Wed 6/23/27	123	
135		**Task 2.6 - 90% Design**	**66 days**	**Mon 6/21/27**	**Mon 9/20/27**		
136		Task 2.6.1 - 90% Design	60 days	Mon 6/21/27	Fri 9/10/27	132	
137		Submit Permit Applications	0 days	Fri 6/25/27	Fri 6/25/27		
138		Internal QAQC	10 days	Mon 8/30/27	Fri 9/10/27		
139		90% Design Review Workshop	0 days	Mon 9/13/27	Mon 9/13/27		
140		SJCUD Review	6 days	Mon 9/13/27	Mon 9/20/27		
141		Task 2.7 - 100% Design	30 days	Mon 9/20/27	Fri 10/29/27		
142		Internal QAQC	10 days	Mon 10/18/27	Fri 10/29/27		
143		**Task 2.8 - Bidding Services**	**50 days**	**Mon 11/1/27**	**Fri 1/7/28**		
144		Task 2.8.1 - Pre-Bid Conference and Site Visit	1 day	Wed 11/24/27	Wed 11/24/27		
145		Task 2.8.2 - Response to Bidder Questions	28 days	Wed 12/1/27	Fri 1/7/28		
146		**Task 2.9 - Construction Phase Services**	**455 days**	**Mon 1/10/28**	**Fri 10/5/29**		
147		Task 2.9.1 - Prepare Conformed Documents	5 days	Mon 1/10/28	Fri 1/14/28	145	
148		Task 2.9.2 - Review Shop Drawings and RFIs	90 days	Mon 1/24/28	Fri 5/26/28	147	
149		Task 2.9.3 - Field Change Directive and Change Order Review	421 days	Fri 2/18/28	Fri 9/28/29		
150		**Task 2.9.4 - Construction Meetings & Subst./Final Walk Throughs**	**421 days**	**Fri 2/18/28**	**Fri 9/28/29**		
151		Substantial Walk Through	0 days	Wed 8/29/29	Wed 8/29/29		
152		Final Walk Through	0 days	Wed 9/19/29	Wed 9/19/29		
153		Task 2.9.5 - Assist with Start-Up, Testing, and Training	10 days	Thu 8/16/29	Wed 8/29/29		
154		Task 2.9.6 - Limited Inspection Services	150 days	Thu 2/1/29	Wed 8/29/29		
155		Task 2.9.7 - Post Construction Services	12 days	Thu 9/20/29	Fri 10/5/29	152	
156		Task 2.9.8 - Asset Management	59 days	Tue 7/10/29	Fri 9/28/29		
157		Task 2.9.9 - Facility O&M Manual	66 days	Sun 7/1/29	Fri 9/28/29	153	



SJCUD Water Infrastructure Program Schedule

This schedule and activities shown are preliminary and we will update the schedule each month and submit as part of our monthly progress report

ID	Task Mode	Task Name	Duration	Start	Finish	Predeces	Resource Names
158		**Task 3 - Northwest to CR 214 Service Area Finished Water Blend and Transfer Station**	**609 days**	**Mon 11/2/26**	**Thu 3/1/29**		
159		Task 3.1 - Project Management	352 days	Mon 11/2/26	Tue 3/7/28		
160		**Task 3.2 - Data Collection and Review**	**131 days**	**Mon 11/2/26**	**Mon 5/3/27**		
161		Task 3.2.1 - Data Collection and Review	30 days	Mon 11/2/26	Fri 12/11/26		
162		Task 3.2.2 - Survey	20 days	Wed 3/10/27	Tue 4/6/27		
163		Task 3.2.3 - Geotechnical Investiation	20 days	Tue 4/6/27	Mon 5/3/27		
164		Task 3.2.4 - Environmental Investigation (Optional)					
165		**Task 3.3 - Technical Evalution and Conceptual Design**	**118 days**	**Thu 2/4/27**	**Mon 7/19/27**		
166		Task 3.3.1 - Desktop Analysis	30 days	Fri 12/11/26	Thu 1/21/27		
167		Task 3.3.2 - Hydraulic Modeling	45 days	Mon 1/4/27	Fri 3/5/27	166	
168		Facility Location Selected	0 days	Wed 3/10/27	Wed 3/10/27		
169		Task 3.3.3 - Design Criteria	30 days	Tue 6/8/27	Mon 7/19/27	167	
170		**Task 3.4 - Detailed Design Documents and Preliminary Design Report**	**166 days**	**Tue 7/20/27**	**Tue 3/7/28**		
171		**Task 3.4.1 - PDR and 30% Design**	**66 days**	**Tue 7/20/27**	**Tue 10/19/27**		
172		PDR and 30% Design	50 days	Tue 7/20/27	Mon 9/27/27		
173		Task 3.4.1.1 - Early Procurement Packages	10 days	Tue 9/14/27	Mon 9/27/27		
174		Internal QAQC	10 days	Tue 9/28/27	Mon 10/11/27		
175		SJCUD Review	6 days	Tue 10/12/27	Tue 10/19/27		
176		**Task 3.4.2 - 60% Design**	**66 days**	**Tue 10/19/27**	**Tue 1/18/28**		
177		60% Design	50 days	Tue 10/19/27	Mon 12/27/27		
178		Task 3.4.2.1 - Early Procurement Shop Drawings	10 days	Mon 12/6/27	Fri 12/17/27		
179		Internal QAQC	10 days	Tue 12/28/27	Mon 1/10/28		
180		SJCUD Review	6 days	Tue 1/11/28	Tue 1/18/28		
181		**Task 3.4.3 - 100% Design**	**36 days**	**Tue 1/18/28**	**Tue 3/7/28**		
182		100% Design	20 days	Tue 1/18/28	Mon 2/14/28		
183		Internal QAQC	10 days	Tue 2/15/28	Mon 2/28/28		
184		SJCUD Review	6 days	Tue 2/29/28	Tue 3/7/28		
185		Project Bidding	30 days	Wed 3/15/28	Tue 4/25/28		
186		**Task 3.5 - Construction Phase Services**	**219 days**	**Mon 5/1/28**	**Thu 3/1/29**		
187		Task 3.5.1 - Project Management	200 days	Mon 5/1/28	Fri 2/2/29		
188		Task 3.5.2 - Conformed Drawings	10 days	Wed 4/26/28	Tue 5/9/28		
189		Task 3.5.3 - Pre-Construction Meeting	1 day	Wed 4/26/28	Wed 4/26/28		
190		Task 3.5.4 - Construction Progress Meetings	1 day	Mon 5/1/28	Mon 5/1/28		
191		Task 3.5.5 - Review Shop Drawings	90 days	Mon 5/1/28	Fri 9/1/28		
192		Task 3.5.6 - Assist with Start-Up, Testing and Training	10 days	Wed 12/20/28	Tue 1/2/29		
193		Task 3.5.7 - O&M Manuals	45 days	Tue 8/1/28	Sun 10/1/28		
194		Task 3.5.8 - RFIs	200 days	Mon 5/1/28	Fri 2/2/29		
195		Task 3.5.9 - Design Clarifications	200 days	Mon 5/1/28	Fri 2/2/29		
196		Task 3.5.10 - Substantial Completion Walk Through	0 days	Tue 1/2/29	Tue 1/2/29		
197		Task 3.5.11 - Final Completion Walk Through	0 days	Fri 2/2/29	Fri 2/2/29		
198		Task 3.5.12 - Construction Record Drawings	20 days	Fri 2/2/29	Thu 3/1/29		
199		Task 3.5.13 - Project Completion Certification	10 days	Mon 1/22/29	Fri 2/2/29		
200		Task 3.5.14 - Asset Management	30 days	Mon 12/25/28	Fri 2/2/29		
201		Task 3.5.15 - Facility O&M Manual	30 days	Mon 12/25/28	Fri 2/2/29		



SJCUD Water Infrastructure Program Schedule	This schedule and activities shown are preliminary and we will update the schedule each month and submit as part of our monthly progress report

ID	Task Mode	Task Name	Duration	Start	Finish	Predeces	Resource Names
202		**Task 4 - CR 214 WTP Faciliy Plan and Reliability Upgrades**	**364 days**	**Mon 11/2/26**	**Thu 3/23/28**		
203		**Task 4.1 - Project Management**	**364 days**	**Mon 11/2/26**	**Thu 3/23/28**		
204		Task 4.1.1 - Project Management	364 days	Mon 11/2/26	Thu 3/23/28		
205		Task 4.1.2 - Progress Meetings	364 days	Mon 11/2/26	Thu 3/23/28		
206		**Task 4.2 - Data Collection and Existing Conditions**	**76 days**	**Mon 11/2/26**	**Mon 2/15/27**		
207		Task 4.2.1 - Data Request	15 days	Mon 11/2/26	Fri 11/20/26		
208		Task 4.2.2 - Field Investigation	5 days	Thu 11/19/26	Wed 11/25/26		
209		**Task 4.2.3 - Facility Evaluations**					
210		Task 4.2.3.1 - Hydraulic Evaluation and Modeling	30 days	Tue 12/1/26	Mon 1/11/27		
211		Task 4.2.3.2 - Treatment Process and Operational Evaluation	30 days	Tue 12/1/26	Mon 1/11/27		
212		Task 4.2.3.3 - High Service Pumping and Finished Water Transfer Evaluation	30 days	Tue 12/1/26	Mon 1/11/27		
213		Task 4.2.3.4 - Reliability, Resiliency, and Operational Efficiency Evaluation	30 days	Tue 12/1/26	Mon 1/11/27		
214		Task 4.2.3.5 - Electrical, I&C, and SCADA Evaluation	45 days	Tue 12/15/26	Mon 2/15/27		
215		**Task 4.3 - Conceptual Design Development**					
216		Task 4.3.1 - Conceptual Design Development	45 days	Mon 3/1/27	Fri 4/30/27		
217		Task 4.3.2 - Conceptual Capital Cost Estimating	15 days	Mon 4/12/27	Fri 4/30/27		
218		**Task 4.4 - Facility Plan**					
219		Task 4.4.1 - Ten-Year Implementation Roadmap	20 days	Mon 5/17/27	Fri 6/11/27		
220		Task 4.4.2 - Capital Improvement Plan	30 days	Thu 7/1/27	Wed 8/11/27		
221		Task 4.4.3 - Draft Facility Plan Report	45 days	Thu 7/1/27	Wed 9/1/27		
222		Task 4.4.4 - Final Facility Plan Report	20 days	Wed 9/15/27	Tue 10/12/27		
223		**Task 4.5 - Development of Reliability Upgrades Design Criteria and Parameters**	**54 days**	**Mon 3/1/27**	**Thu 5/13/27**		
224		Task 4.5.1 - PDR and 30% Design	40 days	Mon 3/1/27	Fri 4/23/27		
225		Task 4.5.2 - Early Procurement Packages	20 days	Fri 4/16/27	Thu 5/13/27		
226		Task 4.6 - Permitting	45 days	Fri 4/30/27	Thu 7/1/27		
227		**Task 4.7 - 75% Design**					
228		Task 4.7.1 - 75% Design	50 days	Mon 5/17/27	Fri 7/23/27		
229		Task 4.7.2 - Early Procurement Shop Drawings	20 days	Mon 6/28/27	Fri 7/23/27		
230		Task 4.8 - 100% Design	30 days	Thu 8/5/27	Wed 9/15/27		
231		**Task 4.9 - Bidding Services**					
232		Task 4.9.1 - Pre-Bid Conference and Site Visit	1 day	Mon 9/20/27	Mon 9/20/27		
233		Task 4.9.2 - Response to Bidder Questions	28 days	Fri 9/17/27	Tue 10/26/27		
234		**Task 4.10 - Construction Phase Services**	**108 days**	**Tue 10/26/27**	**Thu 3/23/28**		
235		Task 4.10.1 - Prepare Conformed Documents	10 days	Tue 10/26/27	Mon 11/8/27		
236		Task 4.10.2 - Review Shop Drawings and RFIs	80 days	Mon 11/8/27	Fri 2/25/28		
237		Task 4.10.3 - Field Change Directive and Change Order Review	80 days	Mon 11/8/27	Fri 2/25/28		
238		**Task 4.10.4 - Construction Meetings & Subst./Final Walk Throughs**	80 days	Mon 11/8/27	Fri 2/25/28		
239		Substantial Walk Through	0 days	Tue 1/25/28	Tue 1/25/28		
240		Final Walk Through	0 days	Fri 2/25/28	Fri 2/25/28		
241		Task 4.10.5 - Assist with Start-Up, Testing, and Training	5 days	Wed 1/19/28	Tue 1/25/28		
242		Task 4.10.6 - Limited Inspection Services	80 days	Mon 11/8/27	Fri 2/25/28		
243		Task 4.11.7 - Post Construction Services	20 days	Fri 2/25/28	Thu 3/23/28		
244		Task 4.10.8 - Asset Management	19 days	Tue 2/1/28	Fri 2/25/28		
245		Task 5 - Contingency	758 days	Wed 11/11/26	Fri 10/5/29		



SJCUD Water Infrastructure Program Schedule	This schedule and activities shown are preliminary and we will update the schedule each month and submit as part of our monthly progress report

Carollo Engineers, Inc. - Engineering Services Fee
St. Johns County Utility Department
Water Infrastructure Program

		Fee Type	Principal Profession & QA/QC	Senior Program Manager	Supervising Professional & QA/QC	Project Manager	Design Manager I	Senior Professional	Lead Professional	Professional	Staff Professional	Engineering Intern	Senior BIM Designer	Lead Designer	Project Admin	Document Processing	Labor Totals	Labor Costs	Sub- Ardurra	Sub - Ardurra (Lasseter)	Sub - Wekiva (Structural/ Architectural)	Sub - Powell & Hinkle (HVAC/Fire Protection/Plumbing)	Sub - ETM (Site Civil/Survey)	Sub - UES (Geotech)	Sub - Alpha Envirotech (Environmental)	Other Direct Costs	Cost Totals
			$ 375.00	$ 356.00	$ 340.00	$ 328.00	$ 265.00	$ 230.00	$ 210.00	$ 202.00	$ 170.00	$ 150.00	$ 242.00	$ 195.00	$ 170.00	$ 150.00											
Task 1 - Program Management																											
1.1	Program Management, Control and Reporting	Lump Sum	0	40	0	0	0		156								196	$ 47,000.00	$ -								$ 47,000.00
1.2	Program Kickoff Meeting	Lump Sum	0	4	6	24	8		12			8					62	$ 17,176.00	$ 5,629.73							$ 1,000.00	$ 23,805.73
1.3	Quality Management	Lump Sum	40	20	16	32	8		40				20	20		8	204	$ 58,516.00	$ 26,878.32								$ 85,394.32
1.4	CMAR Selection Phase Support	Time & Materials	0	8	0	80	40		40								168	$ 48,088.00	$ 35,080.00								$ 83,168.00
Task 1 Subtotal			40	72	22	136	56	0	248	0	0	8	20	20	0	8	630	$ 170,780.00	$ 67,588.05	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,000.00	$ 239,368.05
Task 2 - Trout Creek Water TreatmentPlant																											
2.1	Project Management																										
2.1.1	Project Management	Lump Sum	0	20	0	78	0		312								410	$ 98,224.00	$ -	$ 11,600.00	$ 2,803.56		$ 12,970.00				$ 125,597.56
2.1.2	Progress Meetings	Lump Sum	0	40	28	86	86	8	120								360	$ 101,798.00	$ 24,394.64				$ 25,350.00		$ 2,000.00		$ 153,542.64
2.1.3	Design CAMP	Lump Sum	120	40	28	40	120		40								388	$ 122,080.00								$ 65,000.00	$ 187,080.00
2.2	Preliminary Design Report and 30% Design Submittal																										
2.2.1	Data Gathering																										
2.2.1.1	Data Request	Lump Sum	0	2	0	8	16		16								42	$ 10,936.00	$ 12,427.25								$ 23,363.25
2.2.1.2	Initial Field Investigation	Lump Sum	0	4	0	8	8		4			4					28	$ 7,608.00									$ 7,608.00
2.2.1.3	Survey	Lump Sum	0		0	2	8		8								18	$ 4,456.00	$ 3,287.90				$ 10,000.00				$ 17,743.90
2.2.1.4	Geotechnical Investigation	Lump Sum	0		0	2	8		8								18	$ 4,456.00	$ 2,775.61		$ 1,186.10			$ 35,375.00			$ 43,792.71
2.2.1.5	Environmental Investiation (Optional)																										
2.2.1.5.1	Phase I Cultural Resource Assessment Survey (Optional)	Allowance	0		0	2	0		4								6	$ 1,496.00							$ 18,200.00		$ 19,696.00
2.2.1.5.2	Phase I Environmental Site Assessment (Optional)	Allowance	0		0	2	0		4								6	$ 1,496.00							$ 4,800.00		$ 6,296.00
2.2.2	Water Quality Analysis	Lump Sum	12	2	0	16	40	20	60			80					210	$ 50,260.00									$ 50,260.00
2.2.3	Development of Design Criteria and Parameters	Time & Materials	0	4	0	20	40		60								124	$ 31,184.00			$ 1,818.70		$ 8,320.00				$ 41,322.70
2.2.4	Preliminary Design Report (30% Design)																										
2.2.4.1	Preliminary Design Report (30% Design)	Lump Sum	48	8	64	36	332		360	80	120	160	100	500		80	1888	$ 412,256.00	$ 64,829.86	$ 7,200.00	$ 32,203.45		$ 44,475.00				$ 560,964.31
2.2.4.2	Ground Storage Tanks Design Criteria	Lump Sum	0	2	0	4	4		4				8			4	26	$ 6,460.00	$ 12,365.97								$ 18,825.97
2.3	Early Procurement, Identification and Support of Equipment Requiring Pre-Purchasing	Time & Materials	20	10	16	20	56		60							20	202	$ 53,500.00		$ 8,000.00							$ 61,500.00
2.4	Permitting																										
2.4.1	FDEP Permit Application	Lump Sum	0		0	8	8		16			40					72	$ 14,104.00	$ 7,614.65	$ 1,600.00							$ 23,318.65
2.4.2	Stormater Management Facility Permitting Support and On-Site Environmental Resource Permit	Lump Sum	0		0	8	0		8								16	$ 4,304.00					$ 5,220.00				$ 9,524.00
2.4.3	Land Development Permit	Lump Sum	0		0	8	0		8								16	$ 4,304.00					$ 6,735.00				$ 11,039.00
2.4.4	Permit Assistance - FDEP Variance (Optional)	Allowance	0		0	8	16		16			40					80	$ 16,224.00									$ 16,224.00
2.5	60% Design																										
2.5.1	60% Design	Lump Sum	64	4	88	30	376		330	120	60	80	200	500		80	1932	$ 438,464.00	$ 97,420.65	$ 34,400.00	$ 69,597.75	$ 41,000.00	$ 33,090.00				$ 713,972.40
2.5.2	Early Procurement, Shop Drawing Reviews	Time & Materials	0	4	0	20	72		72			64					232	$ 51,784.00	$ 9,777.24								$ 61,561.24
2.6	90% Design																										
2.6.1	90% Design	Lump Sum	56	4	88	20	240		240	100	36	48	100	220		80	1232	$ 285,524.00	$ 98,421.82	$ 22,400.00	$ 53,199.45		$ 15,320.00				$ 474,865.27
2.7	100% Design	Lump Sum	24	4	44	24	198		96	40	40	40	80	160		80	830	$ 189,326.00	$ 73,873.04	$ 1,600.00	$ 32,251.70		$ 4,440.00				$ 301,490.74
2.8	Bidding Services																										
2.8.1	Responses to Bidder Questions	Time & Materials	0	4	16	12	36		36	16	20						140	$ 34,532.00		$ 3,200.00	$ 3,071.07		$ 3,570.00				$ 44,373.07
2.9	Construction Phase Services																										
2.9.1	Review Shop Drawings and RFIs	Time & Materials	0	16	100	40	740		720	220	500	500			400		3236	$ 672,556.00	$ 46,320.16	$ 20,000.00	$ 23,708.35	$ 8,100.00	$ 6,180.00				$ 776,864.51
2.9.2	Field Change Directive and Change Order Reviews	Time & Materials	0	2	0	20	40		40								102	$ 26,272.00	$ 7,156.90	$ 1,600.00	$ 9,503.32						$ 44,532.22
2.9.3	Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion	Time & Materials	0	10	0	40	104		272			120					546	$ 119,360.00	$ 56,438.25	$ 25,600.00			$ 6,130.00				$ 207,528.25
2.9.4	Assist with Start-up, Testing and Training	Time & Materials	0	10	0	8	80		80			80					258	$ 56,184.00	$ 17,923.74	$ 32,000.00							$ 106,107.74
2.9.5	Limited Construction Inspection Services	Time & Materials	0	4	80	8	128		100	20	20	20					380	$ 96,608.00		$ 4,800.00							$ 101,408.00
2.9.6	Post Construction Services	Time & Materials	0	10	8	16	16		28	8			60	100			246	$ 57,284.00		$ 3,200.00	$ 2,045.82		$ 4,500.00				$ 67,029.82
2.9.7	Asset Management	Time & Materials	0	2	0	8	20		20								50	$ 12,836.00		$ 1,600.00							$ 14,436.00
2.9.8	Facility O&M Manual	Time & Materials	0	4	20	20	86		180		80	80					470	$ 100,974.00	$ 20,609.21	$ 4,800.00							$ 126,383.21
Task 2 Subtotal		Time & Materials	344	210	580	622	2878	28	3322	604	876	1356	548	1480	400	344	13564	$ 3,086,850.00	$ 555,636.89	$ 183,600.00	$ 228,318.20	$ 49,100.00	$ 186,300.00	$ 35,375.00	$ 25,000.00	$ 65,000.00	$ 4,418,251.16

Carollo Engineers, Inc. - Engineering Services Fee
St. Johns County Utility Department
Water Infrastructure Program

		Fee Type	Principal Profession & QA/QC	Senior Program Manager	Supervising Professional & QA/QC	Project Manager	Design Manager I	Senior Professional	Lead Professional	Professional	Staff Professional	Engineering Intern	Senior BIM Designer	Lead Designer	Project Admin	Document Processing	Labor Totals	Labor Costs	Sub- Ardurra	Sub - Ardurra (Lasseter)	Sub - Wekiva (Structural/ Architectural)	Sub - Powell & Hinkle (HVAC/ Fire Protection/ Plumbing)	Sub - ETM (Site Civil/Survey)	Sub - UES (Geotech)	Sub - Alpha Envirotech (Environmental)	Other Direct Costs	Cost Totals
Task 3 - Northwest to CR214 Service Area Finished Water Blend and Transfer Station																											
3.1	Project Management	Lump Sum	0	20	0	0	0		40								60	$ 15,520.00	$ 24,012.10	$ 6,200.00			$ 27,450.00		$ 1,500.00	$ 1,000.00	$ 75,682.10
3.2	Data Collection and Review																										
3.2.1	Data Collection and Review	Lump Sum	0		0	0	0		0								0	$ -	$ 11,556.92	$ 1,600.00							$ 13,156.92
3.2.2	Survey	Lump Sum & Allowa	0		0	0	0		0								0	$ -	$ 5,452.63				$ 47,499.00				$ 52,951.63
3.2.3	Geotechnical Investigation	Lump Sum	0		0	0	0		0								0	$ -	$ 2,581.30		$ 1,186.10			$ 16,300.00			$ 20,067.40
3.2.4	Phase I Environmental Site Assessment (Optional)	Allowance	0		0	0	0		0								0	$ -	$ 4,888.62						$ 4,600.00		$ 9,488.62
3.3	Technical Evaluation and Conceptual Design																										
3.3.1	Finished Blended Water Quality Analysis - Bench Scale	Lump Sum	0	4	0	8	0		16								28	$ 7,408.00	$ 71,377.74	$ 1,600.00							$ 80,385.74
3.3.2	Hydraulic Modeling	Lump Sum	0		0	0	0		0								0	$ -	$ 28,210.14								$ 28,210.14
3.3.3	New Blending Station Site Plan and Equipment Design Criteria	Lump Sum	0	10	0	0	0		20								30	$ 7,760.00	$ 18,189.98								$ 25,949.98
3.4	Detailed Design Documents and Preliminary Design Report (PDR)																										
3.4.1	Preliminary Design Report and 30% Design Documents	Lump Sum	4	4	0	0	50		20				40	80			198	$ 45,654.00	$ 105,320.30	$ 32,000.00	$ 5,895.94		$ 11,090.00				$ 199,960.24
3.4.2	60% Design	Lump Sum	4	4	0	0	80		20				60	100			268	$ 62,344.00	$ 175,290.18	$ 48,000.00	$ 11,399.46	$ 17,500.00	$ 33,080.00				$ 347,613.64
3.4.3	100% Design	Lump Sum	4	4	0	0	50		20				40	80			198	$ 45,654.00	$ 154,592.66	$ 31,200.00	$ 7,877.96		$ 4,145.00				$ 243,469.62
3.5	Construction Phase Services																										
3.5.1	Project Management	Time & Materials	0	4	0	0	0		8								12	$ 3,104.00	$ 21,357.28	$ 800.00			$ 5,190.00				$ 30,451.28
3.5.2	Pre-Construction Meeting	Time & Materials	0		0	0	0		0								0	$ -	$ 4,073.67	$ 7,200.00	$ 1,040.32						$ 12,313.99
3.5.3	Construction Progress Meetings	Time & Materials	0		0	0	16		8								24	$ 5,920.00	$ 42,181.80				$ 4,190.00				$ 52,291.80
3.5.4	Review Shop Drawings	Time & Materials	0		0	0	40		0								40	$ 10,600.00	$ 74,631.85	$ 12,000.00	$ 8,498.00	$ 8,100.00	$ 2,730.00				$ 116,559.85
3.5.5	Assist with Start-up, Testing and Training	Time & Materials	0		0	0	0		0								0	$ -	$ 39,295.40								$ 39,295.40
3.5.6	O&M Manuals	Time & Materials	0		0	0	0		0								0	$ -	$ 21,033.97	$ 4,000.00							$ 25,033.97
3.5.7	Requests for Information (RFI)	Time & Materials	0		0	0	0		0								0	$ -	$ 9,280.34	$ 2,400.00			$ 2,575.00				$ 14,255.34
3.5.8	Design Clarifications (DC)	Time & Materials	0		0	0	0		0								0	$ -	$ 20,429.99	$ 1,600.00							$ 22,029.99
3.5.9	Substantial Completion Walk-Through	Time & Materials	0	4	0	0	0		8								12	$ 3,104.00	$ 10,991.65	$ 1,600.00			$ 2,760.00				$ 18,455.65
3.5.10	Final Completion Walk-Through	Time & Materials	0	4	0	0	0		8								12	$ 3,104.00	$ 9,765.62	$ 1,000.00			$ 2,760.00				$ 16,629.62
3.5.11	Construction Record Drawings	Time & Materials	0		0	0	0		0				10	40			50	$ 10,220.00	$ 56,319.40	$ 3,200.00							$ 69,739.40
3.5.12	Project Completion Certification	Time & Materials	0		0	0	0		0								0	$ -	$ 5,646.37								$ 5,646.37
3.5.13	Asset Management	Time & Materials	0		0	0	0		0								0	$ -		$ 3,200.00							$ 3,200.00
3.5.14	Facility O&M Manual	Time & Materials	0		0	0	0		0								0	$ -	$ 30,668.29	$ 8,000.00							$ 38,668.29
Task 3 Subtotal			12	58	0	8	236	0	168	0	0	0	150	300	0	0	932	$ 220,392.00	$ 947,148.20	$ 165,600.00	$ 35,897.78	$ 25,600.00	$ 143,469.00	$ 16,300.00	$ 6,100.00	$ 1,000.00	$ 1,561,506.98
Task 4 - CR 214 Water Treatment Plant Reliability Upgrades																											
4.1	Project Management																										
4.1.1	Project Management	Lump Sum	0	2	0	80	0		20						2		104	$ 31,492.00		$ 3,400.00						$ 27,500.00	$ 62,392.00
4.1.2	Progress Meetings	Lump Sum	0	2	0	80	4		80						2	10	178	$ 46,652.00									$ 46,652.00
4.2	Data Gathering																										
4.2.1	Data Request	Lump Sum	0		0	8	0		0			8					16	$ 3,824.00	$ 10,281.99	$ 3,200.00							$ 17,305.99
4.2.2	Field Investigation	Lump Sum	0		0	16	0		0			8					24	$ 6,448.00									$ 6,448.00
4.2.3	Facility Evaluation	Time & Materials	0	8	0	40	20		0			8					76	$ 22,468.00									$ 22,468.00
4.2.3.1	Hydraulic Evaluation and Modeling	Lump Sum	0		0	0	0		0								0	$ -	$ 33,882.96								$ 33,882.96
4.2.3.2	Treatment Process and Operational Evaluation	Time & Materials	0		0	0	0		0								0	$ -	$ 50,238.02								$ 50,238.02
4.3	Development of Reliability Upgrades Design Criteria and Parameters																										
4.3.1	Preliminary Design Report and 30% Submittal	Lump Sum	0		0	12	125		0			40				20	197	$ 46,061.00		$ 5,600.00	$ 2,955.17						$ 54,616.17
4.4	Permitting	Lump Sum	12	2	0	16	32		0			40				20	122	$ 27,940.00		$ 800.00							$ 28,740.00
4.5	75% Design																										
4.5.1	75% Design	Lump Sum	12	2	0	12	162		0				40	40		20	288	$ 72,558.00		$ 13,600.00	$ 5,982.22						$ 92,140.22
4.6	100% Design	Lump Sum	24	4	0	92	92		0				40	40		20	312	$ 85,460.00		$ 9,600.00	$ 4,202.38						$ 99,262.38
4.7	Bidding Services																										
4.7.1	Responses to Bidder Questions and Bid Evaluations	Time & Materials	0	4	0	20	16		8			20					68	$ 16,904.00		$ 2,400.00	$ 1,040.32						$ 20,344.32
4.8	Construction Phase Services																										
4.8.1	Review Shop Drawings and RFIs	Time & Materials	0		0	60	120		0			40			80		300	$ 71,080.00		$ 10,400.00	$ 5,828.46						$ 87,308.46
4.8.2	Field Change Directive and Change Order Reviews	Time & Materials	0		0	144	0		0								144	$ 47,232.00		$ 1,600.00							$ 48,832.00
4.8.3	Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion	Time & Materials	0		0	40	30		80								150	$ 37,870.00		$ 13,600.00							$ 51,470.00
4.8.4	Assist with Start-up, Testing and Training	Time & Materials	0		0	16	8		80			40					144	$ 30,168.00		$ 4,800.00							$ 34,968.00
4.8.5	Limited Construction Inspection Services	Time & Materials	0	4	0	20	40		80			40					184	$ 41,384.00		$ 2,400.00							$ 43,784.00
4.8.6	Post Construction Services	Time & Materials	0	4	0	16	40		0				40	60			160	$ 38,652.00		$ 3,200.00							$ 41,852.00
4.8.7	Asset Management	Time & Materials	0	2	0	4	4		8			8					26	$ 5,964.00		$ 1,600.00							$ 7,564.00
Task 4 Subtotal			48	34	0	676	693	0	356	0	0	252	120	140	84	90	2493	$ 632,157.00	$ 94,402.97	$ 76,200.00	$ 20,008.55	$ -	$ -	$ -	$ -	$ 27,500.00	$ 850,268.52
Task 5 - Contingency																											
5.1	Contingency (Assumed 5%)	Allowance	0		0	0	0		0								0	$ -	$ 100,000.00								$ 311,989.71
Task 5 Subtotal			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ 100,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 311,989.71
Program Total			**444**	**374**	**602**	**1442**	**3863**	**28**	**4094**	**604**	**876**	**1616**	**838**	**1940**	**484**	**442**	**17619**	**$ 4,110,179.00**	**$ 1,764,776.11**	**$ 425,400.00**	**$ 284,224.53**	**$ 74,700.00**	**$ 329,769.00**	**$ 51,675.00**	**$ 31,100.00**	**$ 94,500.00**	**$ 7,381,476.55**

Total Lump Sum	**$ 4,389,541.58**
Total Time & Materials	**$ 2,609,614.51**
Total Allowance	**$ 382,320.46**

September 29, 2026 **Via Email**: MHuff@carollo.com

Marya Huff, PE
Carollo
4720 Salisbury Road, Suite 117
Jacksonville, FL 32256

Reference: Proposal for Environmental Services
St. Johns County Utility Department
Four (4) Water Infrastructure Projects
St Johns County, Florida

Dear Ms. Huff:

Alpha Envirotech Consulting, Inc (AEC) is pleased to submit this proposal to provide environmental services for the above referenced projects.

PROJECT INFORMATION

It is our understanding that Carollo Engineers, Inc. (Carollo) has been selected by St. Johns County Utility Department (SJCUD) to implement a coordinated program of capital improvements consisting of the following projects:

• Project 1: Trout Creek Water Treatment Plant (approximately 5 acres)

• Project 2: Northwest to CR 214 Service Area Finished Water Blend and Transfer Station (~ 1 acre)

• Project 3: CR 214 Water Treatment Plant Reliability Upgrades

• Project 4: CR 214 Future Improvements Facility Plan

Based on our communications with Carollo, environmental consulting services will be required for Project 1 and Project 2.

PROPOSED SCOPE OF SERVICES

AEC proposes the following scope of work:

Project 1: Trout Creek Water Treatment Plant

TASK 1.1 – Project Meetings

AEC will participate in regular project meetings for Project 1 upon request to address environmental issues throughout the project.

TASK 1.2 – Phase I Environmental Site Assessment

The purpose of the Phase I Environmental Site Assessment (ESA) is to evaluate the property for the presence or likely presence of any hazardous substance or petroleum products in soil, groundwater, or surface water from on-site and off-site sources. AEC will perform our study consistent with the standards provided in the American Society for Testing and Materials

(ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", the Standard (ASTM E 1527-21). As required by the noted Standard, our work will be conducted under the responsible charge of an Environmental Professional to address the Project 1 area and associated piping alignment.

TASK 1.3 – Phase I Cultural Resource Assessment Survey

AEC will conduct cultural and historical resource investigation in the Project 1 area and associated piping alignment to determine if archaeological and historical resources are present. Prior to field work, AEC will perform a required A Township, Range and Section (TRS) search from the Florida Master Site File (FMSF) to determine if any archaeological and historical sites have been recorded in the project area. During the fieldwork, the project area will be tested for the presence or absence of cultural resources. Archaeological shovel tests (excavations) and remote sensing (metal detectors) will be employed. Open areas, such as powerline easements, will be tested using an established linear grid. The comprehensive Phase I Cultural Resource Assessment Survey (CRAS) will satisfy the requirements of local, state, and federal permitting agencies, including the Seminole Tribe of Florida, if applicable.

Upon completion of our archaeological investigations, AEC will issue a Phase I CRAS to summarize findings of the archaeological investigation and provide recommendations regarding the mitigation of impact or preservation of sites, if found.

Project 2: Northwest to CR 214 Service Area Finished Water Blend and Transfer Station

TASK 2.1 – Project Meetings

AEC will participate in regular project meetings for Project 2 upon request to address environmental issues throughout the project.

TASK 2.2 – – Phase I Environmental Site Assessment

AEC will conduct a Phase I ESA for the Project 2 area and associated piping alignment to evaluate the property for the presence or likely presence of any hazardous substance or petroleum products in soil, groundwater, or surface water from on-site and off-site sources.

PROJECT FEE AND SCHEDULE

We are prepared to initiate project activities immediately upon your written authorization. Based on the scope of services outlined above, we propose to provide the consulting services for the following lump sum fees.

• Task 1.1 – Project Meetings for Project 1 (assuming 8 hrs @ $250.00/hr)	$2,000.00
• Task 1.2 – Phase I ESA for Project 1	$4,800.00
• Task 1.3 – Phase I CRAS for Project 1	$18,200.00
• Task 2.1 – Project Meetings for Project 2 (assuming 6 hrs @ $250.00/hr)	$1,500.00
• Task 2.2 – Phase I ESA for Project 2	$4,600.00
Total	**$31,100.00**

LIMITATIONS

The proposed scope of work and fees include only services explicit herein. If additional environmental services (i.e., Listed Species Wildlife and Habitat Assessment, Pre-demolition Asbestos-containing Material Survey, Pre-demolition Lead-based Paint Survey, Stormwater Pollution Prevention Plan, Erosion & Sediment Control Inspections, etc.) will be required, AEC will submit a Change Order to cover these costs.

We appreciate the opportunity to provide this proposal to perform the environmental consulting services for this project. If you have any questions concerning this proposal, or if we can serve you in any other way, please contact the undersigned.

Sincerely,

Alpha Envirotech Consulting, Inc.



Amy Y. Fu, P.E.
Principal

ARDURRA GROUP, INC.
405 Golfway West Drive, Suite 201A
St. Augustine, FL 32095
Phone: 904-562-2185

Scope of Services for Professional Engineering Services for Four (4) Water Infrastructure Projects

Article A. Scope of Services

ARDURRA will perform the following tasks to complete Evaluation, Final Design and Construction Phase Services for the PROJECT as defined in this Scope of Services. The work associated with these engineering services is separated into the following tasks:

- Task 1 – Project Management
- Task 2 – Trout Creek Water Treatment Plant
- Task 3 – Northwest to CR 214 Service Area Finished Water Blend and Transfer Station
- Task 4 – CR 214 Water Treatment Plant Facility Plan and Reliability Upgrades
- Task 5 – Contingency

Task 1 - Project Management

Ardurra will perform program management and monitoring activities throughout the completion of the scope of services, as delineated in the following tasks and subtasks.

Task 1.1: Program Management, Control, and Reporting [Not Used]

Task 1.2: Program Kickoff Meeting

Ardurra will attend an in-person kickoff meeting after issuance of the Notice to Proceed (NTP) and assist Carollo with meeting minutes.

Task 1.3: Quality Management

A comprehensive quality management program will be implemented throughout the duration of the program to guide all planning, design, permitting, and construction-phase services to be completed in accordance with SJCUD requirements, applicable regulatory standards, and industry best practices. Ardurra will utilize established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews, constructability reviews, and management oversight at key project milestones. Deliverables will undergo progressively detailed reviews prior to submission to verify technical accuracy, completeness, consistency, and compliance with project objectives.

Quality management activities will be coordinated across all four projects to promote consistency in design criteria, technical approaches, deliverable formats, and documentation. Any comments identified during internal reviews or by SJCUD will be tracked through resolution to maintain continuous improvement and timely incorporation into project deliverables. This structured quality management approach is intended to reduce project risks, minimize rework, support schedule adherence, and provide SJCUD with high-quality deliverables that facilitate successful project implementation.

Task 1.4: CMAR Support

Ardurra will provide limited Construction Manager at Risk (CMAR) support during the Guaranteed Maximum Price (GMP) development process. Services will include review of and responses to Requests for Information (RFIs), as well as review of construction cost estimates associated solely with the blending station improvements. It is assumed that up to three (3) cost estimate reviews will be performed at key design milestones. Cost estimating services for project elements outside of the blending station are not included in this scope. Additional reviews or significant redesign efforts resulting from cost estimate findings may be considered Additional Services.

Task 2 – Trout Creek Water Treatment Plant

Ardurra's scope for this project includes the mechanical design, and construction services for ground storage tank and high service pump station design, updating the InfoWater Pro hydraulic model, quality technical and constructability review for the project and electrical scope of work (See Attachment B). It is assumed that survey, geotechnical, environmental, civil, structural, HVAC, Plumbing, I&C, cost estimating and mechanical design other than above-mentioned will be provided by Carollo and its subconsultants.

Task 2.1: Project Management

Task 2.1.1 Project Management [Not Used]

Task 2.1.2 Progress Meetings

Ardurra will attend and prepare for several progress meetings:

- Biweekly Project Manager Update Meetings – Attend bi-weekly PM update meetings that will be conducted virtually with SJCUD staff, Ardurra's Project Manager (PM) and Project Engineer in attendance at minimum. Up to 20 meetings are assumed.
- Permitting Status Update Meetings – Ardurra's PM will attend monthly permitting status update during the project manager update meetings with SJCUD staff, subcontractors and Carollo. Up to 5 meetings are assumed.

- Monthly Interim Design Progress Meetings – During the detailed design phase, Ardurra will attend up to 10 monthly progress meetings with SJCUD to collect relevant information, present progress to date, receive guidance on design efforts, discuss issues and concerns, and monitor the progress of the work.
- Design CAMP® - Ardurra will attend a 1-day Design CAMP® during the preliminary design phase to promote decision-making and expedite the delivery of the 30 percent design.

Task 2.1.3. Interim Design Submittal Review Workshops

- Conduct a submittal review workshop with SJCUD for each of the following design submittals to facilitate timely stakeholder review of documents. Upon selection, the CMAR will be required to attend and participate in submittal review workshops.
    - Preliminary Design Report and 30 Percent Design Submittal
    - 60 Percent Design Submittal
    - 90 Percent Design Submittal

Task 2.1.4. Owner-Direct Purchased Equipment Basis of Design Selection Workshop

- Following the 30% Design Submittal workshop, Ardurra will work with the CMAR to identify and present the long lead time items for shop drawing procurement through a competitive process where multiple qualified vendors are available. SJCUD will provide preferences for vendor packages and evaluations during the Design CAMP®. Ardurra will work with the CMAR to prepare appropriate bid documents. The CMAR will be responsible for bidding and procurement of shop drawings for procuring owner-direct purchases.

Task 2.2: Preliminary Design Report and 30% Design Submittal

Task 2.2.1 Data Collection and Review

Task 2.2.1.1 Data Request

Ardurra will assist Carollo to submit a data request via email to SJCUD. The data request may include but is not limited to items such as water quality, transmission system drawings (existing and proposed), hydraulic system modeling reports, and any other documentation required for the design. Additional data may be requested later if needed. Data will be transmitted electronically where possible. Ardurra will work with SJCUD staff to acquire the information. It is assumed that all available requested data will be provided within 14 calendar days.

Task 2.2.1.2 Initial Field Investigation [Not Used]

Task 2.2.1.3 Survey

It is understood that a survey exists for the Trout Creek site. If necessary, ETM Survey & Mapping, Inc. (ETM Survey) will provide miscellaneous survey support such as establishment of

SJCUD required survey control including benchmarks, centerline control points, tank staking, as well as additional field survey staking on an as needed basis. Following completion of the geotechnical borings, ETM Survey will perform a survey of the boring locations.

Task 2.2.1.4 Geotechnical Investigation

Universal Engineering Sciences (UES) will provide geotechnical investigation services for the Trout Creek site. Geotechnical soil borings shall be provided at the location of proposed major structures.

Geotechnical work is anticipated to include the following:

- 4 – 35 ft borings
- 16 – 50 ft borings
- 2 – 100 ft borings

A geotechnical report shall be provided with recommendations for the structure foundations and piping. Ardurra's scope will be limited to coordination of boring locations with UES.

Task 2.2.1.5 Environmental Investigation (Optional) [Not Used]

Task 2.2.1.5.1 Phase I Cultural Resource Assessment Survey (Optional) [Not Used]

Task 2.2.1.5.2 Phase I Environmental Site Assessment (Optional) [Not Used]

Task 2.2.2 Water Quality Analysis [Not Used]

Task 2.2.3 Development of Design Criteria and Parameters [Not Used]

Task 2.2.4 Preliminary Design Report (30% Design)

Task 2.2.4.1 Preliminary Design Report (30% Design)

Upon establishment of design criteria and receipt of information from Tasks 2.1 and 2.2, Ardurra will assist Carollo to develop a preliminary design report (PDR) with support from subconsultants. The PDR shall include the following components:

- Design criteria including:
    - Process mechanical design criteria.
        - Process Mechanical
            - Preliminary list of equipment for major process mechanical equipment, including estimated sizes, capacities, and quantities. The list shall be accompanied by preliminary specifications and/or datasheets if available.
            - Recommend procurement process for new process equipment.
            - Establish the level of redundancy required for all process equipment.

- Design will be completed in a 3D and BIM360 environment to enhance visualization during design and construction as follows:
    - The various structures and buildings will be developed in a 3D drawing format, with applicable extractions from the associated 3D models to create 2D drawings (plans and sections) for adding applicable details and annotations as part of the Interim Review Submittals identified herein.
    - The 3D models will incorporate major design elements such as aboveground and below-grade structures; process, mechanical and electrical equipment; process piping, mechanical ductwork; electrical cable trays, major conduits and duct banks; and other critical elements.
    - The 3D models will be updated throughout design development and reviewed with SJCUD staff during regularly scheduled progress meetings. Models will be in viewable PDF format.
    - Clash detection software (Navisworks) will be used during design in conjunction with the 3D models to identify and mitigate the potential multi-discipline conflicts such as structural elements, electrical cable trays, conduits and duct banks; HVAC ductwork; and mechanical piping.
- Hydraulics and hydraulic design criteria (including a detailed hydraulic profile).
    - Preliminary Hydraulic Profile: Ardurra will assist Carollo to prepare a preliminary hydraulic profile of the entire treatment plant to handle Day 1 and future flows under average day and peak flow conditions for the planning horizon (2050).
- A written description of the materials and equipment to be incorporated into the project.
- List of required permits.
- Ardurra will assist Carollo and the subconsultants to create preliminary drawings, including:
    - Hydraulic profile.
    - Process flow diagram.

    - Site layout.
    - Mechanical plan view drawings.
- A list of the proposed design specifications.
- Equipment data sheets.

Additionally, Ardurra will perform QA/QC for the whole project by utilizing established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews and constructability reviews at this project milestone.

The Draft Trout Creek WTP PDR will be submitted to SJCUD for review. A workshop will be held with SJCUD staff to review the PDR and receive any comments. The final PDR will be finalized within two weeks of the workshop.

Task 2.2.4.2 Ground Storage Tanks Design Criteria

Ardurra will prepare a standalone Design Criteria Package (DCP) for the proposed Ground Storage Tanks (GSTs) to support a Design-Build (DB) procurement. The DCP will establish the technical, operational, and site-specific requirements necessary for DB teams to develop the final design and construction approach. The DCP will include preliminary site layout concepts; projected storage capacity requirements; yard piping criteria; preliminary pipe sizing; hydraulic design criteria; geotechnical recommendations and foundation requirements based on available subsurface information; utility considerations; site access requirements; and technical specifications defining minimum design, material, equipment, and performance requirements for the GSTs.

It is assumed that SJCUD will advertise the GST DCP as a separate DB solicitation independent of the CMAR-delivered improvements. Ardurra will support coordination of the DCP with the adjacent project components to allow compatibility with the overall facility layout, hydraulic requirements, and future operational needs.

Ardurra will provide limited support during the qualification-based selection phase, including responses to bidder questions, and preparation of addenda. The scope assumes up to ten bidder questions; and two addendums. Technical content for bidder questions and addendum will be developed by Ardurra, but formal responses will be issued by SJCUD. Additional procurement support beyond the assumed level may be provided as an additional service.

Task 2.3: Permitting

Ardurra will assist Carollo to perform various permitting coordination and assistance activities. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permitting activities will begin at the preliminary design level but permit applications may not be submitted until after the 60% design.

Task 2.3.1 FDEP Permit Application

Ardurra will assist Carollo to prepare the Florida Department of Environmental Protection (FDEP) Specific Permit to Construct PWS Components application for the proposed improvements in accordance with Chapter 62-555, Florida Administrative Code (F.A.C.), and all applicable FDEP design criteria and regulatory requirements. Ardurra will coordinate with Carollo throughout the permitting process, including participation in pre-application meetings, preparation of supporting technical documentation, and coordination of permit application submittals. Ardurra will address and respond to up to one (1) Requests for Additional Information (RAIs) issued by FDEP and will revise permit documentation as necessary to support permit issuance. The permit application will be developed based on the approved design documents and submitted at a design milestone appropriate for agency review (assumed post 60% design).

Task 2.3.2 Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP) [Not Used]

Task 2.3.3 Land Development Permit [Not Used]

Task 2.3.4 Permit Assistance – FDEP Variance (OPTIONAL) [Not Used]

Task 2.4: 60% Design

Task 2.4.1 60% Design

Ardurra will assist Carollo to prepare 60 percent level documents for SJCUD/CMAR review and comment. The 60 percent design submittal will include all mech plans, technical specifications, and typical details.

Additionally, Ardurra will perform QA/QC for the whole project by utilizing established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews and constructability reviews at this project milestone.

Ardurra will attend a review meeting with Carollo, SJCUD and CMAR. SJCUD and CMAR will provide review comments within 7 calendar days after submitting the design package.

Task 2.4.2 Early Procurement, Shop Drawing Reviews

Upon receipt of vendor submittals and shop drawings, Ardurra will review the information for conformance with the design intent and incorporate the selected equipment into the design documents.

Task 2.5: 90% Design

Task 2.5.1 90% Design

Ardurra will assist Carollo to prepare 90 percent documents for SJCUD/CMAR review and comment. The 90 percent design submittal will include all discipline plans, technical specifications, and typical details.

Additionally, Ardurra will perform QA/QC for the whole project by utilizing established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews and constructability reviews at this project milestone.

Ardurra will attend a review meeting with SJCUD and CMAR. SJCUD and CMAR will provide review comments 7 calendar days after submitting the design package.

Task 2.6: 100% Design

Task 2.6.1 100% Design

Ardurra will assist Carollo to prepare 100 percent level documents for SJCUD review. The 100 percent design submittal will include all discipline plans, technical specifications, and typical details.

Additionally, Ardurra will perform QA/QC for the whole project by utilizing established quality assurance and quality control (QA/QC) procedures that include independent technical reviews, interdisciplinary coordination reviews and constructability reviews at this project milestone.

Task 2.7: Construction Phase Services

The following services are for the construction of the Trout Creek Water Treatment Plant. Ardurra will provide discipline-specific construction inspection services with the assistance of SJCUD personnel. The overall construction duration is estimated to be approximately twenty-four (24) months. The project construction duration will be confirmed by CMAR. Review beyond the assumed construction period may be considered additional engineering services during construction.

Task 2.7.1 Review Shop Drawings and RFIs

Ardurra will clarify technical or design-related questions to the CMAR and will issue clarifications of the design documents as deemed appropriate to each request. In addition, Ardurra will review up to twenty (20) shop drawings with up to one resubmittal per shop drawing as well as up to five (5) Requests for Information (RFIs). Ardurra will budget 10 hours of review time per shop drawing and 4 hours of review time per RFI.

Ardurra's Engineer or Record will review and return shop drawings within 14 calendar days of receipt of the shop drawings. Ardurra will expedite review of certain critical path shop drawings as identified by the CMAR and communicate with 14 calendar days in advance.

Task 2.7.2 Field Change Directive and Change Order Reviews

Ardurra will assist the Carollo/SJCUD in issuing Field Change Directives (FCD) for changes that are identified as conflicts in the field by the CMAR and approved by the SJCUD.

At SJCUD's request, Ardurra will review and evaluate change orders (CO) issued by the CMAR for conformance to the approved change**.**

Task 2.7.3 Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion

Ardurra will attend the following:

- One Pre-Construction Conference.
- Up to twenty-four (24) Monthly Construction Progress Meetings (up to 2 hours each).
- Up to four (4) Pre-Installation Meetings (up to 2 hours each).
- Up to four (4) Pre-process Start-up Meetings (up to 2 hours each).
- Up to six (6) Electrical and Instrumentation Meetings (up to 2 hours each).
- One Substantial Completion walkthrough (up to 4 hours).
- One Final Completion walkthrough (Close-out Meeting).
- Post-Construction Meeting.

Ardurra will attend one substantial completion walk and one final completion walk. Ardurra will assist Carollo to develop a substantial completion punch list within three business days after the substantial completion walk.

Ardurra will conduct routine site visits to observe the construction progress. The frequency of site visits will be based upon project activity and need, within the allotted budget. In addition, Ardurra will coordinate with Carollo, SJCUD and the CMAR for site visits to verify installation and functionality of the electrical and instrumentation portions of the work as deemed appropriate for functional testing and start- up procedures.

Task 2.7.4. Assist with Start-up, Testing and Training

Ardurra personnel will attend startup and testing activities to verify that the installed facilities are operating in general conformance with the design intent and performance requirements of the Contract Documents. Ardurra will review startup and testing results, document observations, and provide recommendations regarding corrective actions, as needed, to achieve successful operation of the facilities. This scope assumes up to five (5) full working days of on-site assistance by Ardurra personnel. Additional startup, testing, training, troubleshooting, return visits, or extended operational support beyond the assumed two-week period will be considered additional services.

It is assumed that the CMAR will coordinate with the equipment manufacturers to provide training for SJCUD staff.

Task 2.7.5 Limited Construction Inspection Services [Not Used]

Task 2.7.6 Post Construction Services [Not Used]

Task 2.7.7 Facility O&M Manual

Ardurra will assist Carollo to prepare an Operations and Maintenance (O&M) Manual for the facility to support SJCUD staff in the operation, monitoring, maintenance, and troubleshooting

of the installed systems. The O&M Manual will be developed using information from the final design documents, equipment submittals, manufacturer literature, startup and testing documentation, and operation and maintenance manuals provided by equipment vendors and the CMAR.

The O&M Manual will include facility descriptions, process narratives, equipment summaries, standard operating procedures, preventive maintenance recommendations, process control considerations, alarm and monitoring descriptions, and troubleshooting guidance for major treatment and support systems. Ardurra will coordinate with the CMAR and equipment manufacturers to obtain and incorporate relevant information necessary to develop the manual.

A draft O&M Manual in pdf format will be submitted to SJCUD for review and comment. Ardurra will incorporate one consolidated round of SJCUD comments and provide a final O&M Manual in pdf format. This scope assumes that equipment-specific operation and maintenance manuals prepared by manufacturers will be provided by the CMAR and incorporated by reference or appended to the facility O&M Manual, as appropriate.

Task 3 – Northwest to CR 214 Service Area Finished Water Blend and Transfer Station

Ardurra will provide professional engineering services to support the design and construction of the Northwest to CR 214 Service Area Finished Water Blending and Transfer Station. The project is intended to improve system capacity, reliability, and water quality within the CR 214 service area by facilitating the transfer and blending of finished water from the northwest portion of St. Johns County. The CR 214 WTP wellfield has limited expansion potential and relies on reverse osmosis treatment due to lower raw water quality. In contrast, higher quality raw water is available in the northwest service area. System planning has identified the transfer of water from the northwest to the CR 214 service area as a preferred solution to meet increasing demand and maintain system performance.

A 2.0 MGD blending and transfer station was previously constructed at the CR 214 WTP site in 2018. This project will expand system capability through the construction of a new blending, storage, and booster pump station to provide an additional 2.5 MGD of finished water to the southern service area. Final design pressures and operating conditions shall be established based on system modeling and analysis performed as part of this project. The new facility shall be designed to integrate with existing infrastructure, including the current blending station, high service pump station, and SCADA system at the CR 214 WTP.

Ardurra shall utilize and update the existing hydraulic water model to establish final design flows, pressures, and system operating conditions. SJCUD's conceptual planning has identified a potential corridor along CR 2209 and a general location west of the CR 214 WTP for the

proposed facility. Ardurra shall evaluate alternative site locations, including potential property acquisition sites and existing County-owned properties, to determine the most feasible location for the project.

Ardurra's scope for this project includes the mechanical design, permitting, and construction and CMAR services, updating the InfoWater Pro hydraulic model, and electrical and I&C scope of work (See Attachment C). It is assumed that survey, geotechnical, environmental, civil, structural, HVAC, Plumbing, Fuel Systems, cost estimating will be provided by Carollo and its subconsultants.

The work associated with these engineering services is separated into the following tasks:

Task 3.1: Project Management

Task 3.1.1 Project Management

Ardurra shall provide project management and coordination throughout Project 2 effort. Services shall include:

- Conduct a project kickoff meeting with SJCUD staff and applicable project stakeholders.
- Conduct monthly meetings with Carollo, Ardurra and SJCUD – 12 meetings are estimated.
- Conduct site visits, one (1) visit is expected for each discipline through the 90% design.
- Additional milestone workshops:
    - Conduct Workshop/Progress Meeting to review Conceptual Design.
    - Conduct Workshop/Progress Meeting to review 30% design documents with Carollo, SJCUD and CMAR.
    - Conduct Workshop/Progress Meeting to review 60% design documents with Carollo, SJCUD and CMAR.

Task 3.2: Data Collection and Review

Task 3.2.1 Data Collection and Review

Ardurra shall review the available data of the existing CR214 WTP, NW WTP, Trout Creek WTP and associated systems.

The following information will be provided by SJCUD:

- Record drawings
- Previous studies, reports, master plan, and/or facility plans
- Operating/Control Narratives for existing Blend/Transfer Station
- Existing hydraulic models
- Finished Water quality data for CR214 and NW WTPs (2021-2026)
- Current Blend water quality and chemical dosing data

Task 3.2.2 Survey

It is understood that the location of the blending station is not identified. Survey will be required if the blending station is located off the CR 214 WTP site. ETM Survey & Mapping, Inc. will provide miscellaneous survey support such as establishment of SJCUD required survey control including benchmarks, centerline control points, tank staking, as well as additional field survey staking on an as needed basis.

Task 3.2.3 Geotechnical Investigation

Universal Engineering Sciences (UES) will provide geotechnical investigation services for the blending station site. Geotechnical soil borings shall be provided at the location of proposed major structures.

Geotechnical work is expected to include the following:

- 1 – 35 ft boring for stormwater
- 3 – 50 ft borings for electrical building and pump slab
- 4 – 100 ft borings for GSTs

A geotechnical report shall be provided with recommendations for the structure foundations and piping.

Task 3.2.4 Phase I Environmental Site Assessment (OPTIONAL)

The purpose of the Phase I ESA is to evaluate the property for the presence or likely presence of any hazardous substance or petroleum products in soil, groundwater, or surface water from on-site and off-site sources. AEC will perform our study consistent with the standards provided in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", the Standard (ASTM E 1527-21). As required by the noted Standard, our work will be conducted under the responsible charge of an Environmental Professional.

Task 3.3: Blending Technical Evaluation

Ardurra shall provide technical memoranda for the following items for conceptual design.

Task 3.3.1 Finished Blended Water Quality – Bench Scale Study

If desired by SJCUD, bench scale testing will be conducted to validate proposed blending ratios derived from the desktop analysis. The bench-scale testing will use the water from the existing facility, and pilot plant from Project 1. Water quality parameters to be tested during bench-scale will be developed as part of the testing plan. It is assumed that water sample lab testing will be performed either at the SJCUD's lab or SJCUD's contract lab. A technical memorandum will be prepared to summarize the testing plan, water quality data, key findings, and recommendations for full-scale implementation.

Task 3.3.2 Hydraulic Modeling

The hydraulic water model shall be updated based on the new blending station design conditions provided by the County.

Task 3.3.3 New Blending Station Location Identification

Ardurra and the County shall perform a high level assessment of two (2) potential locations for the blending station and determine the most appropriate location prior to detailed design. This work may include a basic site plan to assist in the site selection process.

Task 3.4: Detailed Design Documents and Preliminary Design Report (PDR)

Task 3.4.1 Preliminary Design Report and 30% Design Documents

Prepare a PDR that includes the information from Tasks 3.2 and 3.3 and other necessary information required to proceed into Final Design. The PDR shall include the following components:

- Introduction and purpose.
- Site specific details including:
  - Site Topographic and Boundary Survey.
  - Geotechnical investigations and recommendations for foundation design
  - Design criteria including:
    - Process Mechanical
      - Preliminary list of equipment for major process mechanical equipment, including estimated sizes, capacities, and quantities. The list shall be accompanied by preliminary specifications and/or datasheets if available.
      - Recommend procurement process for new process equipment.
      - Establish the level of redundancy required for all process equipment.
  - Hydraulics and hydraulic design criteria
    - Preliminary Hydraulic Calculations: Ardurra will perform hydraulic calculations for the pump station and update the hydraulic model.
  - A written description of the materials and equipment to be incorporated into the project.
  - List of required permits.
- Preliminary drawings in AutoCAD 2026, including:
  - Hydraulic profile.
  - Process flow diagram.
  - Site layout.
  - Mechanical plan view drawings.

- A list of the proposed design specifications.
- Equipment data sheets.

The Draft Finished Water Blend and Transfer Station PDR will be submitted to SJCUD for review. A workshop will be held with SJCUD staff to review the PDR and receive any comments. The final PDR will be finalized within two weeks of the workshop.

Task 3.4.2 60% Design (including Permitting)

Ardurra will prepare 60 percent level documents for SJCUD review and comment. The 60 percent design submittal will include all discipline plans, technical specifications, and typical details.

Ardurra will attend a review meeting with SJCUD. SJCUD will provide review comments 7 calendar days after submitting the design package.

Ardurra will perform various FDEP and SJC DRC permitting coordination and assistance activities. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permit applications may not be submitted until after the 60% design.

Task 3.4.3 100% Design

Ardurra will prepare 100 percent level documents for SJCUD review and comment. The 100 percent design submittal will include all discipline plans, technical specifications, and typical details.

Task 3.5: Construction Phase Services

Task 3.5.1 Project Management

Activities performed under this task consist of the general functions required to maintain that the project is on schedule, within budget, and that the quality of the work products defined within this scope are consistent with SJCUD's standards and expectations. This task also includes monthly invoicing. Construction duration of fifteen (15) months is assumed.

Task 3.5.2 Pre-Construction Meeting

Ardurra will prepare conformed documents (plans and specifications) "Issued for Construction" by compiling bidder questions and addenda. The conformed documents will be distributed at the pre-construction meeting. Ardurra will attend one (1) pre-construction meeting and provide assistance to SJCUD in answering technical questions during the meeting. Ardurra will prepare an agenda and distribute minutes to the project team.

Task 3.5.3 Construction Progress Meetings

Ardurra will attend monthly construction progress meetings and site visits. It is assumed that no more than fifteen (15) meetings will be attended by Ardurra. Ardurra will prepare an agenda and distribute meeting minutes to the project team. This tasks also includes up to six (6) site visits for pre-installation inspections.

Task 3.5.4 Review Shop Drawings

Ardurra will receive, review, evaluate, and distribute shop drawings. It is assumed that no more than twenty (20) shop drawings will be reviewed by Ardurra. No more than one resubmittal per shop drawing is assumed. Ardurra will budget 10 hours of review time per shop drawing. This task also includes up to five (5) virtual meetings and two (2) site coordination meetings with vendors and SJCUD.

Task 3.5.5 Assist with Start-up, Testing and Training

Ardurra personnel will attend startup and testing activities to verify that the installed facilities are operating in general conformance with the design intent and performance requirements of the Contract Documents. Ardurra will review startup and testing results, document observations, and provide recommendations regarding corrective actions, as needed, to achieve successful operation of the facilities. This scope assumes up to two (2) consecutive weeks of startup, testing, and training support, consisting of ten (10) full working days of on-site assistance by Ardurra personnel. Additional startup, testing, training, troubleshooting, return visits, or extended operational support beyond the assumed two-week period will be considered additional services.

It is assumed that the CMAR will coordinate with the equipment manufacturers to provide training to SJCUD staff.

Ardurra will support SJCUD with the preparation and submittal of all BacT test results to FDEP for review and approval. It is assumed that a preliminary BacT narrative will be submitted to FDEP for review prior to sample collection. This scope assumes that FDEP will provide a single round of comments or request for additional information (RAI) associated with its review of the BacT submittal.

Task 3.5.6 O&M Manuals

Ardurra will receive, review, evaluate, and distribute O&M manuals. It is assumed that no more than five (5) O&M manuals will be reviewed by Ardurra.

Task 3.5.7 Requests for Information (RFI)

Ardurra will receive, review, and evaluate up to ten (10) RFIs. Ardurra will submit RFI response to the CMAR. Ardurra will budget 4 hours of review time per RFI.

Task 3.5.8 Design Clarifications (DC)

Ardurra will issue necessary designer clarifications of Contract Documents. Ardurra will issue up to three (3) DCs.

Task 3.5.9 Substantial Completion Walk-Through

Ardurra will conduct one (1) walk through to assess the project at Substantial Completion. Ardurra will create a punch list and distribute to the project team. Ardurra will issue the Substantial Completion Certificate to the CMAR upon SJCUD approval.

Task 3.5.10 First Completion Walk-Through

Ardurra will conduct one (1) final walk through to confirm and verify the completion of the punch list.

Task 3.5.11 Construction Record Drawings

Ardurra will update the construction record drawings upon acceptance of CMAR's construction red lines. Ardurra will produce and submit construction record drawings upon project final completion for SJCUD review. Ardurra will incorporate SJCUD review comments and submit final construction record drawings in electronic format (PDF) and AutoCAD. The hydraulic model will be updated to reflect final record drawings.

Task 3.5.12 Project Completion Certification

Ardurra will perform the project completion certification and submit to FDEP.

Task 3.5.13 Facility O&M Manual

Ardurra will prepare an Operations and Maintenance (O&M) Manual for the facility to support SJCUD staff in the operation, monitoring, maintenance, and troubleshooting of the installed systems. The O&M Manual will be developed using information from the final design documents, equipment submittals, manufacturer literature, startup and testing documentation, and operation and maintenance manuals provided by equipment vendors and the CMAR.

The O&M Manual will include facility descriptions, process narratives, equipment summaries, standard operating procedures, preventive maintenance recommendations, process control considerations, alarm and monitoring descriptions, and troubleshooting guidance for major treatment and support systems.

Ardurra will coordinate with the CMAR and equipment manufacturers to obtain and incorporate relevant information necessary to develop the manual. A draft O&M Manual will be submitted to SJCUD for review and comment. Ardurra will incorporate one consolidated round of SJCUD comments and provide a final O&M Manual in electronic format. This scope assumes that equipment-specific operation and maintenance manuals prepared by manufacturers will be provided by the CMAR and incorporated by reference or appended to the facility O&M Manual, as appropriate.

Task 4 – CR 214 Water Treatment Plant Facility Plan and Reliability Upgrades

The CR 214 WTP currently utilizes two (2) 2.0-MGD reverse osmosis (RO) treatment skids operating in conjunction with raw water blending to produce approximately 8.0 MGD of finished water. This Technical Memorandum (TM) presents the professional engineering evaluation of the existing CR 214 WTP RO treatment system with a focus on accommodating a third RO treatment train and assessing the long-term reliability and capacity of the clearwell and high service pump

station. It is understood that no additional treatment process or capacity improvements beyond these identified upgrades are currently anticipated for the CR 214 WTP.

Task 4.1: Data Collection and Existing Conditions

Task 4.1.1 Data Request

The purpose of this task is to collect and review the available data to complete the project. Data collection will include a variety of sources based on the best available data. The required data is anticipated to include, but not be limited to:

- Plant As-Built Record Drawings
- Existing Pump Operating Data (including pump starts, stops, run times, and cycling)
- Existing Electrical Data
- Existing SCADA and Instrumentation Data
- Previous Condition Assessments
- Existing Permits and Permit Conditions
- Existing Maintenance Records
- Proposed Projects
- Equipment and component information including RO Train Operation and Maintenance (O&M) manuals
- SCADA Logic & Screens
- Plant & RO Train Operational Data
- Raw Water Quality Historical Data
- Finished Water Quality Historical Data

The data provided will be reviewed and compiled for use in the following tasks.

Task 4.2 Facility Evaluation Technical Memorandum

Ardurra will assess the RO treatment system, clear well and high service pump station to identify physical, operational, and infrastructure constraints that may influence future improvements. The evaluation will include review of available site space, process layout, and existing treatment components to determine the feasibility of adding a third RO train or implementing other capacity and reliability enhancements while minimizing operational disruptions during construction and startup. Historical and projected well water quality trends will be evaluated to understand potential impacts on future treatment performance and system operation. Findings from the evaluation will be used to develop a technical memorandum of recommendations for system improvements that enhance reliability, operability, and long-term treatment capacity.

Each of the evaluations are detailed below:

- Hydraulic Model Update and High Service Pump Station Evaluation
- Membrane Treatment Process and Operational Evaluation

Prior to starting the evaluations, Ardurra will establish and confirm the demand, capacity, and planning criteria with SJCUD.

Task 4.2.1 Hydraulic Model Update and High Service Pump Station Evaluation

SJCUD will provide the latest available InfoWater Pro hydraulic model for the CR 214 WTP service area. Ardurra will review the existing model, verify key assumptions and boundary conditions, and evaluate the capacity and operational adequacy of the high service pump station under projected future demand conditions. The evaluation will assess the ability of the existing pumping facilities to satisfy anticipated system demands while maintaining required pressures and operational reliability. Recommendations for improvements will be developed if deficiencies are identified.

Task 4.2.2 Membrane Treatment Process and Operational Evaluation

Ardurra shall evaluate the performance and operational characteristics of the existing treatment for RO System by adding a third skid. This will include evaluation of the known limited operating depth within the clear well and transfer pump system. The evaluation shall identify the preferred approach based upon technical feasibility, operational performance, and reliability.

Task 5 – Contingency

Task 5.1 Contingency

The level of effort and associated fee presented herein are based on the scope of work currently defined and the information available at the time of proposal preparation. A contingency has been included to accommodate minor scope revisions, unforeseen conditions, additional coordination, and reasonable iterations that may be required during project execution. Should project requirements change significantly or additional services beyond the assumed scope be requested, such services will be considered outside the scope of this proposal and may require an amendment to the agreement.

Article B. Assumptions

Due to the nature of this program, certain assumptions apply to this Scope of Services. To the extent possible, these assumptions are stated within this document and are reflected in the budget.

- SJCUD will provide available existing record drawings, GIS data, hydraulic models, previous studies, permits, operational data, and other pertinent information necessary to support design and permitting activities.
- Existing information provided by SJCUD will be relied upon without independent verification unless otherwise noted in the scope.

- Design criteria, regulatory requirements, and utility standards in effect at the time of design will be utilized.
- Timely review and consolidated comments from SJCUD will be provided at each project milestone. It is assumed that SJCUD will review and provide comments within 7 days.
- Meetings, workshops, and coordination efforts are limited to those specifically identified in the scope.
- Easement acquisition, property purchase, and landowner negotiations are not included.
- Geotechnical recommendations will be based on the findings of the geotechnical consultant and the planned boring program identified in the scope.
- Permitting agencies will review and process permit applications within their normal review timeframes.
- Permit application fees, utility fees, impact fees, and other agency fees must be paid directly by SJCUD.
- SJCUD will furnish available water quality data, pumping records, production records, and operational information necessary to support planning and design activities.
- Design will be based upon available demand projections and planning criteria provided or approved by SJCUD.
- CMAR means and methods, sequencing, temporary facilities, temporary treatment, and temporary bypass systems are the responsibility of the CMAR unless specifically included in the scope.
- It is assumed that CMAR will be present at the milestone workshops listed in the scope and no additional CMAR meetings are anticipated unless specifically included in the scope.
- Construction cost estimates will be performed by the CMAR.
- Review of CMAR submittals, RFIs, and construction progress will be performed as described in the scope and is based on the anticipated construction duration.
- Ardurra will not review CMAR pay applications.
- Significant changes in project requirements, regulatory criteria, treatment processes, project delivery approach, or project schedule after authorization may constitute additional services.
- Asset Management will be developed by the CMAR.
- Early procurement for equipment and materials related to the booster pump station will not be required.
- Project 4 will not include electrical or instrumentation and control design services.
- Ardurra will only provide electrical design services for the installation of the 3rd RO skid at CR214 WTP.

Article C. Schedule

Below is an anticipated schedule by task for purposes of scope assumptions. Note that a detailed schedule will be developed as part of the project kickoff. The total project time for design and construction services will be approximately thirty-six (36) months. Ardurra's services will commence upon SJCUD's issuance of a written notice-to-proceed. The proposed schedule is an estimate contingent to the CMAR's approved construction schedule and ability to complete the work for the contracted time.

Article D. Payment for Services

Total compensation for the Scope of Services described herein shall be lump sum value of **$2,190,176.09**, as detailed in Attachment A. The estimated budget and durations are contingent to the CMAR's ability to complete the work under the contracted schedule. In the event that the construction time or equipment delivery times extend and exhaust the available construction budget, Ardurra may seek Carollo's/SJCUD's authorization for additional compensation over the estimated original budget.

Article E. Authorized Representatives

The Authorized Representatives designated below are authorized to act with respect to this Task Order. Communications between the parties shall be through the Authorized Representatives:

For Carollo Engineers	For Ardurra Group, Inc.
Name: Sudhan Paranjape Program Manager	**Name:** David Rasmussen, PE, BCEE, QEP Senior Project Manager
Address: 200 E. Robinson Street, Suite #1400 Orlando, FL 32801	**Address:** 405 Golfway W Dr, Suite 201A, St. Augustine, FL 32095
Telephone: 407-377-4341	**Telephone:** (904) 567-7754

ATTACHMENT A: FEE ESTIMATE

Attachment A
St. Johns County Utility Department
Four (4) Water Infrastructure Projects
Ardurra Group, Inc. Fee Estimate

Task #	*Task*	*Senior Professional III*	*Senior Professional I*	*Lead Project Professional I*	*Project Professional I*	*Assistant Professional III*	*BIM Specialist / Sr Technologist*	*Technician II*	*Admin/Clerical*	***Total Hours***	*Total Cost*
	Rates	*$375.00*	*$322.43*	*$270.32*	*$202.29*	*$153.25*	*$256.15*	*$159.72*	*$133.17*		
Task 1 - Program Management											
1.1	Program Management, Control and Reporting									0	$ -
1.2	Program Kickoff Meeting	4	4	4		8			4	24	$ 5,629.73
1.3	Quality Management	40		40					8	88	$ 26,878.32
1.4	CMAR Support	16	40		80						$ 35,080.00
	Subtotal Task 1	**60**	**44**	**44**	**80**	**8**	**0**	**0**	**12**	**248**	**$ 67,588.05**
Task 2 - Trout Creek Water Treatment Plant											
2.1	**Project Management**										
2.1.1	Project Management									0	$ -
2.1.2	Progress Meetings	24		36		30			8	98	$ 24,394.64
2.2	**Preliminary Design Report and 30% Design Submittal**										
2.2.1	***Data Gathering***										
2.2.1.1	Data Request	12		12	8	20				52	$ 12,427.25
2.2.1.2	Initial Field Investigation									0	$ -
2.2.1.3	Survey			8		4	2			14	$ 3,287.90
2.2.1.4	Geotechnical Investigation			8		4				12	$ 2,775.61
2.2.1.5	***Environmental Investigation (Optional)***										
2.2.1.5.1	Phase I Cultural Resource Assessment Survey (Optional)									0	$ -
2.2.1.5.2	Phase I Environmnetal Site Assessment (Optional)									0	$ -
2.2.2	Water Quality Analysis									0	$ -
2.2.3	Development of Design Criteria and Parameters									0	$ -
2.2.4	***Preliminary Design Report (30% Design)***										
2.2.4.1	Preliminary Design Report (30% Design)	48		24	40	80	24	80	8	304	$ 64,829.86
2.2.4.2	Ground Storage Tanks Design Criteria	8		12	4	12	4	12	4	56	$ 12,365.97
2.3	**Permitting**										
2.3.1	FDEP Permit Application	8		8		16				32	$ 7,614.65
2.3.2	Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP)									0	$ -
2.3.3	Land Development Permit									0	$ -
2.3.4	Permit Assistance - FDEP Variance (OPTIONAL)									0	$ -
2.4	**60% Design**										
2.4.1	60% Design	60		40	80	120	28	120	24	472	$ 97,420.65
2.4.2	Early Procurement, Shop Drawing Reviews	8		16		16				40	$ 9,777.24
2.5	**90% Design**										
2.5.1	90% Design	80		40	60	96	12	160	16	464	$ 98,421.82
2.6	**100% Design**										
2.6.1	100% Design	60		32	40	60	12	120	24	348	$ 73,873.04
2.7	**Construction Phase Services**										
2.7.1	Review Shop Drawings and RFIs	16		60	48	80			16	220	$ 46,320.16
2.7.2	Field Change Directive and Change Order Reviews	2		4		8		24	2	40	$ 7,156.90
2.7.3	Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion	44		88		88			20	240	$ 56,438.25
2.7.4	Assist with Start-up, Testing and Training			40	20	20				80	$ 17,923.74
2.7.5	Limited Construction Inspection Services									0	$ -
2.8.6	Post Construction Services									0	$ -
2.8.7	Facility O&M Manual	12		16	24	40			6	98	$ 20,609.21
	Subtotal Task 2	**382**	**0**	**444**	**324**	**694**	**82**	**516**	**128**	**2,570**	**$ 555,636.89**

Attachment A
St. Johns County Utility Department
Four (4) Water Infrastructure Projects
Ardurra Group, Inc. Fee Estimate

Task #	*Task*	*Senior Professional III*	*Senior Professional I*	*Lead Project Professional I*	*Project Professional I*	*Assistant Professional III*	*BIM Specialist / Sr Technologist*	*Technician II*	*Admin/Clerical*	*Total Hours*	*Total Cost*
	Rates	*$375.00*	*$322.43*	*$270.32*	*$202.29*	*$153.25*	*$256.15*	*$159.72*	*$133.17*		
Task 3 - Northwest to CR 214 Service Area Finished Water Blend and Transfer Station											
3.1	**Project Management**										
3.1.1	Project Management	24		32	8	24			8	96	$ 24,012.10
3.2	**Data Collection and Review**										
3.2.1	Data Collection and Review	4		12		24	6		12	58	$ 11,556.92
3.2.2	Survey	4		8			2	8		22	$ 5,452.63
3.2.3	Geotechnical Investigation	4		4						8	$ 2,581.30
3.2.4	Phase 1 Environmental Site Assessment (OPTIONAL)	4		8		8				20	$ 4,888.62
3.3	**Blending Technical Evaluation**										
3.3.1	Finished Blended Water Quality - Bench Scale Study	60		60	60	120			16	316	$ 71,377.74
3.3.2	Hydraulic Modeling	12	40	40						92	$ 28,210.14
3.3.3	New Blending Station Location Identification	6		12	40		8	16		82	$ 18,189.98
3.4	**Detailed Design Documents and Preliminary Design Report (PDR)**										
3.4.1	Preliminary Design Report and 30% Design Documents	72		80	80	120	24	80	24	480	$ 105,320.30
3.4.2	60% Design (including Permitting)	110		100	120	156	80	220	24	810	$ 175,290.18
3.4.3	100% Design	60	16	120	80	140	64	240	16	736	$ 154,592.66
3.5	**Construction Phase Services**										
3.5.1	Project Management	30		30					15	75	$ 21,357.28
3.5.2	Pre-Construction Meeting	4		4		8			2	18	$ 4,073.67
3.5.3	Construction Progress Meetings	30		60		96				186	$ 42,181.80
3.5.4	Review Shop Drawings	32		80	96	120			24	352	$ 74,631.85
3.5.5	Assist with Start-up, Testing and Training	16		40	40	80			16	192	$ 39,295.40
3.5.6	O&M Manuals	4		8	20	80			8	120	$ 21,033.97
3.5.7	Requests for Information (RFI)	8		12		8		8	4	40	$ 9,280.34
3.5.8	Design Clarifications (DC)	8		12	8	16		60	4	108	$ 20,429.99
3.5.9	Substantial Completion Walk-Through	8		8	8	24			4	52	$ 10,991.65
3.5.10	Final Completion Walk-Through	8		8	8	16			4	44	$ 9,765.62
3.5.11	Construction Record Drawings	12	12	24	24	40	40	120	8	280	$ 56,319.40
3.5.12	Project Completion Certification	4		4		20				28	$ 5,646.37
3.5.13	Facility O&M Manual	16		24	24	80			8	152	$ 30,668.29
	Subtotal Task 3	**540**	**68**	**790**	**616**	**1,180**	**224**	**752**	**197**	**4,367**	**$ 947,148.18**
Task 4 – CR 214 Water Treatment Plant Facility Plan and Reliability Upgrades											
4.1	**Data Collection and Existing Conditions**										
4.1.1	Data Request	4	12			12	12			40	$ 10,281.99
4.2	**Facility Evaluation Technical Memorandum**										
4.2.1	Hydraulic Model Update and High Service Pump Station Evaluation	12	40	60					2	114	$ 33,882.96
4.2.2	Treatment Process and Operational Evaluation	24	60	80					2	166	$ 50,238.02
	Subtotal Task 4	**40**	**112**	**140**	**0**	**12**	**12**	**0**	**4**	**320**	**$ 94,402.97**
	LABOR SUBTOTAL (Tasks 1 - 4)	**1,022**	**224**	**1,418**	**1,020**	**1,894**	**318**	**1,268**	**341**	**7,505**	**$ 1,664,776.09**
	% Labor per Category	**14%**	**3%**	**19%**	**14%**	**25%**	**4%**	**17%**	**5%**	**100%**	

Attachment A
St. Johns County Utility Department
Four (4) Water Infrastructure Projects
Ardurra Group, Inc. Fee Estimate

Task #	*Task*	*Senior Professional III*	*Senior Professional I*	*Lead Project Professional I*	*Project Professional I*	*Assistant Professional III*	*BIM Specialist / Sr Technologist*	*Technician II*	*Admin/Clerical*	*Total Hours*	*Total Cost*
	Rates	*$375.00*	*$322.43*	*$270.32*	*$202.29*	*$153.25*	*$256.15*	*$159.72*	*$133.17*		
Task 5 - Contingency											
5.1	Contingency										
	Subtotal Task 5										**$ 100,000.00**
Outside Professionals											
W.D.Lasseter (Electrical Design) - Project 1											**$ 183,600.00**
W.D.Lasseter (Electrical Design) - Project 2											**$ 165,600.00**
W.D.Lasseter (Electrical Design) - Project 3											**$ 76,200.00**
	Subtotal Outside Professionals										**$ 425,400.00**
	GRAND TOTAL - LUMP SUM										**$ 2,190,176.09**

ATTACHMENT B: WD LASSETER
(ELECTRICAL ENGINEERING SCOPE)

ENGINEERING SERVICES FEE PROPOSAL

DATE: September 29, 2026

TO: Dave Rasmussen, PE
Ardurra Group, Inc.
405 Golfway West Drive, Suite 201A
St Augustine, FL 32095

FROM: David Lassetter
WD Lassetter, PE
3837 Buckskin Trail East
Jacksonville, Florida 32277

RE: SJCUD Four (4) Water Infrstructure Projects
Project 1: Trout Creek Water Treatment Plant

This Fee Proposal is based upon CAD drafting services and word processing services by Ardurra. My understanding of the project scope is represented by the drawing listing.

Services During Design Phase		
Task 2.1 - Project Management		56
Design Camp	40	
Interim Design Submittal Review Workshops	12	
Owner-Direct Purchased Equipment Basis of Design Workshop	4	
Task 2.2 - Preliminary Design Report and 30% Design Submittal		36
Development of Design Criteria and Parameters	8	
Preliminary Design Report	8	
30% Electrical Plans	16	
30% I&C Coordination Review	4	
Task 2.3 - Early Procurement Documents		40
Task 2.4 - Permitting		8
Task 2.5 - 60% Design		172
60% Electrical Plans & Specifications	144	
60% I&C Coordination Review	16	
Early Procurement Shop Drawing Reviews	12	
Task 2.6 - 90% Design		112
90% Electrical Plans & Specifications	96	
90% I&C Coordination Review	16	
Electronic Procurement Packages	12	
Task 2.7 - 100% Design		8
Task 2.8 - Bidding Services		8
Subtotal Engineering Hours		440
Subtotal Engineering Budget @ $200.00 /Hour		$88,000
Reimbursable Expense Budget		$400
Proposed Lump Sum Fee Authorization		$88,400

Electrical Drawing List		Engineering Hours 30%	60%	90%
E01	ELECTRICAL LEGEND AND SCHEDULES	4	4	4
E02	SINGLE LINE DIAGRAM - MAIN POWER DISTRIBUTION	4	4	4
E03	SINGLE LINE DIAGRAM - MOTOR CONTROL CENTERS	4	4	4
E04	SINGLE LINE DIAGRAM - MOTOR CONTROL CENTERS	4	4	4
E05	CONTROL WIRING DIAGRAMS		4	4
E06	CONTROL WIRING DIAGRAMS		4	4
E07	CONTROL WIRING DIAGRAMS		4	4
E08	ADMIN AND ELECTRICAL BUILDING POWER PLAN		8	4
E09	ADMIN AND ELECTRICAL BUILDING LIGHTING PLAN		8	4
E10	ADMIN AND ELECTRICAL BUILDING SYSTEMS PLAN		8	4
E11	ADMIN AND ELECTRICAL BUILDING GENERATOR PLAN		8	4
E12	ELECTRICAL SITE PLAN		8	4
E13	DEGASIFIER ELECTRICAL PLAN		8	4
E14	ODOR CONTROL ELECTRICAL PLAN		8	4
E15	GROUND STORAGE TANK ELECTRICAL PLAN		8	4
E16	FINISHED WATER CLEARWELL ELECTRICAL PLAN		8	4
E17	CHEMICAL STORAGE AREA ELECTRICAL PLAN		8	4
E18	ADVANCED TREATMENT AREA ELECTRICAL PLAN		8	4
E19	HIGH SERVICE PUMPING ELECTRICAL PLAN		8	4
ED1	CONDUIT AND CABLE SCHEDULE		4	4
ED2	CONDUIT AND CABLE SCHEDULE		4	4
ED3	LIGHTING DETAILS		4	4
ED4	ELECTRICAL DETAILS		4	4
ED5	ELECTRICAL DETAILS		4	4
Total Engineering Hours		16	144	96

Task 2.9 - Construction Phase Services			Hours
Conformed Documents			8
Review Shop Drawings and RFIs			100
Shop Drawing Submittals	30 reviews	60	
Shop Drawing Resubmittals	20 reviews	20	
RFIs	10 reviews	20	
Field Change Directives and Change Order Reviews			8
Construction Progress Meetings			128
Pre-Construction Conference		4	
Monthly Construction Progress Meetings	24 meetings	96	
Electrical and Instrumentation Meetings	4 meetings	16	
Substantial Completion Walkthrough		8	
Final Completion Walkthrough		4	
Post-Construction Meeting		4	
Assist with Start-up, Testing and Training	5 days		40
Limited Construction Inspection Services	6 inspections		24
Post Construction Services			16
Record Drawings		8	
O&M Manual Reviews		8	
Start-Up and Performance Testing			120
Asset Management Assistance			8
Facility O&M Manual			24
Subtotal Engineering Hours			476
Subtotal Engineering Budget @ $200.00 /hour			$95,200
Time and Material Fee Authorization			$95,200

ATTACHMENT C:
WD LASSETER (ELECTRICAL ENGINEERING SCOPE)
Northwest to CR 214 Service Area Finished Water Blend and Transfer Station

ENGINEERING SERVICES FEE PROPOSAL

DATE: October 15, 2026

TO: Dave Rasmussen, PE
Ardurra Group, Inc.
405 Golfway West Drive, Suite 201A
St Augustine, FL 32095

FROM: David Lassetter
WD Lassetter, PE
3837 Buckskin Trail East
Jacksonville, Florida 32277

RE: SJCUD Four (4) Water Infrastructure Projects
Project 3: CR214 WTP Facility Plan and Reliability Upgrades

This Fee Proposal is based upon CAD drafting services and word processing services by Ardurra. My understanding of the project scope is represented by the drawing listing.

Services During Design Phase		
Task 4.1 - Project Management		16
Kickoff Meeting	4	
Reliability Upgrades Submittal Review Workshops	12	
Task 4.2 - Data Collection and Existing Conditions		16
Task 4.5 - Development of Reliability Upgrades Design Criteria		28
Preliminary Design Report and 30% Submittal	16	
30% Electrical Plans	12	
Task 4.6 - Permitting		4
Task 4.7 - 75% Design		68
75% Electrical Plans & Specifications	52	
75% I&C Coordination Review	16	
Task 4.8 - 100% Design		48
100% Electrical Plans & Specifications	40	
100% I&C Coordination Review	8	
Task 4.9 - Bidding Services		4
Subtotal Engineering Hours		184
Subtotal Engineering Budget @ $200.00 /Hour		$36,800
Reimbursable Expense Budget		$200
Proposed Lump Sum Fee Authorization		$37,000

		Engineering Hours		
Electrical Drawing List		30%	60%	90%
E01	ELECTRICAL LEGEND AND SCHEDULES	4	4	4
E02	SINGLE LINE DIAGRAM - MAIN SWITCHBOARD	4	4	4
E03	SINGLE LINE DIAGRAM - MOTOR CONTROL CENTERS	4	4	4
E04	CONTROL WIRING DIAGRAMS		4	4
E05	CONTROL WIRING DIAGRAMS		4	4
E06	ELECTRICAL SITE PLAN		8	4
E07	MEMBRANE BUILDING MODIFICATIONS ELECTRICAL PLAN		8	4
E08	RO SKID #3 ELECTRICAL PLAN		8	4
ED1	CONDUIT AND CABLE SCHEDULE		4	4
ED2	ELECTRICAL DETAILS		4	4
Total Engineering Hours		12	52	40

Task 4.10 - Construction Phase Services			Hours
Conformed Documents			8
Review Shop Drawings and RFIs			52
Shop Drawing Submittals	16 reviews	32	
Shop Drawing Resubmittals	10 reviews	10	
RFIs	5 reviews	10	
Field Change Directives and Change Order Reviews			8
Construction Progress Meetings			68
Pre-Construction Conference		4	
Monthly Construction Progress Meetings	12 meetings	48	
Electrical and Instrumentation Meetings	2 meetings	8	
Substantial Completion Walkthrough		4	
Final Completion Walkthrough		4	
Post-Construction Meeting		4	
Assist with Start-up, Testing and Training	3 days		24
Limited Construction Inspection Services	3 inspections		12
Post Construction Services			16
Record Drawings		8	
O&M Manual Reviews		8	
Asset Management Assistance			8
Subtotal Engineering Hours			196
Subtotal Engineering Budget @ $200.00 /hour			$39,200
Time and Material Fee Authorization			$39,200

ATTACHMENT D:
WD LASSETER (ELECTRICAL ENGINEERING SCOPE)
CR 214 Water Treatment Plant Facility Plan and Reliability Upgrades

ENGINEERING SERVICES FEE PROPOSAL

DATE: October 15, 2026

TO: Dave Rasmussen, PE
Ardurra Group, Inc.
405 Golfway West Drive, Suite 201A
St Augustine, FL 32095

FROM: David Lassetter
WD Lassetter, PE
3837 Buckskin Trail East
Jacksonville, Florida 32277

RE: SJCUD Four (4) Water Infrastructure Projects
Project 3: CR214 WTP Facility Plan and Reliability Upgrades

This Fee Proposal is based upon CAD drafting services and word processing services by Ardurra. My understanding of the project scope is represented by the drawing listing.

Services During Design Phase		
Task 4.1 - Project Management		16
Kickoff Meeting	4	
Reliability Upgrades Submittal Review Workshops	12	
Task 4.2 - Data Collection and Existing Conditions		16
Task 4.5 - Development of Reliability Upgrades Design Criteria		28
Preliminary Design Report and 30% Submittal	16	
30% Electrical Plans	12	
Task 4.6 - Permitting		4
Task 4.7 - 75% Design		68
75% Electrical Plans & Specifications	52	
75% I&C Coordination Review	16	
Task 4.8 - 100% Design		48
100% Electrical Plans & Specifications	40	
100% I&C Coordination Review	8	
Task 4.9 - Bidding Services		4
Subtotal Engineering Hours		184
Subtotal Engineering Budget @ $200.00 /Hour		$36,800
Reimbursable Expense Budget		$200
Proposed Lump Sum Fee Authorization		$37,000

		Engineering Hours		
Electrical Drawing List		30%	60%	90%
E01	ELECTRICAL LEGEND AND SCHEDULES	4	4	4
E02	SINGLE LINE DIAGRAM - MAIN SWITCHBOARD	4	4	4
E03	SINGLE LINE DIAGRAM - MOTOR CONTROL CENTERS	4	4	4
E04	CONTROL WIRING DIAGRAMS		4	4
E05	CONTROL WIRING DIAGRAMS		4	4
E06	ELECTRICAL SITE PLAN		8	4
E07	MEMBRANE BUILDING MODIFICATIONS ELECTRICAL PLAN		8	4
E08	RO SKID #3 ELECTRICAL PLAN		8	4
ED1	CONDUIT AND CABLE SCHEDULE		4	4
ED2	ELECTRICAL DETAILS		4	4
Total Engineering Hours		12	52	40

Task 4.10 - Construction Phase Services			Hours
Conformed Documents			8
Review Shop Drawings and RFIs			52
Shop Drawing Submittals	16 reviews	32	
Shop Drawing Resubmittals	10 reviews	10	
RFIs	5 reviews	10	
Field Change Directives and Change Order Reviews			8
Construction Progress Meetings			68
Pre-Construction Conference		4	
Monthly Construction Progress Meetings	12 meetings	48	
Electrical and Instrumentation Meetings	2 meetings	8	
Substantial Completion Walkthrough		4	
Final Completion Walkthrough		4	
Post-Construction Meeting		4	
Assist with Start-up, Testing and Training	3 days		24
Limited Construction Inspection Services	3 inspections		12
Post Construction Services			16
Record Drawings		8	
O&M Manual Reviews		8	
Asset Management Assistance			8
Subtotal Engineering Hours			196
Subtotal Engineering Budget @ $200.00 /hour			$39,200
Time and Material Fee Authorization			$39,200

ENGLAND-THIMS & MILLER
14775 Old St. Augustine Road, Jacksonville, FL 32258
etminc.com | 904.642.8990

October 30, 2026

Marya Huff, PE
Lead Engineer
Carollo Engineers, Inc.
12724 Gran Bay Parkway West, Suite 410
Jacksonville, FL 32258

RE: St. Johns County Four Water Infrastructure Projects
Scope and Fee for Carollo/Ardurra Tasks 2 and 3
ETM No.: 26-446

Dear Ms. Huff,

England-Thims & Miller, Inc. (ETM) is pleased to submit this scope and fee document for professional services for the St. Johns County (SJC) Four (4) Water Infrastructure Projects, specifically Project 1 - Trout Creek Water Treatment Plant and Project 2 - Northwest to CR 214 Service Area Finished Water Blend and Transfer Station.

The proposed scopes of work for each project are outlined below. Task and subtask numbers correspond to the tasks in Carollo's Scope of Services with the St. Johns County Utility Department (SJCUD) but include only those applicable to ETM's work. Any gaps in the numbering represent tasks that are not part of ETM's scope and are otherwise addressed in Carollo's Scope of Services.

TASK 2 – PROJECT 1: TROUT CREEK WATER TREATMENT PLANT

Task 2.1.1 – Project Management

ETM will perform project management of the site-civil design, engineering, and permitting tasks required by Carollo for the Trout Creek water treatment plant. These tasks are as follows:

- Management of ETM staff and subconsultants
- Coordination with Carollo, SJC, SJCUD, SilverLeaf developer and consultants
- Validate buffer requirements and height restrictions
- Perform monthly invoicing
- Coordinate with other Carollo or SJCUD consultants assisting with related tasks for geotechnical and environmental tasks

Lump Sum Fee ***$7,970.00***



Task 2.1.2 – Progress Meetings

ETM will participate in meetings and workshops identified for its involvement in Carollo's scope, along with a limited allowance for additional progress and internal coordination meetings as needed to support the work.

- 5 Permitting Status Update Meetings
- 5 virtual coordination meetings with Carollo
- Civil EOR and Landscape Architect participation in three of the five days of Carollo Design CAMP®
- Interim Design Submittal Review Workshops:
  - Preliminary Design Report and 30% design submittal
  - 60% design submittal
  - 90% design submittal
- Prepare for and attend 5 one-hour virtual coordination meetings, as requested.

Lump Sum Fee ***$25,350.00***

Task 2.2.1.3 – Miscellaneous Survey Services

ETM Survey & Mapping, Inc. will provide miscellaneous survey support upon request such as:

- Establishment of owner requested survey control
- Establish/stake benchmarks
- Stake centerline control points
- Tank location staking for geotechnical boring
- GST staking
- Additional field survey staking on an as needed basis

Not to Exceed Fee ***$10,000.00***

Task 2.2.4 – Development Design Criteria and Parameters

ETM will coordinate with the Carollo team to define the design parameters for the civil/site related items including yard piping, stormwater management, paving, grading, and drainage.

Not to Exceed Fee ***$8,320.00***

Task 2.2.5.1 – Preliminary/30% Design

The preliminary/30% design will include the following preliminary site design criteria:

- Based on the conceptual layout provided by Carollo and the known location of the SJCUD raw water well and monitoring well, ETM will review and revise the conceptual layout in accordance with SJCUD standards, and design and engineering standards to prepare site civil drawings for the proposed water treatment plant.
- Stormwater and Roadways: The preliminary design will estimate the pervious and impervious areas and determine the necessary stormwater conveyance, treatment and discharge requirements. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security cameras locations.
- Landscape Architectural Services:
    - Landscape plans in compliance with the St Johns County Landscape Code and the SilverLeaf PUD.
    - The permit landscape plans may include site buffering, and site canopy requirements.
    - Required landscape calculations necessary for St Johns County approval.
- Irrigation Design
    - Irrigation plans in compliance with St Johns County Landscape Development Code and the Water Management District Regulations.
    - Preparation of an automatic irrigation system based on the landscape plans.
    - Preparation of a watering schedule.
- Anticipated drawings: General Notes, Master Site Plan, Site Geometry, Pre-development drainage, post-development drainage, Paving & Drainage, Civil details, SJCUD details (as pertains to site civil, not WTP details), erosion control plans, and maintenance of traffic.
- Prepare list of required civil/site permits.

Lump Sum Fee ***$39,350.00***

- Maintenance of Traffic: ETM will evaluate whether site specific maintenance of traffic (MOT) plans for the proposed driveway connection to County Road 16A are required due to the ongoing construction in the area realigning County Road 16A at the First Coast Expressway and the potential for water main installation in the right-of-way of County Road 16A.

Not to Exceed Fee ***$5,125.00***

Task 2.4 – Permitting

ETM will perform various permitting coordination and assistance activities related to the required civil/site permitting. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permitting activities such as pre-application meetings will begin at the preliminary design level but permit applications will not be submitted until after the 60% design.

Permit application fees are NOT included.

Task 2.4.2 – Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP)

ETM will support Carollo with on-site stormwater management design and the ERP permitting for the WTP site.

ETM, serving as SJCUD's subconsultant, is concurrently providing design and permitting services for a joint-use stormwater management facility (SMF) to be located on the adjacent parcel owned by Trout Creek Venture LLC. The SMF will be situated southeast of the proposed Water Treatment Plant (WTP) site and will receive stormwater runoff from the WTP through a planned drainage connection. The initial phase of the SMF will be designed and permitted to accommodate runoff associated with the WTP site, with future expansion of the facility anticipated as development occurs on the adjacent parcel. The adjacent property owner will be responsible for modifying the ERP and expanding the SMF to support ultimate site development. ETM will coordinate the design of the SMF control structure to accommodate both the ultimate buildout condition and the initial WTP phase. Wetland delineation and evaluation of potential impacts associated with the isolated wetland located in the southwest portion of the site are being performed by others under a separate contract. Coordination between the WTP and SMF design efforts will be required to establish final stormwater design criteria and permit assumptions. It is anticipated that the ERP for the SMF will be obtained prior to submission of the WTP permitting package.

ETM will confirm with the St. Johns River Water Management District and the FDEP that ERP permitting for the Trout Creek Water Treatment Plant will be administered by the FDEP pursuant to the operating agreement between FDEP and the Water Management District. ETM, with support from Carollo, will prepare and submit the ERP application for the WTP site.

Lump Sum Fee ***$5,220.00***

Task 2.4.3 – St. Johns County Development Review Committee (DRC) Permitting (Land Development Permit)

ETM will schedule a pre-application meeting with the SJC DRC between the 30% and 60% design.

ETM will prepare and submit a full permit package to the SJC Development Services for review by the DRC for civil/site permitting of the WTP site. This task will utilize the grading and master drainage plans provided in earlier tasks. ETM will prepare all permit applications, exhibits, and tables necessary for the permit application and will coordinate its processing. This task also includes meetings and negotiations with SJC staff, Carollo engineering subconsultants (AEC and UES) and project surveyor, and responses to requests for additional information from SJC staff.

Lump Sum Fee ***$6,735.00***

Task 2.5.1 – 60% Design

The 60% design will build upon the 30% plans, incorporate comments from the 30% review, and will include the following site design criteria:

- Stormwater and Roadways: The design will have all pervious and impervious areas determined and the required stormwater conveyance, treatment and discharge requirements determined. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security camera locations.
- Landscape Architectural Services:
    - Landscape plans in compliance with the St Johns County Landscape Code and the SilverLeaf PUD.
    - The permit landscape plans may include site buffering, and site canopy requirements.
    - Required landscape calculations necessary for St Johns County approval.
- Irrigation Design
    - Irrigation plans in compliance with St Johns County Landscape Development Code and the Water Management District Regulations.
    - Preparation of an automatic irrigation system based on the landscape plans.
    - Preparation of a watering schedule.
- Maintenance of Traffic: ETM will determine whether a site specific maintenance of traffic (MOT) plans for the proposed driveway connection to County Road 16A is required due to the ongoing construction in the area realigning County Road 16A at the First Coast Expressway as well as whether there is the potential for water main installation in the right-of-way of County Road 16A,
- Plan set will be prepared to a level sufficient for initial permit submittals.

Lump Sum Fee ***$33,090.00***

Task 2.6.1 – 90% Design

The 90% design will build upon the 60% plans, incorporate comments from the 60% review and any comments from regulatory reviews, and will include the following site design criteria:

- Stormwater and Roadways: The design will have all pervious and impervious areas finalized and the required stormwater conveyance, treatment and discharge requirements finalized. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security camera locations.
- Landscape Architectural Services:
    - Landscape plans in compliance with the St Johns County Landscape Code and the SilverLeaf PUD.
    - The permit landscape plans may include site buffering, and site canopy requirements.
    - Required landscape calculations necessary for St Johns County approval.
- Irrigation Design

  - Irrigation plans in compliance with St Johns County Landscape Development Code and the Water Management District Regulations.
  - Preparation of an automatic irrigation system based on the landscape plans.
  - Preparation of a watering schedule.

- Maintenance of Traffic: ETM will finalize the site specific maintenance of traffic (MOT) plans for the proposed driveway connection to County Road 16A and any water main installations proposed for the right-of-way of County Road 16A.

Not to Exceed Fee ***$15,320.00***

Task 2.7 – Issued for Construction/Conformed Documents

After the CMAR receives bids, based on RFIs received, all civil/site, landscaping, and Maintenance of Traffic plans will be finalized incorporating all comments received during previous reviews and regulatory reviews preparing the “Issued for Construction” drawing set.

Lump Sum Fee ***$4,440.00***

Task 2.8. – Bidding Services

ETM will provide bidding-phase support services to Carollo throughout the procurement of construction trade packages for the project.

Task 2.8.2 – Response to Bidder Questions and Bid Evaluations

ETM will support Carollo with responses to questions related to ETM’s sections of the documents and provide drawing and specification updates to Carollo as needed for issuance of addenda.

Not to Exceed Fee ***$3,570.00***

Task 2.9 – Construction Phase Services

ETM will provide civil/site/landscape discipline-specific construction inspection services to Carollo with the assistance of SJCUD personnel. The overall construction duration is estimated to be approximately twenty-four (24) months. The project construction duration will be confirmed by CMAR. Review beyond the assumed construction period may be considered additional engineering services during construction.

Task 2.9.2 – Review Shop Drawings and RFIs

ETM will review and prepare the appropriate response to Contractor's shop drawing and RFI submittals for implementation of the Project. ETM will review shop drawings for conformance with the CMAR documents and compliance with the contract documents. Such review or other action shall not extend to means, methods, sequences, techniques, or procedures of construction selected by the CONTRACTOR, or to safety precautions and programs.

ETM will clarify technical or design-related questions to the CONTRACTOR and will issue clarifications of the design documents as deemed appropriate to each request. In addition, ETM will review up to twenty (20) shop drawings with up to one resubmittal per shop drawing as well as up to fifteen (15) Requests for Information (RFIs).

Not to Exceed Fee ***$6,180.00***

Task 2.9.4 – Construction Meetings and Site Visits

ETM will attend the following:

- One-in-person Pre-Construction Conference.
- Up to four (4) Monthly Construction Progress Meetings.
- One Substantial Completion walkthrough.
- One Final Completion walkthrough (Close-out Meeting)

ETM will attend one substantial completion walkthrough and one final completion walkthrough. Following the substantial completion walkthrough, ETM will prepare a punch list and provide it to Carollo within one business day.

Not to Exceed Fee ***$6,130.00***

Task 2.9.7 – Post Construction Services

ETM will provide permit closeout services for all permits obtained by ETM as part of Task 2; permit closeout for permits obtained by others is excluded from this scope.

Not to Exceed Fee ***$4,500.00***

Task 2 Fee Table:

Task	Description	Fees	
		Lump Sum	Not to Exceed
Task 2	***Trout Creek Water Treatment Plant***		
Task 2.1.1	**Project Management**	$ 7,970.00	
Task 2.1.2	**Progress Meetings**	$ 25,350.00	
Task 2.2.1.3	**Miscellaneous Survey Services**		$ 10,000.00
Task 2.2.4	**Development Design Criteria and Parameters**		$ 8,320.00
Task 2.2.5.1	**Preliminary / 30% Design**	$ 39,350.00	
	30% MOT Plans - Allowance		$ 5,125.00
Task 2.4	**Permitting**		
Task 2.4.2	***Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP)***	$ 5,220.00	
Task 2.4.3	**St. Johns County Development Review Committee (DRC) Permitting (Land Development Permit)**	$ 6,735.00	
Task 2.5.1	**60% Design**	$ 33,090.00	
Task 2.6.1	**90% Design**		$ 15,320.00
Task 2.7	**Issued for Construction/Conformed Documents**	$ 4,440.00	
Task 2.8	**Bidding Services**		
Task 2.8.1	**PreBid Conference and Site Visit**	$ -	
Task 2.8.2	**Response to Bidder Questions and Evaluation**		$ 3,570.00
Task 2.9	**Construction Phase Services**		
Task 2.9.1	**Prepare Conformed Documents**	$ -	
Task 2.9.2	**Review Shop Drawings and RFIs**		$ 6,180.00
Task 2.9.4	**Construction Meetings and Site Visits**		$ 6,130.00
Task 2.9.5	**Post Construction Services**		$ 4,500.00
	Expenses		$ 5,000.00
	Totals:	$ 122,155.00	$ 64,145.00
	Grand Total:	**$**	**186,300.00**

TASK 3 – PROJECT 2: NORTHWEST TO CR 214 SERVICE AREA FINISHED WATER BLEND AND TRANSFER STATION

Task 3.1 – Project Management

ETM will perform project management of the site-civil design, engineering, and permitting tasks required by Ardurra for the Northwest to CR 214 Service Area Finished Water Blend and Transfer Station. These tasks are as follows:

- Coordination with Ardurra, SJC, SJCUD and consultants
- Attend project kickoff meeting with SJC and SJCUD for this project (assume 4 hours)
- Perform monthly invoicing
- Interim Design Submittal Review Workshops:
    - Conceptual Design (4 hours)
    - 30% design submittal (4 hours)
    - 60% design submittal (4 hours)
    - 90% design submittal (4 hours)
- Prepare for and attend up to 8 hours of virtual coordination meetings, as requested
- Attend one site visit

Lump Sum Fee $22,450.00

Task 3.2.2 – Survey Services

Task 3.2.2.1 - Boundary Survey

It is understood that the location of the blending station is not identified at this time but is understood that the site will be approximately 2-acres; therefore, when a site is identified, ETM Surveying & Mapping, Inc. will prepare a boundary survey for the approximate 2-acre SJC Finished Water and Transfer Station site that complies with Florida's Board of Professional Surveyors and Mappers Standards of Practice of Chapter 5J-17, Florida Administrative Code, pursuant to Chapter 472, Florida Statutes. The location and mapping of all improvements and utilities will be limited to above ground visible evidence only. This scope of service does not include addressing title commitments, reports, certifications or other items typically associated with an ALTA/NSPS Land Title Survey that is not a state specific requirement. If needed those would be considered additional fees. The delivery shall consist of a signed and sealed copy of the finalized map of survey.

Lump Sum Fee $13,780.00

Task 3.2.2.2 - Topographic Survey

ETM Surveying & Mapping, Inc. will prepare a topographic survey for design purposes of the approximate 2-acre SJC Finished Water and Transfer Station site. The limits of topographic survey will extend twenty-five feet beyond the site boundaries where applicable. The topographic data to be

collected will be surveyed in 50 foot grid lines at 50 foot intervals or at any major change in topography. The surveyed data will be referenced to a published horizontal and vertical datum. The location and mapping of improvements and utilities will be limited to above ground visible evidence only. The deliverable will consist of digital data files of the survey suitable for civil engineering design with finalized maps of survey to follow.

Lump Sum Fee ……..…..... $12,620.00

Task 3.2.2.3 - Protected Tree Survey

ETM Surveying & Mapping, Inc. will prepare a Protected Tree Survey for the approximate 2-acre SJC Finished Water and Transfer Station site in accordance with the standards for tree protection as adopted by the appropriate local regulatory agency. The deliverable will consist of digital data (CAD) files of the survey suitable for civil engineering design.

Lump Sum Fee $7,690.00

Task 3.2.2.4 – Survey Allowance

A 10% allowance for additional services requested related to either the boundary survey, topographic survey, and/or protected tree survey.

Not to Exceed $3,409.00

Task 3.2.2.5 - Miscellaneous Survey Services:

ETM Survey & Mapping, Inc. will provide miscellaneous survey support upon request such as:

- Establishment of owner requested survey control,
- Establish/Stake Benchmarks,
- Stake Centerline control points,
- GST staking for geotechnical borings,
- Additional field survey staking on an as needed basis.

Not to Exceed $10,000.00

Task 3.4.1 – 30% Design Documents

The 30% design will include the following preliminary site design criteria:

- Based on the conceptual layout provided by Carollo and the known location of the SJCUD raw water well and monitoring well, ETM will review and revise the conceptual layout in accordance with SJCUD standards, and design and engineering standards to prepare site civil drawings for the proposed water treatment plant.

- Stormwater and Roadways: The preliminary design will estimate the pervious and impervious areas and determine the necessary stormwater conveyance, treatment
- and discharge requirements. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security camera locations.
- Landscape Architectural Services:
    - Landscape plans in compliance with the St Johns County Landscape Code and the SilverLeaf PUD.
    - The permit landscape plans may include site buffering, and site canopy requirements.
    - Required landscape calculations necessary for St Johns County approval.
- Irrigation Design
    - Irrigation plans in compliance with St Johns County Landscape Development Code and the Water Management District Regulations.
    - Preparation of an automatic irrigation system based on the landscape plans.
    - Preparation of a watering schedule.
- Maintenance of Traffic: ETM will evaluate whether site specific maintenance of traffic (MOT) plans will be required depending on where the project is located.
- Anticipated drawings: General Notes, Master Site Plan, Site Geometry, Pre-development drainage, Post-development drainage, Paving & Drainage, Civil details, SJCUD details (as pertain to site civil, not WTP details), erosion control plans, and maintenance of traffic.
- Prepare list of required civil/site permits.

Lump Sum Fee ***$11,090.00***

Task 3.4.2 – 60% Design

The 60% design will build upon the 30% plans, incorporate comments from the 30% review, and will include the following site design criteria:

- Stormwater and Roadways: The design will have all pervious and impervious areas determined and the required stormwater conveyance, treatment and discharge requirements determined. The design will also include access roadways, site security requirements such as number of entrances, gates, fences and security camera locations.
- Landscape Architectural Services:
    - Landscape plans in compliance with the St Johns County Landscape Code and the SilverLeaf PUD.
    - The permit landscape plans may include site buffering, and site canopy requirements.
    - Required landscape calculations necessary for St Johns County approval.
- Irrigation Design
    - Irrigation plans in compliance with St. Johns County Landscape Development Code and the Water Management District Regulations.
    - Preparation of an automatic irrigation system based on the landscape plans.
    - Preparation of a watering schedule.

- Maintenance of Traffic: ETM will prepare maintenance of traffic (MOT) plans based upon the requirements determined during the 30% design.
- Plan set will be prepared to a level sufficient for initial permit submittals.

Permitting

ETM will perform various permitting coordination and assistance activities related to the required civil/site permitting. It is assumed that regulatory permit review times will typically be 30 calendar days. It is expected that permitting activities such as pre-application meetings will begin at the preliminary design level but permit applications will not be submitted until after the 60% design.

Permit application fees are NOT included.

Stormwater Management Facility Permitting Support and On-Site Environmental Resource Permit (ERP)

ETM will support Carollo with on-site stormwater management design and the ERP permitting for the WTP site.

It is assumed that the site of the Northwest to CR 214 Service Area Finished Water Blend and Transfer Station will not be located within a previously designed and permitted master planned development which are grandfathered from the new stormwater permitting rules. Therefore, it is assumed that the proposed site will be subject to the new stormwater rules which may require additional design and coordination.

ETM will confirm with the St. Johns River Water Management District and the FDEP that ERP permitting for the Northwest to CR 214 Service Area Finished Water Blend and Transfer Station will be administered by the FDEP pursuant to the operating agreement between FDEP and the Water Management District. ETM, with support from Carollo, will prepare and submit the ERP application for the WTP site.

St. Johns County Development Review Committee (DRC) Permitting (Land Development Permit)

ETM will schedule a pre-application meeting with the SJC DRC between the 30% and 60% design.

ETM will prepare and submit a full permit package to the SJC Development Services for review by the DRC for civil/site permitting of the WTP site. This task will utilize the grading and master drainage plans provided in earlier tasks. ETM will prepare all permit applications, exhibits, and tables necessary for the permit application and will coordinate its processing. This task also includes meetings and negotiations with SJC staff, Carollo engineering subconsultants (AEC and UES) and project surveyor, and responses to requests for additional information from SJC staff.

Lump Sum Fee $33,080.00

Task 3.4.3 – Issued for Construction/Conformed Documents

After the CMAR receives bids, based on RFIs received, all civil/site, landscaping, and Maintenance of Traffic plans will be finalized incorporating all comments received during previous reviews and regulatory reviews preparing the "Issued for Construction" drawing set.

Lump Sum Fee ***$4,145.00***

Task 3.5 – Construction Phase Services

Task 3.5.2 – Pre-Construction Meeting

ETM will attend one (1) pre-construction meeting and provide assistance to Carollo and SJCUD in answering technical questions related to the ETM plan sheets during the meeting.

ETM will prepare conformed documents (plans and specifications) "Issued for Construction" by compiling bidder questions and addenda related to the plan sheets and specifications ETM is responsible for and provide to Carollo to compile with the full set of plans and specifications

Not to Exceed Fee ***$5,190.00***

Task 3.5.3 – Construction Progress Meetings

ETM will attend monthly construction progress meetings and site visits as requested by Carollo while the civil/site and landscaping portions of construction are active. It is assumed that ETM will attend seven (7) of the assumed fifteen (15) meetings.

Not to Exceed Fee ***$4,190.00***

Task 3.5.4 – Review Shop Drawings

ETM will review and evaluate the civil, site, and landscape related shop drawings. It is assumed that no more than four (4) sets of shop drawings will be reviewed by ETM. No more than one resubmittal per shop drawing is assumed.

Not to Exceed Fee ***$2,730.00***

Task 3.5.7 – Request for Additional Information

ETM will review and evaluate up to four (4) civil, site, and landscape related RFIs. ETM will submit RFI responses to Carollo to submit to the CMAR.

Not to Exceed Fee ***$2,575.00***

Task 3.5.9 – Substantial Completion Walk Through

ETM will conduct one (1) walk through to assess the project at Substantial Completion. ETM will create a punch list of the civil, site, and landscape related items and provide to Carollo to incorporate into the overall punch list and to distribute to the project team.

Not to Exceed Fee ***$2,760.00***

Task 3.5.10 – Final Completion Walk Through

ETM will conduct one (1) final walk through with Carollo to confirm and verify the completion of the civil, site, and landscape related items punch list.

Not to Exceed Fee ***$2,760.00***

Task 3 Fee Table:

Task	Description	Fees	
		Lump Sum	Not to Exceed
Task 3	***Northwest to CR 214 Service Area Finished Water Blend and Transfer Station***		
Task 3.1	**Project Management**	$ 22,450.00	
Task 3.2.2	**Survey Services**		
Task 3.2.2.1	**Boundary Survey**	$ 13,780.00	
Task 3.2.2.2	**Topographic Survey**	$ 12,620.00	
Task 3.2.2.3	**Protected Tree Survey**	$ 7,690.00	
Task 3.2.2.4	**10% Survey Allowance**		$ 3,409.00
Task 3.2.2.5	**Misc. Survey**		$ 10,000.00
Task 3.4.1	**Preliminary / 30% Design**	$ 11,090.00	
Task 3.4.2	**60% Design**	$ 33,080.00	
Task 3.4.3	**Issued for Construction/Conformed Documents**	$ 4,145.00	
Task 3.5	**Construction Phase Services**		
Task 3.5.2	**Preconstruction Meeting**		$ 5,190.00
Task 3.5.3	**Construction Progress Meetings**		$ 4,190.00
Task 3.5.4	**Review Shop Drawings**		$ 2,730.00
Task 3.5.7	**Request for Additional Information**		$ 2,575.00
Task 3.5.9	**Substantial Completion Walk Through**		$ 2,760.00
Task 3.5.10	**Final Completion Walk Through**		$ 2,760.00
	Expenses		$ 5,000.00
	Totals	$ 104,855.00	$ 38,614.00
	Grand Total:	**$**	**143,469.00**

EXPENSES

Costs such as printing, telephone, delivery service, mileage, and travel shall be invoiced per the Contract terms and are included in the above expenses line item for each project. Permit application fees are NOT included.

ITEMS NOT INCLUDED

The exclusions below are listed primarily to define the scope of this project. Should any of these services be required, we will be pleased to provide you with a quotation to perform them.

- Administrative Hearings
- Architectural Design
- As-Built Surveys
- Bid Document Preparation (except Site Civil)
- Bidding Administration
- Borrow Pit Permitting
- Building Permit Review Coordination
- Entitlements
- Contract Administration
- DEP Groundwater Discharge Permit
- Dewatering Design
- Geotechnical Investigation (by Carollo)
- Boundary Survey (WTP only, provided by SJC for the WTP site)
- Tree survey (WTP only, provided by SJC for the WTP site)
- Jurisdictional Wetland Delineation (provided by SJC for the WTP site, TBD for Project 2)
- Groundwater Modeling
- Mitigation Area Design
- Land Use Planning
- Cost Estimates
- Large Scale Site Redesigns
- Offsite Drainage Modeling
- Permit Compliance
- Buffer Enhancement Planting Design
- Wetland Drawdown Analysis
- Phase I Environmental Assessment

If you are in agreement with this proposal, please issue a purchase order for $329,769.00 at your earliest convenience.

If you should have any questions or require additional information, please call. Thank you for this opportunity to be of professional service.

Sincerely,

ENGLAND-THIMS & MILLER, INC.

Robert J Kermitz
Vice President

cc: Ann Newland – ETM

Powell & Hinkle Engineering, P.A.
Ph: 904.264.5570 | Fx: 904.278.2646
1409 Kingsley Avenue Bldg. 12A | Orange Park, FL 32073 5557
Successfully Serving The Construction Industry Since 1986

REVISED PROPOSAL FOR ENGINEERING SERVICES

September 29, 2026

Marya Huff, PE
Lead Engineer
Carollo Engineers, Inc.
12724 Gran Bay Parkway West, Suite 410
Jacksonville, FL 32258

Re: St. Johns County Utility Department, Trout Creek WTP RFQ-RFQ 2902-0-2026/JM Professional Engineering Services for the Water Infrastructure Projects.

Dear Marya:

We are pleased to provide this revised Proposal for the referenced project. This revised Proposal includes the engineering, design, preparation of construction documents, and construction administration, for the mechanical (HVAC) and plumbing (M&P) systems design. The building codes do not require a fire protection system for this project but we added it as an optional design in case it is requested.

This revised Proposal is based on the following:

Project 1: Trout Creek - Greenfield Water Treatment Plant

1. One Admin Building (combined operations and electrical)
    a. Operations portion: ±1,500 sq. ft. with two small offices (12x12), control room, bathroom, SCADA/IT station with monitors, and small lab area.
    b. Electrical portion: ±2,000 sq. ft.

Project 2: Northwest CR 214 Service Area Finished Water Blend and Transfer Station

1. One High Service Pump Station Building ±1,500 sq. ft.

This revised Proposal is also based on Carollo Engineers, Inc. providing AUTOCAD DWG files and/or Revit Model floor plans for our use as backgrounds for the M&P design drawings. We will also require elevations, and wall and roof sections to aid in the HVAC load calculations.

The scope of the M&P engineering services is as follows:

1. Attend kick-off meeting.
2. Attend design charrette.
3. Heating, cooling, and ventilation system design where required.

4. Plumbing system design where required. The building sanitary waste and domestic water piping design start 5 feet outside of the building.
5. Optional fire protection and fire alarm systems design: The fire alarm design includes full construction documents and the fire protection design includes full construction documents and hydraulic calculations This design does not include obtaining and paying for water flow tests.
6. The construction administration is limited to assisting in the interpretation of the construction documents during bidding and construction, equipment submittal review, HVAC systems air test and balance report review, and a maximum of ten (10), six (5) for each project, single person construction observations. Powell & Hinkle Engineering, P.A. shall not be held responsible for the means, methods, procedures, techniques, or sequences of construction, safety on the jobsite, or the Contractor's failure to carry out the work in accordance with the contract documents.
7. The submittal review includes review of contractor provided product material which is understood to be reflective of the products which have been specified in the design documents. This review includes confirming the proposed material will meet the design intent and subsequently will provide documentation (in the form of a submittal review and transmittal comment sheet) to this effect. If the contractor provided product data is not reflective of the design intent and/or is to be evaluated as a less expensive (value-engineered) alternative, we will alert Carollo Engineers, Inc. of this situation and draft a fee proposal for the evaluation of the substitution as a value engineered alternative to design we have provided.

This revised Proposal does not include the following:

1. Value engineering review of completed construction documents.
2. Alternate design drawings which are requested during design.
3. Multiple permit sets. This proposal is based on one set of permit documents for the entire scope as outlined herein.
4. Electrical systems design.
5. Revit BIM deliverables beyond design team coordination.
6. Sustainability Rating System Design.
7. Leadership in Energy and Environmental Design (LEED) or any other Green Building rating systems.
8. Bi-Directional Amplifier (BDA) system design (This is required by St. Johns County and should be part of electrical systems design.)
9. Neither mass notification systems design nor mass notification risk analysis. (Same a above)
10. Opinion of probable construction cost.
11. Drawing reproductions (normal progress drawings and final drawings will be provided as PDF format files for Carollo Engineers, Inc. 's use and reproduction).
12. Guaranteed Maximum Price (GMP) construction documents.
13. Building commissioning.
14. Any involvement with mold remediation, nor any hazardous waste, including asbestos, found during the design and construction of this project.

Except for involvement with mold and hazardous waste remediation, any of the excluded items listed above, if requested by the Carollo Engineers, Inc. , will be completed as extra services at our established hourly rates. Sheets of printed drawings, if requested by Carollo Engineers, Inc. , will be completed as extra services at a per sheet cost as follows: 11x17 @ $2.00, 18x24 @ $3.00, 24x36 @ $3.50, 30x42 @ $5.00 plus a $35.00 delivery fee.

Our lump sum engineering fees are as follows:

Project 1:

Construction Documents:	$41,000.00	
Construction Administration:	$ 8,100.00	
Total:	$49,000.00	
Optional Fire Protection Systems Design:		$27,000.00

Project 2:

Construction Documents:	$17,500.00	
Construction Administration:	$ 8,100.00	
Total:	$25,600.00	
Optional Fire Protection Systems Design:		$12,000.00

Meetings, other that the meetings listed above, during design and/or construction, requested by Carollo Engineers, Inc. , are limited to virtual meetings. The number of single person construction observations can be increased from the maximum of ten (10) included in this lump sum proposal as requested by Carollo Engineers, Inc. for $900.00 per person per site visit.

Record drawings, if requested by Carollo Engineers, Inc. , is limited to receiving clear and readable marked-up M&P drawing prints from Carollo Engineers, Inc.

Additional work requested by Carollo Engineers, Inc. beyond the scope of this revised Proposal will be billed at the following hourly rates:

Principal Engineers	$195.00	Senior Designers	$150.00
Sr. Reg. Prof. Engineers	$165.00	Designers	$120.00
Project Managers	$160.00	CAD Operators	$ 96.00
Reg. Prof. Engineers	$160.00	Administrators	$ 90.00
Engineers (EIT)	$132.00	Clerical	$ 85.00

TERMS AND CONDITIONS

Powell & Hinkle Engineering, P.A. will perform the services outlined and for the fee stated in this Proposal.

Billings and Payments: This project will be invoiced monthly for work completed and any reimbursable expenses. Any requested work resulting in reimbursable expenses, including document reproduction, will be billed at cost. The travel expense between Powell & Hinkle Engineering, P.A.’s office in Orange Park and the job site is included in the construction observation fee. Additional travel beyond Orange Park and the job site will be billed at our established hourly rates for travel time plus travel expenses. Use of automobiles for this travel will be billed at the current allowable IRS rate per mile.

It is Carollo Engineers, Inc. 's responsibility to pay Powell & Hinkle Engineering, P.A. after receipt of payment from the owner. It is also Carollo Engineers, Inc. ’s responsibility for interest payments at the rate of 1.5 % per month for all amounts due beyond sixty (60) days after receipt of payment from owner and all collection costs incurred for amounts due beyond ninety (90) days including but not limited to collection agency fees, legal fees, and all court costs.

Hidden Conditions: Powell & Hinkle Engineering, P.A. shall not be responsible for hidden conditions nor any resulting damages to persons or property. A condition is hidden if concealed by existing finishes (excluding lay-in type ceilings), buried below floors, or finished grade, or is not capable of investigation by reasonable visual observation.

Formal Letter of Agreement: When signed by both parties, this revised Proposal becomes our Formal Letter of Agreement herein after called Agreement.

Termination of Services: This Agreement may be terminated upon 10 days' written notice by either party should the other fail to perform his obligations hereunder. In the event of termination, Carollo Engineers, Inc. shall pay Powell & Hinkle Engineering, P.A. for all services and reimbursable expenses rendered to the date of termination, and reimbursable termination expenses.

Applicable Law: Unless otherwise specified, this Agreement shall be governed by the laws of the principal place of business of Powell & Hinkle Engineering, P.A.

Indemnifications: Carollo Engineers, Inc. shall indemnify and hold harmless Powell & Hinkle Engineering, P.A. and all of its personnel from and against any and all claims, damages, losses and expenses (including attorneys fees and defense costs) arising out of or resulting from the performance of the services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act of omission, and/or strict liability of Carollo Engineers, Inc. or anyone directly employed by Carollo Engineers, Inc. (except Powell & Hinkle Engineering, P.A.).

Powell & Hinkle Engineering, P.A. shall indemnify and hold harmless Carollo Engineers, Inc. and all of its personnel from and against any claims, damages, losses and expenses (including attorney's fees and defense costs) arising out of or resulting from the performance of the services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act of omission, and/or strict liability of Powell & Hinkle Engineering, P.A. or anyone directly employed by Powell & Hinkle Engineering, P.A. **Pursuant to Section 558.0035 Florida Statues, Powell & Hinkle Engineering, P.A.'s Corporation is the responsible party for the professional services it agrees to provide under this Agreement. No individual Professional Employee, Agent, Director, Officer, or Principal may be individually liable for negligence arising out of this Agreement.**

Mediation: Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to arbitration or the institution of legal or equitable proceedings by either party. Powell & Hinkle Engineering P.A. and Carollo Engineers, Inc. shall submit any disputes to mediation and endeavor to resolve disputes by mediation.

Powell & Hinkle Engineering P.A. and Carollo Engineers, Inc. shall endeavor to resolve claims, disputes, and other matters in question between them by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to this Agreement and with the American Arbitration Association. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

Powell and Hinkle Engineering, P.A.'s scope of basic services includes design documents suitable for bidding and construction of this project. Powell and Hinkle Engineering, P.A. will provide support for the systems designed within the scope in this revised Proposal throughout the bidding and construction phases of this project. This support is limited to design efforts and does not include any construction costs.

Construction Administration: It is understood and agreed that Powell & Hinkle Engineering, P.A.'s Basic Services under this Agreement includes submittal review and project construction observations. In the event Powell & Hinkle Engineering, P.A. is <u>not</u> requested to complete submittal review and/or construction observations, Powell & Hinkle Engineering, P.A. is not responsible for determining that the M&P systems have been installed in accordance with the Construction Documents. In this event, Carollo Engineers, Inc. waves any claims against Powell & Hinkle Engineering, P.A. that may be connected in any way to the construction of the M&P systems.

If this revised Proposal meets with your approval, please sign below, and return a copy to our office. We look forward to working with you on this project. When signed by both parties, this revised Proposal becomes our Formal Letter of Agreement.

Respectfully,

Robert L. Hinkle, P.E.
Principal

Accepted by: Carollo Engineers, Inc.

_____ _____
(signature) (date)

_____ _____
(Printed Name) (Title)

September 9, 2026

Carollo Engineers, Inc.
12724 Gran Bay Parkway West, Suite 410
Jacksonville, FL 32258

Attention: Ms. Marya Huff

Reference: **PROPOSAL FOR A GEOTECHNICAL EXPLORATION**
Four Water Infrastructure Projects
St. Johns County, Florida
UES Proposal No. 2167461
UES Opportunity # A26141.02427.000

Dear Ms. Huff:

UES Professional Solutions, LLC (UES) is pleased to submit a proposal to conduct geotechnical services for the referenced project. Our understanding of this project, along with our proposed scope of services and costs, is presented in the following paragraphs.

PROJECT INFORMATION

Project information was provided to us in recent correspondence with you. We were provided with a copy of RFQ No: 2902 prepared by St. Johns County Purchasing Department dated 5/22/2026. We understand that the scope consists of two projects consisting of a new water treatment facility and additions of an existing water treatment facility. We were provided with concept plans showing the layout of the proposed construction and the requested boring locations.

Project 1 (Trout Creek WTP – Task 2.2.1.4) consists of a new water treatment facility at 7980 CR-16A in St. Augustine, Florida (Parcel ID 010790 0011). This facility will be designed to initially accommodate 5 million gallons per day (MGD) and expand to 10 (MGD). This site will include two water treatment tanks and associated treatment structures, facilities, and pavement areas.

Project 2 (Northwest to CR-214 Service Area Finished Water Blend and Transfer Station – Task 3.2.3) consists of upgrading the existing 2.0 MGD blending and transfer station to 2.5 MGD. The site is located on the east side of Water Plant Road north of CR-214 in St. Augustine, Florida. This site will include a water treatment tank and associated treatment structures, facilities, and pavement areas.

Detailed loading information has not been provided, therefore we assume maximum column and wall loads for miscellaneous structures will not exceed 75 kips and 3 klf, respectively. Detailed

grading information has not been provided, therefore we assume maximum elevating fill heights will not exceed 2 feet.

PROPOSED GEOTECHNICAL EXPLORATION

Based on our understanding of the project information for **Project 1**, as requested, we propose to perform two (2) Standard Penetration Test (SPT) borings in the center of the tank areas to a depth of 100 feet. We will also perform sixteen (16) Standard Penetration Test (SPT) borings to depths of 50 feet and four (4) Standard Penetration Test (SPT) borings to depths of 35 feet.

Based on our understanding of the project information for **Project 2**, as requested, we propose to perform two (2) Standard Penetration Test (SPT) borings to a depth of 100 feet, four (4) Standard Penetration Test (SPT) borings to depths of 50 feet, and two (2) Standard Penetration Test (SPT) borings to depths of 35 feet. We will grout the 100-foot borings upon completion in accordance with SJRWMD regulations.

We will conduct all field services in accordance with applicable ASTM standards. At the completion of drilling, we will transport all samples to our laboratory where they will be examined by a geotechnical engineer and visually classified according to the Unified Soil Classification System. Representative samples will be selected for index and classification testing.

Based on available aerial imagery, portions of the site for project 1 are moderately to heavily wooded. Therefore, we have included an alternate budget for limited site clearing in order to access the test boring locations. Our proposal assumes that the cleared materials will remain on-site and that any areas or trees to remain untouched will be clearly marked or flagged prior to UES' mobilization to the site. Furthermore, this proposal assumes the client has obtained permission including any necessary permits from the property owner and/or regulatory agency and authorizes UES to perform limited site clearing to access the test boring locations. We anticipate that the site will be accessible by our all terrain vehicle (ATV)-mounted drill rig after the limited site clearing has been performed.

Due to the nature of the equipment required to perform the test borings, some property disturbance should be expected. Our proposal does include limited site clean-up including backfilling the boreholes with soil-cuttings for safety considerations. No other restoration services (i.e. pressure washing, landscaping, repairing wheel ruts, etc.) are included in this proposal. We understand that the rights of entry and access to the property will be provided to us prior to and at commencement of field activities.

Our fee estimate does not include an allowance for horizontal and vertical survey control for the test boring locations. Our field crew will locate the test locations based upon estimated distances and relationships to obvious landmarks. Therefore, the test locations and depths should be considered accurate to the degree of the methodologies used.

UES will contact Sunshine State One Call (1-800-432-4770) for public utility clearance prior to the start of drilling activities. It is our experience that this service does not mark the locations of privately owned utilities. Our proposal requires that private utility lines and other subsurface appurtenances be located in the field by others prior to our mobilization. UES shall not be held responsible for service interruptions or damage to private utility lines or other buried structures. As an alternate we can provide utility locate services at our boring locations using GPR or other methods as appropriate.

A professional engineer, registered in the State of Florida, who has specialized in geotechnical engineering, will direct and supervise our work. A report which describes our exploration and documents the subsurface conditions encountered will be provided for you. This report will include the following:

1. A brief discussion of our understanding of the planned construction and imposed loads.

2. A presentation of the field and laboratory test procedures used and the data obtained.

3. A presentation of the subsurface conditions including subsurface profiles, estimated seasonal high groundwater, and estimated geotechnical engineering properties (as necessary).

4. A geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction.

5. Recommendations for foundation design.

6. Recommendations for site preparation procedures.

COMPENSATION FOR SERVICES

Based on the scope of the geotechnical exploration, the proposed laboratory testing, and the preliminary engineering services outlined above, we propose to complete the geotechnical exploration and engineering services for:

- **Project 1 Task 2.2.1.4: lump sum fee of $31,775.00**
- **Project 1 clearing: lump sum fee of $3,600.00**
- **Project 2 Task 3.2.3: lump sum fee of $16,300.00**

We will contact you immediately if we encounter subsurface conditions which could require (1) the borings to be performed to deeper depths, (2) additional borings or other field testing, and/or (3) additional engineering analysis/evaluation and studies outside the scope of this proposal.

SCHEDULING AND AUTHORIZATION

We can initiate the field services within two weeks after receipt of written authorization to proceed with the field exploration complete in 1 day. We can provide preliminary verbal results

as soon as the drilling has been completed in order to expedite the design process, upon request. The final geotechnical report should be available within four weeks after notice to proceed.

We have included a short form authorization agreement. In order to expedite our internal project tracking requirements, please execute this document and return one copy to our office.
UES appreciates this opportunity to offer our services, and we are looking forward to the assignment. Please call if you have any questions.

Respectfully submitted,

UES PROFESSIONAL SOLUTIONS, LLC

Stephen R. Weaver, P.E.
Geotechnical Services Manager

Attachments: Work Authorization Form
General Conditions

UES PROFESSIONAL SOLUTIONS, LLC

WORK AUTHORIZATION / PROPOSAL ACCEPTANCE FORM

UES is pleased to provide the services described below. The purpose of this document is to describe the terms under which the services will be provided and to obtain authorization.

PROJECT NAME:	Four Water Infrastructure Projects		
PROJECT LOCATION:	St. Augustine, Florida		
CLIENT NAME:	Carollo Engineers, Inc. Ms. Marya Huff	**DATE:**	September 9, 2026
CLIENT ADDRESS:	12724 Gran Bay Parkway West, Suite 410 Jacksonville, FL 32258	**PHONE NO.:** **EMAIL:**	407-377-2678 mhuff@carollo.com

I. Scope of Services and Understanding of Project

As Shown in UES Proposal No. 2167461 (Attached)
UES Opportunity # A26141.02427.000

Project 1 - Task 2.2.1.4: lump sum fee of $31,775.00
Project 1 clearing: lump sum fee of $3,600.00
Project 2 – Task 3.2.3: lump sum fee of $16,300.00

II. Contract Documents. The following documents form part of this Agreement and are incorporated herein by referral:

A. **UES** General Conditions
B. **UES** Proposal Dated: **September 9, 2026**
C. Plans, reports, specifications and other documents provided by the Client prior to this Agreement date.
D. Other exhibits marked and described as follows:

In the event of any inconsistency or conflict among the Contract Documents, the provision in the Contract Document first listed above shall govern.

III. Authority to proceed and for payment. (To be completed by Client)

If the above invoice is to be mailed for approval to someone other than the account charged, please indicate where below:

Firm: _____ Social Security No. or Federal Identification #: _____

Address: _____

Attention: _____ Title: _____

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized representatives

CLIENT		**UES PROFESSIONAL SOLUTIONS**	
BY (Signature)		BY (Signature)	
PRINTED NAME		PRINTED NAME	Stephen R. Weaver
TITLE		TITLE	Geotechnical Services Manager
DATE		DATE	September 9, 2026

RETURN EXECUTED COPIES TO
UES
5561 FLORIDA MINING BOULEVARD SOUTH
JACKSONVILLE, FLORIDA 32257-3648
TELEPHONE: 904.296.0757
sweaver@teamues.com

GENERAL TERMS AND CONDITIONS

SECTION 1: BINDING AGREEMENT

1.1 By accepting the Proposal, Client accepts and agrees to be bound by all terms set forth in the Proposal and these General Terms and Conditions and any applicable addendum attached hereto. Client acknowledges and agrees that these General Terms and Conditions include certain state-specific terms and conditions that are applicable based on the location where the Services (as hereinafter defined) are to be performed. Attached hereto are State-Specific Addenda, each corresponding to a particular state or region.

1.2 If the Services are performed in Florida, Texas, California, Nevada, Oregon, Washington or Arizona, the State-Specific Addendum attached hereto **is** incorporated into and made a part of these General Terms and Conditions.

1.3 In the event of any conflict between these General Terms and Conditions and the terms of the applicable State-Specific Addendum, the terms of the State-Specific Addendum shall govern and control for Services performed in that state or region.

1.4 The Proposal and these General Terms and Conditions (collectively, the "Agreement") represent and contain the entire and only agreement and understanding among UES Professional Solutions, LLC, a Florida limited liability company and its affiliates (the "Company") and Client with respect to the subject matter of this Agreement and supersede any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties.

SECTION 2: SERVICES

2.1 The Company is responsible for providing the services described under the Scope of Services ("Services") of the Proposal to which these General Terms and Conditions form a part. The term "the Company" as used herein includes all the Company's agents, employees, professional staff, and subcontractors.

2.2 The Company shall provide revised or additional services, including changes to the Services necessary due to changed or unforeseen conditions, only in accordance with a written addendum or change order (collectively, "Change Order") to the Agreement agreed to by the Company and Client, and only to the extent set forth in that Change Order.

2.3 The Company shall not be responsible for any delays, fees or costs associated with adverse or unusual weather conditions that prevent the Services from being safely conducted.

2.4 The Company shall provide the personnel, equipment, Level D personal protective equipment (as defined by the Occupational Safety and Health Administration ("OSHA"), and other materials necessary to provide the Services. The Company, at its sole discretion, may retain subcontractors or other third parties to assist it in the provision of the Services.

2.5 The terms "Project" and "Site" as used interchangeably in these General Terms and Conditions refer to the land and/or construction project on which or to which the Company is to provide Services under this Agreement.

2.6 The Company shall perform all Services hereunder as an independent contractor, and nothing contained herein shall be deemed to create any association, partnership, joint venture, or relationship of principal and agent or master and servant, or employer and employee between the parties hereto or any affiliates or subsidiaries thereof, or to provide either party with the right, power or authority, whether express or implied, to create any such duty or obligation on behalf of the other party.

SECTION 3: PROFESSIONAL STANDARD OF CARE

3.1 The Company will provide its Services under this Agreement in a manner consistent with the level of professional care and skill ordinarily exercised by similar professionals practicing contemporaneously under similar conditions in the locality of the Project. NO OTHER WARRANTY CONCERNING THE SERVICES THE COMPANY PROVIDES UNDER THE AGREEMENT OR ANY ADDENDUM OR CHANGE ORDER, EXPRESS OR IMPLIED, IS MADE, AND ALL OTHER WARRANTIES, INCLUDING THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED TO THE FULL EXTENT PERMITTED BY APPLICABLE LAW.

3.2 Client understands that subsurface investigations may involve drilling, boring, excavating or sampling through varied subsurface soil and water strata which, consistent with the prevailing standard of professional care, may result in the unavoidable or inadvertent cross-mingling of soil and water and any hazardous substances or constituents contained in them, and that this risk cannot be eliminated despite the exercise of professional care. IF SUBSURFACE INVESTIGATIONS ARE PART OF THE SERVICES, CLIENT WAIVES ANY CLAIM AGAINST THE COMPANY, AND SHALL INDEMNIFY, DEFEND, AND HOLD THE COMPANY HARMLESS FROM ANY CLAIM OR LIABILITY FOR INJURY OR LOSS ARISING FROM CROSS-CONTAMINATION RELATED TO SUCH SUBSURFACE EXPLORATIONS.

3.3 The Company will take reasonable precautions to minimize damage to the Site, but it is understood by Client that, in the normal course of the provision of the Services, including sampling or drilling, some damage to, or alteration of the Site is possible. The repair of such damage shall not be part of the Services unless explicitly specified in writing in the Agreement.

3.4 Execution and delivery of this Agreement by the Company is not a representation that the Company has visited the site, become generally familiar with local conditions under which the work is to be performed, or correlated personal observations with the requirements of the Scope of Services.

3.5 Client's payment in full of the amount owed for Services rendered shall be taken to mean that Client is satisfied with and has accepted the Company's Services.

SECTION 4: RESPONSIBILITIES

4.1 Client is responsible for providing the Company with a clear understanding of the project's nature and scope. Client shall supply the Company with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys, plans and specifications, and designs, to allow the Company to properly complete the Services. Client assumes all liability for information not provided to the Company that may affect the quality or sufficiency of the Services.

4.2 Client acknowledges that the Company's responsibilities in providing the Services is limited to those services described in the Proposal, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those Services. Such duties may include, but are not limited to, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third party required for the Company's provision of the Services.

SECTION 5: SITE ACCESS AND SITE CONDITION

5.1 Client will grant or obtain at its expense lawful and safe access to the Site as needed for the Company to perform the Services and will notify all affected persons and entities in writing of the Company's presence. The access shall be adequate to allow the Company to conduct the Services, including bringing and storing equipment and tools on the Site and any necessary access to exterior and interior areas. The Company shall not be responsible for any delays, fees or costs caused by delayed or restricted access that prevents or slows the delivery of the Services. If the Site is not owned or operated by Client or the Client does not otherwise have the authority to grant the Company lawful access, Client shall be responsible for obtaining, at its own expense, an access agreement for the Site and any facilities located thereon and are necessary to perform the Services. The Company reserves the right to delay, without penalty, any Site visit, and the provision of Services if a site access agreement, in the Company's reasonable judgment and discretion, would impose conditions, liabilities or risks on the Company in excess of those set forth in these General Terms and Conditions or the Agreement. IF THE SITE IS NOT OWNED BY CLIENT, CLIENT AGREES TO DEFEND, RELEASE, AND HOLD THE COMPANY, INCLUDING ITS OFFICERS, DIRECTORS, SHAREHOLDERS, EMPLOYEES, AGENTS, AFFILIATES AND SUCCESSORS (THE "COMPANY INDEMNITEES") HARMLESS FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES OR LIABILITIES ALLEGED BY THE SITE OWNER OR THE SITE OWNER'S EMPLOYEES, AGENTS, CONTRACTORS OR OTHER PERSONS OR ENTITIES ARISING FROM THE COMPANY'S PERFORMANCE OF SERVICES AT SUCH SITE.

5.2 Client shall be responsible for the safety of the Site where the Project is conducted and for providing a safe environment for the Company to provide the Services. The Company shall be responsible for the safe and compliant conduct of its personnel at the Site and shall also comply with the reasonable and lawful work rules for the Site. As required by applicable laws, the Company will prepare a site-specific Health and Safety Plan (HASP) applicable to its personnel for the Services provided at the Site. The Company shall not be responsible for the safety of other personnel at the Site, nor shall it be responsible for ensuring that the Site complies with environmental, health and safety laws, or reporting any unsafe conduct or non-compliance that it

may observe. If the Company encounters conditions at the Site that are unsafe for its personnel, it reserves the right at its sole discretion to suspend or halt work until such conditions are cured. The Company shall not be responsible for any fees, costs or damages associated with any safety-related delays. Unless otherwise provided for in the Agreement, the Company shall not work in conditions that require personal protective equipment beyond that classified as Level D by OSHA, unless otherwise identified in the Proposal.

5.3 Client is responsible for accurately identifying to the Company in writing the existence and location of all subterranean structures and utilities on or affecting the Site and the Services. The Company will take reasonable precautions to avoid affecting subterranean structures and utilities disclosed to it in writing by Client. If included in the Agreement, Client may authorize the Company to conduct applicable private utility identification and clearance requirements on behalf of Client.

5.4 Unless otherwise stated in the Proposal, any soil or groundwater monitoring activities that are included in the Services are based on the assumption that soil borings and monitoring wells can be installed using standard truck-mounted drilling equipment, the locations are accessible to such equipment, and that surface conditions at each location consists of non-reinforced asphalt or concrete not exceeding six (6) inches in thickness and no concrete or asphalt cutting will be required. If the Company encounters materially different conditions at the Site, the Company shall inform Client, and a Change Order shall be agreed to that addresses any changes in schedule, fees or costs associated with the changed conditions.

SECTION 6: HAZARDOUS SUBSTANCES AND ENVIRONMENTAL CONDITIONS

6.1 Client represents it has informed the Company of all known or suspected Hazardous Substances on, under or near the Site of which it is aware, and that it has provided the Company with all studies, reports, investigations, or similar documents in its possession about the environmental conditions at the Site, including any documents and correspondence involving Federal, State or local environmental, health or safety regulatory notifications.

6.2 For purposes of the Agreement and these General Terms and Conditions, the term "Hazardous Substances" includes materials defined or regulated as hazardous substances, hazardous materials, hazardous wastes, hazardous constituents, solid wastes, pollutants, or toxic substances under any Federal, State or local environmental, health, safety or natural resources law, statute, regulation or ordinance, including but not limited to petroleum products, polychlorinated biphenyls, per- and polyfluoroalkyl substances, asbestos, and any other material or substance listed or identified by the United States Environmental Protection Agency or any similar State or local agency as presenting a potential danger to health, safety or the environment.

6.3 Except to the extent required by law, the Company shall not be responsible for making any disclosures to governmental agencies or the Site owner regarding the presence or release of Hazardous Substances on, under, from or around a Site.

6.4 **FOR ENVIRONMENTAL INVESTIGATION, GEOTECHNICAL AND REMEDIATION PROJECTS,** the discovery of Hazardous Substances or other environmental conditions on, under or near the Site not contemplated within the Services may constitute a changed condition, necessitating a Change Order. Although unlikely, Client acknowledges that such a discovery of Hazardous Substances may make it necessary for the Company to take immediate measures to protect the health and safety of its employees and other persons, or to arrange for others to do so, including and up to delaying or terminating work. Client agrees to compensate the Company for all expenses incurred or caused by the discovery of unanticipated Hazardous Substances or environmental conditions encountered at the Site, including but not limited to those related to worker protection and exposure, emergency response actions, and equipment decontamination.

6.5 **FOR ENVIRONMENTAL INVESTIGATION AND REMEDIATION PROJECTS,** all substances on, in, or under Site, or obtained from Site as samples or as byproducts of the sampling process, shall be Client's property. The Company shall not be required to sign or certify a waste manifest, disposal ticket, or similar document relating to the transportation or disposal of wastes or Hazardous Substances. The Company may serve as Agent for Client if requested under a separate agreement and authorization. Client shall be considered the "generator" of any hazardous or other wastes, as that term is defined in the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. and agrees that it shall assume all duties as "generator" of any waste material associated with the Services. Further, Client agrees that the Company is not a generator, storer, treater, transporter, arranger, or disposer of wastes or Hazardous Substances and shall not be so identified on any document.

FOR GEOTECHNICAL PROJECTS, all substances on, in, or under the Site, or obtained from the Site as samples or as byproducts of the sampling process, shall be Client's property. Unless otherwise expressly specified in the Agreement or the Services, the characterization, management, and disposition of substances, including Hazardous Substances, generated during the Services (including, but not limited to, wastes, samples, produced soils or fluids, cuttings, or protective gear or equipment, etc.) is the sole responsibility of Client. Client shall be considered the "generator" of any hazardous or other wastes, as that term is defined in the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. and agrees that it shall assume all duties as "generator" of any waste material associated with the Services. Further, Client agrees that the Company is not and shall not be identified as a generator, storer, treater, transporter, arranger, or disposer of wastes or Hazardous Substances on any document. Unless specifically provided for in the Agreement, the Company shall not have any responsibilities with respect to the storage or preservation of samples, and Client agrees that the Company is not responsible or liable to Client for any loss of samples that are shipped to a testing facility or retained in storage.

6.6 The Company shall not have custody of any monitoring wells or permanent sampling locations installed as part of the Project, and shall not be responsible for proper maintenance, repair, or closure of such wells, unless otherwise provided for in the Agreement.

6.7 CLIENT AGREES TO DEFEND, INDEMNIFY, RELEASE, AND HOLD THE COMPANY INDEMNITEES HARMLESS FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES OR LIABILITIES (INCLUDING ATTORNEY'S FEES AND CONSULTANTS' FEES, COSTS OF DELAY OF THE SERVICES, AND ANY COSTS ASSOCIATED WITH POSSIBLE REDUCTION TO THE VALUE OF THE PROJECT OR THE SITE IN WHICH IT IS SITUATED) ARISING FROM (I) THE COMPANY'S DISCOVERY OF OR ITS EMPLOYEES' OR SUBCONTRACTORS' EXPOSURE TO HAZARDOUS SUBSTANCES OR SUSPECTED SUBSTANCES RELATED TO THE SERVICES, TO THE EXTENT CAUSED BY CLIENT'S NEGLIGENCE ACTS, OMISSIONS OR WILLFUL MISCONDUCT; (II) ANY DISCLOSURES THE COMPANY IS REQUIRED TO MAKE BY LAW REGARDING HAZARDOUS SUBSTANCES OR ENVIRONMENTAL CONDITIONS AT A SITE; (III) ANY CLAIMS MADE ALLEGING THAT (A) THE COMPANY IS AN OWNER OR OPERATOR OF THE SITE AT WHICH THE SERVICES ARE RENDERED; (B) THE COMPANY IS THE GENERATOR, STORER OR TREATER OF HAZARDOUS SUBSTANCES AT SUCH SITE; OR (C) THAT THE COMPANY ARRANGED FOR THE TRANSPORTATION OR DISPOSAL OF ANY HAZARDOUS SUBSTANCES FROM THE SITE; (IV) ANY VIOLATION BY CLIENT OF ANY FEDERAL, STATE OR LOCAL LAW, REGULATION, ORDER, DECREE OR ORDINANCE RELATED TO HAZARDOUS SUBSTANCES; OR (V) ANY CLAIMS MADE BY THIRD-PARTIES WITH RESPECT TO ALLEGED EXPOSURES TO OR DAMAGES CAUSED BY HAZARDOUS SUBSTANCES AT OR FROM THE SITE OR DURING OR RELATED TO ANY PROJECT OR THE PROVISION OF SERVICES, TO THE EXTENT CAUSED BY CLIENT'S NEGLIGENCE OR WILLFUL MISCONDUCT.

SECTION 7: REVIEWS, INSPECTIONS, TESTING, AND OBSERVATIONS

7.1 If the Services include oversight, monitoring or observation of work being conducted by third parties (other than the Company subcontractors), such Services shall be conducted solely to determine that the work being overseen, monitored, or observed is in general conformity to the contractual requirements between Client and such third parties. Client shall have sole responsibility and authority to reject, suspend, or stop the work of such third parties, or modify or terminate any agreement between Client such third parties.

7.2 The Company shall not have the responsibility or authority to stop, suspend, or modify the work of such third parties, and does not guarantee that work it inspects conforms in all respects to the design, or to applicable laws, statutes, regulations, rules or codes, and it shall have no liability for design or construction defects, or the failure of Client's designers or contractors to comply with their contractual obligations.

7.3 Neither the activities of the Company pursuant to this Agreement, nor the presence of the Company or its employees, representatives, or subcontractors on the Project Site, shall be construed to impose upon the Company any responsibility for means or methods of work performance, superintendence, sequencing of construction, or safety or environmental conditions or compliance at the Project Site. Client acknowledges that Client or its contractor is solely responsible for Project jobsite safety and compliance with environmental, health and safety laws.

7.4 Client is responsible for scheduling all inspections and construction materials testing ("CMT") activities of the Company. The Company will not be responsible for tests and inspections that it does not perform due to Client's failure to timely schedule work. Client shall at the time of execution of the Agreement provide the Company with a proposed schedule for tests and inspections the Company shall perform. Client will give reasonable notice of all changes to that schedule. The Company shall not be required to conduct any tests or inspections on less than 72 hours written notice, nor after normal business hours or on weekends or holidays.

SECTION 8: OWNERSHIP AND USE OF DOCUMENTS; INTELLECTUAL PROPERTY

8.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by the Company, as instruments of service, shall remain the property of the Company. Neither Client nor any other entity shall change or modify the Company's instruments of service. The Company disclaims any and all responsibility and liability for problems that may occur during implementation of the Company's plans, specifications, or recommendations when Company is not retained to observe such implementation. The Company will retain all pertinent records relating to the Services for a period of "five years or such longer period" of time required by applicable accrediting agency, unless specified in the Scope of Services following submission of the report or completion of the Services, during which period the records will be made available to the Client in a reasonable time and manner, subject to payment of a reasonable fee for the time of the Company's employees to assemble and transmit those documents.

8.2 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by the Company, are prepared for the sole and exclusive use of Client, and may not be given to any other entity, or used or relied upon by any other entity, without the express written consent of the Company. Such written consent may take the form of a "reliance letter" which must be agreed to by such other person or entity to whom the Services and instruments of service may be disclosed, and for which a separate fee will be charged. The Company shall be entitled to injunctive relief preventing/prohibiting any disclosure, reliance or attribution prohibited hereunder, and CLIENT SHALL RELEASE, INDEMNIFY, DEFEND, AND HOLD HARMLESS THE COMPANY FROM ANY LOSSES ARISING FROM OR RELATED TO SUCH UNAUTHORIZED DISCLOSURE, ATTRIBUTION OR RELIANCE. Client is the only entity to which the Company owes any duty or duties, in contract or tort, pursuant to or under this Agreement.

8.3 The Company shall retain sole and exclusive ownership of all ideas, concepts, theories, improvements, designs, original works of authorship, formulas, processes, models, software, algorithms, inventions, know-how, techniques, compositions of matter and any other information owned by the Company prior to the date of this Agreement or created or modified by the Company during the provision of the Services.

8.4 Each party may disclose to the other party certain information that it considers to be confidential ("Confidential Information") provided such information is disclosed in writing and clearly marked or, if orally disclosed, promptly thereafter reduced to writing and clearly marked "Confidential." In no event shall Confidential Information include information that: (a) is or becomes publicly available other than through a breach of the Agreement; (b) is known to the party receiving such information prior to disclosure or is independently developed by such party subsequent to such disclosure without reference to Confidential Information provided hereunder; or (c) is subsequently lawfully obtained by the party receiving such information from a third party without obligations of confidentiality. Each party agrees that it (a) will not disclose or divulge the other party's Confidential Information to any person, (b) will not use the other party's Confidential Information for its own benefit or the benefit of others, (c) will employ at least the same degree of care in protecting Confidential Information as it employs in protecting its own confidential information, and (d) will, upon termination of the Agreement, or at any time at the request of the other party, return to the other party or destroy all copies of the other party's Confidential Information. Notwithstanding the foregoing, each party may disclose the other party's Confidential Information to its employees, subcontractors and authorized agents who have a need to know such confidential information to fulfill its obligations under this Agreement. In the event a party receives a subpoena or other validly issued administrative or judicial process requesting the disclosure of the other party's Confidential Information, such party will promptly notify the other party and tender to it the defense of such demand and will cooperate (at the other party's expense) with the defense of such demand. Unless the demand shall have been timely quashed or extended, the party receiving the demand shall thereafter be entitled to comply with such demand when and to the extent required by law.

SECTION 9: COMMERCIAL TERMS: BILLING AND PAYMENT; RISK ALLOCATION AND INDEMNIFICATION; INSURANCE; AND FUEL SURCHARGE

BILLING AND PAYMENT

9.1 The Company will submit invoices to Client monthly or upon completion of Services. If appropriate, invoices may show charges for different personnel and expense classifications. Partially completed items of work for which a fee has been specified may be billed based upon the percentage of completion as estimated by the Company. Reimbursable expenses, those outside of the scope of the proposed Services, will be charged to the Client at cost plus an applicable fee. Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of the lesser of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts. If the Company incurs any expenses to collect overdue billings on invoices, the sums paid by the Company for reasonable attorneys' fees, court costs, the Company's time, the Company's expenses, and interest will be due and owing by the Client. Client agrees that the Company may refuse to release to Client any reports, findings, data, and other work product until it has been paid in full for Services rendered.

RISK ALLOCATION AND INDEMNIFICATION

9.2 CLIENT AGREES THAT THE COMPANY'S LIABILITY FOR ANY DAMAGE ON ACCOUNT OF ANY BREACH OF CONTRACT, ERROR, OMISSION, OR PROFESSIONAL NEGLIGENCE WILL BE LIMITED TO A SUM NOT TO EXCEED THE GREATER OF $50,000 OR THE COMPANY'S FEE. If Client prefers to have higher limits on contractual or professional liability, the Company agrees to increase the limits up to a maximum of (i) $1,000,000.00 upon Client's written request at the time of accepting the Proposal provided that Client agrees to pay an additional consideration of the greater of five percent of the total fee for Services or $1,000.00, or (ii) $2,000,000.00 upon Client's written request at the time of accepting the Proposal provided that Client agrees to pay an additional consideration of the greater of ten percent of the total fee for Services or $2,000.00. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional contractual or professional liability insurance.

9.3 CLIENT SHALL NOT BE LIABLE TO THE COMPANY AND THE COMPANY SHALL NOT BE LIABLE TO CLIENT FOR ANY PUNITIVE, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS, LOSS OF USE, AND LOST SAVINGS) INCURRED BY EITHER PARTY DUE TO THE FAULT OF THE OTHER, REGARDLESS OF THE NATURE OF THE FAULT, OR WHETHER IT WAS COMMITTED BY CLIENT OR THE COMPANY, THEIR EMPLOYEES, AGENTS, OR SUBCONTRACTORS; OR WHETHER SUCH LIABILITY ARISES IN BREACH OF CONTRACT OR WARRANTY, TORT (INCLUDING NEGLIGENCE), STATUTORY, OR ANY OTHER CAUSE OF ACTION.

9.4 As used in this Agreement, the terms "claim" or "claims" mean any claim in contract, tort, or statute alleging negligence, errors, omissions, strict liability, statutory liability, breach of contract, breach of warranty, negligent misrepresentation, or any other act giving rise to liability.

9.5 Subject to the provisions of the limitation of liability described in this Section, Client and the Company each agree to indemnify and hold harmless the other party and the other party's affiliated companies, officers, directors, partners, employees, and representatives, from and against losses, damages, and judgments, including reasonable attorneys' fees and expenses recoverable under applicable law, but only to the extent they are legally determined to be caused by a negligent act, error, or omission of the indemnifying party or any of the indemnifying party's officers, directors, members, partners, agents, employees, or subconsultants in the performance of Services. If claims, losses, damages, and judgments are legally determined to be caused by the joint or concurrent negligence of Client and the Company, they shall be borne by each party in proportion to its negligence.

9.6 Notwithstanding any other term or provision in this Agreement, in recognition of the relative risks, rewards and benefits of the work being performed by the Company to both the Client and the Company, the risks have been allocated such that the Client agrees and acknowledged that, to the fullest extent permitted by law, the total liability of the Company to the Client for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this Agreement from any cause or causes of action whatsoever, whether arising out of contract, negligence, strict liability in tort, or warranty, shall not exceed the amount specified in this Section 9 of the General Terms and Conditions.

INSURANCE

9.7 The Company represents it has Worker's Compensation insurance in force, that it has commercial general liability coverage in the amount of $1,000,000.00 per occurrence and has professional liability insurance in the amount of $1,000,000.00 per claim.

9.8 Client shall maintain such insurance as is necessary to fully underwrite Client's defense and indemnity obligations set forth herein, and shall, upon request by the Company, provide proof to the Company to verify such insurance.

FUEL SURCHARGE

9.9 In any week, when the Weekly Retail Gasoline & Diesel Price Index (Gasoline – All Grades line item) as reported by EIA (US Energy Information Administration) exceeds $3.15 per gallon, the Company has the option of adding a fuel surcharge to any Testing or Inspection Services invoice in the form of either a) a 1% Fuel Surcharge per invoice, or b) an additional $15 to normal Trip Charges. When the index price per gallon drops below $3.15 per gallon determined on the date of the invoice, the additional fuel surcharge will be eliminated.

SECTION 10: DISPUTE RESOLUTION

10.1 All claims, disputes, and other matters in controversy between the Company and Client arising out of or in any way related to this Agreement or any Addendum or Change Order shall be decided by binding arbitration in accordance with the Construction Industry Rules of the American Arbitration Association then obtaining, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Notwithstanding the foregoing, the Company shall not be required to arbitrate any legal and/or equitable claims (including statutory and equitable liens) for collection of monies due. The successful party in any such action will be entitled to recover its reasonable attorneys' fees, expert witness fees, and other claim-related expenses and court costs incurred, and also the time value at prevailing rates of its employees reasonably incurred in prosecuting or defending the claims, with any claims against the Company subject to the limitations in Section 9. For the purposes hereof, "successful party" shall mean a party who receives an award greater than fifty (50%) percent of its claimed amount.

10.2 The sole and exclusive venue for any dispute resolution proceeding shall be the location in which the Company office performing the Services is located. This Agreement shall be governed by and construed in accordance with the laws of the jurisdiction in which the Company office performing the Services is located.

10.3 Notwithstanding the foregoing, all claims, including for negligence or any other cause whatsoever that the Client has or claims to have against the Company, shall be deemed waived unless (i) Client notifies the Company of the claim or claims within thirty (30) days of discovery thereof, and (ii) if the Client contends that a claim exists against the Company for negligence or another violation of a standard of care owed by the Company, Client has first provided the Company with a written certification executed by an independent design professional currently practicing in the same discipline as the Company. The certification shall: a) identify the name of the professional; b) specify each and every act or omission that the certifier contends is a violation of the standard of care identified in this Agreement; and c) state in complete detail the basis for the certifier's opinion that each such act or omission constitutes such a violation. This certificate shall be provided to the Company not less than thirty (30) calendar days prior to the institution of any arbitration or judicial proceeding.

10.4 NOTWITHSTANDING THE FOREGOING, THE COMPANY SHALL HAVE NO LIABILITY FOR ANY CLAIM DISCOVERED BY CLIENT MORE THAN ONE YEAR AFTER DELIVERY OF THE LAST ISSUED REPORT BY THE COMPANY FOR THE SERVICES. THE PARTIES AGREE THAT THIS PROVISION IS MATERIAL TO THE DECISION OF THE COMPANY TO ENTER INTO THIS AGREEMENT, THAT IT IS A REASONABLE MEASURE TO ALLOCATE AND INSURE AGAINST RISK, AND THAT IT DOES NOT VIOLATE PUBLIC POLICY.

SECTION 11: TERMINATION

11.1 This Agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof, or in the case of a force majeure event such as terrorism, act of war, public health, or other emergency. Such termination shall not be effective if such substantial failure or force majeure has been remedied before expiration of the period specified in the written notice. In the event of termination, the Company shall be paid for services performed to the termination notice date plus reasonable out of pocket termination expenses incurred or paid by the Company in connection with such termination and the winding down of its operations.

11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by this Agreement, the Company may complete such analyses and records as are necessary to complete its files and may also complete a report on the Services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct out of pocket costs incurred or paid by the Company in completing such analyses, records, and reports.

SECTION 12: SOLICITATION OF EMPLOYEES

12.1 Client agrees that during the term of the Agreement, and for a period of one (1) year after the last date on which the Company has provided Services, Client shall not, directly or indirectly, solicit or attempt to solicit for employment, or contract directly or indirectly with, any employee of the Company except as authorized in writing by the Company.

SECTION 13: ASSIGNS

13.1 Neither Client nor the Company may assign this Agreement or assign or delegate any of its rights or obligations without the prior written consent of the other party.

SECTION 14: SURVIVAL

14.1 If any of the provisions of this Agreement is held by a court of competent jurisdiction to be illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired and will survive. Limitations of liability and indemnities will survive termination of this Agreement for the period of all applicable statutes of limitations to which they relate.

SECTION 15: MISCELLANEOUS

15.1 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.

15.2 Failure by either party at any time to enforce any obligation by the other party, to claim a breach of any term of the Agreement or to exercise any power agreed to hereunder will not be construed as a waiver of any right, power or obligation under the Agreement, will not affect any subsequent breach, and will not prejudice either party as regards any subsequent action.

15.3 The headings in these General Terms and Conditions are for reference only and are not intended to form part of the Agreement between the Parties.

15.4 It is agreed that this Agreement is entered into by the parties for the sole benefit of the parties to the Agreement, and that nothing in the Agreement shall be construed to create a right or benefit for any third party.

15.5 To the extent that a statute of limitations for any cause of action against the Company arising from this Agreement can be modified contractually in accordance with law, and the relevant statute of limitations for any claim arising of or relating to this Agreement, or the Services provided by Company, is greater than two (2) years, the relevant statute of limitations shall be two (2) years from the date Company last provided Services. The parties agree that this provision is material to the decision of Company to enter into this agreement, that it is a reasonable measure to allocate and insure against risk, and that it does not violate public policy. This section shall not be construed as an agreement to increase the statute of limitations for any causes of action that are otherwise barred by law.

15.6 All future services rendered by the Company at Client's request for the Project described in the Proposal (whether by Change Order, Addendum, or amendment to this Agreement) shall be conducted under the terms of this Agreement.

15.7 If the Project duration is not stated in the Proposal, then in the event Services are not completed within one (1) year from the date of the Proposal, the Company reserves the right to (i) adjust its invoices to reflect a higher hourly rate for Services when the fee being charged is at a unit rate or a time and material bid, or (ii) to increase the flat fee (or not to exceed amount) to reflect higher rates charged by the Company for similar Services, on such date.

15.8 The project estimate outlined in this specific Proposal is valid for 90 days from the Proposal date. Company reserves the right to review and adjust this estimate if Client does not approve of the Proposal within 90 days.

CLIENT APPROVAL

In the event the Client authorizes work without returning a signed copy of the Proposal, the Client agrees to be bound by the General Terms and Conditions as stated herein. The Proposal presented has been read, understood, and accepted by the Client effective as of the date that the executed Proposal is returned to the Company.

STATE-SPECIFIC ADDENDUM – FLORIDA

SECTION 1: ADDENDUM TO AGREEMENT

1.1 This Florida addendum (this "Addendum") is made and entered into by and between the Company and Client and is effective as of the date of execution of the Agreement if the Services are performed in the State of Florida, and this Addendum is incorporated into and made a part of the General Terms and Conditions solely with respect to the Services covered by this Addendum.

SECTION 2: INDEMNITY

2.1 IN **ADDITION TO AND NOTWITHSTANDING ANY OTHER PROVISION IN THIS AGREEMENT**, CLIENT AGREES, TO THE FULLEST EXTENT PROVIDED BY LAW, TO RELEASE, DEFEND (WITH COUNSEL REASONABLY ACCEPTABLE TO THE COMPANY), INDEMNIFY, AND HOLD THE COMPANY INDEMNITEES HARMLESS FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES OR LIABILITIES FROM OR BY ANY PERSON OR ENTITY ARISING FROM (1) ACTS OR OMISSIONS BY CLIENT, CLIENT'S AGENTS, STAFF, AND OTHERS EMPLOYED BY OR CONTRACTED TO CLIENT, INCLUDING ARCHITECTS, ENGINEERS, CONTRACTORS, SUBCONTRACTORS, AND CONSULTANTS, WHETHER OR NOT THE COMPANY IS RESPONSIBLE IN PART FOR THE ACTS OR OMISSIONS FOR WHICH CLIENT IS INDEMNIFYING THE COMPANY AND (2) THE PROVISION OF THE SERVICES BY THE COMPANY EXCEPT TO THE EXTENT CAUSED BY THE COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, SUCH EXCEPTION SUBJECT TO THE LIMITS SET FORTH IN SECTION 8 OF THE GENERAL TERMS AND CONDITIONS.

2.2 THE COMPANY AGREES TO INDEMNIFY, AND HOLD CLIENT HARMLESS FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES OR LIABILITIES ARISING TO THE EXTENT SOLELY FROM THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT BY THE COMPANY IN THE PROVISION OF THE SERVICES, SUBJECT TO THE LIMITS SET FORTH IN SECTION 8 OF THE GENERAL TERMS AND CONDITIONS.

2.3 To the extent either party's damages are covered by available insurance, Client and the Company waive all rights of subrogation against each other and against the contractors, subcontractors, consultants, agents, and employees of the other, except such rights as they may have to the proceeds of such insurance.

SECTION 3: INDIVIDUAL LIABILITY (5 POINTS LARGER THAN ADJACENT TEXT)

3.1 **PURSUANT TO FLORIDA STAT. 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF THE COMPANY MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

STATE-SPECIFIC ADDENDUM – TEXAS

SECTION 1: ADDENDUM TO AGREEMENT

1.1 This Texas addendum (this "Addendum") is made and entered into by and between the Company and Client and is effective as of the date of execution of the Agreement if the Services are performed in the State of Texas, and this Addendum is incorporated into and made a part of the General Terms and Conditions solely with respect to the Services covered by this Addendum.

SECTION 2: BILLING AND PAYMENT

2.1 The fees and charges reflected in the Company's proposal for services are exclusive of any sales, use, personal property, value added and goods/services taxes. Where applicable, such taxes shall appear as a separate item on the Company's invoice and Client shall be liable for the payment of such taxes to the Company. Notwithstanding the foregoing, Client shall not be responsible for any foreign, federal, state, or local taxes based on the Company's net income or receipts, or such other taxes based on the Company doing business in any particular jurisdiction.

SECTION 3: INDEMNITY

3.1 IN ADDITION TO AND NOTWITHSTANDING ANY OTHER PROVISION IN THESE GENERAL CONDITIONS, CLIENT AGREES, TO THE FULLEST EXTENT PROVIDED BY LAW, TO RELEASE, DEFEND (WITH COUNSEL REASONABLY ACCEPTABLE TO THE COMPANY), INDEMNIFY, AND HOLD THE COMPANY INDEMNITEES HARMLESS FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES (INCLUDING ATTORNEY'S FEES) OR LIABILITIES FROM OR BY ANY PERSON OR ENTITY ARISING FROM (1) ACTS OR OMISSIONS BY CLIENT, CLIENT'S AGENTS, STAFF, AND OTHERS EMPLOYED BY OR CONTRACTED TO CLIENT, INCLUDING ARCHITECTS, ENGINEERS, CONTRACTORS, SUBCONTRACTORS, AND CONSULTANTS, WHETHER OR NOT THE COMPANY IS RESPONSIBLE IN WHOLE OR IN PART FOR THE ACTS OR OMISSIONS FOR WHICH CLIENT IS INDEMNIFYING THE COMPANY AND (2) THE PROVISION OF THE SERVICES BY THE COMPANY EXCEPT TO THE EXTENT CAUSED BY THE COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, SUCH EXCEPTION SUBJECT TO THE LIMITS SET FORTH SECTION 8 OF THE GENERAL TERMS AND CONDITIONS. FOR THE AVOIDANCE OF DOUBT, CLIENT'S INDEMNIFICATION OBLIGATIONS SET FORTH IN THIS SECTION 3.1 INCLUDE, WITHOUT LIMITATION, INDEMNIFICATION FOR ANY CLAIMS, LOSSES, DAMAGES OR LIABILITIES ARISING IN WHOLE OR IN PART FROM THE ACTIONS OR INACTIONS OF THE COMPANY.

3.2 THE COMPANY AGREES TO INDEMNIFY, AND HOLD CLIENT HARMLESS FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES OR LIABILITIES ARISING TO THE EXTENT SOLELY FROM THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT BY THE COMPANY IN THE PROVISION OF THE SERVICES, SUBJECT TO THE LIMITS SET FORTH IN SECTION 8 OF THE GENERAL TERMS AND CONDITIONS.

3.3 To the extent either party's damages are covered by available insurance, Client and the Company waive all rights of subrogation against each other and against the contractors, subcontractors, consultants, agents, and employees of the other, except such rights as they may have to the proceeds of such insurance.

SECTION 3: EXPRESS NEGLIGENCE RULE

3.1 WITH RESPECT TO CLIENT'S INDEMNIFICATION OBLIGATIONS HEREUNDER, THESE TERMS AND CONDITIONS COMPLY WITH THE REQUIREMENT, KNOWN AS THE EXPRESS NEGLIGENCE RULE, TO EXPRESSLY STATE IN A CONSPICUOUS MANNER TO AFFORD FAIR AND ADEQUATE NOTICE THAT THESE TERMS AND CONDITIONS CONTAIN PROVISIONS REQUIRING ONE PARTY TO BE RESPONSIBLE FOR THE NEGLIGENCE, STRICT LIABILITY, OR OTHER FAULT OF ANOTHER PARTY.

Applicable to California, Nevada, Oregon, Washington, and Arizona

SECTION 1: ADDENDUM TO AGREEMENT

1.1 This West addendum (this "Addendum") is made and entered into by and between the Company and Client and is effective as of the date of execution of the Agreement if the Services are performed in the States of California, Nevada, Oregon, Washington or Arizona, and this Addendum is incorporated into and made a part of the General Terms and Conditions solely with respect to the Services covered by this Addendum.

SECTION 2: LIMITATIONS OF LIABILITY

2.1 CLIENT ACKNOWLEDGES AND AGREES THAT THE INDEMNITY AND LIMITATION OF LIABILITY PROVISIONS CONTAINED IN THIS AGREEMENT WERE SPECIFICALLY NEGOTIATED.

1320 Wilfred Drive
Orlando, FL 32803
Phone: 407.219.4454

Wekiva Project Number: 26-368

September 29, 2026

Marya Huff, PE
Carollo Engineers, P.C.
12724 Gran Bay Parkway West, Suite 410
Jacksonville, FL 32258

Re: Proposal for Structural Engineering & Architectural Services
SJC Water Infrastructure Program
St Johns County, Florida

Dear Ms. Huff,

Wekiva Engineering, LLC (Wekiva) is pleased to submit this proposal to provide structural engineering services to Carollo Engineers (Carollo) for the above referenced project. It is our understanding that the County would like to upgrade the infrastructure at multiple facilities. These facilities along with the proposed structural and architectural scope is as follows:

Trout Creek WTP
- 1,500 SF Operations Building
- 2,000 SF Electrical and Pump Building
- Degasifier Structure/Foundation
- Clearwell
- Odor Control Foundation
- Chemical Storage and Feed Foundation and Canopy
- Ion Exchange Foundation and Elevated Platform
- Generator Foundation
- Miscellaneous Equipment Supports

Northwest to CR 214 Service Area Finished Water Blend and Transfer Station
- High Service PS w/ Building

CR 214 WTP
- Additional RO Skid located within existing facility
- Future Improvements Facility Plan

SCOPE OF SERVICES

It is our understanding that the proposed expansion will include the following structures and structural scope items. These fee structure for these items have been denoted as either lump sum (LS) or time and materials (T&M).

Task 2: Trout Creek Water Treatment Plant

Task 2.1.2: Progress Meetings (LS): Wekiva staff will attend progress meetings and attend a CAMP design meeting. This meeting workshop is anticipated to encompass 1.5 days.

Task 2.2.1.4: Geotechnical Investigation (LS): Wekiva staff will review the geotechnical draft and final reports and provide comments.

Task 2.2.4: Development of Design Criteria and Parameters (LS): Wekiva staff will develop design criteria for structural and architectural design.

1320 Wilfred Drive
Orlando, FL 32803
Phone: 407.219.4454

Task 2.2.5: Preliminary Design Report (30% Design) (LS): Wekiva staff will assist in the preparation of a Preliminary Design Report (PDR). This will include all design criteria along with 30% level drawings. These will include preliminary plans, sections and elevations particularly for proposed buildings. Wekiva will also assist in the preparation of an EOPCC. All drawings will be prepared using Revit.

Task 2.5: 60% Design (LS): Wekiva staff will prepare 60% level drawings and specifications. There are anticipated to be a total of (52) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 2.6: 90% Design (LS): Wekiva staff will prepare 90% level drawings and specifications. There are anticipated to be a total of (52) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 2.7: 100% Design (LS): Wekiva staff will prepare 100% level drawings and specifications. There are anticipated to be a total of (52) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 2.8.2: Response to Bidder Questions and Bid Evaluations (T&M): Wekiva staff will assist Carollo in answering bidding questions and issuing addenda.

Task 2.9.1: Construction Phase Services (T&M): Wekiva staff will assist Carollo during the construction phase by performing the following:

- Review Shop Drawings (Assumed to be a total of 80)
- Review RFIs (Assumed to be a total of 25)

Task 2.9.3: Construction Meetings and Site Visits (T&M): Wekiva staff will assist Carollo during the construction phase by performing the following:

- Attending (4) construction review meetings
- Performing (5) site visits which includes a substantial completion and a final completion visit.

Task 2.9.5: Post Construction Services (T&M): Wekiva staff will prepare record drawings using Contractor supplied redline markups.

Task 3: Northwest to CR 214 Service Area Finished Water Blend and Transfer Station

Task 3.2.3: Geotechnical Investigation (LS): Wekiva staff will review the geotechnical draft and final reports and provide comments.

Task 3.4.1: Preliminary Design Report (30% Design) (LS): Wekiva staff will assist in the preparation of a Preliminary Design Report (PDR). This will include all design criteria along with 30% level drawings. These will include preliminary plans, sections and elevations particularly for proposed buildings. Wekiva will also assist in the preparation of an EOPCC. All drawings will be prepared using Revit.

Task 3.4.2: 60% Design (LS): Wekiva staff will prepare 60% level drawings and specifications. There are anticipated to be a total of (7) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 3.4.4: 100% Design (LS): Wekiva staff will prepare 100% level drawings and specifications. There are anticipated to be a total of (7) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 3.5: Bid Phase Services (T&M): Wekiva staff will assist Carollo in answering bidding questions and issuing addenda.

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Task 3.6: Construction Phase Services (T&M): Wekiva staff will assist Carollo during the construction phase by performing the following:

- Review Shop Drawings (Assumed to be a total of 12)
- Review RFIs (Assumed to be a total of 5)
- Attending (4) construction review meetings
- Performing (2) site visits which includes a substantial completion and a final completion visit.
- Wekiva staff will prepare record drawings using Contractor supplied redline markups.

Task 4: CR 214 Water Treatment Plant

Task 4.4: CR 214 Water Treatment Plant Future Improvements Facility Plan (LS): Wekiva will assist Carollo in preparation of facility plan documents.

Task 4.5.1: Preliminary Design Report (30% Design) (LS): Wekiva staff will assist in the preparation of a Preliminary Design Report (PDR). This will include all design criteria along with 30% level drawings. These will include preliminary plans, sections and elevations particularly for proposed buildings. Wekiva will also assist in the preparation of an EOPCC. All drawings will be prepared using Revit.

Task 4.7: 75% Design (LS): Wekiva staff will prepare 75% level drawings and specifications. There are anticipated to be a total of (4) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 4.8: 100% Design (LS): Wekiva staff will prepare 10% level drawings and specifications. There are anticipated to be a total of (4) drawings along with standard division 3, 4, 5, 6, 7, 8, 9, and 13 specifications.

Task 4.9: Bidding Services (T&M): Wekiva staff will assist Carollo in answering bidding questions and issuing addenda.

Task 4.10: Construction Phase Services (T&M): Wekiva staff will assist Carollo during the construction phase by performing the following:

- Review Shop Drawings (Assumed to be a total of 4)
- Review RFIs (Assumed to be a total of 2)
- Wekiva staff will prepare record drawings using Contractor supplied redline markups.

COST AND SCHEDULE

Wekiva proposes to undertake the work described above for all design tasks on a lump sum fixed fee basis at a total price of **$239,568.84**. These lump sum tasks are denoted in each task description. The bidding and construction phase services will be performed on a time and materials fee bases for a total not-to-exceed price of **$54,735.66**. The attached Table 1 contains a breakdown of the fee per task.

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TERMS AND CONDITIONS

Wekiva will begin work immediately upon your notice to proceed. We will issue monthly invoices for the work accomplished during the calendar month. We appreciate the opportunity to submit this proposal to Carollo and we look forward to a successful collaboration on this project. If you have any questions or need further information, please call.

Sincerely,



John Sobczak, P.E.
Member

Table 1 - Structural Engineering Services Fee

Fee Estimate: Structural Engineering Services
SJC Water Infrastructure Program
Date: September 2026

Task No	*Task Description*	*Man-hours By Category*					*Totals*	
		Principal $233.63	Associate $172.52	Engineer $136.58	Drafting $117.60	Clerical $64.70	Hrs	Labor Cost
2.1.2	*Progress Meetings*	12.0	0.0	0.0	0.0	0.0	12	$ 2,803.56
2.2.1.4	*Geotechnical Investigation*	2.0	1.0	4.0	0.0	0.0	7	$ 1,186.10
2.2.4	*Design Criteria*	4.0	0.0	6.0	0.0	1.0	11	$ 1,818.70
2.2.5	*PDR*	45.0	15.0	60.0	90.0	5.0	215	$ 32,203.45
2.5	*60% Design*	105.0	50.0	120.0	165.0	10.0	450	$ 69,597.75
2.6	*90% Design*	75.0	50.0	90.0	120.0	10.0	345	$ 53,199.45
2.7	*100% Design*	50.0	25.0	65.0	60.0	5.0	205	$ 32,251.70
2.8.2	*Bidding*	5.0	1.0	10.0	2.0	2.0	20	$ 3,071.07
2.9.1	*Construction*	45.0	35.0	40.0	10.0	8.0	138	$ 23,708.35
2.9.3	*Construction Meetings Site*	36.0	0.0	8.0	0.0	0.0	44	$ 9,503.32
2.9.5	*Record Drawings*	2.0	0.0	2.0	10.0	2.0	16	$ 2,045.82
3.2.3	*Geotechnical Investigation*	2.0	1.0	4.0	0.0	0.0	7	$ 1,186.10
3.4.1	*PDR*	8.0	5.0	5.0	20.0	2.0	40	$ 5,895.94
3.4.2	*60% Design*	20.0	4.0	16.0	30.0	5.0	75	$ 11,399.46
3.4.4	*100% Design*	14.0	5.0	8.0	22.0	1.0	50	$ 7,877.96
3.5	*Bidding*	2.0	0.0	2.0	2.0	1.0	7	$ 1,040.32
3.6	*Construction*	20.0	4.0	14.0	6.0	8.0	52	$ 8,498.00
4.5.1	*PDR*	5.0	0.0	4.0	10.0	1.0	20	$ 2,955.17
4.7	*75% Design*	8.0	2.0	8.0	20.0	5.0	43	$ 5,982.22
4.8	*100% Design*	8.0	2.0	5.0	10.0	2.0	27	$ 4,202.38
4.9	*Bidding*	2.0	0.0	2.0	2.0	1.0	7	$ 1,040.32
4.10	*Construction*	14.0	2.0	10.0	5.0	4.0	35	$ 5,828.46
	Total Cost							**$** 287,295.60



Request for Qualifications

PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

STAGE 2: APPROACH, SCHEDULE, QC, AND COST CONTROL/BUDGET COMPLIANCE

RFQ NO: 2902

Prepared For
St. Johns County Utility Department

JULY 2026

carollo®

Executive Summary

One Program. Four Projects. **One Integrated Delivery Strategy.**

St. Johns County's four water infrastructure projects represent a single capital improvement program (CIP) identified as priority in the Water Supply Master Plan with shared technical, operational, regulatory, and schedule interdependencies. Success depends not only on delivering each project, but on coordinating them as one integrated effort that advances the County's long-term water supply strategy while meeting critical funding, schedule, and implementation milestones.

Carollo's approach is built around one objective: **helping St. Johns County deliver four concurrent water infrastructure projects on schedule, within budget, and with the flexibility to adapt as needs evolve.** Through collaborative planning, disciplined project management, proactive permitting, and transparent cost control, we reduce project risk, accelerate decision-making, and help the County maximize the value of its investment. **The key features that distinguish our approach include:**

CAMP® bridges the gap between concept and reality.



Conceptual Plan **CAMP®** **Implementation**

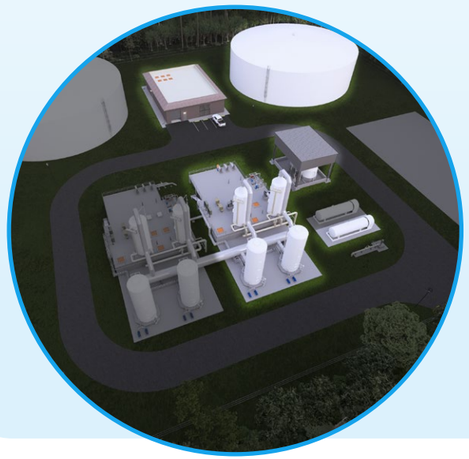
Concentrated, Accelerated, Motivated, Problem Solving

Carollo's CAMP® is a structured, collaborative workshop process that accelerates project delivery by bringing decision-makers together to resolve technical challenges, align priorities, and establish project direction early. By compressing decision cycles and promoting real-time problem solving, CAMP® reduces schedule risk, improves coordination, and helps projects advance more efficiently from concept to implementation.

Approach/Methodology/Innovation

Reduce risk through smarter planning.

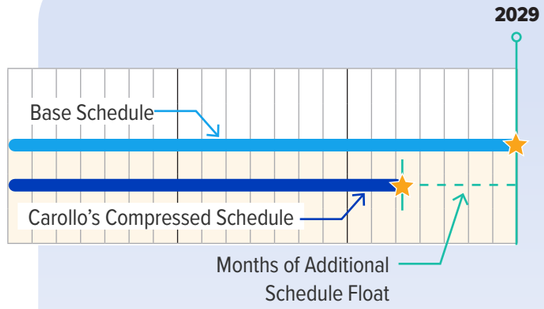
Our design guiding principle **RELI (Robust, Easy to Operate and Maintain, Logically Laid Out, Innovative)** optimizes designs that improve operational reliability, reduce maintenance demands, and improves system resiliency.



Why it matters:

Integrated planning that reduces risk before construction begins.

- Optimizes footprint and phased implementation.
- Balances constructability, operations, and life-cycle cost.
- Preserves flexibility for future treatment and expansion.



Why it matters:

Compressed schedule creates float—providing room to absorb risks to meet key milestones.

- Earlier project completion.
- Reduced escalation exposure.
- Greater schedule certainty.

Schedule

Compressed Scheduling Creates Critical Flexibility.

We evaluated the County's preliminary schedule and identified opportunities to optimize project sequencing. **By applying our CAMP® process, we further compressed the critical path, creating additional schedule float** that provides flexibility to manage unforeseen risks while protecting the County's 2029 operational goal and set bond schedule.

Quality Control

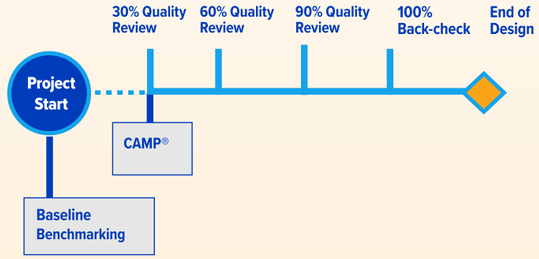
Deliver coordinated, construction-ready documents.

Carollo's quality reviews start on day one,unlike traditional QA/QC processes that begin at the 30 percent design milestone. This continuous approach improves design quality, minimizes rework, shortens review cycles, and supports the County's aggressive project schedule.

Why it matters:

One integrated team. One consistent standard of quality.

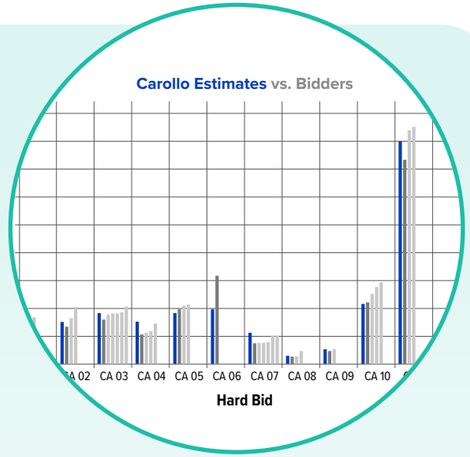
- Cross-project QA/QC keeps all four projects coordinated.
- Early multidisciplinary reviews reduce redesign and permitting risk.
- Day-one quality reviews protect schedule, budget, and operational reliability.



Why it matters:

Real-time cost information supports better decisions.

- Immediate evaluation of treatment alternatives.
- Transparent cost impacts before decisions.
- Budget certainty throughout project development.



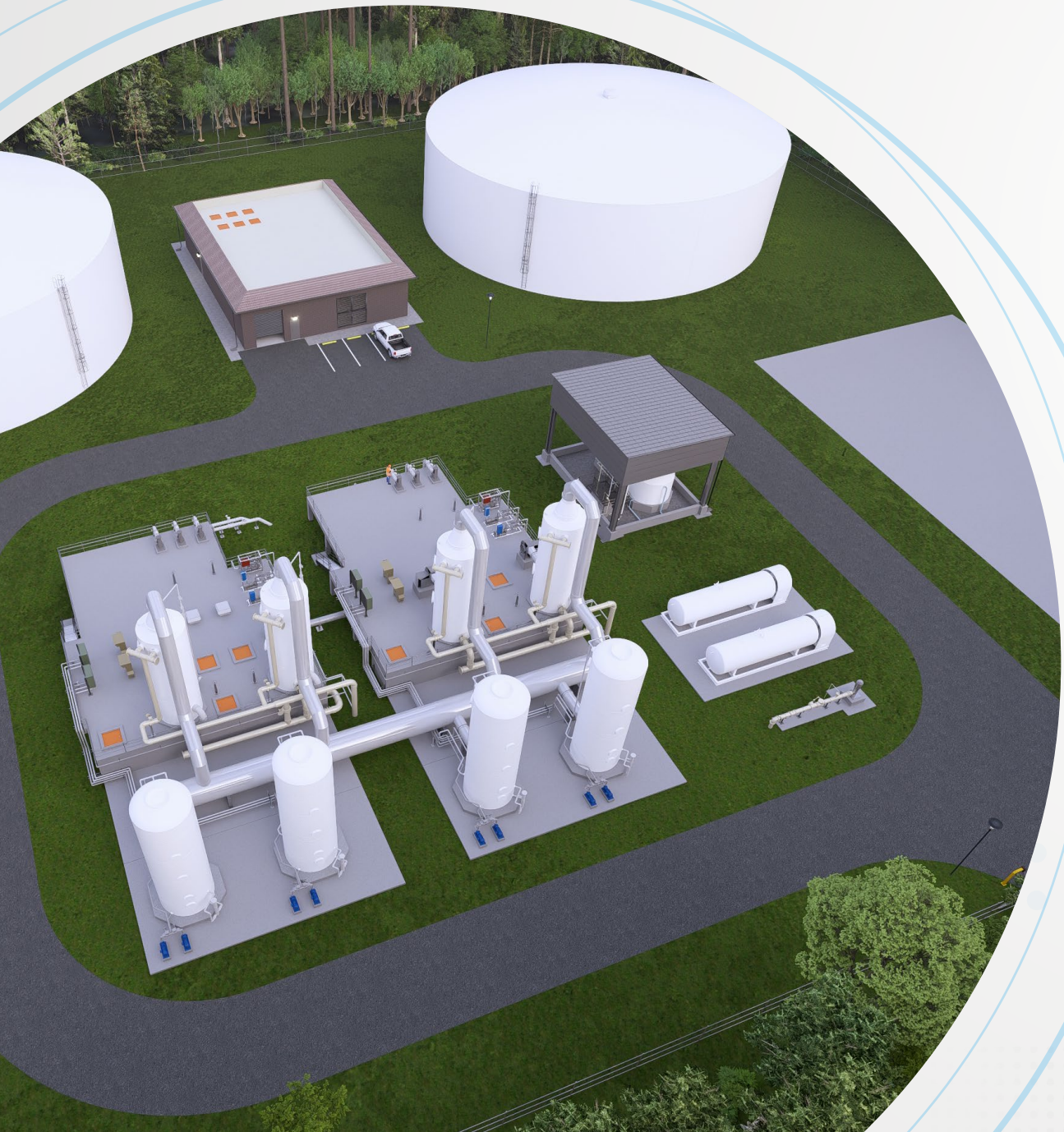
Cost Control/Budget Compliance

Control costs before they become change orders.

Accurate estimates provide the County with greater confidence that projects can be delivered within available funding. Carollo's 12 most recent engineer's estimates have been in line with bid-day bids, despite challenging market conditions.

SECTION 1:

APPROACH/ METHODOLOGY/ INNOVATION



St. Johns County's Water Supply Master Plan

Delivering the first phase of a $168 Million CIP.

Carollo will lead the successful delivery of four interconnected projects that implement the Water Supply Master Plan—strengthening capacity, improving reliability, optimizing system flexibility, and planning for the future.

ONE COORDINATED DELIVERY TEAM. ONE INTEGRATED STRATEGY. LONG-TERM VALUE.

$168 MILLION
CIP
2026–2030

THESE FOUR PROJECTS
First Phase of Implementation



Trout Creek WTP

Creates New Water Supply Capacity
Supports projected growth while reducing reliance on existing facilities.



NW - CR214 Blend Tanks and Transfer Station

Moves Water Where it's Needed Most
Optimizes system flexibility and improves service.

ONE INTEGRATED PROGRAM
Coordinated Planning.
Smart Investment.
Reliable Water.



CR214 Reliability Improvements

Protects Existing Infrastructure
Enhances treatment reliability and operational performance.



CR214 Future Improvements Facility Plan

Guides the Next Phase of Investment
Provides the roadmap for future needs and strategic growth.

These four projects represent the first major implementation phase of the County's **Water Supply Master Plan.**
Our comprehensive approach ensures every capital dollar advances **capacity, reliability, operational resilience, and long-term value** for the community.

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Our team's management approach to successful design within the funding budget and schedule constraints. Ability to optimize design and design within the County's budget and schedule constraints including ability to expedite design to meet schedules.

Integrated Program Leadership. Proactive Risk Management.

Predictable Project Delivery.

The County has already established its vision through the Water Supply Master Plan. Our responsibility is to transform that vision into four coordinated, constructible projects that remain aligned with the County's budget, schedule, and long-term operational goals. Every management decision is made with one objective—to deliver the first phase of the Water Supply Master Plan on schedule, within budget, and in a manner that supports the County's long-term operational goals.

Progressive cost estimating and continuous budget alignment ensure every major design decision remains consistent with the County's available funding while advancing the objectives of the Water Supply Master Plan.

PROGRAM SCHEDULE MANAGEMENT

Our integrated Master Program Schedule manages critical path activities, inter-connected project milestones, permitting, procurement, and phased implementation as one coordinated program. By proactively managing these relationships, we support the County's 2029 water delivery objectives while maintaining flexibility to adapt to changing conditions and emerging information without compromising the overall implementation strategy.

BUDGET MANAGEMENT

Rather than treating cost estimating as a milestone deliverable, we integrate continuous budget validation throughout planning and design. Progressive cost estimating, life-cycle evaluations, and value engineering ensure every recommendation advances the objectives of the Water Supply Master Plan while maximizing the value of the County's capital investment.



INTEGRATED DESIGN MANAGEMENT

These projects are managed as one integrated water supply program—not four independent assignments. Through coordinated hydraulic evaluations, shared design criteria, interdisciplinary collaboration, and constructability reviews, we streamline decisions, eliminate redundant effort, and maximize each capital investment, resulting in more efficient, cost-effective project delivery.

PROGRAM RISK MANAGEMENT

Our program-level risk management process identifies technical, operational, permitting, and procurement risks early, when they can be addressed with the least impact. A programatic risk register, proactive coordination, and continuous issue tracking keep the program moving forward while protecting both schedule commitments and budget certainty.

Our integrated management approach transforms the County's Water Supply Master Plan into four coordinated, constructible projects delivered as one successful program.

Our team's ability to optimize design and design within the county's budget and schedule constraints including ability to expedite design to meet schedules

Optimizing Every Decision. Accelerating Every Phase.

Delivering the County's Water Supply Master Plan requires more than sound engineering—it requires making informed decisions early and maintaining momentum throughout design. Carollo combines advanced design optimization tools, a trademark process called CAMP® (Concentrated, Accelerated, Motivated Problem Solving), and the institutional knowledge of industry-leading water professionals to identify the best solutions faster, reduce uncertainty, avoid unnecessary redesign, and keep the program aligned with the County's budget, schedule, and long-term operational goals. **Additionally, the partnership of two industry-leading firms provides expanded technical expertise, specialized resources, and proven experience.** By leveraging the strengths of both teams, we increase capacity, enhance responsiveness, and improve schedule reliability while maintaining the highest standards of quality and client service.



Design Tools

We evaluate alternatives using advanced engineering analyses and decision-support tools to identify practical, cost-effective solutions that maximize performance, value, and long-term reliability.



CAMP®

Carollo's Concentrated, Accelerated, Motivated Problem Solving (CAMP®) process engages key stakeholders early to accelerate decision-making, build consensus, and maintain project momentum.



Institutional Knowledge

We leverage decades of specialized water infrastructure experience to apply proven practices, minimize learning curves, and deliver efficient, well-informed solutions.

Together, these three capabilities enable Carollo to optimize every design decision, expedite project delivery, and transform the County's Water Supply Master Plan into practical, constructible projects that maximize value while meeting budget and schedule commitments.

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Design Optimization Tools

Turning Better Information into Better Decisions.

Our design optimization tools transform engineering data into informed decisions. By evaluating multiple alternatives through hydraulic modeling, water quality analyses, constructability reviews, lifecycle cost evaluations, and digital decision-support tools, we identify practical solutions that maximize performance while reducing cost, risk, and schedule impacts.

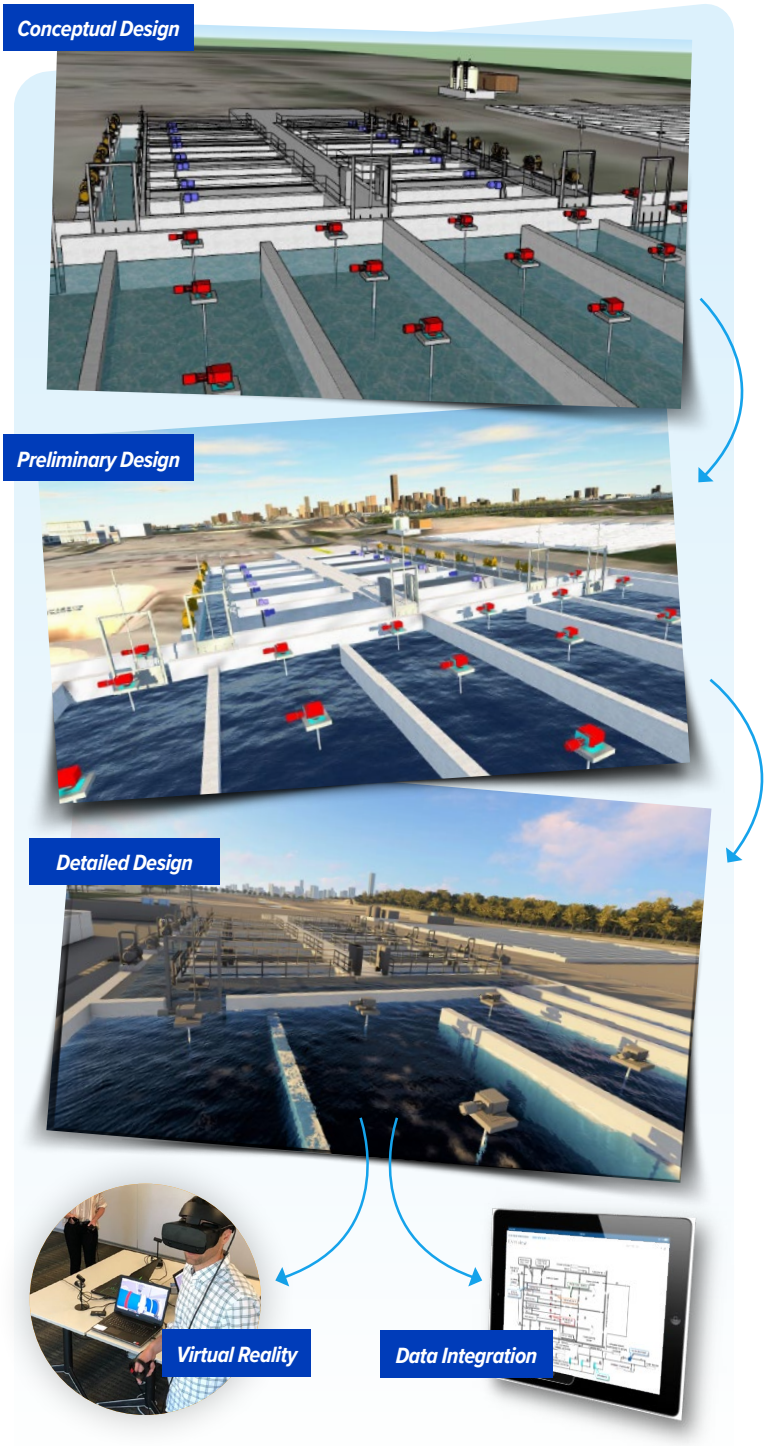
Virtual Reality (VR) Tools. The Carollo team will facilitate a virtual reality design tour for County staff, allowing each member to "walk through" the design and provide feedback regarding layout, perceived operational space constraints, and preferences for ancillary facility placement. Staff can choose to use the VR headset themselves and enter the model, or view what others are seeing on screen. Using RESOLVE software, County review comments can be entered directly into the model during VR reviews.

LIDAR. 3D laser scanning can quickly and cost-effectively convert existing infrastructure into virtual 3D models, offering many benefits for projects such as CR214, including increasing accuracy by not relying on inaccurate as-built drawings.

Conversion of LIDAR to Building Information Modeling (BIM). While visual models created with LIDAR are useful, the LIDAR data can be converted to Revit 3D BIM that offers even greater benefits to plant staff, designers and contractors through features such as clash detection which identifies conflicts between disciplines **before** construction begins.

Digital As-builts. Geospatial data indexing the below-grade assets during construction provides cost-effective validation of the 3D model as-builts for improved accuracy and reliability.

3D Design and BIM Tools. Carollo typically designs from start-to-finish using advanced capabilities of 3D and BIM techniques. To expedite our design efforts, we prepare conceptual designs using SketchUp 3D and transition to Bentley's MicroStation or Autodesk's Revit MEP BIM-layered 3D platform for preliminary and detailed design.



EOMMs, Asset Management and CMMS. The integration of submittal information and asset attributes into the BIM model database for incorporation into electronic O&M manuals (EOMM), asset management platforms (AMP), and computerized maintenance management systems (CMMS) is quickly becoming the norm. This approach allows for the integration of critical data attributes to be represented in a virtual model environment.

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Designing within the County's Budget and Schedule Constraints

Project 2: CR214 WTP Blending Station Approach.

Our Project 2 team, led by Project Manager David Rasmussen, played a key role in the recent CR214 WTP projects, including the blending station, the transfer pump station, and the concentrate management study, and he will apply those lessons to this effort to minimize risk and streamline implementation.

We have identified County owned property east of the existing CR214 WTP as a viable location for the proposed 2.5 MGD blending pump station and storage tank. That parcel would accommodate the new facilities if necessary. However, keeping the new facilities on the existing CR214 WTP site offers significant operational advantages — simpler operations, consolidated maintenance, more efficient staffing, and easier integration with existing systems — and would free the County parcel for other uses.

We will work closely with County staff during design to determine the most operationally and cost effective option. Our proposed site plan presents several alternatives for siting the pump station and ground storage tank; during the next phase we recommend conducting a focused evaluation of constructibility, permitting, operations, and lifecycle cost for each alternative so we can select the best path forward.

Innovative Idea:

Packaged Booster Pump Station
– Meeting budget and schedule constraints



Time is critical to deliver supplemental water to the CR214 WTP service area. A packaged booster pump station, such as the Grundfos Hydro MPC-E, offers a fast, cost-effective solution that minimizes construction and installation efforts while meeting the County's immediate pressure and flow needs. The factory-assembled skid includes pumps, VFDs, controls, and instrumentation, significantly reducing procurement complexity, construction time, and installation risk. The proposed four-pump system can deliver 2.5 MGD (1,736 GPM) at 70 psi and automatically adjusts operation to maintain system pressure and maximize efficiency.

The packaged station is quoted at approximately $150,000, compared to an estimated $600,000 for a conventional booster station, representing **capital savings of more than $500,000**. With a lead time of roughly 16 weeks, the packaged solution could **accelerate implementation by an estimated 16 to 36 weeks.** While standard considerations such as equipment lead times, site readiness, and commissioning must be managed, these risks are readily addressed through early coordination and vendor support. Overall, the packaged booster station provides the fastest and most economical path to bringing supplemental water to the CR214 WTP service area.

Innovative Idea:

Tie-in to Existing 12-inch WM from Northwest Service Area – Redundancy and Reliability

We propose connecting the new booster pump station to the existing 12-inch water main from the Northwest service area that currently supplies the blending station at the CR214 site. Because the CR214 WTP clearwell has known hydraulic limitations that present operational risk to the county, this tie in will preserve the ability to convey Northwest service area flows through the existing pipeline to the new booster station. That connection increases **system reliability** and provides **valuable redundancy** for emergency, maintenance, or peak demand scenarios.



1. New 2.5 MGD Booster Pump Station
2. GST Location Alternative 1
3. Tie into Existing 12" Pipe and Feed New Booster Station
4. Exiting 12" Pipe from NW Service Area
5. Existing Blending Station
6. Tie new GST into existing GST fill line and HSPS Suction Header
7. GST Location Alternative 2 - Pump directly into the distribution system or new GST
8. Tie into Existing 20" WM with Isolation Valve

Innovative Idea:

Predictive Water Quality Analytics to Optimize NW–CR214 Blending

SJCUD currently relies on WaterSafe360 and other manual water quality tools to calculate blended water chemistry. While effective under stable conditions, these approaches require operators to continually update inputs and react to changing source water quality.

BLUE PLAN-IT® DECISION SUPPORT SYSTEM

Ardurra and Carollo will modernize this process by integrating Carollo's Blue Plan-it® platform with Ardurra's Big Data and analytics capabilities to deliver real-time, predictive blending optimization. Using SCADA and LIMS data, the system continuously evaluates water quality conditions, predicts changes before they occur, and provides actionable operational guidance.

Key benefits include proactive blending recommendations, improved treatment stability, automated KPI reporting and alerts, enterprise-wide visibility beyond SCADA, and a scalable solution that supports planning, operations, and future system changes. This approach transforms blending from a manual, reactive process into a data-driven program that reduces upset risk and improves operator decision-making.

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Design Optimization Tools that Translate in Innovative Design on Budget and Schedule

Every design decision should be supported by data; not assumptions. Carollo's design optimization tools allow our team to rapidly evaluate alternatives, compare lifecycle impacts, test operational scenarios, and optimize treatment solutions before major decisions are made. The result is better-informed decisions, reduced project risk, and designs that maximize value while keeping the program on budget and on schedule.



Carollo's RESERVOIR® tool will be used to organize and manage the process equipment information relevant to all disciplines during the design process.

Focus on the critical design details, not the minutiae.

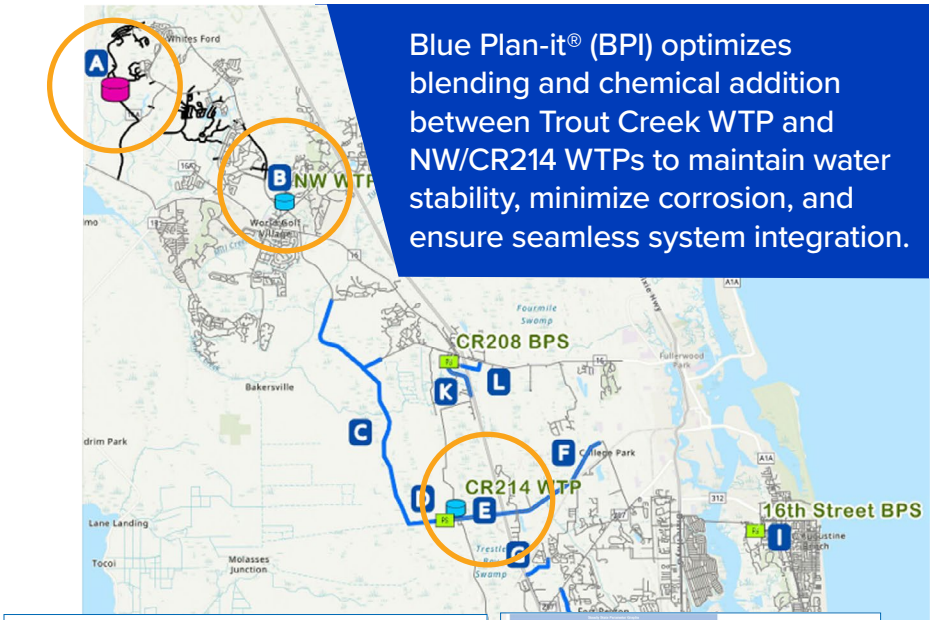
Carollo's RESERVOIR® database tool streamlines process equipment information management across disciplines, reducing rework and supporting timely design deliverables. It automatically generates single-line drawings and checks for errors such as spelling, matchlines, detail callouts, scales, and P&ID discrepancies. Unique to Carollo, this tool improves design document quality, allowing County staff to focus on technical content rather than coordination issues.

BLUE PLAN-IT® DECISION SUPPORT SYSTEM

Blue Plan-it® (BPI) is a fully customizable water resources and treatment planning and decision support management tool developed by Carollo. It provides a holistic and collaborative approach in the planning and management of water treatment and much more, all using one integrated platform.

We will use Carollo's BPI corrosion and stability modeling tool to evaluate blending scenarios between the new Trout Creek WTP and the existing NW and CR214 WTPs. **Because BPI performs corrosion and stability analyses up to 25 times faster than conventional modeling tools**, our team can evaluate more alternatives in less time, reducing design effort while accelerating project delivery and improving decision-making.

Blue Plan-it® (BPI) optimizes blending and chemical addition between Trout Creek WTP and NW/CR214 WTPs to maintain water stability, minimize corrosion, and ensure seamless system integration.

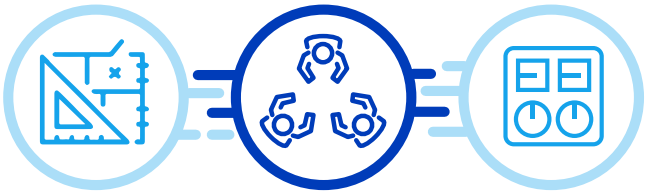


Design CAMP® Fostering Trust Through Collaborative Design

The CAMP® approach was developed in 2005 by Carollo to facilitate execution in a shared working environment.

CAMP® is a technique to optimize stakeholder participation, make decisions, solidify process criteria, and critically evaluate the design. It is a structured, repeatable approach that yields results in an efficient manner. Through a facilitated approach, **the combined experiences of key personnel from the design team, and County staff, and other critical stakeholders, are leveraged over a short, concentrated effort** to make time-critical informed decisions and to accelerate project development.

CAMP® bridges the gap between concept and reality.



When decades of experience are leveraged together in an organized fashion, the quality and speed of decision-making is dramatically enhanced. A CAMP® duration is established based on the project-specific outcomes that are desired, but typically are in the one-to two-week time frame to advance preliminary design efforts. The goal is to walk out of a Design CAMP® with the necessary decisions to advance the preliminary design that meet our clients' vision. As concepts and layouts are developed, real-time revisions are generated, reviewed, and reworked as needed.

SUCCESS OF THE CAMP® PROCESS

PROJECT	Traditional Design Schedule (months)	CAMP® Design Schedule (months)	MONTHS SAVED
Blue River WWTP Biosolids Facility, Kansas City, MO	20	14	6
WRP Expansion, Gilbert, AZ	30	18	12
BNR/Tertiary Treatment Facilities, Modesto, CA	10	6	4
biottta® Wellhead Nitrate Treatment, Delano, CA	12	6	6
Secondary Treatment Expansion Project, Phase 1, Turlock, CA	8	4	4
Reclamation Expansion, San Clemente, CA	12	8	4
Four Water Infrastructure Projects, St. Johns County	**34**	**28**	**6**

THREE Things You Need to Know about Carollo's CAMP® Process

Every engineering firm has workshops, but only Carollo has CAMP®. To facilitate decision-making on challenging topics, Carollo recommends using a Concentrated, Accelerated, Motivated, Problem Solving process.



1. It's not a normal workshop. We really focus on the "concentrated" part of CAMP®. In its most powerful form, a project development CAMP® might run five days and result in a 30-percent complete design.

2. It saves time and money. The "accelerated" part of CAMP® means that we can move forward more quickly than a normal project by having all decision makers in the room, which is especially important when a project has an aggressive schedule. Time saved is money saved.

3. It makes Operations' lives easier. CAMP® is built around respecting your staff members' time. We get you in and out as quickly as possible and transform the results of the CAMP® into real action that moves toward a successful conclusion. We've proven it for numerous clients across the country.

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Institutional Knowledge That Reduces Learning Curves, Cost, and Schedule Risk

The fastest project is the one that doesn't have to relearn what the County already knows.

Every project begins with a learning curve, understanding facility history, operational challenges, County standards, and the decisions that shaped the existing infrastructure. Our team starts ahead. With decades of direct experience supporting St. Johns County, our key leaders bring institutional knowledge that reduces investigation time, avoids repeating past evaluations, identifies optimization opportunities early, and accelerates design without compromising quality.



Sudhan Paranjape, PE

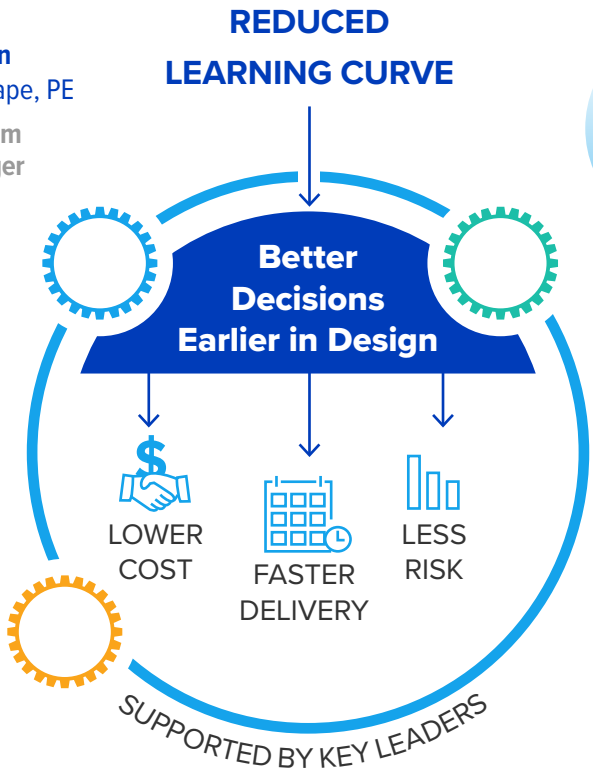
Program Manager

Supported the design of the 8-mgd CR214 Water Treatment Plant and associated wellfield infrastructure project.



David Lassetter, PE, BCEE, QEP

Electrical/Instrumentation & Controls





David Rasmussen, PE, BCEE, QEP

Project Manager NW to CR214 Finished Water Blending and Transfer Station

Has managed 50-plus projects for the County, including the design and construction of improvements at the CR214 WTP to support blending of finished water from the Northwest WTP.

Having supported St. Johns County Utility Department since 2007, he brings extensive familiarity with County facilities, standards, and operations, including CR214 treatment and wellfield improvements.

- **Reduced Capital Costs** – Optimize generator sizing, fuel storage capacity, motor control center (MCC) configuration, and building footprint to avoid over design and reduce upfront construction costs.
- **Lower Long-Term Operating Costs** – Right-sized electrical and facility infrastructure minimizes energy consumption, maintenance requirements, and future replacement costs.
- **Improved System Reliability** – Evaluate split MCC configurations to reduce the risk of a single equipment failure impacting the entire facility.
- **Greater Value for Ratepayers** – Deliver a reliable and resilient electrical system while maximizing cost savings and protecting the County's investment.

The most valuable lessons are those you don't have to learn twice.

Our key leaders' deep, ongoing experience with St. Johns County eliminates learning curves, reduces costs, and accelerates schedule—delivering better results for the County.

How will the team make decisions on raw water quality, process, equipment sizing, selections, site layout and expansion potential, functional capabilities, permitting, "things to consider," and design a facility with a long service life?

Our Decision Framework

How We Make Every Major Design Decision.

Every major design decision is evaluated against the County's implementation goal, not simply technical criteria. Our decision framework balances operational needs, available funding, schedule commitments, and long-term system performance to ensure every recommendation advances the Water Supply Master Plan while delivering the greatest value to St. Johns County.

EVERY DESIGN DECISION

SYSTEM NEED
- Expand water supply capacity.
- Improve system reliability.
- Increase operational flexibility.
- Support future system growth.

BUDGET & SCHEDULE
- Align with available CIP funding.
- Support the County's 2029 implementation goals.
- Minimize cost and schedule impacts.
- Meet County's 2030 Fixed Bond end date.

LONG-TERM VALUE
- Optimize life-cycle cost.
- Improve operational efficiency.
- Preserve future expansion flexibility.

ADAPTIVE EVALUATION

Rapidly evaluate and refine alternatives through multidisciplinary collaboration, hydraulic modeling, life-cycle cost analyses, constructability reviews, and operational assessments to identify the preferred solution that best supports the County's budget, schedule, and long-term water supply objectives.

RECOMMENDED SOLUTION

A practical, implementable solution that balances performance, cost, schedule, and long-term value while supporting the County's implementation of its Water Supply Master Plan.

OUR DESIGN GUIDING PHILOSOPHY

To optimize the layout, Carollo will follow our standard design approach called **RELI**
We have been implementing this design approach for over 90 years to **optimize treatment plant layouts while adding longevity to the plant.** These principles of design excellence are simply stated as:
Robust. **E**asy to Operate and Maintain. **L**ogically Laid Out. **I**nnovative.

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Applying RELI to the Trout Creek WTP

For the Trout Creek WTP, Carollo applies the RELI principles to develop resilient treatment solutions that improve operational reliability, reduce maintenance demands, and provide flexibility to adapt as future water quality conditions evolve.

R Robust



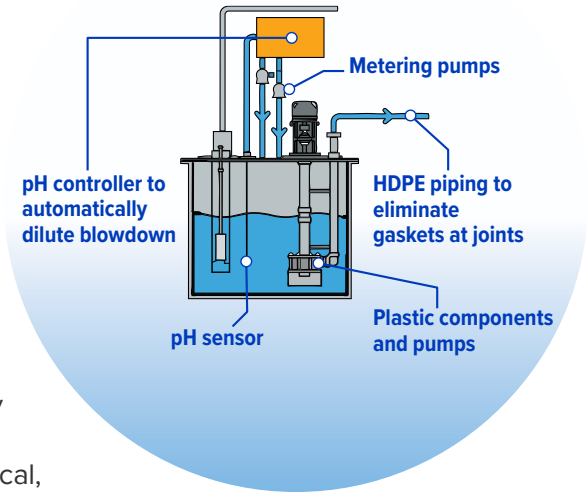
Today's anticipated raw water quality requires hydrogen sulfide (H_2S) removal. Degasification is a proven, robust process that consistently removes more than **99 percent of hydrogen sulfide**. If raw water quality differs from initial assumptions, our experienced project team can readily evaluate and implement alternative treatment technologies to maintain project objectives and regulatory compliance.

If hydrogen sulfide concentrations are below approximately 1.5 ppm, the degasification system could be replaced with ozone treatment. **This alternative has the potential to achieve the required treatment objectives while reducing capital costs.**

If future sulfate or Total Dissolved Solids (TDS) concentrations require additional treatment, we have identified another robust alternative. Rather than recommending reverse osmosis, which would increase concentrate management challenges already experienced at CR214, we propose our XBAT solution. This approach minimizes concentrate production while providing a more sustainable long-term treatment strategy. Additional information on this innovative technology is provided in the Innovation section.

E Easy to Operate and Maintain

We recognize the operational challenges associated with the existing low-pH blowdown pump station at the Northwest WTP. Blowdown from the biotrickling filters has a pH of approximately 2, creating a highly corrosive environment for conventional metallic and rubber components.



Our design replaces these vulnerable components with corrosion-resistant plastic pumps and piping specifically selected for this service. We also incorporate automatic pH adjustment to dilute the blowdown before pumping. For the force main, we recommend fully welded HDPE piping to eliminate gasketed joints. Identifying material compatibility requirements for all design components allows the team to select materials that are well-suited for the anticipated chemical, hydraulic, and environmental conditions. This proactive approach minimizes corrosion, degradation, and premature equipment failure, resulting in a more durable facility with **increased reliability, lower maintenance requirements, and a long service life.**

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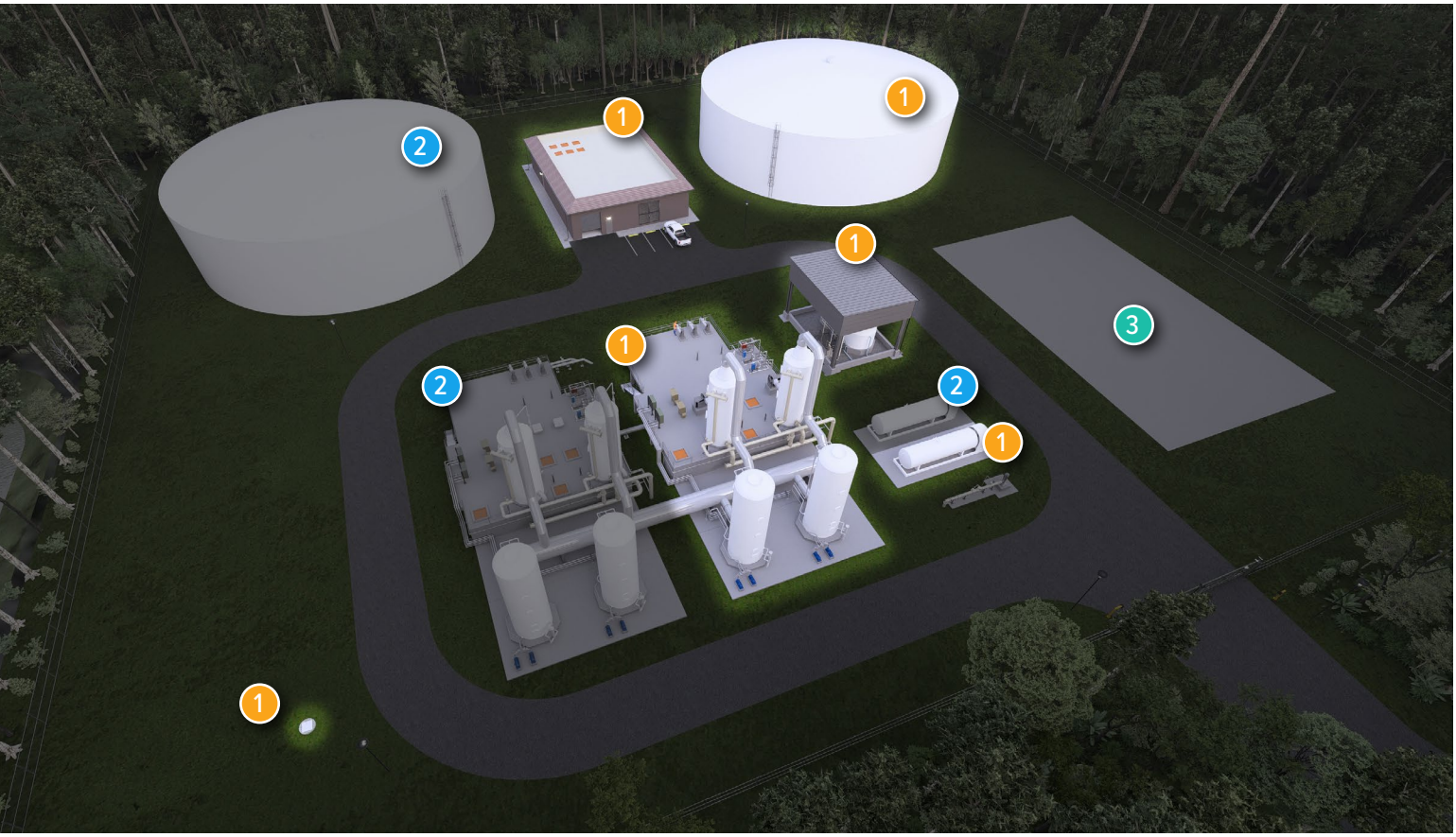
Logically Laid Out

Modular design and layout for ease of future expansion.

A modular design approach with planned phased expansion allows facilities and equipment to be right-sized for current operating conditions while preserving a clear pathway for future growth. This strategy minimizes upfront capital expenditures, avoids overbuilding infrastructure before it is needed, and improves operational efficiency during the early years of operation. As demands increase, additional capacity can be added in a logical, cost-effective manner with minimal disruption to ongoing operations.



1

Phase 1:

Utilize a modular design to build for today's 5.0-mgd capacity and treatment needs so we keep costs low and the project on schedule.

2

Phase 2:

Allocate space and plan for future expansion to 10.0 mgd. Modular design allows this to be efficient and with minimal disruptions.

3

Adaptive Treatment Process:

Design for future treatment of sulfate and TDS if the water quality needs change. Ozone can lower capital costs. XBAT can solve issues with brine or concentrate disposal. CO_2 storage and feed system (pH adjustment).

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Innovative

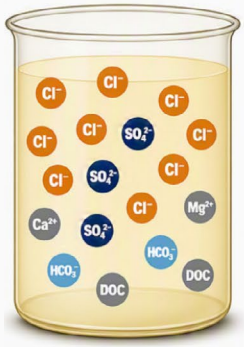
Our XBAT technology was introduced earlier as a robust, adaptable treatment alternative for the Trout Creek WTP. We also see potential to apply this innovation to Project No. 3—CR214 Reliability Improvements. Unlike conventional reverse osmosis, which increases concentrate management challenges, XBAT selectively removes chloride and sulfate while replacing them with bicarbonate. This approach reduces the constituents that adversely impact wastewater treatment processes, minimizes concentrate disposal challenges, and provides a more sustainable, lower-cost long-term solution for St. Johns County.



Testing at Carollo's WaterARC® lab.

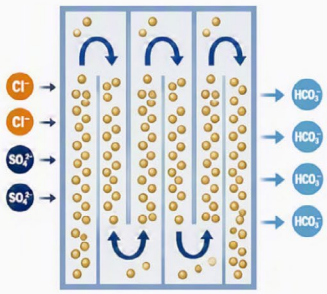
XBAT Treatment of CR214 CONCENTRATE

1. INFLUENT CONCENTRATE
Chloride-and Sulfate-Dominated



High TDS and high corrosivity

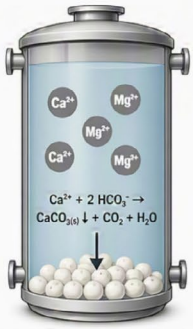
2. STEP 1 - SIX® ION EXCHANGE
Removes chloride and sulfate; replaces with bicarbonate



Anion exchange resin captures Cl^- and SO_4^{2-} and releases HCO_3^-

Outcome: Chloride and sulfate reduced; bicarbonate increased

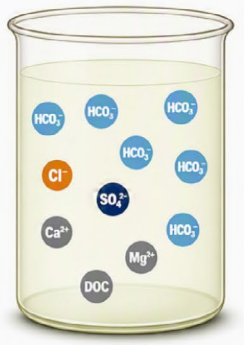
3. STEP 2 - PELLET SOFTENING
Removes hardness (Ca^{2+}, Mg^{2+}) by forming solid $CaCO_3$ pellets



Pellet softening removes hardness and stabilizes bicarbonate chemistry

Outcome: Hardness removed; chemistry stabilized

4. EFFLUENT - TREATED WATER
Bicarbonate-Dominated



Lower TDS and lower corrosivity

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Provide the approach to permitting, field services, and working with subcontractors.

Permitting Strategy

Early Coordination. Faster Reviews. Reduced Risk.

Successful delivery of the Four Water Infrastructure Projects depends on a permitting strategy that supports timely decisions, minimizes regulatory risk, and maintains project momentum. Carollo integrates permitting into every phase of project development through early agency coordination, collaborative planning, and continuous communication, enabling the County to advance each project efficiently while reducing schedule impacts and unnecessary costs.

Drinking Water Permit

Carollo will prepare and coordinate the Florida Department of Environmental Protection (FDEP) Drinking Water Permit and applicable design criteria. Early coordination with FDEP will confirm project-specific requirements, resolve technical issues before submittal, and streamline agency review. Following permit submission, our team will respond promptly to requests for additional information and incorporate permit conditions into final design, construction, startup, and commissioning activities to maintain schedule and support timely facility authorization.

Stormwater Permit

Stormwater permitting will be integrated with ETM's design efforts. ERP authorization for the Trout Creek WTP will be coordinated with FDEP, the permitting authority for water treatment facilities within the SJRWMD. Because the site is within the SilverLeaf PUD, approved before January 1, 2024, it is expected to qualify for applicable grandfathering provisions under the 2024 ERP stormwater rule updates. Early coordination with FDEP will confirm permitting requirements, review prior wetland impact authorizations, and validate the site's grandfathered status to streamline ERP approval.

PERMITTING ROADMAP

PLANNING	▪ Permitting schedule development for inter-project coordination. ▪ Detailed review of all permit requirements. ▪ Conduct agency alignment sessions for the program with WMD, DEP, USACE (if necessary), and local stakeholders.
AGENCY COORDINATION	▪ Conduct early pre-application meetings. ▪ Leverage Carollo and partner agency relationships. ▪ Coordinate concurrent permitting across all four projects.
PERMIT APPLICATIONS	▪ Complete permit applications at early design stage. ▪ Separate project teams allow multiple applications to be completed concurrently.
AGENCY REVIEW/RFIs	▪ Anticipate agency comments through early coordination. ▪ Provide timely, coordinated RFI responses. ▪ Resolve comments quickly to maintain project momentum.
RAPID RESPONSES	▪ Local experts respond immediately to agency comments. ▪ Established County and regulator relationships expedite reviews.
PERMIT ISSUANCE	
CONSTRUCTION SUPPORT	
STARTUP & ACCEPTANCE	▪ Maintain active collaboration with contractor to expedite closeout submittal review and approval for agency completion and use permits.

OTHER REGULATORY SUPPORT

Although Consumptive Use Permit (CUP) and environmental resource permitting are outside the current scope, our team—including specialized environmental permitting experts—has extensive experience supporting groundwater development, wetlands permitting, mitigation planning, and agency coordination throughout Florida and is prepared to assist the County as needed.

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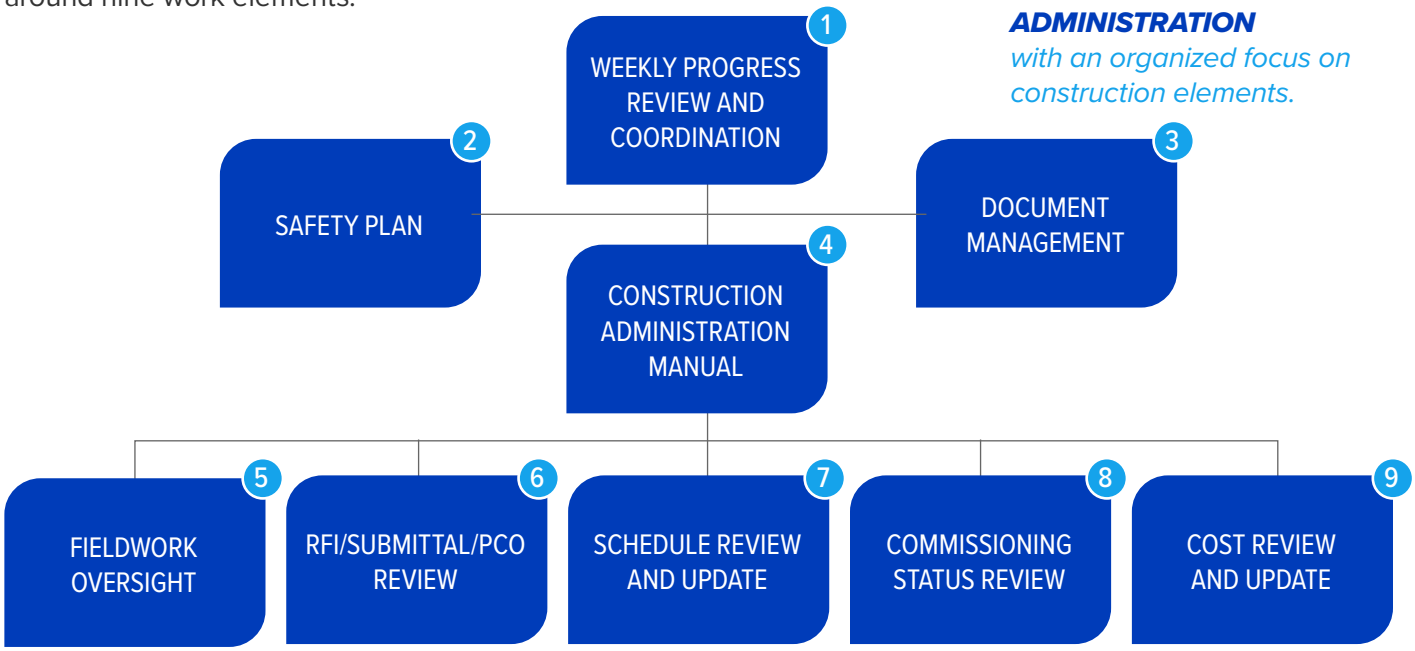
Approach to Proactive Field Servicing for Safe, Efficient Project Delivery

Real-Time Field Coordination Keeps Construction Safe, On Schedule, and on Budget.

Our approach to effective construction administration is simple: be organized and follow a detailed plan to define methods and processes to execute the essential construction management (CM) activities. In distilled form, we will administer the contract requirements by organizing our efforts around nine work elements:

EFFECTIVE CONSTRUCTION ADMINISTRATION
with an organized focus on construction elements.



1. Status review meeting to include contract items, construction progress, schedule look-ahead, outstanding RFI/submittal/change orders with intent to resolve and/or establish actionable assignments.

2. Safety plan defines procedures for oversight of contractor's site safety management, and safe working practices for the CM field team.

3. Autodesk Forma documentation management system with defined protocol for version control, access rights, file sharing, comments/mark-ups, and document indexing for sorting and document retrieval.

4. Construction Administration Manual (CAM) defines roles and responsibilities, workflow processes, project reporting protocol, and conflict resolution framework.

5. Daily observation reports to establish the construction record and basis to analyze monthly schedule of values/pay applications.

6. Parallel review and comment of key/critical RFIs, submittals, and potential change orders (PCO) to assess contract conformance and cost implications. Items will be screened for accuracy and necessity before routing to the design team, reducing unnecessary document handling.

7. Review to assess conformance to sequence, logic, and analysis of actual work duration versus planned.

8. Continuous review and evolution of test protocol, acceptance plans, and schedule milestones so that testing and commissioning activities are detailed and well-planned.

9. Summary capture of planned versus actual expenditures and change order cost basis verification.

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Approach to Working with Subcontractors: Integrated Teaming Reduces Risk

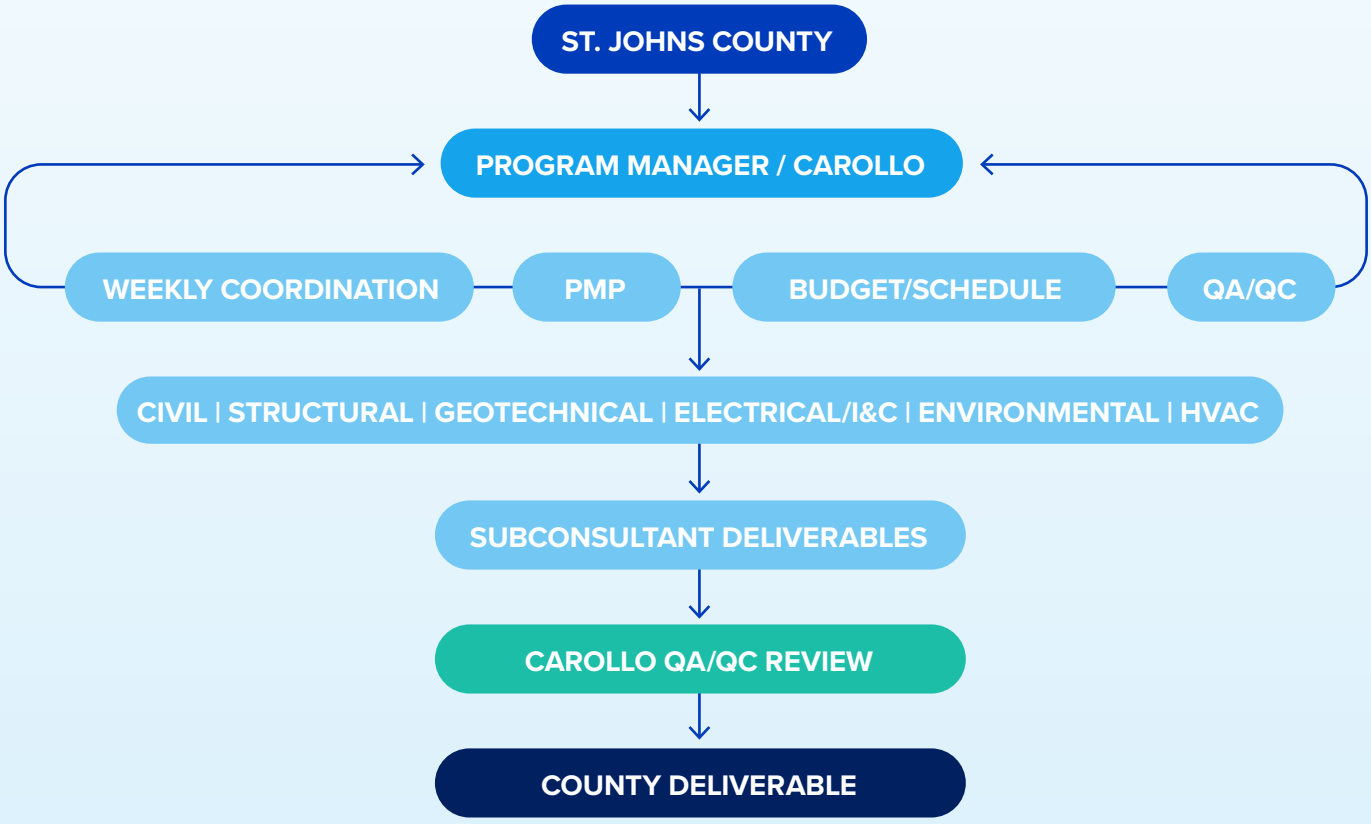
One Integrated Team. One Standard of Quality.

The County benefits from a team that functions as a single, integrated organization—not a collection of separate firms. Carollo intentionally partners with subconsultants with whom we have established working relationships and a proven history of delivering complex water infrastructure projects. Our major partner, Ardurra, has collaborated with Carollo on the recent Biosolids Master Plans for St. Johns County and Clay County Utility Authority. Likewise, ETM, Alpha Envirotech, Powell & Hinkle, UES, and Wekiva are trusted teaming partners on projects across Florida. These established relationships allow our teams to communicate efficiently, coordinate seamlessly across disciplines, and minimize the learning curve that can impact cost, schedule, and project delivery.

Every subconsultant works under the same Project Management Plan (PMP), communication protocols, quality standards, and project controls as Carollo staff. Routine coordination meetings, milestone reviews, schedule updates, and budget tracking maintain alignment across all four projects, allowing potential issues to be identified and resolved early before they affect scope, schedule, or cost.

Most importantly, every subconsultant deliverable is subject to Carollo's project-specific Quality Assurance/Quality Control (QA/QC) process. No subconsultant work product is incorporated into a County deliverable without first undergoing the same independent technical and quality reviews applied to Carollo's own work. Review comments are tracked through resolution to verify that all deliverables are complete, coordinated, technically sound, and consistent with project objectives.

This disciplined approach provides the County with one accountable team, one consistent standard of quality, and greater confidence that decisions are coordinated, risks are proactively managed, and project budgets and schedules remain under control throughout delivery.



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Discuss the major challenges your Team has identified on the projects, and how you intend to address those challenges.

Delivering the County's Phase 1 water infrastructure program requires proactively addressing the challenges most critical to project success. **Carollo has identified three priorities that will drive our approach: meeting the accelerated implementation schedule, designing for evolving water quality requirements, and improving operational performance at the CR214 clearwell.** By addressing these challenges early, we reduce risk, support informed decision-making, and deliver practical solutions that protect the County's investment.

1 Delivering Trout Creek WTP by 2029

Meeting the County's Aggressive Delivery Schedule

The County's highest schedule priority is bringing the Trout Creek Water Treatment Plant online by September 2029 while maintaining operational reliability across the remaining projects. Meeting this commitment requires more than simply accelerating design—it requires eliminating unnecessary delays, making critical decisions earlier, and actively managing interdependencies across the entire water infrastructure program.

The Challenge

Compressed Design and Delivery Window

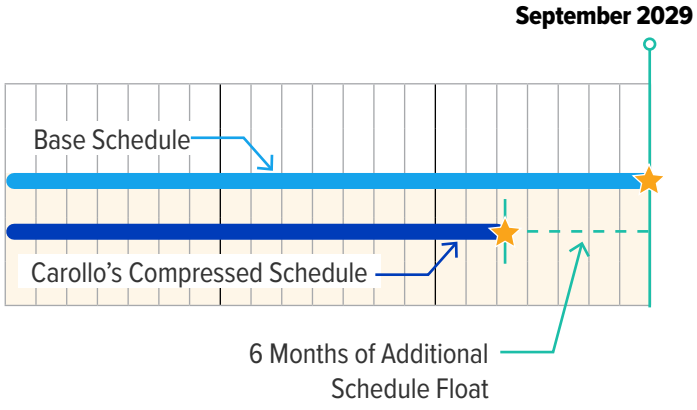
Traditional sequential design does not provide sufficient time to deliver Trout Creek WTP by 2029.

Early Decisions are Critical

Long-lead procurement, permitting, and major design decisions must occur much earlier than in a conventional delivery approach.

Program-Level Coordination

Four interdependent projects must advance as one coordinated program while maintaining operational reliability.



Our Response

Accelerate Critical Decisions Through CAMP®

Rather than waiting until traditional design milestones, Carollo uses its CAMP® process to bring County staff, operators, regulators, and the design team together early to resolve major technical decisions while flexibility remains highest.

Compress the Critical Path Through Concurrent Project Delivery

We evaluated the County's preliminary schedule and identified multiple opportunities to compress the critical path through concurrent design, permitting, procurement, and construction activities. These improvements strengthen our ability to achieve the County's 2029 operational milestone.

Manage the Program as One Integrated Schedule

We transformed four independent project schedules into one integrated Master Program Schedule, optimizing project sequencing, managing critical interdependencies, and improving schedule certainty to support the County's 2029 operational milestone.

TOTAL CAMP® BENEFIT OF 6 MONTHS

The CAMP® implementation is projected to save 6 months of cumulative design schedule across the four projects creating earlier facility availability and reducing escalation exposure.

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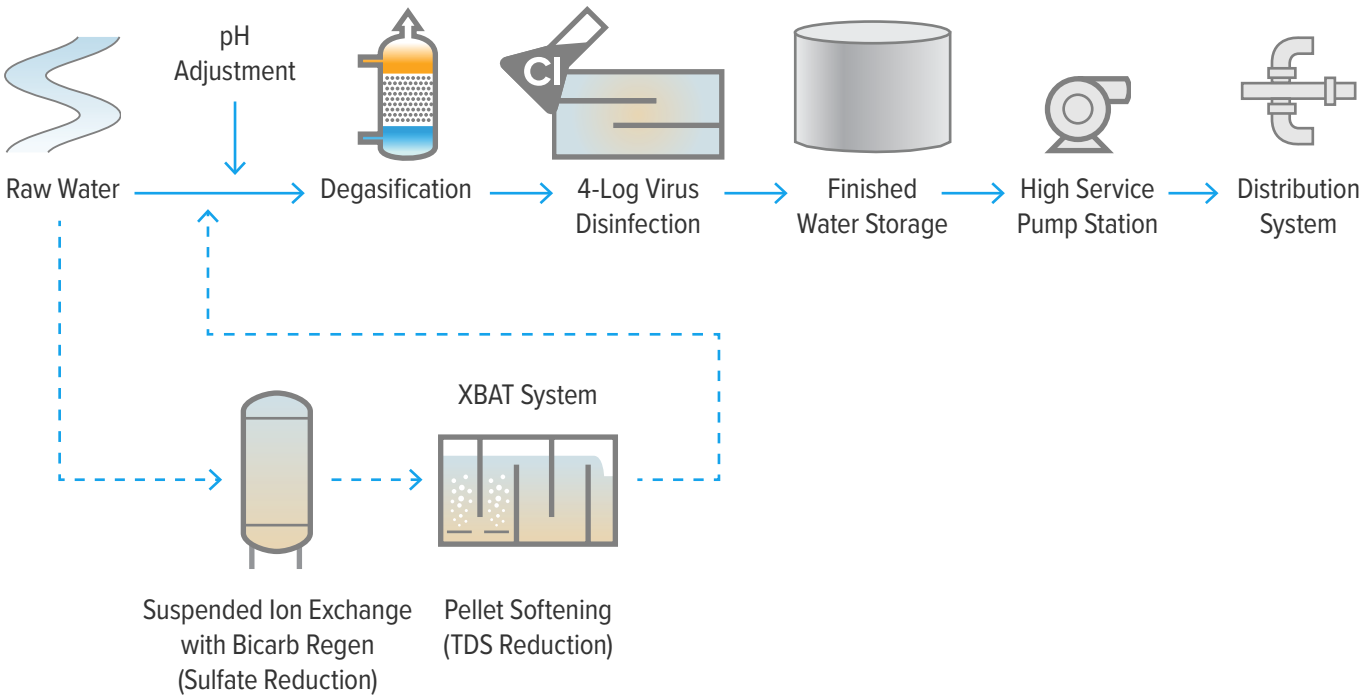
2 Designing for Evolving Water Quality Requirements

The Challenge

Design a treatment process that performs under today's anticipated water quality while maintaining flexibility to accommodate evolving requirements. For Trout Creek, hydrogen sulfide is today's challenge but based on water quality in the area there is a risk for sulfate and TDS to require treatment in the future. Conventional treatments (reverse osmosis and ion exchange) for sulfate and TDS generate waste streams that would further exacerbate the County's current concentrate challenges.

Our Response

- Design for today's needs to keep costs low.
- Modular equipment with planned placement for ease of expansion.
- Flexible treatment train.
- Plan for future sulfate and/or TDS reduction.
- Hydraulic flexibility.
- Explore XBAT to eliminate problematic waste streams.



Address today's needs to stay within schedule and budget.

Plan for future potential challenges with flexible treatment design.

Built-in flexibility supports long-term success and protects your investment

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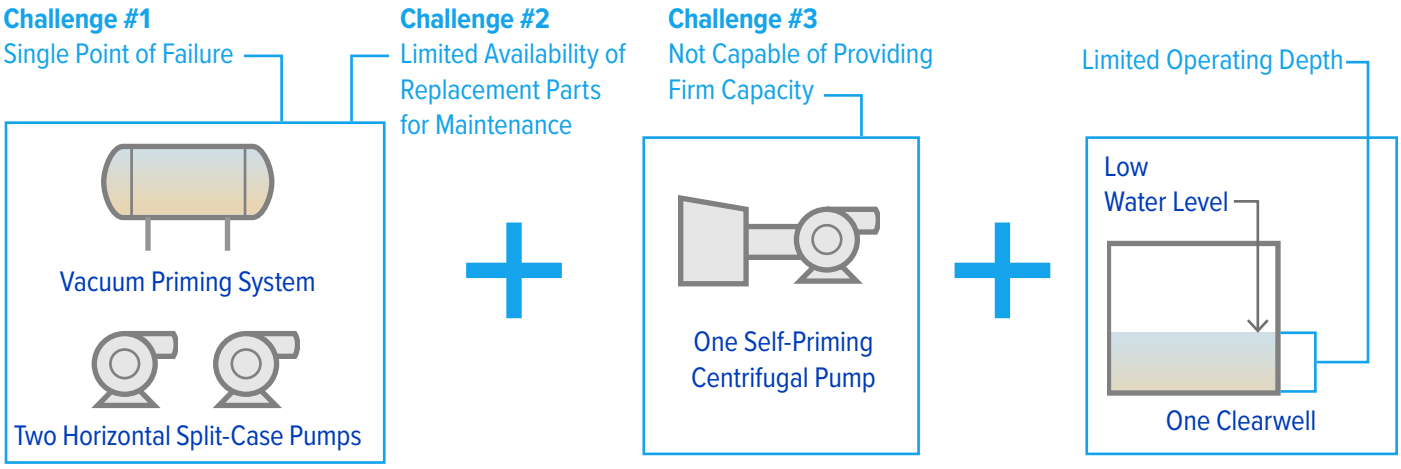
3 Addressing Clearwell Operational Challenges, Reliability & System Redundancy

The Challenge

The existing clearwell pumping system is constrained by the limited operating volume available within the clearwell, resulting in frequent pump cycling and hydraulic fluctuations. These operating conditions impact downstream treatment performance, reduce equipment reliability, and increase operational complexity. Recommended improvements will reduce operational complexity by eliminating dependence on the existing vacuum priming system while providing a more reliable, flexible, and maintainable pumping solution.

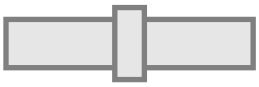


Our Response

Due to the challenges associated with the existing clearwell and the significant congestion in the surrounding area, there are no practical options for modifying the existing clearwell to address the operational issues while keeping the plant in service. Therefore, our proposed approach is to construct a new clearwell east of the existing facility in an area that is currently open and unused.

STEP 1

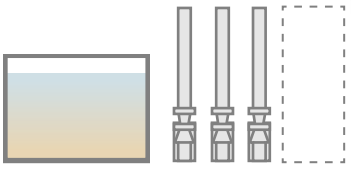
We will incorporate a connection to the existing 12-inch water main in the Northwest Service Area as part of Project 2 to enhance system integration and operational reliability.



Incorporated Connection

STEP 2A

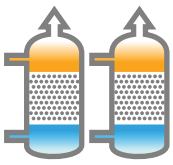
Construct new clear well with vertical turbine pumps.



New Clearwell with Vertical Turbine Pumps

STEP 2B

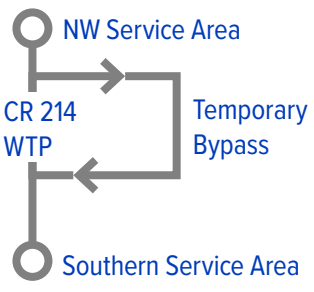
Construct new degasifiers or relocate existing if feasible.



New or Relocated Degasifiers

STEP 3

During low-demand periods, use connection from Step 1 to bypass CR 214 WTP and convey 2.5 mgd to Southern Service Area. Complete tie-ins for new clearwell, pumps, and degasifiers.



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Approach to working with local contractors, facility start-up, integrations, and construction administration issues.

Leveraging Local Relationships for Successful Project Delivery

Our team's extensive experience delivering water and wastewater infrastructure projects throughout Northeast Florida has enabled us to develop strong working relationships with many of the region's most qualified contractors, subcontractors, suppliers, and equipment representatives.

Local Knowledge

Utilize contractors' familiarity with local codes, suppliers, labor markets, and site conditions to streamline permitting, reduce material and transportation costs, avoid delays, and minimize costly design revisions.

Open Communication

Maintain clear, consistent communication to quickly resolve issues, reduce misunderstandings, minimize rework, and avoid costly delays, ultimately saving both time and money.

Mutual Trust

Existing strong working relationships with contractors, regular coordination, and a team-based approach to identify practical solutions and keep projects moving efficiently.

Shared Construction Commitment

Shared commitment between designer and contractor understanding that this is not a one-off program—it is a long-term commitment to quality, continuous improvement, and serving the County's best interests.



This local knowledge and collaborative network help streamline project delivery, minimize risk, and ultimately provide greater value to St. Johns County throughout design, construction, startup, and commissioning.

Provide approach to working with local contractors, facility start-up, integrations, and construction administration issues.

A Better Approach to Commissioning: Essential Task Management Throughout Construction

Commissioning is often a low priority for the contractor, which can lead to poorly conceived planning for operational transition.

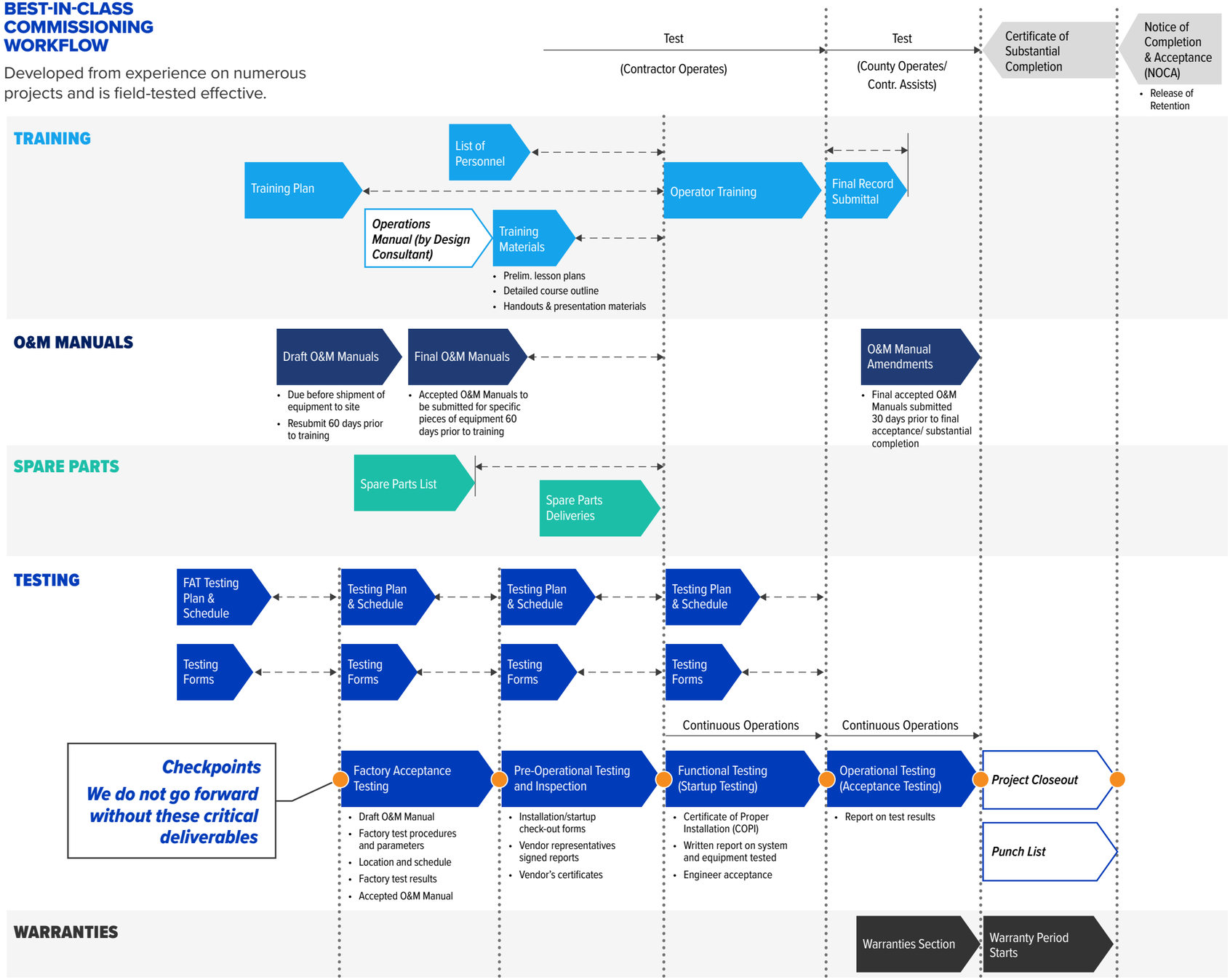
Why Our Approach to Commissioning Adds Value

As your CM team, we look at commissioning differently: it is not something left to the end of the project, and instead we require continuous evolution of the commissioning activities throughout the project. From experience, we have developed a multi-faceted testing and commissioning workflow that has been field-tested and proven in its effectiveness. Key features and benefits of our workflow include:

- **Parallel work activities.** Our workflow challenges the contractor to begin development of training, operations and maintenance (O&M) manuals and standard operating procedures (SOPs), and testing plans concurrently, starting early in the project. The benefit is that the development of these integral elements can be tracked in parallel, which helps make certain that all the essential elements are completed well in advance of final commissioning.
- **Definitive milestones for testing plan development.** With a new facility, there are hundreds of tests that must be completed. The scope and breadth require detailed test plans, and attention to detail for test scheduling. By establishing clear milestones during plan and schedule development, we proactively direct the effort and mitigate potential delays.
- **Multi-step process for test plan development and execution.** Our process is geared to methodically approach the testing, starting with development of detailed plans and checklists for each unit and system, then transitioning to a step-wise progression through pre-acceptance functional testing, system testing, and finally transitioning to full-system acceptance testing. The benefit of our method is that by accomplishing the essential troubleshooting effort in a step-wise progression, we significantly improve the outcome of the acceptance testing and transition to operation by the County.

BEST-IN-CLASS COMMISSIONING WORKFLOW

Developed from experience on numerous projects and is field-tested effective.



A Better Approach to Commissioning

Testing and commissioning new systems always presents challenges for both the startup team and plant operations staff. The potential for unique challenges is amplified simply because of the scope of the program and the fact that you will be taking over facilities that will require multiple testing and commissioning steps.

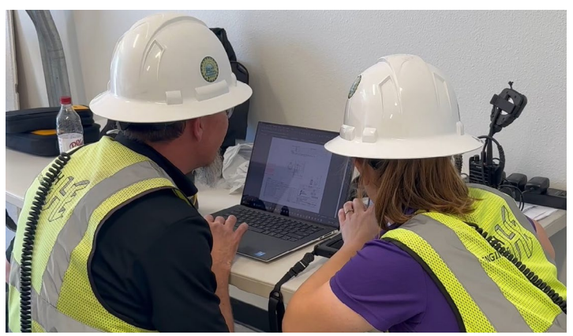


ATTENTION TO DETAIL MATTERS

Our startup program addresses every detail you need to confidently operate your plant.

Why Our Proven Approach to Commissioning is Better for Your O&M Staff

It is no secret that contractors are notoriously unresponsive to the process of commissioning. The lack of rigor by the contractor typically results in increased load and responsibility for operations staff and a need to learn and operate new, unfamiliar systems on the fly. Both of these outcomes are avoidable if the essential elements of correct commissioning are well defined and diligently managed.



Our innovative, best-in-class method for commissioning focuses on three field-tested rules.

RULE 1 Start the Commissioning Plan During Design.

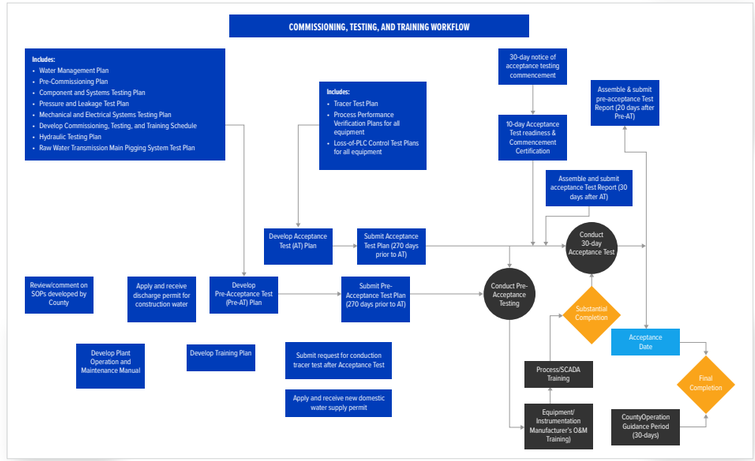
During design, we focus our review of interim deliverables on operability, maintenance, required training, manufacturers' field service needs and durations, and overall access to the process areas in the facilities. During this phase, we develop the Startup Management Plan, and liaise with County operations staff to incorporate input into the design.

RULE 2 Implement Startup Planning with Urgency During Construction.

From the very start of construction, we work to finalize startup testing and training plans. The benefit is that we evolve the plans early and achieve buy-in and acceptance well before testing begins, so that more time is spent on the details and execution and everyone is well-versed in the activities that actually commence.

RULE 3 Integrate the Functional Testing and Operator Training Processes.

Functional testing is an excellent tool to familiarize operations staff with equipment and processes as our start-up team and your O&M staff confirm the systems are duty-fit. We integrate functional testing with sequential operator training programs. The benefit of this tandem approach is that your staff gets a focused "deep dive" on all elements of process functionality and operation, which has proven to provide a much higher learning curve.

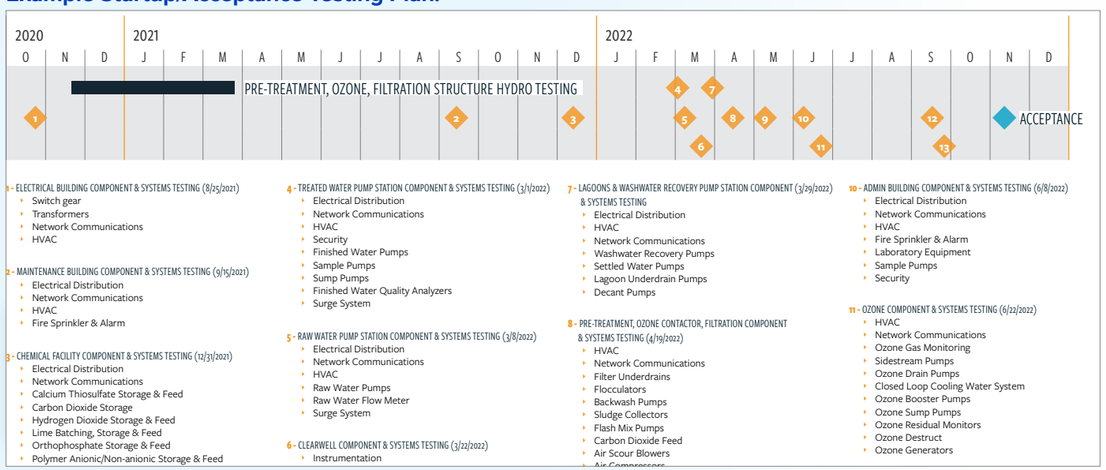


A Seamless Transition from Acceptance Testing to "Hand-off"

Acceptance testing includes all elements of the facility's operation to demonstrate compliance with contractual performance requirements. It is during this testing that all the work during functional testing and training pays off, and your staff operates the facilities with support from the startup team.

During this phase, your staff will be ready for the final "hand-off" of the facility at project close-out but will update and evolve the final Operations Plan by refining and modifying SOPs, control/operational strategies for regulatory requirements, process monitoring, emergency response, and O&M requirements.

Example Startup/Acceptance Testing Plan:



PLAN THE WORK. WORK THE PLAN.

We rigorously plan and schedule every startup activity.

Provide approach to working with local contractors, facility start-up, integrations, and construction administration issues.

Approach and Challenges to Providing Engineering Services During Construction

Leveraging Intelligent Tools for Effective Construction Management to Maintain Schedule and Budget.

Even with a sound plan and seasoned team, we know from experience you can expect changes during construction, and you must be prepared to see the changes coming and be able to proactively make course corrections.

We found that there are several useful tracking tools that provide significant value to you by keeping you abreast of key project issues, cost and schedule trends, and contractual issues that need resolution.

Financial Dashboard

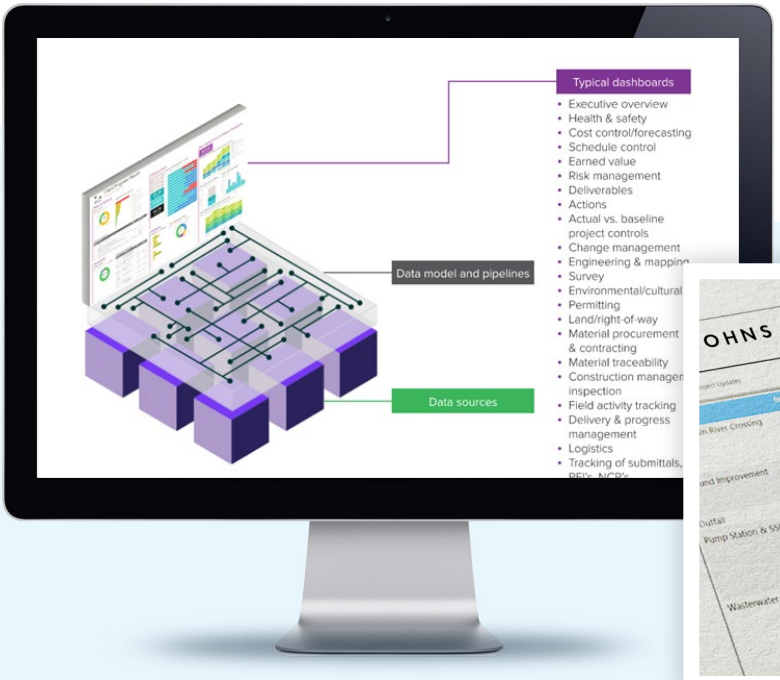
We provide an updated project expenditure summary each month to show how project expenditures are tracking against various budget categories. This is also particularly useful to illustrate the real-time status of budget allocations for allowances, change orders, and owner's management reserve.

Issues Matrix

We update the issues matrix continuously to track risks and/or financial exposure, and we use a standard "heat map" color coding system that provides an easy-to-assimilate risk level and status so that you can quickly understand how issues are developing and being resolved.

Real-Time Pay Application, Schedule, and Progress Report Review

We complete a full scrub of all pay application line-items, schedule logic ties, and progress reporting in a live BlueBeam® session each month to reconcile differences between contractor progress summaries and schedule of values, and our records of work completed. The comments provide an efficient, permanent record of schedule progression and payments throughout the contract duration.





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SECTION 2:
SCHEDULE



Provide preliminary schedule for design and construction.
Integrated approach to Master Program Schedule Strategy.

Project Schedule

Master Program Schedule Strategy

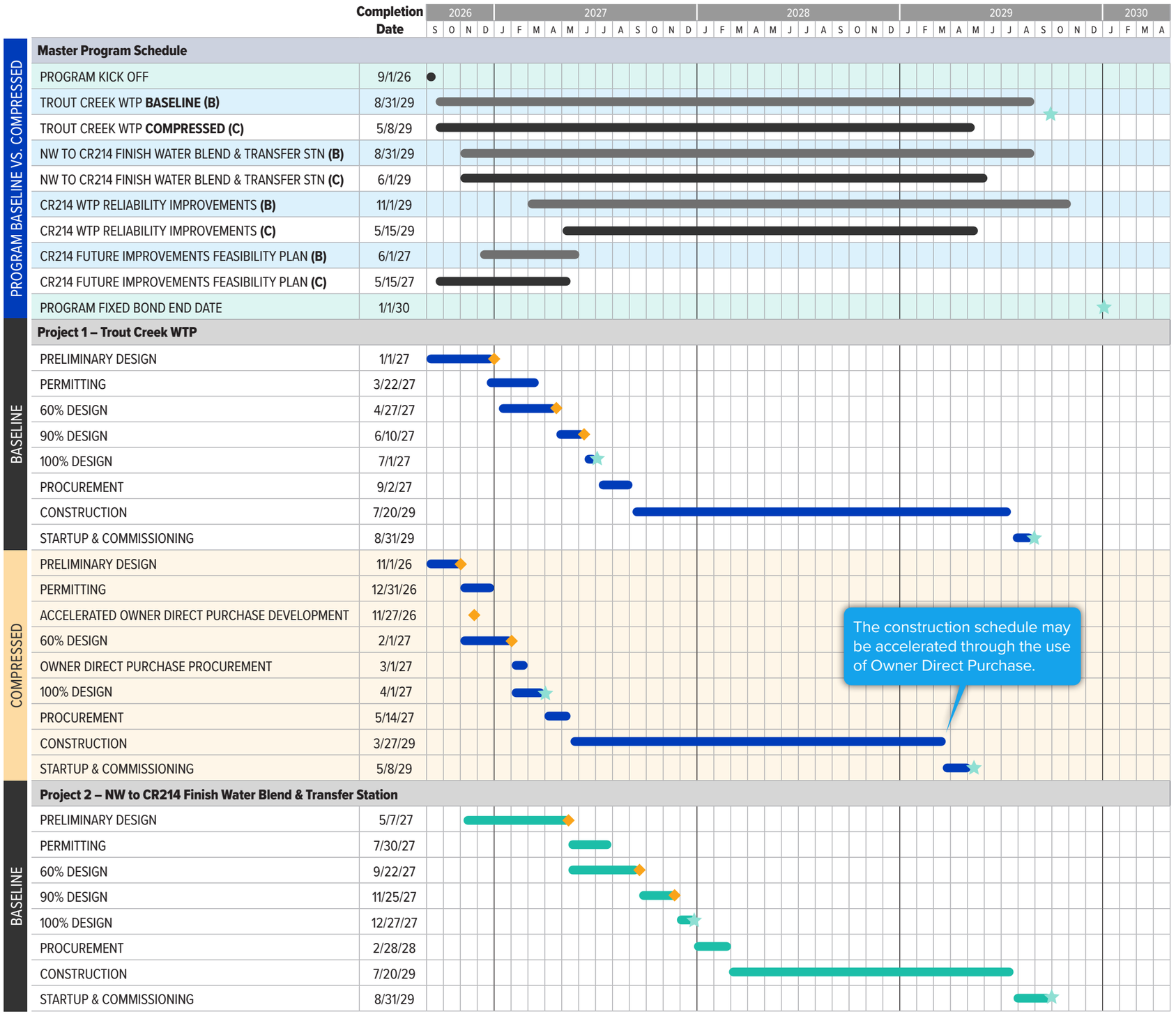
St. Johns County's four water infrastructure projects will be managed as a single integrated capital improvement program through a unified Master Program Schedule that links planning, design, permitting, procurement, construction, startup, and commissioning activities to support September 2029 operational readiness and January 2030 bond requirements.

Program Delivery Approach

- One integrated Master Program Schedule governing all four projects.
- Defined critical path and inter-project dependency management.
- The critical path for the program is the Trout Creek WTP. Preliminary design of the Blend & Transfer Station cannot begin until water quality data from Trout Creek is available and analyzed. In addition, timely completion and operation of both the Trout Creek WTP and the Blend & Transfer Station are essential to enable the planned construction of modifications identified in the Facility Plan while maintaining uninterrupted service and avoiding impacts to community water demands.
- Alignment of design, permitting, procurement, and construction milestones. These milestones will be consolidated whenever practical to streamline execution, reduce administrative burden, and improve overall project efficiency.
- Regular executive schedule reviews and milestone tracking which was developed from program conception to maintain transparency with cost control/budget accuracy which links scope decisions to associated cost, schedule, and operational impacts.

Schedule Compression Initiatives

- CAMP® Design Basis Workshops establish early project alignment.
- Early agency coordination reduces permitting uncertainty.
- **Parallel design and permitting activities split between two firms to shorten overall duration.**
- Early procurement packages advance long-lead equipment acquisition.



Inter-Project Dependency Management and Major Milestones

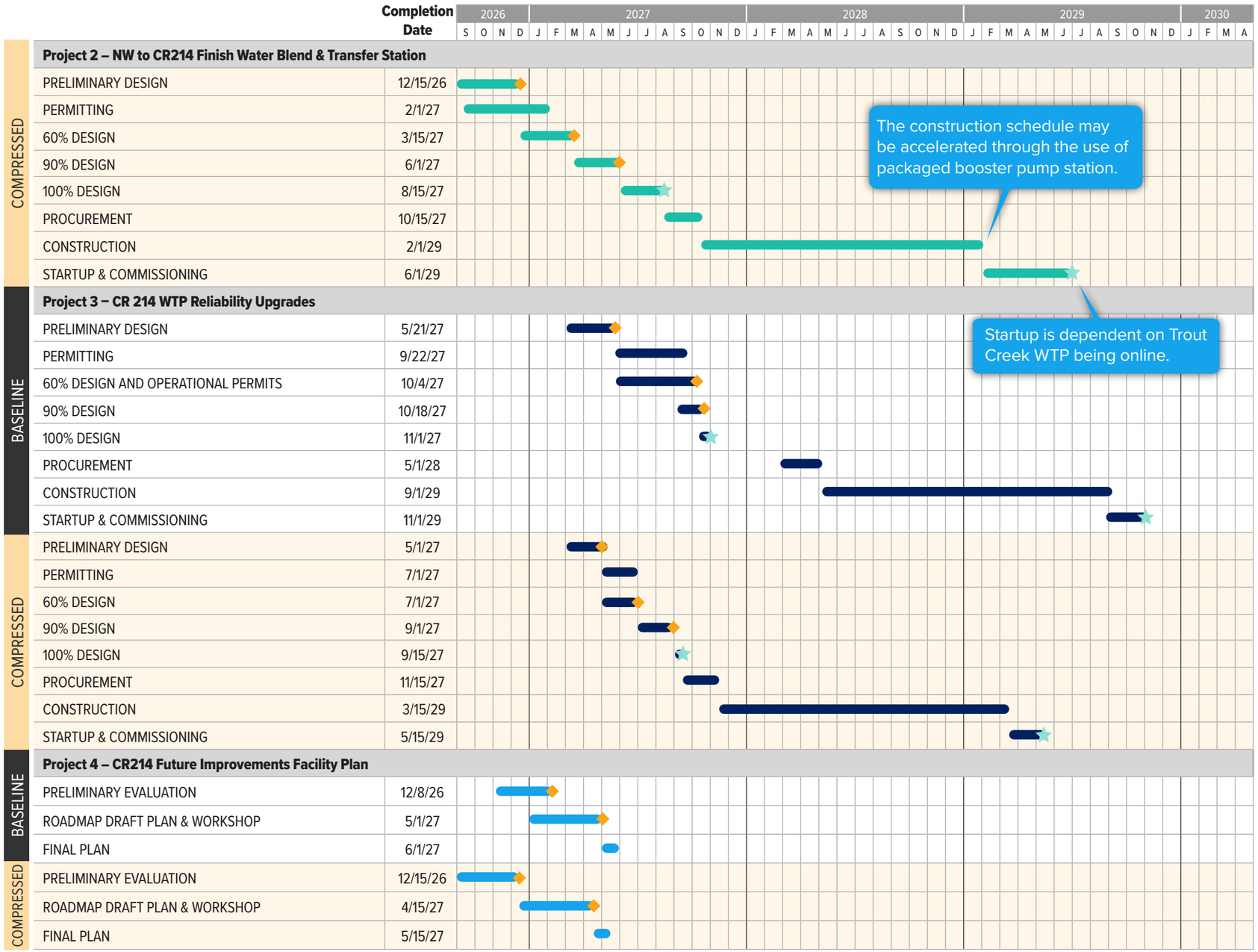
- Trout Creek WTP water quality evaluation and process selection support downstream blend station design decisions.
- Maintaining facility operation at CR214 during clearwell modifications is dependent on Trout Creek WTP and the Blend & Transfer Station operability.
- Future Improvements Facility Plan establishes long-term implementation priorities, regulatory pathways, and sequencing recommendations.
- Major Milestones:
  - Trout Creek WTP Technology Selection and Early Procurement
  - Trout Creek WTP Operational
  - Blend & Transfer Station Operational- Reliability Enhancements at CR214 Operational
- Reliability Improvements are coordinated with future facility planning to avoid redundant investments and support long-term capacity goals.

Float Management & Risk Mitigation

- CAMP® workshops and milestone trend analyses support proactive decision-making.
- Recovery strategies include parallel work efforts, phased permitting, supplemental resources, accelerated reviews, and procurement advancement.
- Risk registers are continuously monitored to preserve milestone integrity and maintain schedule certainty.
- The compressed schedule reflects Carollo's approach to accelerating delivery while maintaining critical milestones, permitting requirements, operational reliability, and bond-funded completion commitments.

Schedule Risk Recovery Framework

- Program-level risk register integration.
- Executive recovery planning when thresholds are reached.
- Additional stakeholder coordination and focused review workshops.
- Construction sequencing and phased implementation strategies.
- Milestone integrity maintained through proactive schedule control.



Schedule Risk Management and Mitigation. The evaluation will assess the proposer's ability to identify, quantify, and mitigate schedule risks. This includes risks related to permitting, supply chain constraints, site selection, design unknowns, and multi-site coordination.

Program Schedule Risk Register & Mitigation Plan

Expanded RFP-driven register with permitting, lead times, site selection, design unknowns, multi-site coordination, float management, and bond milestone controls.

Identifying, Quantifying, and Mitigating Schedule Risk

We have evaluated every schedule risk for its potential impact to the County's 2029 operational milestone and 2030 fixed bond date. Our program-level risk register identifies some of the most critical risks early, assigns ownership, defines mitigation actions, and continuously monitors recovery strategies throughout project delivery.

Our Risk Management Plan: Identify-Quantify-Mitigate

IDENTIFY: We identify schedule risks before they affect the critical path. Program-wide risk workshops during project kickoff. Evaluate permitting, site, utility, and regulatory constraints. Identify design unknowns and long-lead procurement risks. Map interdependencies across all four projects.

QUANTIFY: Every risk is evaluated based on schedule impact and probability. Critical path and float analysis. Risk scoring using program-level priorities. Recovery thresholds tied to milestone performance. Continuous schedule forecasting and trend analysis.

MITIGATE: Mitigation actions are implemented before risks become delays. Early permitting and agency coordination. Advanced procurement of long-lead equipment. Parallel work activities and phased implementation. CAMP® workshops to accelerate key decisions. Recovery plans for near-critical activities.

RISK RATING LEGEND VH

- **VH:** Critical path impact likely; executive action required.
- **H:** Significant delay potential; active mitigation required.
- **M:** Moderate impact possible; monitor and mitigate.

#	RISK CATEGORY	RFP / SCHEDULE DRIVER	BASELINE	COMPRESSED	MITIGATION / RECOVERY STRATEGY	OWNER
1	Raw Water Quality & Process Selection	Trout Creek test well results, sulfate/TDS/hardness, treatment process and waste stream assumptions.	H	VH	Water-quality decision gate; process memo; CAMP treatment workshop; preserve process allowances.	Process Lead
2	Finished Water Blending Compatibility	NW, Trout Creek, and CR214 source waters require blend limits and disinfection compatibility.	H	VH	Blend strategy memo; hydraulic model updates; operating envelope; Ops review of blend setpoints.	Process / Ops
4	Permitting & Regulatory Approvals	FDEP, SJRWMD, USACE, local development, FDOT, zoning, wetland, and ERP approvals may affect readiness.	H	H	Permit matrix; pre-app meetings; agency comment log; permit-ready packages; CAMP® escalation.	Permitting Lead
6	Off-Site Utilities & Third-Party Infrastructure	FPL, communications, off-site water/force main extensions, stormwater, and access connections.	H	H	Utility owner map; FPL/ETM coordination; third-party dates in Integrated Master Schedule (IMS); utility action log.	Civil / PM
7	Environmental / Wetlands / ERP	Wetlands, off-site pond interface, environmental assessments, and ERP conditions may alter design sequence.	M	H	Confirm wetland strategy; early environmental review; ERP path; coordinate stormwater assumptions.	Env. Lead
8	Aquifer Sustainability & CUP	Future Trout Creek expansion and withdrawals may be affected by CUP limits, or aquifer sustainability.	H	VH	CUP review; withdrawal scenario modeling; SJRWMD coordination; sustainable yield decision gate.	Hydrogeology
9	Critical Path & Bond Milestones	Operational dates and three-year bond schedule create fixed milestone pressure across design, procurement, and construction.	H	VH	Monthly critical path method (CPM) reviews; milestone dashboard; executive decision triggers; recovery scenarios.	PM
10	Float Consumption / Near-Critical Work	Compressed delivery reduces float between reviews, permits, procurement release, construction, and startup.	M	H	Float trend log; burn-rate thresholds; 30/60/90-day lookahead; near-critical recovery actions.	PM
11	Review Cycle Compression	PER, 60%, 90%, permit and procurement reviews overlap; late decisions can affect package readiness.	M	H	Rolling reviews; live comment resolution; decision log; reviewer pre-briefs; CAMP® closeout.	QA/QC Lead
12	Procurement & Long-Lead Equipment	Treatment, pumping, electrical, I&C, and specialty equipment lead times can affect construction start.	M	H	Vendor outreach; long-lead list at PER/60%; ODP/pre-purchase packages; procurement tracker.	PM
13	Construction Sequencing	Tie-ins, outages, site access, bypassing, startup windows, and work near active plants may constrain construction.	H	H	Constructability reviews; outage plans; phasing/bypass strategy; coordination with plant operations.	CM / Ops
14	Operational Continuity	CR214 must remain in service while reliability upgrades, transfer improvements, and future plan recommendations advance.	H	H	Operations phasing; redundancy review; temporary operating plans; readiness and shutdown criteria.	Ops / CM
15	Future Facility Planning Interfaces	Project 4 roadmap may change assumptions for Projects 2 and 3, including scope, capacity, cost, and sequence.	M	H	Plan/design alignment workshops; option decision matrix; roadmap-to-IMS integration; scope log.	PM
16	SCADA Integration & Controls Compatibility	New WTP, well, blending/booster station, and CR214 upgrades must integrate with County SCADA architecture.	M	H	Controls architecture workshop; I/O list at PER; control narratives; FAT/SAT plan; Ops reviews.	I&C Lead
17	Communications Infrastructure	High-speed communications, telemetry, alarms, remote access, and inter-facility data links are required for operations.	M	H	Fiber/telecom route check; provider coordination; redundant comms options; comms milestones in IMS.	I&C / IT
18	Blending Automation Logic	Automated blend control must respond to water quality, hydraulics, storage levels, pump operation, and disinfection strategy.	H	VH	Control philosophy during PER; model validation; simulated control testing; manual fallback mode.	Process / I&C
19	Startup & Commissioning Integration	Electrical, instruments, SCADA, pumping, treatment equipment, testing, training, and operational acceptance are interdependent.	H	VH	Integrated commissioning plan; startup scripts; readiness reviews; segmented commissioning path.	Startup Lead
20	Cybersecurity & County Network Compliance	Control systems must comply with County network, access, cybersecurity, and operational technology requirements.	M	H	Early IT/SCADA review; network approval path; cybersecurity checkpoints; pre-startup validation.	IT / I&C
21	Data Migration & SCADA Configuration	Tags, alarms, historian trends, graphics, reporting, device mapping, and database configuration can delay SAT/startup.	M	H	SCADA standards package; tag/database plan; graphics templates; staged database testing.	SCADA Lead
22	Operator Readiness & Training	New treatment, blending, RO reliability improvements, and automation require SOPs, training, and operational acceptance.	M	H	Operator CAMP® workshops; SOPs; simulation/tabletop training; extended startup support.	Ops / Startup
23	Cost / Scope / Change Order Control	Evolving scope, alternates, site changes, and owner decisions can affect budget and contract stability.	M	H	Cost trend log; OPCC updates; scope decision register; allowances/alternates; change avoidance reviews.	PM
24	Program-Level Risk Tracking	All projects need linked risk registers, IMS updates, owners, mitigation status, and executive reporting.	H	H	Central register; monthly CAMP®/IMS review; risk scoring updates; dashboard and escalation triggers.	PM

Program Delivery Risk Roadmap

Navigating Critical Risks. Maintaining Momentum. Delivering Water Reliability.

A proactive, integrated risk management approach from early design through construction, integration, and successful startup.

START
Kickoff & Program Initiation

1 WATER SUPPLY & PROCESS PLANNING

KEY RISKS
- Raw water quality & process aelection
- Finished water blending compatibility
- Aquifer sustainability & CUP

KEY MITIGATIONS
- CAMP workshops & decision gates
- Modeling & treatment evaluation
- St. Johns River WMD coordination & CUP review

2 PERMITTING & SITE READINESS

KEY RISKS
- Regulatory & permit approvals
- Environmental / wetlands / ERP
- Off-site utilities & third-party infrastructure

KEY MITIGATIONS
- Permit matrix & early agency engagement
- Fatal-flaw screening & property strategy
- Utility owner coordination & action log
- Stormwater & wetland strategy

Critical Path Risk

3 EXTERNAL PROGRAM INTERFACE

KEY RISKS
- County Traditional Design Bid Build (DBB) Projects
- Routing, Tie-Ins & Hydraulic Availability
- Testing, Commissioning & Interplant Operations

KEY MITIGATIONS
- DBB milestones incorporated into IMS
- Interface control document (ICD)
- Biweekly coordination meetings
- Fallback tie-in & phasing plans

4 SCHEDULE & PROCUREMENT CONTROL

KEY RISKS
- Critical path & bond milestones
- Float consumption / Near-critical work
- Review cycle compression
- Long-lead equipment & procurement
- Cost / scope / change order control

KEY MITIGATIONS
- IMS & CPM
- Float tracking & monthly trend reviews
- Rolling reviews & decision log
- Long-lead tracking & pre-purchase packages
- Cost trend log & scope governance

5 DIGITAL SYSTEMS INTEGRATION
SCADA • CONTROLS • COMMUNICATIONS • CYBERSECURITY

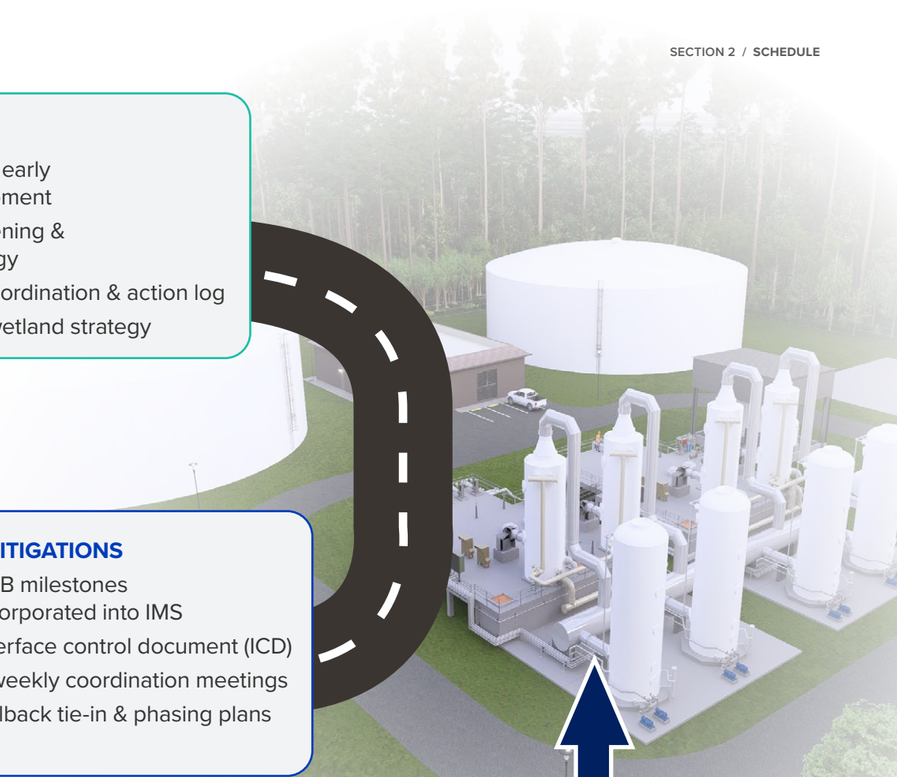
KEY RISKS
- SCADA Integration & Controls Compatibility
- Communications Infrastructure
- Blending Automation & Control Logic
- Cybersecurity & County Network Compliance
- Data Migration

KEY MITIGATIONS
- Early SCADA architecture & I/O lists
- Communications plan & redundancy
- Control philosophy & simulation testing
- Cybersecurity reviews & network approval
- Staged data migration & graphics build

6 CONSTRUCTION & STARTUP READINESS

KEY RISKS
- Construction sequencing & phasing
- Operational continuity
- Startup & commissioning integration
- Operator readiness & training

KEY MITIGATIONS
- Phasing & constructability reviews
- Outage planning & redundancy
- Integrated commissioning plan
- FAT/SAT, readiness & training
- Operator involvement & training plan



DESTINATION
SEPTEMBER 2029
WATER DELIVERY
TROUT CREEK WATER TREATMENT PLANT
Building water resilience for St. Johns County
Planned Operational Date: September 2029

PROGRAM DELIVERY TOOLKIT

SCHEDULE MANAGEMENT
- IMS
- CPM & Critical Path Analysis
- Float Tracking & Trend Reviews
- 30/60/90-Day Lookahead
- Milestone Dashboard

COST MANAGEMENT
- Cost Trend Log
- OPCC Milestone Updates
- Allowance / Alternate Tracking
- Procurement Cost Tracking
- Change Avoidance Reviews

RISK MANAGEMENT
- Living Risk Register
- Dependency & Interface Logs
- CAMP Risk Workshops
- Decision Log & Escalation
- Risk Score Updates

STARTUP & OPERATIONS
- FAT / SAT Plan
- Commissioning Scripts
- Readiness Reviews
- Operator Training & SOPs
- Extended Startup Support

SECTION 3:
QUALITY CONTROL



Identification of a single point of accountability for project quality.

Quality Control

Quality Built In: Expert Oversight at Every Step

At Carollo, quality is more than a final check—it is a core principle embedded in every phase of project delivery, never an afterthought. Led by the proposed Program Manager and your single point of contact, Sudhan Paranjape, who is supported by our Technical Advisory Team, our quality process integrates nationally recognized subject matter experts who help shape key technical decisions from the outset. Through continuous oversight, independent peer reviews, and discipline-specific QA/QC, we ensure every deliverable meets the highest standards of technical excellence, constructability, and long-term operational reliability.

THE QUALITY MANAGEMENT PLAN (QMP)

At the project outset, we will develop the project QMP, accounting for multiple QA/QC functional elements including requirements for deliverable review to define requirements (i.e., processes, peer analysis, checking, inter-discipline coordination, time requirements for comment review, etc.), and the corresponding sequence of review/ correct/audit/finalize.

QMP

- Establishes procedures for a successful and quality project.
- Includes both program level quality assurance and project team quality control.
- Will be confirmed with you at the start of the project.

STANDARD IS NOT STANDARD

Our suite of standard QA/QC procedures include specific requirements for review of all deliverables throughout the duration of the project.

QUALITY ASSURANCE

- Conducted proactively as the project progresses
- Independent peer reviews to address critical issues
- Early engagement of experts
- Conducted in early stages to avoid rework

RESULT

Achieves a systematic approach to eliminate gaps and avoid rework

QUALITY CONTROL

- Quality checks prior to submittals
- Internal QC workshops prior to major submittals
- Independent QC team

RESULT

Provides high-quality deliverables that minimize errors

Quality is in Our DNA

Our in-house quality management tools include standard specifications, design checklists, independent process and discipline reviews, and a constructability review.



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Provide approach to deliver a quality product.

Where Quality Meets Accountability:

Our Commitment, Certified.

To ensure the highest level of quality, every deliverable we submit to the County will include a Quality Certification Page—a signed form that certifies each work product has undergone a comprehensive technical review. **This form serves as a formal assurance that the submittal is complete, technically sound, and ready for client delivery.** No work product will be transmitted to the County without signoff from our designated Technical Chiefs, who serve as discipline-specific quality leads for this contract. **This process reinforces our commitment to protecting the County's time and resources by eliminating the need for client-led quality review.** It is a core part of our culture of accountability and is what sets Carollo apart: we deliver quality that's built in, not inspected in.

carollo

QA/QC CERTIFICATION FORM

Project Information

Project Name: _____

Project Phase (e.g., 30% Deliverable): _____

Date: _____

Prepared By: _____

QA/QC Checklist

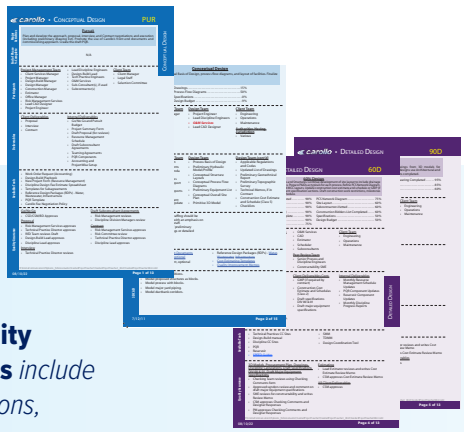
- ☐ Completed the design checklist.
- ☐ Review of technical accuracy.
- ☐ Compliance with client standards.
- ☐ Coordination across disciplines.
- ☐ Document formatting and completeness.

Certification Statement

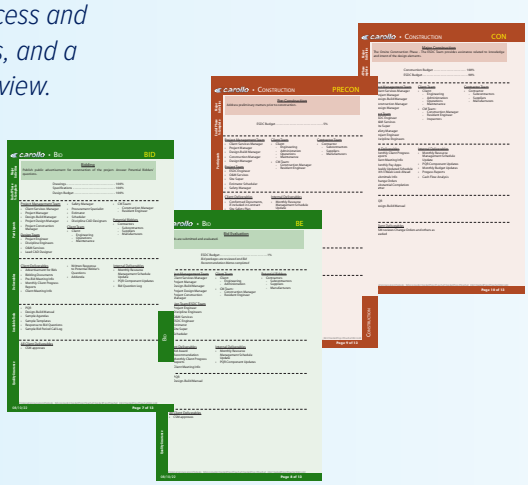
This form certifies that the deliverable has undergone internal QA/QC review and is approved for submission to the client. Each discipline chief or their designee has reviewed and signed below to confirm compliance with quality standards.

Discipline Chief Signatures

Discipline	Chief of Designee Name	Date	Signature
Process Mechanical			
Electrical			
I&C			
Structural			
Civil			
HVAC/Plumbing			
Architecture			
CAD – Compliance with Drafting Standards			
DP – Formatting			
Cost			
Schedule			
Constructability			



Our in-house quality management tools *include standard specifications, design checklists, independent process and discipline reviews, and a constructibility review.*



Design Checklists: Precision at the Discipline Level

Each engineering discipline (process, civil, structural, mechanical, electrical, I&C, etc.) follows a tailored design checklist developed and continuously updated through lessons learned from Carollo's 90+ years of water and wastewater project delivery. These checklists ensure consistency, technical accuracy, and adherence to standards—while also capturing the County-specific requirements.

- Standard details and drawing conventions.
- Equipment redundancy and maintainability checks.
- Code, permitting, and safety alignment.
- Coordination with related disciplines.
- Integration of O&M and startup considerations.

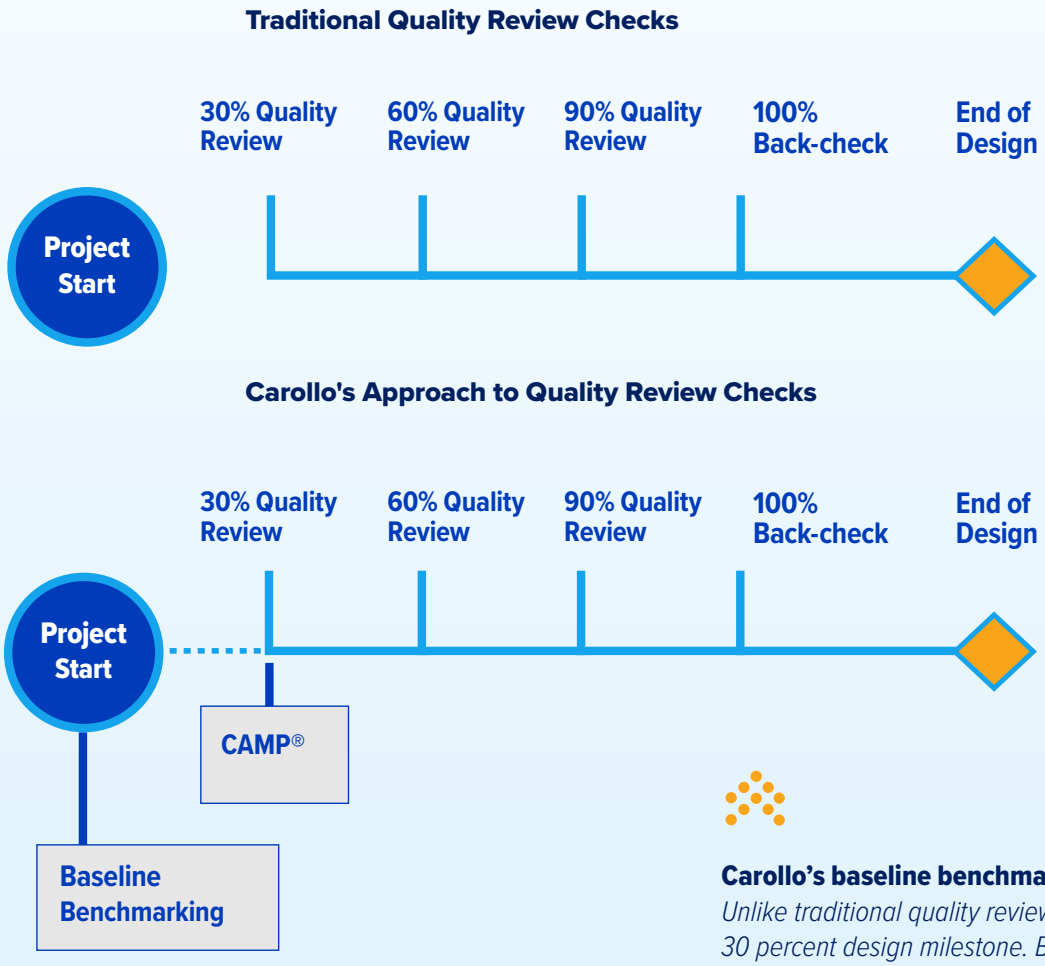
Methods for integrating work from multiple locations.

Baseline Benchmarking:

Front-End Focus to Avoid Rework

Before major design work begins, Carollo initiates a Baseline Benchmarking Review—a workshop that brings together the project team, the County stakeholders, and Technical Advisory Team (TAT). This session is used to:

- Identify critical success factors and potential pitfalls.
- Align expectations between Engineering and Operations.
- Eliminate low-value alternatives from early consideration.
- Define evaluation criteria and design direction.
- Embed constructibility and operations input from Day One.
- This early alignment helps prevent false starts, streamline decision-making, and focus the team on practical solutions that work long term.



Carollo's baseline benchmarking starts on Day One.
Unlike traditional quality reviews that begin at the 30 percent design milestone. By aligning the project team around clear design objectives, technical criteria, and operational priorities before major decisions are made, we prevent false starts, minimize redesign, accelerate decision-making, and keep the project on budget, on schedule, and focused on delivering long-term value to St. Johns County.

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Describe use of standardized templates, checklists, and review cycles and procedures for interdisciplinary review and cross office verification.

Proactive Communication

Yields Effective Team Coordination

What Our Experience Tells us: **More is Better**

We know from experience there is no substitute for regular communication across the full project team. During the preliminary design phase, our team will build a strong foundation of trust and transparency by engaging consistently with County staff at every level—from operations personnel to executive leadership.

These collaborative successes underscore a core principle of our program management approach: communicate frequently and with purpose.

The urgency to complete the engineering and permit approval work reinforces the need for consistent, purposeful communication—keeping all team members aligned on work in progress, emerging issues, milestones, and next steps. These lessons learned directly inform our recommendations for the following meeting types and frequencies.

Bi-Weekly Management Coordination Meetings. We meet with you every two weeks at a regularly scheduled time slot to discuss project direction and decisions. These 60-minute, bi-weekly meetings are organized around a standard working agenda targeting specific topical areas that are most likely to impact schedule, risk, and cost. We maintain a list of actionable items for team project management and engineering coordination, and a decision log to document key decisions.

Weekly Team Coordination Meetings. Our team meets every week to discuss coordination issues and review project deliverable status, external coordination and review processes, quality control, and schedule. We track action items and deliverables from these internal meetings as the basis to brief the collective project team during bi-weekly management meetings. Internal coordination meetings are not new, but we know from experience that they are essential at the project level to effectively engage team resources—fostering open communication and resolution to potential issues that keep all project elements on track.

Engineering Discipline Coordination

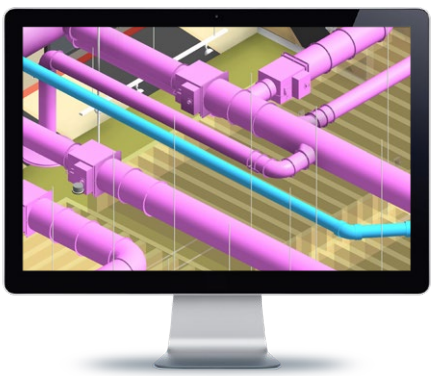
There are two distinct facets of our discipline coordination approach:

1. Bi-Weekly Project Design Coordination Meetings. Our program management teams will meet bi-weekly with the design disciplines to discuss design progression and project deliverable status. These regular meetings provide the forum for the teams to vet discipline coordination issues as design progresses.

2. Scheduled Design Submittal. Our PMP defines the requirements of the Project Delivery Teams for design and technical submittal milestones, quality checks and response timelines, comment tracking and response adjudication, and processes for additional design review (if required). These submittals provide additional opportunities to expand discipline coordination based on the collective input from the design team, our oversight team, and the checking team.

COLLABORATIVE COMMUNICATION THROUGH BIM

We apply best-in-class delivery tools to strengthen coordination across design and O&M teams. BIM modeling enables visualization of operational flexibility and space requirements; incorporating operator input to provide sufficient room around key equipment for safe, efficient, and reliable maintenance and operations throughout the facility lifecycle.



Describe use of collaborative software.

Use of Proven Systems and Tools
Translates to Improved Delivery Efficiency

Having a project team that is equipped with institutional knowledge will help advance all project elements. A fast and efficient start must be leveraged with tools and systems that provide a working framework throughout the project lifecycle.

We're Already on Task with Systems and Tools

Essential systems and tools that we will integrate into the project working framework include:

- Design process matrix and review workflow.
- Bluebeam Studio design QC.
- Interface management plan and log.
- "Master Tracker" tool and reference repository.
- Risk management standards and templates.



NO LEARNING CURVE

We have established workflow systems, tools, and processes. These established systems and tools are proven effective for our team, and will allow us to immediately transition for the essential fast start.

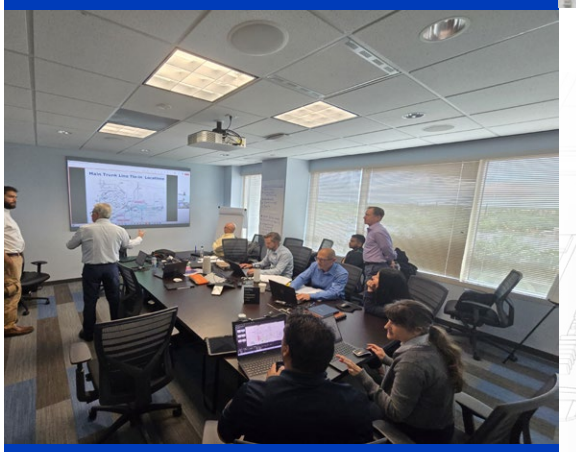
Provide evidence of successful outcomes, lessons learned, and continuous improvement.

Evidence of Continuous Improvement

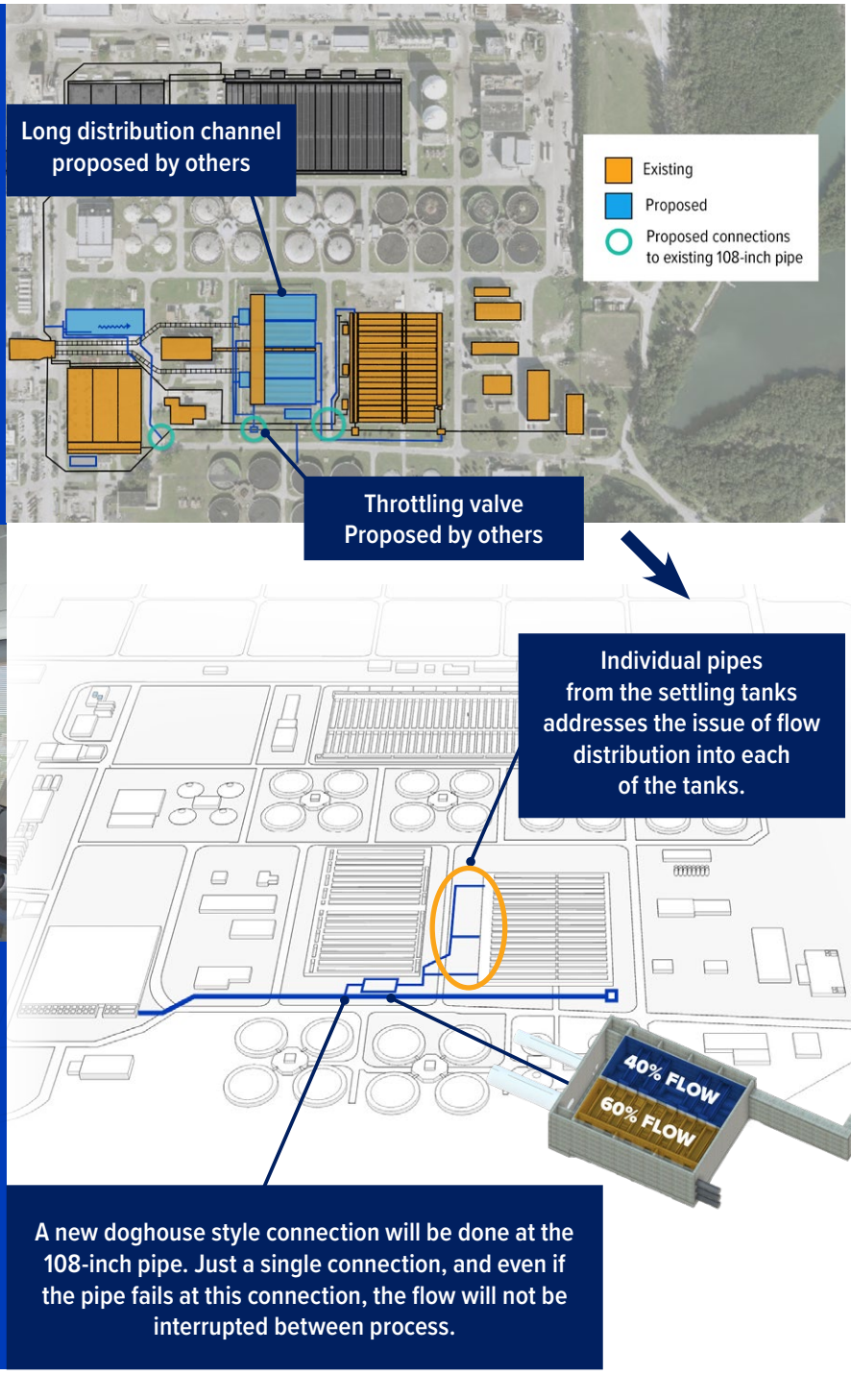
Through Quality Control Baseline Benchmarking in Action

Baseline Benchmarking begins on day one by challenging design assumptions while flexibility remains highest. This example demonstrates how early collaboration and technical benchmarking transformed an inherited design into a simpler, more reliable, and more cost-effective solution.

The original design, developed by others, relied on a throttling valve and long distribution channels to split flow between the existing and new settling tanks. This approach increased hydraulic complexity, created uneven flow distribution, and introduced unnecessary operational challenges. Through Baseline Benchmarking, Carollo challenged the original design assumptions and developed a simpler, more reliable solution before advancing the project.



During Baseline Benchmarking, our RELI approach challenged the original design assumptions and identified opportunities for improvement. These optimizations were validated during CAMP® workshops through collaborative decision-making with operations and engineering, resulting in a simpler, more reliable, and more cost-effective solution.



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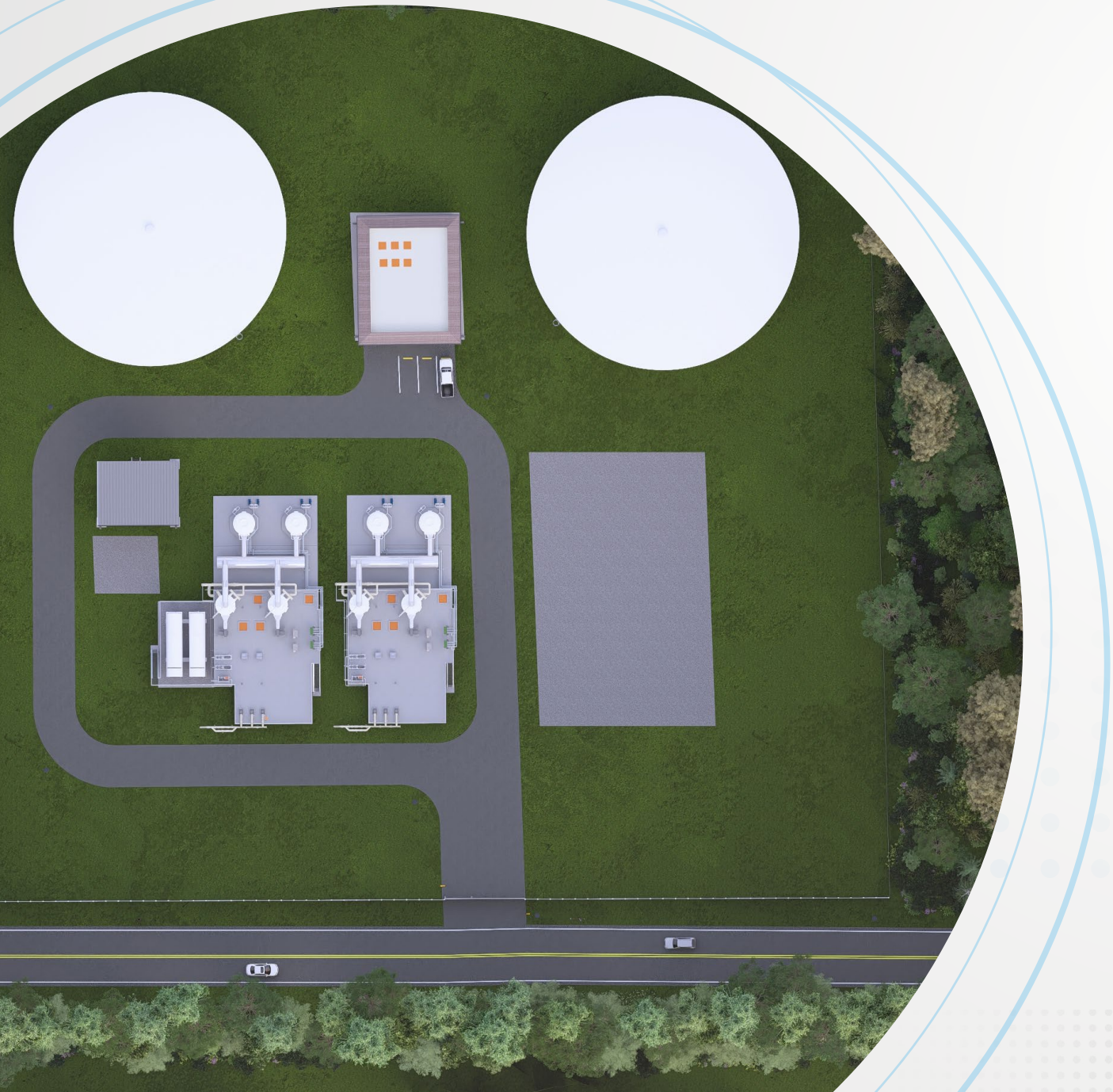
SECTION 4:

COST CONTROL/ BUDGET COMPLIANCE



Outline a clear process for collaboratively refining scope with the owner, establish pricing mechanisms that allow scope to be finalized without repeated contract amendments, maintain transparency in how scope adjustments affect cost and provide a pathway to a final, stable scope without relying on change orders.

Cost Control/Budget Compliance

Collaborative Scope Refinement. Predictable Costs. Fewer Change Orders.

Collaborative Scope Development

Scope Refinement

A systematic approach to uncertainty:

- Owner feedback.
- Budget considerations.
- Operational needs.
- Iterative Approach.

Benefits to County:

» Aligns scope with County priorities.
» Reduces uncertainty early.
» Supports informed decision-making.
» Builds stakeholder consensus.
» Improves schedule certainty.
» Minimizes redesign effort.

Maintain Transparency

- Link scope decisions to associated cost, schedule, and operational impacts.
- Strong documentation through decision logs, scope matrices, and budget tracking tools.

Benefits to County:

» Real-time cost visibility.
» No unexpected budget impacts.
» Better funding decisions.
» Supports value engineering.
» Strengthens budget accountability.
» Increases Owner confidence.

Final Scope

- Well-defined.
- Minimize change orders.
- Meet schedule.

Benefits to County:

» Reduces change orders.
» Improves cost certainty.
» Supports reliable scheduling.
» Minimizes project risk.
» Streamlines project delivery.
» Protects County investment.

1

2

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4

Pricing Mechanism

- Agreed-upon unit rates.
- Task-based fee schedule.
- Engineering cost model.
- Scope-pricing matrix linking tasks, risk, assumptions, and deliverable.

Utilize “optional” services tasks with pre-established pricing to make informed decisions as additional info becomes available.

Benefits to County:

» Minimizes contract amendments.
» Accelerates scope decisions.
» Improves budget predictability.
» Supports phased implementation.
» Simplifies project administration.
» Maintains project momentum.

Our Commitment to the County

Our team combines technical expertise with a practical understanding of the County’s operational, budgetary, and long-term water supply goals. We recognize that the Four Water Infrastructure Projects require thoughtful planning, disciplined decision-making, and continuous collaboration to balance scope, schedule, budget, and operational needs. Every recommendation is evaluated not only for technical merit, but also for its impact on lifecycle cost, constructability, operational flexibility, and future expansion.

As the County’s partner, we respect your time and focus every interaction on helping you make informed decisions:

- *Decision-focused meetings with information provided in advance.*
- *Complete, coordinated deliverables that minimize review time.*
- *Real-time cost and schedule evaluations to support timely decisions.*
- *Collaborative planning that minimizes risk, change orders, and project delays.*
- *Practical, implementable solutions that strengthen reliability, resiliency, and long-term value.*

Our objective is simple: help the County deliver four successful projects that provide reliable water infrastructure today while supporting future growth for decades to come.

Detailed Design

Keeping Our Eye On the Mark

What we will Focus on During the 60 through 100 Percent Design Phases.

The scope requirements for detailed design are clear. The design progression will include three submittals at 60, 90, and 100 percent design evolution. But that doesn't mean that detailed design is a perfunctory effort.

During this phase we will advance the design, and as we do, we will continue to exercise diligence to meet the mark on fundamental project elements:

- **Cost Control.** During detailed design, cost control includes two facets: level-of-effort and cost trending for the design effort; and construction cost updates. We will provide design level-of-effort/cost trending monthly, and construction cost estimates tri-monthly.
- **Schedule Control.** Schedule control will also include two facets: design progression versus project deliverable milestones, and projected construction schedule. We are confident in meeting milestones, yet we know from experience that project delivery during detailed design often is impacted by unanticipated schedule deviations.

We will provide design schedule updates monthly. A primary emphasis of the construction schedule updates is to integrate the contractor's project specific construction schedule into the overall master program schedule to confirm alignment of key milestones.

Permitting Support. The timing for permit approval is always unpredictable and may actually dictate the critical path for the detailed design phase. Equally important as the permit review process evolves, there are often corresponding design changes that result. We will provide an update of permit support status monthly, including any impacts to design schedule or cost, and a summary of potential mitigation strategies.



MITIGATING CHANGE

For any change in cost or schedule, we have several tactics to mitigate, including corrective action schedule adjustments and/or supplemental resourcing, to keep the project objectives on track.

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Tested and Proven—Efficient and Effective Bid Period Services

Focus on the Process and Results will Follow.

From experience, we know there is no “secret sauce” recipe for quality bidding services. Instead, there are several procedural steps, which if followed, will deliver an efficient, effective, and successful bid period and bid review:

Thorough and Transparent Pre-Bid Meeting

- Detailed review of project elements.
- Emphasize specific work requirements.
- Identify project risk elements that may impact constructibility or schedule.

Prompt and Detailed Response to Contractor Inquiries

- Detailed response to improve clarity of design intent.
- Timely responses to allow adequate time for bid response.

Comprehensive Bid Submittal Review

- Detailed review of apparent low bid for compliance with legal, financial, and other contract requirements.

Timely Recommendations for Award

- Summary document to codify review criteria and results/recommendations for award.

STICK WITH WHAT WORKS

Following a series of procedural steps coupled with the application of best practices will result in successful bid period services.



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Change Order Minimization Plan. Identify potential scope gaps and reduce the likelihood of change orders.

Change Order Minimization Plan
To Control Cost and Schedule

The Program Manager will coordinate program and project activities to minimize conflicts and costly change orders. Specific measures include assigning work limits and staging areas to prevent overlap, conducting constructability reviews during design, regular coordination meetings to resolve conflicts early, and applying CAMP® protocols for risk/change management.

Approach to Change Order Management

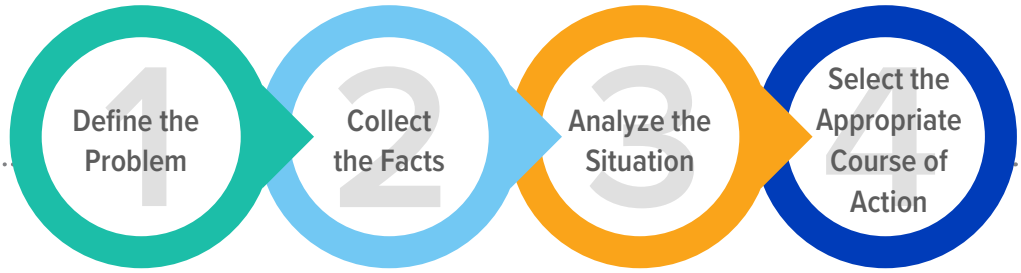
In any construction climate, it is imperative to the County that the Construction Management team possess the experience and capability to implement a carefully thought out program for preventing, managing, and resolving construction disputes. We have developed a change order management program focusing on two specific objectives: change order prevention and expeditious resolution.

A key aspect of change order prevention is providing a team in the field that is thoroughly knowledgeable in the design and construction of water infrastructure projects. With our experience, our team can prevent potential change orders by anticipating problems during construction.

A prime example of this was achieved on two very successful water infrastructure projects for Boynton Beach's Ion Exchange WTP Project and for the South Central Regional WWTP Aeration Project. Both were delivered under budget, and one received Design-Build Project of the Year.

With early identification, owner direct purchases (ODP) save the owner time and taxes. **For Boynton Beach's Ion Exchange WTP project, a total of $3.4M of equipment was Owner Direct Purchased, allowing the tax dollar savings for additional scope to be built within the original budget.**

If the right steps are taken to manage change orders and resolve conflicts, we can lessen detrimental changes to the cost and schedule.



Change Order Process

Successful construction management teams develop and maintain a strong partnering attitude throughout the project and with all stakeholders. Successful projects are safe, on-time, on-budget, fully compliant and most importantly, complete. Our proven procedures for resolving potential change orders are as follows:

- The Carollo team will identify each issue that may result in a potential change order.
- The Carollo team will develop and maintain a risk register to track the potential change order.
- All correspondence associated with the potential change order or claim will be linked to the risk item.
- If the contractor chooses to submit an official change order request, the Carollo team will provide a review of the previously mentioned risk items to the County and provide a recommendation for resolving the issue.
- If the County believes a change order request is justified, the Carollo team will negotiate a change order with the contractor. Our team will package a draft contract change order with justification documentation for the County's review.

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Budget Accuracy & Cost Control Tools. Provide examples of experience with cost tracking systems, estimating software, or forecasting tools, methods for maintaining budget discipline throughout scope refinement, and the ability to provide real-time cost impacts during negotiations.



Budget Accuracy & Cost Control Tools

Provide Structure for the Project

Straightforward and Effective

Project controls, document management, and reporting are essential systems that are the foundation of project tracking and reporting.

Our system platform uses data from several sources and a suite of tools to generate integrated "live" dashboards and key metrics including schedule, cost, budget forecast, earned value, change management, risks and mitigation, deliverables, actions pending, etc.

Cost Control

The foundational element of effective cost control is delineation of baseline budgets and task/work element breakdowns:

Project Implementation and Support. This budget includes project management, design oversight, regulatory/permit support), and is established using industry standard budgeting methods based on task-specific level-of-effort and direct labor costs.

Engineering Design Services. This budget includes engineering design and related support (geotechnical, surveying, etc.) and is established using industry standard budgeting (sheet count and hours-per-sheet, field service costs, etc.) and direct labor costs.

We assess progress against baseline budgets by regularly tracking expenditures and level of completion, and we measure incurred actual and planned costs. We use best management practices to provide sensitivity analyses.

Leveraged Output from the QMP. The QMP processes allow Sudhan and his team to apply course corrections in the design progression to minimize design change orders and to mitigate changes to the cost of construction.

Designing to Budget Requires Regular Construction Cost Model Updates

Our cost model includes features to specifically adjust for commodity price trending and other important construction market variables (e.g., including bidder backlog, vendor pricing, and self-performed versus subcontracted work, etc.). Regular cost model updates define primary cost drivers and provide the basis to course correct if design progression shows deviation from project baseline budget.

Schedule Control

Delineation of critical path elements for project completion is the essential factor in schedule management and control. We do so by setting baseline schedules, critical paths, and float for each project component (i.e., external agency and regulatory approvals, design, construction, etc.), and integrate project-level milestone and interface components to the Master Project Schedule.

We assess progress against baseline milestones and critical path completion by regularly tracking level of completion, and we measure incurred actual activity duration against planned durations. We also use other best management practices to provide additional acuity and sensitivity analyses to further assess planned and actual schedule durations such as the Schedule Sensitivity Analysis.

Some schedule deviation on a multi-year project is expected, so we regularly update and adjust schedule progression and complete schedule sensitivity analyses to assess "trickle down" impacts of schedule changes, and to identify potential corrective actions through adjustment of schedule duration for key tasks, and/or options to selectively use schedule float.

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A Key Focus of Managed Project Delivery

Better Project Delivery Outcomes from Risk-Informed Decisions.

Our risk management approach leverages best practices by applying simple and straightforward principles:

Assess Risk Potential. We assess and quantify potential impacts of risk against baseline risk profiles (impact and probability of occurrence). There are several risk components that we use to capture the project and project level risk potential, including:

- **Project Timing.** The project timeline may conflict with other new or ongoing projects in the Northeast Florida Region. This creates a risk that the construction markets may be saturated, which could translate to reduced competition and a corresponding increase in project costs from market leverage.
- **Market Drivers.** Market and supply chain factors continue to illustrate upward trends in material and labor pricing, which present significant risk to project costs.
- **Environmental and Institutional Requirements.** The project requires collaboration from numerous permitting agencies, which translates to inherent schedule and cost risks related to permit approvals.
- **Construction and Delivery.** The program's primary delivery risks include inter-project dependencies, long-lead equipment procurement, and startup/commissioning complexity, each with the potential to impact schedule and budget.

Define Risk Tolerance. We further assess each risk category to quantify:

- **Exposure Profile.** Quantifying the exposure profile helps determine if risks are isolated to a specific project element or have the potential to impact the project/program as a whole.
- **Risk Tolerance.** The exposure profile assessment helps to define how risks can be accounted for in the overall project scope (i.e., establishing contingency funds, identifying how schedule float may be used if needed, adding contingency schedule time, etc.).

Continuous Tracking of Mitigation Strategies. We regularly track the progression of risk mitigation strategies and tactics, and we measure potential changes in risk profile (increasing or decreasing impact), and identify corrective actions as needed (e.g., changes to allocated schedule float, allocation of risk contingency budgets, accelerated or increased task level of effort, etc.). This continuous tracking includes:

- Ongoing market analysis.
- Updated quantitative risk assessments.
- Ongoing design and constructability reviews.



ESSENTIAL RISK MANAGEMENT

Any real (or perceived) risk will impact project cost and/or schedule, so risks must be actively identified and mitigated.

Leveraging Best Practices

By continuously tracking cost, schedule, and permitting risks, the programmatic register enables risk-based decision making. This aligns with Carollo's broader commitment to proactively managing risks associated with this critical wter infrastructure program.

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Cost Estimating and Affordability

The County, along with the rest of the industry, is facing significant uncertainty and volatility in the cost and availability of equipment and commodities needed to build the water infrastructure projects.

To compound the project affordability challenges, our economy and potential funding streams also appear increasingly uncertain. While the Carollo team cannot control these factors, we can help the County navigate these unpredictable times.

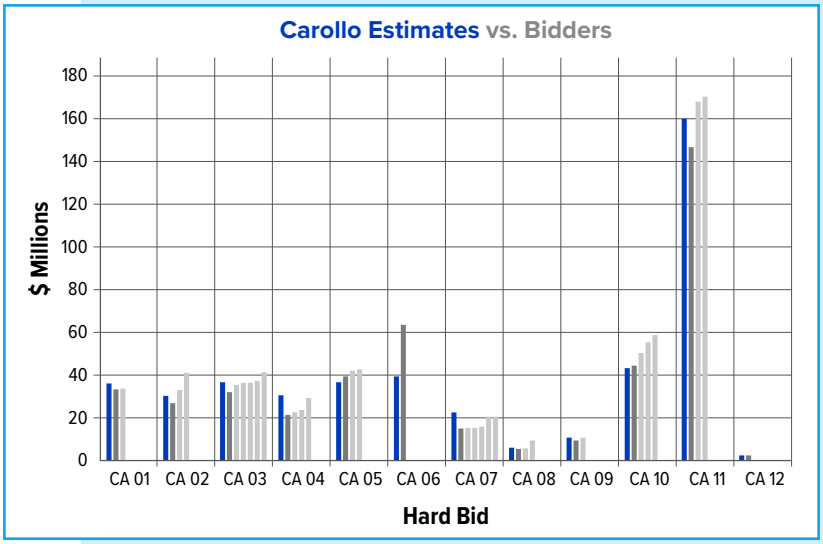
Estimators who specialize in water infrastructure. Our entire construction estimating team were previously self-performing contractors in the water industry. Estimating water infrastructure projects is all they do. This estimating expertise from an industry-specific contractor perspective helps to more accurately identify risks and market factors that have the most potential to impact costs, and account for them accordingly. As shown in the figure below, our process results in accurate bids, so your project can proceed without redesign or delay.

Early cost certainty

Our team also understands the importance of early cost certainty and works to not only price what is shown in the preliminary engineering documents, but also what is not captured in the early submittals. Our experience tell us what will be required to construct the intent of the design. This estimating expertise from an industry-specific contractor perspective helps to more accurately identify risks and market factors that have the most potential to impact costs, and account for them accordingly.

Industry-standard estimating software

Carollo has also implemented the use of industry-standard estimating software (Sage Estimating). This system allows us to interface with other external pricing databases that add quality and consistency to the overall pricing process. These tools allow us to confidently identify project cost drivers and prioritize budgetary pricing requests from the market. Experience has shown that this approach is superior to relying on published pricing manuals created for the general construction industry.



Results You Can Count On

The 12 most recent estimates by our estimating team have been right-in-line with bids on bid day, despite challenging market conditions

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carollo®









Request for Qualifications

PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

RFQ NO: 2902

Prepared For
St. John's County Utility Dept.

JUNE 2026

carollo®

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SECTION 1:
RFQ QUALIFICATION COVER PAGE AND COVER LETTER



Qualifications Cover Page

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

COVER PAGE

PURCHASING DEPARTMENT
ST. JOHNS COUNTY, FL
4040 LEWIS SPEEDWAY,
ST. AUGUSTINE, FLORIDA 32084

FULL LEGAL NAME OF RESPONDENT: Carollo Engineers, Inc.

STATE OF FLORIDA, DEPARTMENT OF STATE, DIVISION OF CORPORATIONS REGISTRATION#: F00000003055

MAILING ADDRESS: 12724 Gran Bay Parkway West, Suite 410, Jacksonville, Florida 32258

FEIN #: 86-0899222

POINT OF CONTACT FOR RFP:

NAME & TITLE: Sudhan Paranjape, PE, Vice President

EMAIL ADDRESS: SParanjape@carollo.com

POINT OF CONTACT FOR INVITATION TO PAYMENTWORKS:

NAME & TITLE: Sudhan Paranjape, PE, Vice President

EMAIL ADDRESS: SParanjape@carollo.com

DATE: June 18, 2026



State of Florida
Department of State

I certify from the records of this office that CAROLLO ENGINEERS, INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on May 25, 2000.

The document number of this corporation is F00000003055.

I further certify that said corporation has paid all fees due this office through December 31, 2026, that its most recent annual report/uniform business report was filed on April 15, 2026, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-first day of April, 2026

Secretary of State

Tracking Number: 4793855828CU

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

12724 Gran Bay Parkway West, Suite 410
Jacksonville, Florida 32258
904-296-1599

June 18, 2026

Jennifer McDaniel, Procurement Coordinator
St. Johns County Purchasing Department
4040 Lewis Speedway
St. Augustine, FL 32084

RE: **Section 1: Qualifications Cover Page and Cover Letter**
RFQ 2902: Professional Engineering Services for
Four Water Infrastructure Projects

Dear Selection Committee Members:

St. Johns County is advancing a strategic water infrastructure program to support growth, strengthen reliability, expand operational flexibility, and prepare for future water supply needs. Through the Trout Creek Water Treatment Plant, the Northwest-to-CR214 Blend Tank and Transfer Station, CR214 Water Treatment Plant Reliability Improvements, and the CR214 Future Improvements Facility Plan, the County is making a long-term investment in resiliency and sustainability.

Carollo and Ardurra have assembled a team aligned with these goals. Our approach is based on three principles: **Footprint-Optimization, Adaptive Design, and Accelerated Delivery.** We recognize challenges associated with constrained sites, uncertain water quality conditions, resiliency enhancement through strategic transfers, improving treatment reliability, and maintaining an aggressive schedule. Our team brings direct experience with St. Johns County addressing these challenges.

Our team combines nationally recognized specialists in treatment, hydraulics and planning, with local professionals familiar with St. Johns County's infrastructure, permitting environment, and growth pressures. Carollo serves as lead engineer for the Polk Regional Water Cooperative's regional supply program, including two greenfield water treatment facilities, groundwater supply development, storage facilities, pump stations, and transmission infrastructure. We have led membrane treatment and reliability improvements across Florida and developed facility planning strategies for utilities including the City of Tampa's David L. Tippin Water Treatment Facility. In St. Johns County, members of our team have supported improvements at the CR214 Water Treatment Plant, including the original CR214 blending tank and transfer pump station, as well as other utility infrastructure initiatives, establishing a strong foundation of local facility knowledge, design preferences and operational practices.

Through this response, we are expressing our interest in completing this project and are committed to developing innovative solutions that align with the County's priorities while optimizing costs and delivering long-term value. From phased expansion concepts at Trout Creek to addressing CR214 operational constraints and concentrate management challenges, our team brings practical solutions informed by decades of experience and looks forward to the opportunity to further discuss our approach for helping St. Johns County successfully deliver this important program.

Sincerely,
CAROLLO ENGINEERS, INC.

S. V. Paranjape

Sudhan Paranjape, PE
Vice President, Program Manager

Firm's Legal Name
Carollo Engineers, Inc.

Primary Office
12724 Gran
Bay Parkway West
Suite 410
Jacksonville, Florida 32258

Other Work Location
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Suite 1400
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Primary Point of Contact
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Secondary Point of Contact
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Project Coordinator
407-377-2678
mhuff@carollo.com

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Organization Ownership Structure

Carollo is a privately held S-corporation, headquartered in Walnut Creek, CA, is led by President and Chief Executive Officer B. Narayanan and a Board of Directors and is employee-owned corporation with 248 employees serving as firm principals and owners. Carollo is not an entity of a larger firm or corporate structure. The CEO and eight-member board of directors are well-respected, highly accomplished leaders who are also employee-owners.

Firm History and Business Philosophy

Carollo is a full-service, environmental engineering firm that has been exclusively providing water, wastewater, infrastructure, water reuse, and water resources services for 93 years to municipal, federal, and private sector clients. Founded in 1933, Carollo's engineering team has grown to include more than 1,900 employees including more than 850 registered engineers in 60+ offices across North America. Carollo has successfully completed tens of thousands of projects for hundreds of public sector clients and has built a strong reputation in the water industry for creative thinking, innovative designs, and responsive client service. Our business philosophy describes superior service as "the heart of our core character," with an approach built on open dialogue with stakeholders, creative development of solutions, and leveraging internal technical resources to balance cost efficiency with water utility excellence.

Board of Directors/Principals

B. Narayanan, President and CEO

D. Sobeck, Managing Director of Marketing

V. Hart, managing Director of Technical Practices

S. Hoff, Managing Director of Client Services

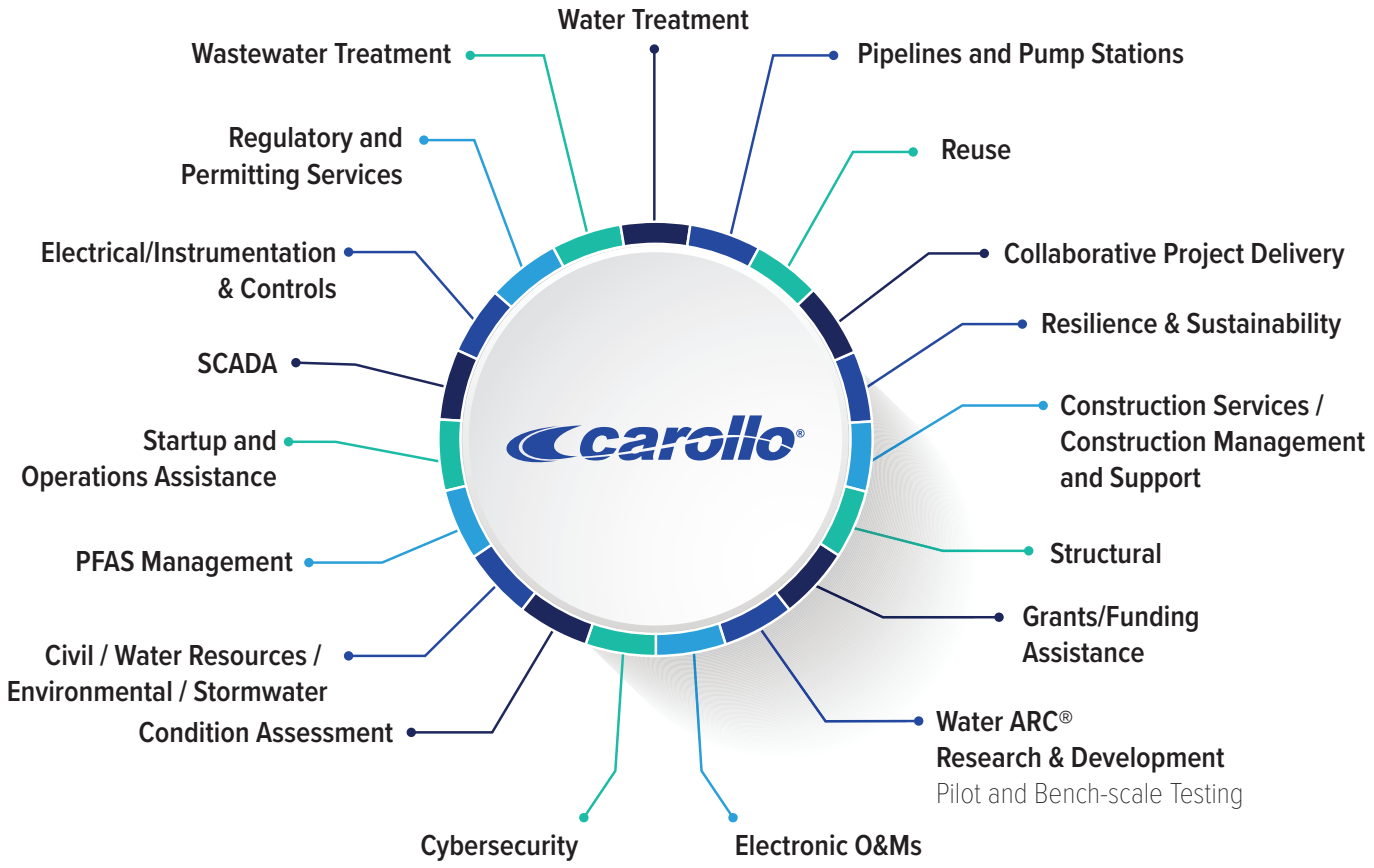
T. Hedlund, Managing Director of Internal Operations

M. Cannon, Managing Director of People

A. Prudhel, Board Member

K. Powers, General Counsel

Carollo offers full-service water sector engineering services.



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Delegation of Authority

CERTIFICATION

This is to certify that the undersigned, Kristi J. Powers, as Corporate Secretary and General Counsel for Carollo Engineers, Inc., is authorized to state and certify: That by corporate policy approved by the Board of Directors on 04/01/2019, Sudhanva Paranjape, Vice President, is authorized to execute agreements for the usual and customary engineering business of the company.

Dated: June 5, 2026

Kristi J. Powers
Corporate Secretary & General Counsel

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SECTION 2:
TEAM QUALIFICATIONS



Integrated Team. Specialized Expertise. Proven Delivery

Footprint-Optimization | Adaptive Design | Accelerated Delivery

St. Johns County's water infrastructure program is driven by a clear set of objectives: **delivering new treatment capacity to support continued growth, improving system reliability, expanding operational flexibility through water transfer and blending, and preparing existing facilities for future demands.** Our team was assembled specifically to address these priorities.

From accelerating delivery of the Trout Creek Water Treatment Plant to support system growth, to optimizing hydraulic transfers, improving reliability at the CR214 Water Treatment Plant, and developing long-term facility improvement strategies, our professionals bring direct experience delivering the same types of solutions for utilities facing similar challenges. Together, they provide the integrated leadership, treatment expertise, hydraulic planning, permitting support, and construction-phase experience necessary to successfully advance each component of the County's program.

A team built for your goals



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Licenses/Certifications

Carollo Engineers, Inc.

Print

Licensee

Name:	**CAROLLO ENGINEERS, INC.**	License Number:	**8571**
Rank:	**Registry**	License Expiration Date:	
Primary Status:	**Current**	Original License Date:	**06/26/2000**

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
65401	Current, Active	BAUMBERGER, LAURA B	Registry		Professional Engineer	02/28/2027

This Receipt is issued pursuant to County ordinance 87-36

2025/2026 ST. JOHNS COUNTY LOCAL BUSINESS TAX RECEIPT

MUST BE DISPLAYED IN A CONSPICUOUS PLACE

Account 1090383

EXPIRES September 30, 2026

Business Type Consultant

Location 2795 Mitchell Dr
Out Of Area CA 94598

Business Name Carollo Engineers Inc

Owner Name Carolla Engineers Inc

Mailing Address 4600 Washington St
Phoenix AZ 85034

New Business
Transfer

Tax	22.00
Penalty	0.00
Cost	0.00
Total	22.00

JENNIFER RAVAN
ST. JOHNS COUNTY TAX COLLECTOR

This receipt does not constitute a franchise, an agreement, permission or authority to perform the services or operate the business described herein when a franchise, an agreement, or other county commission, state or federal permission or authority is required by county, state or federal law.

This form becomes a receipt only when validated below

Paid by receipt(s) 2024-943579 on 07/09/25 for $22.00

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PARANJAPE, SUDHANVA VIJAYKUMAR
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OVIEDO FL 32765

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Carollo Engineers, Inc. (Cont.)

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COSTA MESA CA 92626

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125 E. HEARTHSTONE DRIVE
BOISE ID 83702

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ANDERSON, NORMAN E.
200 EAST ROBINSON ST
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Lasseter

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430 GRACIELA CIR
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dbpr Department of Business & Professional Regulation

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LICENSEE DETAILS 5:46:26 PM 6/12/2025

Licensee Information

Name:	DOWNEY, JOSEPH EVANS JR. (Primary Name)
Main Address:	541 N. COLLEGE STREET AUBURN Alabama 36830
County:	OUT OF STATE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	80839
Status:	Current,Active
Licensure Date:	03/25/2016
Expires:	02/28/2027

Special Qualifications	Qualification Effective
Civil	03/25/2016

Alternate Names

England-Thims & Miller, Inc. (ETM)



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CANADAY, RYAN JOSEPH
171 SILVER BIRCH STREET
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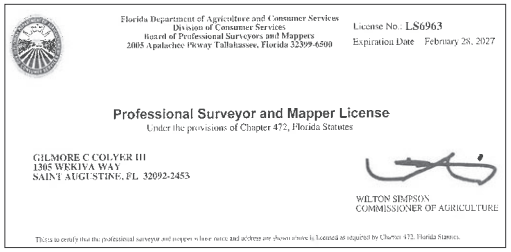


Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkwy Tallahassee, Florida 32399-6500

License No.: LS6963
Expiration Date: February 28, 2027

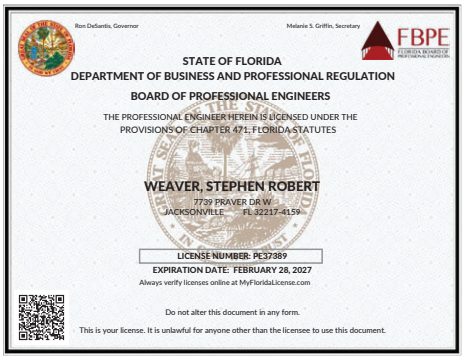
Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

GILMORE C COLYER III
1305 WEKIVA WAY
SAINT AUGUSTINE, FL 32092-2453

WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

UES, Inc.



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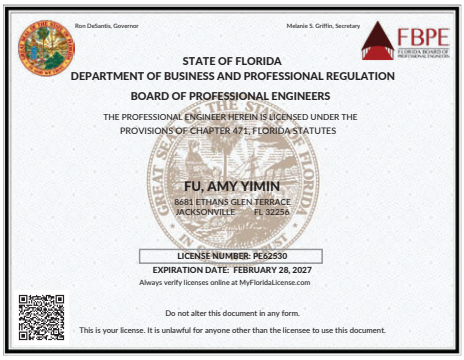
Alpha Envirotech Consulting, Inc.



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BUTTERWORTH, MATTHEW
66 WEST 9TH STREET
ATLANTIC BEACH, FL 32233

Categories
2, 21, 5A

Issued: February 11, 2025 **Expires: January 31, 2029**

Signature of Licensee

WILTON SIMPSON, COMMISSIONER

The above individual is licensed under the provisions of Chapter 487, F.S. to purchase and apply restricted use pesticides.

Authorized Gopher Tortoise Agent
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Division of Habitat and Species Conservation
Wildlife Diversity Conservation Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-1031

Permittee Name: Jody Sisk
Permittee Address: Atlantic Ecological Services, LLC
201 Basque Road
SAINT AUGUSTINE, FLORIDA 32080
UNITED STATES

Permit Number: GTA-09-00003I
Effective Date: **03/31/2025**
Expiration Date: **03/31/2029**

IS AUTHORIZED TO:

1. Conduct gopher tortoise surveys
2. Capture gopher tortoises using bucket traps
3. Capture gopher tortoises using hand shovel excavation of gopher tortoise burrows
4. Mark captured gopher tortoises
5. Release gopher tortoises at recipient sites
6. Supervise backhoe excavation of gopher tortoise burrows to capture gopher tortoises
7. Burrow scope

Permittee Signature: Jody Sisk Date: 3-31-2025

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

Authorized By: Cassie Rios Authorized for: Melissa Tucker, Division Director

Authorizing Signature: Cassie Rios Date: 03/31/2025

Wildlife Diversity Conservation Section

Is Authorized To (Continued)

This permit is in effect an amendment and supersedes all previous versions. All amended conditions and provisions of the previous permit (changed or new items) are indicated by bold text.

PERMIT CONDITIONS AND PROVISIONS:

1 Authorization to conduct the specified activities in association with the relocation of gopher tortoises in Florida is subject to Rule 68A-9.002 and Chapter 68A-27, Florida Administrative Code (F.A.C.), the Gopher Tortoise Permitting Guidelines (April 2008 – **revisions incorporated April 2023**) [hereafter, the "Permitting Guidelines"], and subsequent revisions of these guidelines that are in effect at the time the authorized activities are conducted, and subject to the following provisions/conditions. Responsibilities for each authorized activity are detailed in these guidelines. Authorized activities are also predicated and conditioned on the information and assurances provided in the **Authorized Gopher Tortoise Agent's ("Agent") 03/05/2025** application (as supplemented), the assurances of which are herein incorporated by reference.

2 The **Agent** shall only take, attempt to take, pursue, hunt, harass, capture, possess, or transport gopher tortoises, or molest, damage or destroy any gopher tortoise burrows when such activity is authorized by a separate permit (e.g., Conservation, 10 or Fewer Burrows, Temporary Exclusion, Recipient Site, Scientific Collecting) issued by the FWC for a specified property that authorizes the **Agent** to capture and possess gopher tortoises from or within that property.

3 Marking of gopher tortoises **shall** be done for all permits except for 10 or Fewer Burrows permits with on-site relocation. All tortoises **>60 mm CL shall be marked. Hatchlings ≤ 60 mm CL shall not be marked. The marginal scutes of tortoises >129 mm carapace length (CL) shall either be drilled or notched, and marginal scutes of juveniles 61 – 129 mm CL notched.** Passive Integrated Transponder (PIT) tags may be used as an alternative to drilling or notching the marginal scutes. **All tortoises, markings (ID numbers), PIT tag information, carapace length, sex, health status, and age class shall be reported in the relocation permit after action report(s).**

PERMIT NO. GTA-09-00003I Page : 1 / 3

Organizational Chart

ST. JOHNS COUNTY, FL BOARD OF COUNTY COMMISSIONERS



ADVISORS / QA/QC

Jennifer Nyfennegger, PhD, PE ★ — Water Process Specialist
Mike Zappone, PE* ★ — Pump Stations
Tim Taylor, PE* ★ — Water Distribution Specialist
Joseph Downey, PE[1] ★ — Pump Stations and Pipelines



PROGRAM MANAGER

Sudhan Paranjape, PE ★



PROJECT COORDINATOR

Marya Huff, PE ★



PERMITTING

Mary Thomas, PE ★ — Regulatory Permitting
Amy Fu, PE[2] — Environmental Permitting



PROJECT NO. 1 / TROUT CREEK WTP

Erica Stone, PhD, PE ★ — Project Manager
Jeremy O'Neal, PE ★ — Process Engineer
Melanie Pickett, PhD, PE ★ — Water Quality Lead
Chris Reinbold, PE — Degasifier Systems
Khalil Kairouz, PhD, PE — Bitrickling Filters
Arturo Burbano, PhD, PE — Disinfection
Brandon Lawhern, PE, ENV SP, DBIA ★ — Distribution Main
Scott Richards, PE ★ — Well Conversion and Pump Station



PROJECT NO. 2 / NORTHWEST TO CR214 SERVICE AREA FINISHED WATER BLEND TANK & TRANSFER STATION

David Rasmussen, PE, BCEE, QEP[1] ★ — Project Manager
Manasi Parekh, PE[1] ★ — Hydraulic/ Mechanical Engineer
Kaitlin Jeffords[1] ★ — Hydraulic Modeling



PROJECT NO. 3 / CR214 TREATMENT PLANT RELIABILITY UPGRADES

Jon Harn, PE ★ — Project Manager
Brandon Yallaly, PE ★ — Membrane Specialist



PROJECT NO. 4 / CR214 FUTURE IMPROVEMENTS FACILITY PLANS

Michelle Widick, PE, ENV SP[1] ★ — Project Manager
Dave Rasmussen, PE, BCEE, Env SP[1] — Operational Optimization
Vinnie Hart, PE, ENV SP ★ — Operational Optimization



ENGINEERING SERVICES DURING CONSTRUCTION

Gerry Torres, DBIA ★ — Construction Manager
David McCarty — Resident Project Representative
Leo Pou/Jon Harn, PE — Start-up and Commissioning
Shawn Odgen/Jennifer Jones — Electronic O&Ms

SUBCONSULTANTS

1. Ardurra
2. Alpha Envirotech Consulting
3. Powell & Hinkle
4. UES
5. Wekiva Engineering
6. ETM

SUPPORT SERVICES

Site Civil Design
Ann Newland, PE[6] ★
Ryan Canaday, PE[6]
Environmental
Amy Fu, PE[2]
Yard Piping
Brandon Lawhern, PE, ENV SP, DBIA ★
Geotech
Steve Weaver, PE[4]
Electrical/I&C
David Lasseter, PE[1] ★

HVAC
David Spell, PE[3]
SCADA/Programming
Norm Anderson, PE
Joe Hanlon, PE
Plumbing
Robert Bird, PE[3]
Structural & Arch.
John Sobczak, PE[5] ★
Mike Houseman Architect[5]

Fire Protection
Alan Watt, PE[3]
Survey
Cliff Colyer III, PSM[6]
David Ashley (SUE)[6]
CAD/BIM
Angelica Ramirez
John Dodds (CAD)[1]
Creg Dieziger (BIM))[1]

★ *Key Personnel*
** Licensed in a state outside of FL*



Sudhan Paranjape, PE

PROGRAM MANAGER

Sudhan brings valuable continuity to St. Johns County through his work on the CR214 Membrane Water Treatment Plant, Northwest Water Treatment Plant Expansion, and ongoing County support. His experience in groundwater supply development, membrane treatment, facility planning, and utility infrastructure implementation provides a strong understanding of the operational, regulatory, and growth drivers shaping the County's water system. He will coordinate delivery across all four projects while maintaining focus on reliability, operational flexibility, capacity expansion, and long-term resiliency.

OVERVIEW

Years Experience

33

Education

- ME Environmental Engineering, Old Dominion University, Norfolk, Virginia, 1997
- BS Civil Engineering, University of Pune, India, 1993

Licenses

- Professional Engineer, FL No. 64472

Professional Affiliations

- Water Environment Federation
- Florida Water Environment Association
  - » Biosolids Committee

Supporting Responsible Growth

The most important outcome is delivering the infrastructure needed to support St. Johns County's continued growth while maintaining reliable service. Success means coordinating multiple projects into a unified program that expands capacity, improves reliability, increases operational flexibility, and prepares the utility for future demands.

RELEVANT EXPERIENCE

Project Engineer for St. Johns County, Florida, CR214 Membrane Water Treatment Plant and Wellfield Raw Water Main.

Supported the design of the new 8-mgd CR214 Water Treatment Plant and associated wellfield infrastructure. The treatment process included pretreatment, low-pressure reverse osmosis membranes, sulfide removal, chlorination, and concentrate management. The project included design of 11,000 LF of 36-inch raw water main connecting four new and six future Upper Floridan Aquifer wells to the treatment facility.

Project Manager for Orange County Utilities, Florida, Water, Wastewater, and Reuse Water Facilities Program Management.

Managed multi-year contract for OCU facilities. Major assignments included the evaluation and documentation of 4-log virus removal compliance at nine water treatment plants; Southwest Service Area Conveyance Facilities Plan Update; multiple value engineering studies for three major wastewater plant expansions, program management of 75,000 sf Utility Operations Center, and several pilot studies.

Project Engineer for St. Johns County, Florida, Northwest Water Treatment Plant Expansion.

Project included expansion of the existing NW WTP to a treatment capacity of 9 mgd. The treatment process included cascade aeration for removal of H2S, chlorination/storage and high service pumping and design of a 30-inch raw water main from the wellfield to the water plant.

Project Engineer for the City of Tampa, Florida, David L. Tippin 120-mgd WTP Facilities Master Plan.

Led the process evaluation and alternatives analysis as part of the preparation of a 20-year master plan looking at the existing treatment process to reduce operating costs (particularly chemical costs), improve plant hydraulics, treatability/pilot studies, and provide suggested alternatives for treatment and expansion.

Project Design Engineer for the City of Valdosta, Georgia, Water Treatment Plant Expansion.

Led design of a 22.5 mgd water treatment plant featuring sulfide removal via air stripping towers, state-of-the-art ozonation process with two 500 PPD ozone generators, cooling water skids, and ozone destruct skids, and chlorination using on-site hypochlorite generation.

VALUE TO ST. JOHNS COUNTY

- » St. Johns County project continuity
- » Experienced multi-project program leadership
- » Coordinated delivery across four integrated projects
- » Practical solutions for treatment and infrastructure facilities
- » Proven implementation and operational focus

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Erica Stone, PhD, PE

PROJECT MANAGER - TROUT CREEK WATER TREATMENT PLANT

Erica brings an extensive background delivering groundwater treatment and water quality improvement projects throughout Florida, including sulfide treatment evaluations, filtration and membrane treatment improvements, treatment process optimization, facility planning, permitting, design, bidding, and construction phase services for complex water treatment facilities. Erica's strong understanding of groundwater quality challenges, treatment implementation, and multidisciplinary coordination support efficient project delivery, long-term operational reliability, and future treatment adaptability.

OVERVIEW

Years Experience

20

Education

- PhD Environmental Engineering, University of Central Florida, 2008
- BS Environmental Engineering, University of Central Florida, 2006

Licenses

- Professional Engineer, FL No. 75487

Professional Affiliations

- Florida Section American Water Works Association
- Florida Water Environment Association

Reliable Treatment Capacity

Trout Creek WTP represents more than a new treatment facility—it represents the County's ability to meet future demand. The most important outcome is delivering a reliable, adaptable treatment plant that provides capacity today while maintaining flexibility to accommodate future treatment requirements and evolving water quality conditions.

RELEVANT EXPERIENCE

Principal-in-Charge for Clay County Utility Authority, Florida, Meadowbrook Water Treatment Plant Improvements Design.

Led the evaluation and implementation of improvements for the 8.78-mgd groundwater treatment facility to address total sulfide treatment challenges, aging infrastructure, storage improvements, pump replacements, and system reliability enhancements.

Project Manager for the City of Sanford, Florida, Sanford Facility Plan for SMWTP Improvements.

Managed facility planning, pilot and bench-scale testing, source water characterization, treatment evaluations, preliminary design, permitting coordination, and implementation planning for major water treatment facility improvements.

VALUE TO ST. JOHNS COUNTY

- » Strong groundwater treatment expertise
- » Focused on operational reliability
- » Practical approach to implementation
- » Experienced in evaluating future treatment needs
- » Proven utility collaboration and communication

Project Manager / Engineer-of-Record for the City of Tampa, Florida, David L. Tippin Water Treatment Facility Filter Improvements.

Managed major filtration improvements providing additional treatment capacity and operational reliability at the 120-mgd facility. The project included planning, permitting, detailed design, operational coordination, and construction phase services while maintaining continuous plant operations.

Project Director for the City of Bunnell, Florida, Brackish Water Reverse Osmosis Water Treatment Plant Improvements.

Led treatment evaluations and design coordination for groundwater supply improvements requiring reverse osmosis treatment to address brackish groundwater conditions and achieve potable water quality standards.

Project Manager / Engineer-of-Record for the City of Daytona Beach, Florida, Brennan Water Treatment Plant Filter Upgrade.

Managed rehabilitation and upgrade of the City's 24-mgd water treatment plant, including filter rehabilitation, air scour backwash improvements, instrumentation and controls upgrades, and operational reliability enhancements. Services included assessment, design, bidding, and construction phase support.

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David Rasmussen, PE, BCEE, QEP

ARDURRA

PROJECT MANAGER - NW TO CR214 FINISHED WATER BLENDING AND TRANSFER STATION

Dave brings an extensive background in water and wastewater treatment, with depth in water treatment, pumping systems, hydraulic optimization, and concentrate management solutions. He has managed 50-plus projects for the County, supporting planning, design, and construction services for treatment facilities, pump stations, and utility infrastructure, including multiple delivery methods and a deep understanding of plant hydraulics, water quality management, operational flexibility, and long-term system performance.

OVERVIEW

Years Experience

19

Education

- BS Environmental Engineering, University of Central Florida, 2007

Licenses

- Professional Engineer, FL No. 77561

Certifications

- Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers
- Qualified Environmental Professional (QEP), Institute of Professional Environmental Practice

RELEVANT EXPERIENCE

Project Manager for St. Johns County, Florida, CR214 Mainland Water Treatment Plant Blending and Alkalinity Adjustment Modifications.

Managed the design and construction of improvements at the CR214 Mainland WTP to support blending of finished water from the Northwest WTP. Improvements included upgrades to the clear well transfer pump station, large-diameter transfer piping, chemical feed systems, and a new carbon dioxide feed system for pH adjustment, enhancing operational flexibility and water quality management.

Project Manager for St. Johns County, Florida, CR214 WTP Concentrate Disposal Evaluation.

Managed the evaluation of concentrate management alternatives for the CR214 WTP, assessing 10 disposal and reuse strategies and developing recommendations to support long-term facility planning.

VALUE TO ST. JOHNS COUNTY

- Deep St. Johns County system knowledge
- Direct experience with CR214 transfer and blending facilities
- Enhances operational flexibility and resiliency
- Optimizes hydraulic and treatment system performance
- Improves long-term system reliability

Operational Flexibility

The blend tank and transfer station will strengthen the County's ability to move water where it is needed most. The most important outcome is creating operational flexibility that improves resiliency, supports system wide reliability, and allows the utility to respond effectively to changing demands and future growth.

Project Manager for St. Johns County, Florida, CR214 WTP Transfer Pump Station.

Managed improvements to the CR214 WTP Transfer Pump Station, including installation of a third 30-hp self-priming transfer pump, associated valves and accessories, soft starter, controls, and related system upgrades to increase pumping capacity and operational flexibility.

Client Services Manager for St. Johns County, Florida, Hastings WTP Expansion.

Led the design, permitting, bidding, and construction-phase services for expansion of the Hastings WTP reverse osmosis system to 0.66 mgd. Improvements included four RO skids (three duty, one standby), electrical building modifications, three new high-service pumps with VFDs, a new degasifier, sodium hypochlorite storage and feed facilities, and a new 400-kW standby generator with automatic transfer switch.

Project Manager for JEA, Jacksonville, Florida, Lofton Oaks WTP Improvements.

Managed the design and construction of water treatment plant improvements, including a new 0.20-MG ground storage tank, high-service pumping facility, sodium hypochlorite feed system, emergency generator, stormwater infrastructure, and site improvements. The project also included rehabilitation of an existing 1,000-gpm Lower Floridan Aquifer production well and replacement of associated piping, valves, and appurtenances.



Jonathan Harn, PE

PROJECT MANAGER - CR214 WATER TREATMENT PLANT RELIABILITY UPGRADES

Jon brings specialized expertise in reverse osmosis and nanofiltration treatment systems, including membrane optimization, Start-up, troubleshooting, and operational support for complex groundwater treatment facilities throughout Florida and nationwide. His experience includes full-scale membrane system implementation, pilot testing, equipment selection, commissioning, and long-term operational optimization for facilities ranging from small municipal systems to large-scale treatment plants. Jon's practical understanding of membrane performance, operational troubleshooting, and Start-up optimization will help identify opportunities to improve reliability, reduce operational constraints, and support long-term treatment performance.

OVERVIEW

Years Experience

19

Education

- BS Mechanical Engineering/ Business Administration, University of Florida, 2007

Licenses

- Professional Engineer, FL No. 79455

Professional Affiliations

- American Membrane Technology Association
- Southeast Desalting Association

System Reliability

Reliable infrastructure is the foundation of utility service. The most important outcome is identifying and removing operational constraints, improving treatment reliability, and maximizing the performance of the CR214 Water Treatment Plant to support both existing customers and future growth.

RELEVANT EXPERIENCE

Membrane Project Manager for St. Johns County, Florida, Hastings WTP Expansion.

Managed expansion of the RO treatment system to 0.66 mgd, including new membrane skids, high-service pumping, degasification, chemical feed systems, standby power improvements, and construction-phase services.

Project Manager / RO Program Manager for JEA, Jacksonville, Florida, Arlington East Water Production Facility.

Led planning and design of a new advanced water treatment facility incorporating reverse osmosis treatment, groundwater supply development, concentrate management, and associated water treatment infrastructure to support long-term water supply reliability.

VALUE TO ST. JOHNS COUNTY

- Specialized reverse osmosis expertise
- Membrane optimization and reliability specialist
- Experienced Start-up and commissioning leader
- Practical troubleshooting and operational support
- Strong operations and maintenance perspective

Project Manager / Commissioning Lead for the City of Port St. Lucie, Florida, Rangeline Road RO Water Treatment Facility.

Managed design and commissioning support for a reverse osmosis water treatment facility, including membrane treatment systems, process optimization, Start-up planning, and operational readiness activities.

Project Manager for the City of Bonita Springs, Florida, RO WTP Phase 3 Expansion and Wellfield Improvements.

Managed expansion of RO treatment capacity from 8.0 mgd to 12.0 mgd, including new treatment trains, membrane facilities, groundwater supply wells, and supporting electrical and instrumentation improvements.

Project Manager / Start-up and Commissioning Lead for the Florida Keys Aqueduct Authority, Florida, Stock Island RO Water Treatment Plant.

Supported development and implementation of a new RO water treatment facility, including membrane treatment systems, pumping infrastructure, concentrate management facilities, Start-up planning, and commissioning services.

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Michelle Widick, PE, ENV SP

PROJECT MANAGER - CR214 FUTURE IMPROVEMENTS FACILITY PLAN

ARDURRA

Michelle brings specialized expertise in facility planning for water and wastewater treatment systems and related utility infrastructure. Her experience includes leading planning studies, evaluating existing facilities, developing improvement alternatives, and guiding utilities through phased capital planning efforts that align operational needs, regulatory requirements, and long-term system goals. She brings a practical, strategic approach to evaluating facility needs, prioritizing capital investments, and developing implementation road maps that align operational requirements, regulatory drivers, and future growth objectives.

OVERVIEW

Years Experience

19

Education

- ME Civil Engineering, University of Florida, 2011
- BS Civil Engineering, University of Florida, 2007

Licenses

- Professional Engineer, FL No. 76892

Certifications

- Envision Sustainability Professional (ENV SP)

RELEVANT EXPERIENCE

Project Manager for Clay County Utility Authority, Florida, Water and Wastewater System Condition Assessment.

Managed development of an FDEP-compliant facility plan, including alternatives evaluation, environmental review coordination, master planning integration, and preparation of planning documents to support future infrastructure investments and regulatory compliance.

Project Manager for Pasco County, Florida, Handcart Road & Tynall Road Utility Improvements Program Management.

Led condition assessments of 22 water treatment plants, seven water reclamation facilities, 129 lift stations, and reclaimed water facilities. Developed condition and risk scores, identified critical assets, and prioritized improvements through a 15-year repair and replacement plan.

VALUE TO ST. JOHNS COUNTY

- Develops actionable implementation road maps
- Guides capital investment decisions
- Prioritizes critical infrastructure needs
- Evaluates alternatives, risks, and resiliency
- Aligns planning with future growth

Assistant Program Manager for the City of Clearwater, Florida, Water Reclamation Facility Maintenance and Repair Program.

Supported rehabilitation planning and capital improvement initiatives across three wastewater treatment facilities. Responsibilities included condition assessment, risk management, project prioritization, program controls, and long-term infrastructure planning.

Assistant Program Manager for the City of Clearwater, Florida, Northeast WRF Facility Plan.

Managed technical reviews of utility infrastructure improvements, including master utility plans, hydraulic models, technical specifications, and design documents to support long-term system planning and implementation.

Project Manager for St. Johns County, Florida, Ponte Vedra Water, Wastewater, Reclaimed Water Master Plan Update.

Leads development of a comprehensive utility master plan including hydraulic modeling, facility assessments, demand forecasting, and capital improvement planning. The project evaluates water, wastewater, lift station, and reclaimed water infrastructure to support long-term growth, resiliency, and regulatory compliance.

Long-Term Planning

The most important outcome is providing the County with a clear and actionable roadmap for future investments. Success means identifying priorities, sequencing improvements, and establishing a practical path forward that supports reliability, operational flexibility, and long-term growth.



Gerardo Torres, DBIA

CONSTRUCTION MANAGER

Gerry brings specialized expertise in construction management, program controls, estimating, constructability, implementation planning, and operational phasing for complex water infrastructure projects, including large-scale treatment plant expansions, conveyance improvements, and system resiliency projects requiring detailed budget management, schedule coordination, operational phasing, and multidisciplinary collaboration. Gerry's practical understanding of construction sequencing, cost controls, contractor coordination, and maintaining operations during construction transform planning and design into successful implementation while minimizing operational impacts and maintaining schedule certainty.

OVERVIEW

Years Experience

20

Education

- AS Civil Engineering, University of Puerto Rico, 2008

Certification

- Designated Design-Build Professional (DBIA)

RELEVANT EXPERIENCE

Construction Technical Advisor for Polk County, Florida, Regional Water Cooperative Water Supply Improvements Phase 1.

Supported construction implementation coordination for a regional water supply program involving groundwater supply, treatment, conveyance, hydraulic modeling, booster pump stations, and integration with 16 existing utility systems.

Principal Construction Manager for Manatee County, Florida, Lake Manatee Water Treatment Plant Filter Upgrade.

Managed construction phase services and Start-up assistance for retrofit of an existing surface water treatment facility with membrane ultrafiltration systems, including operational coordination and resident project representative services.

Construction Technical Advisor for the City of Fort Myers, Florida, Reverse Osmosis Water Treatment Plant Expansion.

Supported the construction administration and implementation for expansion of the City's reverse osmosis water treatment facility to 15 mgd, including new RO skids, electrical upgrades, generator systems, and integration of new and existing infrastructure while maintaining continuous operations.

Preconstruction and Estimating Manager for the City of Atlanta Department of Watershed Management, Georgia, Water Supply Program.

Supported program controls, estimating, and constructability for a large-scale regional water supply program that included pump stations, tunnels, reservoirs, and major water treatment infrastructure intended to provide long-term system reliability and resiliency.

Constructability Reviewer for JEA, Florida, Oakridge Water Treatment Plant High Service Pump Replacement.

Provided constructability review and implementation support for replacement of high-service pumps, electrical upgrades, generator systems, and resiliency improvements while maintaining ongoing facility operations.

VALUE TO ST. JOHNS COUNTY

- Strong budget and schedule controls
- Practical constructability and phasing expertise
- Experienced construction phase leader
- Focused on operational continuity
- Proven implementation of complex utility projects

Successful Implementation

The best plans only create value when they are successfully implemented. The most important outcome is delivering projects safely, efficiently, and with minimal disruption while maintaining operational continuity and achieving quality, schedule, and budget objectives.

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David Lasseter, PE

ARDURRA

ELECTRICAL/INSTRUMENTATION & CONTROLS

David provides specialized expertise in electrical power, instrumentation, control systems, and SCADA for water and wastewater facilities. Having supported St. Johns County Utility Department since 2007, he brings extensive familiarity with County facilities, standards, and operations, including CR214 treatment and wellfield improvements. His experience spans power distribution, standby generation, process controls, Start-up, and long-term infrastructure reliability.

OVERVIEW

Years Experience

48

Education

- BS Electrical Engineering, University of Florida

Licenses

- Professional Engineer, FL No. 37971

RELEVANT EXPERIENCE

Electrical Engineer for St. Johns County, Florida, CR214 WTP and Wellfield Improvements.

Provided electrical and I&C engineering for numerous CR214 treatment plant and wellfield projects, including membrane treatment improvements, blending systems, high-service pumping, standby power evaluations, well rehabilitations, and facility reliability upgrades.

Electrical Engineer for St. Johns County, Florida, CR214 WTP Transfer Pump Station Improvements.

Designed electrical and control system improvements for installation of a third clear well transfer pump, including power distribution, instrumentation, controls, and SCADA integration to improve system reliability and operational flexibility.

VALUE TO ST. JOHNS COUNTY

- Deep St. Johns County expertise
- Leads electrical systems integration
- Advances SCADA and controls
- Enhances facility reliability
- Improves operational resiliency

Electrical Engineer for St. Johns County, Florida, CR214 Wellfield Standby Power Evaluation.

Provided electrical engineering evaluation and recommendations for standby power improvements at the CR214 Wellfield, supporting reliable operation of critical groundwater supply infrastructure and enhancing system resiliency during power outages and emergency conditions.

Electrical Engineer for St. Johns County, Florida, Players Water Reclamation Facility.

Designed electrical power, instrumentation, controls, and SCADA systems for a major treatment facility, including PLC-based controls, fiber optic communications, operator interfaces, and integration with the County's Master SCADA system.

Electrical Engineer for St. Johns County, Florida, Grand Oaks Reclaimed Water Delivery Station.

Provided electrical design review and standards development for reclaimed water delivery infrastructure, supporting construction, procurement, and system-wide consistency with County electrical and control standards.

Electrical Engineer for St. Johns County, Florida, County Electrical and I&C Standards Development.

Helped develop and maintain County electrical, instrumentation, SCADA, and control system standards used across treatment facilities, pumping stations, and utility infrastructure projects.



Marya Huff, PE

PROJECT COORDINATOR

OVERVIEW

Years Experience
6

Education
- BS Environmental and Ecological Engineering, Purdue University, 2020

Licenses/Certifications
- Professional Engineer, FL No. 99446
- FDEP Certified Stormwater Erosion and Sedimentation Control Inspector
- OSHA 30-Hour Construction

VALUE TO ST. JOHNS COUNTY

Serves as a trusted extension of the Program Manager, providing local, proactive coordination, communication, and follow-through that helps keep the County's projects aligned, organized, and moving forward efficiently.

Project Manager / Marsh Landing WWTP Design of Electrical Improvements / *St. Johns County, Florida*
Managed the construction phase, coordinating contractors, the client, and design team to support project objectives, schedule, budget, and quality. Oversaw design implementation, field issue resolution, construction progress, and stakeholder coordination.

Project Coordinator / Oakridge Water Treatment Plant High Service Pump Replacement / *JEA, Jacksonville, Florida*
Supported planning, design, bidding, and construction-phase activities for upgrades to a critical 22-mgd water treatment facility, including pump replacements, electrical and controls upgrades, resiliency improvements, permitting, and coordination among technical disciplines, client staff, and project stakeholders.

Project Engineer / Meadowbrook Water Treatment Plant Design / *Clay County Utility Authority, Florida*
Supported planning and design of water treatment plant improvements, including new ground storage tanks, high-service pumping upgrades, yard piping modifications, and electrical improvements. The project included treatment process enhancements, infrastructure rehabilitation, and construction sequencing to maintain plant operations during implementation.



Mary Thomas, PE

REGULATORY PERMITTING

OVERVIEW

Years Experience
25

Education
- BS Civil Engineering, Missouri University of Science and Technology, 2001

Licenses
- Professional Engineer, FL No. 65602

VALUE TO ST. JOHNS COUNTY

Provides expert regulatory strategy, permitting leadership, and agency coordination that helps the County navigate complex requirements, reduce permitting risks, and maintain project momentum across the program.

Program Manager / Southeast Water Production Facility and Pipeline Program / *Polk Regional Water Cooperative, Florida*
Outside of the overall program management, Mary led the regulatory coordination and permitting support for this regional water supply program that includes a reverse osmosis facility, transmission pipelines, production wells, and a concentrate injection well.

Project Manager / Consumptive Use Permitting Support Services / *Seminole County, Florida*
Provided ongoing permitting strategy, regulatory coordination, and water resource planning support for County water supply projects and initiatives.

Project Manager and Project Engineer / Integrated Water Resources Program / *Orange County Utilities, Florida*
Supported permitting, regulatory compliance, and implementation of a countywide capital program encompassing water supply, reclaimed water, aquifer recharge, and stormwater projects.

Permitting Lead / South County One Water Program / *Hillsborough County, Florida*
Supported regulatory coordination and permitting strategy for a multi-project water, wastewater, and reclaimed water infrastructure program, including treatment facilities, pumping stations, pipelines, and associated utility improvements.

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Jenn Nyfennegger, PhD, PE / TECHNICAL ADVISOR/QAQC WATER PROCESS SPECIALIST

carollo

VALUE TO ST. JOHNS COUNTY

Provides specialized water treatment expertise and independent technical oversight that helps optimize treatment performance, strengthen process reliability, and support high-quality, resilient infrastructure solutions for the County.

OVERVIEW

Years Experience
23

Education
- PhD Environmental Engineering, University of Florida, Gainesville, 2008
- BS Environmental Engineering, University of Florida, Gainesville, 2003

Licenses
- Professional Engineer, FL No. 72234

Technical Advisor / PFAS Alternatives Assessment for Norwood-Oeffler Water Treatment Plant / *City of North Miami Beach, Florida*

Project Manager / Corkscrew Water Treatment Plant Expansion Feasibility Study / *Lee County, Florida*

Project Engineer / Lake Manatee Water Treatment Plant Filter Upgrade Project / *Manatee County, Florida*



Mike Zappone, PE

carollo

TECHNICAL ADVISOR/QAQC PUMP STATIONS

VALUE TO ST. JOHNS COUNTY

Provides nationally recognized pump station expertise and independent QA/QC oversight to help optimize hydraulic performance, improve reliability, and support resilient, maintainable conveyance infrastructure solutions.

OVERVIEW

Years Experience
32

Education
- BS Mechanical Engineering, University of Arizona, 1994

Licenses
- Professional Engineer, FL No. 99446
- Mechanical Engineer, WA, NE, OR

Technical Advisor/Quality Control / David L. Tippin Water Treatment Plant Raw Water Pump Station Design / *City of Tampa, Florida*

Technical Advisor/Quality Control / Lift Station 34 Design / *City of Daytona Beach, Florida*

Technical Advisor and QA/QC / Equalization Pump Station – South District Wastewater Treatment Plant / *Miami-Dade Water and Sewer Department, Florida*



Tim Taylor, PE

carollo

TECHNICAL ADVISOR/QAQC WATER DISTRIBUTION SPECIALIST

VALUE TO ST. JOHNS COUNTY

Provides senior technical advisory and independent QA/QC oversight for complex water distribution and conveyance infrastructure projects, helping utilities improve system reliability, hydraulic performance, constructability, and long-term operational resiliency.

OVERVIEW

Years Experience
40

Education
- MS Civil/Environmental Engineering, San Jose State University, 1994
- BS Civil/ Environmental Engineering, California Poly State University, 1986

Licenses
- Professional Engineer, OR, WA, HI, AZ, NV, ID, CA

Technical Reviewer / PS 428 Booster Pump Station / *Manatee County, Florida*

Technical Advisor / Westside Sewer Interceptor / *Bay County Utility Authority, Florida*

Project Manager / Industrial Pipeline Inspection and Alternatives Assessment / *California*

Technical Advisor / Phase 3A Carlton Regional Pump Station Design / *Peace River Manasota Regional Water Authority, Florida*



Joseph Downey, PE

ARDURRA

TECHNICAL ADVISOR/QAQC PUMP STATIONS AND PIPELINES

VALUE TO ST. JOHNS COUNTY

Provides technical leadership for pumping, transmission, and hydraulic systems, helping the County deliver reliable water infrastructure and make informed long-term investment decisions.

OVERVIEW

Years Experience
40

Education
- MS Environmental Engineering, Auburn University,1991
- BS Civil Engineering, Auburn University, 1985

Licenses
- Professional Engineer, FL No. 80839

Technical Advisor / CR214 Water Treatment Improvements / *St. Johns County, Florida*

Project Manager / Raw Water Pumping Stations / *Fort Payne Water Works Board, Alabama*

Project Manager / Lookout Mountain Storage and Pumping / *Fort Payne Water Works Board, Alabama*

Project Engineer / Southwest Water Treatment Plant / *Huntsville Utilities, Alabama*



Jeremy O'Neal, PE

PROCESS ENGINEER

OVERVIEW

Years Experience
14

Education
- ME Environmental Engineering, University of Florida, 2013
- BS Agricultural and Biological Engineering, University of Florida, 2011

Licenses
- Professional Engineer, FL No. 84374

VALUE TO ST. JOHNS COUNTY

Provides specialized groundwater treatment and process engineering expertise that helps optimize treatment performance, support operational reliability, and deliver practical, resilient solutions for complex water treatment facilities.

Lead Process Engineer / Northwest Water Treatment Plant Expansion / *St. Johns County, Florida*
Supported expansion of the Northwest WTP from 6.0 mgd to 9.0 mgd, including design of hydrogen sulfide removal systems utilizing packed tower degasification and biotrickling filters, chemical treatment systems, hydraulic modeling, and high service pumping improvements.

Project Manager / Meadowbrook Water Treatment Plant Improvements Design / *Clay County Utility Authority, Florida*
Managed evaluation and design of improvements for the 8.78-mgd groundwater treatment facility, including treatment alternatives for total sulfide removal, storage tank replacements, high service pump upgrades, yard piping modifications, and related infrastructure improvements.

Process Engineer / Water Treatment Plant Chlorine System Upgrades and Hydrogen Sulfide Treatment System / *Island Water Association, Florida*
Responsible for the design of a new 5.99-mgd hydrogen sulfide treatment system which includes pH adjustment with carbon dioxide, degasification towers and odor control with biotrickling filters. Responsible for drawing development, specifications and discipline coordination.



Melanie Pickett, PhD, PE, ENV SP

WATER QUALITY LEAD

OVERVIEW

Years Experience
13

Education
- PhD Environmental Engineering, University of South Florida, 2018
- MS Environmental Engineering, University of South Florida, 2015
- BS Environmental Engineering, Florida Gulf Coast University, 2013

Licenses
- Professional Engineer, FL No. 98281

VALUE TO ST. JOHNS COUNTY

Provides specialized water quality and treatment expertise that helps utilities evaluate emerging contaminants, optimize treatment performance, and develop resilient, science-based solutions for evolving groundwater quality challenges.

Project Manager and Engineer / David L. Tippin Water Treatment Facility PFAS Suspended Ion Exchange (SIX) Pilot / *City of Tampa, Florida*
Managed pilot testing for PFAS removal using suspended ion exchange treatment technology, including treatment evaluation, operational testing, data analysis, and development of design criteria to support future full-scale implementation.

Project Engineer / Cherry Hill Water Production Facility Direct Potable Reuse Pilot Project / *Polk County, Florida*
Supported operation and management of a direct potable reuse demonstration facility evaluating advanced treatment processes and public outreach initiatives for future alternative water supply implementation. Responsibilities included pilot coordination, regulatory reporting, and conceptual design support.

Project Engineer / Corkscrew Water Treatment Plant Expansion Feasibility Study / *Lee County, Florida*
Supported development of PFAS treatment alternatives and adsorptive treatment evaluations, including GAC and PAC treatment approaches, for future groundwater treatment facility improvements and water quality enhancements.

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Brandon Lawhern, PE, DBIA, ENV SP

DISTRIBUTION MAIN ENGINEER

OVERVIEW

Years Experience
26

Education
- BS Mechanical Engineering, Auburn University, 2000
- BS Business, Birmingham-Southern College, 2000

Licenses/Certifications
- Professional Engineer, FL No. 63866
- Certified General Contractor: FL CGC 1522887
- Stormwater Management Insp.: Certification No. 51746

VALUE TO ST. JOHNS COUNTY

Provides experienced conveyance and utility infrastructure leadership that helps utilities deliver reliable, constructable, and resilient transmission systems through strong coordination of design, construction, and operational requirements.

Project Manager/Technical Specialist / Tynes Reclaimed Water Facility / *Clay County Utility Authority, Florida*
Managed design and construction of a reclaimed water storage and distribution facility, including a pump station, storage tanks, and associated conveyance infrastructure.

Project Manager / Reverse Osmosis Water Treatment Plant Phase 3 Expansion and Wellfield Improvements (Progressive Design-Build) / *Bonita Springs Utilities, Florida*
Managed expansion of RO treatment capacity from 8.0 mgd to 12.0 mgd, including new treatment trains, membrane facility expansion, cartridge filtration, and supporting electrical and instrumentation improvements.

Supervising Engineer/Project Manager / 36-inch Water Transmission Main Commissioning / *Gainesville Regional Utilities, Florida*
Led commissioning of a 36-inch transmission main that had been out of service for more than 15 years. Work included installation of tie-in valves, pipeline inspection, pigging, pressure testing, disinfection, and return of more than 1,400 linear feet of critical water transmission infrastructure to service.



Scott Richards, PE

WELL CONVERSION AND PUMP STATION

OVERVIEW

Years Experience
24

Education
- BS Mechanical Engineering, University of Florida, 2002

Licenses
- Professional Engineer, FL No. 71505

VALUE TO ST. JOHNS COUNTY

Provides practical mechanical and conveyance engineering expertise focused on well systems, pump stations, hydraulics, and operational reliability to support resilient and maintainable water infrastructure improvements for the County.

Project Manager / Lake Highland Water Supply Wells and Piping Design / *Orlando Utilities Commission, Orlando, Florida*
Provided design services for rehabilitation of water supply wells, replacement of raw water mains, and improvements to finished water piping systems, including permitting, coordination with adjacent infrastructure projects, and engineering services during construction.

Project Manager / Oakridge Water Treatment Plant High-Service Pump Replacement / *JEA, Jacksonville, Florida*
Provided engineering services for replacement of high-service pumps, motors, piping, valves, generator systems, and associated electrical upgrades at a major water treatment facility while maintaining ongoing operations and improving resiliency.

Project Manager / Water Treatment Plant No. 1 High-Service Pump Station Suction Piping Replacement / *City of Winter Springs, Florida*
Managed replacement of the existing suction header and associated modifications to improve hydraulic performance, reduce cavitation concerns, and enhance operational reliability at the City's high-service pump station.

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Manasi Parekh, PE

HYDRAULIC/MECHANICAL ENGINEER

ARDURRA

VALUE TO ST. JOHNS COUNTY

Provides hands-on experience with St. Johns County water facilities, applying expertise in hydraulics, pumping systems, treatment processes, and implementation to support reliable and efficient project delivery.

Project Engineer / CR214 WTP Transfer Pump Station / *St. Johns County, Florida*
Supported design of improvements to the CR214 WTP Transfer Pump Station, including installation of a new transfer pump, associated valves, controls, and pumping system upgrades to enhance operational flexibility and water transfer capabilities.

Project Engineer / CR214 WTP Membrane Evaluation / *St. Johns County, Florida*
Evaluated RO membrane performance and fouling conditions, including membrane autopsy, chemical testing, and treatment optimization recommendations that improved plant operations and eliminated the need for acid feed.

Project Engineer / CR214 WTP Concentrate Disposal Evaluation / *St. Johns County, Florida*
Evaluated concentrate management strategies for the CR214 WTP, including assessment of disposal and reuse alternatives, cost evaluations, and development of implementation recommendations.

Project Manager / Hastings WTP Expansion / *St. Johns County, Florida*
Managed design, permitting, and construction support for expansion of the RO treatment facility to 0.66 mgd, including high-service pumping, degasification, chemical feed systems, electrical improvements, and standby power enhancements.

OVERVIEW

Years Experience
9

Education
- MS Environmental Engineering sciences, University of Florida, 2017
- BE Chemical Engineering, University of Mumbai, 2015

Licenses
- Professional Engineer, FL No. 95301



Kaitlin Jeffords, EI

HYDRAULIC MODELING

ARDURRA

VALUE TO ST. JOHNS COUNTY

Provides hydraulic modeling and system evaluation expertise that helps the County optimize pumping, storage, and transmission infrastructure while supporting reliable and efficient water delivery.

Project Engineer / Carlton WTP 3A Pump Station Improvements / *Peace River Manasota Regional Water Supply Authority, Florida*
Performed hydraulic modeling and GIS analysis for improvements to a high-service pump station, increasing capacity to 25 mgd. The project included a new 5-MG storage tank, vertical turbine pumps, yard piping, electrical upgrades, and SCADA integration.

Engineer / South County Potable Water In-Line Booster Pump Station / *Hillsborough County, Florida*
Supported development of a 50-mgd potable water booster station with 42-inch transmission piping, surge control facilities, and future expansion provisions. Responsibilities included GIS analysis, data collection, and asset management support.

Project Engineer/Modeler / Water Main Replacement Program Phases 5 & 6 / *City of Venice, Florida*
Supported design, permitting, utility coordination, and construction administration for approximately 18,000 linear feet of water main improvements and associated service connections.

Project Engineer/Modeler / Water Main Replacement Program Phase 8 / *City of Venice, Florida*
Performed hydraulic modeling analysis, system evaluations, and preliminary engineering studies to support water distribution system improvements and capital planning decisions.

OVERVIEW

Years Experience
11

Education
- BS Chemical Engineering, University of Alabama, 2015

Licenses
- Engineer Intern, FL No. 1100021394

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Brandon Yallaly, PE

MEMBRANE SPECIALIST

VALUE TO ST. JOHNS COUNTY

Brings specialized expertise in membrane treatment technologies, reverse osmosis systems, and advanced water purification processes to support reliable, efficient, and resilient treatment system performance for the County.

Reverse Osmosis Process Design Lead / Pure Water Indirect Potable Reuse Facility / *City of San Diego, California*

Led reverse osmosis process design for a 34-mgd potable reuse facility utilizing ozone, biofiltration, ultrafiltration, reverse osmosis, UV disinfection, and advanced oxidation processes to produce high-quality potable water supplies.

Lead Process Mechanical Engineer / Venice Gardens Water Treatment Facility Expansion / *Sarasota County, Florida*

Led preliminary and final design for expansion and optimization of membrane treatment systems, including conversion to two-stage membrane arrays, concentrate pump station improvements, upgraded chemical systems, and advanced operational enhancements to improve treatment efficiency and reliability.

Lead Reverse Osmosis Process Engineer / Advanced Water Purification Pilot Facility / *El Paso Water Utilities Service Board, Texas*

Led reverse osmosis process engineering for an advanced water purification pilot facility utilizing MF/UF, RO, UV advanced oxidation, GAC, and chlorination to support direct potable reuse and improve downstream treatment performance.

OVERVIEW

Years Experience

29

Education

- MS Civil and Environmental Engineering, Auburn University, 1999
- BS Civil Engineering with Honors, University of Florida, 1997

Licenses/Certifications

- Professional Engineer, FL No. 60307
- Civil Engineer, ID, TX



Vincent Hart, PE, ENV SP

OPERATIONAL OPTIMIZATION

VALUE TO ST. JOHNS COUNTY

Proven expertise in optimization of complex water treatment facilities, improving operational reliability, reducing lifecycle costs, and enhancing treatment performance through process evaluations, pilot testing, and operational optimization strategies.

Design Manager / David L. Tippin Water Treatment Facility Master Plan Design-Build / *City of Tampa, Florida*

Led development of operational sequencing, process evaluations, plant phasing strategies, Start-up planning, operator training, and O&M integration for improvements to the 82-mgd treatment facility while maintaining continuous plant operations.

Project Advisor / Rueter-Hess Water Treatment Plant Optimization Assistance / *Parker Water and Sanitation District, Colorado*

Provided operational optimization support for a 10-mgd water treatment facility to reduce membrane fouling, improve TOC removal, optimize coagulant dosing, and enhance overall treatment performance through full-scale and pilot testing evaluations.

Pretreatment Manager and Pretreatment Start-up Manager / Berl L. Handcox Sr. Water Treatment Plant / *City of Austin, Texas*

Provided operational and Start-up leadership for a CMAR water treatment project, assisting with treatment process optimization and operational strategies to achieve stable, non-corrosive finished water quality.

OVERVIEW

Years Experience

34

Education

- MS Environmental Engineering, Virginia Polytechnic Institute and State University, 1994
- BS Environmental Engineering, Syracuse University, 1992

Licenses/Certification

- Professional Engineer, FL No. 96251
- Envision Sustainability Professional

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Ann Newland, PE

CIVIL/SITE DESIGN

ENGLAND-THIMS & MILLER

OVERVIEW

Years Experience

30

Education

- BS Environmental Engineering, University of Florida, 1996

Licenses/Certifications

- Professional Engineer, FL No. 59818
- 40-Hour OSHA Hazmat
- Current 8-hour Annual Refresher
- NASSCO: PACP, LACP, MACP

VALUE TO ST. JOHNS COUNTY

Combines extensive St. Johns County and SilverLeaf experience with expertise in civil/site design, stormwater management, and utility planning to support efficient project delivery and growth coordination.

Project Manager/Engineer / SilverLeaf DRI / *St, Johns County, Florida*
Managed civil engineering, utility planning, stormwater design, and permitting for multiple developments within the 8,500-acre SilverLeaf DRI. Responsibilities included water and wastewater modeling, pump station design, drainage analysis, master utility planning, and coordination with SJCUD and regulatory agencies.

Project Manager/Engineer / JEA Wildlight Water Treatment Plant / *JEA, Yulee, Florida*
Led civil/site design, stormwater permitting, and County permitting for a new water treatment plant, including site development, utility coordination, and support for multiple groundwater supply wells serving a rapidly growing service area.

Project Manager/Engineer / St. Marys TAD2 Water Treatment Plant / *City of St. Marys, Georgia*
Managed site planning, civil/site design, stormwater permitting, and utility infrastructure design for a new water treatment plant serving a growing residential and commercial service area.

Project Manager/Engineer / Lift Stations and Force Main Improvements / *City of St. Marys, Georgia*
Managed planning and design of three lift stations and associated force main infrastructure, including system evaluations, routing analysis, capacity assessments, and utility coordination.



John Sobczak, PE

STRUCTURAL ENGINEER

WEKIVA ENGINEERING

OVERVIEW

Years Experience

20

Education

- MS Structural Engineering, University of Central Florida, 2007
- BS Mechanical Engineering, University of Central Florida, 2005

Licenses/Certification

- Professional Engineer, FL No. 71407

VALUE TO ST. JOHNS COUNTY

Combines extensive structural engineering expertise with direct experience supporting St. Johns County treatment facilities and pumping infrastructure, helping deliver reliable, resilient, and constructible utility improvements.

Structural Engineer / Northwest WTP 6.0-MGD MDF Expansion / *St. Johns County, Florida*
Provided structural engineering for expansion of a membrane treatment facility, supporting treatment process improvements, facility reliability, and future capacity needs.

Structural Engineer / Hastings WTP Expansion / *St. Johns County, Florida*
Provided structural engineering services for expansion of the Hastings Water Treatment Plant, supporting treatment process improvements, facility upgrades, and long-term infrastructure reliability.

Structural Engineer / Bartram Repump Station Storage Tank / *JEA, Jacksonville, Florida*
Provided structural design for a water storage tank supporting pumping operations, pressure management, and distribution system reliability.

Structural Engineer / Water Supply Facilities Chemical System Improvements / *Orange County Utilities, Florida*
Designed structural components for chemical storage and feed system improvements at water supply facilities, supporting treatment process reliability and regulatory compliance.

Structural Engineer / Nassau Regional WTP Emergency Storage Tank/ *JEA, Jacksonville, Florida*

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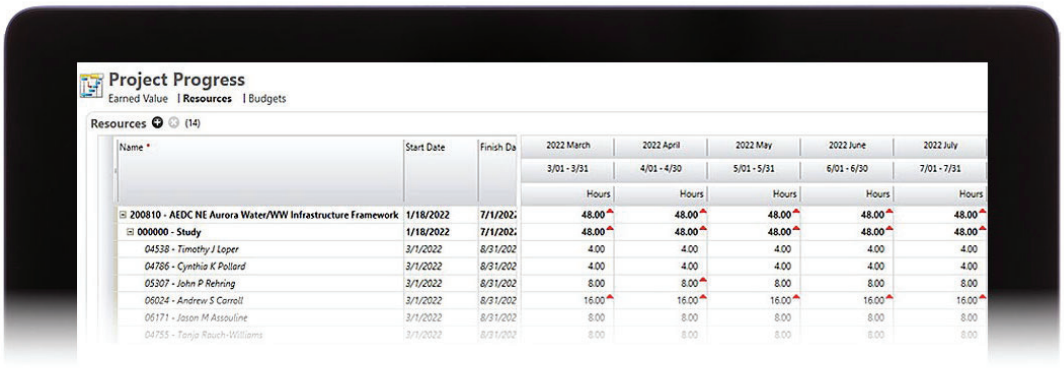
Staff Resourcing

Carollo utilizes BST Enterprise project management and accounting software to manage project engineering costs, subconsultant costs and expenses, and resource allocation. The software allows the contract management team to view Carollo's hours and project costs at any time. BST Global, provides an integrated accounting tool for time sheets, financial reporting, invoices, and project staffing. Sudhan and Marya participate in monthly staffing meetings that allow company wide coordination of backlog planning. BST Enterprise provides an intuitive visual for when individual staff members are over-booked or under-booked, allowing quick resolution in our internal monthly coordination meetings.



Carollo uses BST Enterprise to manage staff resources and backlog for all our projects, updated at least once each month.

Proposed Sub-Contractors

Carollo has selected subconsultants who share our commitment to client service and bring both the local knowledge and specialized technical expertise needed to strengthen this program. Each firm has established relationships and a working familiarity with the regulatory environment, infrastructure conditions, and community priorities specific to northeast Florida and St. Johns County. Their capabilities complement Carollo's water infrastructure experience across the four projects in this program, including the water treatment plant, and reflect a shared culture of responsiveness, collaboration, and delivering practical solutions for public utilities.



Ardurra Group, Inc. *(Mechanical engineering, hydraulic modeling, and facility planning)*

Carollo selected Ardurra as a key partner for this program based on their extensive experience supporting St. Johns County Utility Department and their expertise in water treatment, pumping systems, hydraulic analysis, utility infrastructure, and project delivery. Since 2014, Ardurra has worked closely with the County on planning, design, permitting, and implementation of critical water infrastructure improvements, developing a strong understanding of local facilities, groundwater treatment challenges, regulatory requirements, and operational needs.

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Ardurra's experience includes significant work at the County's CR214 and Hastings Water Treatment Plants, including treatment process evaluations, reverse osmosis system improvements, pumping and distribution system upgrades, electrical and controls modernization, and facility reliability enhancements. Their team also brings specialized expertise in hydraulic modeling, civil/site engineering, utility planning, and construction-phase services that directly support the County's four-project program.

By combining local knowledge with technical expertise across treatment, pumping, and utility infrastructure systems, Ardurra provides valuable insight into facility operations, implementation considerations, and long-term infrastructure planning. Their familiarity with County facilities, staff, standards, and ongoing initiatives will help streamline project delivery and support successful outcomes across the program.

England Thims & Miller, Inc. (ETM) *(Civil/site engineering, surveying)*

ETM will provide civil/site engineering and surveying services with extensive experience supporting St. Johns County utility and development projects. Their work on the SilverLeaf development and Trout Creek Water Treatment Plant provides firsthand familiarity with project sites, regional growth trends, and County requirements. This local knowledge will support efficient site development, permitting, surveying, and project delivery across the County's Water Infrastructure Program.

Wekiva Engineering, LLC (Wekiva) *(Structural engineering)*

Wekiva will provide structural engineering services based on their specialized experience supporting water and wastewater infrastructure throughout Florida and their familiarity with St. Johns County facilities. Wekiva has supported improvements at the Hastings WTP, SR 207 WWTP, Anastasia Island WWTF, and SR16 WRF. Their expertise in treatment facilities, pumping infrastructure, and utility structures helps deliver resilient, constructible, and cost-effective solutions that support reliable long-term operations.

Universal Engineering Sciences, Inc. (UES) *(Geotechnical engineering)*

UES provides geotechnical engineering services supported by extensive experience with St. Johns County infrastructure projects. Their familiarity with local subsurface conditions, permitting requirements, and County processes helps streamline project development and reduce risk during design and construction. UES brings proven experience supporting water and wastewater facilities, pipelines, pump stations, storage facilities, and other critical utility infrastructure throughout Northeast Florida.

Alpha Envirotech Consulting, Inc. (AEC) *(Environmental permitting)*

AEC provides environmental permitting and regulatory support services with extensive experience supporting water infrastructure projects throughout St. Johns County. As the County's environmental services consultant since 2022, AEC brings valuable familiarity with local environmental conditions, permitting requirements, and regulatory agencies. Their expertise includes wetland permitting, environmental assessments, listed species evaluations, cultural resource surveys, and permitting coordination with SJRWMD, FDEP, and USACE. This experience will help streamline environmental permitting, reduce project risks, and support timely project delivery.

Powell & Hinkle, Inc. *(HVAC/plumbing/fire protection)*

Powell & Hinkle provides HVAC, plumbing, and fire protection engineering services for water and wastewater facilities throughout Florida. Their experience includes treatment plants, pump stations, operations buildings, maintenance facilities, and utility infrastructure for clients including JEA and Clay County Utility Authority. Combined with their familiarity with St. Johns County facilities, Powell & Hinkle brings practical, code-compliant mechanical and fire protection solutions that support reliable operations, maintainability, and long-term facility performance.

Conflict of Interest Disclosure - Attachment D

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT D
CONFLICT OF INTEREST DISCLOSURE FORM

The term "conflict of interest" refers to situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting a Respondent's professional judgment in completing work for the benefit of St. Johns County ("County"). The bias such conflicts could conceivably impart may inappropriately affect the goals, processes, methods of analysis or outcomes desired by the County.

Respondents are expected to safeguard their ability to make objective, fair, and impartial decisions when performing work for the benefit of the County. Respondents, therefore must avoid situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting the Respondent's professional judgement when completing work for the benefit of the County.

The mere appearance of a conflict may be as serious and potentially damaging as an actual distortion of goals, processes, and methods of analysis or outcomes. Reports of conflicts based upon appearances can undermine public trust in ways that may not be adequately restored even when the mitigating facts of a situation are brought to light. Apparent conflicts, therefore, should be disclosed and evaluated with the same vigor as actual conflicts.

It is expressly understood that failure to disclose conflicts of interest as described herein may result in immediate disqualification from evaluation or immediate termination from work for the County.

Please check the appropriate statement:

[X] I hereby attest that the undersigned Respondent has no actual or potential conflict of interest due to any other clients, contracts, or property interests for completing work on the above referenced project.

[ ] The undersigned Respondent, by attachment to this form, submits information which may be a potential conflict of interest due to other clients, contracts or property interests for completing work on the above referenced project.

Legal Name of Respondent: Carollo Engineers, Inc.

Authorized Representative(s):

Signature	Print Name/Title
S.V. Paranjape	Sudhanva Paranjape, PE, Vice President
Signature	Print Name/Title

Qualification Certification - Attachment A

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS
ATTACHMENT A
QUALIFICATION CERTIFICATION

The Undersigned presents this Qualification Submittal to be considered as a Qualified Engineering Firm for RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS.

A copy of the professional license(s) under which our firm is authorized to conduct business in the State of Florida is attached. Each license has been issued in accordance with the applicable provisions of Chapter 471 or Chapter 481, Florida Statutes, and is currently valid and in force.

It is further understood that qualification, if given, shall be valid for the purpose of responding to the above solicitation, unless suspended or terminated by St. Johns County.

The Undersigned authorizes and requests any public official, engineer, architect, Surety Company, bank depository, material or equipment manufacture or distributor or any person, firm or corporation to furnish all information requested by St. Johns County, to verify statements given with this Qualification Submittal.

The Undersigned further authorizes the St. Johns County, FL designee to disclose, without any liability whatsoever, any and all information contained in the Qualification Submittal.

The Undersigned has not been disqualified by any public agency in Florida except as indicated below. (If none, insert: "N/A")

DATED this 3rd day of June, 2026.

S. V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE
Printed Name of Affiant

Vice President
Printed Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Consultant/Contractor

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026, by Sudhanva Paranjape, PE, who is personally known to me or has produced _____ as identification.

Notary Public
My Commission Expires: July 8, 2029

Claims, Liens, Litigation History - Attachment B

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT B
CLAIMS, LIENS, LITIGATION HISTORY

Respondents must complete all questions below and provide information requested as applicable. Failure to appropriately complete the questions below or provide requested information may be grounds for disqualification. Any material misrepresentation of information may also be grounds for disqualification.

1. Within the past 7 years, has your organization filed a suit or a formal claim against a project owner (as a prime or subcontractor) or been sued by or had a formal claim filed by an owner, subcontractor or supplier resulting from a contract dispute? Yes X No _____ If yes, please attach additional sheet(s) to include:
   Description of every action Captions of the Litigation or Arbitration

   Amount at issue: _____ Name (s) of the attorneys representing all parties:
   See below and attached.

   Amount actually recovered, if any: _____
   Name(s) of the project owner(s)/manager(s) to include address and phone number:
   See below and attached.

2. List all pending litigation and or arbitration.
   See below and attached.

3. List and explain all litigation and arbitration within the past seven (7) years - pending, resolved, dismissed, etc.
   See below and attached.

4. Within the past 7 years, please list all Liens, including Federal, State and Local, which have been filed against your Company. List in detail the type of Lien, date, amount and current status of each Lien.
   None.

5. Have you ever abandoned a job, been issued a Notice of Default, terminated for cause, or had a performance/surety bond called to complete a job?

   Yes _____ No X If yes, please explain in detail:

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Claims, Liens, Litigation History - Attachment B

6. For all claims filed against your company within the past five (5) years, have all been resolved satisfactorily with final judgment in favor of your company within 90 days of the date the judgment became final? Yes ____ No __X__ If no, please explain why?
   None of the above noted claims against Carollo have gone to trial, as all have been settled via mediation. So there has been no final judgment in favor of Carollo.

7. List the status of all pending claims currently filed against your company:
   See below and attached.

Liquidated Damages

1. Has a project owner ever withheld retainage, issued liquidated damages or made a claim against any Performance and Payment Bonds? Yes ____ No __X__ If yes, please explain in detail:

(Use additional or supplemental pages as needed)

Attachment B – Claims, Liens, Litigation History

Responses to Items 1 and 3: In the past 7 years, Carollo has not filed a suit or a formal clam against a project owner (as a prime or subcontractor). Carollo has been sued by or had a formal claim filed by an owner, subcontractor or supplier resulting from a contract dispute as follows:

Project Name: **Florida In General**
Date of Claim: August 12, 2019
Name of Claimant: Joseph D. Gilberti, Jr., Florida
Name of Entities Against Whom the Claim Was Filed: Ardurra Group, Inc.; HDR, Inc.; Stantec Consulting Services, Inc.; Carollo Engineers, Inc.; Progressive Water Resources, LLC; and Hazen and Sawyer, PC
Amount at Issue: In excess of $1,000,000
Brief Description of the Claim: Carollo and several other large water engineering firms doing business in Florida were sued by a private citizen who has a history of suing governmental entities (i.e., his most recent lawsuit was against the Federal Reserve). The overall allegations of the citizen centered around claims that Carollo was working with the other noted water firms to hide an alleged underground water source on the plaintiff's/citizen's property from our Florida clients.
Name(s) of the Attorneys Representing All Parties: Plaintiff - Self-Represented. Carollo - Brian Bennett, Bennett Legal Group, P.A./Nicholas A. Shannin, Shannin Law Firm, P.A.; Ardurra - John Y. Benford, Wilson Elser Moskowitz Edelman & Dicker LLP; HDR - Unknown; Stantec - Seth P. Traub, Shumaker, Loop & Kendrick, LLP; Progressive Water Resources - William P. Convey, Shendell & Pollock; and Hazen - Gregory S. Martin, Martin Hild PA.
Amount Actually Recovered: $0.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: None as this litigation was not related to a particular project and/or owner.
Status: The lawsuit was dismissed.

Project Name: **Water Treatment Plant No. 2 Expansion Project**
Date of Claim: January 3, 2020
Name of Claimant: City of Olathe, Kansas.
Name of Entities Against Whom the Claim Was Filed: Carollo/Garney LLC, Garney Holding Company, and Carollo Engineers, Inc.
Amount at Issue: In excess of $75,000
Brief Description of the Claim: Carollo and their joint venture partner were the subject of a lawsuit filed by a client related to tank corrosion as part of a design-build project completed in 2005.
Name(s) of the Attorneys Representing All Parties: Plaintiffs – David Schatz, Spencer Fane LLP; and Carollo/Garney – Kenton E. Snow and Scott C. Grier, Rouse Frets White Goss Gentile Rhodes, P.C.
Amount Actually Recovered: $195,000.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: Ron Shaver, City Attorney, 300 SW 8th Avenue, Suite 100, Topeka, KS 66603, (913) 971-8938; rshaver@olatheks.gov.

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Claims, Liens, Litigation History - Attachment B (Cont.)

Status: The matter was submitted to mediation and thereafter settled with no admission of fault by Carollo.
Project Name: **5-Year CIP WWTP Rehabilitation and Replacement Project**
Date of Claim: July 19, 2021
Name of Claimant: Sewerage Agency of Southern Marin (SASM), California.
Name of Entities Against Whom the Claim Was Filed: Carollo Engineers, Inc.
Amount at Issue: In an amount of at least $3,000,000
Brief Description of the Claim: Carollo was the subject of a lawsuit filed by a client related to the replacement of trickling filter media as part of a wastewater treatment plant rehabilitation project.
Name(s) of the Attorneys Representing All Parties: Plaintiff – Matthew J. Weber, Downey Brand LLP; and Carollo – Ryan P. Harley, Collins Collins Muir + Stewart
Amount Actually Recovered: $797,500
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: Tom Levin, Senior Civil Engineer, Sewerage Agency of South Marin, 450 Sycamore Avenue, Mill Valley, CA 94941; (415) 388-2402; tlevin@cityofmillvalley.org.
Status: The matter was submitted to mediation and thereafter settled with no admission of fault by Carollo.
Project Name: **Southeast Surface Water Treatment Facility Project**
Date of Claim: November 18, 2021
Name of Claimant: City of Fresno, California.
Name of Entities Against Whom the Claim Was Filed: Carollo Engineers, Inc. and W.M. Lyles Co.
Amount at Issue: $163,128.97
Brief Description of the Claim: Carollo and the construction contractor were the subject of a lawsuit filed on behalf of a client via subrogation by their insurance carrier related to ozone equipment installed as part of a new surface water treatment plant project.
Name(s) of the Attorneys Representing All Parties: Plaintiff – Timothy Thompson and Steve McQuillan, Whitney, Thompson & Jeffcoach LLP; and Carollo – Sheila McDonald, W&D Law, LLP
Amount Actually Recovered: $0.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: Paul Amico, Assistant Director, City of Fresno, Department of Public Utilities – Administration, 1626 E Street, Fresno, CA 93706, (559) 621-8612; Paul.Amico@fresno.gov.
Status: The City has dismissed the complaint, without prejudice.
Responses to Items 2, 3 and 7: The following is Carollo's pending litigation, as we have no pending arbitration:
Project Name: **Rancho Cucamonga Wastewater Treatment Plant Pretreatment Design Project.**
Date of Claim: April 6, 2024
Name of Claimant: South Coast Controls Corporation (SCCC), California
Name of Entities Against Whom the Claim Was Filed: Carollo Engineers, Inc. and Arch Insurance Company
Amount at Issue: $372,688.62
Brief Description of the Claim: Carollo terminated SCCC for cause for failure to complete the contracted services and SCCC filed suit against Carollo for breach of contract. Carollo denies responsibility for the claims.
Name(s) of the Attorneys Representing All Parties: Plaintiff – John P. Ward, Attlesey Ward; and Carollo – Creighton Sebra, Clark Hill LLP.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: N/A because this is active litigation.
Status: Carollo filed a cross-complaint against SCCC and the lawsuit is in progress.
Project Name: K**lein Water Treatment Facility Pellet Softening Project**
Date of Claim: February 27, 2026
Name of Claimant: South Adams County Water and Sanitation District, Colorado
Name of Entities Against Whom the Claim Was Filed: Astro Metal Craft; Carollo Engineers, Inc.; Moltz Construction, Inc.; and Wigen Companies, Inc.
Amount at Issue: Per complaint "an amount to be proven at trial for its damages, including but not limited to all economic and actual damages and other losses awardable under Colorado law; costs and fees, including its attorneys' fees."
Brief Description of the Claim: The construction contractor, the construction contractor's welder subcontractor, and the manufacturer of the equipment are the subject of a lawsuit filed by a client related to tank corrosion and leakage. Carollo denies responsibility for any of the claims.
Name(s) of the Attorneys Representing All Parties: Plaintiff - Timothy Fiene, Nathan Dumm & Mayer P.C.; and Carollo – Jacquiline Pons-Bonney; W&D Law, LLP.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: N/A because this is active litigation.
Status: The lawsuit is in progress.
Project Name: North Huron Lift Station and Raw Sewage Pump Station Project
Date of Claim: November 13, 2024
Name of Claimant: City of Westminster, Colorado

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Claims, Liens, Litigation History - Attachment B (Cont.)

Name of Entities Against Whom the Claim Was Filed: Northern Colorado Constructors, Inc.; Carollo Engineers, Inc.; Canterbury Construction Management Services, Inc.; Swiss Re Corporate Solutions America Insurance Corporation f/k/a North American Specialty Insurance Co.; Ground Engineering Consultants, Inc. (by cross-complaint); and Brierley Associates (by cross-complaint).
Amount at Issue: Per complaint "all damages to which Plaintiff is entitled; an award for costs and attorneys' fees as allowed by contract or otherwise allowed under Colorado law; pre-and post-judgment interest; and such other and further relief as the Court deems just and proper."
Brief Description of the Claim: Carollo, the construction manager, and the construction contractor are the subject of a lawsuit filed by a client related to onsite inspection work performed by Carollo's subconsultant during construction of an interceptor sewer replacement project. Carollo denies responsibility for any of the claims.
Name(s) of the Attorneys Representing All Parties: Plaintiff – John W. Mill, Mill Construction Law LLC; Northern Colorado Constructors, Inc. – Daniel E. Evans; Gordon & Rees Scully Mansukhani LLP; Carollo – Jacquiline Pons-Bonney, W&D Law, LLP; Canterbury Construction Management Services, Inc. – Emily L.P. Aguero, Wilson Elser Moskowitz Edelman & Dicker, LLP; Swiss Re Corporate Solutions – Vincent J. Wegher, Allen & Curry, P.C.; Ground Engineering – Timothy M. Schulte, Cardi & Schulte, LLC; and Brierly Associates – Adam B. Wiens, Lewis Brisbois Bisgaard & Smith LLP.
Name(s) of Project Owner(s)/Manager(s) To Include Address and Phone Number: N/A because this is active litigation.
Status: The lawsuit is in progress.

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Certificate of Insurance

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

7/4/2026

DATE (MM/DD/YYYY) 6/4/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies, LLC DBA Lockton Insurance Brokers, LLC in CA CA license #0F15767 444 W. 47th St., Ste. 900 Kansas City MO 64112-1906 (816) 960-9000 kcasu@lockton.com	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED 1472626 CAROLLO ENGINEERS, INC. 2795 MITCHELL DR. WALNUT CREEK CA 94598-1601	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Zurich American Insurance Company — 16535 INSURER B : American Guarantee and Liab. Ins. Co. — 26247 INSURER C : Allied World Surplus Lines Insurance Company — 24319 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 23600647 **REVISION NUMBER:** XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	Y	N	GLO 9730569	7/4/2025	7/4/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 2,000,000 $ 25,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY X HIRED AUTOS ONLY SCHEDULED AUTOS X NON-OWNED AUTOS ONLY	Y	N	BAP 9730571	7/4/2025	7/4/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) DED: COMP/COLL	$ 2,000,000 $ XXXXXXX $ XXXXXXX $ XXXXXXX $ 2,000
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $	Y	N	AUC 4428881	7/4/2025	7/4/2026	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000 $ XXXXXXX
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	N	WC 9730570	7/4/2025	7/4/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
C	PROFESSIONAL LIABILITY FULL PRIOR ACTS	N	N	0313-9010	7/4/2025	7/4/2026	$5,000,000 PER CLAIM/AGG	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RFQ No: 2902 - Professional Engineering Services for Four (4) Water Infrastructure Projects. St. Johns County is an additional insured as respects general liability and auto liability, and these coverages are primary and non-contributory, as required by written contract. (SEE ATTACHED.)

CERTIFICATE HOLDER

23600647
St. Johns County, a political subdivision of the
State of Florida
4040 Lewis Speedway
St. Augustine FL 32084

CANCELLATION See Attachments

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Joseph M Agnello

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SECTION 3:
RELATED EXPERIENCE



Understanding St. Johns County's Water Infrastructure Priorities

Experience focused on reliable supply, operational resiliency, and long-term system flexibility.

St. Johns County is advancing these projects to strengthen water supply reliability, improve transmission resiliency, and support continued growth through practical, phased infrastructure improvements. The County's priorities include expanding groundwater production capacity, increasing distribution system connectivity, maintaining operational flexibility, minimizing implementation risk, and positioning the system to adapt to future water quality and supply challenges.

An Integrated Team Focused on Reliable Delivery and Long-Term System Success.

By intentionally pairing Carollo and Ardurra, the County gains access to a significantly expanded pool of technical resources, subject matter experts, and project delivery professionals. Rather than relying on a single firm's capacity, this partnership effectively doubles the available engineering talent and support resources that can be mobilized to meet project demands. This depth of staffing provides greater flexibility, enhanced responsiveness, and the ability to efficiently advance multiple projects simultaneously without compromising quality or schedule. Combined with our proven history of proven history of working together, most recently on St. John's County Biosolids Master Plan, our integrated team offers the County the confidence that the right expertise will be available at the right time throughout every phase of project delivery.

The following projects demonstrate experience directly relevant to St. Johns County's program and highlight our ability to deliver scalable treatment facilities, adaptable infrastructure solutions, and accelerated project execution for public utility clients.

Carollo + Ardurra Experience by the numbers:

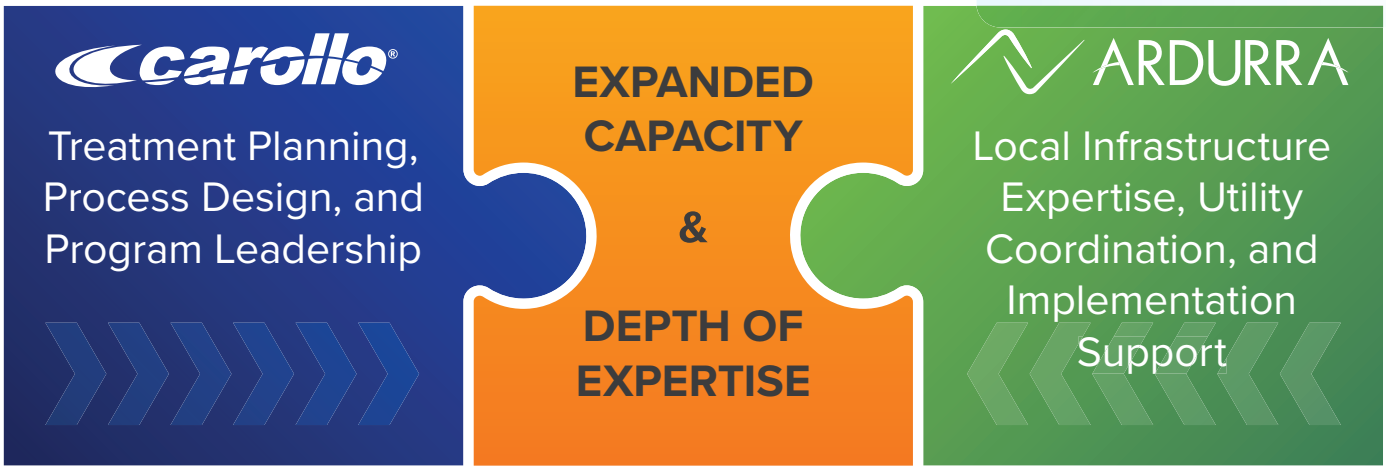
100+ | 100+
Water treatment Specialists

300+ | 200+
Designs and Plans for Water Treatment Plants

1,000+ | 500+
Treatment Optimization Assessments

600+ | 500+
Pump stations designed, ranging up to 650 MGD

A Partnership with Purpose and Scale



FASTER DELIVERY • GREATER FLEXIBILITY • SCALABLE RESOURCES

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Owner
Polk Regional
Water Cooperative

Owner Contact
Eric DeHaven,
Executive Director
813-323-7061
ericdehaven@prwcwater.org

Award Date: 2022

Completion Date: 2026

Project Budget: $700M

Project Cost: $700M

RELEVANCE TO ST. JOHNS COUNTY

Project 1 – Trout Creek WTP

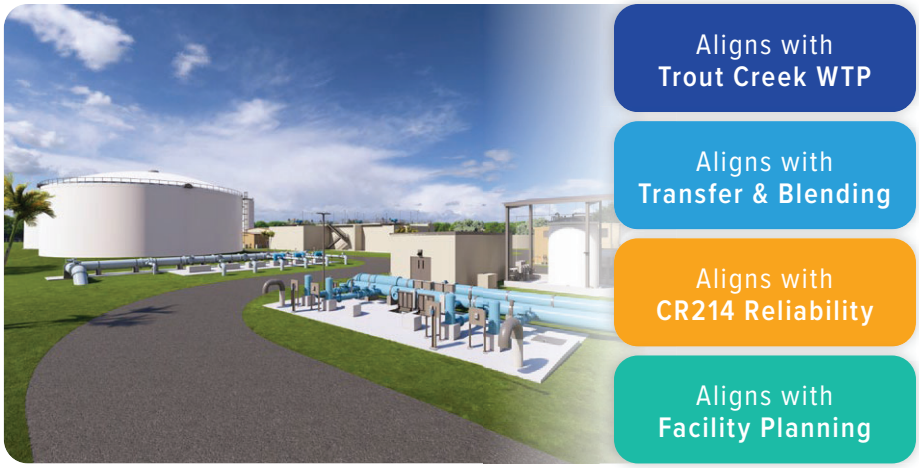
- Design of greenfield groundwater treatment facilities
- Expandable treatment infrastructure including degasification for sulfide removal
- Water use, environmental, and regulatory permitting coordination

Project 2 – Blend Tank & Transfer Station

- Large-diameter transmission infrastructure
- Regional water conveyance systems
- Hydraulic system integration
- Operational flexibility through water transfers

Project 3 – CR214 Reliability Improvements

- Membrane treatment facility and treatment process upgrades
- Reliability and redundancy improvements
- Operational resiliency planning



Aligns with **Trout Creek WTP**

Aligns with **Transfer & Blending**

Aligns with **CR214 Reliability**

Aligns with **Facility Planning**

Southeast & West Polk Regional Water Production Facilities Program / Polk Regional Cooperative, FL

Carollo is leading the planning, permitting, design, and implementation of the Polk Regional Water Cooperative's Southeast and West Polk Water Production Facilities Program, one of Florida's largest regional water supply initiatives. Developed to diversify water sources and support long-term growth, the program includes **two greenfield groundwater treatment facilities**, groundwater supply development, regional transmission infrastructure, concentrate management facilities, and associated utility systems. Carollo's responsibilities include groundwater investigations, wellfield development, hydraulic and groundwater modeling, water quality evaluations, treatment process design, permitting, funding compliance, and overall program management for this approximately $700 million infrastructure program. Both of these facilities include **reverse osmosis, carbon dioxide for pH adjustment and degasifiers** which are directly applicable to Trout Creek and CR214.

The program demonstrates experience directly aligned with St. Johns County's water infrastructure objectives. Project elements include development of **new treatment capacity, hydraulic conveyance and transfer systems, advanced membrane treatment facilities, concentrate management solutions, and long-range implementation planning.** The work requires coordination among multiple utilities, regulatory agencies, and stakeholders while balancing growth demands, operational reliability, and future water supply needs. Through this program, Carollo has demonstrated the ability to successfully deliver integrated water infrastructure solutions that combine treatment, conveyance, reliability, permitting, funding coordination, and long-term planning into a cohesive strategy for sustainable utility growth.

WHY THIS PROJECT MATTERS

One of Florida's largest regional water supply programs, delivering new groundwater supply, advanced treatment, transmission infrastructure, and long-term implementation planning under a coordinated program management approach. The treatment processes (RO, carbon dioxide, and degasifiers) utilized at both these facilities are directly applicable to the anticipated treatment at Trout Creek and CR214.

Owner
Collier County

Owner Contact
Howard Brogdon,
Principal Project Manager
239-252-5252
howard.brogdon@collier.gov

Award Date: 2023

Completion Date: 2028

Project Budget: $230M

Project Cost: $230M

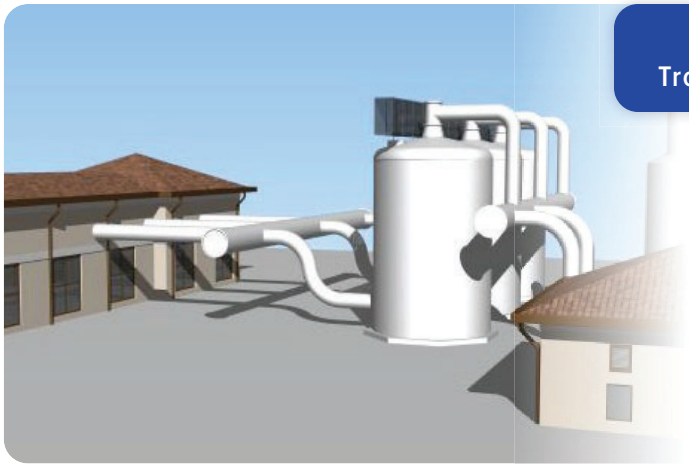
RELEVANCE TO ST. JOHNS COUNTY

Project No. 1 – Trout Creek WTP

- Greenfield water treatment plant design
- Phased facility expansion planning
- Groundwater treatment systems
- Finished water storage facilities
- High-service pumping infrastructure
- Future treatment adaptability
- Operational resiliency improvements
- Long-term capacity planning

Program-Wide Benefits

- Multi-project program management
- Stakeholder and utility coordination
- Planning through construction support
- Integration of planning, design, and implementation activities



Aligns with **Trout Creek WTP**

Northeast Regional Water Treatment Plant / Collier County, FL

The Collier County Northeast Regional Water Treatment Plant is a **greenfield regional facility** designed to address growing water supply needs. Carollo provided design and construction-phase services for a water treatment plant utilizing reverse osmosis (RO) treatment and degasification towers with biotrickling filters for odor control, with a **phased expansion up to 20 million gallons per day (MGD).**

Key components include a brackish Floridan Aquifer RO treatment system followed by a **two-stage degasification system with biotrickling filters for hydrogen sulfide removal** and a chemical scrubber. Additional facilities include a 5-MGD anion exchange treatment system for blending surficial groundwater, a 24-MGD finished water pumping facility, two 5-million-gallon ground storage tanks, and noise abatement measures to maintain compatibility with nearby residential neighborhoods. The design also features medium-voltage power to provide standby power to remote wells from a centralized generation facility.

The design process included workshops with plant staff **to address corrosion,** noise, and maintenance challenges, resulting in improvements to materials, vapor control, and noise isolation. Carollo identified alternate materials of construction, methods for controlling corrosive hydrogen sulfide vapors, and noise isolation strategies within the treatment plant.

WHY THIS PROJECT MATTERS

This project demonstrates Carollo's experience developing expandable groundwater treatment facilities that integrate treatment, storage, pumping, and future capacity planning. The facility incorporated RO treatment, degasification, hydrogen sulfide removal, and biotrickling filtration technologies relevant to Trout Creek and CR214. Through phased implementation and adaptable design, the project enhanced reliability, operational flexibility, and long-term water supply resiliency.

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Owner
St. Johns County
Utility Department

Owner Contact
Barry Stewart, Manager of
Water Operations
904-209-2645
bstewart@sjcfl.us

Award Date: 2020

Completion Date: 2021

Project Budget: $159,000

Project Cost: $159,000

RELEVANCE TO ST. JOHNS COUNTY

- Finished water transfer infrastructure
- Transfer pump station improvements
- Ground storage tank integration
- Hydraulic system evaluation
- Pumping capacity expansion
- Redundancy and reliability improvements
- Electrical and controls integration
- Construction-phase services
- Improvements at CR214 WTP



Aligns with
Transfer & Blending

CR 214 Water Treatment Plant Transfer Pump Station / St. Johns County, FL

Ardurra provided design and construction-phase services for improvements to the CR214 Water Treatment Plant Transfer Pump Station. The existing transfer station included two constant-speed clearwell transfer pumps (one duty and one standby), each rated at 5,908 gallons per minute (gpm) at 44 feet of total dynamic head (TDH). These pumps convey pre-finished water from the treatment process to two ground storage tanks (GSTs).

The project included design of a third 30-horsepower self-priming transfer pump (Transfer Pump No. 3) within the available space at the existing station. Improvements included associated piping, valves, accessories, soft starter, instrumentation, and control system modifications. The new pump was designed to provide approximately 2,800 gpm and operate when a single membrane treatment skid is in service, improving operational flexibility while maintaining system performance.

The design required integration of the **new pumping equipment into an active treatment facility while maintaining compatibility with existing hydraulic conditions, storage facilities, controls, and plant operations.** Ardurra also provided construction-phase services to support implementation of the improvements. The project enhanced transfer capacity, operational redundancy, and reliability of water movement between treatment and storage facilities.

WHY THIS PROJECT MATTERS

This project demonstrates Ardurra's ability to enhance system reliability within an active treatment facility. Through targeted pumping improvements, controls integration, and careful coordination with ongoing operations, the project increased transfer capacity while maintaining continuous service and operational compatibility.

Owner
Broward County Water and Wastewater Services

Owner Contact
Mike Saltzman, PE, Construction Project Manager Supervisor
954-831-0736
Lsaltzman@broward.org

Award Date: 2020

Completion Date: 2024

Project Budget: $27.3M

Project Cost: $27.3M

RELEVANCE TO ST. JOHNS COUNTY

Project No. 2 – NW-to-CR214 Blend Tank & Transfer Station

- Finished water storage facilities
- Booster pumping systems
- Hydraulic modeling and system optimization
- Water transfer infrastructure
- Operational flexibility improvements
- Future demand planning
- Water quality management within storage systems
- Phased implementation while maintaining service



Aligns with **Transfer & Blending**

Storage Tanks and Pumping Stations / Broward County, FL

Broward County Water and Wastewater Services selected Carollo to provide planning, design, permitting, and construction-phase engineering services for a series of **finished water storage, pumping, and system reliability improvements** across multiple water service districts. The program was developed to increase storage capacity, improve pumping reliability, maintain regulatory compliance, and support future water demands through strategic upgrades to critical water transmission and storage infrastructure. Major improvements included new ground storage tanks, booster pumping stations, chemical feed systems, controls upgrades, and water quality enhancements designed to improve operational flexibility and long-term system performance.

A key component of the program was the use of **hydraulic evaluations, system modeling, and operational analyses** to optimize facility sizing, pumping capacity, and storage requirements while maintaining uninterrupted operation of existing facilities. Additional improvements included finished water mixing systems to improve water quality, reduce thermal stratification, and maintain disinfectant residuals throughout the storage facilities. The project demonstrates experience directly relevant to St. Johns County's blend tank and transfer station improvements through the successful integration of finished water storage, pumping infrastructure, hydraulic optimization, water quality management, and phased implementation strategies that support growth, reliability, and long-term operational flexibility.

WHY THIS PROJECT MATTERS

The project provides direct experience relevant to St. Johns County's blend tank and transfer station improvements by combining hydraulic modeling, storage optimization, pumping system design, and phased implementation under active operating conditions.

Owner
Lee County Utilities

Owner Contact
Henry Barroso, Utilities Operations Manager
239-826-5619
hbarroso@leegov.com

Award Date: 2022

Completion Date: 2025

Project Budget: $53M

Project Cost: $53M

RELEVANCE TO ST. JOHN'S COUNTY

Project No. 1 – Trout Creek WTP

- Groundwater-based water treatment facility
- Future treatment adaptability
- Pilot testing and process evaluation
- Permitting and implementation
- Long-term water supply planning

INNOVATION HIGHLIGHT:

Evaluated elimination of sulfuric acid through pilot testing and process optimization, improving safety, reducing operating costs, and simplifying operations.



Aligns with **CR214 Reliability**

North Lee County RO Water Treatment Plant Expansion / Lee County, FL

Lee County Utilities selected Carollo to provide planning, design, permitting, and engineering services for improvements and expansion of the North Lee County Reverse Osmosis (RO) Water Treatment Plant, a brackish groundwater treatment facility utilizing the Floridan Aquifer as its source water. The project was initiated to improve operational reliability, increase production capacity, optimize treatment performance, and support the County's long-term water supply objectives. Carollo evaluated existing treatment processes and hydraulic limitations, implemented improvements to increase RO feed pump capacity, optimized treatment train performance, and ultimately designed an expansion that increased facility capacity from 10 mgd to 15 mgd as part of a $53 million capital improvement program.

The project included evaluation and optimization of post-treatment processes, including **pH adjustment using carbon dioxide, degasification systems, and biotrickling filtration for odor control.** Process evaluations and pilot testing were performed to identify opportunities to improve efficiency, reliability, and operational flexibility while supporting long-term water quality objectives. The team successfully demonstrated elimination of sulfuric acid from the treatment process, reducing operating costs, improving operator safety, and simplifying plant operations. The completed improvements enhanced treatment reliability, expanded production capacity, improved energy efficiency, and strengthened Lee County's ability to utilize brackish groundwater as a sustainable long-term water supply source.

WHY THIS PROJECT MATTERS

This project demonstrates Carollo's ability to optimize, expand, and modernize a groundwater-based treatment facility while improving reliability, reducing operating costs, and preparing for future water supply demands. The project reflects the same balance of capacity expansion, treatment flexibility, and long-term planning envisioned for the Trout Creek Water Treatment Plant.

Owner
St. Johns County
Utility Department

Owner Contact
Barry Stewart, Manager of
Water Operations
904-209-2645
bstewart@sjcfl.us

Award Date: 2018

Completion Date: 2025

Project Budget: $361,000*

*Final construction costs were higher than estimated due to COVID-19-related market escalation, bidding conditions, and owner-directed scope additions.

Project Cost: $957,200

RELEVANCE TO ST. JOHNS COUNTY

- Groundwater supply well infrastructure
- Hydrogen sulfide removal processes
- Chemical feed and disinfection systems
- High-service pumping and storage facilities
- Raw water blending system evaluation
- Electrical, I&C modernization
- Reliability and redundancy improvements
- Long-term facility planning and implementation



Aligns with **CR214 Reliability**

Aligns with **Facility Planning**

Hastings Water Treatment Plant Improvements and Expansion / St. Johns County, FL

Ardurra provided design, bidding, and construction-phase services for improvements and expansion of the Hastings Water Treatment Plant, a 220,000-gpd groundwater-based RO facility. Originally constructed in 1990, the facility includes two groundwater supply wells, antiscalant feed, RO membrane treatment, forced-draft aeration for hydrogen sulfide and carbon dioxide removal, chlorination, finished water storage, and high-service pumping.

Ardurra evaluated treatment, pumping, electrical, and control systems; assessed well rehabilitation needs; optimized RO performance; evaluated membrane improvements; and designed upgrades to chemical feed and disinfection systems. The project included replacement of aging electrical infrastructure, instrumentation and control upgrades, expanded process monitoring, blend system modifications, and a maintenance-of-operations plan to maintain continuous water production during construction.

To improve reliability and eliminate a single point of failure, Ardurra designed a redundant RO treatment skid housed within a new pre-engineered building. Improvements also included replacement of the clearwell aeration system, upgrades to yard piping, electrical and instrumentation systems, and installation of a diesel fire pump system.

Ardurra also evaluated expansion alternatives to **increase capacity from 0.22 mgd to an ultimate build out capacity of 0.66 mgd.** Expansion planning included additional RO skids, feed pumps, antiscalant facilities, raw water blending systems, and associated treatment, pumping, storage, and control infrastructure, establishing a phased road map for future growth and regulatory compliance.

WHY THIS PROJECT MATTERS

This project demonstrates Ardurra's ability to modernize and expand treatment facilities while maintaining operations. Through process optimization, electrical and controls upgrades, and phased capacity improvements, the project improved reliability, eliminated single points of failure, and established a framework for future growth.

Owner
City of Tampa

Owner Contact
Sarah Burns, PE, Water Planning Manager
813-274-5913 sarah.burns@tampagov.net

Award Date: 2018

Completion Date: 2028

Project Budget: $350M

Project Cost: $350M

RELEVANCE TO ST. JOHNS COUNTY

Project No. 4 – CR214 Future Improvements Facility Plan

- Facility-wide condition assessments
- Treatment process evaluations
- Hydraulic and operational analyses
- Capital improvement prioritization
- Future capacity planning
- Phased implementation roadmap
- Pilot testing and technology evaluations
- Planning-to-implementation continuity



Aligns with **Facility Planning**

David L. Tippin Water Treatment Facility Comprehensive Master Plan and Design Build / Tampa, FL

Carollo was selected by the City of Tampa to develop and implement a comprehensive 15-year master plan for the David L. Tippin Water Treatment Facility, a major regional drinking water facility serving approximately 620,000 residents. The planning effort included facility-wide **condition assessments, treatment process evaluations and optimization, hydraulic analyses, electrical, mechanical, and structural reviews, regulatory evaluations, and development of a prioritized capital improvement program.** The objective was to improve treatment performance, enhance water quality, increase reliability, and establish a phased roadmap for future capacity and infrastructure improvements.

Following completion of the master plan, Carollo was selected to design and implement the recommended improvements through a multi-year capital program exceeding $350 million. Improvements included filtration expansion, pilot testing and implementation of Suspended Ion Exchange (SIX®) technology, ozone generation upgrades, chemical feed system modernization, clearwell modifications, pumping improvements, and facility-wide electrical and reliability upgrades. The program demonstrates Carollo's ability to successfully transition from planning to implementation while maintaining uninterrupted operations, prioritizing investments, evaluating emerging technologies, and delivering long-term infrastructure solutions that support reliability, resiliency, and future growth.

WHY THIS PROJECT MATTERS

This project demonstrates Carollo's ability to transform facility planning into implementation. Through comprehensive evaluations, technology assessments, pilot testing, and phased capital improvement planning, the program established a roadmap for future growth while improving reliability, operational performance, and long-term water supply resiliency.

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Owner
Clay County Utility Authority

Owner Contact
Darrell Damrow,
PE, Chief Engineer
904-213-2464
ddamrow@clayutility.org

Award Date: 2024

Completion Date: 2025

Project Budget: $443,117

Project Cost: $443,117

RELEVANCE TO ST. JOHNS COUNTY

- Water treatment facility assessments
- Groundwater well infrastructure evaluation
- High-service pumping system analysis
- Storage facility condition assessments
- Electrical, I&C evaluation
- Asset management program development
- Reliability and redundancy analysis
- Risk-based capital improvement planning
- Long-term facility planning
- Operational resiliency improvements



Aligns with
Facility Planning

Water and Wastewater System Condition Assessment / Clay County, FL

Ardurra completed a comprehensive asset condition assessment for Clay County Utility Authority (CCUA), evaluating 22 water treatment plants (WTPs), 7 water reclamation facilities (WRFs), reclaimed water storage and pumping facilities, and more than 129 lift stations. The assessment focused on asset performance, reliability, remaining useful life, and long-term capital improvement needs to support expansion of CCUA's asset management program.

Using a structured asset hierarchy, Ardurra performed **multidisciplinary inspections of critical infrastructure, including groundwater wells, high-service pumping systems, aeration and chemical feed processes, ground storage tanks, electrical systems, instrumentation, and controls.** Assets were evaluated using condition assessments and risk-based scoring methodologies that considered probability and consequence of failure, operational criticality, and system redundancy.

The assessment identified and prioritized rehabilitation and replacement needs for critical treatment, pumping, storage, electrical, and control assets. Based on the findings, Ardurra developed a 15-year Rehabilitation and Replacement (R&R) Plan establishing prioritized capital improvements across four planning horizons ranging from immediate (0–1 year) to long-term (10–15 years). The WTP program alone identified more than $13 million in capital improvement needs.

The resulting asset management framework provides a data-driven road map for **maintaining regulatory compliance, improving reliability, reducing unplanned outages, and supporting long-term infrastructure planning.**

WHY THIS PROJECT MATTERS

This project demonstrates Ardurra's ability to evaluate existing facilities, identify reliability risks, and develop phased capital improvement strategies. Through condition assessments, risk-based prioritization, and long-term rehabilitation planning, the program established a practical roadmap for future investments, improved reliability, and proactive asset management..

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SECTION 4:
CAPACITY FOR PROJECT



Capacity for Project

Resources to Deliver For St. Johns County

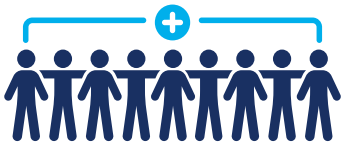
St. Johns County's water infrastructure program requires the ability to advance multiple projects concurrently while maintaining schedule certainty, technical quality, and responsive client service. Our team combines dedicated project leadership, specialized technical expertise, and scalable support resources capable of supporting all four projects simultaneously. With experienced staff located throughout Florida and access to national treatment, hydraulic, planning, and construction support specialists, we have the resources necessary to deliver the County's program without the need to hire additional personnel following award.

Resources to Deliver for St. Johns County

Deep In-House expertise. Trusted Partners. One Integrated Team.

Carollo by the Numbers

90 + YEARS



1,900+ STAFF

Water-Focused

The combined strength of Carollo and Ardurra *ensures the resources, expertise, and flexibility needed to advance all four projects as one coordinated water infrastructure program.*

Internal Resources

Management of Infrastructure Projects	Dedicated Program Manager, Project Coordinator,Four Project Managers and a Construction Manager.
Treatment Process	10+ treatment specialist assigned to this project, supported by more than 1000 treatment specialist in our company.
Hydraulic Systems	5 dedicated hydraulic experts supported by over 100 national hydraulics experts.
Facility Planning	20+ facility planning experts are available to support this project.
Construction Services	10+ local construction services staff are available to support this project.
CAD/BIM Production	20+ CAD and BIM specialists are available to support this project.

External Resources

Ardurra	20+ dedicated local staff members to lead and assist with various components of this project.
Alpha Envirotech	6 dedicated environmental specialists to assist with regulatory and environmental requirements of the project.
Wekiva Engineering	Dedicated structural engineer and dedicated architect to support project needs.
ETM	360+ engineers and surveyors available to support the project on civil, site design and survey.
UES	3 engineers, 4 drillers, and 4 driller assistants available to provide geotechnical services to support the project.
Powell & Hinkle	7 engineers and 5 designers to support the project on HVAC, plumbing, and fire protection.

NO ADDITIONAL HIRING REQUIRED | Our team has the depth and capability to deliver all projects without the need to hire additional staff.

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Current Active Projects for the Next 3 Years

Project	Owner	Stage	Completion Date
Clay County Project Quench Pilot Facility Operations Support	Clay County Utility Authority	Active	8/1/2026
Meadowbrook WTP Improvements	Clay County Utility Authority	Active	7/31/2026
Clay County/Ardurra Biosolids Master Plan	Clay County Utility Authority	Active	10/30/2026
Cocoa Sellers WRF Network and Building Upgrade	City of Cocoa	Active	1/15/2027
Daytona Beach Lift Station 62 Improvements - Design and Construction Services	Daytona Beach	Active	9/1/2026
City of Daytona Beach Lift Station 27 Replacement	Daytona Beach	Active	5/11/2028
Daytona Beach Lift Station No. 34 CEI Services - WA No 13	Daytona Beach	Active	6/30/2026
North Williamson Blvd Force Main Routing and Design	Daytona Beach	Active	8/1/2026
Daytona Beach Clyde Morris Utility Relocates - FDOT Reimbursable Adjustments	Daytona Beach	Active	12/31/2027
City of Deltona/WSP Engineering Services During Construction SCADA Upgrades (TO No. 2)	City of Deltona	Active	4/15/2026
JEA Buckman WRF Biosolids Conversion	JEA	Active	9/30/2028
Oakridge WTP High Service Pump Replacement Project	JEA	Active	4/30/2027
OUC Lake Highland Water Supply Wells and Piping Design	Orlando Utilities Commission	Active	6/3/2026
Orlando Lake Nona Reclaimed Water Storage and Repump Facility ESDC (RQS23-0570)	City of Orlando	Active	6/30/2027
Conserv II WRF Iron Bridge Regional Disinfection Alternatives Evaluation	City of Orlando	Active	1/6/2028
Oviedo Water Reclamation Facility Reject Force Main	City of Oviedo	Active	12/31/2026
Oviedo LFA Test Production Well	City of Oviedo	Active	12/31/2026
2.0 MG Reclaimed Water Storage Tank at OWRF	City of Oviedo	Active	9/30/2026
Oviedo Water Treatment and Distribution Optimization Study	City of Oviedo	Active	12/31/2026
Lift Station # 7 Relocation	City of Oviedo	Active	7/31/2026
Polk County ERUSA WPF and WWTF (RFP 24-551) - Part 1	Polk County	Active	6/15/2026
Owners Advisory Services for Design and Construction of SMWTP	Sanford, City of	Active	7/31/2029
Greenwood Lakes WRF Rehabilitation & Replacement and SCADA Improvements	Seminole County	Active	1/31/2027
St. Johns County Marsh Landing Electrical WRF Upgrade Design	St. Johns County Utility Department	Active	4/30/2027
Winter Springs Wastewater Treatment Facilities Design	City of Winter Springs	Active	5/15/2028
NWRWWTF Improvements - Design	Polk County	Active	2/1/2027
PRWC Phase 2 West Polk WPF and Pipeline Design	Polk Regional Water Cooperative	Active	12/31/2028

Our team currently supports a variety of treatment, planning, and utility infrastructure projects throughout Florida. These projects demonstrate our continued engagement in the water sector while also providing direct experience relevant to the County's program. Workload planning is actively managed to ensure that dedicated project managers and technical leads remain available throughout project delivery.

Team Availability

Personnel		Role	Current and Future (3 Years) Availability			
			Current	2027	2028	2029
Program Management	Sudhan Paranjape	Program Manager	70%	80%	80%	80%
	Marya Huff,	Project Coordinator	85%	100%	100%	100%
	Jennifer Nyfennegger	Advisor / QA/QC: Process Specialist	40%	40%	40%	50%
	Mike Zappone	Advisor / QA/QC: Pump Stations	30%	30%	30%	35%
	Tim Taylor	Advisor / QA/QC: Water Distribution Specialist	45%	50%	50%	50%
	Joseph Downey	Advisor / QA/QC: Pump Stations and Pipelines	50%	50%	60%	60%
	Mary Thomas	Regulatory Permitting	70%	70%	60%	60%
Project 1	Erica Stone	**Project 1:** Project Manager	85%	90%	90%	90%
	Jeremy O'Neal	Process Engineer	90%	90%	90%	80%
	Melanie Pickett	Project 1: Water Quality Lead	70%	80%	80%	80%
	Brandon Lawhern	Distribution Main	80%	100%	100%	100%
	Scott Richards	Well Conversion and Pump Station	70%	80%	80%	80%
Project 2	David Rasmussen	**Project 2:** Project Manager	80%	90%	90%	90%
	Manasi Parekh	Hydraulic/Mechanical Engineer	90%	100%	100%	100%
	Kaitlin Jeffords	Hydraulic Modeling	80%	100%	100%	90%
Project 3	Jon Harn	**Project 3:** Project Manager	80%	90%	100%	90%
	Brandon Yallaly	Membrane Specialist	60%	70%	70%	60%
Project 4	Michelle Widick	**Project 4:** Project Manager	85%	90%	90%	90%
	Vinnie Hart	Operational Optimization	40%	60%	60%	60%
ESDC	Gerry Torres	Construction Manager	60%	60%	90%	90%
	David McCarty	Resident Project Representative	50%	60%	100%	100%
	Leo Pou	Start-up and Commissioning	40%	40%	90%	100%
	Ann Newland	Site Civil Design	60%	90%	80%	60%

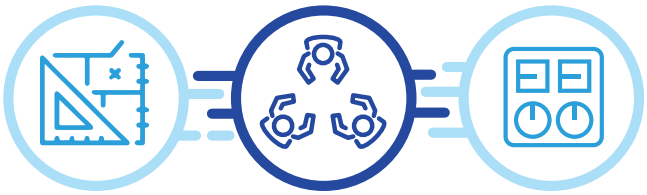
Other Relevant Information—Beyond Resources: Tools That Drive Successful Project Delivery

Beyond available staff resources, our team offers established working relationships, specialized expertise, and dedicated project leadership to deliver all four projects efficiently while maintaining continuity from planning through start-up. To further support accelerated delivery, we leverage proven tools and methodologies that facilitate timely decision-making, improve coordination, and maintain project momentum from planning through implementation.

Design CAMP® Fostering Trust Through Collaboration

CAMP® is a facilitated decision-making process that brings County staff, operators, and project stakeholders together to evaluate alternatives, establish project priorities, and accelerate delivery through informed, timely decisions.

CAMP® bridges the gap between concept and reality.



SUCCESS OF THE CAMP® PROCESS

PROJECT LOCATION	Traditional Design Schedule (months)	CAMP® Design Schedule (months)
Southeast Surface Water Treatment Facility, City of Fresno, CA	20	14
WRP Expansion, Gilbert, AZ	30	18
BNR/Tertiary Treatment Facilities, Modesto, CA	10	6
biottta® Wellhead Nitrate Treatment, Delano, CA	12	6
Tom Harpool Regional WTP Expansion, Upper Trinity Regional Water District, TX	48	40
Babcock Ranch Water Treatment Plant and Water Reclamation Facility, Charlotte County, FL	20	15

Plant Evaluation and Optimization...Key to Unlocking the Potential of Your Treatment Plants



Carollo has successfully delivered similar large scale projects in a complete 3D working environment from start to finish. Using Building Information Modeling (BIM) accelerates design, enhances plant staff understanding, and improves coordination across disciplines and process areas with minimal construction conflicts resulting in fewer changes in the field. A 3D BIM environment also streamlines the creation of drawings with section cuts directly from the model.

B:\Pursuits\Client52(ORL)\SJC\TroutCreekWTP\Qual0626\Indd\Sec 4-Capacity for Project.indd

SECTION 5:
ADMINISTRATION INFORMATION



Affidavit of Solvency - Attachment C

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT C
AFFIDAVIT OF SOLVENCY

PERTAINING TO THE SOLVENCY OF Carollo Engineers, Inc., being of lawful age and being duly sworn I, Sudhanva Paranjape, PE, as Vice President *(ex: CEO, officer, president, duly authorized representative, etc.)* hereby certify under penalty of perjury that:

1. I have reviewed and am familiar with the financial status of above stated entity.
2. The above stated entity possesses adequate capital in relation to its business operations or any contemplated or undertaken transaction to timely pay its debts and liabilities (including, but not limited to, unliquidated liabilities, unmatured liabilities and contingent liabilities) as they become absolute and due.
3. The above stated entity has not, nor intends to, incur any debts and/or liabilities beyond its ability to timely pay such debts and/or liabilities as they become due.
4. I fully understand failure to make truthful disclosure of any fact or item of information contained herein may result in denial of the application, revocation of the Certificate of Public Necessity if granted and/or other action authorized by law.

The undersigned has executed this Affidavit of Solvency, in his/her capacity as a duly authorized representative of the above stated entity, and not individually,

DATED this 3rd day of June, 2026.

S. V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE
Printed Name of Affiant

Vice President
Printed Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Consultant/Contractor

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026, by Sudhanva Paranjape, PE, who is personally known to me or has produced _____ as identification.

Notary Public
My Commission Expires: July 8, 2029

Drug-Free Workplace - Attachment E

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT E
DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Statute 287.087 hereby certifies that

Carollo Engineers, Inc. does:

Name of Firm

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the danger of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the contractual services that are described in St. Johns County's Request for Qualification to provide bond underwriter services a copy of the statement specified in paragraph 1.

4. In the statement specified in paragraph 1, notify the employees that, as a condition of working on the contractual services described in paragraph 3, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Florida Statute 893, as amended, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than three (3) days after such conviction or plea.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

6. Consistent with applicable provisions with State or Federal law, rule, or regulation, make a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1 through 5.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

S.V. Paranjape

Signature Sudhanva Paranjape, PE

June 3, 2026

Date

E-Verify Affidavit - Attachment F

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT F
E-VERIFY AFFIDAVIT

STATE OF Florida
COUNTY OF Orange

I, Sudhanva Paranjape, PE (hereinafter "Affiant"), being duly authorized by and on behalf of Carollo Engineers, Inc. (hereinafter "Respondent") hereby swears or affirms as follows:

1. Respondent understands that E-Verify, authorized by Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), is a web-based system provided by the United States Department of Homeland Security, through which employers electronically confirm the employment eligibility of their employees.

2. For the duration of an Contract awarded under RFQ No. 2902 (hereinafter "Agreement"), in accordance with section 448.095, F.S., Respondent shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Respondent and shall expressly require any subcontractors performing work or providing services pursuant to the Agreement to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor.

3. Respondent shall comply with all applicable provisions of section 448.095, F.S., and will incorporate in all subcontracts the obligation to comply with section 448.095, F.S.

4. Respondent understands and agrees that its failure to comply with all applicable provisions of section 448.095, F.S. or its failure to ensure that all employees and subcontractors performing work under the Agreement are legally authorized to work in the United States and the State of Florida constitute a breach of the Agreement for which St. Johns County may immediately terminate the Agreement without notice and without penalty. The Respondent further understands and agrees that in the event of such termination, Respondent shall be liable to the St. Johns County for any costs incurred by the St. Johns County resulting from Respondent's breach.

DATED this 3rd day of June, 2026.

S.V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE, Vice President
Printed Name & Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Respondent

NOTARY PUBLIC STATE OF FLORIDA
TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026, by Sudhanva Paranjape, PE, who is personally known to me or has produced _____ as identification. Vice President

Notary Public
My Commission Expires: July 8, 2029

Public Entity Crimes - Attachment G

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT G
SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES ON PUBLIC ENTITY CRIMES

I, Sudhanva Paranjape, PE ("Affiant"), being duly authorized by and on behalf of Carollo Engineers, Inc. ("Respondent") hereby swears or affirms as follows:

1. The principal business address of Respondent is: _____
2. I am duly authorized as Vice President (Title) of Respondent.
3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined in Section 287.133 of the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined in Section 287.133 of the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Respondent, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. There has been a conviction of a public entity crime by the Respondent, or an officer, director, executive, partner, shareholder, employee, member or agent of the Respondent who is active in the management of the Respondent or an affiliate of the Respondent. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted vendor list. The name of the convicted person or affiliate is _____. A copy of the order of the Division of Administrative Hearings is attached to this statement. **(Draw a line through paragraph 7 if paragraph 6 above applies.)**

S.V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE, Vice President
Printed Name & Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Respondent

June 3, 2026
Date of Signature

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this 3rd day of June 2026, 20___, by Affiant, who is ☒ personally known to me or ☐ has produced _____ as identification.

Notary Public

Sudhanva Paranjape, PE

July 8, 2029
My Commission Expires

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Coercion for Labor and Services - Attachment H

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT H
Affidavit Regarding the Use of Coercion for Labor and Services

Section 787.06(13), Florida Statutes requires all nongovernmental entities executing, renewing, or extending a contract with a governmental entity to provide an affidavit signed by an officer or representative of the nongovernmental entity under penalty of perjury that the nongovernmental entity does not use coercion for labor or services as defined in that statute.

As an officer or authorized representative of Respondent, I certify that the company identified below does not, for labor or services:

- Use or threaten to use physical force against any person;
- Restrain, isolate, or confine or threaten to restrain, isolate, or confine any person without lawful authority and against her or his will;
- Use lending or other credit methods to establish a debt by any person when labor or services are pledged as a security for the debt, if the value of the labor or services as reasonably assessed is not applied toward the liquidation of the debt, the length and nature of the labor or services are not respectively limited and defined;
- Destroy, conceal, remove, confiscate, withhold, or possess any actual or purported passport, visa, or other immigration document, or any other actual or purported government identification document, of any person;
- Cause or threaten to cause financial harm to any person;
- Entice or lure any person by fraud or deceit; or
- Provide a controlled substance as outlined in Schedule I or Schedule II of s. 893.03 to any person for the purpose of exploitation of that person.

Under penalties of perjury, I declare and affirm that I have read the foregoing document and that the facts stated in it are true and correct.

DATED this 3rd day of June, 2026.

S. V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE, Vice President
Printed Name of Affiant

Vice President
Printed Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Respondent

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026, by Affiant, who is personally known to me or has produced ____ as identification.

Notary Public
My Commission Expires: July 8, 2029

Non-Collusion Certification - Attachment I

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT I
NON-COLLUSION CERTIFICATION

St. Johns County requires, as a matter of policy, that any Respondent receiving a contract or award resulting from this Request for Qualification issued by St. Johns County shall make certification as below. Receipt of such certification, under oath, shall be a prerequisite to the award of contract and payment thereof.

I (we) hereby certify that if the contract is awarded to me, our firm, partnership or corporation, that no members of the elected governing body of St. Johns County nor any professional management, administrative official or employee of the County, nor members of his or her immediate family including spouse, parents or children, nor any person representing or purporting to represent any member or members of the elected governing body or other official, has solicited, has received or has been promised, directly or indirectly, any financial benefit including but not limited to a fee, commission, finder's fee, political contribution, goods or services in return for favorable review of any Qualifications submitted in response to this Request for Qualification or in return for execution of a contract for performance or provision of services for which Qualification are herein sought.

DATED this 3rd day of June, 2026.

S.V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE, Vice President
Printed Name & Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Respondent

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
Bonded through National Notary Assn.

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026 by Affiant, who is ☒ personally known to me or ☐ has produced _____ as identification.

Notary Public
My Commission Expires: July 8, 2029

Equal Opportunity Report - Attachment J

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT J
EQUAL OPPORTUNITY REPORT STATEMENT

The Respondent shall complete the following statement by signing this form where indicated. Failure to complete this form may be grounds for rejection of bid:

The awarded Consultant shall comply with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987 and the Florida Civil Rights Act of 1992, as amended) prohibiting employment discrimination and shall comply with the regulations and guidelines promulgated pursuant to this Act by the Secretary of the Interior and the Heritage Conservation and Recreation Service.

During the performance of this contract, the awarded Consultant, for itself, its assignees and successors in interest ("Consultant") agrees as follows:

(1) The Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Consultant will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Consultant will, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The Consultant will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Consultant's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

DATED this 3rd day of June, 2026.

S. V. Paranjape
Signature of Affiant

Sudhanva Paranjape, PE, Vice President
Printed Name & Title of Affiant

Carollo Engineers, Inc.
Full Legal Name of Respondent

TERESA BOYWID
Notary Public - State of Florida
Commission # HH 695493
My Comm. Expires Jul 8, 2029
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Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 3rd day of June, 2026 by Affiant, who is ☒ personally known to me or ☐ has produced _____ as identification.

Notary Public
My Commission Expires: July 8, 2029

Truth In Negotiation Certification - Attachment K

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT K
TRUTH IN NEGOTIATION CERTIFICATION

Pursuant to Section 287.055(5)(a), Florida Statutes, for any lump-sum or cost-plus-a-fixed fee professional services contract over the threshold amount provided in Section 287.017, Florida Statutes, the Department of Transportation (Department) requires the Respondent to execute this certificate and include it with the submittal of the Technical Proposal, or as prescribed in the contract advertisement.

The Respondent hereby certifies, covenants, and warrants that wage rates and other factual unit costs supporting the compensation for this project's agreement are accurate, complete, and current at the time of contracting.

The Respondent further agrees that the original agreement price and any additions thereto shall be adjusted to exclude any significant sums by which the Department determines the agreement price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such agreement adjustments shall be made within (1) year following the end of the contract. For the purposes of this certificate, the end of the agreement shall be deemed to be the date of final billing or acceptance of the work by the Department, whichever is later.

Signature of Authorized Principal(s):

NAME (print): Sudhanva Paranjape, PE

SIGNATURE: S.V. Paranjape

TITLE: Vice President

FULL LEGAL NAME OF RESPONDENT: Carollo Engineers, Inc.

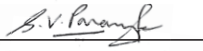
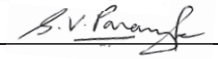
DATE: June 3, 2026

Acknowledgement of Addenda - Attachment L

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT L
ACKNOWLEDGEMENT OF ADDENDA

Respondent hereby acknowledges receipt of the following Addenda, issued by the County and incorporated into and made a part of the RFQ Documents. By acknowledging the Addenda listed below, Respondent hereby certifies that the information, clarifications, revisions, or other items included in each Addenda have been incorporated into the Respondent's Qualifications. Failure to acknowledge and incorporate issued Addenda may result in a Respondent being deemed non-responsive to the requirements of the RFQ and removed from further consideration.

ADDENDUM NUMBER	DATE RECEIVED	PRINT NAME OF RESPONDENT'S AGENT	TITLE OF RESPONDENT'S AGENT	SIGNATURE OF RESPONDENT'S AGENT
1	6/3/2026	Sudhanva Paranjape	Vice President	
2	6/8/2026	Sudhanva Paranjape	Vice President	
3	6/11/2026	Sudhanva Paranjape	Vice President	

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carollo®

ST. JOHNS COUNTY, FL
BOARD OF COUNTY COMMISSIONERS

REQUEST FOR QUALIFICATIONS

RFQ NO: 2902

PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

St. Johns County Purchasing Department
4040 Lewis Speedway
St. Augustine FL 32084
(904) 209-0150
www.sjcfl.us/Purchasing

FINAL
5/22/2026

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

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PART I: GENERAL TERMS AND CONDITIONS

A. DEFINITIONS

Terms used within this Request for Qualifications ("RFQ") shall have the meaning as set forth in the definitions established by the St. Johns County Purchasing Policy ("Policy"), or as provided herein. Terms defined herein, for specific application to this project shall govern over terms defined in the Policy.

B. PURPOSE & INTENT

The purpose of this RFQ is to solicit Qualifications from Respondents licensed to perform professional engineering services in the State of Florida, in accordance with Florida Statutes §287.055 (CCNA), for the planning, design, permitting, and construction phase services for the following projects: .

- Project 1- Trout Creek Water Treatment Plant
- Project 2- Northwest To CR214 Service Area Finished Water Blend & Transfer Station
- Project 3- CR214 Water Treatment Plant Reliability Upgrades
- Project 4 – CR214 Future Improvements Facility Plan

C. SUBMITTAL DEADLINE & LOCATION

Qualifications submitted in response to this RFQ must be delivered to and received by the SJC Purchasing Department by or before **four o'clock (4:00PM EST) on Thursday, June 18, 2026 ("Qualifications Submittal Deadline")**. Any Qualifications received by the SJC Purchasing Department after the stipulated deadline shall not be considered and will be returned to the Respondent, unopened.

Qualifications must be submitted to: St. Johns County Purchasing Department
4040 Lewis Speedway,
St. Augustine, FL 32084

All mail delivered to the County is processed through SJC Central Receiving. Respondents must factor the additional time for processing when mailing their Proposals to the County. Any Proposals that are not delivered to the SJC Purchasing Department by the Submittal Deadline above shall not be considered, even if the Proposal is delivered to SJC Central Receiving prior to the deadline above. SJC Purchasing is not responsible for Proposals that are delayed in delivery due to mail processing activities of the County's Central Receiving Office.

Additionally, the County is not responsible for Proposals that are incorrectly labeled, addressed, mailed or otherwise delivered to an incorrect location other than the SJC Purchasing Department. Any such Proposal that is not received in the SJC Purchasing Department shall be returned to the Proposer, unopened.

D. DESIGNATED POINT OF CONTACT

The County's Designated Point of Contact for this RFQ is Jennifer McDaniel, Procurement Coordinator, St. Johns County Purchasing Department. Any and all questions and/or inquiries shall be directed to the Designated Point of Contact in writing, via email at jmcdaniel@sjcfl.us. In the event the Designated Point of Contact is absent or otherwise unavailable for more than three (3) business days, firms may contact Kayla Lauro, via email at klauro@sjcfl.us.

E. LOBBYING PROHIBITION

In accordance with Section 9 of the Policy, Respondents **SHALL NOT** contact any staff member of St. Johns County, including members of the Board of County Commissioners, except the above referenced individual, with regard to this RFQ. Any such communication is a violation of the Policy and shall result in disqualification, and removal from consideration for award of a contract under this RFQ.

F. SUBMITTAL OF QUESTIONS/INQUIRIES

Any and all questions and/or inquiries related to this RFQ must be directed, **in writing,** to the Designated Point of

Contact as provided above, by or before **four o'clock (4:00PM) EST** on **Thursday, June 4, 2026 ("Question Submittal Deadline")**. Any questions received after this deadline will not be addressed or clarified by the County, unless it is determined to be in the best interest of the County to do so. The County reserves the right to extend the Submittal Deadline for Qualifications in order to clarify or answer questions as necessary to serve the best interest of the County.

G. TENTATIVE SCHEDULE OF EVENTS

The County proposes the tentative schedule of events below. The dates provided may change at the discretion of the County. If any modifications impact the schedule of this RFQ, through and until the Submittal Deadline for Qualifications, the County will issue an Addendum.

Broadcast of RFQ	May 22, 2026
Deadline for Questions	June 4, 2026
Issuance of Final Addendum	June 11, 2026
Qualifications Submittal Deadline	June 18, 2026
1st Stage Evaluation Meeting (Tentative)	June 25, 2026
2nd Stage Evaluation Meeting (Tentative)	July 16, 2026
Negotiations	35 days
Negotiated Contract to BOCC for Consideration	September 2026

H. ADDENDA

Any change, clarification, revision, deletion, additional documents or information provided by the County after broadcast of this RFQ will be provided via Addendum, and posted to Demandstar (www.demandstar.com) with the RFQ Documents. All planholders for this RFQ will be notified of the posted Addendum by Demandstar. Planholders may access Demandstar and download issued Addenda for inclusion in their submitted Qualifications. Respondents may also request issued Addenda from the Designated Point of Contact, in writing. It is the responsibility of the Respondent to acquire any Addenda issued by the County. The County is not responsible for a Respondent's failure to obtain any issued Addenda. Any clarifications, answers, or information provided in any manner other than a formally issued Addendum, are to be considered "unofficial" and shall not bind the County to any requirements, terms or conditions not stated herein.

The County shall make every possible, good faith effort to issue any and all addenda no later than seven (7) days prior to the due date for qualifications. Any addenda issued after this date shall be for material, necessary clarifications to the Request for Qualifications.

Respondents are solely responsible for Incorporating any and all changes, clarifications, revisions, deletions, additional documents and information provided by Addendum into their submitted Qualifications. Failure by Respondents to appropriately consider and incorporate any Addenda into their submitted Qualifications may cause the submitted Qualifications to be considered non-responsive and removed from further consideration. It shall be the sole discretion of the Purchasing Director, or designee, to determine whether or not an Addendum is material to the submitted Qualifications, resulting in disqualification and removal from consideration for award.

Each Respondent must acknowledge all issued Addenda by completing and submitting **Attachment "L",** as provided herein, in their submitted Qualifications.

I. SOLICITATION POSTPONEMENT/CANCELLATION

The County may, at its sole and absolute discretion, postpone, cancel, or re-advertise, at any time, this solicitation process for any reason, as determined by Purchasing Director, in order to best serve the interests of the County.

J. RIGHT TO REJECT/ACCEPT

The County reserves the right to accept or reject any or all Qualifications, waive minor formalities and irregularities which do not materially affect the solicitation or the submitted Qualifications, and to award to the Respondent that serves the best interest of the County.

K. COMPLIANCE WITH ST. JOHNS COUNTY PURCHASING POLICY

All applicable terms and conditions of the St. Johns County Purchasing Policy ("Policy"), and associated procedures are incorporated into this RFQ Document by reference and are fully binding. Respondents are required to submit their responses to this RFQ, and to conduct their activities during this process in accordance with the Policy and associated procedures.

This solicitation, the subsequent evaluation, negotiations, and contract award shall be in accordance with the Policy and associated procedures. The County reserves the right to disqualify, remove from consideration, or suspend/debar as appropriate, any Respondent or Supplier that does not comply with the applicable requirements set forth in the Policy and associated procedures.

L. <u>PAYMENTWORKS REGISTRATION</u>

The County has implemented a registration process for awarded Suppliers, which includes Contractors and Consultants even if the Supplier, Contractor, or Consultant is currently or has previously done business with the County. This process is through PaymentWorks, a third-party payee management system. Upon award, Supplier will receive an invitation to register from the County Purchasing Department, via email, which will originate from the PaymentWorks system.

If a Supplier has already registered within PaymentWorks, the registration does not have to be done again. However, in order to link the Supplier's current account with the County in PaymentWorks, the Supplier must provide the email to the person that is used on the Supplier's current account in PaymentWorks. The Supplier is responsible for completing the registration process for acceptance by the County, in order to receive any payments. The County cannot edit, input and/or bypass any portion of the registration for the Supplier. If there are any questions about this process, Suppliers can reach out to Leanne Cribbs at lcribbs@sjcfl.us

M. SUB-CONTRACTORS

If a Respondent elects to sub-contract with any Contractors, Consultants, or Suppliers, for any portion(s) of the required Services, Respondent must identify all such Sub-Contractor(s) in the submitted Qualifications, along with the portion(s) of the Services, they are proposed to perform. The County may, at its discretion, require Respondent to submit additional, relevant data necessary to establish to the satisfaction of the County, the qualifications, reliability and responsibility of the Sub-Contractor(s) proposed, to ensure, they are appropriately qualified and capable to perform the specified Services.

Prior to award of a contract, the County will notify the Respondent, in writing, if the County, after due investigation, has reasonable and substantial objections to any proposed Sub-Contractor. The Respondent may then submit an alternate Sub-Contractor for consideration of the County, at no additional cost to the County, or may request to withdraw from consideration of award. If the Respondent fails to propose an alternate Sub-Contractor within seven (7) calendar days of the original notification, the County may disqualify the Respondent, at no cost to the County.

The County reserves the right to disqualify any Respondent, Contractor, Consultant, Supplier or Individual from consideration to perform Services, at either a prime or sub level, due to previously documented issues with performance, quality or compliance with the County or any other agency.

The awarded Respondent is responsible for ensuring that proposed Sub-Contractors only perform the Services for which they were proposed and accepted by the County, and Respondent must not change the Sub-Contractor(s) without prior written approval by the County.

The awarded Respondent shall be responsible for any and all Services performed by any Sub-Contractor(s) and such

sub-contracts shall not relieve the awarded Respondent of any obligations or responsibilities stated in the awarded Contract.

N. PROHIBITION AGAINST CONSIDERATION OF SOCIAL, POLITICAL, OR IDEOLOGICAL INTERESTS

Respondents are hereby notified of the provisions of Section 287.05701, Florida Statutes, as amended, that the County will not request documentation of or consider a Respondent's social, political, or ideological interests when determining if the Respondents is a responsible Respondent. Proposers are further notified that the County's governing body shall not give preference to a Respondent based on the Respondent's social, political, or ideological interests.

O. CONVICTED AND DISCRIMINATORY VENDOR LISTS, AND SCRUTINIZED COMPANIES

Respondent warrants that neither it nor any Subcontractor is currently on the convicted vendor list or the discriminatory vendor list maintained pursuant to Sections 287.133 and 287.134 of the Florida Statutes, or on any similar list maintained by any other state or the federal government. Respondent shall immediately notify the County in writing if its ability to perform is compromised in any manner during the term of the Contract.

Section 287.135 of the Florida Statutes prohibits agencies from contracting with companies for goods or services that are on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel, and from contracting with companies for goods or services of $1,000,000 or more that are on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or are engaged in business operations in Cuba or Syria. The lists are created pursuant to §215.473 and §215.4725, F.S. By execution of this Contract, Respondent certifies that it is not listed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and is not engaged in a boycott of Israel or engaged in business operations in Cuba or Syria, and understands that pursuant to §287.135, F.S., the submission of a false certification may subject Respondent to civil penalties, attorney's fees, and/or costs. In accordance with §287.135, F.S., the County may terminate this Contract if a false certification has been made, or the Respondent is subsequently placed on any of these lists or engages in a boycott of Israel or is engaged in business operations in Cuba or Syria.

P. COMPLIANCE WITH FLORIDA STATUTE 287.138

Pursuant to 287.138 F.S., effective July 1, 2023, the County may not enter into contracts which grants the Respondent access to personal identifiable information if: 1) the Respondent is owned by the government of a Foreign Country of Concern (as defined by the statute: (b) the government of a Foreign Country of Concern has a controlling interest in the entity; or (c) the Respondent is organized under the law of or has its principal place of business in a Foreign Country of Concern. The County shall be entitled to immediately terminate this Agreement with liability to ensure the County's continued compliance with the statute.

Pursuant to 287.138 F.S., effective January 1, 2024, if Respondent may access, receive, transmit, or maintain personal identifiable information under this Agreement, Respondent must submit a Foreign Entity Affidavit to the County. Additionally, effective July 1, 2025, Respondent shall submit a Foreign Entity Affidavit to the County prior to any renewals of this Agreement. Failure or refusal to submit a Foreign Entity Affidavit shall be cause for immediate termination of this Agreement by the County.

Q. EMPLOYMENT ELIGIBILITY AND MANDATORY USE OF E-VERIFY

As a condition precedent to entering into the awarded Contract, and in accordance with section Florida Statute § 448.095, Florida Statutes, awarded Respondent and all sub-contractors shall register with and use the E-Verify system to verify the work authorization status of all employees hired on or after July 1, 2023.

1. Awarded Respondent shall require each sub-contractor to provide Respondent with an affidavit stating that the sub-contractor does not employ, contract with, or sub-contract with an unauthorized alien. Awarded Respondent shall maintain a copy of such affidavit for the duration of the awarded Contract.

2. The County, Respondent, or any sub-contractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated Florida Statute § 448.09(1), or these provisions regarding employment eligibility shall terminate the contract with the person or entity.

3. The County, upon good faith belief that a subcontractor knowingly violated these provisions regarding employment eligibility, but Contractor otherwise complied, shall promptly notify Respondent and Respondent shall immediately terminate the contract with the subcontractor.

4. Awarded Respondent acknowledges that, in the event that the County terminates the awarded Contract for Respondent's breach of these provisions regarding employment eligibility, then Respondent may not be awarded a public contract for at least one (1) year after such termination. Respondent further acknowledges that Respondent is liable for any additional costs incurred by the County as a result of the County's termination of the awarded Contract for breach of these provisions regarding employment eligibility.

PART II: SCOPE OF SERVICES

A. OVERVIEW

The St. Johns County Utility Department ("SJCUD") is undertaking a comprehensive program of water supply, treatment, and distribution improvements to address existing system constraints and accommodate projected population growth within the Mainland Utility Service Areas. Potable water demand is expected to increase significantly over the next twenty (20) years, requiring both near-term infrastructure enhancements and long-term system expansion to ensure reliable and sustainable service delivery. SJCUD commissioned the 2025 Mainland Water Supply Master Plan (MWSMP) to address projected growth in potable water demand, which is anticipated to increase from approximately 10.32 million gallons per day (MGD) to 18.32 MGD over the next 20 years.

The County's water system is currently served by multiple treatment facilities, including the Northwest Water Treatment Plant ("WTP") and the County Road 214 WTP. As growth continues, these facilities will require expansion, operational improvements, and enhanced interconnectivity to meet future demand and maintain system performance. Planned improvements include increased treatment capacity, expanded transmission capabilities, and optimization of system operations through blending and transfer of finished water between service areas.

To support these efforts, the County anticipates the implementation of multiple capital improvement projects, including, but not limited to, the development of a new water treatment facility in the Mainland service area, improvements to the County Road 214 Water Treatment Plant and construction of finished water blending and transfer facilities.

The awarded Consultant shall provide a comprehensive range of professional engineering services, including planning, evaluation, design, permitting, bidding assistance, construction administration, and post-construction support for these projects:

- Project 1- Trout Creek Water Treatment Plant
- Project 2- Northwest To CR214 Service Area Finished Water Blend & Transfer Station
- Project 3- CR214 Water Treatment Plant Reliability Upgrades
- Project 4 – CR214 Future Improvements Facility Plan

B. DESIGN CAPACITIES

The St. Johns County Mainland service area is currently served by the Northwest WTP and the County Road 214 WTP. Based on projected growth, the existing facilities are expected to exceed their build-out treatment and raw water capacities within the planning horizon, with capacity constraints anticipated as early as 2030.

To address future demand, system improvements will include the transfer of treated water from the northwest service area to the County Road 214 service area. Long-term planning efforts have identified the need to transfer

up to approximately 4.4 million gallons per day ("MGD") of finished water to support system demands by 2045. The proposed Trout Creek WTP will serve the northwest portion of the service area and will be designed to interconnect with the existing Northwest WTP system, providing additional capacity and facilitating the required transfer of water to the southeastern portion of the service area.

The current design capacities and treated flow rates for the existing water treatment facilities are provided in Table 1. Transfer flows are included within the total flow values presented herein.

The awarded Consultant shall consider both existing system capacities and projected demand conditions when developing design solutions, ensuring that all improvements are scalable, operationally efficient, and capable of supporting long-term system needs.

Table 1-Current Permit Capacity and Flows

Facility	Permit Capacity (Maximum Day)(MGD)	2025 Average Annual Flow (MGD)	2025 Maximum Day Flow (MGD)
Northwest WTP	9.0	6.335	9.296
CR214 WTP	8.0 Reverse Osmosis/Raw + 2.0 Transfer from NW	6.260	8.227
NW to CR214 Transfer	2.0	1.48	-
* Northwest WTP is currently in design for expansion to a 12.0 MGD maximum day flow (MDF) capacity.			

The projected design capacities, finished water flows, and transfer flow rates for the water treatment facilities are provided in Table 2. These projections reflect anticipated system demands and planned infrastructure improvements over the planning horizon.

Table 2- Projected Flows

Facility	Permit Capacity (Maximum Day) (MGD)	2030 Maximum Day Flow (MGD)	2035 Maximum Day Flow (MGD)	2040 Maximum Day Flow (MGD)	2045 Maximum Day Flow (MGD)
Northwest WTP	12.0	9.6	10.8	10.8	10.8
CR214 WTP	8.0 + 4.5 Transfer	10.3	11.08	11.78	12.39
Trout Creek WTP	5.0 (Future 10.0)	2.14	3.76	6.31	8.56
Existing CR208 Transfer to CR214	2.0	2.0	2.0	2.0	2.0
Additional NW to CR214 Transfer	2.5	0.3	1.1	1.8	2.4

C. DESIGN STANDARDS

The awarded Consultant shall be responsible for identifying, researching, and complying with all applicable federal, state, and local codes, standards, and regulatory requirements necessary for the successful completion of each assigned project. All designs, plans, and specifications shall be prepared in accordance with the most current versions, revisions, and amendments of such codes and standards, whether or not specifically listed herein.

Applicable codes, standards, and requirements may include, but are not limited to, the following:

- St. Johns County Utility Department Manual of Water, Wastewater, and Reuse Design Standards
- St. Johns County Land Development Code
- Applicable landscaping and irrigation requirements, including compliance with the SilverLeaf Planned Unit Development (PUD) (Ordinance No. 2024-55) and St. Johns County landscape and tree protection ordinances

- Florida Department of Environmental Protection (FDEP) regulations
- St. Johns River Water Management District (SJRWMD) requirements
- U.S. Army Corps of Engineers (USACE) permitting requirements
- St. Johns County Supervisory Control and Data Acquisition (SCADA) System Standards (latest edition)

D. LIST OF PROJECTS:

PROJECT 1- TROUT CREEK WATER TREATMENT PLANT

1. Project Description

The awarded Consultant shall provide professional engineering services for the design and construction of the Trout Creek WTP. The proposed facility will have an initial maximum day flow (MDF) capacity of 5.0 million gallons per day (MGD) and is anticipated to be located on a 4.6-acre site at 7980 County Road 16A, St. Augustine, Florida (Parcel ID 010790 0011), adjacent to Florida Department of Transportation (FDOT) property and a planned SilverLeaf residential development.

The site is generally considered a greenfield location, with the exception of approximately one (1) acre of cleared area associated with the installation of two test wells. Stormwater treatment for the WTP site will be accommodated by an off-site facility located within the adjacent SilverLeaf development. Design and permitting of the off-site stormwater pond are not included within the scope of this contract.

The facility will be supported by a new wellfield. A test well program is currently underway in parallel with this solicitation, and raw water quality data is anticipated to be available in late 2026. Should the identified site prove infeasible, the project may be relocated to an alternative suitable location.

Trout Creek WTP is on an expedited schedule, with the goal of delivering treated water by September 2029.

2. Design Criteria

a) Design Flow

The Trout Creek WTP shall be designed with an initial capacity of 5.0 MGD, with provisions for future expansion to 10.0 MGD. The maximum day and peak hour design factors are anticipated to be consistent with those of the Northwest Water Treatment Plant, estimated at 1.5 and 2.5, respectively.

b) Raw Water Quality Characteristics

SJCUD is currently completing an Upper Florida Aquifer ("UFA") test well within the Trout Creek wellfield. The County anticipates the raw water quality is expected to be similar to that of the Northwest Water Treatment Plant, which is characterized by elevated levels of total dissolved solids ("TDS"), sulfate, and hardness. Additionally, a well location approximately 0.5 miles from the site was sampled for water quality. These sampling results are provided in Exhibit B.

The Consultant shall evaluate available water quality data and recommend an appropriate treatment process for the facility. The design shall account for potential future treatment requirements, including sulfate removal and associated waste stream management, if necessary.

The current test well program is scheduled for completion between April 2026 and November 2026, with a draft test well report anticipated in December 2026.

c) Treatment Limits

Finished water produced by the Trout Creek WTP shall comply with all applicable Primary and Secondary Drinking Water Regulations, including those established by the Florida Department of Environmental Protection (FDEP) under Chapter 62-550, Florida Administrative Code. The design shall also meet FDEP requirements for 4-log virus inactivation utilizing free chlorine disinfection.

3. Design Considerations

The Consultant shall incorporate all site-specific constraints, existing conditions, and project requirements into the design of the Trout Creek Water Treatment Plant. Design considerations shall include, but not be limited to, field services, utility coordination, site planning, and civil site work, as described herein.

a) Field Services

The awarded Consultant shall review and utilize the existing on-site topographic survey completed by St. Johns County provided on Exhibit C and shall identify and perform any additional surveying required to support the project. Off-site survey services shall be included as necessary.

No geotechnical investigations have been completed for the project site. The Consultant shall perform all necessary geotechnical investigations and incorporate the findings into the design.

Wetland delineation and wildlife assessments have been previously completed for the site and are provided on Exhibit D. The Consultant shall review available environmental data and perform any additional environmental assessments necessary to support permitting and design requirements.

b) Utilities

The awarded Consultant shall coordinate with all applicable utility providers and design all required utility infrastructure to support the facility.

Electrical service shall be provided through coordination with Florida Power and Light (“FPL”) to deliver 480-volt, three-phase service to the site. The Consultant shall coordinate all required electrical service extensions and connections.

Potable water service is not currently available at the project site. The Consultant shall design an on-site potable water distribution system to serve the facility and may be required to design an off-site water transmission main, up to approximately 5,000 linear feet, to connect to the existing system. The final connection distance may be reduced depending on adjacent development timing.

Sewer service is available via a pressurized force main located approximately 5,000 linear feet south of the project site. The Consultant shall design the necessary off-site force main extension to connect the facility, with potential reductions in length based on adjacent development conditions.

The awarded Consultant shall also coordinate the extension of high-speed communication infrastructure to support facility operations.

c) Site Planning

The site design must accommodate the initial construction of a 5.0 MGD water treatment facility with provisions for expansion to 10.0 MGD. The design shall include one production well and one monitoring well (at the location shown on Exhibit E) and shall account for long-term operational needs and site expansion requirements.

The project site is located within the SilverLeaf Planned Unit Development (PUD) (Ordinance No. 2024-55) and shall comply with all applicable development requirements. The Consultant shall incorporate applicable setback, landscaping, and screening requirements, including Scenic Edge requirements along County Road 16A.

Approximately 0.43 acres of isolated wetlands have been identified on-site. State permitting for wetland impacts is being initiated separately. The Consultant shall coordinate the design with the approved permitting strategy and complete all required local permitting activities.

d) Civil Site Work

The awarded Consultant shall design all required civil site improvements, including clearing, grading, and site preparation in accordance with geotechnical recommendations. Design shall include on-site stormwater conveyance systems, access improvements, and integration with off-site stormwater facilities.

Stormwater treatment will be provided through an off-site pond located within the adjacent SilverLeaf development. The Consultant shall design all on-site stormwater conveyance and complete permitting for those improvements. The off-site stormwater pond will be designed and permitted by others, with coordination required to ensure compatibility with the project.

e) Production Well No.1

The on-site Trout Creek test well is intended to be converted into Production Well No. 1. The Consultant shall design the permanent wellhead and associated infrastructure, including vertical turbine pumps, variable frequency drive (VFD) control panels, and remote terminal unit (RTU) panels necessary for integration into the facility's control systems.

4. Description of Tasks

The awarded Consultant shall provide all professional engineering, bidding assistance, and construction phase services necessary for the successful delivery of the Trout Creek Water Treatment Plant project. Services shall include, but not be limited to, project management and coordination; organizing, attending, and leading design progress meetings; and coordination with FPL and other utility providers, as required.

The awarded Consultant shall perform all technical evaluations necessary to support the project, including geotechnical investigations, evaluation and selection of appropriate treatment processes and equipment, and analysis of raw water quality conditions. The Consultant shall utilize and update the existing hydraulic water model to establish appropriate delivery conditions and system integration requirements for the Trout Creek Water Treatment Plant.

Design services shall include the development of all required on-site and off-site infrastructure, including water transmission mains, force main extensions, raw water connections, and internal process connectivity. The Consultant shall coordinate with England Thims & Miller, Inc. for the design, permitting, connection to, and construction of the off-site stormwater system, as applicable.

The awarded Consultant shall prepare all required technical documentation, including a Raw Water Quality Analysis and Process Selection Memorandum, a Preliminary Design Report, and a Master Phasing Plan. Services shall also include the preparation of complete construction plans and specifications suitable for bidding, development of equipment pre-purchase packages as necessary to support the project schedule, and preparation of an Opinion of Probable Construction Cost.

The awarded Consultant shall obtain all required permits and provide bidding services, including support during procurement and evaluation. The Consultant shall also provide engineering services during construction, including review of submittals, responses to requests for information, site visits, and general support necessary to ensure the project is constructed in accordance with the approved design. A project risk register shall be developed and maintained throughout the design and construction phases.

Additional services may be required as identified by the County to support successful project delivery.

PROJECT 2- NORTHWEST TO CR214 SERVICE AREA FINISHED WATER BLEND & TRANSFER STATION

1. Project Description

The Consultant shall provide professional engineering services for the design and construction of a Northwest to CR214 Service Area Finished Water Blending and Transfer Station. This project is intended to improve system capacity, reliability, and water quality within the CR214 service area by facilitating the transfer and blending of finished water from the northwest portion of St. Johns County.

The CR214 WTP wellfield has limited expansion potential and relies on reverse osmosis treatment due to lower raw water quality. In contrast, higher quality raw water is available in the northwest service area. System planning has identified the transfer of water from the northwest to the CR214 service area as a preferred solution to meet increasing demand and maintain system performance.

A 2.0 MGD blending and transfer station was previously constructed at the CR214 WTP site in 2018. This project will expand system capability through the construction of a new 2.5 MGD blending, storage, and booster pump station. The new facility shall be designed to integrate with existing infrastructure, including the current blending station, high service pump station, and SCADA system at the CR214 WTP.

The awarded Consultant shall utilize and update the existing hydraulic water model to establish final design flows, pressures, and system operating conditions.

Conceptual planning has identified a potential corridor along CR 2209 and a general location west of the CR214 WTP for the proposed facility. The Consultant shall evaluate alternative site locations, including potential property acquisition sites and existing County-owned properties, to determine the most feasible location for the project.

2. Design Criteria

a) Design Flow and Pressure

The blending and transfer station shall be designed to convey approximately 2.5 MGD of finished water from the northwest service area to the CR214 service area. Final design pressures and operating conditions shall be established based on system modeling and analysis performed as part of this project.

b) Blend Water Quality Characteristics

The awarded Consultant shall evaluate existing water quality data from the Northwest WTP and CR214 WTP, along with available data from the Trout Creek wellfield, to determine appropriate blending strategies. The hydraulic water model shall be updated and utilized to establish blend rates and optimize system performance.

c) Treatment Limits

Finished water produced through the blending and transfer process shall meet all applicable Primary and Secondary Drinking Water Regulations, including those established by the Florida Department of Environmental Protection (FDEP) under Chapter 62-550, Florida Administrative Code. The design shall account for differences in disinfection methods, including free chlorine used in the northwest system and chloramines used within the CR214 service area.

3. Design Considerations

a) Off-Site Utilities

Transmission piping associated with the transfer of water from the northwest service area to CR214 is not included within this RFQ. However, the awarded Consultant shall evaluate and design any off-site piping required to connect the blending and booster pump station to the existing transmission system.

b) Stormwater Treatment

The project site shall include stormwater conveyance improvements with connection to off-site retention necessary to support the facility. The awarded Consultant shall design and permit stormwater systems

in accordance with applicable regulations and shall obtain an Environmental Resource Permit (ERP) from the State of Florida, as required.

4. Description of Tasks

The awarded Consultant shall provide all professional engineering, bidding assistance, and construction phase services necessary for the successful delivery of the project. Services shall include, but not be limited to, evaluation of alternative site locations, including both existing County-owned properties and potential acquisition sites, to determine the most feasible location for the facility.

The awarded Consultant shall perform all required field and technical evaluations, including surveying, geotechnical investigations, and environmental assessments, including wetland delineation. The Consultant shall organize, attend, and lead all design progress meetings and coordinate with Florida Power and Light (FP&L) and other utility providers, as required.

The awarded Consultant shall evaluate contributing water qualities and blending requirements, perform treatment process and equipment selection, and utilize/update the existing hydraulic water model to establish final project delivery conditions. Technical documentation shall include preparation of a Blend Water Quality Analysis and Process Selection Memorandum, a Hydraulic Modeling Memorandum, and a Preliminary Design Report and Master Phasing Plan, as applicable.

Design services shall include the preparation of complete construction drawings and specifications at the 60%, 90%, and 100% design stages. The Consultant shall obtain all required permits, develop and maintain a project risk register, and prepare an Opinion of Probable Construction Cost.

The awarded Consultant shall also provide bidding assistance services and engineering services during construction, including review of submittals, responses to requests for information, and general support necessary to ensure the project is constructed in accordance with the approved design.

PROJECT 3- CR214 WATER TREATMENT PLANT RELIABILITY UPGRADES

1. Project Description

The awarded Consultant shall provide professional engineering services to evaluate and implement reliability upgrades at the County Road 214 WTP. The CR214 WTP is a critical component of the St. Johns County potable water system, serving as both a primary source of supply and the primary transfer point for water from the northwest service area. Its role within the system makes reliability, redundancy, and operational capacity essential to meeting current and future demand.

This project will focus on improving plant infrastructure to enhance reliability and resilience and to reduce system vulnerabilities. The existing facility includes two (2) 2.0 MGD reverse osmosis (RO) treatment skids that operate in conjunction with raw water blending to produce approximately 8.0 MGD of finished water.

The awarded Consultant shall evaluate alternatives to provide redundancy for the existing RO treatment system and associated processes. Potential improvements may include the addition of a third 2.0 MGD RO backup skid, cartridge filtration, or other equipment and system enhancements that can be placed into service with minimal operational disruption. The Consultant shall recommend the most feasible and cost-effective solution to improve system reliability and maintain continuous plant operation.

2. Description of Tasks

The awarded Consultant shall provide all professional engineering, bidding assistance, and construction phase services necessary to support the implementation of reliability upgrades at the CR214 Water Treatment Plant. Services shall include, but not be limited to, organizing, attending, and leading design progress meetings and coordinating all design activities with existing plant infrastructure, equipment, and

the County's SCADA control system. The Consultant shall consider existing facility constraints, including provisions within the original design for future expansion, such as space allocated for a third RO skid.

The awarded Consultant shall develop design solutions that maintain continuous plant operations during construction and implementation of improvements. Design services shall include the preparation of a Preliminary Design Report and complete construction documents, including design drawings and specifications at the 60%, 90%, and 100% design stages.

The awarded Consultant shall obtain all required permits, develop and maintain a project risk register, and prepare an Opinion of Probable Construction Cost. Services shall also include bidding support and engineering services during construction, including review of submittals, responses to requests for information, and coordination necessary to ensure the work is completed in accordance with the approved design.

PROJECT 4 – CR214 FUTURE IMPROVEMENTS FACILITY PLAN

1. **Project Description**

The awarded Consultant shall provide professional engineering services to develop a comprehensive facility plan for the County Road 214 WTP to support long-term operational efficiency, reliability, and capacity. This effort shall include a detailed evaluation of the existing plant design, operations, and performance, in coordination with the other projects identified in this RFQ.

The awarded Consultant shall identify infrastructure improvements necessary to optimize plant operations and support long-term system demands. Known operational challenges include limited operating depth within the clearwell, which results in excessive cycling of transfer pumps and flow fluctuations impacting downstream treatment processes and concentrate disposal. The Consultant shall evaluate these and other system constraints and develop recommended solutions.

The facility plan shall include conceptual-level designs (approximately 30% design) for proposed improvements, along with supporting technical analysis. Additional considerations may include, but are not limited to, high service pump upgrades and system modifications based on the final capacity requirements and configuration of the finished water transfer system. The Consultant may utilize and update existing hydraulic water to complete the facility plan.

The awarded Consultant shall prepare a concise, prioritized ten (10)-year implementation roadmap that identifies recommended improvements, estimated costs, and sequencing of projects necessary to achieve full operational efficiency at the CR214 WTP. The plan shall include a budget framework to support capital planning and funding strategies.

E. PROJECT SCHEDULES

It is anticipated that the master contract will be executed in or around September 2026. Project schedules will vary based on scope, funding availability, and task order authorization; however, anticipated timelines for key projects are provided in Table 3.

Project schedules are estimates and may be adjusted by the County based on funding availability, permitting requirements, and operational priorities.

Table 3 – Project Schedules

Project No.	Project Name	Design Start	Design Complete	Facility Operational	Bond Schedule
1	Trout Creek Water Treatment Plant	September 2026	July 2027	September 2029	All Engineering and

2	Northwest to CR214 Service Area Finished Water Transfer Station	November 2026	January 2028	September 2029	Construction shall be completed within three (3) years from the anticipated Bond issuance date of January 2027.
3	CR214 WTP Reliability Upgrades	March 2027	November 2027	Per Bond Schedule	
4	CR214 WTP Future Improvements Facility Plan & Preliminary Design	November 2026	June 2027	Results Inform Projects 2 & 3	

PART III: SUBMITTAL INSTRUCTIONS & FORMAT

A. RESPONDENT RESPONSIBILITIES

Respondents are responsible for any and all costs associated with developing and submitting Qualifications in response to this RFQ. Respondents are also solely responsible for any and all costs associated with interviews and/or presentations. It is expressly understood that no Respondent may seek or claim any award and/or re-imbursement from the County for any expenses, costs, and/or fees (including attorneys' fees) borne by any Respondent, during the entire RFQ process. Such expenses, costs, and/or fees (including attorneys' fees) are the sole responsibility of the Respondent.

All Qualifications received in response to this RFQ shall become the property of St. Johns County and will not be returned. In the event of contract award, all documentation produced as part of the contract will become the exclusive property of the County.

By submitting Qualifications in response to this RFQ, Respondent certifies that its representatives have carefully read and fully understood all instructions and requirements provided in the RFQ Documents, including any Exhibits and/or Attachments, and have full knowledge of the scope, nature, and quality of work to be performed for the County. All Qualifications submitted must be binding for a minimum of one hundred twenty (120) consecutive calendar days from the Submittal Deadline, as provided herein, or as revised in an Addendum.

Respondents are responsible for complying with all applicable provisions of the Policy as well as all applicable rules, laws, codes, and ordinances throughout the solicitation process.

B. MINIMUM QUALIFICATIONS

The following are the minimum requirements that the Respondent must meet in order to be considered responsible to perform the specified Services. Respondent must submit sufficient documentation to clearly demonstrate that Respondent meets or exceeds the following minimum qualification requirements:

1. Must be a licensed Engineer, in the State of Florida, as defined in Chapter 287.055(2)(h)(2), Florida Statutes; and
2. Must have an active registration with the State of Florida, Department of State, Division of Corporations; and
3. Must provide a copy of a current Local Business Tax Receipt from St. Johns County or from a local jurisdiction in the State of Florida where the Respondent's permanent business location or branch office is maintained, or provide written exemption from the SJC Tax Collector's Office. If Respondent does not possess a current Local Business Tax Receipt from St. Johns County or from their local jurisdiction, as provided above, Respondent must obtain such required Local Business Tax Receipt upon notification of the County's intent to award the Respondent; and
4. Must submit any and all experience in performing professional engineering services for public water supply facility projects similar in size and scope as provided in the Scope herein, within the past five (5) years. Failure to submit experience shall be deemed a material defect, which shall cause Respondent to be deemed non-responsive and removed from further consideration under this RFQ.

Failure by any Respondent to meet the minimum requirements stated above shall result in Respondent being deemed non-responsive and removed from further consideration. Minimum qualification requirements must be maintained throughout the duration of an awarded Contract.

C. JOINT VENTURE

In the event a Joint Venture submits Qualifications, all documents required by the Florida Department of Business and Professional Regulation must be filed, in accordance with Section 489.119, Florida Statutes, prior to the Submittal Deadline for Qualifications, as stated herein, or as revised by Addendum. The documents included in the Joint Venture's Qualifications must be signed by an individual that is duly empowered by a properly executed Declaration of a Joint Venture and Power-of-Attorney. The Joint Venture's Qualifications must clearly identify the member of the Joint Venture that will be responsible for each aspect of the Services required under the awarded Contract.

D. TRADE SECRETS

All material marked as a trade secret must be separated from all non-trade secret material, such as being submitted in a separate envelope clearly marked as "trade secret". If the County receives a public records request for a document or information that is marked and certified as a trade secret, the County shall promptly notify the person that certified the document as a trade secret.

To invoke the provisions of Florida Statute 812.081, Trade Secrets, or other applicable law, the requesting firm must complete an Affidavit of Trade Secret Confidentiality, signed by an officer of the company, and submit the affidavit with the information classified as "Trade Secret" with other proposed documents. The affidavit must reference the applicable law or laws under which trade secret status is to be granted.

E. USE OF COUNTY LOGO

Pursuant to, and consistent with, County Ordinance 92-2 and County Administrative Policy 101.3, the Respondent may not manufacture, use, display, or otherwise use any facsimile or reproduction of the County Seal/Logo without express written approval of the Board of County Commissioners of St. Johns County, Florida.

F. PUBLIC RECORDS

1. The cost of reproduction, access to, disclosure, non-disclosure, or exemption of records, data, documents, and/or materials, associated with this RFQ shall be subject to the applicable provisions of the Florida Public Records Law (Chapter 119, Florida Statutes), and other applicable State and Federal provisions. Access to such public records, may not be blocked, thwarted, and/or hindered by placing the public records in the possession of a third party, or an unaffiliated party.

2. In accordance with Florida law, to the extent that awarded Consultant's performance under the awarded Contract constitutes an act on behalf of the County, Consultant shall comply with all requirements of Florida's public records law. Specifically, if Respondent is expressly authorized, and acts on behalf of the County under the awarded Contract, awarded Consultant shall:

   i. Keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the Services for at least 5 years from final payment
   ii. Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost as provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
   iii. Ensure that public records related to the awarded Contract that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by applicable law for the duration of the awarded Contract and following completion of the awarded Contract if the awarded Consultant does not transfer the records to the County; and
   iv. Upon completion of the awarded Contract, transfer, at no cost, to the County all public records in possession of the Consultant or keep and maintain public records required by the County to perform the

Services for at least 5 years from final payment.

If the awarded Consultant transfers all public records to the County upon completion of the awarded Contract, the awarded Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the awarded Consultant keeps and maintains public records upon completion of the Contract, the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the County's information technology systems.

Failure by the Consultant to comply with the requirements of this section shall be grounds for immediate, unilateral termination of the awarded Contract by the County.

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE AWARDED AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: 500 San Sebastian View, St. Augustine, FL 32084, (904) 209-0805, publicrecords@sjcfl.us.

G. CONFLICT OF INTEREST

Respondents must certify that they presently have no interest and shall acquire no interest, either directly or indirectly, which would conflict in any manner with the performance of required services provided herein.

Respondents must certify that no person having any interest shall be employed for the performance of any of the required services as provided herein.

Respondents are required to disclose to the County any and all potential conflicts of interest for any prospective business association, interest or circumstance, the nature of work the Respondent may undertake and request an opinion from the County, whether such association, interest, or circumstance constitutes a conflict of interest.

Respondents must disclose any contractual or employment relationship with any County officer or employee in the submitted Qualifications. Additionally, Respondents must disclose any ownership interest in the responding firm by a County officer or employee, including elected officials. Failure to disclose such information shall be grounds for disqualification, termination of award, suspension or debarment.

NO RESPONDENT, OR KEY PERSONNEL OF A RESPONDENT, MAY PARTICIPATE IN MORE THAN ONE (1) RESPONSE TO THIS RFQ. PARTICIPATION IN MULTIPLE RESPONSES SHALL RESULT IN THE DISQUALIFICATION AND REMOVAL FROM CONSIDERATION ALL RESPONDENTS INVOLVED.

H. QUALIFICATION SUBMITTAL INSTRUCTIONS

Respondent must submit one (1) original hard copy of the Qualifications, and one (1) exact electronic PDF copy of the Qualifications on an unlocked USB Drive. A CD/DVD is not an acceptable alternative to the USB Drive. The hard-copy and USB Drive must be placed in a sealed envelope or container, labeled with the Respondent's full legal name, mailing address, and the solicitation number and title. A mailing label is provided herein to assist with appropriately labeling the Respondent's package. The County is not responsible for any Qualifications that are incorrectly labeled and are not delivered to the appropriate location as provided herein.

Qualifications must be submitted on 8 ½"x11" pages, with no less than ½" margins and 11pt font. Sections and sub-sections must be clearly identified. **The Qualifications must not exceed forty (40) pages in length**, which does not include the County issued attachments, table of contents, addenda, and section separators. It is highly recommended that Respondents follow the prescribed organization of the submittal, in order to facilitate evaluation.

Submitted Qualifications must include, at a minimum, the following components, including any and all attachments specified herein, as listed below:

Section 1: Qualifications Cover Page and Cover Letter
Respondent must complete and submit the Qualifications Cover Page, provided herein, and must also provide a 1–2-page cover letter, that must include, but is not limited to the following:

- Full legal company name, including any fictitious name(s), and Company type (i.e. Corporation, Partnership, Joint Venture, etc.).
- Physical street address and mailing address (if different), including any other location(s) which may perform portions of the Services.
- Primary point of contact information (name, title, phone, email), and any secondary or supplemental point(s) of contact information.
- Names and titles of principals, partners, or owners, as applicable.
- Brief statement of company history (date of establishment, number of years in business, number of employees, etc.) and business philosophy; and
- Brief statement regarding the Respondent's interest in this project.

Delegation of Authority
Respondent must provide a signed Delegation of Authority Letter for any representative signing the Qualifications on behalf of the Respondent, who are not principals, owners, partners, etc., for the Respondent. The Delegation of Authority Letter must state the level(s) of authority delegated to each representative, must be on company letterhead, and must be signed by a principal, owner, or partner (as applicable) of the Respondent. The principal, owner, or partner **must** be listed on Sunbiz, or provide official documentation establishing their authority, in order for the County to accept the signature of the Delegation of Authority.

Section 2: Team Qualifications
Respondent must provide documentation to fully demonstrate the qualifications, education and abilities of the identified Key Personnel that shall be performing Services on this Project, if awarded. Respondent must provide evidence of being a certified minority business enterprise, if applicable. Respondents must provide the following, at a minimum, as well as any supplemental documentation which demonstrates the Staff Qualifications:

Licenses/Certifications –Provide documentation to demonstrate meeting Minimum Qualification requirements as provided herein, along with any other current licenses and certifications applicable to this project, held by Respondent and Key Personnel who are proposed to participate in the Services; and

Project Team – Provide the Respondent's Key Personnel and/or Sub-Contractors assigned to the project, such as the Project Manager, Process Engineer, Civil/Site Engineer, Electrical Engineer, Instrumentation and Controls (I&C) Engineer, Structural Engineer, Hydraulic/Mechanical Engineer, and Hydraulic Modeler, who will comprise the project team, and provide a description of their qualifications, education and capabilities to perform the Services addressed within the Qualifications. Indicate whether the firm currently has on payroll all employees necessary for performance of all the required work or if new employees would need to be hired. Describe staffing plans and the intended presence in the County**.** Respondent must provide evidence of being a certified minority business enterprise, if applicable. Respondent must disclose any conflict of interest, real or potential, due to any other clients, contracts, or property interests. Must complete and submit **Attachment "D"** – Conflict of Interest Disclosure Form; and

Proposed Sub-Contractors – Provide any and all Sub-Contractors or Suppliers proposed to perform any aspect of the Services specified herein. Respondent must provide list of all proposed sub-Contractors and must include any and all documentation to demonstrate the qualifications and capabilities of each proposed Sub-Contractor or Supplier, including but not limited to licenses, certifications, and other credentials. All proposed Sub-Contractors or Suppliers are subject to approval by the County. If Respondent does not intend to utilize any Sub-Contractors,

the Respondent must state as such in the submitted Qualifications; and

Qualification Certification – Complete and submit **Attachment "A"** provided herein; and

Claims, Liens, Litigation History – Complete and submit **Attachment "B"** provided herein; and

Certificates of Insurance – Submit documentation to demonstrate evidence of current and valid insurance policies in at least the coverage limits as specified herein, or certification from a qualified insurance provider attesting to Respondent's ability to obtain the required coverages upon award.

Section 3: Related Experience

Respondent must provide documentation to demonstrate any and all related experience Respondent and proposed Sub-Contractors possess for projects similar in size and scope as specified herein, that were awarded, completed and/or are in progress within the past five (5) years. Experience which demonstrates capabilities and success with public utility or water/wastewater infrastructure projects, shall be evaluated more favorably than experience with other types of facilities.

Submitted experience must reflect Respondent's ability to manage all aspects of design, site assessment, bid assistance, stakeholder engagement, coordination with permitting agencies, construction administration, and post construction services. The information must provide details including, but not limited to project title, owner/agency, point of contact (name, title, phone, email), project award and completion dates, beginning and final project cost.

Respondents are encouraged to provide clear, detailed, and well-organized Qualifications that demonstrate their experience, project understanding, and team capabilities, as these factors will be considered during the evaluation process.

The County reserves the right to reach out to any agency to inquire about the Respondent's performance in order to evaluate and verify the responsibility of the Respondent to perform the Services as specified herein, whether or not the agency is included in the list specified in this Section.

Section 4: Capacity for Project

Respondent must provide a written narrative detailing the firm's capacity to complete the required services within the identified project schedule. Respondents shall:

- Describe internal and external resources currently available to fulfill the scope of this project. Identify resources that will need to be obtained in the event of an award.
- Respondents shall describe any current and future workloads for which they are currently contracted or have been awarded over the next three (3) years.
- Respondent shall provide any other relevant information to be considered in the evaluation of its ability to render services to the County.

Section 5: Administrative Information

Respondents must complete and submit all remaining Attachments, as provided herein, which are not required in the previous section

PART IV: EVALUATION AND AWARD

A. DETERMINATION OF RESPONSIVENESS

The SJC Purchasing Department shall review each submitted Qualifications for responsiveness to the requirements provided herein. Any Qualifications that is materially non-responsive to the requirements of this RFQ shall be disqualified and removed from consideration prior to evaluation. Only those responsive Qualifications submitted from responsible Respondents shall be evaluated for consideration of award.

The County reserves the right to waive any minor formality or irregularity in any submitted Qualifications. However, any missing information or documentation that is material to the purpose of the RFQ shall not be waived as a minor formality.

B. EVALUATION OF QUALIFICATIONS

All responsive Qualifications will be evaluated by an Evaluation Committee of no less than five (5) representatives, as determined by the SJC Purchasing Department. Evaluators will review and score the Qualifications individually, with no interaction or communication with any other individual, except any such communication which occurs at the Evaluation Meeting. Evaluators' scores will be announced at a Public Evaluation Meeting in accordance with Florida Sunshine Law. Evaluation of the responsive Qualifications shall be in accordance with the Evaluation Criteria as provided herein.

Evaluators may consider any evidence available regarding financial, technical, other qualifications and abilities of Respondent, including past performance (experience) with the County prior to recommending approval of award to the St. Johns County Board of County Commissioners.

C. EVALUATION CRITERIA AND SCORING

The County will evaluate and rank Respondents from highest to lowest based upon the specific evaluation criteria and point scores listed below.

Stage 1: Evaluation Criteria - Qualifications:	**Maximum Possible Points per Evaluator:**
1. Team Qualifications	**40**
2. Related Experience	**40**
3. Capacity for Project	**20**
Stage 1: Total Points Possible per Evaluator:	**100**
Stage 2: Shortlist Evaluation Criteria – Approach, Schedule, QC, and Budget	
1. Approach/Methodology/Innovation	**45**
2. Schedule	**15**
3. Quality Control	**15**
4. Cost Control/Budgetary Compliance	**15**
Stage 2: Total Points Possible per Evaluator:	**90**
Stage 3 – Additional Shortlist Interviews/Presentation (If needed)	**10**
Total Points Possible (Shortlist Firms Only)	**200**

D. STAGE 2: APPROACH, SCHEDULE, QC, AND COST CONTROL/BUDGET COMPLIANCE

Upon evaluation of qualifications, the Evaluation Committee shall determine a shortlist of Respondents to participate in a second-stage evaluation in accordance with Florida Statute 287.055. Scores from the first stage shall be combined with the scores from the second stage evaluations to establish the ranking of the shortlisted Respondents.

The second-stage evaluation shall consist of a written response designed to evaluate the shortlisted firms' understanding of the project, technical approach, project management capabilities, and ability to successfully deliver the required services. As part of the written response, shortlisted firms shall, at a minimum, address the following:

1. **Approach/Methodology/Innovation**
   Provide approach on how the firm intends to successfully complete quality and innovative designs including general considerations below:

- Team's management approach to successful design within the funding budget and schedule constraints. Ability to optimize design and design within the County's budget and schedule constraints including ability to expedite design to meet schedules.
- How will team make decisions on raw water quality, process, equipment sizing, selections, site layout and expansion potential, functional capabilities, permitting, "things to consider", and design a facility with a long service life.
- Provide the approach to permitting, field services, and working with subcontractors.
- Discuss the major challenges your Team has identified on the projects, and how you intend to address those challenges.
- Provide approach to working with local contractors, facility start-up, integrations, and construction administration issues.
- Approach and challenges with providing engineering services during construction and things to consider during construction to maintain schedule and budget.

2. Schedule

- Provide preliminary schedule for design and construction.
- Master Program Schedule Strategy. The evaluation will consider the proposer's approach to developing a fully integrated master schedule that encompasses all four projects. This includes the ability to identify and manage critical paths, define inter project dependencies, and align all major milestones with both the required water delivery timeline and the fixed bond end date. Proposers should demonstrate clear strategies for schedule compression, float management, and maintaining milestone integrity across the entire program.
- Schedule Risk Management and Mitigation. The evaluation will assess the proposer's ability to identify, quantify, and mitigate schedule risks. This includes risks related to permitting, supply chain constraints, site selection, design unknowns, and multi site coordination.

3. Quality Control

- Identification of a single point of accountability for project quality.
- Provide approach to deliver a quality product.
- Methods for integrating work from multiple locations (e.g., shared platforms, coordination protocols. Provide QA/QC workflows that apply consistently across all offices.
- Describe use of standardized templates, checklists, and review cycles and procedures for interdisciplinary review and cross office verification.
- Describe use of collaborative software .
- Provide evidence of successful outcomes, lessons learned, and continuous improvement

4. Cost Control/Budget Compliance

- Outline a clear process for collaboratively refining scope with the owner, establish pricing mechanisms (e.g., unit rates, alternates, cost models) that allow scope to be finalized without repeated contract amendments, maintain transparency in how scope adjustments affect cost and provide a pathway to a final, stable scope without relying on change orders.
- Change Order Minimization Plan. Identify potential scope gaps and reduce the likelihood of change orders. Provide examples of past projects where change orders were minimized despite evolving scope.
- Budget Accuracy & Cost Control Tools. Provide examples of experience with cost tracking systems, estimating software, or forecasting tools, methods for maintaining budget discipline throughout scope refinement, and the ability to provide real-time cost impacts during negotiations.

E. STAGE 3: ADDITIONAL INTERVIEW/PRESENTATIONS (IF NEEDED)

Upon evaluation of the Qualifications (First Stage) and the Approach, Schedule, Quality Control, and Budget submittals (Second Stage), the Evaluation Committee may, at its discretion, shortlist Respondents to participate in additional interviews and/or presentations in order to make a final decision on selection of the most qualified Respondent through evaluation. The format and requirements for any additional interviews/presentations shall

be provided to the shortlisted Respondents following the second stage evaluation meeting, if determined to be necessary. Scores from the interviews/presentations shall be combined with the scores from the first and second stages evaluations to establish the final ranking of the shortlisted Respondents.

F. NEGOTIATIONS & AWARD

The County intends to award a contract to the top-ranked Respondent based on the cumulative scores from the evaluation of Qualifications (First Stage), Approach, Schedule, Quality Control, and Cost Control/Budget Compliance submittals (Second Stage), and, if applicable, additional presentations or interviews (3rd Stage) determined necessary by the County. A Notice of Intent will be issued, expressing the County's intent to move forward. The County is under no obligation to award a Contract as a result of this RFQ. Any award of a Contract shall be contingent upon availability of lawfully appropriated funds for this purpose.

It is the intent of the County to enter into negotiations with the top ranked Respondent, provided no documentable justification is provided that would prohibit the County from proceeding with the top ranked Respondent. If the County and the selected Respondent are able to reach an agreement for the required Services, a Contract will be presented to the Board of County Commissioners for approval to execute. If the County and the selected Respondent are unable to reach an agreement, the County shall cease negotiations with the top ranked Respondent and shall initiate negotiations with the next successively ranked Respondent with the intent of coming to an agreement. This process shall continue until such time as an agreement can be reached, or the County, in its sole discretion, determines that moving to a subsequent Respondent in the rankings does not serve the best interest of the County.

The St. Johns County Board of County Commissioners reserves the right to reject any or all submitted Qualifications, waive minor formalities or award to/negotiate with the firm whose qualifications package best serves the interest of the County.

F. PROTEST PROCEDURES

Any actual Respondent who is aggrieved in connection with the Notice of Intent to Award a Contract (Protestor), where such grievance is asserted to be the result of a violation of the requirements of the Policy and associated procedures, or any applicable provision of law by the officers, agents, or employees of the County, may file a Protest to the Purchasing Director. The protestor shall submit the Protest in writing, accompanied by a security in the form of a Protest Bond, by 4:00PM on the fifth business day following the date of the posting of the Notice of Intent to Award.

PART V: CONTRACT REQUIREMENTS

A. CONTRACT AGREEMENT & TERM

The County intends to negotiate and award a Professional Services Agreement, on a form provided by the County, for completion of the projects, in accordance with this RFQ Document, and as negotiated with the selected Respondent. The Term of the awarded Contract shall be determined upon negotiation and approval by both parties.

In the event a Contract is attached to this RFQ, such attached Contract is for discussion purposes only, and not necessarily reflective of any Contract that may be ultimately entered into by the County. In the event that a Contract is not attached to this RFQ, it is expressly understood that the County's preference/selection of any Respondent or submitted Qualifications does not constitute an award of a Contract with the County. It is anticipated that subsequent to the County's preference/selection of any Respondent, negotiations will follow between the County and the selected Respondent. It is further expressly understood that no contractual relationship exists with the County until a Contract has been executed by both the County and the selected Respondent. The County reserves the right to delete, add to, or otherwise modify one or more components of the selected Respondent's Qualifications and any subsequent proposal(s) in order to accommodate changed or evolving circumstances that the County may have encountered since the issuance of this RFQ.

Any contract(s) awarded as a result of this RFQ shall be non-exclusive. The County reserves the right to: (1) enter

into contracts with firms for some or all of the services, and (2) to subsequently solicit Qualifications and/or negotiate contracts, for services, as needed, in order to serve the best interest of the County. All such actions shall be at the sole discretion of the County.

B. PERFORMANCE

At any point in time during the term of the Contract with the awarded Consultant, County Staff may review records of performance to ensure that the Respondent is continuing to provide sufficient financial support, equipment, quality of workmanship, and organization as prescribed herein. The County may place said contract on probationary status and implement termination procedures if the County determines that the awarded Consultant no longer possesses the financial support, equipment, quality of workmanship, and organization which would have been necessary during the RFQ evaluation period in order to comply with this demonstration of competency section.

C. TERMINATION

Failure on the part of the awarded Consultant to comply with any portion of the duties and obligations under the awarded Contract shall be cause for termination. If the awarded Consultant fails to perform any aspect of the responsibilities described herein, St. Johns County shall provide written notification, and opportunity to cure the default, in accordance with the Contract Documents. In the event the awarded Consultant fails to cure the default, or comply with the requirements of the Contract Documents, the County shall issue termination notice in accordance with the Contract Documents and shall seek any and all remedies legally available to mitigate damages incurred by the County.

D. FORCE MAJEURE

If awarded a Contract on the basis of the submitted Qualifications and any subsequent proposals, the awarded Respondent pledges to perform the specified Work barring any delays due to force majeure events which are not reasonably foreseeable and are beyond the reasonable control of both the awarded Consultant and the County, including acts of war, terrorist attacks, labor strikes, floods, earthquakes, epidemics, pandemics, riots, natural disasters, and other acts of God.

E. GOVERNING LAWS & REGULATIONS

It shall be the responsibility of the awarded Consultant to be familiar and comply with any and all federal, state, and local laws, ordinances, rules and regulations as provided herein and any others that are relevant and applicable to the services to be performed, under the awarded Contract. The Contract shall be governed by the laws of the State of Florida and the County both as to interpretation and to performance.

F. COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT

The awarded Consultant warrants that the product/s or services supplied to St. Johns County shall conform in all respects to the standards set forth in the Occupational Safety and Health Act (OSHA) of 1970 as amended and the failure to comply will be considered a breach of contract. St. Johns County shall be held harmless against any unsafe conditions and Consultant employee incidents.

The awarded Consultant further certifies that if the material, equipment, service, etc., delivered or provided is subsequently found to be deficient in any OSHA requirement in effect on date of delivery or service fulfillment date, all costs necessary to bring the material, equipment, service, etc., into compliance with the requirements shall be borne by the awarded Consultant. All Personal Protective Equipment used by the awarded Consultant, their employees, as well as personnel supplied by any sub Consultants and subcontractors shall be ANSI certified and meet OSHA standards.

G. LICENSES, PERMITS, FEES

The awarded Consultant shall be responsible for obtaining and holding any and all necessary licenses, permits, certifications required to perform the Services described herein throughout the duration of the Contract. Payment of any fees or fines resulting in the lack of permits, licenses or certifications shall be the sole responsibility of the awarded Consultant.

H. INSURANCE REQUIREMENTS

The awarded Consultant shall not commence work under the awarded Contract until Consultant provides proof of all insurance required under this section and such insurance has been approved by the County. All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida. The awarded Consultant shall furnish proof of Insurance to the County prior to the commencement of operations. The Certificate(s) shall clearly indicate the awarded Consultant has obtained insurance of the type, amount, and classification as required by contract and that no material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the County. Certificates shall specifically include the County as Additional Insured for all lines of coverage except Workers' Compensation and Professional Liability. A copy of the endorsement must accompany the certificate. Compliance with the foregoing requirements shall not relieve the awarded Consultant of its liability and obligations under the awarded Contract.

Certificate Holder Address: St. Johns County, a political subdivision of the State of Florida
4040 Lewis Speedway,
St. Augustine, FL 32084

The awarded Consultant shall maintain during the life of this Contract, Commercial General Liability Insurance with minimum limits of $2,000,000 per occurrence, $4,000,000 aggregate to protect the awarded Consultant from claims for damages for bodily injury, including wrongful death, as well as from claims of property damages which may arise from any operations under the awarded Contract, whether such operations be by the awarded Consultant or by anyone directly employed by or contracting with the awarded Consultant.

The awarded Consultant shall maintain during the life of the contract, Professional Liability or Errors and Omissions Insurance with minimum limits of $5,000,000 per claim and aggregate.

The awarded Consultant shall maintain during the life of the awarded Contract, Commercial Automobile Liability Insurance with minimum limits of $1,000,000 combined single limit for bodily injury and property damage liability to protect the awarded Consultant from claims for damages for bodily injury, including the ownership, use, or maintenance of owned and non-owned automobiles, including rented/hired automobiles whether such operations be by the awarded Consultant or by anyone directly or indirectly employed by the awarded Consultant.

The awarded Consultant shall maintain during the life of the awarded Contract, Umbrella or Excess Liability Insurance covering workers compensation, general commercial liability and business auto liability with minimum limits of liability of $5,000,000, per occurrence and aggregate.

The awarded Consultant shall maintain during the life of the awarded Contract, adequate Workers' Compensation Insurance in at least such amounts as are required by the law for all of its per Florida Statute 440.02.

In the event of unusual circumstances, the County Administrator, or his designee, may adjust these insurance requirements.

I. INDEMNIFICATION

Consultant shall indemnify and hold harmless the County and its officers and employees ("Indemnified Party"), from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of awarded Consultant or other persons employed or utilized by awarded Consultant in the performance of the Contract.

To the extent permitted by law and as limited by and pursuant to the provisions of Section 768.28, Florida Statutes, the awarded Consultant shall indemnify, defend, and hold harmless the County, including the County's officers and employees ("Indemnified Parties"), from liabilities, damages, losses, and costs, including but not limited to, reasonable attorney's fee, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct

of the awarded Consultant and persons employed or utilized by the awarded Consultant in the performance of the awarded Contract. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the County's sovereign immunity. This indemnification shall survive the termination of the awarded Contract. Additionally, the awarded Consultant agrees to include the include the following indemnification in all contracts with contractors/subcontractors who perform work in connection with the awarded Contract.

This indemnification will not be valid in the instance where the loss is caused by the gross negligence, or willful, wanton or intentional misconduct of any Indemnified Party.

If any provision(s), or portion(s) of a provision(s), of this Section, or the application thereof to any person or circumstance shall, to any extent, be held to be invalid, illegal or unenforceable for any reason whatsoever, the validity, legality and enforceability of the remaining provision(s), or part of the provision(s), shall not in any way be affected or impaired thereby; and shall be interpreted to the fullest extent possible to be enforceable and to give effect to the intent manifested by the provision(s), or portion(s) thereof, held invalid, illegal or unenforceable.

PART VI: – ATTACHMENTS

The required Attachments that Respondents must complete, sign, have notarized and include as part of their submitted Qualifications are provided herein on the following pages. The instructions provided above in Part III specify in which sections of the submitted Qualifications the required Attachments must be included.

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

COVER PAGE

PURCHASING DEPARTMENT
ST. JOHNS COUNTY, FL
4040 LEWIS SPEEDWAY,
ST. AUGUSTINE, FLORIDA 32084

FULL LEGAL NAME OF RESPONDENT: _____

STATE OF FLORIDA, DEPARTMENT OF STATE, DIVISION OF CORPORATIONS REGISTRATION#: _____

MAILING ADDRESS: _____

FEIN #: _____

POINT OF CONTACT FOR RFP:

NAME & TITLE: _____

EMAIL ADDRESS: _____

POINT OF CONTACT FOR INVITATION TO PAYMENTWORKS:

NAME & TITLE: _____

EMAIL ADDRESS: _____

DATE: _____

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS
ATTACHMENT A
QUALIFICATION CERTIFICATION

The Undersigned presents this Qualification Submittal to be considered as a Qualified Engineering Firm for RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS.

A copy of the professional license(s) under which our firm is authorized to conduct business in the State of Florida is attached. Each license has been issued in accordance with the applicable provisions of Chapter 471 or Chapter 481, Florida Statutes, and is currently valid and in force.

It is further understood that qualification, if given, shall be valid for the purpose of responding to the above solicitation, unless suspended or terminated by St. Johns County.

The Undersigned authorizes and requests any public official, engineer, architect, Surety Company, bank depository, material or equipment manufacture or distributor or any person, firm or corporation to furnish all information requested by St. Johns County, to verify statements given with this Qualification Submittal.

The Undersigned further authorizes the St. Johns County, FL designee to disclose, without any liability whatsoever, any and all information contained in the Qualification Submittal.

The Undersigned has not been disqualified by any public agency in Florida except as indicated below. (If none, insert: "N/A")

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name of Affiant

_____
Printed Title of Affiant

_____
Full Legal Name of Consultant/Contractor

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20____, by _____, who is personally known to me or has produced_____ as identification.

_____
Notary Public
My Commission Expires:_____

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT B
CLAIMS, LIENS, LITIGATION HISTORY

Respondents must complete all questions below and provide information requested as applicable. Failure to appropriately complete the questions below or provide requested information may be grounds for disqualification. Any material misrepresentation of information may also be grounds for disqualification.

1. Within the past 7 years, has your organization filed a suit or a formal claim against a project owner (as a prime or subcontractor) or been sued by or had a formal claim filed by an owner, subcontractor or supplier resulting from a contract dispute? Yes _____ No _____ If yes, please attach additional sheet(s) to include:
   Description of every action Captions of the Litigation or Arbitration

   Amount at issue: _____ Name (s) of the attorneys representing all parties:
   _____
   _____
   _____
   _____
   Amount actually recovered, if any: _____
   Name(s) of the project owner(s)/manager(s) to include address and phone number:
   _____
   _____
   _____
   _____

2. List all <u>pending</u> litigation and or arbitration.
   _____
   _____
   _____
   _____

3. List and explain <u>all litigation and arbitration</u> within the past seven (7) years - pending, resolved, dismissed, etc.
   _____
   _____
   _____
   _____

4. Within the past 7 years, please list all <u>Liens</u>, including Federal, State and Local, which have been filed against your Company. List in detail the type of Lien, date, amount and current status of each Lien.
   _____
   _____
   _____

5. Have you ever abandoned a job, been issued a Notice of Default, terminated for cause, or had a performance/surety bond called to complete a job?

   Yes _____ No _____ If yes, please explain in detail:
   _____
   _____
   _____

6. For all claims filed against your company within the past five (5) years, have all been resolved satisfactorily with final judgment in favor of your company within 90 days of the date the judgment became final? Yes ____ No _____ If no, please explain why?

   _____
   _____
   _____
   _____

7. List the status of all pending claims currently filed against your company:

   _____
   _____
   _____

Liquidated Damages

1. Has a project owner ever withheld retainage, issued liquidated damages or made a claim against any Performance and Payment Bonds? Yes ____ No _____ If yes, please explain in detail:

   _____
   _____
   _____

(Use additional or supplemental pages as needed)

ATTACHMENT C
AFFIDAVIT OF SOLVENCY

PERTAINING TO THE SOLVENCY OF_____, being of lawful age and being duly

sworn I,_____, as_____ *(ex: CEO, officer,*

president, duly authorized representative, etc.) hereby certify under penalty of perjury that:

1. I have reviewed and am familiar with the financial status of above stated entity.

2. The above stated entity possesses adequate capital in relation to its business operations or any contemplated or undertaken transaction to timely pay its debts and liabilities (including, but not limited to, unliquidated liabilities, unmatured liabilities and contingent liabilities) as they become absolute and due.

3. The above stated entity has not, nor intends to, incur any debts and/or liabilities beyond its ability to timely pay such debts and/or liabilities as they become due.

4. I fully understand failure to make truthful disclosure of any fact or item of information contained herein may result in denial of the application, revocation of the Certificate of Public Necessity if granted and/or other action authorized by law.

The undersigned has executed this Affidavit of Solvency, in his/her capacity as a duly authorized representative of the above stated entity, and not individually,

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name of Affiant

_____
Printed Title of Affiant

_____
Full Legal Name of Consultant/Contractor

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20____, by _____, who is personally known to me or has produced_____ as identification.

_____
Notary Public
My Commission Expires:_____

ATTACHMENT D
CONFLICT OF INTEREST DISCLOSURE FORM

The term "conflict of interest" refers to situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting a Respondent's professional judgment in completing work for the benefit of St. Johns County ("County"). The bias such conflicts could conceivably impart may inappropriately affect the goals, processes, methods of analysis or outcomes desired by the County.

Respondents are expected to safeguard their ability to make objective, fair, and impartial decisions when performing work for the benefit of the County. Respondents, therefore must avoid situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting the Respondent's professional judgement when completing work for the benefit of the County.

The mere appearance of a conflict may be as serious and potentially damaging as an actual distortion of goals, processes, and methods of analysis or outcomes. Reports of conflicts based upon appearances can undermine public trust in ways that may not be adequately restored even when the mitigating facts of a situation are brought to light. Apparent conflicts, therefore, should be disclosed and evaluated with the same vigor as actual conflicts.

It is expressly understood that failure to disclose conflicts of interest as described herein may result in immediate disqualification from evaluation or immediate termination from work for the County.

Please check the appropriate statement:

☐ I hereby attest that the undersigned Respondent has no actual or potential conflict of interest due to any other clients, contracts, or property interests for completing work on the above referenced project.

☐ The undersigned Respondent, by attachment to this form, submits information which may be a potential conflict of interest due to other clients, contracts or property interests for completing work on the above referenced project.

Legal Name of Respondent: _____

Authorized Representative(s): _____ _____

Signature Print Name/Title

_____ _____

Signature Print Name/Title

ATTACHMENT E
DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Statute 287.087 hereby certifies that

_____does:
Name of Firm

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the danger of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the contractual services that are described in St. Johns County's Request for Qualification to provide bond underwriter services a copy of the statement specified in paragraph 1.

4. In the statement specified in paragraph 1, notify the employees that, as a condition of working on the contractual services described in paragraph 3, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Florida Statute 893, as amended, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than three (3) days after such conviction or plea.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

6. Consistent with applicable provisions with State or Federal law, rule, or regulation, make a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1 through 5.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

_____
Signature

_____
Date

ATTACHMENT F
E-VERIFY AFFIDAVIT

STATE OF _____
COUNTY OF _____

I, _____ (hereinafter "Affiant"), being duly authorized by and on behalf of _____(hereinafter "Respondent") hereby swears or affirms as follows:

1. Respondent understands that E-Verify, authorized by Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), is a web-based system provided by the United States Department of Homeland Security, through which employers electronically confirm the employment eligibility of their employees.

2. For the duration of an Contract awarded under RFQ No. 2902 (hereinafter "Agreement"), in accordance with section 448.095, F.S., Respondent shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Respondent and shall expressly require any subcontractors performing work or providing services pursuant to the Agreement to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor.

3. Respondent shall comply with all applicable provisions of section 448.095, F.S., and will incorporate in all subcontracts the obligation to comply with section 448.095, F.S.

4. Respondent understands and agrees that its failure to comply with all applicable provisions of section 448.095, F.S. or its failure to ensure that all employees and subcontractors performing work under the Agreement are legally authorized to work in the United States and the State of Florida constitute a breach of the Agreement for which St. Johns County may immediately terminate the Agreement without notice and without penalty. The Respondent further understands and agrees that in the event of such termination, Respondent shall be liable to the St. Johns County for any costs incurred by the St. Johns County resulting from Respondent's breach.

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name & Title of Affiant

_____
Full Legal Name of Respondent

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20____, by {*insert name and title of Affiant*}, who is personally known to me or has produced_____ as identification.

_____
Notary Public
My Commission Expires:_____

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

ATTACHMENT G
SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES ON PUBLIC ENTITY CRIMES

I, _____ ("Affiant"), being duly authorized by and on behalf of _____ _____ ("Respondent") hereby swears or affirms as follows:

1. The principal business address of Respondent is: _____ _____
2. I am duly authorized as _____ (Title) of Respondent.
3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined in Section 287.133 of the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined in Section 287.133 of the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Respondent, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. There has been a conviction of a public entity crime by the Respondent, or an officer, director, executive, partner, shareholder, employee, member or agent of the Respondent who is active in the management of the Respondent or an affiliate of the Respondent. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted vendor list. The name of the convicted person or affiliate is _____. A copy of the order of the Division of Administrative Hearings is attached to this statement. **(Draw a line through paragraph 7 if paragraph 6 above applies.)**

_____ _____
Signature of Affiant Printed Name & Title of Affiant

_____ _____
Full Legal Name of Respondent Date of Signature

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20___, by Affiant, who is ☐ personally known to me or ☐ has produced _____ as identification.

_____ _____
Notary Public My Commission Expires

ATTACHMENT H
Affidavit Regarding the Use of Coercion for Labor and Services

Section 787.06(13), Florida Statutes requires all nongovernmental entities executing, renewing, or extending a contract with a governmental entity to provide an affidavit signed by an officer or representative of the nongovernmental entity under penalty of perjury that the nongovernmental entity does not use coercion for labor or services as defined in that statute.

As an officer or authorized representative of Respondent, I certify that the company identified below does not, for labor or services:

- Use or threaten to use physical force against any person;
- Restrain, isolate, or confine or threaten to restrain, isolate, or confine any person without lawful authority and against her or his will;
- Use lending or other credit methods to establish a debt by any person when labor or services are pledged as a security for the debt, if the value of the labor or services as reasonably assessed is not applied toward the liquidation of the debt, the length and nature of the labor or services are not respectively limited and defined;
- Destroy, conceal, remove, confiscate, withhold, or possess any actual or purported passport, visa, or other immigration document, or any other actual or purported government identification document, of any person;
- Cause or threaten to cause financial harm to any person;
- Entice or lure any person by fraud or deceit; or
- Provide a controlled substance as outlined in Schedule I or Schedule II of s. 893.03 to any person for the purpose of exploitation of that person.

Under penalties of perjury, I declare and affirm that I have read the foregoing document and that the facts stated in it are true and correct.

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name of Affiant

_____
Printed Title of Affiant

_____
Full Legal Name of Respondent

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20____, by Affiant, who is personally known to me or has produced____ _____ as identification.

_____
Notary Public
My Commission Expires:_____

ATTACHMENT I
NON-COLLUSION CERTIFICATION

St. Johns County requires, as a matter of policy, that any Respondent receiving a contract or award resulting from this Request for Qualification issued by St. Johns County shall make certification as below. Receipt of such certification, under oath, shall be a prerequisite to the award of contract and payment thereof.

I (we) hereby certify that if the contract is awarded to me, our firm, partnership or corporation, that no members of the elected governing body of St. Johns County nor any professional management, administrative official or employee of the County, nor members of his or her immediate family including spouse, parents or children, nor any person representing or purporting to represent any member or members of the elected governing body or other official, has solicited, has received or has been promised, directly or indirectly, any financial benefit including but not limited to a fee, commission, finder's fee, political contribution, goods or services in return for favorable review of any Qualifications submitted in response to this Request for Qualification or in return for execution of a contract for performance or provision of services for which Qualification are herein sought.

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name & Title of Affiant

_____
Full Legal Name of Respondent

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20__, by Affiant, who is ☐ personally known to me or ☐ has produced _____ _____ as identification.

_____
Notary Public
My Commission Expires:_____

ATTACHMENT J
EQUAL OPPORTUNITY REPORT STATEMENT

The Respondent shall complete the following statement by signing this form where indicated. Failure to complete this form may be grounds for rejection of bid:

The awarded Consultant shall comply with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987 and the Florida Civil Rights Act of 1992, as amended) prohibiting employment discrimination and shall comply with the regulations and guidelines promulgated pursuant to this Act by the Secretary of the Interior and the Heritage Conservation and Recreation Service.

During the performance of this contract, the awarded Consultant, for itself, its assignees and successors in interest ("Consultant") agrees as follows:

(1) The Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Consultant will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Consultant will, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The Consultant will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Consultant's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

DATED this _____ day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name & Title of Affiant

_____
Full Legal Name of Respondent

Sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 20__, by Affiant, who is ☐ personally known to me or ☐ has produced _____ _____ as identification.

_____
Notary Public
My Commission Expires:_____

ATTACHMENT K
TRUTH IN NEGOTIATION CERTIFICATION

Pursuant to Section 287.055(5)(a), Florida Statutes, for any lump-sum or cost-plus-a-fixed fee professional services contract over the threshold amount provided in Section 287.017, Florida Statutes, the Department of Transportation (Department) requires the Respondent to execute this certificate and include it with the submittal of the Technical Proposal, or as prescribed in the contract advertisement.

The Respondent hereby certifies, covenants, and warrants that wage rates and other factual unit costs supporting the compensation for this project's agreement are accurate, complete, and current at the time of contracting.

The Respondent further agrees that the original agreement price and any additions thereto shall be adjusted to exclude any significant sums by which the Department determines the agreement price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such agreement adjustments shall be made within (1) year following the end of the contract. For the purposes of this certificate, the end of the agreement shall be deemed to be the date of final billing or acceptance of the work by the Department, whichever is later.

Signature of Authorized Principal(s):

NAME (print): _____

SIGNATURE: _____

TITLE: _____

FULL LEGAL NAME OF RESPONDENT: _____

DATE: _____

ATTACHMENT L
ACKNOWLEDGEMENT OF ADDENDA

Respondent hereby acknowledges receipt of the following Addenda, issued by the County and incorporated into and made a part of the RFQ Documents. By acknowledging the Addenda listed below, Respondent hereby certifies that the information, clarifications, revisions, or other items included in each Addenda have been incorporated into the Respondent's Qualifications. Failure to acknowledge and incorporate issued Addenda may result in a Respondent being deemed non-responsive to the requirements of the RFQ and removed from further consideration.

ADDENDUM NUMBER	DATE RECEIVED	PRINT NAME OF RESPONDENT'S AGENT	TITLE OF RESPONDENT'S AGENT	SIGNATURE OF RESPONDENT'S AGENT

RFQ NO: 2902; PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS

Cut along the outer border and affix this label
to your sealed bid envelope to identify it as a
"Sealed RFQ"

SEALED RFQ • DO NOT OPEN



SEALED RFQ NO.:	**RFQ 2902**
RFQ TITLE:	**PROFESSIONAL ENGINEERING SERVICES FOR FOUR (4) WATER INFRASTRUCTURE PROJECTS**
DUE DATE/TIME:	**By 4:00 PM EST – June 18 2026**
SUBMITTED BY:	
	Company Name
	Company Address
	Company Address
DELIVER TO:	St. Johns County Purchasing Department 4040 Lewis Speedway St. Augustine, FL 32084

END OF DOCUMENT

JonesEdmunds



Executive **SUMMARY**

St. Johns County
Water Supply Master Plan (WSMP)

SUMMARY

SJCUD commissioned the WSMP to provide water supply, treatment, and distribution strategies for the Mainland Utility Service Areas through 2045. The planning efforts demonstrate that SJCUD's water supply challenges require an adaptive strategy to address short-term constraints and secure a long-term water supply.

The alternatives analysis highlights several key conclusions that inform the short-term plan:

- **SJCUD's average daily drinking water** demands are projected to increase from 10.32 Million Gallons per Day (MGD) to 18.32 MGD over the next 20 years.
- **Developing additional fresh groundwater** in the Northwest part of the County is necessary and preferable from a cost perspective.
- **Large near-term transmission improvements are unavoidable** to address immediate system constraints, particularly the transfer limitations at the CR214 Water Treatment Plant (WTP) and the pressure and tank recovery issues on Anastasia Island (AI).
- An estimated **$168 M** of capital improvements are needed by 2030 and the majority of investment (95%) to meet the 2045 planning horizon demands are required before 2035.



Looking beyond the near term, groundwater production rates and water quality will remain the most significant uncertainties. Adaptive planning will be essential, ensuring that short-term investments in facilities such as the Trout Creek (TC) WTP and Northwest (NW) WTP transfers are paired with flexibility to incorporate future sources, whether through expanded RO facilities, additional wellfields, or surface water integration. As part of the County's long-term adaptive strategy, Jones Edmunds recommends that SJCUD evaluate participation in regional minimum flow and level (MFL) mitigation projects while evaluating the alternative sources that can mitigate saltwater upwelling risks in existing and future wellfields. Although regional MFL initiatives may offer collaborative benefits and long-term groundwater allocations, they will not fully eliminate localized salinity challenges. Surface water alternatives could eliminate both MFL-related groundwater withdrawal constraints and salinity risks.

Tables 1, 2, and 3 summarize the near-term investments and the long-term adaptive strategies.

Table 1 Near-Term Action Plan (Next 5 Years)

Focus: Immediate Improvements and foundational investments

Expand groundwater supply capacity
- Continue to monitor water quality at all well fields
- Add new wells at CR 214 and NW WTP (2026)
- Proceed with new WTP Wellfield at the Trout Creek location (2027-2029)

Strength transmission system
- Implement major transmission pipeline along CR 214 to Holmes Blvd. (2027)
- Build a new transfer line between Northwest and Mainland (2029)
- Construct new BPS and blending facility near CR214 (2029)

Optimize existing facilities
- Install new pumps and controls at the 16th St. BPS (2027)
- Improve CR214 to meet future demands (2028)
- Upgrade Shores BPS (2028)

Assess future water supply
- Continue participating in regional stakeholder MFL mitigation projects
- Explore water quality and product production potential at key locations (2026)
- Evaluate alternative water supplies that may reduce MFL impacts and mitigate saltwater upwelling (2027)

Table 2 Mid-Term Growth and Planning Strategy (5 to 10 years)

Focus: System expansion, capacity optimization, and strategic positioning

Optimize groundwater supply capacity
- Add new wells at Trout Creek and NW WTP
- Expand Trout Creek WTP
- Install new wells to optimize water quality

Strength transmission system
- Build I-95 to Watson Road transmission
- Construct Marketplace Drive to Quesada Road improvements

Develop future water supply
- Plan land acquisition strategy around future water supply sources
- Continue participating in regional stakeholder MFL mitigation projects

Table 3 **Long-Term Resiliency and Sustainability Framework (Beyond 10 years)**

Focus: Adaptive planning and future proofing

Optimize groundwater supply capacity
- Install new wells to optimize groundwater supplies

Bolster resiliency
- Fortify single points of failure and transmission and production facilities

Implement a sustainable water supply strategy
- Incorporate alternative water supplies



EXISTING AND FUTURE CONDITIONS

Service Area and System Demands

SJCUD presently serves ~111,000 residents across the NW, Mainland, SR16, and AI service areas (≈177 square miles), with South and Main West to be added in the WSMP horizon. An estimated 86,000 residents are expected to be connected to the SJCUD drinking water system by 2045. The average daily demand of drinking water is projected to increase from 10.32 to 18.32 MGD by 2045, as shown in Figures 1 and 2.



Key Terms

- **GPM** = Gallons per minute; quantity of water delivered in a minute of time
- **MGD** = Million gallons per day; quantity of water delivered on a daily basis
- **MFL** = Minimum flow and level; a regulatory limit that constrains withdrawals from groundwater and surface waters
- **BPS** = Booster Pumping Station; a facility that increases pressure in the water distribution system
- **WTP** = Water Treatment Plant; a facility that treats water to drinking water standards
- **psi** = Pounds per square inch; a measurement of how much pressure is in a pipe
- **LOS** = Level of Service; established criteria for determining adequacy of water system to meet demands
- **PHF** = Peak Hour Flow; maximum amount of water delivered on an hourly basis
- **MDF** = Maximum Daily Flow; maximum amount of water delivered on a daily basis
- **ADF** = Average Daily Flow; average amount of water delivered on a daily basis

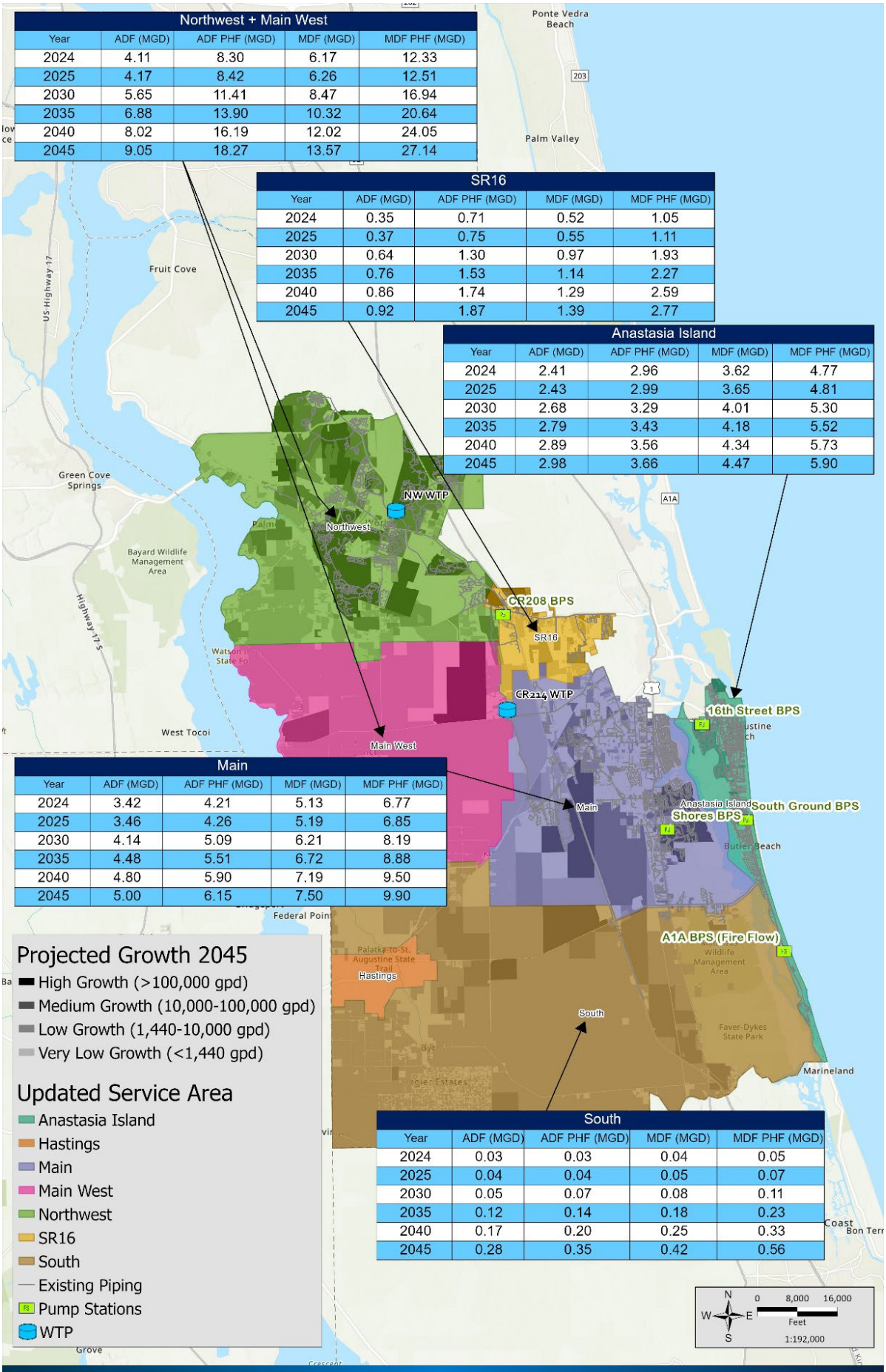


Figure 1: Average Daily Demand by Service Area

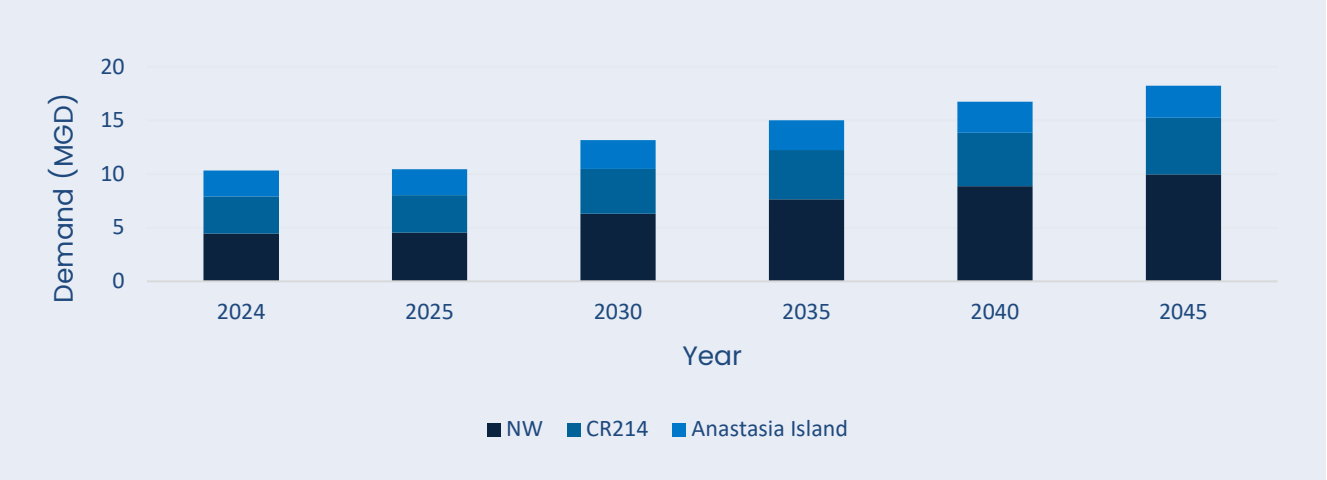


Figure 2: Projected Increase of Average Daily Drinking Water Demand

Note: NW includes NW and SR16 service areas; CR214 includes Main, Main West, and South service areas; AI includes the AI service area.

WELLFIELD PUMPING RATES

The future water supply plan recommendations are directly dependent on the assumed well pumping rates. The selected well pumping rates were derived from a combination of upwelling analyses and current wellfield production data. Upwelling evaluations were conducted to ensure that proposed extraction rates would not induce excessive vertical flow from deeper aquifer zones, which could compromise water quality or sustainability. These analyses helped define safe operational thresholds for each location, particularly in areas with known confining layers or variable transmissivity. Historical production data from existing wells informed the average pumping rates. Table 3 provides the well pumping rates for existing and new wellfields evaluated as part of the master plan.

Table 4 **Wellfield Pumping Rates**

Facility	Existing Wells	Assumed Average Pumping Rates for New Wells (MGD)
NW	Six existing and one recently completed	0.45
CR214	Eight existing	0.6
Trout Creek	—	0.6
West Wellfield	—	0.6
Anastasia Island	—	0.4

CR214 wells have consistently produced nearly 0.60 MGD, validating this rate as both achievable and sustainable. In contrast, the NW wells have shown slightly lower yields, supporting the selection of 0.45 MGD for new wells in that region. The AI wells were conservatively rated at 0.40 MGD due to limited aquifer thickness and higher susceptibility to saltwater intrusion.

ALTERNATIVES ANALYSIS

MODEL DEVELOPMENT & CALIBRATION

Two legacy models (NW and Mainland) were upgraded and merged into an extended-period simulation (EPS) framework. Elevations were derived from LiDAR DEM, and boundary conditions incorporated water treatment plants (WTPs), booster pump stations (BPSs), and ground storage tanks (GSTs) with documented operational controls. The model reflects current and planned infrastructure using SJCUD's GIS and capital improvement projects (CIPs) and allocates spatial demands through ArcGIS and diurnal curves for average and maximum day conditions.

The network spans approximately 590 miles of mains (1–36 in), primarily PVC and ductile iron, and includes two WTPs, five BPSs, and ten GSTs. Future water supply planning is informed by well pumping rates derived from upwelling analyses and historical production data to provide sustainable extraction. Calibration aligned 2024 scenarios with SCADA data, refining pipe C-factors and operational settings. Planning scenarios for 2025 confirm level-of-service compliance and identify localized pressure and velocity issues, guiding targeted upgrades.



Image: St. Johns County

SCREENING TO SHORTLIST

Eight 2045 supply/transfer scenarios were screened using pressure LOS (typical 40–80 psi; limits 20–135 psi), 72-hr tank recovery under MDD, velocity thresholds (>6 fps bottlenecks; >4 fps flagged), and fire flow (≥1,500 gpm near commercial). Four refined alternatives advanced from the initial screening:

Alternative 1
New AI WTP

This alternative proposes to construct a new WTP on AI. The facility would reduce reliance on transfers from the NW WTP and delay the need for new water supply production. For the Mainland system, separating AI from the CR214 WTP eliminates tank recovery issues without requiring major piping improvements.

Alternative 2
Additional NW Transfer Line

This alternative expands transfer capacity from the NW to the Mainland system by constructing new pipelines and a BPS near the CR214 WTP. The additional transfer would be supplied by the NW WTP and the new Trout Creek WTP to meet near-term demands. In addition to the 42,605 linear feet (LF) of 20-inch additional transfer piping, the alternative requires significant transmission system improvements.

Alternative 3
New West WTP

This alternative adds new supply capacity by constructing a West WTP. The facility would provide water to the Mainland and AI systems, reducing reliance on the CR214 WTP. However, a transfer BPS and significant piping improvements downstream of CR214, as required in Alternative 2, would still be required. In addition to the piping improvements downstream of CR214, Alternative 3 requires piping connecting from the West WTP to the new transfer BPS near CR214 (approximately 43,991 LF of 20-inch piping).

Alternative 4
Expand CR214 WTP

This alternative increases production at the CR214 WTP by adding wells and expanding treatment capacity. Although it enhances supply at an existing site, significant piping improvements downstream of CR214, as required in Alternative 2, would still be required, along with an investment in a wellfield with a declining yield.

Based on discussions with SJCUD staff, Jones Edmunds developed alternatives to achieve the same total 2045 production capacity of 30.5 MGD. The total capacity represents a 90% demand-to-capacity ratio by the end of the planning horizon. The screening process included evaluating implementation risks, cost sensitivities to well production pumping rates and transmission pipe costs, and a non-cost factor analysis. The following table summarizes the ranking of the four alternatives based on screening evaluations.



Table 5 Final Ranking of the Four Alternatives

Alternative	Original Total Cost (Rank)	Revised Total Cost (Rank)	Potential Risk (Rank)	Initial Non Cost Rank
Alt 1 – New AI WTP	$258 (2)	$214 (2)	$132 (4)	3
Alt 2 – Additional NW Transfer	$237 (1)	$153 (1)	$78 (1)	1
Alt 3 – New West WTP	$377 (4)	$294 (4)	$124 (3)	4
Alt 4 – Expand CR 214 WTP	$310 (3)	$260 (3)	$79 (2)	2

Note: All costs are in 2025 dollars (in millions).

PREFERRED SOLUTION – ALTERNATIVE 2

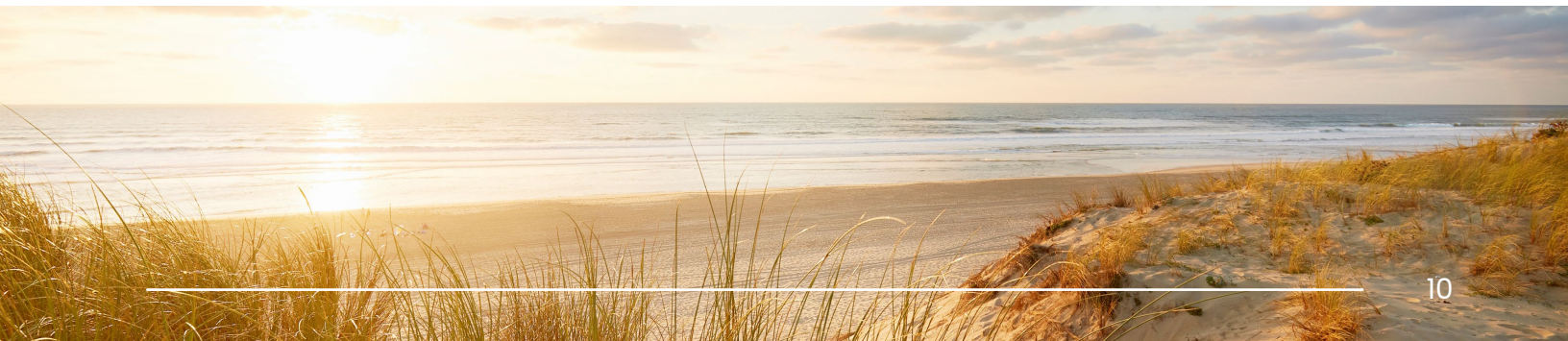
Alternative 2 is preferred due to four key reasons outlined below. Figure 3 on the following page summarizes the major improvements included in Alternative 2.

Schedule/Constructability
Pipeline/BPS work is deliverable faster than siting and constructing new RO WTPs

Service Performance
Reliably moves water to the Mainland/AI to maintain pressures and tank recovery by ~2030

Cost Position
Among the lowest screening costs and most favorable under sensitivity to higher well yields/lower pipe unit costs

Risk/Resilience
Avoids coastal siting risk (AI) and heavy dependence on declining CR214/TR wellfield while adding transfer redundancy



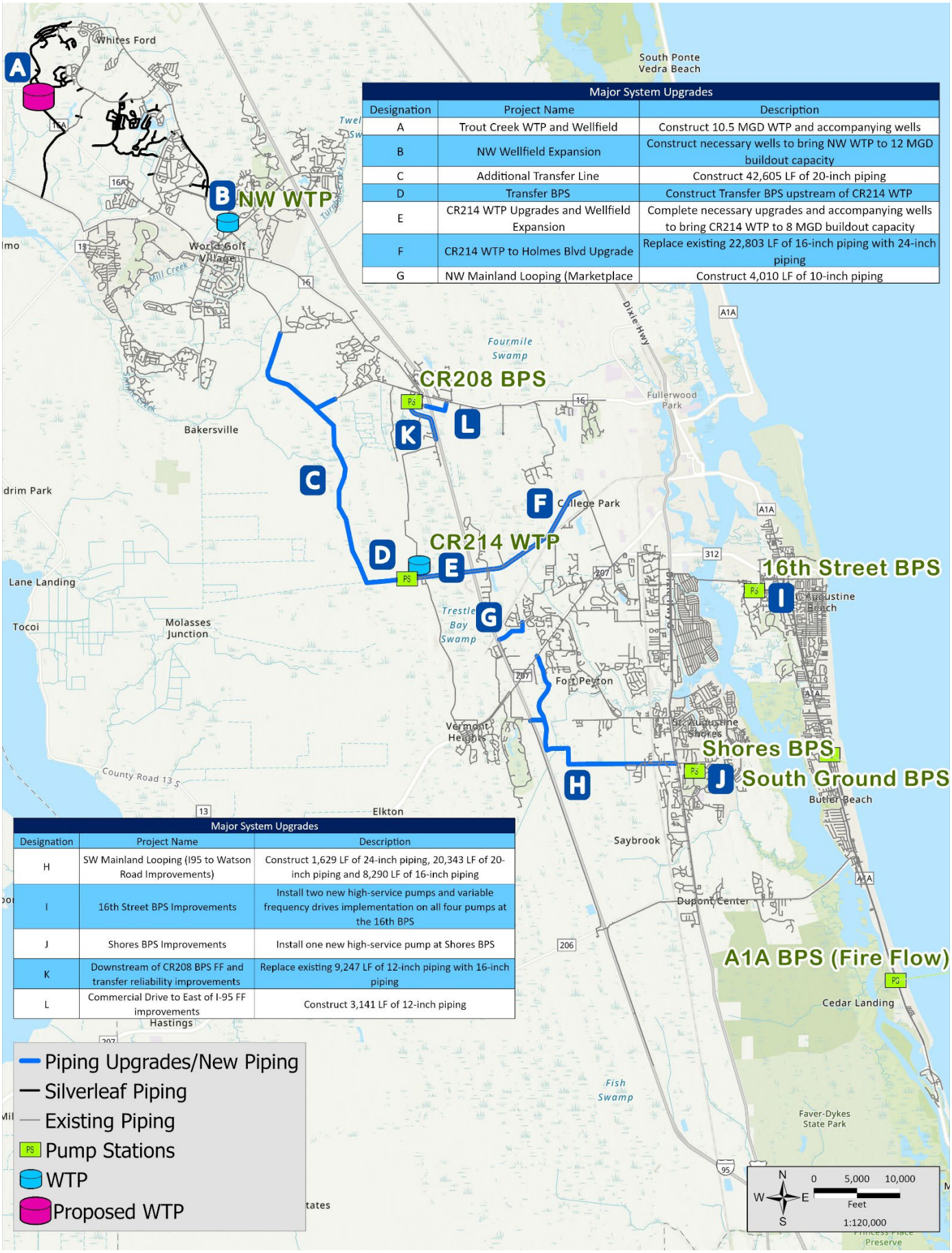


Figure 3: Alternative 2 Map

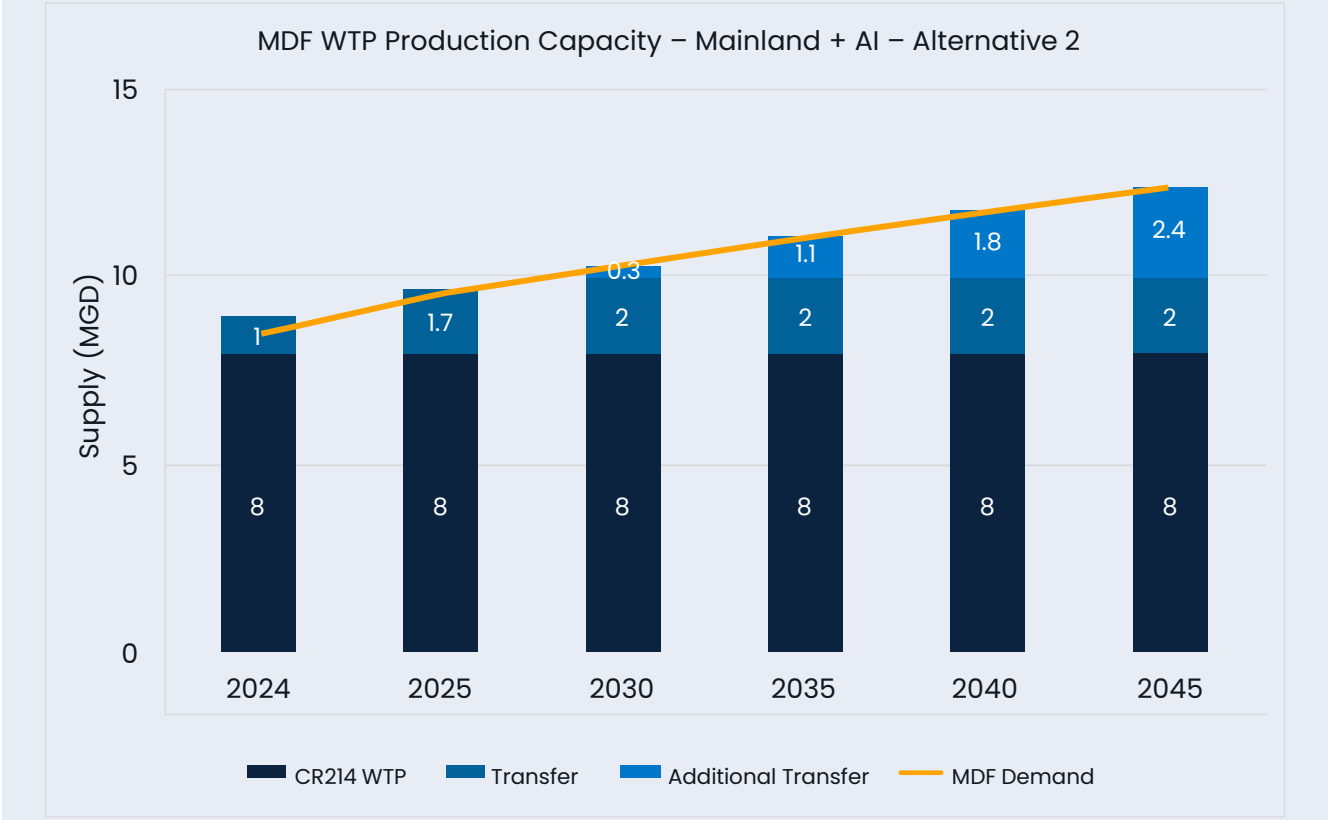


Figure 4: Mainland System Water Production Capacity and Demands

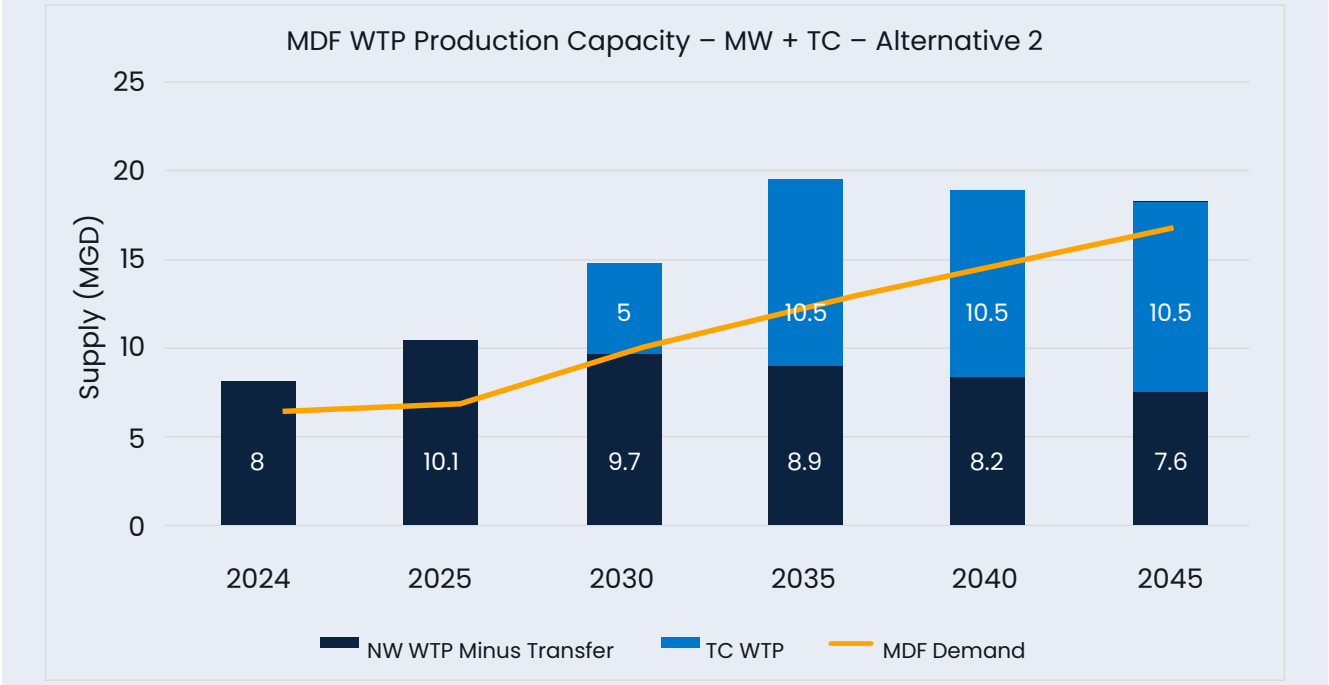


Figure 5: Northwest and Trout Creek Production Capacities and Demands

NEAR-TERM IMPLEMENTATION

Near-term program elements are summarized in the recommended CIP for 2026 to 2030.

Table 6 2026 to 2030 Capital Improvement Program

Facility	Project Name	2026	2027	2028	2029	2030	Total
CR 214 WTP	Plant Improvements (Clearwell, One Skid, and Cartridge Filters)		$2,600,000	$20,000,000			$22,600,000
	Install Four Wells		$12,500,000				$12,500,000
	Install One Well (TR51)	$3,125,000					$3,125,000
TC WTP	Engineering for 5-MGD MDD Capacity Facility		$2,708,000				$2,708,000
	5-MGD MDD Capacity			$20,833,000			$20,833,000
	Install Three Wells				$9,375,000		$9,375,000
NW WTP	Install Seven Wells		$21,875,000				$21,875,000
	Install One Well (NW8)	$3,125,000					$3,125,000
	Install One Well (NW9)	$3,125,000					$3,125,000
	Install One Well			$3,125,000			$3,125,000
Water Booster Facilities	Engineering for the 16th BPS Improvements		$563,000				$563,000
	Install Two New High-Service Pumps (HSPs) and Variable Frequency Drives Implementation on all Four Pumps at the 16th BPS		$3,125,000				$3,125,000
	Engineering for Shores Unit 2 BPS Upgrades			$175,000			$175,000
	Shores Unit 2 BPS Upgrades (Pumping Capacity)			$1,250,000			$1,250,000
	Engineering for Additional Transfer BPS and Blending Facility			$2,100,000			$2,100,000
	Additional Transfer BPS and Blending Near the CR214 WTP to Boost Additional Transfer Downstream of the CR214 WTP				$15,000,000		$15,000,000
Water Transmission Mains	Engineering for Additional Transfer Line				$1,897,000		$1,897,000
	Additional Transfer Line – 42,605-feet of 20-inch Piping				$19,971,000		$19,971,000
	Engineering for 2031 CR214 to Holmes Improvement		$938,000				$938,000
	The CR214 WTP to Holmes Improvements – 22,803-feet of 16- to 24-inch Upgrade		$12,818,000				$12,818,000
Fire Flow Improvements	Engineering for Commercial Drive to East of I-95			$124,000			$124,000
	Commercial Drive to East of I-95 – 3,141-feet of 12-inch Piping			$883,000			$883,000
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	Downstream of CR208 – 9,247-feet of 12- to 16-inch Upgrade (also increases transfer capacity)			$3,465,000			$3,465,000
Alternative Water Supplies	County-Wide Testing, Exploration, and Studies	$500,000	$500,000	$500,000	$500,000	$500,000	$2,500,000
	Total Budget	**$9,875,000**	**$57,627,000**	**$52,940,000**	**$46,743,000**	**$500,000**	**$167,685,000**

Note: Engineering costs include permitting, design, and construction phase. All costs are in 2025 dollars.

CR214 WTP

Five-Year Cost
$38,225,000

Description

The CR214 Water Treatment Plant is a cornerstone of the SJC potable water system, serving as both a primary source of supply and the sole transfer point for water from the northwest region. Its strategic role makes reliability and capacity critical to meeting current and future demand. Near-term improvements will focus on upgrading plant infrastructure to enhance operational efficiency and resilience, while constructing additional wells to expand raw water supply. These upgrades will not only support population growth but also reduce system vulnerabilities by ensuring consistent transfer capability until the planned booster station and additional transmission line are completed.

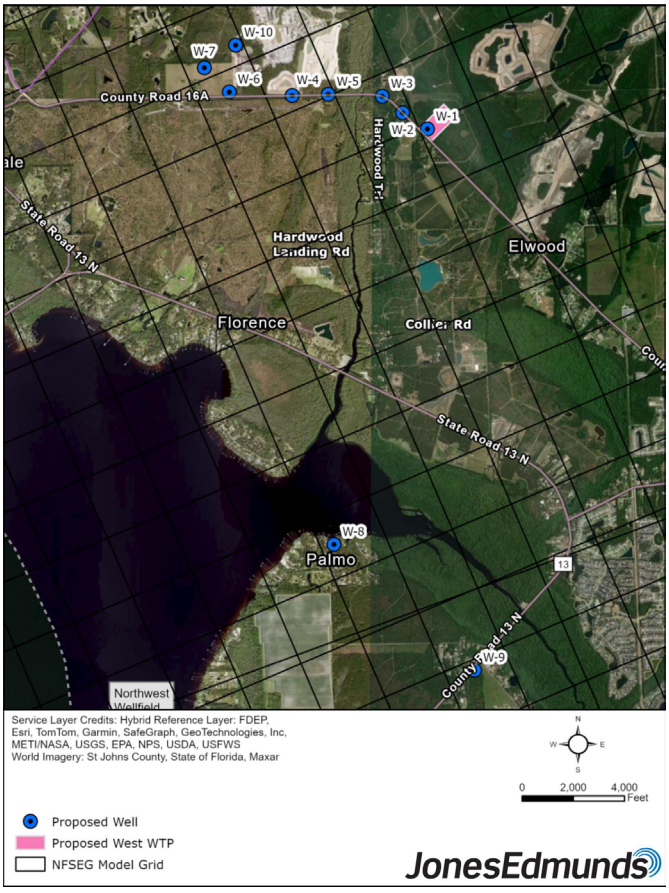


TC WTP

Five-Year Cost
$32,916,000

Description

The Trout Creek Water Treatment Plant represents a major investment in system reliability and future capacity. Existing wellfields and treatment plants have limited expansion potential, making this facility essential for meeting long-term demand. Near-term efforts include constructing a 5 MGD WTP and associated wells to introduce a new water source in a strategic location. This addition will strengthen supply in the northwest portion of the system, where growth is most significant, and improve transfer capabilities. Over time, the plant will expand to 10.5 MGD, ensuring the system can accommodate sustained population increases and maintain service levels.



NW WTP

Five-Year Cost
$31,250,000

Description

The Northwest Water Treatment Plant is a vital component of the county's potable water system, currently expanding to 12 MGD but constrained by well capacity. To fully utilize its production and maintain reliability, near-term upgrades will focus on adding supply wells and optimizing plant operations. These improvements will allow the NW WTP to operate at its full potential, providing a stable and robust water source that supports both current needs and anticipated growth in the region.



WATER BOOSTER FACILITIES

Five-Year Cost
$22,213,000

Description

Booster stations play a critical role in maintaining adequate pressure and service levels throughout the distribution system. Planned upgrades include modernizing aging facilities at Shores and 16th Street to improve efficiency and reliability, as well as constructing a new transfer booster station to facilitate increased water movement from the northwest to the mainland. These enhancements will strengthen system performance, reduce operational risks, and ensure consistent service as overall demand and flow requirements continue to rise.

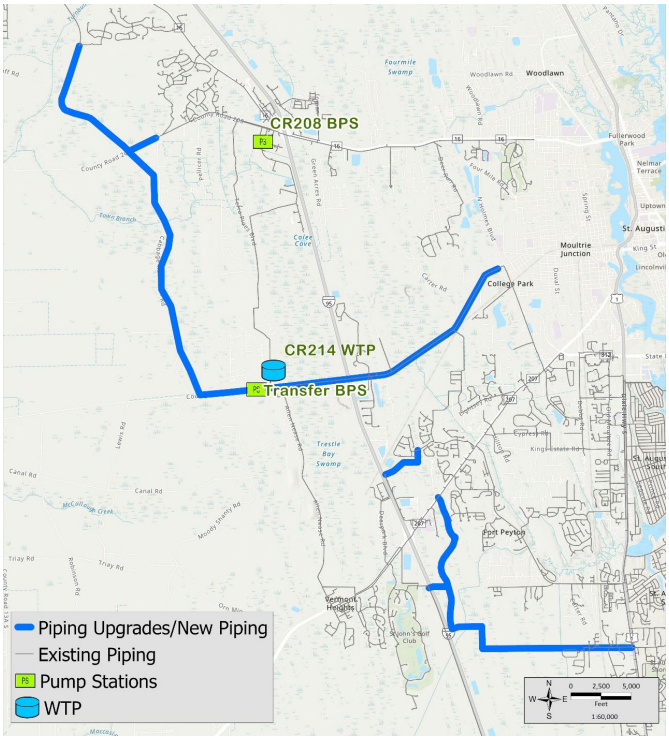


Water Transmission Mains

Five-Year Cost
$35,624,000

Description

As water demand grows, the capacity and condition of transmission mains become increasingly important. Several aging and undersized mains will be replaced or upsized to reduce headloss, improve flow efficiency, and enhance system reliability. In addition, a new transfer line will be constructed to expand overall capacity and support higher volumes of water movement across the system. These improvements will ensure the infrastructure can handle future demands while maintaining service quality and operational resilience.

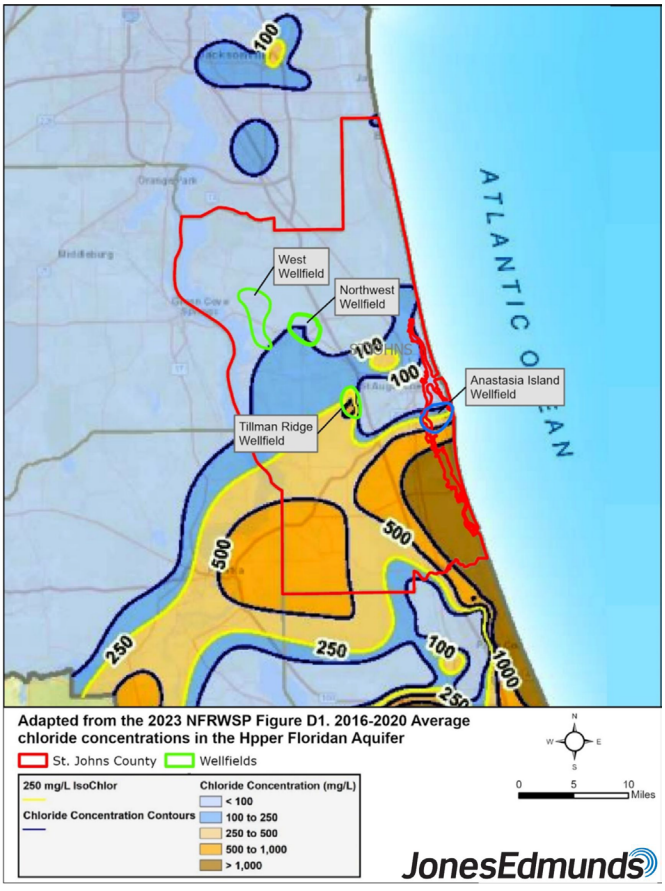


Alternative Water Supplies

Five-Year Cost
$2,500,000

Description

Beyond physical infrastructure upgrades, the County will continue to explore alternative water sources and emerging technologies to ensure long-term sustainability. This proactive approach will position the system to adapt to changing conditions, optimize costs, and minimize environmental impacts. By investing in research and planning for alternative supplies, the County can maintain a reliable potable water system that meets customer needs while supporting responsible resource management.



Fire Flow Improvements

Five-Year Cost
$4,957,000

Description

Ensuring adequate fire flow is essential for protecting public safety and maintaining resilient service throughout the potable water system. Planned improvements will focus on areas where the major transmission upgrades do not provide sufficient enhancement to localized fire flow capacity. Fire flows should be re-evaluated in each service area once the larger transmission improvements are completed. The improvements downstream of CR208 have an added benefit of increasing transfer capacity.



EXECUTIVE SUMMARY

JonesEdmunds

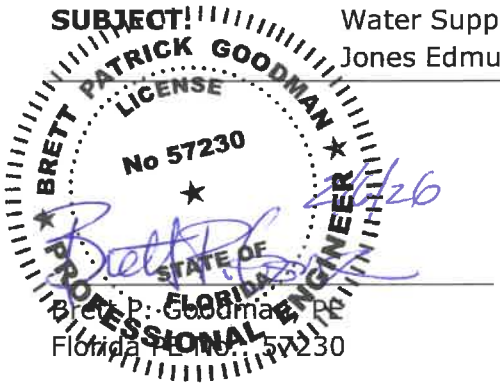
St. Johns County Water Supply Master Plan (WSMP)

TO: Teri Lane Pinson, PE, PMP

FROM: Brett Goodman, PE; Will Mohrman, EI; John Horvath, PE; TJ Lillo, PE

DATE: February 6, 2026

SUBJECT: Water Supply Master Plan Executive Summary
Jones Edmunds Project No. 19270-224-01



Brett P. Goodman, PE
Florida PE No. 57230

SUMMARY

The St. Johns County Utilities Department (SJCUD) commissioned the Water Supply Master Plan to provide water supply, treatment, and distribution strategies for the Mainland Utility Service Areas through 2045. The planning efforts demonstrate that SJCUD's water supply challenges require an adaptive strategy to address near-term constraints and secure a long-term water supply.

The alternatives analysis highlights several key conclusions that inform the near-term plan:

- Developing additional fresh groundwater in the northwest area is necessary and preferable from a cost perspective.
- Large near-term transmission improvements are unavoidable to address immediate system constraints, particularly the transfer limitations at the County Road (CR) 214 Water Treatment Plan (WTP) and the pressure and tank recovery issues on Anastasia Island (AI).
- An estimated $168,000,000 of capital improvements are needed by 2030, and approximately 95 percent of the investment is needed before 2035 to meet the 2045 planning horizon demands.

Looking beyond the short-term, groundwater production rates and water quality will remain the most significant uncertainties. Adaptive planning will be essential, ensuring that short-term investments in facilities such as the Trout Creek (TC) WTP and Northwest (NW) WTP transfers are paired with flexibility to incorporate future sources, whether through expanded reverse osmosis (RO) facilities, additional wellfields, or surface-water integration. As part of the County's long-term adaptive strategy, Jones Edmunds recommends that SJCUD

evaluate participating in regional minimum flow and level (MFL) mitigation projects while evaluating the alternative sources that can mitigate saltwater upwelling risks in existing and future wellfields. Although regional MFL initiatives may offer collaborative benefits and long-term groundwater allocations, they will not fully eliminate localized salinity challenges. Surface-water alternatives could eliminate MFL-related groundwater withdrawal constraints and salinity risks.

Table 1 summarizes the adaptive strategy recommendations.

Table 1 Adaptive Strategy Recommendations

Timeframe	Recommendation	Purpose/Focus Area
Near-Term	Proceed with additional water sources in NW and TC WTPs and a potential additional site in the northwest part of County.	Expand groundwater supply capacity.
	Implement major transmission improvements, including a booster pump station (BPS)/blending facility near the CR214 WTP.	Strengthen distribution.
	Explore groundwater quality and production potential (Palmo, West, and AI).	Assess future supply reliability.
	Determine the CR214 WTP ultimate capacity (to mitigate new transfer timing).	Optimize existing facility use.
	Continue participating in an MFL mitigation project, evaluate other MFL mitigation projects, and evaluate alternative water supplies that may reduce MFL impacts and mitigate saltwater upwelling.	Regulatory compliance and resource sustainability.
	Monitor water quality at all wellfields; add wells as needed.	Protect and sustain water quality.
Long-Term	Identify next water production center (AI, West, Palmo, or surface water).	Plan for future demand.
	Evaluate funding a long-term MFL mitigation project or develop alternative water supplies.	Secure sustainable water resources.
	Plan a land acquisition strategy around future water supply sources.	Protect supply corridors.
	Fortify single points of failure in transmission and production facilities.	Increase system resilience.

1 EXISTING AND FUTURE CONDITIONS

1.1 SERVICE AREA AND SYSTEM DEMANDS

The St. Johns County Utilities Department (SJCUD) presently serves approximately 111,000 residents across the Northwest (NW), Mainland, State Road (SR) 16, and Anastasia Island (AI) service areas (approximately 177 square miles), with South and Main West to be added in the Water Supply Master Plan (WSMP) horizon. Approximately 86,000 are expected to be connected to the SJCUD drinking water system by 2045. Figures 1 and 2 show that the average daily demand of drinking water is projected to increase from 10.32 to 18.23 million gallons per day (MGD) by 2045.

Figure 1 Average Daily Demand by Service Area

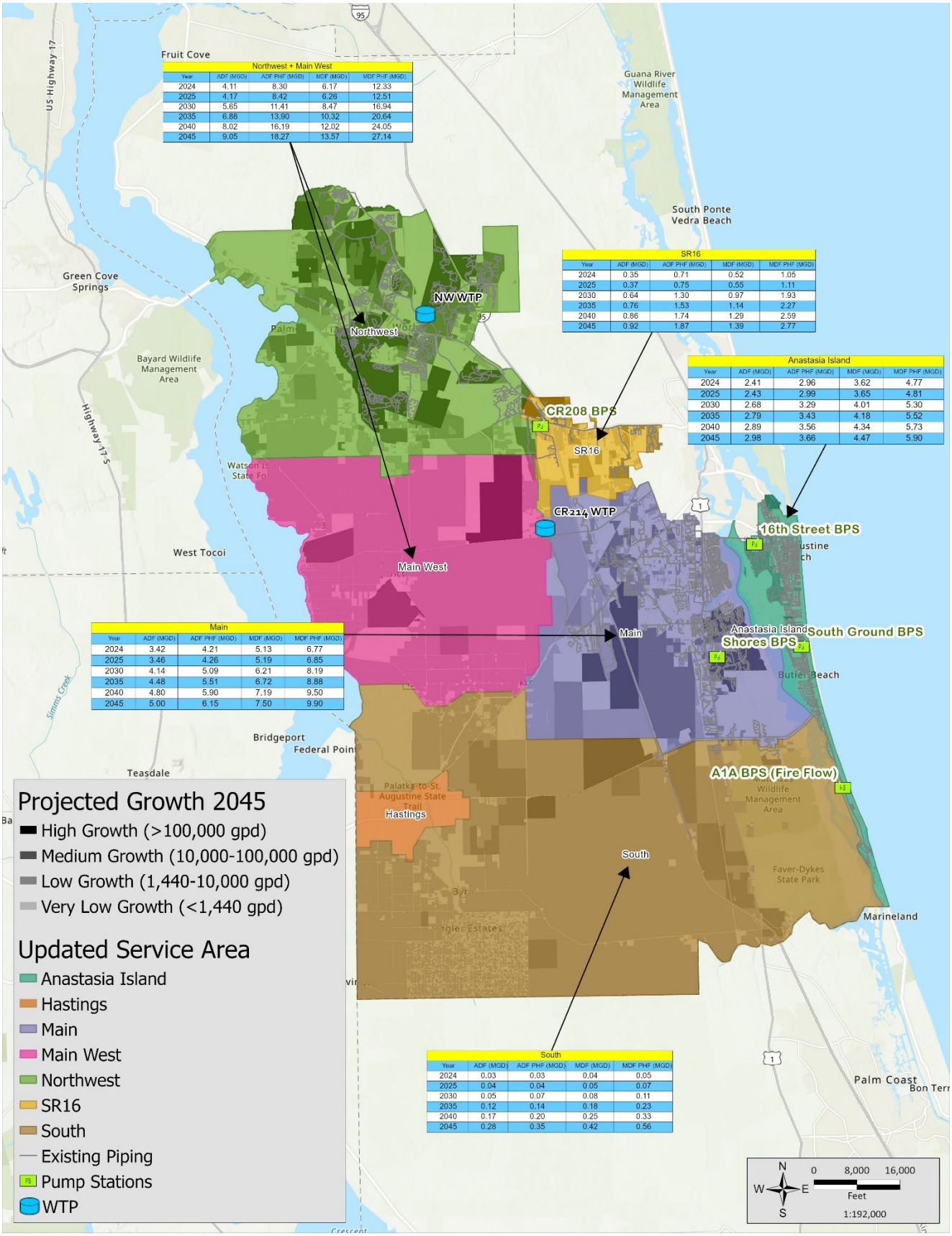
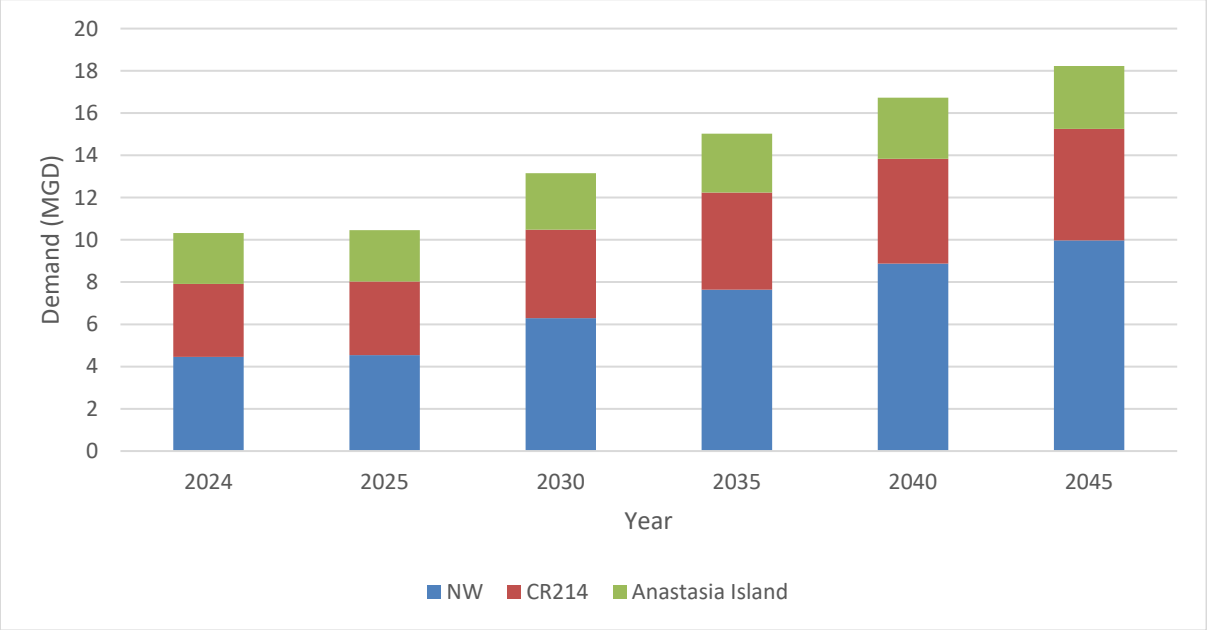


Figure 2 Average Daily Demand by Service Area



Notes: NW includes NW and SR16 service areas; CR214 includes Main, Main West, and South service areas; AI includes AI service area.

1.2 Wellfield Pumping Rates

The future water supply plan recommendations directly depend on the assumed well pumping rates. The selected well pumping rates were derived from a combination of upwelling analyses and current wellfield production data presented in the *Existing and Future Conditions* Technical Memorandum (TM). Upwelling evaluations were conducted to ensure that proposed extraction rates would not induce excessive vertical flow from deeper aquifer zones, which could compromise water quality or sustainability. These analyses helped define safe operational thresholds for each location, particularly in areas with known confining layers or variable transmissivity. Historical production data from existing wells informed the average pumping rates. Table 2 provides the well pumping rates for existing and new wellfields evaluated as part of the master plan.

Table 2 Wellfield Pumping Rates

Facility	Existing Wells	New Well Average Pumping Rate (MGD)	Average Pumping Rate (GPM)
NW	Six and one recently completed	0.45	310
CR214	Eight	0.60	415
TC	—	0.60	415
West Wellfield	—	0.60	415
AI	—	0.40	278

CR214 wells have consistently produced nearly 0.60 MGD, validating this rate as achievable and sustainable. In contrast, the NW wells have shown slightly lower yields, supporting the

selection of 0.45 MGD for new wells in that region. The AI wells were conservatively rated at 0.40 MGD due to limited aquifer thickness and higher susceptibility to saltwater intrusion.

2 MODEL DEVELOPMENT AND CALIBRATION

Two legacy InfoWater models (NW and Mainland) were upgraded and combined in InfoWater Pro as an extended-period simulation (EPS). Elevations were assigned from light detection and ranging (LiDAR) digital elevation models (DEMs); boundary conditions included WTP high-service pumps (HSPs), BPSs, and ground-storage tanks (GSTs) with documented controls. Current and future piping reflect SJCUD's latest geographic information system (GIS) and in-design capital improvement projects (CIPs). Spatial demand allocation used ArcGIS and diurnal curves for average annual daily demand (AADD) and maximum daily demand (MDD) conditions. The modeled network includes approximately 590 miles of water mains (1 through 36-inch) with predominantly polyvinyl chloride (PVC) and ductile iron (DI) materials; key assets include two WTPs (NW and CR214), five BPSs (one fire-flow only), and 10 GSTs. Recent work placed the CR208 BPS and GST in service and decommissioned the SR16 elevated storage tank (EST).

2.1 DATA AND METHODS

The team compiled GIS, record drawings, monthly operating reports (MORs) (2021–2024), supervisory control and data acquisition (SCADA) time-series (pressures, flows, and tank levels), pump curves/controls, and CIPs in design. Diurnal patterns were derived from 2024 SCADA events and demand multipliers selected using the 2024 MDD:AADD ratio (1.46) to conservatively represent current peak behavior. These datasets informed the baseline and planning scenarios (2025–2045).

2.2 CALIBRATION APPROACH

2024 scenarios (AADD and MDD) were calibrated to SCADA at key locations (pressures, pump flows, and tank levels). Pipe C-factors were seeded conservatively and refined; site-specific control adjustments reflected SJCUD practices (e.g., Southground closed valves to prevent recirculation, altitude valve set-points, 16th Street configurations). The resulting model reproduces observed distribution behavior and is suitable for planning analyses, with remaining discrepancies concentrated at BPSs due to manual/legacy controls that do not impact comparative planning outcomes.

2.3 PLANNING SCENARIOS

2025 base scenarios (AADD, MDD, and MDD plus fire-flow [MDD+FF] steady-state) incorporate updated demands, CR208 BPS, an active 16th Street check valve, and near-term CIPs. Outputs confirm Level of Service (LOS) compliance (≥20 pounds per square inch [psi]; typically 40–80 psi) and identify localized high pressures downstream of CR214 under peaks and corridors with velocities of more than 4 feet per second (fps) that inform upgrades.

3 ALTERNATIVES ANALYSIS

3.1 SCREENING TO SHORTLIST

Eight 2045 supply/transfer scenarios were screened using the following criteria:

- Pressure LOS – typically between 40–80 psi; limits 20–135 psi.
- Tank recovery – 72 hours under MDD.
- Velocity thresholds – >6 fps bottlenecks; >4 fps flagged).
- Fire flow (≥1,500 gallons per minute [gpm] near commercial).

The following are four refined alternatives advanced from the initial screening.

Alternative 1 – New AI WTP

This alternative proposes constructing a new WTP on AI. The facility would reduce reliance on transfers from the NW WTP and delay the need for new water supply production. The Mainland system would benefit by separating the AI WTP from the CR214 WTP, thereby eliminating tank recovery issues without requiring major piping improvements.

Alternative 2 – Additional NW Transfer Line

This alternative expands transfer capacity from the NW to the Mainland system by constructing new pipelines and a BPS near the CR214 WTP. The additional transfer would be supplied by the NW WTP and the new TC WTP to meet short-term demands. In addition to the 42,605 linear feet (LF) of 20-inch additional transfer piping, this alternative requires significant transmission system improvements including:

- I-95 to Watson Road Improvements (1,629 LF of 24-inch, 20,343 LF of 20-inch, and 8,290 LF of 16-inch piping).
- CR214 WTP to Holmes Boulevard Transmission Upgrade (22,803 LF of 16-inch piping replaced with 24-inch piping).
- Marketplace Drive to Quesada Road (4,010 LF of 10-inch piping).

Alternative 3 – New West WTP

This alternative adds new supply capacity by constructing a West WTP. The facility would provide water to the Mainland and AI systems, reducing reliance on the CR214 WTP. However, a transfer BPS and significant piping improvements downstream of CR214 as required in Alternative 2 would still be required. In addition to the piping improvements downstream of CR214, this alternative requires piping to connect from the West WTP to the new transfer BPS near CR214 (approximately 43,991 LF of 20-inch piping.

Alternative 4 – Expand CR214 WTP

This alternative increases production at the CR214 WTP by adding wells and expanding treatment capacity. Although it enhances supply at an existing site, significant piping improvements downstream of CR214 as required in Alternative 2 would still be required along with an investment in a wellfield with a declining yield.

Based on discussions with SJCUD staff, Jones Edmunds developed the alternatives so that they all have the same total 2045 production capacities of 30.5 MGD. The total capacity represents a 90-percend demand-to-capacity ratio by the end of the planning horizon. The screening process included evaluating implementation risks, cost sensitivities to well production pumping rates and transmission pipe costs, and a non-cost factor analysis. Table 3 summarizes the four alternatives' ranking based on screening evaluations.

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Note: All costs are in 2025 dollars (in millions).

3.2 Preferred Solution – Alternative 2

Alternative 2 is the preferred solution due to four key reasons:

- Schedule/constructability: Pipeline/BPS work is deliverable faster than siting and constructing new RO WTPs.
- Service performance: Reliably moves water to Mainland/AI to maintain pressures and tank recovery by approximately 2030.
- Cost: Among the lowest screening costs and most favorable under sensitivity to higher well yields/lower pipe unit costs.
- Risk/resilience: Avoids coastal siting risk (AI) and heavy dependence on declining CR214/Tillman Ridge wellfield while adding transfer redundancy.

3.3 Near-Term Implementation

Figure 3 shows the major system improvements included in Alternative 2 that are needed to meet the demands through 2045 shown in Figures 4 and 5. Table 4 summarizes the near-term plan elements in the recommended CIP for 2026 to 2030.

Figure 3 Alternative 2 Map

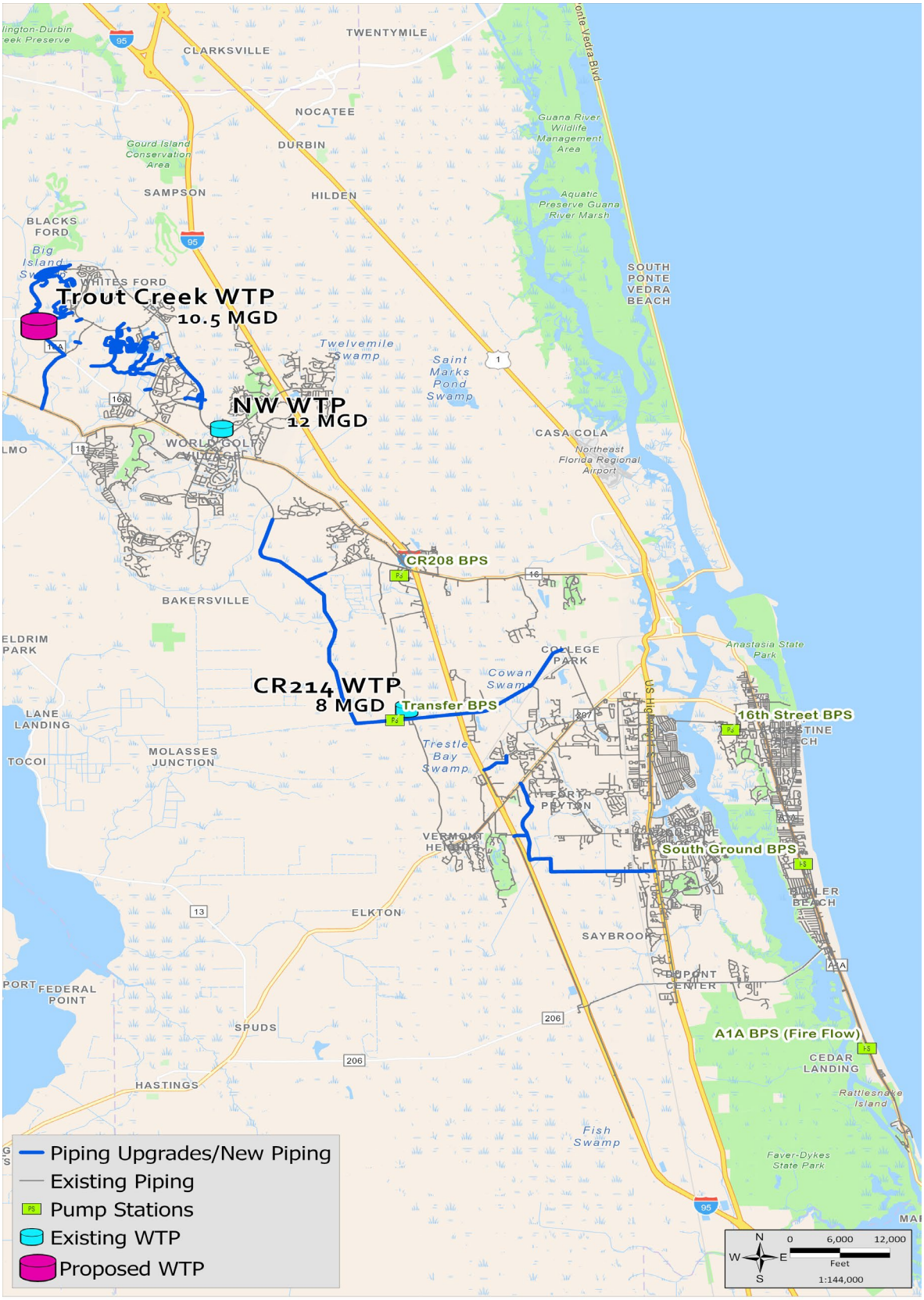


Figure 4 Mainland System Water Production Capacity and Demands

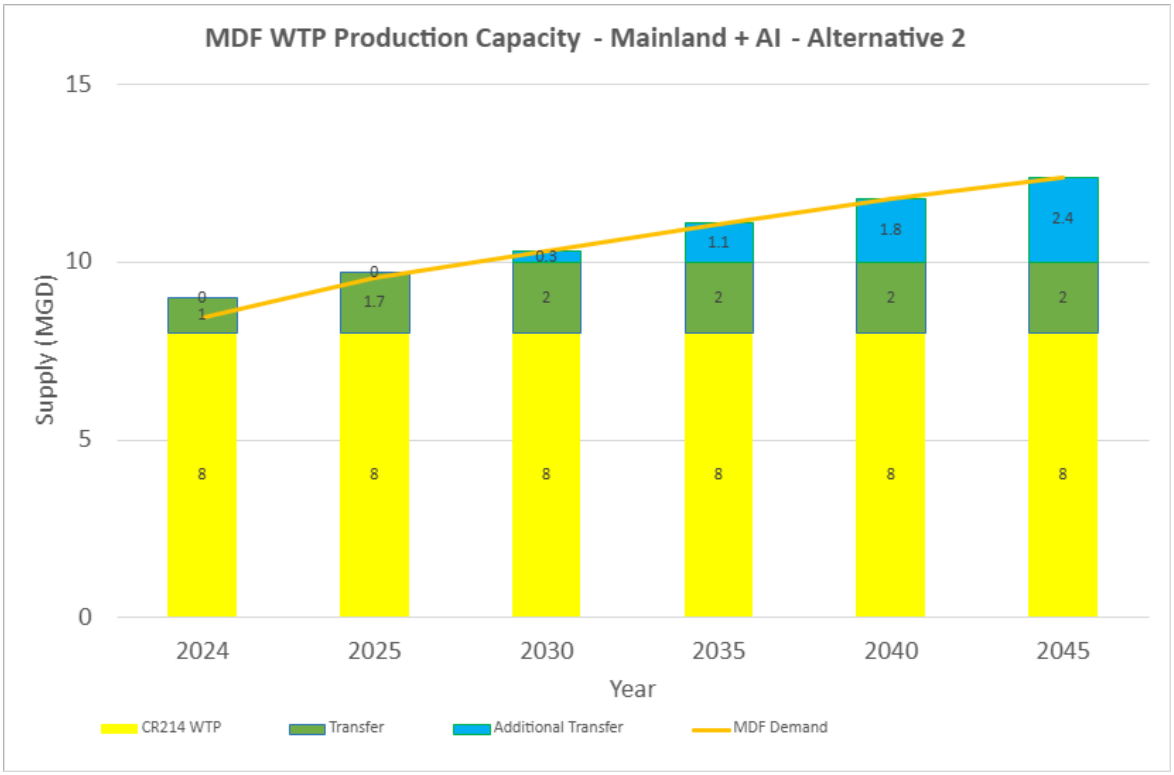
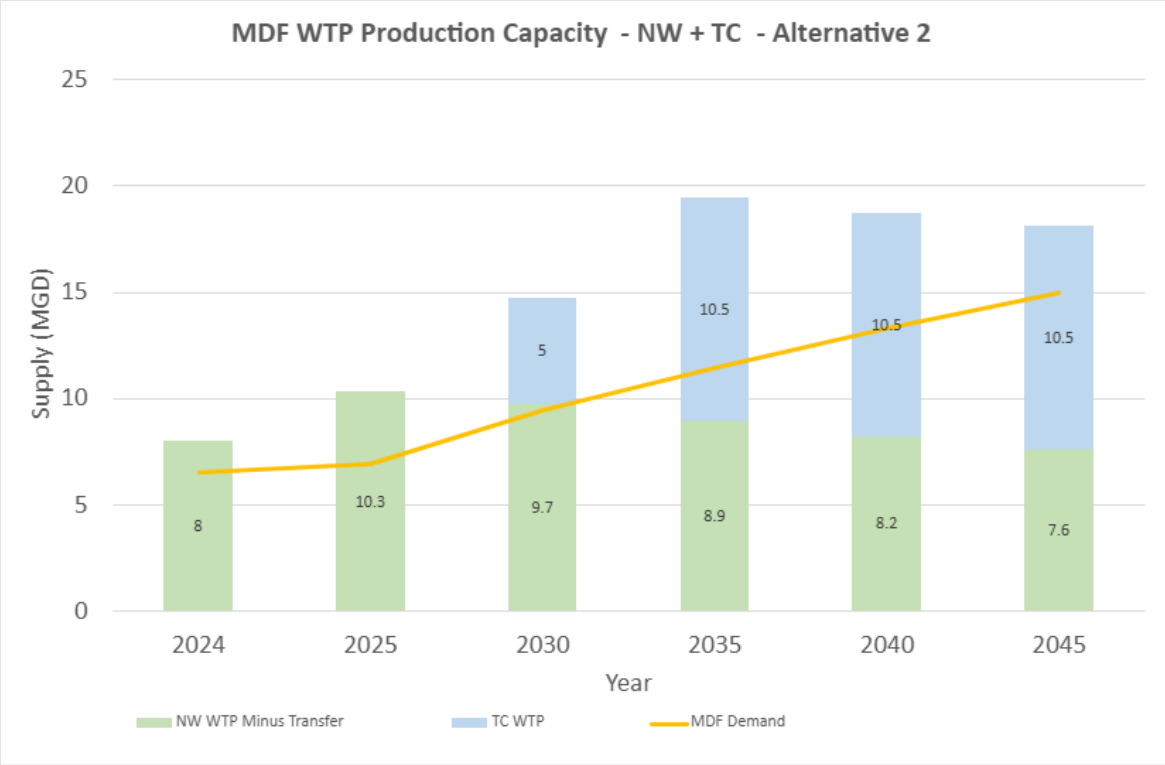


Figure 5 Northwest and Trout Creek Production Capacities and Demands



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	Install Two New High-Service Pumps (HSPs) and Variable Frequency Drives Implementation on all Four Pumps at the 16th BPS		$3,125,000				$3,125,000
	Engineering for Shores Unit 2 BPS Upgrades			$175,000			$175,000
	Shores Unit 2 BPS Upgrades (Pumping Capacity)			$1,250,000			$1,250,000
	Engineering for Additional Transfer BPS and Blending Facility			$2,100,000			$2,100,000
	Additional Transfer BPS and Blending near the CR214 WTP to Boost Additional Transfer downstream of the CR214 WTP				$15,000,000		$15,000,000
Water Transmission Mains	Engineering for Additional Transfer Line				$1,897,000		$1,897,000
	Additional transfer line – 42,605 feet of 20-inch piping				$19,971,000		$19,971,000
	Engineering for 2031 CR214 to Holmes Improvement		$938,000				$938,000
	The CR214 WTP to Holmes Improvements – 22,803 feet of 16- to 24-inch upgrade		$12,818,000				$12,818,000
Fire Flow Improvements	Engineering for Commercial Drive to East of I-95			$124,000			$124,000
	Commercial Drive to East of I-95 – 3,141 feet of 12-inch piping			$883,000			$883,000
	Engineering for Downstream of CR208			$485,000			$485,000
	Downstream of CR208 – 9,247 feet of 12- to 16-inch upgrade (Also increases transfer capacity)			$3,465,000			$3,465,000
Alternative Water Supplies	County Wide Testing, Exploration, and Studies	$500,000	$500,000	$500,000	$500,000	$500,000	$2,500,000
	Total Budget	**$9,875,000**	**$57,627,000**	**$52,940,000**	**$46,743,000**	**$500,000**	**$167,685,000**

Notes: Engineering costs include permitting, design, and construction phases. All costs are in 2025 dollars.

TECHNICAL MEMORANDUM

St. Johns County Utility – Mainland Water Supply Master Plan (WSMP)

TO: Teri Lane Pinson, PE, PMP

FROM: Brett Goodman, PE; Will Mohrman, EI; John Horvath, PE

DATE: November 13, 2025

SUBJECT: Regulatory Evaluation
Jones Edmunds Project No. 19270-224-01

This Technical Memorandum (TM) provides an overview of regulations related to source water, water treatment, distribution systems, and disposal and an outline of potential future regulations. This TM does not include all regulatory requirements but is intended to cover relevant regulations that may impact the WSMP and future potable water capital improvement projects (CIPs). Attachment A supplements the regulations discussed herein and provides additional resources for understanding their requirements. In the following sections, the term "alternative water supply" (AWS) refers to source water other than groundwater such as stormwater, potable reuse, surface water, desalination, and water recharge projects. The superscripted numbers in the following refer to the resources in Attachment A.

This TM should be considered a living document that will have changes in the coming year. Collectively, these regulations create a framework that SJCUD must navigate to shape the planning efforts and drive initiatives to provide sustainable and safe water-supply systems.

1 SOURCE WATER REGULATIONS

1.1 POTABLE SETBACK REQUIREMENTS

The Florida Department of Environmental Protection (FDEP) setback requirements for new public water system wells are listed in Chapters 62-532, FAC (Water Well Permitting and Construction Requirements)[1] and 62-555, FAC (Permitting, Construction, Operation, and Maintenance of Public Water Systems)[2], Florida Administrative Code (FAC). Chapter 62-532, FAC, provides requirements for water well permitting and construction. Attachment B contains an in-depth summary of the regulation and GIS analysis for the St. Johns County (SJCUD) to use to locate potential well sites. Setback requirements prevent substances from septic systems and hazardous materials from contaminating public water supply wells. Master planning should consider buffer zones and restricting new well locations. New wells and existing sources must follow FDEP setback rules, guiding the placement and construction of new facilities such as Trout Creek and Anastasia Island (AI). This protects current and future potable water supplies from contamination. Existing wellfields are

identified in Figure 1 in the Existing and Future Conditions TM. Along with the figures in Attachment B, proposed wellfields are also identified in Figures 10 and 11 in the Existing and Future Conditions TM.

1.2 Comprehensive Plan and/or Land Development Code Requirements for Wellhead Protection

Chapter 62-521, FAC, (the Wellhead Protection Rule)[3] protects public drinking water by managing pollution in and contamination of groundwater supplies by establishing a 500-foot radius around all wells serving community and non-transient non-community public water systems (PWS). The FDEP Source Water Assessment and Protection Program (SWAPP) website records the PWSs for SJCUD.

SJCUD will follow these regulations when evaluating sites for new wells, reclaimed water (RCW), wastewater treatment residuals, solids waste facilities, and storage tanks containing regulated substances.

Table 1 summarizes the County's wellhead protection requirements in the Comprehensive Plan and Land Development Code.

Table 1 Comprehensive Plan and Land Development Code Wellhead Protection Requirement

Code Reference	Objective/Zone	Definition	Requirement
Comp Plan Obj. D.5.4; LDC 3.02	Wellhead Resource Protection	Establishes protected areas around public potable water supply wells (Surficial and Floridan Aquifers) to prevent contamination of drinking water.	Designation of Resource Protection Areas (RPA): 1,000 feet or 5-year travel time (Surficial) and 1,000 feet (Floridan); primary (200 feet) and secondary zones; new wells must conduct a wellhead protection study; restrictions vary by zone, see below.
LDC 3.02.03(A)	Primary Zone (Both Aquifers)	Immediate area (200 feet or 1-year travel time) around the well; requires the highest protection.	Prohibits all land uses except existing residential, water supply facilities, open space, parks, playgrounds; no parking or impervious surfaces (surficial) except allowed recreation; ban on new landfills, industrial use, and certain agricultural and waste facilities.
LDC 3.02.03(B)	Secondary Zone (Surficial)	1,000 feet or 5-year travel time from the well (outer RPA for Surficial Aquifer).	Prohibits new landfills, concentrated animal feeding operations, dairy storage, land application of sludge/septage, new underground storage, and surface drainage modifications reducing recharge.
LDC 3.02.03(C); 3.02.0	Secondary Zone (Floridan)	1,000-foot radius from well (outer RPA for Floridan Aquifer).	Restricts certain uses—expansions or new hazardous waste, landfills, animal feeding or dairy, underground storage—require Special Use Permit and compliance with state/local environmental permitting.

1.3 Minimum Flow and Levels (MFL)

MFLs are limits set locally by the St. Johns River Water Management District (SJRWMD) in accordance with Section 373.042 Florida Statutes (FS) regarding how much water can be withdrawn from priority water bodies. MFLs establish a minimum hydrologic regime and define the limits at which further consumptive use withdrawals would be significantly harmful to priority water bodies. Attachment C contains an in-depth summary of MFLs and how the Lower Santa Fe and Ichetucknee River MFL impacts the current consumptive use permit (CUP) renewal. MFLs and recovery plans will restrict groundwater supplies. Withdrawals from the Upper Floridan aquifer will amplify the impacts of MFLs on the Keystone Heights, Santa Fe, and Ichetucknee MFLs. We recommended SJCUD continue to evaluate the most cost-effective MFL mitigation strategy by participating in regional MFL stakeholder efforts and assessing local alternatives.

1.4 Senate Bill (SB) 64

SB 64 (Florida Session Laws, Chapter 2021-168)[4] eliminates *non-beneficial* surface-water discharges (SWD) by 2032. The regulation intends to protect surface-water quality and promote beneficial reuse projects such as RCW, indirect potable reuse (IPR), and direct potable reuse (DPR) by eliminating the option to discharge wastewater effluent into the surface waters.

SJCUD currently relies primarily on a growing beneficial reuse system and wet-weather discharge permits for SWD and is investigating alternative beneficial reuse projects for projected future flows. The SB 64 plan submitted on November 1, 2021, lists alternate concentrate disposal methods, expanding public access reuse, deep injection wells (DIW), aquifer recharge (AR), and aquifer storage and recovery (ASR), as considerations for the Hastings and Anastasia Island Water Reclamation Facilities (WRF). These projects have could have benefits to potable water supply (e.g., wetland rehydration, DPR, offset potable water use with RCW, indirect river recharges to meet MFLs) and may be used to increase the future CUP allocation.

1.5 Clean Waterways Act (SB 712)

Chapter 2020-150 Laws of Florida[5] (Clean Waterways Act) minimizes the migration of nutrients that impair water bodies. Subparagraph 403.067(7)(a)9, FS, specifies that local governments (counties and municipalities) within a basin management action plan (BMAP) must develop a wastewater treatment (WWT) plan and/or an onsite sewage treatment and disposal system (OSTDS) remediation plan. SJCUD submitted a WWT Plan in July 2024 that was incorporated into the Lower St. Johns River Mainstem BMAP on December 13, 2024.

The regulation is beneficial for potable reuse projects because it improves wastewater quality effluent. OSTDS remediation or connection to a sewer service also increases the volume of water available for aquifer and/or water recharge projects, which can be used to increase CUP allocations by offsetting potable water use.

1.6 Stormwater Harvesting and Environmental Resource Permitting (ERP)

Scalping stormwater and intercepting and treating a portion of stormwater runoff before entering state waters for beneficial uses while the remainder continues downstream is a potential AWS that has the potential of offsetting potable demands as well as reducing stormwater pollutant loadings. Stormwater harvesting would require coordinating with the County's MS4 permit and an ERP from SJRWMD.

Chapter 40C-41, FAC,[6] governs the ERP standards for several basins including the Upper St. Johns River Hydrologic Basin.

An ERP will also be required for future construction relating to water supply (plant expansion, distribution system expansion, storage tanks) if the project impacts stormwater runoff.

1.7 Consumptive Use Permitting

Chapter 373, FS,[7] enables SJRWMD to regulate and approve CUPs within its jurisdictional boundaries. A CUP is required for users meeting or exceeding withdrawal limits and casing sizes outlined in Chapter 40C-2, FAC[8]. The intended use for water allocated via a CUP must be for reasonable-beneficial use, not interfere with any presently existing legal use of water, and be consistent with the public interest. These regulations apply to groundwater and surface-water withdrawals. Part of the reasonable-beneficial use criteria stipulates that "all available water conservation measures must be implemented."

The current CUP expired October 2024 and is being renewed. Increases in groundwater allocations are limited by the MFLs and to a volume that does not have negative impacts to other users. SJCUD is evaluating additional wellfields as shown in Attachment B. When SJCUD is issued the new CUP, it will contain the final approved well locations. Developing these new wellfields will require coordinating with SJRWMD through the CUP. The CUP will define the exact permitting requirements, but the regulatory steps for exploring and developing these wellfields are generally as follows:

- Finalize and submit proof of property control.
- Submit a Test Plan to SJRWMD to evaluate the wellfields' capacity and water quality. The Test Plan will recommend:
    - Specific water quality parameters and intervals during drill stem testing.
    - Outline specific capacity testing and monitoring to be completed.
    - Other data to be collected during drilling including Rossum sand testing, plumbness and alignment, geophysical testing, and any other data warranted or required in the CUP.
- Receive approval of the Test Plan from SJRWMD to initiate drilling.
- Submit well completion report in accordance with CUP conditions.

As groundwater becomes more limited, AWS will likely need to be developed as part of the CUP process. A few water supply options do not require a CUP, such as ASR and stormwater

scalping. Source-water quality is a major consideration in selecting AWS as discussed in the following surface water and groundwater sections.

1.8 Surface Water

Surface water sources such as the St. Johns River (near Trout Creek, Palmero, or West of CR214) or Intracoastal (AI) are potential long-term water supply options for SJCUD. These options reduce the reliance on groundwater and mitigate the impacts to MFLs and other legal groundwater uses. Developing surface water sources will require a CUP from the SJRWMD and consideration of the source water quality as it relates to meeting drinking treatment standards. Surface-water quality, particularly for disinfection byproducts and trihalomethanes precursors such as color and organics, may necessitate additional pretreatment and aesthetic factors such as odor and taste. Blending lower-quality surface water with higher-quality groundwater supplies and desalinating brackish surface water are potential long-term strategies. Developing surface waters will be more costly than traditional groundwater supplies, and we recommend further investigation to compare the costs and benefits of MFL mitigation projects that may extend the availability of traditional groundwater supplies.

Chapter 62-302, FS,[9] regulates surface-water quality and sets classifications for water bodies. Class I and Class I-treated waters are classified as potable water supply. Classes II through V waters are not explicitly classified as potable water supply, and the classification does not preclude them from being used for other purposes. The potential surface water sources along the St. Johns River are Class III water bodies. The Intracoastal near the wellfield shown in Attachment B is designated as a Class III water body.

1.9 Groundwater

Groundwater supply is governed by a regulatory framework that balances resource availability and environmental protection, ensuring a sustainable water supply. However, in some regions of the County (near CR214, AI, or West) poor groundwater quality imposes limitations on the usable water supply, as reviewed in Section 5.5 of the Existing and Future Conditions TM. As a result, the combination of regulatory withdrawal limits (CUPs), environmental safeguards (MFLs), and water quality issues can collectively constrain future groundwater availability for SJCUD's growing population, emphasizing the need for an adaptive water supply strategy.

SJCUD's groundwater withdrawals are limited by its CUP; if the SJCUD needs to increase its CUP allocation, it may consider increasing production from lower-quality aquifers (i.e., higher dissolved solids concentrations, increased cost due to the depth of drilling) and blending the water with higher-quality groundwater or AWS at a treatment facility. Groundwater in St. Johns County can be highly variable due to areas of elevated dissolved solids. We recommend SJCUD continue to investigate groundwater quality in areas in the northwest and west parts of the County such as Palmero and west of CR214 Water Treatment Plant (WTP).

Chapter 62-520, FS,[10] regulates and protects groundwater quality and sets classifications for types of groundwater supplies. Class F-I, G-I, and G-II are drinking water classifications, with Class F-I having the least dissolved solids concentration and Class G-II having the

most. Class G-III and G-IV groundwaters may not be used as drinking water sources. SJCUD's wellfields are classified as G-II groundwaters.

2 WATER TREATMENT REGULATIONS

2.1 PRIMARY AND SECONDARY DRINKING WATER STANDARDS

Chapter 62-550 FAC[11] sets drinking water-quality limits in accordance with the US Environmental Protection Agency (EPA) primary and secondary drinking water standards (PSDWS) and regulates monitoring frequency of the treatment plant and source water. Results are published and reported to FDEP annually. The chapter also sets treatment techniques that must be followed by PWSs for maintaining water quality and requirements for notifying the public about violations of a maximum contaminant level (MCL).

The standards are updated in accordance with the Safe Drinking Water Act (SDWA), which is discussed in Section 5. SJCUD must produce drinking water that meets or exceeds these requirements. PSDWS influence planning by requiring investment in source selection, treatment, and infrastructure to meet regulations. These standards affect water sources, guide improvements, treatment technologies, and community acceptance.

2.2 PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) RELATING TO EPA PRIMARY DRINKING WATER REGULATIONS

The EPA announced the final *National Primary Drinking Water Regulation (NPDWR)*[12] establishing legally enforceable limits for six PFAS. PWSs must monitor the PFAS levels and have 2 more years (until 2027) to complete an initial monitoring period. After 2027, monitoring continues to be required, and information is available to the public. If monitoring PFAS levels exceed the MCLs, PWSs must reduce levels by 2029 to meet the final MCLs. After 2029, PWSs must notify the public and reduce the levels of PFAS in drinking water if the MCL is exceeded.

SJCUD could monitor PFAS levels and plan to upgrade its PWS infrastructure to reduce or remove them if found in concentrations exceeding the MCL. SJCUD could incur significant cost in upgrading new and existing facilities and may require additional training and staff to operate new treatment components. According to the NPDWR, SJCUD must complete the initial monitoring by 2027. However, these requirements may change as the new presidential administration reviews and modifies the PFAS regulations. SJCUD should closely monitor EPA guidelines accordingly.

2.3 PUBLIC DRINKING WATER SYSTEMS PERMITTING

Chapter 62-555, FAC,[13] regulates permitting, construction, operation, and maintenance of PWSs. New well locations will be coordinated with the Wellhead Protection Rule (discussed in Section 1) and the SB 64 initiatives. Expanding or modifying existing WTPs could increase the sample frequency, number of staffed hours, and number of operators and change the operator class-type required to be on site.

FDEP creates a regulatory framework for permitting, constructing, operating, and maintaining PWSs in Florida. It sets siting requirements for new wells and water sources.

Chapter 62-555, FAC, specifies the minimum number of wells and capacity for community systems and mandates maintaining minimum capacity even if the largest well is out of service. These rules influence utility decisions on where to develop new water sources and implement infrastructure for treatment and delivery.

3 DISTRIBUTION SYSTEM REGULATIONS

3.1 LEAD AND COPPER RULE

The revised Lead and Copper Rule (LCR)[14] reduces the "lead action trigger levels" from 15 to 10 micrograms per liter (µg/L). Optimizing corrosion-control systems may result in increased use of a phosphorus-based treatment such as orthophosphate, polyphosphate, or ortho-polyphosphate, which may impact a utility's downstream wastewater treatment facility/WRF by increasing the influent phosphorus concentration. Utilities should be prepared to treat higher phosphorus concentrations when implementing corrosion-control systems. Utilities are required to create and release to the public a pipe replacement plan to replace all lead service lines in the next 10 years.

If SJCUD currently practices corrosion control but has lead concentrations exceeding the trigger level, it must re-optimize its existing treatment. If SJCUD does not currently practice corrosion control, it must conduct a corrosion-control study so that the system is prepared to respond quickly if lead levels exceed 10 µg/L. All lead and copper concentrations reported on the 2023 County Annual Water Quality Reports were significantly lower than action levels. These requirements may change as the new presidential administration reviews and modifies the rule.

3.2 WATER QUALITY

Chapter 62-550, FAC,[15] regulates the sampling frequency and MCL in the distribution system based on numbers of connections and population served. As SJCUD service area population continues to grow, SJCUD may be required to increase the number of sampling points for bacteria and residual chlorine in the distribution system, and additional chemical booster stations may be required to maintain water quality, which will incur additional capital and operations and maintenance costs.

Strategic planning not only determines water sources and treatment but also how water is stored, moved, and managed, influencing water quality as it reaches users. Changes in supply, treatment, or storage can alter water chemistry and disinfectant levels, destabilizing pipe materials, disturbing biofilms, or mobilizing deposits. This may cause discoloration, bad taste, odors, or bacterial growth. Excessive storage or oversized pipes can increase water age, reducing disinfectant and encouraging microbial growth or disinfection byproducts. Conversely, undersized or poorly looped networks risk stagnation or low pressure, harming water quality. Effective planning ensures public health and regulatory standards are met, protecting water quality.

4 DISPOSAL REGULATIONS

Reverse osmosis (RO) facilities such as the CR214 WTP produce a waste stream called concentrate or brine that contains high salt, nutrients, and trace contaminants. SJCUD currently disposes of the RO concentrate produced at the CR214 WRF by blending it into the wastewater collection system that feeds the AI WRF. The WRF's capacity to handle the blended concentrate will change when a new WRF comes online and reduces the amount of wastewater being received at the AI WRF.

Disposal options such as deep well injection (see Section 4.1), surface discharge (see Section 4.3), and evaporation ponds require permitting through FDEP. The groundwater quality and quantity of brine production impact the feasibility of each disposal option. Generally, surface water discharge permitted under a water quality based effluent limitation (WBEL) is the most cost-effective method of disposal. Concentrate management is an essential part of SJCUD's short-term and long-term water supply planning.

4.1 Concentrate Disposal by Underground Injection Control (UIC)

Chapter 62-528, FAC,[16] regulates UIC permitting. SJCUD must adhere to the requirements of the Chapter if considering UIC for concentrate disposal from membrane filtration, backwash, and water not meeting potable water standards. The *Injection Well and ASR Feasibility Study Phase 1A* by Jacobs Engineering dated April 14, 2022, provides two potential zones for RO concentrate injection and recommendations to SJCUD for exploratory wells. UIC permits are complex and require time and significant investments to obtain.

4.2 Land Application

Chapter 62-610, FAC,[17] regulates the reuse of RCW and land application. Particularly relating to concentrate disposal, Parts II, III, and IV may be applicable. Chapter 62-610.400-426 Part II regulates the restricted public access slow-rate land application of water with basic disinfection. Chapter 62-610.450-491 Part III regulates the use of public access reuse. Chapter 62-610.500-525 Part IV regulates the application of RCW to rapid infiltration basins and absorption fields. These regulations are relevant if concentrate from SJCUD's RO WTPs is sent to a municipal WRF for additional treatment to RCW.

4.3 Water-Quality-Based Effluent Limitations (WQBEL)

Chapter 62-650, FAC,[18] WQBEL protects bodies of receiving waters from the effects of harmful wastewater discharges by setting water-quality limitations for treating and disposing of domestic and industrial wastewater. Rule 62-302.530, FAC,[19] governs Numeric Nutrient Criteria and sets a specific numerical value to control the amount of nutrients that can be discharged into surface waters by point sources.

SJCUD must consider these regulations if surface-water disposal is being considered for treated RO concentrate.

5 FUTURE REGULATIONS

5.1 DRINKING WATER REGULATIONS

The EPA is required to publish a new Contamination Candidate List (CCL) every 5 years under the SDWA[20]. The EPA must make regulatory determinations for at least five contaminants from the most recent CCL within 5 years of completing the previous list of regulatory determinations. CCL 5 was announced on July 19, 2021; therefore, regulations from the list should be determined in 2026. The EPA is currently drafting CCL 6.

SJCUD should review contaminants on CCL 5 to predict potential new drinking water regulations for 2026.

5.2 POTABLE REUSE RULEMAKING

The recently adopted Chapter 62-565, FAC,[21] now governs potable reuse in Florida. This rule sets requirements for permitting, constructing and maintaining potable reuse systems.

5.3 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

The EPA's designation of PFAS as "hazardous substances" under Section 102(a) of CERCLA allows the EPA to combat PFAS contamination with its CERCLA enforcement authorities. CERCLA's liability framework ensures that, wherever possible, pollution producers pay to clean up the hazardous substance. WTPs may be at risk of paying for PFAS removal and disposal.

The *Memorandum on Regulatory Freeze Pending Review* dated January 20, 2025, halts the creation of any new federal regulations. Specific to PFAS, discharge limits cannot be set. However, FDEP is not prevented from reassessing the regulation in the future.

5.4 RISK AND RESILIENCY ASSESSMENT (RRA) UPDATE

The RRA is used to evaluate threats from malevolent acts and natural hazards that could threaten water supply.

Community water systems serving a population greater than 100,000 persons were required to submit an updated RRA[22] by March 31, 2025.

5.5 REPEAL OF THE CHEVRON DEFERENCE

The Supreme Court established the Chevron Deference to interpret statutes when disputes arose. It was a two-part test whereby a judge would determine if the statute in question had any ambiguity. If Congress's intent was clear, then an agency is obliged to follow the law. If ambiguity exists, the court would defer to how the agency chooses to carry out the law. With its repeal, disputes over interpretating a statute will be determined by a federal judge instead of industry experts. Critics of the Supreme Court's decision to repeal the law say that statutes will be interpreted based on the ideological leaning of the federal judge appointed to the case.

How this will directly impact SJCUD is unclear unless direct challenges or disputes are made to federal water regulations. Congress may begin to create new statutes to eliminate ambiguity in disputed statutes, which may extend timelines.

6 CONCLUSION

By establishing stringent source-water protection measures, including setback requirements, MFLs, and wellhead protection, the regulations protect public drinking water from contamination.

Compliance with updated drinking water-quality standards, such as those concerning PFAS and lead and copper levels, could compel SJCUD to enhance treatment processes and invest in infrastructure upgrades. The repeal of the Chevron Deference and the new presidential administration could impact the compliance timeline and/or limits if they are challenged. Regulatory changes resulting from the new administration may continue to disrupt water-quality regulations.

SJCUD's long-term water supply plan requires an adaptive strategy to changing regulatory conditions. A primary outcome of the regulatory framework related to SJCUD's long-term water supply will be the need to develop AWS if the impacts from traditional groundwater supplies cannot be mitigated.

Attachment A

Regulatory Resources

ATTACHMENT A – REGULATORY RESOURCES

Superscript	Related Comment	Descriptor
1	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-532	Chapter 62-532, Water Well Permitting
2	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-555	Chapter 62-555, Public Supply System Permitting
3	https://flrules.org/gateway/ChapterHome.asp?Chapter=62-521	Wellhead Protection Rule
4	https://www.flsenate.gov/Session/Bill/2021/64/BillText/er/HTML	SB 64
5	https://www.flsenate.gov/Session/Bill/2020/712/BillText/er/HTML	Clean Waterways Act
6	Florida Administrative Code, 40C, Chapter 40C-41 - SURFACE WATER MANAGEMENT BASIN CRITERIA | Florida Administrative Code | Justia	ERP
7	62-41 : REGULATION OF THE CONSUMPTIVE USES OF WATER - Florida Administrative Rules, Law, Code, Register - FAC, FAR, eRulemaking	CUP
8	Florida Administrative Code, 40C, Chapter 40C-2 - PERMITTING OF CONSUMPTIVE USES OF WATER | Florida Administrative Code | Justia	CUP
9	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-302	Surface Water
10	https://flrules.org/gateway/ChapterHome.asp?Chapter=62-520	Groundwater
11	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-550	PSDWS
12	https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas	PFAS
13	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-555	PDWS Permitting
14	https://www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule	Lead and Copper Rule

Superscript	Related Comment	Descriptor
15	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-550	Distribution System Water Quality
16	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-528	UIC
17	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-610	RCW and land application
18	https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-650	WQBEL
19	https://www.flrules.org/gateway/RuleNo.asp?ID=62-302.530	WQBEL
20	https://www.epa.gov/ccl/basic-information-ccl-and-regulatory-determination	SDWA and CCL
21	https://www.flrules.org/Gateway/View_notice.asp?id=27203376	DPR
22	https://www.epa.gov/waterresilience/awia-section-2013	RRA

Attachment B

Potable Setback Requirements

ATTACHMENT B – POTABLE SETBACK REQUIREMENTS

FDEP setback requirements for new public water system wells are listed in Chapters 62-532, FAC (Water Well Permitting and Construction Requirements)[1] and 62-555, FAC (Permitting, Construction, Operation, and Maintenance of Public Water Systems)[2], FAC. Chapter 62-532, FAC, provides requirements for water well permitting and construction. Section 400 specifies the requirements for permit issuance which include the setback distances in the table below.

Chapter 62-532, Part A, Public Water System Setback Requirements

Installation Description	Rule Reference	Setback in feet
Slow Rate Land Application Restricted Public Access	62-610.421(3)	500[a]
Rapid Rate Land Application	62-610.521(2)	500[b]
Overland Flow Systems	62-610.621(2)	500
Transmission Facilities to Restricted Public Access Slow-rate Land Application Systems, Rapid Rate Land Application System or Overland Flow Systems	62-610.621(4)	100
Public Access, Residential Irrigation, or Edible Crop Slow-rate Land Application Systems	62-610.671(1)	75
Transmission Facilities to Public Access, Residential Irrigation, or Edible Crop Slow-rate Land Application Systems	62-610.671(3)	75
Domestic Wastewater Residuals	62-640.700(4)(b)	500
Phosphogypsum Stack Systems	62-673.340(2)(d)	500[c]
Aboveground and Underground Storage Tank Systems	62-761.500(1)(a) and 62-762.501(1)(a)	100
Solid Waste Disposal Facilities	62-701.300(2)(b)	500
Yard Trash Disposal, Storage, or Processing	62.701.300(12)(a)	200
Storage or Treatment of Solid Waste in Tanks	62.700.300(13)	100
Onsite Sewage Treatment and Disposal Systems (OSTDS) with system flows > 2,000 gallons per day	62-555.312(1)	200
OSTDS with system flows < 2,000 gallons per day	62-555.312(1)	100
High Risk Sanitary Hazards	62-555.312(3)	100
Moderate Risk Sanitary Hazards	62-555.312(3)	50
Dairy Farm Waste – Unlined Storage and Treatment, or High Intensity Areas	62-670.500(6)(a)	300
Dairy Farm Waste – Land Application	62-670.500(6)(b)	200

Notes: [a] This distance shall be reduced to 200 feet if facility Class I reliability is provided and shall be reduced to 100 feet if both facility Class I reliability and high-level disinfection are provided.
[b] This distance shall be reduced to 200 feet if both facility Class I reliability and high-level disinfection are provided and if the applicant provides reasonable assurance that applicable water quality standards will not be violated at the point of withdrawal.
[c] This distance applies only to shallow water supply wells (i.e., potable water wells that pump from an unconfined water table aquifer).

Section 62-532.400, FAC, provides for exemptions from meeting the 500-foot setback distances if reasonable assurance is provided that the groundwater and drinking water

source are protected. Reasonable assurance can be provided if the water supply well is withdrawing from a confined aquifer or through additional monitoring to ensure contaminants are not reaching the water supply well. However, the sanitary setback requirements must still be met. Rule 62-555.312, FAC, requires continuing protection from sanitary hazards by control of all land within 100 feet of the well. This can be provided by ownership of the land; control of land via easements, lease agreements, or deed restrictions; wellhead protection, zoning, or other land use regulations; or other appropriate means.

Subsection 62-555.312(3), FAC, provides the following examples of high-risk sanitary hazards that require a 100-foot setback:

- Active or abandoned mines.
- Airplane or train fueling or maintenance areas at airports and railroad yards.
- Unregulated animal feeding operations.
- Concentrated aquatic animal production facilities.
- Domestic wastewater collection/transmission systems.
- Drainage or injection wells.
- Oil or gas production wells.
- Improperly constructed or abandoned wells.
- Fertilizer, herbicide, or pesticide storage areas at agricultural sites, golf courses, nurseries, parks, or graveyards,
- Unregulated impoundments and tanks that process, store, or treat domestic wastewater, domestic wastewater residuals, or industrial fluids or waste,
- Unregulated industrial waste land application areas,
- Junkyards and salvage or scrap yards.
- Pastures with more than five grazing animals per acre,
- Pipelines conveying petroleum products, chemicals, or industrial fluids or wastes,
- Unregulated underground storage tanks used for bulk storage of a liquid pollutant or hazardous substance other than sodium hypochlorite solution.

The setback distance may be reduced to 50 feet for the following moderate-risk sanitary hazards:

- Unregulated aboveground storage tanks used for bulk storage of a liquid pollutant or hazardous substance other than sodium hypochlorite solution.
- Fertilizer, herbicide, or pesticide application areas that are not under the ownership or control of the supplier of water at agricultural sites, golf courses, nurseries, and parks
- Railroad tracks.
- Stormwater detention or retention basins.
- Surface water.

Section 62-555.312, FAC, includes the following requirements for siting new water supply wells on a site:

- The well area should be free from or least subject to inundation with surface drainage and flood water.
- The well should be upgradient from on-site or off-site sanitary of hazards.

In certain cases, the Florida Department of Environmental Protection (FDEP), St. Johns River Water Management District, or delegated permitting authority can provide variances to the setback requirements. Justification for approval of the variance may include confinement to the production zone, modifications to the well construction (such as additional surface casing), or additional treatment processes. However, FDEP approval is required before modification of the setback distances.

We completed a geographic information system (GIS) analysis to screen for potential contamination sources near the potential wellfields. The analysis included parcels within a 0.5-mile radius of potential well sites and identified the following:

- Reclaimed Water Lines.
- Sewer Lines.
- Potential contaminant sources accessed through the FDEP Open Data Portal:
  - Brownfield Sites and Areas.
  - FDEP Cleanup Sites.
  - Superfund Waste Cleanup Sites.
  - Environmental Restoration Integrated Cleanup (ERIC) Waste Cleanup Sites.
  - Solid Waste Facilities.
  - Small Quantity Hazardous Waste Generators.
  - Closed Hazardous Waste Facilities.
  - Hazardous Waste Treaters, Storers, and Disposers.
  - Large Quantity Hazardous Waste Generators.
  - Hazardous Waste Transporter Facilities.
  - Storage Tank Contamination Monitoring Sites.
  - Petroleum Contamination Monitoring Discharges.
  - Groundwater Contamination Areas.
  - Florida Gypsum Stacks.
  - Florida Institutional Controls Registry.
  - Wastewater Facilities.
  - ERIC PFAS Sites.

Figures 1 through 3 show sites identified in the GIS analysis [Note: figures to be updated after well sites are confirmed]. SJCUD can use these maps to assist in locating property for potential well sites; however, because the Upper Floridan Aquifer in this area is confined, exemptions may be possible from some setback requirements. Additionally, these sites are potential sources of contaminants and their inclusion in the screening does not mean contamination has been identified at the site. Site-specific review is needed to further evaluate the potential for the sites shown to present a risk of contamination, identify other potential sanitary hazards, and determine the best mechanism for control of the 100-foot sanitary setback. SJCUD should complete a thorough review of the setback requirements and a Phase I environmental assessment before purchasing property for new wells.

Figure 1 West Wellfield Potential Contaminant Site Screening

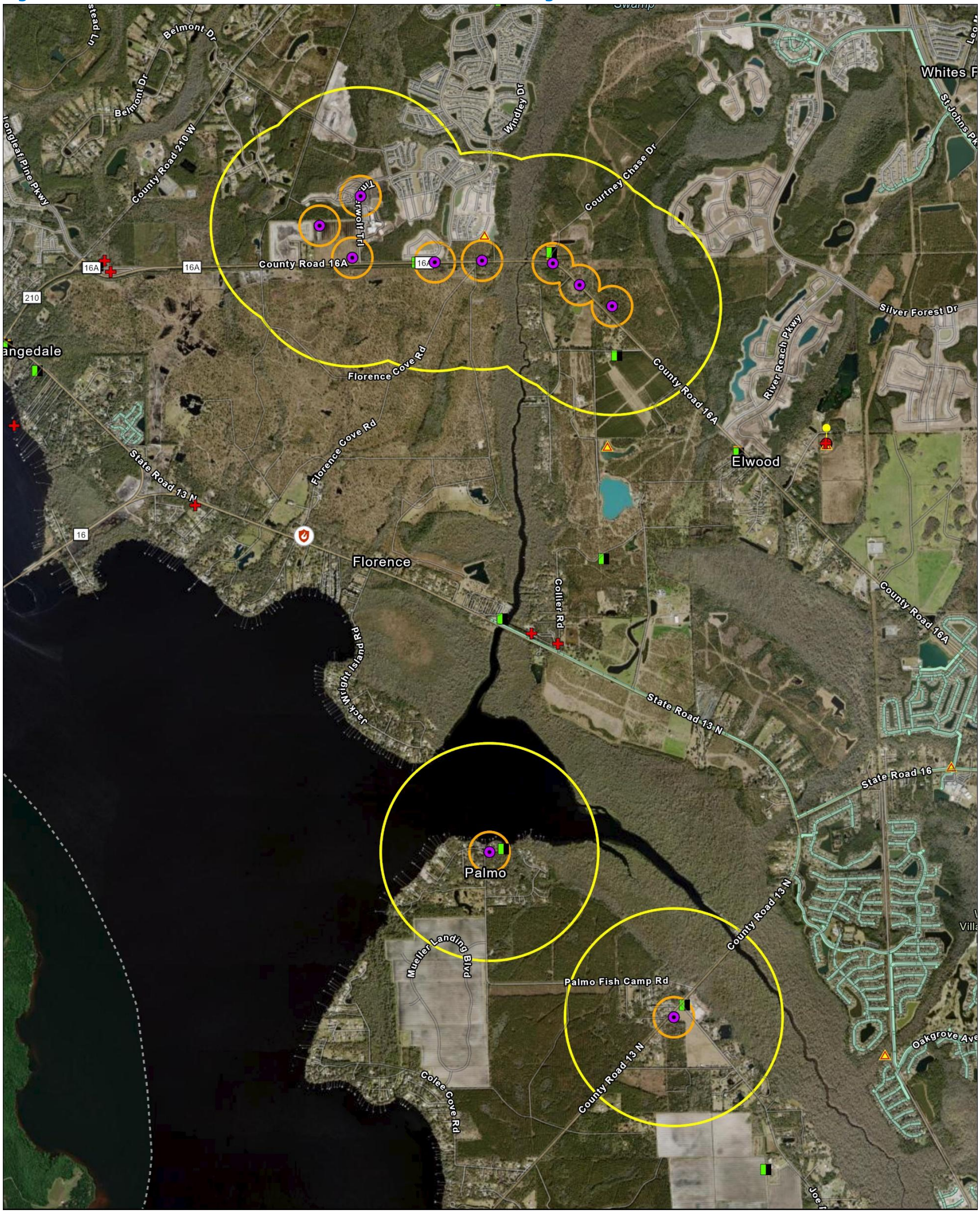
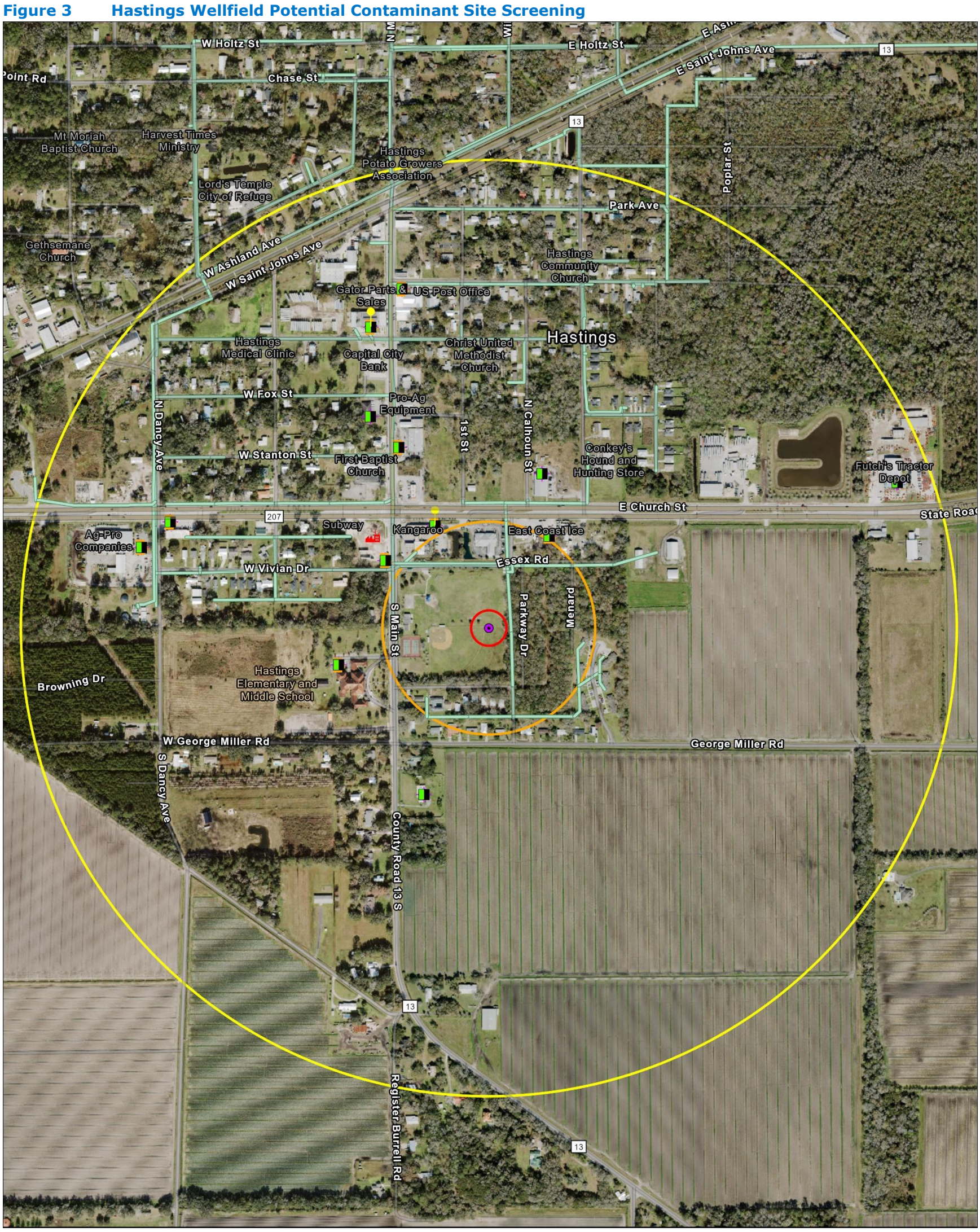


Figure 2 Anastasia Island Wellfield Potential Contaminant Site Screening



Figure 3 Hastings Wellfield Potential Contaminant Site Screening



- Proposed Backup Well
- 100-ft buffer
- 500-ft buffer
- 0.5-mile buffer
- DEP Cleanup Sites
- Storage Tank Contamination Monitoring (STCM)
- Closed Hazardous Waste Facilities
- Petroleum Contamination Monitoring (PCTS) Discharges
- Registered Tanks from (STCM)
- DEP Cleanup Sites
- Sewer Line

N
W E
S

0 500 1,000 Feet

LIQUID SOLUTIONS GROUP

Attachment C

Minimum Flow and Levels

ATTACHMENT C – MINIMUM FLOW AND LEVELS (MFLS)

MFLs establish a minimum hydrologic regime and define the limits at which further consumptive use withdrawals would be significantly harmful to priority water bodies. MFLs are typically determined based on evaluations of topography, soils and vegetation data collected within plant communities, and other pertinent information associated with the water resource. They also consider the ability of wetlands and aquatic communities to adjust to changes in hydrologic conditions. MFLs are designed to allow for an acceptable level of hydrologic change to occur.

Section 373.042 of the Florida Statutes requires the state's water management districts or the Florida Department of Environmental Protection to establish MFLs. During the development of an MFL, computer models for surface waters and groundwater are used to evaluate the effects of existing and/or proposed consumptive uses and the likelihood they might cause significant harm to the water body. If the water body is currently below or projected to fall below the MFL level within 20 years, then a recovery or prevention strategy is required to be developed and adopted.

Prevention and recovery strategies call for water withdrawals to be maintained at or below sustainable limits or for impacts from water withdrawals to be mitigated through water supply development projects — such as reclaimed water, aquifer recharge and water supply projects — and conservation and regulatory measures. These strategies are designed to ensure that fundamental characteristics of a water body are maintained over time, achieve equity among water users, provide users with greater certainty regarding allocations, and ensure that MFLs are met.

For a water user such as SJCUD to obtain a CUP, the consumptive use must be in accordance with all MFLs and any approved prevention and recovery strategies. At present, SJCUD is subject to two adopted MFL Recovery Strategies as follows:

- Recovery Strategy for the Implementation of Lakes Brooklyn and Geneva Minimum Levels dated July 13, 2021, by the St. Johns River Water Management District (SJRWMD).
- Recovery Strategy: Lower Santa Fe River Basin and Ichetucknee Rivers and Priority Springs Minimum Flows and Levels dated April 8, 2014, by the Suwannee River Water Management District (SRWMD).

Each MFL includes significant restrictions for the issuance of permits in the north Florida area, including the County.

The restrictions require mitigation or offset of impacts to the MFL water bodies in excess of certain thresholds. For the Lakes Brooklyn and Geneva MFLs, the County entered into an agreement with SJRWMD to financially participate in the Black Creek Water Resources Development Project up to the County's share of impact to those water bodies, based on the SJCUD's projected future (2045) withdrawal of a combined 23.6 MGD.

The Recovery Strategy for the Lower Santa Fe and Ichetucknee River (LSFIR) MFLs requires SJCUD to provide an approved plan to offset its current and projected impact before renewing its CUP. If SJCUD is unable to develop the plan to mitigate or offset its impacts,

then SJRWMD can only issue up to a 5-year duration CUP. Such a CUP will only have an allocation to meet the demands that can be reasonably projected to occur in that timeframe. At present, SJCUD has not developed an approved plan to address its projected future impacts to the LSFIR. SJCUD is developing alternatives to address this requirement as part of ongoing consumptive use permitting for CUP #1198.

Florida Statutes require periodical reevaluation of MFLs and the development of revisions as needed. The LSFIR MFLs are currently undergoing reevaluation, and draft MFLs and rules have been published. The latest draft of the proposed rule expands on the current rule by also requiring mitigation of a portion of historical water use. It would also add an annual conservation goal for reducing residential per capita water use. SJCUD should continue to monitor the development of this proposed MFL rule.

Florida Statutes also require the water management districts to submit a priority list and schedule for establishing MFLs within their district. The priority list and schedule are required to include the MFLs planned for establishment in the next 3 years. The SRWMD priority list plans new evaluations of the Middle and Upper Suwannee River system. Draft MFLs for portions of the Middle and Upper Suwannee River have been published and subjected to peer review. These draft MFLs are currently being reviewed and revised by the SRWMD. However, given the potential for these MFLs to affect the SJCUD, the County should continue to monitor the development of these MFLs

TECHNICAL MEMORANDUM

St. Johns County Water Supply Master Plan (WSMP)

TO: Teri Lane Pinson, PE, PMP

FROM: Brett Goodman, PE; Will Mohrman, EI; John Horvath, PE; TJ Lillo, PE

DATE: November 13, 2025

SUBJECT: Existing and Future Conditions Evaluation
Jones Edmunds Project No. 19270-224-01

This Technical Memorandum provides an overview of existing and future conditions of the St. Johns County potable water system, including an existing infrastructure discussion, current and future demand analysis, and water supply analysis.

1 INTRODUCTION

1.1 WATER SUPPLY

The St. Johns County Utilities Department (SJCUD) is planning to add one or more wellfields to provide water supply to the Mainland system through the 2045 Consumptive Use Permit (CUP) cycle. Groundwater withdrawals to supply this system are permitted by the St. Johns River Water Management District (SJRWMD) via CUP No. 1198. The CUP authorizes the withdrawal of groundwater from the Upper Floridan aquifer (UFA). Jones Edmunds and Liquid Solutions Group, LLC (LSG) prepared the CUP renewal application, which requested increasing the UFA withdrawal allocation from 14.55 million gallons per day (MGD) to 18.77 MGD to meet increases in potable water demands projected through 2045. The CUP application requested the flexibility to use up to two new wellfields to supply the additional water. The CUP application included locations for a West (Trout Creek area) wellfield and an East [Anastasia Island (AI)] wellfield.

Figure 1 shows the existing SJCUD service areas, locations of the existing wellfields, and the approximate location of the two proposed new wellfields. Up to 10 new wells were proposed at the West wellfield, and up to six new wells were proposed at the AI wellfield. The West wellfield is approximately 3 miles west of the SJCUD Northwest (NW) wellfield, and the AI wellfield is approximately 7 miles east of the SJCUD Tillman Ridge (TR) wellfield.

Properties outside the areas shown in Figure 1 are supplied by private domestic wells, another utility, wholesale purchase, or another SJCUD CUP. Figure 2 shows the other public supply CUPs within the County.

Figure 1 Project Location Map

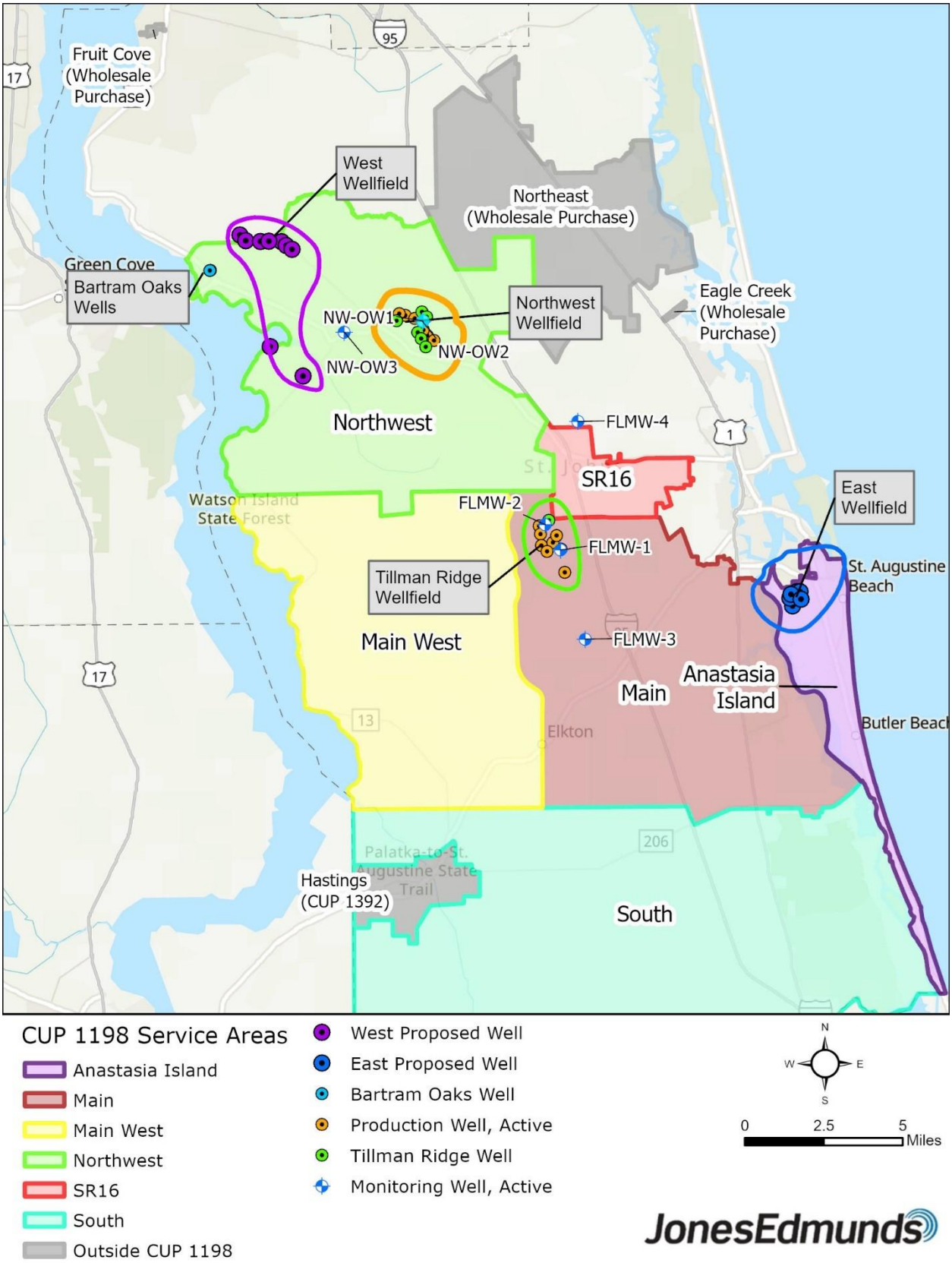
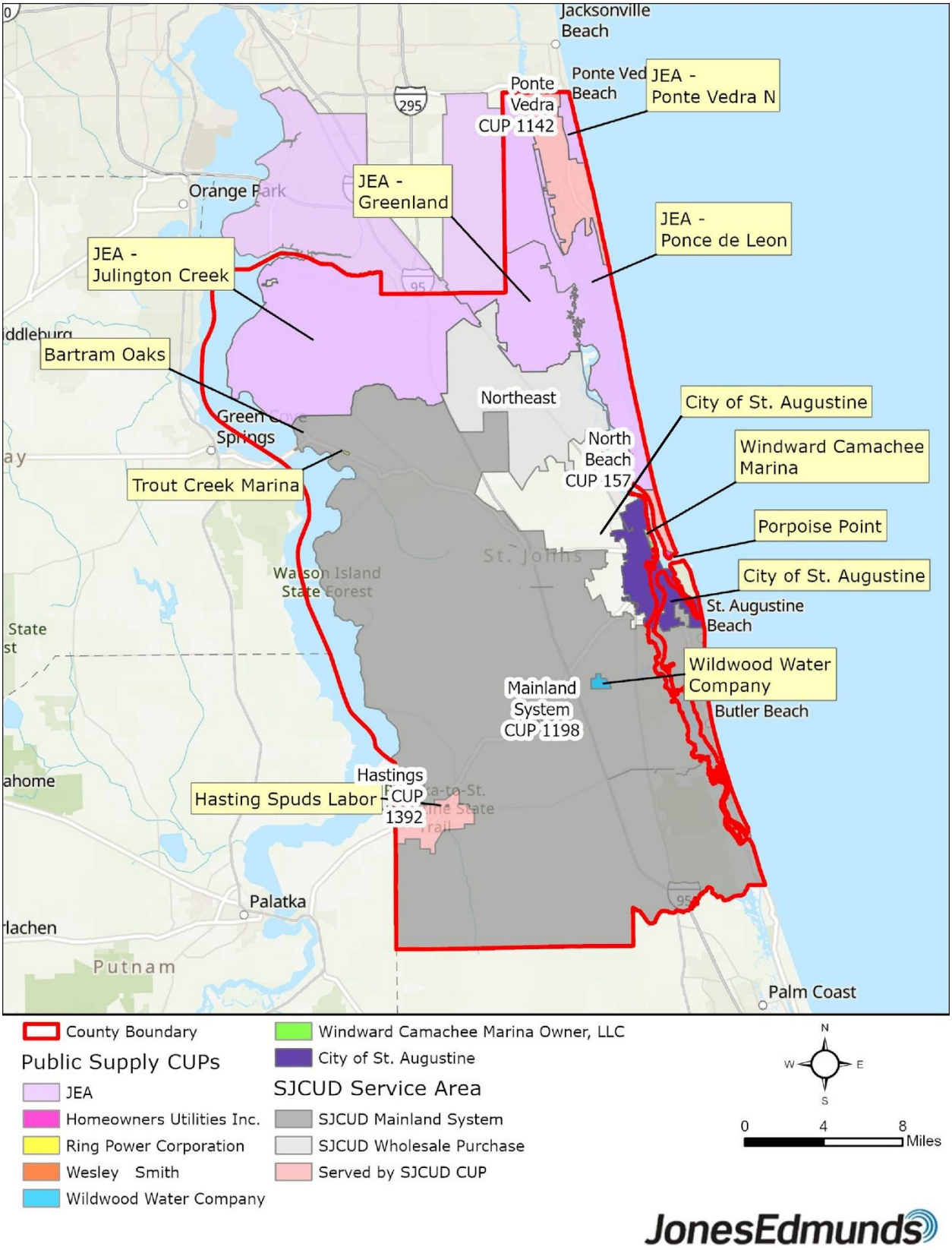


Figure 2 Other Public Supply CUPs within St. Johns County



1.2 WATER DISTRIBUTION

SJCUD provides potable water to approximately 111,000 residents across the Northwest (NW), Main, State Road 16 (SR16), and AI service areas, covering approximately 177 square miles in central St. Johns County. The SJCUD service territory also includes service areas of South and Main West, which SJCUD does not currently serve. The service areas of Ponte Vedra, North Beach, and Hastings are served by SJCUD but are not connected to the area of infrastructure modeled in this WSMP. The service areas of Fruit Cove, Northeast (NE), and Eagle Creek are served through interlocal agreements. Figure 3 shows the layout of the current service areas.

The WSMP adds the South and Main West service areas, which will increase the total service area from 177 to 386 square miles. Figure 3 presents the existing service area boundaries, which may change based on new water supply and distribution within the County to be evaluated as part of the WSMP. The water system comprises components derived from geographic information system (GIS) data and SJCUD tables, which include:

- 590 miles of water mains.
- Three water treatment plants (WTPs) including Bartram Oaks, which was not modeled.
- Five booster pump stations (BPSs) (one used specifically for fire flow).
- Ten ground storage tanks (GSTs).

The County Road 208 (CR208) BPS was recently completed in November 2024, and the elevated storage tank (EST) in the SR16 service area has been decommissioned. The existing conditions model is calibrated with the EST online and BPS offline (using 2024 demands). However, a 2025 conditions scenario was created to present results for the EST offline and the BPS online for 2025 conditions.

1.3 GOALS

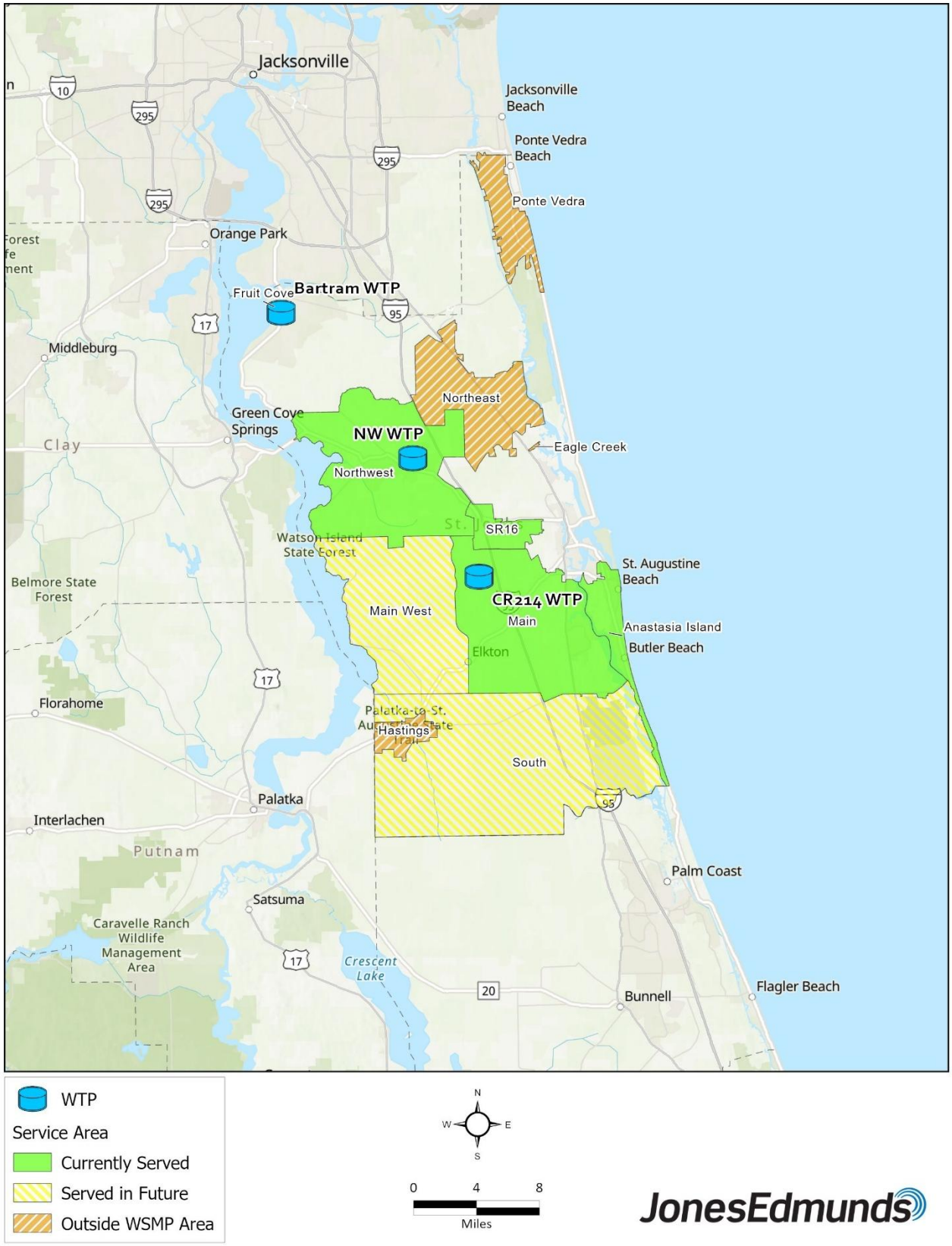
SJCUD's goal is to serve its customers by providing safe, reliable drinking water at affordable rates while emphasizing customer service and protecting the environment. Services must address current and future needs while protecting the environment and supporting a 20-year planning framework. The WSMP provides guidelines for reliable potable water treatment and distribution for community needs now and into the future.

2 EXISTING WATER SYSTEM

SJCUD's potable water system (PWS) provides its customers with continuous, high-quality water. The WSMP describes major system components and details including:

- Treatment Plants.
- BPSs.
- Storage.
- Transmission and Distribution Systems.
- Monitoring and Control Framework.
- Recently Completed Improvements.

Figure 3 Existing Service Area Map



For Informational Purposes Only Q:\19270_st_johns_co\224-01 2045 Mainland Water Supply Master Plan\pro\St_Johns_Mainland_Water_Supply_Master_Plan_CJL.aprx jmasters 11/5/2025

The WSMP documents the facilities, recent observations, and collected data. Jones Edmunds will evaluate the ability of these components to meet future demands in the Modeling Executive Summary. Planned improvements received from SJCUD staff through emails, meetings, or previous studies have been incorporated when applicable.

Figures 4 and 5 show SJCUD's major system components throughout the service area.

2.1 Treatment Plants

Currently, the distribution system incorporates two high-service pumping (HSP) facilities at the NW WTP and the CR214 WTP, which are currently operational. These plants play a critical role in defining the model's boundary conditions by serving as primary sources of treated water and influencing system pressures. Table 1A summarizes the WTP details.

Table 1A WTP Details

WTP[1]	Source	Number of GSTs	Number of HSPs	Pump Details	Pump Design Point	Pressure Range[2] (psi)	Has VFD?	Planned MDD Treatment Capacity (MGD)	Average Day Well Capacity (MGD)[3]
NW	Upper Floridan Aquifer	3	6	Peerless 8AE-17Q	3,000 gpm at 185 feet TDH	Approximately 75 maintained by VFDs	Yes	12	2.7
CR214	Upper Floridan Aquifer	2	4	Aurora Model 411 BF	2,950 gpm at 250 feet TDH	60 to 140 Transfers flow from NW WTP (Goal: Less than 120 psi)	Yes	10 (8 RO/Raw + 2 NW Transfer)[4]	4.2

Notes: gpm = gallons per minute; psi = pounds per square inch; TDH = total dynamic head; VFD = variable-frequency drive.

[1] Service Areas: NW WTP = NW and SR16; CR214 WTP = Main and AI (South and Main West projected to be added in future).

[2] Summer pressure: Three VFDs maintain under 135 psi at CR214 and above 70 psi at Lewis Point. Winter pressure: Automatic operation maintains 70 psi at Lewis Point.

[3] Average Day Well Capacity is based on calculations to conservatively prevent upwelling and water-quality degradation.

[4] The County prefers to limit the wellfield capacity to 7.2 MGD.

The Maximum Daily Flow (MDF) planned treatment capacity is based on permit applications, permits, and reporting, which was adjusted/revised based on as-built information and meetings and conversations with SJCUD staff. Existing and future conditions are based on a "Planned Maximum Daily Demand (MDD) Treatment Capacity" to account for planned expansion of the NW WTP (Currently has a capacity of 9 MGD with an ongoing project which aims to increase this to 12 MGD).

As Section 5 further discusses, the average day well capacity (MGD) is based on the total number of wells and average pumping rates determined from an upwelling analysis completed by LSG. These pumping rates may not reflect actual usage. Table 1B also illustrates current well pumping capacities.

Table 1B Well Capacities

Well Name	District ID	Casing Diameter (inches)	Capacity (gpm)
TR-42	14780	14	1300
TR-43R	484406	12	1000
TR-45	34242	20	1500
TR-46	34243	20	1500
TR-47	36031	20	1500
TR-48	38399	20	1500
TR-49	38400	20	1500
TR-50	404712	18	1300
NW-1	34244	10	1300
NW-2	34245	12	1650
NW-3	34246	12	1800
NW-4	34247	20	1800
NW-5	461256	20	1800
NW-6	461257	20	1800
NW-7*	480566	20	1400

Note: * NW-7 is currently being constructed.
TR – Tillman Ridge
NW - Northwest

2.2 Booster Pump Stations

Table 2 shows the five operational SJCUD BPSs, including the newly constructed CR208 BPS. The *SJCUD Integrated Water Resources Plan* (Jones Edmunds, 2015a) identified that the CR208 BPS is intended to transfer up to 2 MGD from the NW WTP service area to the CR214 WTP service area due to increasing CR214 WTP demands through 2040. The CR208 BPS will also increase pressure in the downstream system and improve SJCUD's ability to meet downstream demands through 2040.

With the CR214 wellfield and transfer flow supplying water to the Main and AI service areas, these BPSs are essential for increasing pressure in the system and supplying these service areas have sufficient water storage to balance peak demands. To supply minimum pressures, the BPSs have built-in controls based on set points shown in Table 3A. Due to model stability and hydraulic imbalances, some of these controls were modified for the 2025 base modeling scenarios – these controls are illustrated in Table 3B.

2.3 Storage

Storage is an essential part of the WSMP and hydraulic modeling efforts. It is vital for balancing supply and demand, ensuring a dependable water supply during peak usage, fire flow, and emergencies. Storage enhances the system's operational flexibility and offers resilience against disruptions in supply. The SJCUD PWS has ten storage tanks serving two WTPs and five BPSs. The CR214 WTP includes two storage tanks, the NW WTP includes three storage tanks, and the BPSs each have one. An EST in the SR16 service area was

Figure 4 Locations of Existing System Facilities – NW WTP System

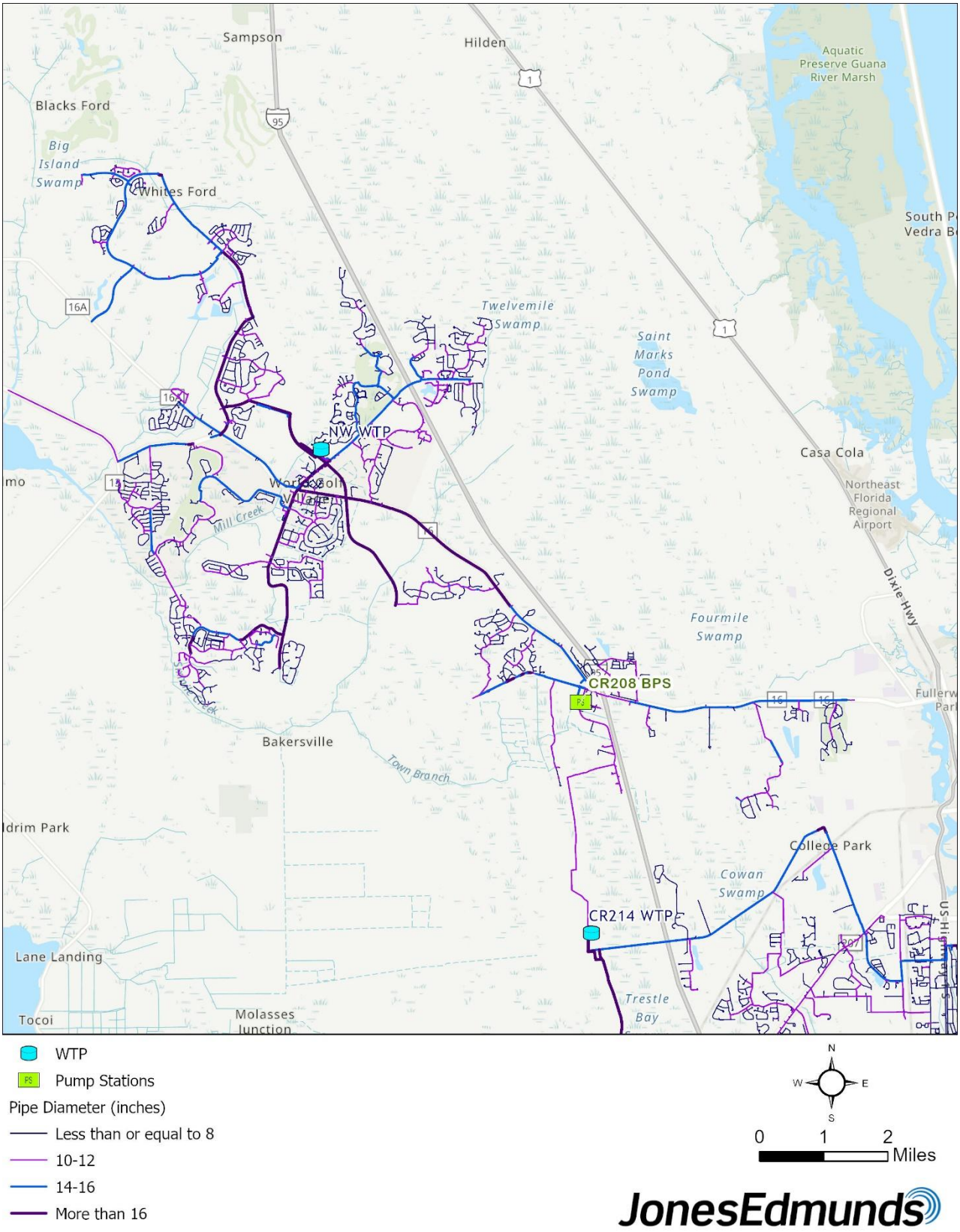
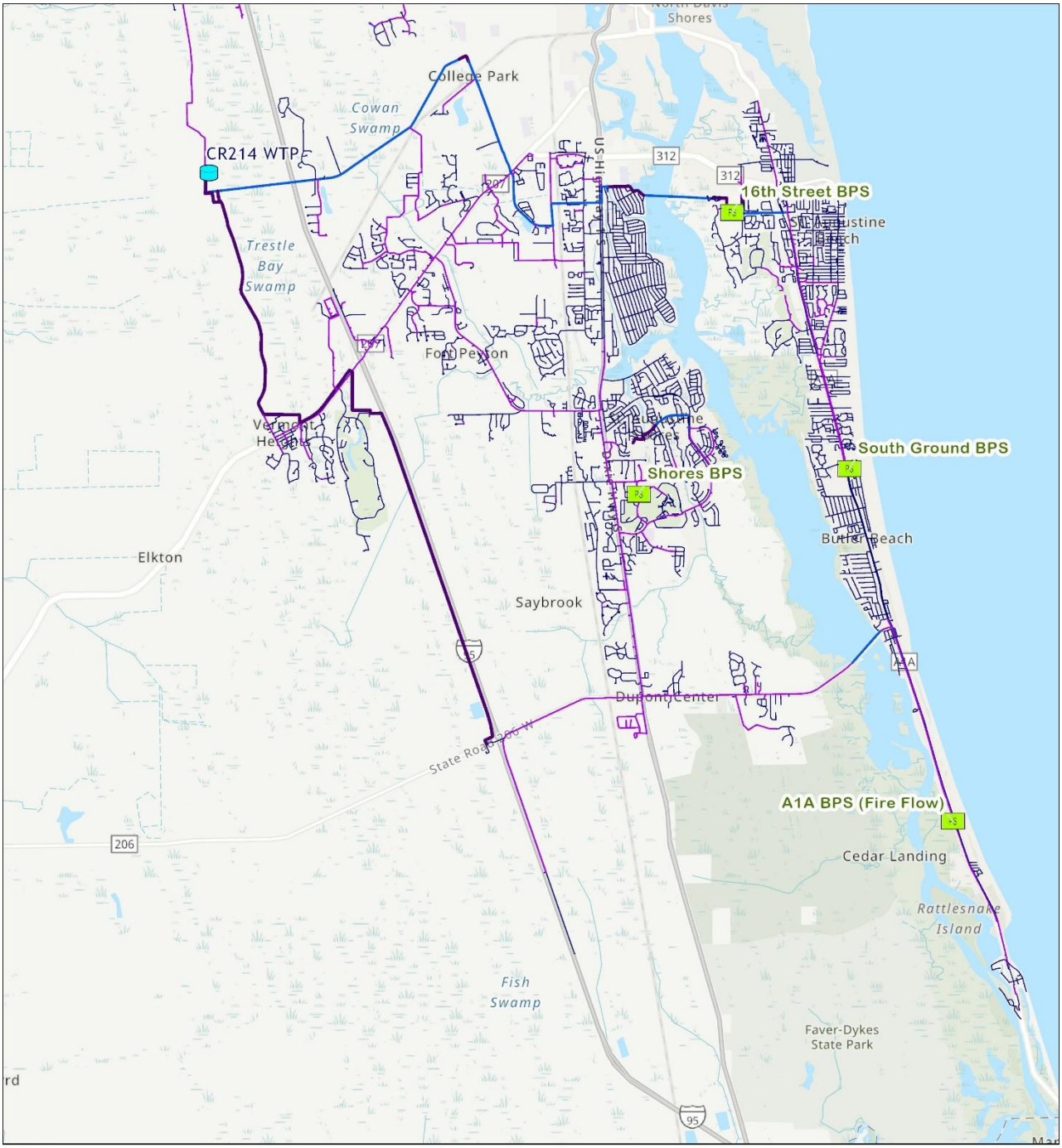


Figure 5 Locations of Existing System Facilities – CR 214 WTP System



recently decommissioned after adding the CR208 BPS. A new storage tank was constructed coinciding with the construction of the CR208 BPS. Table 4 summarizes the storage tank information.

Table 2 Booster Pump Station Detail

BPS	Number of Pumps	Pump Details	Pump Design Point	Pressure Range (psi)	Service Area
16th Street	2	2 – Aurora 411 BF	1,400 gpm at 250 feet TDH	50 to 80	AI
South Ground	3	2 – Peerless Model 3AE9 (VFD) 1 – Peerless Model 6AE16 (VFD)	2 – 520 gpm at 196 feet TDH 1 – 1,975 gpm at 196 feet TDH	Approximately 80 (60 to 80 in the first few hours of the day)	AI
A1A	3	1 – Rhurpumpen GE/GU Jockey Pump 2 – Rhurpumpen 14B-135	1 – 125 gpm at 165 feet TDH 2 – 1,500 gpm at 205 feet TDH	50 to 80	AI
Shores	2	1 – Peerless 5AE14N 1 – Not in Service	800 gpm at 160 feet TDH	50 to 70 (Average close to 65)	Main
CR208	4	4 - Goulds .Series DWT Size 12FDLC 4 Stage	4,240 gpm at 70 psi (3 pumps in operation) 2,198 gpm at 78 psi (3 pumps in operation) 1,920 gpm at 78 psi (2 pumps in operation) 1,413 gpm at 80.2 psi (1 pump in operation)	70 to 80	SR16

Table 3A Booster Pump Control Strategy and Set Points

BPS	Control Strategy and Set Points[1]
16th Street	The altitude valve is set at 65 psi. Valve opens if the tank level is <10 feet and closes at tank level >20 feet. Pump operates in remote/manual. Typically turns on at approximately 5 a.m. and off when the pressures rises to 65 psi at Lewis Point. The pump operates on Monday, Wednesday, and Friday: Pumps 5 tank feet in the day shift and 5 tank feet in the night shift.
South Ground	The altitude valve is set at 55 psi. Valve opens if the tank level is <10 feet and closes at tank level >15 feet. The pump operates on a VFD to maintain a discharge pressure of 80 psi.
A1A	Currently only used for fire flow. If pressure is <35 psi at the Summerhouse Pump Station, the booster pump turns on. The booster pump shuts off if the pressure at the Summerhouse Pump Station is >75 psi.
Shores	Only uses Pump 1. The altitude valve is set at 45 psi. The valve opens if the tank level is <10 feet and closes at tank level >20 feet. The pump operates on Monday, Wednesday, and Friday: Pumps 5 tank feet in the day shift and 5 tank feet in the night shift.
CR208	Not Applicable.

[1] These are the noted control strategies and set points; however, due to manual operation and changing operators, these can change based on tank levels and what operators observe in the system.

Table 3B 2025 Model Adjusted Booster Pump Control Strategy and Set Points

BPS	Control Strategy and Set Points[1]
16th Street	The altitude valve is set at 63 psi. Pump operates in remote/manual. Pump turns on when the downstream pressure is below 55 psi and off downstream pressure is above 70 psi.
South Ground	The altitude valve is set at 55 psi. The pump operates on a VFD to maintain a discharge pressure of 80 psi. Pump operates from 3 AM to midnight, off from midnight to 3AM to allow tank filling.
A1A	Currently only used for fire flow. If pressure is <35 psi at the Summerhouse Pump Station, the booster pump turns on. The booster pump shuts off if the pressure at the Summerhouse Pump Station is >75 psi.
Shores	Only uses Pump 1. The altitude valve is set at 55 psi. Pump turns on when the downstream pressure is below 50 psi and off downstream pressure is above 65 psi.
CR208	The altitude valve is set at 55 psi. The pumps operate on a VFD to maintain a discharge pressure of 78 psi.

Table 4 St. Johns County Storage

Site	Type	Volume (MG)	Diameter (feet)	High-Water Level (feet)	Tank Floor Elevation (feet)	Normal Operating Range (feet)
CR214 WTP #1	GST	1.99	120	23.5	44.77	14 to 21
CR214 WTP #2	GST	1.99	120	23.5	44.77	14 to 21
16th Street BPS	GST	1.48	107	22	9	14 to 18
South Ground BPS	GST	1.0	85	23.58	8	12 to 18
A1A BPS	GST	0.21	rectangle	13.1	3.9	8 to 12
Shores BPS	GST	1.0	81	27	30	12 to 18
NW WTP #1	GST	0.5	55	28.17	~27	20 to 25
NW WTP #2	GST	1.5	95	28.17	~27	20 to 25
NW WTP #3	GST	3.0	135	28.17	~27	20 to 25
CR208	GST	3.0	142	24.2	47	20 to 25

Notes: MG = million gallons

2.4 Transmission and Distribution System

The water transmission and distribution system is vital, transferring water from treatment plants to customers. An inventory of pipes, including quantities and materials, helps assess infrastructure, identify weaknesses, enables hydraulic modeling, and predict performance. Modeling also aids in planning future upgrades and rehabilitation projects. Jones Edmunds summarized the transmission and distribution system using SJCUD's GIS data and an updated InfoWater Pro model. The SJCUD distribution system includes approximately 590 miles of water mains with diameters from 1 to 36 inches made of materials such as asbestos concrete, galvanized steel, ductile iron (DI), polyvinyl chloride (PVC), high-density polyethylene (HDPE), and cast iron.

Table 5 shows the diameters and approximate cumulative linear feet (LF) of water mains included in the hydraulic model. Table 6 shows the materials and approximate cumulative LF of water mains included in the hydraulic model.

Table 5 Existing Water Distribution System – Pipe Size

Pipe Diameter (Inches)	Pipe Lengths (LF)	Pipe Diameter (Inches)	Pipe Lengths (LF)
3/4	260	12	366,999
1	1,765	14	5,003
1 1/4	304	16	184,029
1 1/2	609	18	5,281
2	128,767	20	80,798
3	7,376	22	85
4	325,645	24	101,874
6	708,742	30	2,645
8	926,144	36	1,801
10	266,214		
Total Piping = 3,114,341 LF			

Table 6 Existing Water Distribution System – Pipe Material

Pipe Material	Pipe Lengths (LF)	Pipe Material	Pipe Lengths (LF)
PVC	2,518,415	Galvanized Steel	17,594
DI	79,152	HDPE	121,366
Cast Iron	107,937	Other	510
Asbestos Concrete	11,424	Unknown	257,943
Total Piping = 3,114,341 LF			

2.5 Recently Completed Improvements

The following are recently completed improvements that will be accounted for in the hydraulic modeling:

- 3-MG GST added at the NW WTP.
- 3-MG GST and a BPS added at CR208.
- CR214 downstream piping upgrade:
  - Approximately 1,800 LF of a redundant 24-inch water main installed on Water Plant Road to connect to CR214.
- Cypress Point Water Main Extension:
  - Added 2,205 LF of 10-inch HDPE water main to connect the Cypress Point II community to the PWS.

2.6 Monitoring and Controls Framework

Establishing a comprehensive understanding of the current monitoring and control capabilities enables hydraulic modeling, predicts performance, and maintains operational reliability. SJCUD uses the VTScada and telemetry system to monitor the following data:

- WTP flow and pressure.
- BPS flow and pressure.
- Storage tank levels.
- Pressure at a central point of the system (Lewis Point).
- Transfer flow from the NW WTP to the CR214 WTP.

The above data is used to calibrate the water model and to confirm that the model operates under realistic conditions.

3 EXISTING DEMAND ANALYSIS

3.1 Historical WTP Demands

Analyzing historical demands provides insight into consumption trends, operational patterns, and overall utility performance. Understanding demand fluctuations helps forecast future needs and ensures the adequacy of the infrastructure. Past demand data reveal the system's population shifts and identifies persistent peaks and opportunities for efficiency improvements. Jones Edmunds analyzed the SJCUD historical water demands using flow data from each WTP provided by monthly operating reports (MORs). SJCUD staff noted that the flow meter for CR214 was downstream of the transfer and production flows; this fact was taken into account when totaling up total demand, NW WTP system demands and CR214 WTP system demands.

Jones Edmunds used rainfall data to screen the consumption trends between January 1, 2021, to July 30, 2024, to remove potential anomalies that may impact the daily flow patterns. Jones Edmunds used the data to determine the following historical demands for the SJCUD system:

- **Annual Average Daily Demand (AADD):** Average of all daily demands in a calendar year.
- **Maximum Monthly Average Daily Demand (MMADD):** Average daily demand during the month with the highest monthly average demand.
- **Minimum Daily Demand (MinDD):** Minimum recorded daily demand in a calendar year.
- **MDD:** Maximum recorded daily demand in a calendar year.

Table 7 summarizes the historical demands, and Figure 6 displays the demands visually.

Table 7 Historical Demands

Year	System AADD (MGD)	System MMADD (MGD)	System MinDD (MGD)	System MDD (MGD)	CR214 AADD (MGD)	CR214 MMADD (MGD)	CR214 MinDD (MGD)	CR214 MDD (MGD)	NW AADD (MGD)	NW MMADD (MGD)	NW MinDD (MGD)	NW MDD (MGD)
2021	8.81	10.52	5.24	12.06	5.55	6.24	4.15	6.93	3.26	4.16	1.33	6.53

Year	System AADD (MGD)	System MMADD (MGD)	System MinDD (MGD)	System MDD (MGD)	CR214 AADD (MGD)	CR214 MMADD (MGD)	CR214 MinDD (MGD)	CR214 MDD (MGD)	NW AADD (MGD)	NW MMADD (MGD)	NW MinDD (MGD)	NW MDD (MGD)
2022	9.41	11.21	6.51	13.26	5.68	6.61	3.86	7.31	3.74	4.61	1.07	6.08
2023	9.74	10.48	6.00	11.64	5.67	6.07	3.44	7.71	4.07	4.61	1.96	6.69
2024	10.32	12.12	6.02	15.03	5.86	6.78	3.56	8.37	4.46	5.38	2.36	7.98

Note: NW flow values subtracts the average transfer value of that specific year as this does not add to total demand in the NW system

3.2 Historical Demand Multiplier

We used the historical demands in Table 7 to determine the demand multipliers per year for the entire system. Table 8 presents the demand multipliers that compare the demand conditions (MMADD, MinDD, and MDD) to AADD.

Table 8 Historical WTP Demand Multipliers

Year	System MMADD	System MinDD	System MDD	CR214 MMADD	CR214 MinDD	CR214 MDD	NW MMADD	NW MinDD	NW MDD
2021	1.19	0.59	1.37	1.12	0.75	1.25	1.28	0.41	2.00
2022	1.19	0.69	1.41	1.16	0.68	1.29	1.24	0.29	1.63
2023	1.08	0.62	1.20	1.07	0.61	1.36	1.13	0.48	1.64
2024	1.17	0.58	1.46	1.16	0.61	1.43	1.21	0.53	1.79

Municipal systems in the United States have MDD multipliers typically ranging from 1.2 to 4.0. Smaller community systems often have larger multipliers due to higher flow variations from individual user demands, whereas larger systems typically show lower multipliers due to a greater sample size. The value of 1.46 for St. Johns County in 2024 is typical for a system of its size. Jones Edmunds chose a multiplier of 1.46 for the modeling due to an overall trend of increasing daily demands and to maintain conservative projections.

Developing demand multiplier patterns is essential for determining peak hourly demand (PHD) and requires sub-daily flow measurements from each WTP. The County's SCADA system records flow at each WTP with data collected for specific days correlating with historical AADD and MDD conditions from January 2021 to July 2024 — April 7 to 10, 2024, for AADD and June 1, 9, and 16, 2024, for MDD. Four diurnal curves were created due to the differences in water usage between the NW and CR214 WTPs, representing average and MDDs. These curves are important to insert into the model for accurately representing demand fluctuations throughout the day. Table 9 summarizes these data using an hourly time-step.

Figure 7 presents the four diurnal curves used in current and future modeling.

Figure 6 St. Johns County System Historical Demands

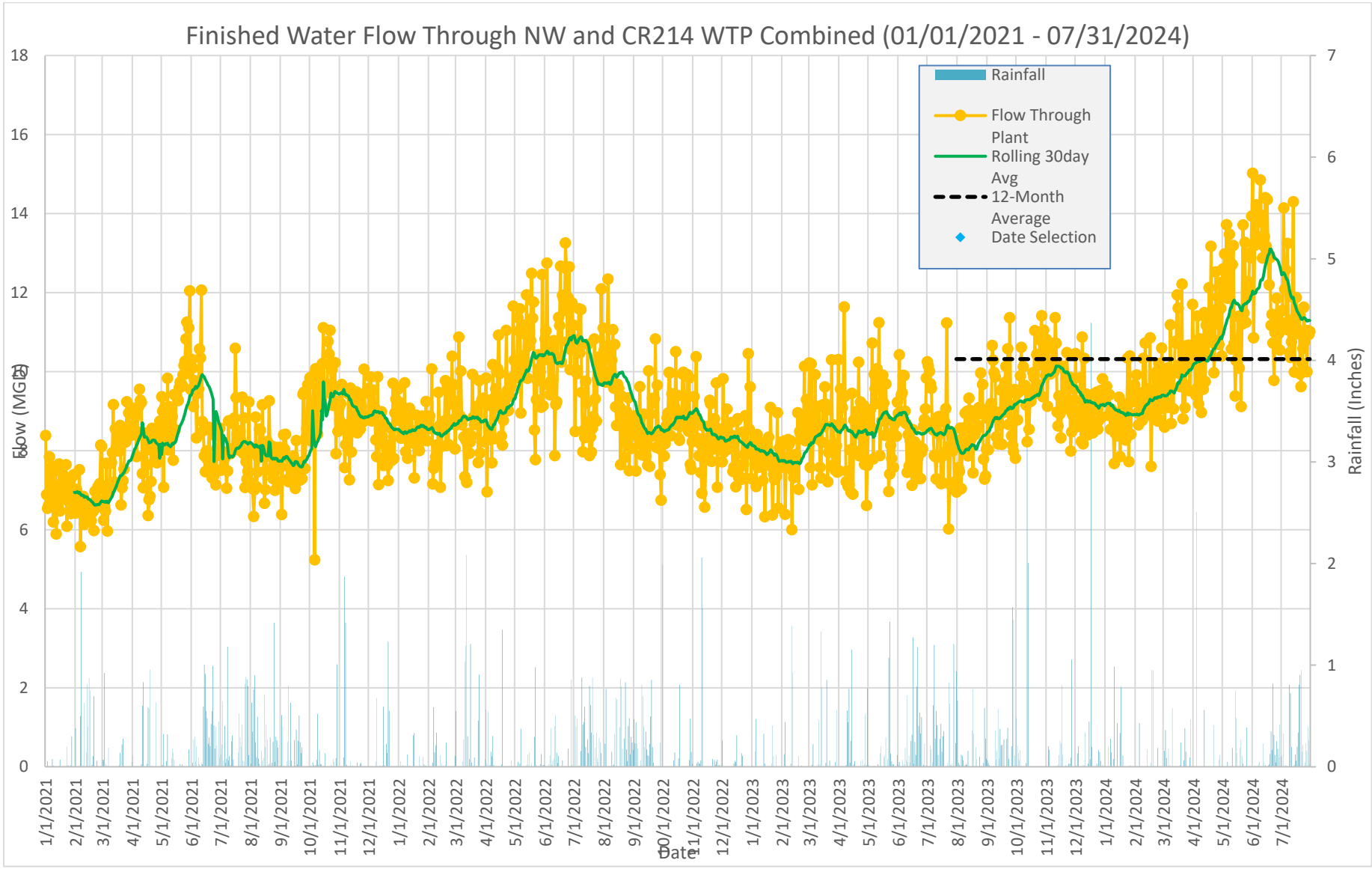
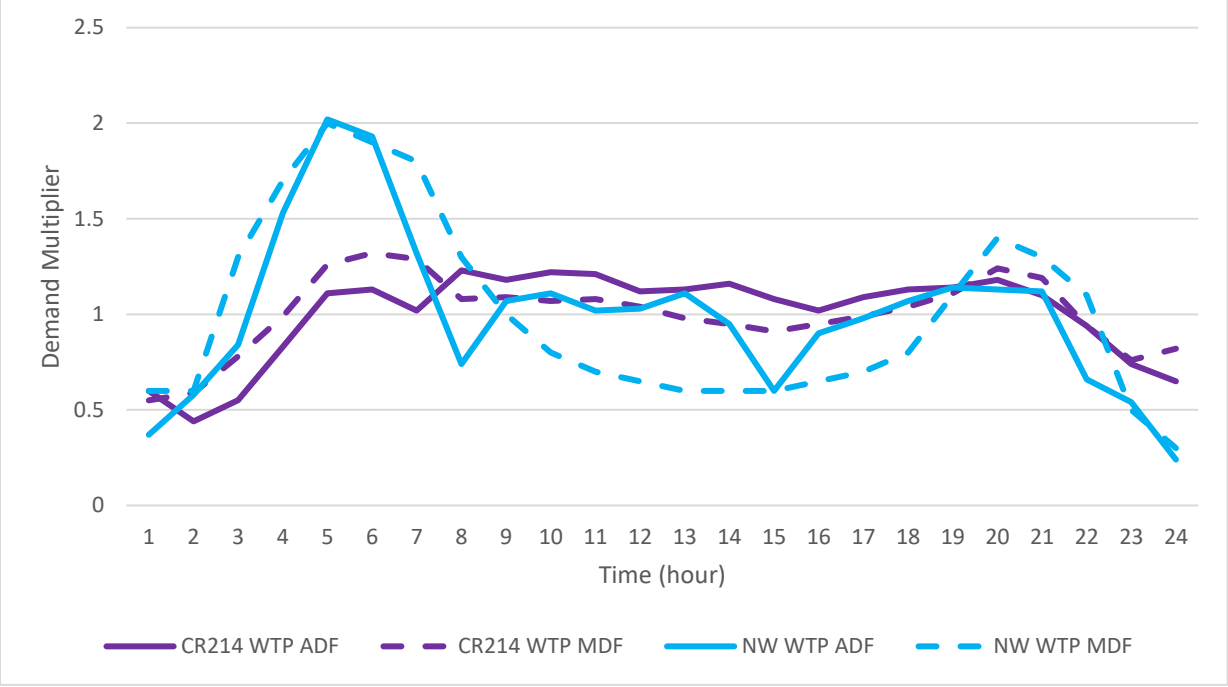


Table 9 2024 PHD Calculations

Description	NW WTP AADD Curve	NW WTP MDF Curve	CR214 WTP AADD Curve	CR214 WTP MDF Curve
PHD (MGD)	8.83	13.18	6.90	11.14
MDD (MGD)	N/A	6.59	N/A	8.44
PHD to MDD Multiplier	N/A	2.00	N/A	1.32
AADD (MGD)	4.37	N/A	5.61	N/A
PHD-to-AADD Multiplier	2.02	N/A	1.23	N/A

Figure 7 AADD and MDD Patterns by Service Area



3.3 Existing Per Capita Demands

The SJCUD system historical demand data (January 2018 - December 2022) were analyzed to determine the current per-capita water demands. Flow per capita was calculated by Jones Edmunds' Water Resources team based on historical water demands by service area. Table 10 summarizes water usage data by service area in gallons per day (gpd).

Table 10 Water Use Summary Statistics (gpd)

Service Area	Per Equivalent Connection			Per Capita		
	Gross	Residential	NR	Gross	Residential	NR
Main	146	126	20	85	74	11
AI	139	116	23	142	118	24
Northeast	253	238	15	137	128	8
NW	221	196	25	97	86	11
Ponte Vedra	302	251	52	196	162	33
SR16	171	80	91	175	82	93
Hastings	92	70	21	66	51	16
Fruit Cove	165	165	0	67	67	0
Eagle Creek	151	165	7	62	59	3
Main System Weighted Average	173	149	25	114	95	19
Utility Weighted Average	200	169	30	130	109	22

Note: NR = non-residential.

According to the *St. Johns County Comprehensive Plan* (Objective D.4.2.1), "The minimum level of service (LOS) standards for existing potable water treatment facilities shall be established as 130 gallons per capita per day (gpcd) for residential uses which do not utilize reclaimed water, and 104 gpcd for residential uses which utilize reclaimed water service."

Based on Table 10, the utility weighted average observed from usage throughout the County for gross and residential water use per capita is equal to 130 and 109 gpd, respectively. This meets the LOS established in the County's Comprehensive Plan. Deviation from the LOS is different for each service area, with the lower demands from service areas where part of the population uses reclaimed water (Main, NW, Hastings, Fruit Cove, and Eagle Creek).

4 FUTURE DEMAND PROJECTIONS

Jones Edmunds and SJCUD staff developed the future demand projections for the buildout scenario to provide an accurate spatial allocation for future demand through 2045.

4.1 Demand Criteria

The future demands are based on an analysis completed by Jones Edmunds, which incorporates future construction projects (including Planned Unit Development [PUD] and Letter of Availability [LOA] projects), Bureau of Economic and Business Research (BEBR)

growth projections (including a detailed population projection with water use summary statistics by service area referenced in the paragraph titled *Historical Per Capital Demands*), and a broken-out demand projection for a large development planned in the NW service area (Silverleaf).

The water demand projections were derived from several sources to project demands and allocate them spatially in areas of projected growth. However, various sources provide highly conservative growth projections. After discussing with SJCUD staff and LSG, the future water demands were capped at the BEBR medium-growth projections. Figure 8 presents the projected water demands through 2045 for the SJCUD main system assuming BEBR medium growth. Figure 8 also shows that the growth rate for the projected water demand is similar to the 2018 through 2024 growth rate. The demand projections presented in Figure 8 are documented in the *Summary of Population and Water Demand Projections Technical Memorandum* dated March 29, 2024. Jones Edmunds' demand projections, used in the modeling, are presented in Table 11, Table 12 and Figure 9 and closely follow previous projections shown in Figure 8. Figure 10 below breaks down the growth by service area which is shown in Figure 9 (Service area boundaries in Figure 10 were recently redrawn). The service areas shown in Figure 10 are grouped in Figure 9 are as follows:

- **NW:** NW, Main West, and SR16
- **CR214:** Main and South
- **Anastasia Island:** Anastasia Island

Figure 8 Historical and Projected Water Demand

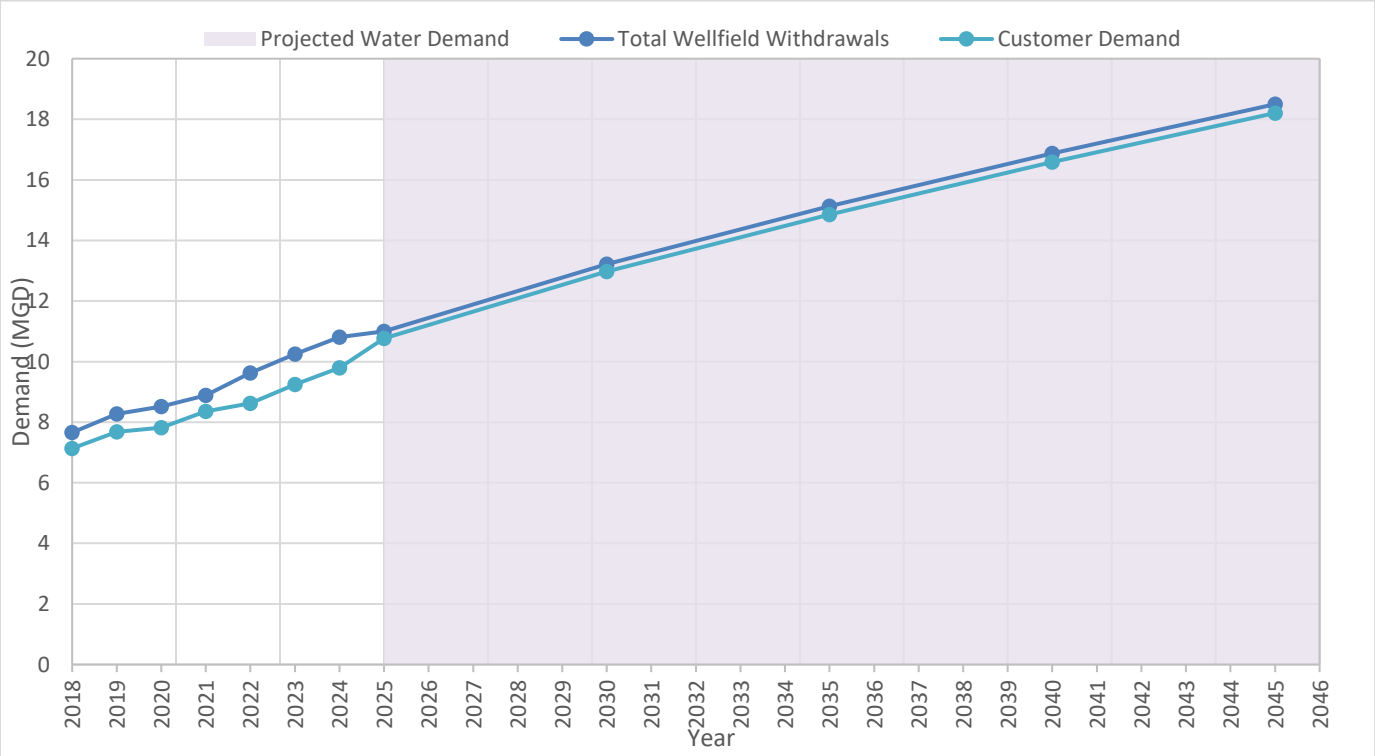
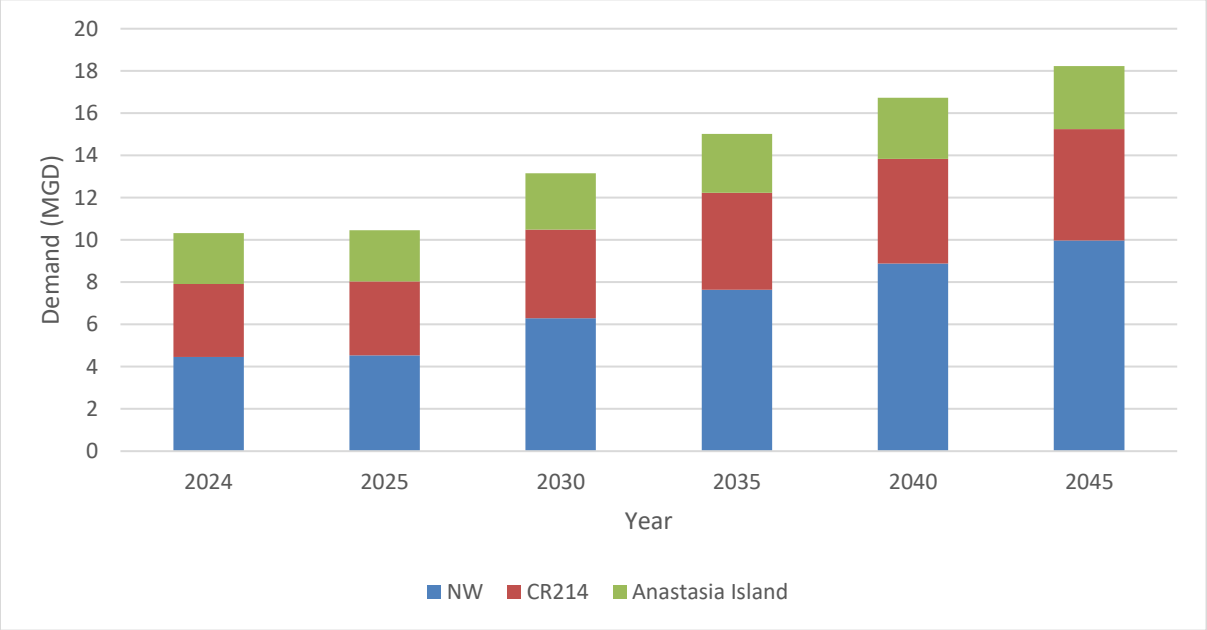


Table 11 Average Daily Flow Future Flow Summary

	Total Growth (MGD)					
Year	PUDs	LOAs	Silverleaf	BEBR	Total Growth After 2025	Total Demand
2025	0	0	0	0	0	10.467
2030	1.864	0.075	0.750	0	2.689	13.156
2035	1.961	0.163	1.500	0.933	4.557	15.024
2040	2.058	0.252	2.250	1.703	6.263	16.730
2045	2.058	0.341	2.990	2.374	7.763	18.230

Note: The flows in this table represent finished flow plus system losses. Water loss due to treatment is not included.

Figure 9 Average Daily Demand by Service Area

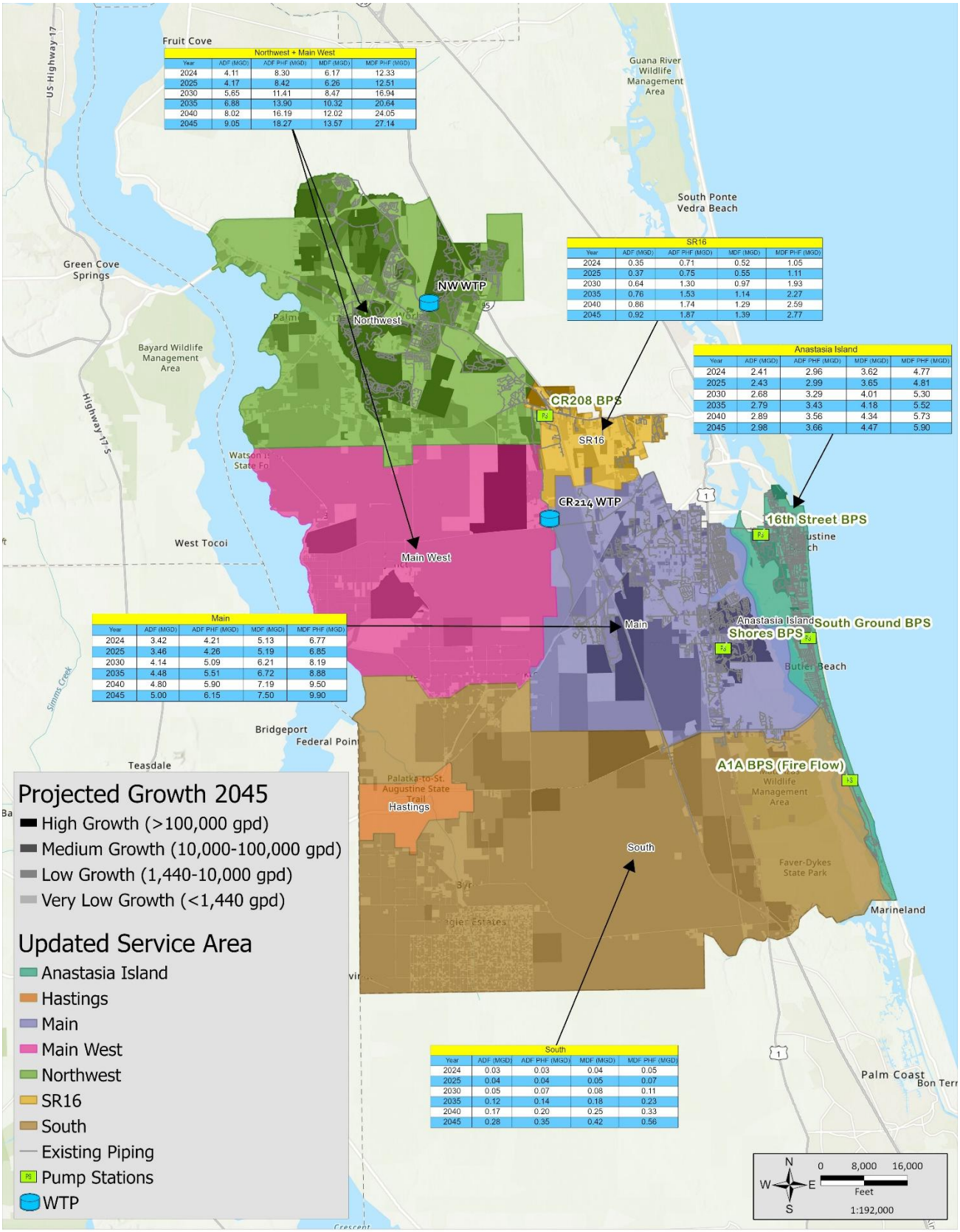


Notes: NW includes NW and SR16 service areas; CR214 includes Main, Main West, and South service areas; AI includes AI service area.

Table 12 Average Daily Demand by Service Area

	Total Demand (MGD)			
Year	NW	CR214	Anastasia Island	Total
2024	4.46	3.45	2.41	10.32
2025	4.54	3.49	2.43	10.46
2030	6.29	4.19	2.68	13.16
2035	7.64	4.60	2.79	15.02
2040	8.88	4.96	2.89	16.73
2045	9.97	5.28	2.98	18.23

Figure 10 Demand by Service Area



4.2 Spatial Demand Allocation

To allocate future demands throughout the system, Jones Edmunds included the following projections in order of priority:

1. PUDs in the service areas (Figure 3) that were currently served or to be served in the future.
2. LOAs for Parrish Farms, Kings Grant, and Robinson Tract.*
3. Silverleaf projections from the Utility Service and Refund Agreement.
4. BEBR projections throughout the service areas ("Currently Served" and "Served in Future" only) in areas where demand was not already added from the listed sources.

* LOAs were capped by approximately 29.3 percent of the estimated growth to avoid exceeding the BEBR medium-growth projections. Attachment 1 provides LOA and PUD tables and figures of included demands, excluded demands, and allocations.

Table 11 summarizes the demand growth analysis. The 2025 demand was increased from the current demand based on recent trends and collaboration with SJCUD staff; the 2025 scenario also includes the newly constructed CR208 BPS and other Capital Improvement Plan (CIP) projects currently in construction. Figure 9 shows demand growth by service area in 5-year increments.

The methodology of the demand growth shown in Table 11 is as follows:

1. Total growth targets for each year derived from the BEBR analysis are indicated in the "Total Growth After 2025" column, which represents the expected growth in each 5-year period.

    a. This growth matches total growth in the 2045 CUP, i.e., 7.763 MGD (see Note 3).

2. PUDs grow first with the following rules:

    a. PUDs in the JEA service area were removed, including Plantation PUD, St. Johns Golf & Country Club, Johns Creek, Shearwater, South Hampton, Stonehurst, and Southlake (see Note 4).

    b. Service areas in this analysis include Main, Main West, NW, SR16, AI, and South (see Note 5).

    c. PUDs did not include a construction-completion date and were assumed to be completed by 2040:

        - Demand included for PUDs for each 5-year window is calculated by subtracting the "Total Growth After 2025" column (our target demand) minus "LOAs" and "BEBR Outside PUDs and LOAs."

            - All PUDs were considered in the analysis and were scaled down at an even rate in 2030 and 2035.

3. Silverleaf Projections were added based on BEBR medium-growth projections, which were consistent with the Development of Regional Impact (DRI) agreement:

a. These projections only include the portion of Silverleaf in the SJCUD service area.

4. Three LOAs (Kings Grant, Parrish Farms, and Robinson Tract) are included in this analysis with the following rule (see additional notes):

   a. Parrish Farms and Robinson Tract are indicated to be 25-percent complete in 2030, 50 percent in 2035, 75 percent in 2035, and 100 percent in 2040.
   b. Kings Grant is indicated to be 33-percent complete in 2035, 66 percent in 2040, and 100 percent in 2045.
   c. Attachment 1 lists the LOAs that were excluded.

5. BEBR medium-growth parcels outside PUDs and LOAs are considered with the following rules:

   a. These demands are added in 2035, 2040, and 2045, with 2045 representing full growth to 2045:

      - 2035 and 2040 only include a percentage of the BEBR medium-growth projections to meet the "Total Growth After 2025" demand goal.

Methodology Notes:

1. Demand conversion factors were based on water use statistics grouped by service area.
2. Demand conversion factors for Main West and South service areas were not available at the time of this analysis and were assigned "Main" (85 gpcd).
3. The growth values account for distribution losses in the model but do not account for treatment losses.
4. Strictly industrial PUDs were excluded to meet BEBR medium-growth projections:

   a. 14.6 percent of industrial areas are included in BEBR.

5. All existing areas outside the current infrastructure are assumed to already have supply for populations, i.e., West wellfield:

   a. Only population/demand growth after 2025 is included in this analysis.

6. The three LOAs were capped at 29.3 percent of the growth to meet the 7.763-MGD growth.

5 GROUNDWATER SUPPLY EVALUATION

This assessment evaluates groundwater capacity, optimizes its use, and reduces unnecessary withdrawal rates. The analysis guides the quantity of wells and minimizes stress on the aquifer. It also considers how withdrawals impact water quality. This holistic approach ensures that groundwater remains a safe, reliable, high-quality water source for current and future needs.

5.1 PUBLIC SUPPLY CUPS IN ST. JOHNS COUNTY

Table 13 shows the permitted withdrawals for the other public supply permits within the County.

Table 13 Other Public Supply CUPs in St. Johns County

Owner	Project	CUP ID	Allocation (MGD)	CUP Expiration
JEA	Julington Creek	88271	1.08/1.16[1]	5/10/2031
	Ponce de Leon	88271	0.44[1]	5/10/2031
	Ponte Vedra North	88271	0.24[1]	5/10/2031
	Greenland	88271	4.53[1]	5/10/2031
SJCUD	Ponte Vedra	1142	7.03	12/12/2032
	Hastings	1392	0.183	3/25/2041
Homeowners Utilities, Inc.	Porpoise Point	1386	0.063	2/23/2043
North Beach Utilities, Inc.	North Beach Utilities	157	0.726	1/12/2041
Ring Power Corp.	Trout Creek Marina	1190	0.019	2/27/2039
Wesley Smith	Hasting Spuds Labor	1432	0.759	11/30/2025
Wildwood Water Company	Wildwood Water Company	324	0.105	7/28/2028
Windward Camachee Marina Owner, LLC	Windward Camachee	1381	0.071	5/3/2043
City of St. Augustine	St. Augustine Wellfield	50299	6.563	5/13/2028

[1] Allocations shown for the JEA Consolidated Permit are the pre-river crossing and post-river crossing wellfield allocations for each project. Julington Creek and Greenland wellfields serve areas inside and outside St. Johns County.

5.2 WATER CONSERVATION

SJCUD Ordinance 2025-11 requires all new developments to install reuse piping if located within the mandatory zone, and all others outside the mandatory zone must use an alternative water source for irrigation that is separate from the potable water distribution system. No new development in the SJCUD service areas may use potable water for irrigation.

LSG used the outdoor water use metrics in Table 14 to estimate the potential water savings from a reduction in outdoor potable water use. Table 15 shows the revised water demand projections, assuming that no single-family or multi-family outdoor use by properties are connected to the main system after 2025. The estimates are based on reducing residential outdoor use. Water savings could result from reduced non-residential outdoor use; however,

data are not available to quantify the potential savings. The water savings in Table 15 assume no reductions in the estimated 2025 outdoor water use of 2.61 MGD.

Table 14 Per Capita Use Metrics

Service Area	Per Capita (gpd)				
	Gross	Residential	NR	Residential Indoor	Residential Outdoor
Main	85	74	11	56	17
AI	142	118	24	67	52
NW	97	86	11	68	18
SR16	175	82	93	45	37
Main System Weighted Average	114	95	19	66	29

Table 15 Outdoor Water Conservation Projected Savings

Year	Water Demands Pre-MRWSA (MGD)	Water Demands Post-MRWSA (MGD)	Projected Savings from MRWSA (MGD)*
2025	11.00	11	0.0
2030	13.22	12.8	0.5
2035	15.12	14.3	0.9
2040	16.86	15.7	1.2
2045	18.50	17.0	1.5

* Estimated potential savings from reducing residential outdoor use by implementation of Mandatory Reclaimed Water Supply Service Area (MRWSA). Potential savings from reducing NR outdoor use was not quantified.

5.3 Future Withdrawals

Table 16 presents the flexibility scenarios simulated in the 2024 CUP application. The withdrawals assume a water demand of 18.77 MGD, which is based on the demand projections in the 2023 *North Florida Regional Water Supply Plan* (SJRWMD and Suwanee River Water Management District [SRWMD], 2023). The withdrawals simulated in the CUP application assumed freshwater at the West wellfield and brackish water at the AI wellfield. As a result, the withdrawals for the AI wellfield were increased to account for membrane treatment and assumed an 80-percent recovery rate. Figures 11 and 12 show the well locations used for the flexibility scenarios.

Table 16 Groundwater Model Flexibility Scenarios

Wellfield	Flex Scenario 1 NW 120% (MGD)	Flex Scenario 2 TR 120% (MGD)	Flex Scenario 3 W 120% (MGD)	Flex Scenario 4 AI 120% (MGD)
TR	5.107	7.200	5.592	5.422
NW	9.600	7.247	7.457	8.000
Bartram Oaks	0.015	0.015	0.015	0.015
Existing WTP Subtotal	**14.722**	**14.462**	**13.064**	**13.437**
West	4.048	4.308	5.706	1.755
AI	0.000	0.000	0.000	4.336
New WTP Subtotal	**4.048**	**4.308**	**5.706**	**6.091**
Totals	**18.77**	**18.77**	**18.77**	**19.528**

Note: 120% refers to 120% of proposed wellfield allocation in CUP 1198 renewal application.

Figure 11 Proposed Well Locations for the New West Wellfield

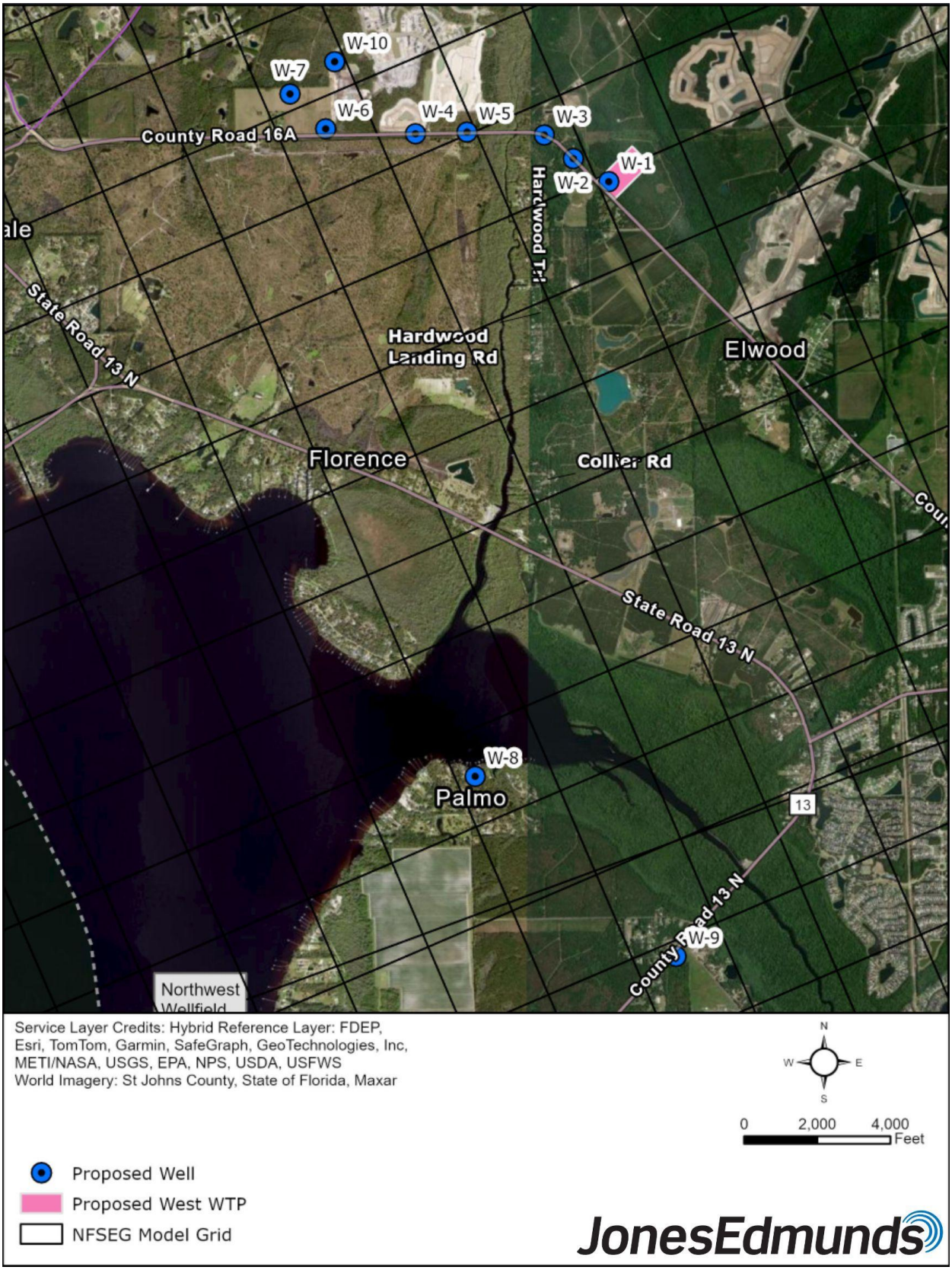


Figure 12 Proposed Well Locations for the New AI Wellfield



5.4 Evaluation of Potential Well Interference

Drawdown from additional withdrawals from the SJCUD existing and proposed wellfields could cause interference with nearby existing legal users. Interference with an existing legal use of water is considered to occur when the withdrawal capability of any individual withdrawal facility of a presently existing legal use of water experiences a 10-percent or greater reduction in withdrawal capability or when the existing user experiences economic, health, or other type of hardship resulting from the new use.

To evaluate the potential for interference, LSG obtained the locations of wells near the wellfields from the SJRWMD databases for CUPs and Well Completion Reports (WCRs). Construction information for wells where the increase in permitted drawdown within the Floridan aquifer was predicted to exceed 1 foot under the Flexibility Scenarios presented in Table 16 was summarized in the CUP application. Surficial aquifer drawdown is generally less than 1 foot; therefore, the potential for interference to these wells was estimated to be low. The analysis assumed that wells with total depths greater than 160 feet possibly withdraw from the Floridan aquifer. Table 17 summarizes the number of wells and the model-predicted drawdown for each wellfield. The proposed wellfield has more existing users within the cone of influence because they have a greater proposed increase in withdrawal. Figures 13 and 14 show the number of existing users identified within the cone of influence of the proposed wellfields.

Table 17 Drawdown Predicted to All Withdrawal Locations

Model Drawdown (feet)	Number of Wells by Wellfield			
	AI	W	NW	TR
0.9 to 1	5	23	0	0
1 to 2	276	167	42	3
2 to 3	192	33	39	0
3 to 4	232	23	14	0
4 to 5	165	4	1	0
5 to 6	79	10	20	0
6 to 7	117	9	2	0
7 to 8	15	0	2	0
8 to 9	23	11	2	0
9 to 10	0	0	2	0
10 to 11	28	3	0	0
11 to 12	0	1	0	0
17.205	0	1	0	0
Total	**1,132**	**285**	**124**	**3**
Total >5 feet	262	35	28	0
Total >10 feet	28	5	0	0

Figure 13 Legal Users Near the Proposed West Wellfield

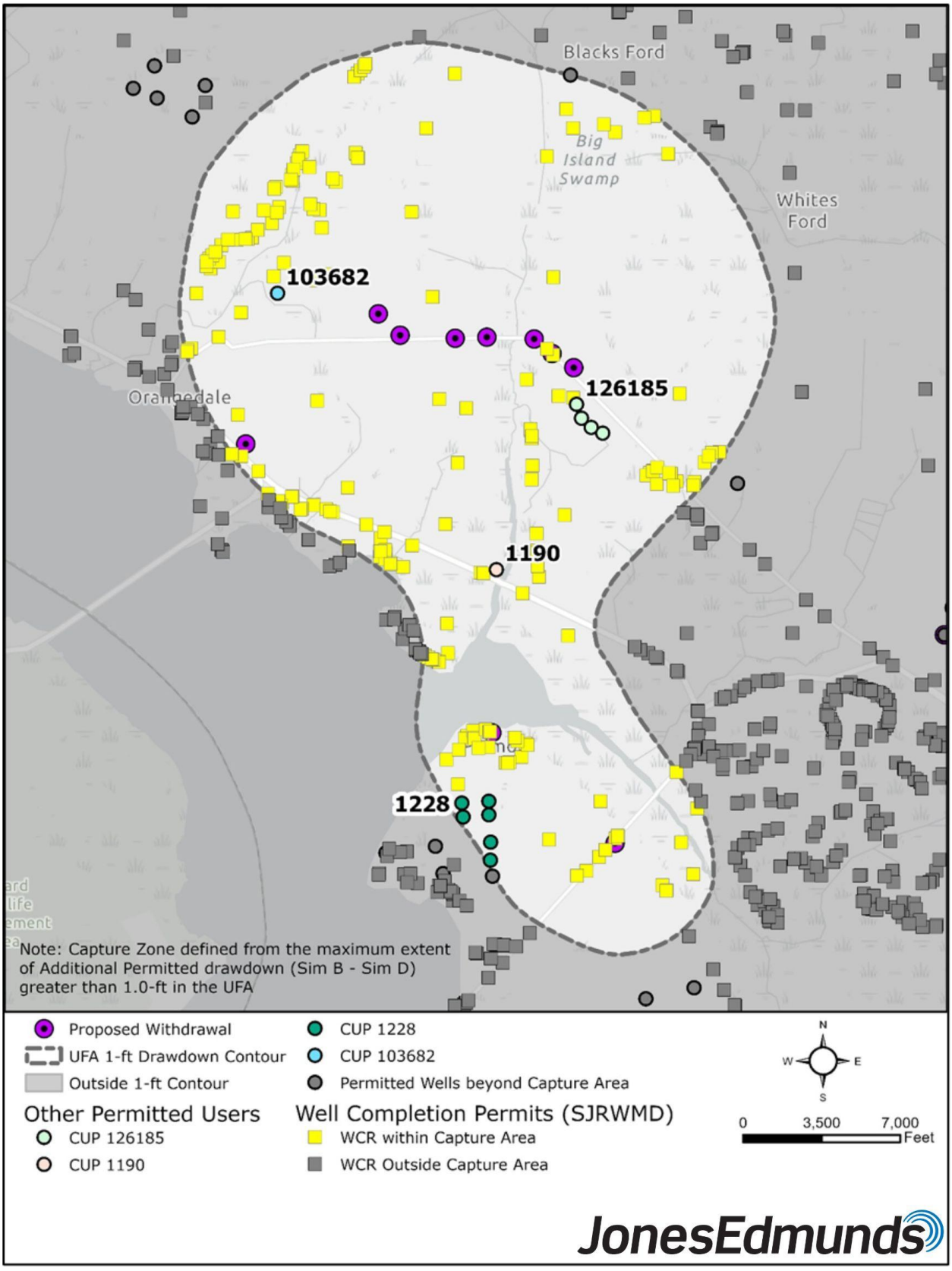
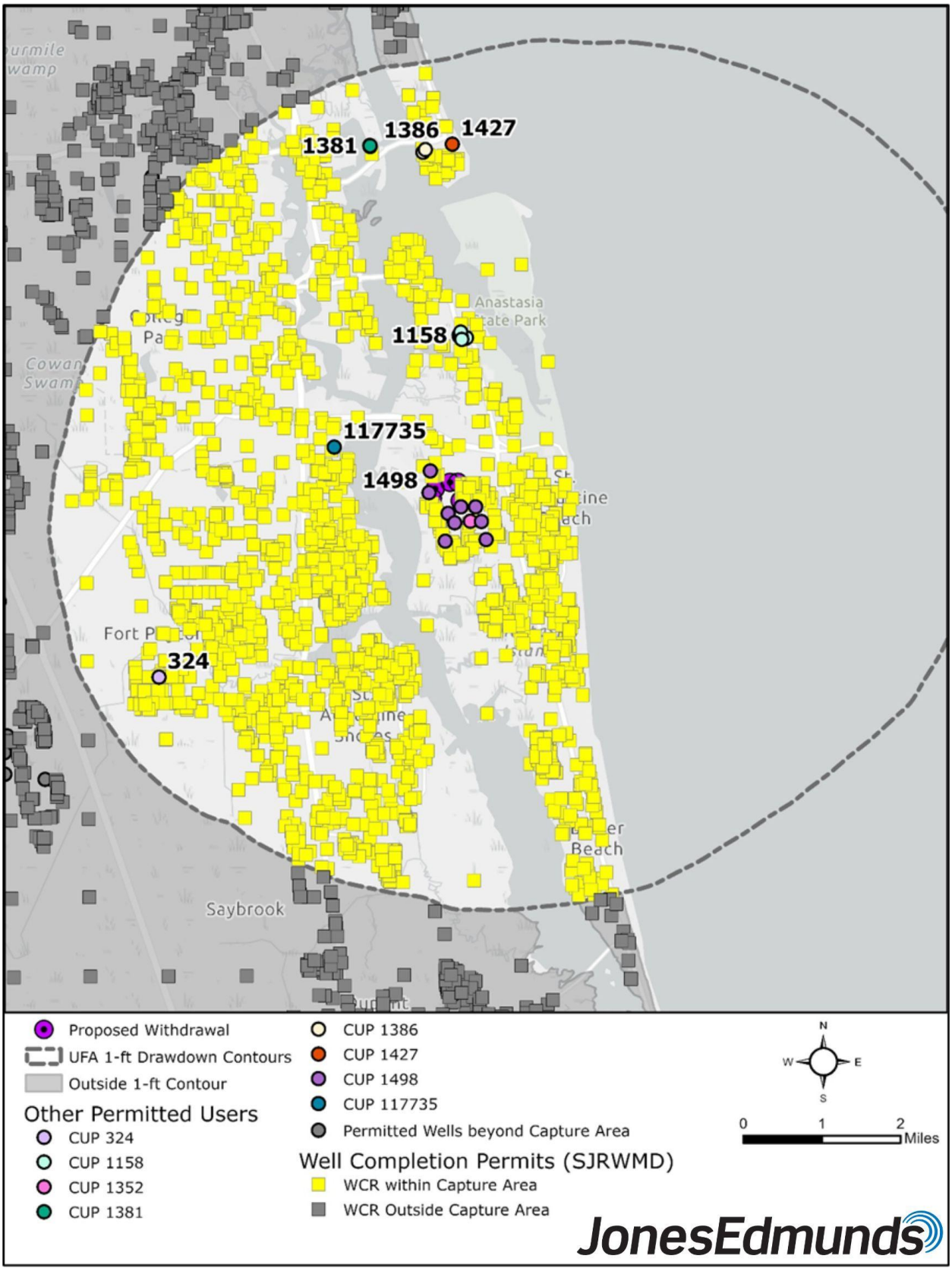


Figure 14 Legal Users Near the Proposed AI Wellfield



Based on the well inventories, the potential for impacts to existing legal users includes three user types:

1. Pumped Floridan aquifer wells that use a submerged impeller (e.g., submersible).
2. Floridan aquifer wells withdrawing under artesian conditions (i.e., water level above land surface so no pump is required).
3. Floridan aquifer wells with a water level close to land surface that use an aboveground centrifugal-type pump. Specific pump information is not available for the wells; however, submersible pumps of 1 horsepower (hp) producing approximately 25 gpm would be typical for smaller irrigation-type uses. Typical wells of this size could sustain up to 12 feet of drawdown without interference; however, larger submersible pumps may experience interference requiring mitigation by SJCUD.

Several WCRs noted flowing conditions. Potential artesian wells impacts were evaluated using land-surface estimates and model-predicted water elevations. All potential artesian wells identified were calculated to experience a reduction of less than 10 percent except one well near the proposed West wellfield. However, the specific well locations and elevations are approximate, and impacts to other artesian wells could occur if well locations or capacities are adjusted.

Centrifugal pumps are designed for lower head applications than submersible pumps and must have a pumped water level within approximately 25 feet of land surface. As such, the lift component is not as significant a consideration in assessing centrifugal pumps, and as long as the water level is within 25 feet of land surface the pump is more able to maintain flow capacity (although the discharge pressure might change). Approximately 50 wells of approximately 1,500 are predicted to have their water level reduced to more than 25 feet below land surface (bls). However, these wells had initial water-level elevations of greater than 20 feet bls to start with, and this analysis does not account for the drawdown caused by their own pumping.

The existing user impact analysis indicates that the potential to impact is generally low; however, wells could require mitigation and SJCUD has a *Wellfield Mitigation Plan* to address interference. More existing users are near the proposed AI wellfield; therefore, potential impacts are greater in that area. Mitigation of interference could range from a drop-pipe extension to full pump replacement. Other costs include staff time to investigate complaints and resolve mitigation. Table 18 shows the range of mitigation costs for the proposed wellfields, assuming an average cost of $3,000 per well.

Table 18 Potential Well Mitigation Cost Estimates

Wells Mitigated	AI		West	
	Wells	Cost	Wells	Cost
All Wells Drawdown > 1 foot	1,132	$3,396,000	285	$855,000
Wells with Drawdown >5 feet	262	$786,000	35	$105,000
Wells with Drawdown >10 feet	28	$84,000	5	$15,000

5.5 Impacts to Water Quality

Specific Condition 26 of the current permit requires quarterly monitoring of water quality in the production wells and seven monitoring wells – NWOW-1 through NWOW-3 and FLMW-1 through FLMW-4 (Figure 1). The samples are analyzed for the following major ion suite, and results are submitted to SJRWMD:

- Calcium
- Magnesium
- Potassium
- Sodium
- Total Iron
- Chloride
- Sulfate
- Bicarbonate Alkalinity
- Carbonate Alkalinity
- Total Dissolved Solids (TDS)
- Specific Conductance

The CUP application summarized water-quality data for the TR and NW wellfields. Geochemical pattern analysis showed water-quality differences between the TR and NW wells with the TR wells having high Chloride concentrations and the NW wells having low Chloride and high Sulfate concentrations. Mann-Kendall Trend analyses of the Chloride, Sulfate, and TDS concentrations in each well were run on the entire dataset and on the 2016 to 2023 data to determine if operation changes following the *Wellfield Optimization Plan* (Jones Edmunds, 2015b) have resulted in trend changes. Table 19 presents the results of the trend analysis. Statistically significant upward trends at the 95-percent confidence interval are shown in **bold** along with the slope of Tau's line, which indicates the magnitude of the trend. The Mann-Kendall Trend results are compared to the average pumping rate over the period analyzed.

The trend analysis showed statistically increasing trends in several wells. The TR wells generally showed improvement in trends following implementation of the 2016 wellfield optimization operational changes. Wells NW-3 through NW-6 were generally operated under higher average pumping rates and all showed increasing Chloride trends, although the Chloride concentrations in these wells are generally low (between 19 to 81 milligrams per liter [mg/L]).

The concentrations in the seven monitoring wells did not show statistically increasing trends in water-quality parameters over the monitoring period. The stability in the monitoring wells indicates that the water-quality changes observed in the production wells are localized and regional changes in water quality have not occurred.

Figure 15 presents regional Chloride concentrations compiled by SJRWMD and SRWMD for the *Regional Water Supply Plan*. The proposed West wellfield is approximately 3 miles west of the NW wellfield. Water quality in the West wellfield is expected to be similar to the NW wellfield with low initial Chloride concentrations and higher Sulfate concentrations. The proposed AI wellfield is approximately 7 miles east of the TR wellfield and water quality is expected to be brackish, requiring reverse osmosis treatment. The AI wellfield is closer to the coast, and initial Chloride concentrations are expected to be higher than those at the TR wellfield.

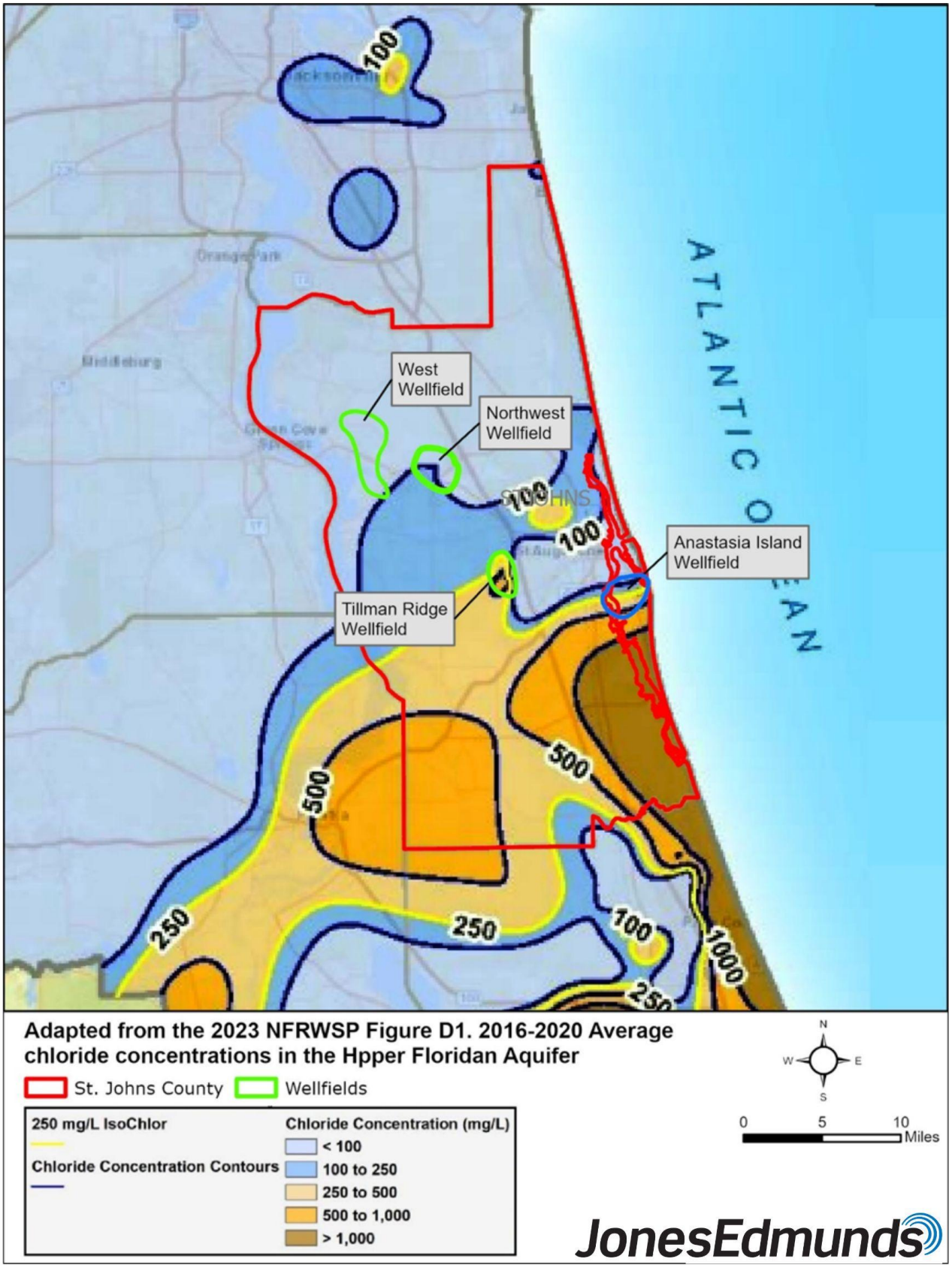
Table 19 Mann-Kendall Trend Test Results

Well Name	Period of Record Analyzed	Chloride		Sulfate		TDS		Average Pumping Rate (MGD)*	Maximum Pumping Rate (MGD)*
		Trend	Slope	Trend	Slope	Trend	Slope		
TR-42	2004Q4 – 2024Q1	Yes	-1.34	no	-0.02	no	-3.21	0.64	2.26
	2016Q1 – 2024Q1	No	-0.17	no	-0.12	no	-1.25	0.43	0.89
TR-43	2004Q4 – 2019Q4	**yes**	**3.42**	**yes**	**0.46**	**yes**	**3.75**	**0.69**	**2.36**
	2016Q1 – 2019Q4	No	-6.25	no	-3.67	no	-10.0	0.61	0.98
TR43R	2019Q4 – 2024Q1	No	1.00	no	0.37	no	-1.04	0.61	1.45
TR-45	2007Q2 – 2024Q1	**Yes**	**4.33**	**yes**	**0.90**	**yes**	**8.30**	**0.73**	**1.64**
	2016Q1 – 2024Q1	No	3.89	no	0.52	no	8.04	0.75	1.58
TR-46	2007Q2 – 2024Q1	**Yes**	**5.19**	**yes**	**0.85**	**yes**	**9.48**	**0.87**	**1.68**
	2016Q1 – 2024Q1	**Yes**	**2.83**	no	-0.02	**yes**	**5.40**	**1.14**	**1.68**
TR-47	2007Q2 – 2024Q1	Yes	-1.81	no	0.03	yes	-3.00	0.47	1.37
	2016Q1 – 2024Q1	**Yes**	**0.70**	no	-0.04	no	1.47	**0.44**	**1.13**
TR-48	2009Q2 – 2024Q1	**Yes**	**1.10**	no	0.33	**yes**	**3.37**	**0.67**	**1.36**
	2016Q1 – 2024Q1	**Yes**	**0.89**	no	-0.09	no	2.02	**0.96**	**1.29**
TR-49	2009Q4 – 2024Q1	**Yes**	**1.12**	**yes**	**0.46**	**yes**	**4.95**	**0.45**	**1.10**
	2016Q1 – 2024Q1	No	0.98	no	0.13	no	3.65	0.50	1.03
FLMW-1	2007Q1 – 2024Q1	Yes	-2.53	yes	-0.51	yes	-4.21	4.76	6.91
	2016Q1 – 2024Q1	No	-4.78	yes	-1.84	no	-6.04	4.83	6.47
FLMW-2	2007Q1 – 2024Q1	No	-0.13	no	0.13	no	0.45	4.76	6.91
	2016Q1 – 2024Q1	No	0.16	no	0.06	no	-1.12	4.83	6.47
FLMW-3	2007Q1 – 2024Q1	Yes	-0.24	**yes**	**0.28**	no	-0.21	4.76	6.91
	2016Q1 – 2024Q1	No	-0.07	no	0.00	no	-0.58	4.83	6.47
FLMW-4	2007Q1 – 2024Q1	Yes	-0.38	no	0.22	no	-0.26	4.76	6.91
	2016Q1 – 2024Q1	No	0.00	no	0.10	no	0.23	4.83	6.47
NW-1	2004Q4 – 2024Q1	No	0.00	**yes**	**0.49**	no	0.10	**0.46**	**1.87**
	2016Q1 – 2024Q1	No	-0.04	no	0.19	yes	-1.14	0.31	1.87

Well Name	Period of Record Analyzed	Chloride		Sulfate		TDS		Average Pumping Rate (MGD)*	Maximum Pumping Rate (MGD)*
		Trend	Slope	Trend	Slope	Trend	Slope		
NW-2	2004Q4 – 2024Q1	No	0.05	**yes**	**0.50**	no	0.24	0.52	1.75
	2016Q1 – 2024Q1	Yes	-0.15	no	0.50	no	-1.36	0.59	1.64
NW-3	2007Q2 – 2024Q1	No	0.02	**yes**	**0.32**	no	-0.16	0.45	2.36
	2016Q1 – 2024Q1	**Yes**	**0.11**	no	0.25	no	-0.55	**0.92**	**2.36**
NW-4	2015Q2 – 2024Q1	**Yes**	**0.50**	no	-0.73	no	0.00	**0.58**	**2.27**
	2016Q1 – 2024Q1	**Yes**	**0.54**	no	-1.16	no	-0.47	**1.09**	**2.27**
NW-5	2018Q2 – 2024Q1	**Yes**	**0.98**	no	0.03	no	2.52	**0.51**	**1.87**
NW-6	2018Q3 – 2024Q1	**Yes**	**2.15**	**yes**	**3.93**	**yes**	**8.48**	**0.58**	**1.96**
NWOW-1	2007Q1 – 2024Q1	Yes	-0.21	no	0.24	no	-0.43	2.45	3.99
	2016Q1 – 2024Q1	No	-0.03	no	0.65	yes	-1.50	3.99	6.85
NWOW-2	2007Q1 – 2024Q1	Yes	-0.11	no	0.24	no	-0.13	2.45	3.99
	2016Q1 – 2024Q1	Yes	-0.10	no	0.29	no	-0.90	3.99	6.85
NWOW-3	2007Q2 – 2024Q1	Yes	-0.57	**yes**	**0.75**	no	-0.50	2.45	3.99
	2016Q1 – 2024Q1	Yes	-0.73	no	-0.37	yes	-2.76	3.99	6.85

* Pumping rates for NWOW-1 through NWOW-3 are the combined NW wellfield flows. Pumping rates for FLMW-1 through FLMW-4 are the combined TR wellfield flows.

Figure 15 Regional Chloride Concentrations



The CUP application presented results of a saltwater upconing analysis for the NW and TR wellfields. SJRWMD's saltwater upconing model (Motz and Ozlem, 2007) was used to evaluate the potential for the proposed withdrawals to cause upward migration of the saltwater-freshwater interface. For the analysis, the Gyhben-Herzberg relationship, which estimates 40 feet of freshwater below sea level for every foot of freshwater above sea level, was used to estimate the depth to saltwater. Table 20 compares the historical pumping rates to the calculated critical pumping rates. The trend analysis and upconing model results indicate the potential for upward migration of saltwater at both wellfield locations. However, some wells have historically higher pumping rates with no statistically significant trends noted. A reduction in the maximum withdrawal rates and continued monitoring of water-quality data are recommended for the existing well.

Table 20 Saltwater Upconing Model Results Compared to Historical Pumping Rates

Well Name	2016 to 2023 Average Withdrawal (MGD)	2016 to 2023 Maximum Monthly Withdrawal (MGD)	Increasing Trend(s) Observed	Calculated Critical Pumping Rate (MGD)
TR-42	0.43	0.89	None	0.43
TR43R	0.61	0.98	None	0.40
TR-45	0.75	1.58	None	0.35
TR-46	1.14	1.68	Chloride, TDS	0.35
TR-47	0.44	1.13	Chloride	0.39
TR-48	0.96	1.29	Chloride	0.37
TR-49	0.50	1.03	None	0.36
TR-50	NA	NA	NA	0.36
NW-1	0.31	1.87	None	0.56
NW-2	0.59	1.64	None	0.50
NW-3	0.92	2.36	Chloride	0.37
NW-4	1.09	2.27	Chloride	0.45
NW-5	0.51	1.87	Chloride	0.49
NW-6	0.58	1.96	Chloride, TDS, Sulfate	0.52
NW-7	NA	NA	NA	0.43
NW-8	NA	NA	NA	0.44
NW-9	NA	NA	NA	0.40
NW-10	NA	NA	NA	0.39
NW-11	NA	NA	NA	0.38
NW-12	NA	NA	NA	0.56

Well construction data are not available for the proposed wellfields; therefore, we used regional data from the North Florida-Southeast Georgia (NFSEG) model in the saltwater upconing model to evaluate the potential pumping rates. Table 21 presents the model input parameters for the proposed wellfields. Four upconing scenarios were completed. The first scenario uses the proposed locations shown in Figures 11 and 12 and the proposed well construction submitted with the permit application. The proposed wells for the West wellfield are generally situated 1,000 feet or more apart. The proposed spacing for the AI wells range from approximately 500 to 1,000 feet. A second scenario was completed to evaluate an increase in well spacing of the wellfields on the sustainable pumping rates. For the second scenario, the spacing of the West wellfield was increased to 2,000 feet or more and the spacing of the AI wellfield was increased to 1,500 feet or more. A third scenario was completed to evaluate reducing the well depths by 100 feet. A fourth scenario uses aquifer parameters (UFA hydraulic conductivity and confining unit leakance) from the NW wellfield for the West wellfield and from the TR wellfield for the AI wellfield instead of the NFSEG model parameters. Table 22 presents the critical pumping rates for the model scenarios.

The calculations completed for proposed wells W-8 and W-9 have the highest sustainable rates. The NFSEG predicted aquifer parameters for these wells are not significantly different than the other wells in the West wellfield and the higher rates largely results from the location of these wells further from the other wells (1.5 miles or more away). However, increasing the well spacing and decreasing well depth only resulted in modest increases in the sustainable pumping rates for both wellfields, indicating that a more significant increase in well spacing is needed to increase the withdrawal rate. Using the data from the NW wellfield has the most significant impact on the sustainable pumping rates. The transmissivity from pump tests at the NW wells is significantly greater than that predicted by the NFSEG model. The transmissivity at the TR wellfield is similar to that predicted by the NFSEG model for the AI wellfield; therefore, these aquifer parameters did not result in higher sustainable pumping rates. Site-specific data are needed to determine the well depth and aquifer properties. We recommend collecting additional data from a test well and reevaluating the sustainable pumping rates. Additional data should include current UFA water elevation, the depth to the top of the UFA, the thickness of the production zone (well depth), the UFA transmissivity, and the leakance of the overlying confining unit.

Table 21 Saltwater Upconing Model Parameters

Well Name	Ground Elevation (ft NAVD)	Well Casing Depth (ft)	Well Depth (ft)	Estimated UFA Water Elevation (ft NAVD)	Salt-Water Interface Depth (ft)	Distance to Well Open Hole (d, ft)	Distance to Well Bottom (l, ft)	Radius of Well (rw, ft)	Distance to SW Interface (b, ft)	UFA Transmissivity (ft^2/day)	Leakance (day -1)
West Wellfield											
W-1	21.2	210	475	45	-1,788	0.00	193	0.833	1,527	5,202.8	21.2
W-2	17.2	210	475	44	-1,759	0.00	185	0.833	1,486	4,787.2	17.2
W-3	15.4	210	475	44	-1,759	0.00	186	0.833	1,486	4,787.2	15.4
W-4	28.9	210	475	44	-1,755	0.00	165	0.833	1,474	4,467.5	28.9
W-5	14.4	210	475	44	-1,755	0.00	180	0.833	1,474	4,467.5	14.4
W-6	27.7	210	475	43	-1,728	0.00	163	0.833	1,443	4,191.8	27.7
W-7	28.4	210	475	44	-1,754	0.00	161	0.833	1,469	5,152.8	28.4
W-8	5.5	210	475	39	-1,549	0.00	186	0.833	1,265	5,095.8	5.5
W-9	8.5	210	475	43	-1,737	0.00	204	0.833	1,475	6,235.1	8.5
W-10	28.0	210	475	44	-1,754	0.00	162	0.833	1,469	4,152.8	28.0
								Average	**1,457**	**4,854**	**4.19E-05**
AI Wellfield											
AI-1	8.2	235	450	25	-1,002	46.10	261	0.750	821	33,674	1.21E-05
AI-2	9.7	235	450	25	-1,002	44.57	260	0.750	821	33,674	1.21E-05
AI-3	6.6	235	450	25	-1,002	47.72	263	0.750	821	33,674	1.21E-05
AI-4	7.4	235	450	25	-1,002	46.90	262	0.750	821	33,674	1.21E-05
AI-5	6.0	235	450	25	-1,002	48.34	263	0.750	821	33,674	1.21E-05
AI-6	9.6	235	450	25	-1,002	44.67	260	0.750	821	33,674	1.21E-05
								Average	**821**	**33,674**	**1.21E-05**

Notes: ft NAVD = feet North American Vertical Datum; ft^2/day = square feet per day; d = top of aquifer to open hole; ft = feet; l = top of aquifer to well bottom; b = distance to salt water interface; rw = radius of well.

Table 22 Proposed Wellfield Saltwater Upconing Model Results

Well Name	Calculated Critical Pumping Rate (MGD)			
	Proposed Well Spacing	Expanded Well Spacing	Reduced Well Depth	Revised Aquifer Parameters[1]
West Wellfield				
W-1	0.240	0.313	0.277	1.436
W-2	0.221	0.275	0.257	1.361
W-3	0.212	0.272	0.245	1.324
W-4	0.200	0.240	0.236	1.294
W-5	0.200	0.248	0.233	1.279
W-6	0.218	0.248	0.257	1.376
W-7	0.235	0.354	0.277	1.459
W-8	0.564	0.614	0.653	2.596
W-9	0.688	0.741	0.785	3.089
W-10	0.224	0.254	0.264	1.406
AI Wellfield				
AI-1	0.314	0.331	0.373	0.281
AI-2	0.319	0.337	0.379	0.285
AI-3	0.329	0.340	0.390	0.294
AI-4	0.316	0.337	0.375	0.281
AI-5	0.313	0.346	0.373	0.279
AI-6	0.320	0.324	0.379	0.286

[1] The NW wellfield average UFA transmissivity of 46,142 ft^2/day and leakance of 9.50 E-5 were used for the West wellfield.

The TR wellfield average UFA transmissivity of 29,483 ft^2/day and leakance of 1.21 E-05 were used for the AI wellfield.

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Durden, D; Gordu, F; Hearn, D; Cera, T; Desmarais, T; Meridth, L; Angel, A; Leahy, C; Oseguera, J; and Grubbs, T. 2019. *North Florida Southeast Georgia Groundwater Model (NFSEG v1.1).* St. Johns River Water Management District (SJRWMD) Technical Publication SJ2019-01. Prepared by SJRWMD and the Suwannee River Water Management District.

Jones Edmunds. 2015a. *St. Johns County Utility Department Integrated Water Resources Plan.*

Jones Edmunds. 2015b. *St. Johns County Utility Department Wellfield Optimization Plan Final Report.*

Motz, LH and Ozlem, A. 2007. *Evaluation and Documentation of SJRWMD Groundwater Models for Use by Permit Applicants.* St. Johns River Water Management District Contract Number SJ398AA

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Attachment 1

LOA and PUD Tables and Figures of Included Demands, Excluded Demands, and Allocations

SJCUD MAINLAND WATER SYSTEM MASTER PLAN

5-YEAR GROWTH PROJECTIONS TABLES AND FIGURES

LOAs not included in the analysis

LOAs Excluded		
Development	**Total ERCs**	**Demand (MGD)**
Southwood Preserve (Elkton DRI)	4233	0.618
SR13 Residential	2500	0.553
Water Lily	2967	0.433
Adler Creek PUD	1682	0.372
Old Kings Park DRI	2306	0.337
7945 CR 208	1300	0.287
Wells Farm	882	0.195
7505 CR214	690	0.101
4685 N Francis Rd	446	0.099
Osceola Lakes (fka Deer Chase Single Family)	600	0.088
Palm Lakes (The Marketplace)	357	0.079
IGP Northeast Quadrant Townhomes*	325	0.072
Preserve @ St. Augustine Lakes	376	0.064
The Quadrant	407	0.059
Norwood 4200 SR16	267	0.059
Golfway MFU	260	0.057
Integra	257	0.057
Cottages at St Johns (fka Capstone Golf)*	232	0.051
Waters Edge PUD	229	0.051
Grand Oaks (Remaining)*	221	0.049
Four Mile PUD	263	0.045
Tapestry St. Augustine	240	0.041
Winding Oaks	279	0.041
Laurel Point	182	0.040
Trailmark East Phase 3*	182	0.040
County Road 208 MF (fka Ruby208 Multifamily)	180	0.040
12 Mile MF (fka Madison Capital)	214	0.037
St. Johns Marketplace New Park Expansion Ph. 4*	250	0.037
207 Apartments at Marketplace	239	0.035
Grand Oaks Phase 2B Unit 3*	139	0.031
Cottages at St. Augustine	207	0.030
CR214 SF	197	0.029
US 1 & CR 204 Commercial	194	0.028
Rock Springs Farms	188	0.027
Pacetti Road Residential	120	0.027
MACV Properties	111	0.025
Tinkerville	165	0.024

LOAs Excluded		
Development	**Total ERCs**	**Demand (MGD)**
Bella Terra PUD*	155	0.023
Laurel Hill Workforce Housing	155	0.023
CR 214 Townhomes	151	0.022
San Antonio Phase 2*	147	0.021
SR 16 Townhomes (fka Cooksy Commercial)	125	0.021
Coquina Crossing Phase IV*	145	0.021
Colonel Hinman's Industrial Park	143	0.021
Spanish Trails/Juniper Sands	132	0.019
Mickler's Subdivision	137	0.019
Orchard Park Ph 3*	128	0.019
Entrada Phase 3 Unit 6B*	125	0.018
5300 State Road 207 Elkton FL	120	0.018
Entrada Phase 1 Unit 3*	115	0.017
Elkton Industrial Park	103	0.015
Merquinn Green Village	103	0.015

Notes: LOAs in the table below include LOAs not included in the analysis, are above 100 ERUs of growth, and are not located completely within a PUD already included in the analysis.

* Indicates that the development was accounted for by a PUD in the table below.

PUDs included in the analysis

PUDs Included		
Development	**Total ERUs Remaining**	**Demand (MGD)**
SilverLeaf Plantation PUD	12552	2.774
Interchange Parcel (Saint Johns DRI)	1354	0.299
St. Augustine Shores PUD (R-1974-03; ORD 1974-16)	2023	0.295
Six Mile Creek PUD (Saint Johns DRI) (adds lands into parcels 27 & 29)	872	0.193
Grand Oaks PUD	582	0.129
Anderson Park PUD	750	0.128
St Augustine Centre PUD (DRI)	589	0.101
World Commerce Center PUD	436	0.096
Palm Lakes PUD (Murabella)	392	0.087
Rancho Del Mar	424	0.062
Ferber SR 16	305	0.052
Nine Mile Gang (Bannon Lakes)	233	0.051
St Augustine Lakes (AKA The Mays Project)	257	0.044
2020 State Road 16	240	0.041
TMI - Rolling Hills PUD	250	0.037
St Johns Market Place aka Oldfield Forest	250	0.037
Entrada PUD	224	0.033
County Road 214 PRD	205	0.030
Silver Creek (fka: Regis Pines)	202	0.029
Bella Terra PUD	155	0.023
Bartram Farms PRD	125	0.018
Southwood PUD (R-PUD-88-014; ORD 1988-34) E of US 1 S	122	0.018
Bartram Farms Unit II PRD	121	0.018
Palmo Creek - Phase One PRD (Kingswood PRD)	69	0.015
Crescent Ranches PRD	96	0.014
Victoria Crossing	96	0.014
Lightsey Road Extension PUD	90	0.013
Mueller' s Landing PRD	59	0.013
Honey Branch Creek	53	0.012
Sea Place III PSD	78	0.011
Terra Pines Reserve I	48	0.011
Grand Ravine	62	0.009
Westgate Crossing (EXPIRED)	50	0.009
Barnes Landing PSD (Sacks-Martin Residential)(PSD 87-16 ORD 87-26)	58	0.008

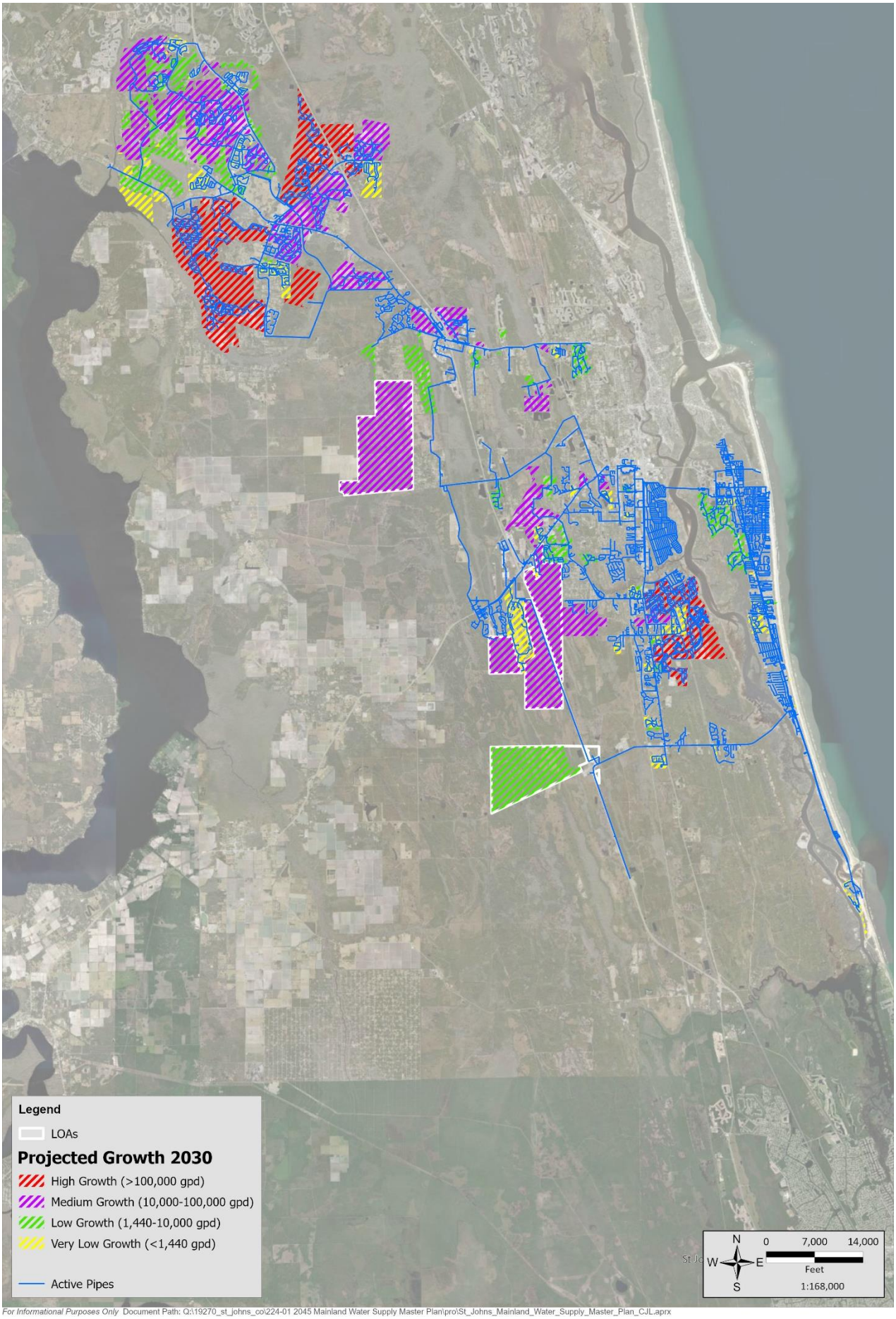
PUDs Included		
Development	**Total ERUs Remaining**	**Demand (MGD)**
Orchard Park II PUD	50	0.007
Terra Pines Reserve II	46	0.007
Treaty Ground PUD (Ord. 1987-37) *R-PUD-87-021	45	0.007
Sea Place II (PSD 85-56 ORD 85-78)	44	0.006
Hyde Park PRD	37	0.005
The Enclave at World Golf	21	0.005
Marsh Creek	30	0.004
Cypress Estates PUD	28	0.004
Westpark Center PUD	22	0.004
Prairie Lakes	23	0.003
Edgewater PUD	19	0.003
Bartram Downs PRD	14	0.003
Hyde Park PUD	20	0.003
Colee Cove Landing North PRD	13	0.003
Southwind Plantation (aka Cabbage Hammock)	13	0.003
Royal St. Augustine PUD	16	0.003
Governors Plantation PUD	18	0.003
Matanzas Woods Apartments	16	0.002
Moultrie Bluff Plaza	15	0.002
Stratton Boulevard Multi-Family PUD	12	0.002
Rivers Edge Plantation	9	0.002
Ponce de Leon Villas (PSD 1984-44)	14	0.002
Devil's Elbow PUD	14	0.002
Winn Dixie PUD (7-16-1997) (2000)	14	0.002
Gray Fox Farms	13	0.002
Double Bridges PRD	9	0.001
Cedar Ridge	8	0.001
Barrataria Island (R-PUD-76-03)	8	0.001
River Plantation	5	0.001
Moultrie Trails PUD	7	0.001
Golden Eye PRD	4	< 0.001
Osprey Cove Estates	4	< 0.001
Samara Lakes PUD (Maltby Farms)	4	< 0.001
Marbrisa PUD	6	< 0.001
Seascape PUD	6	< 0.001
Ocean Palms	6	< 0.001
Sandi Pines Homes PSD	4	< 0.001
Stillwaters PRD	3	< 0.001
Orthodox Christian Mission Center PUD	4	< 0.001
Spanish Cay PUD	4	< 0.001

PUDs Included		
Development	**Total ERUs Remaining**	**Demand (MGD)**
Honey Branch Estates	2	< 0.001
Southaven PUD	2	< 0.001
Kings Trace PUD	3	< 0.001
Cypress Lakes PUD (R-PUD-85-92)	3	< 0.001
Seychelles (PSD 87-045 ORD 87-71)	3	< 0.001
Commodore's Club	3	< 0.001
Summer Island PUD	3	< 0.001
Huguenot Harbour PSD	2	< 0.001
Twin Lakes	2	< 0.001
Villages of Valencia	2	< 0.001
Rock Springs Farm PUD	2	< 0.001
Chelsea Woods (Rolling Hills Community PUD)	2	< 0.001
A1A Hardware PSD	2	< 0.001
Ashton Oaks	1	< 0.001
Arbor Mill PUD	1	< 0.001
Usina Warehouse PSD	1	< 0.001
Mission Trace	1	< 0.001
Moultrie Office Complex PSD	1	< 0.001
Deerfield Meadows PUD	1	< 0.001
Lightsey Road Apartments	1	< 0.001
Rolling Hills PUD	1	< 0.001
Joy II RV Sales and Service	1	< 0.001
Moses Creek Estates PUD	1	< 0.001
Seagate North PSD (R-PSD-93-026)	1	< 0.001
Ocean Gallery Homes PSD	1	< 0.001
Boyd Beach PSD	1	< 0.001
Island Cottages PUD	1	< 0.001

See attached 5-year interval growth figures.

5-Year Growth Figures

2030 through 2045



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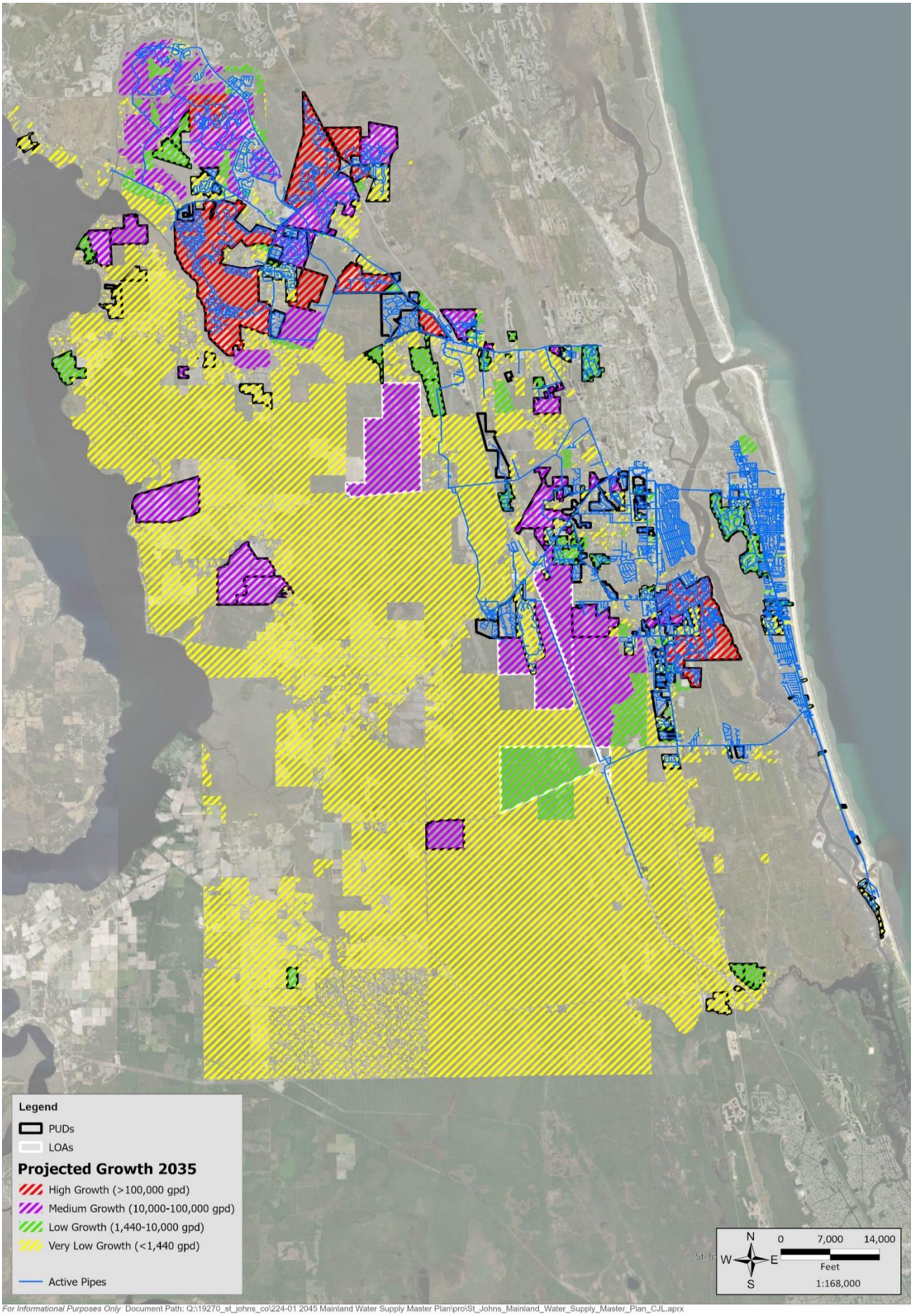

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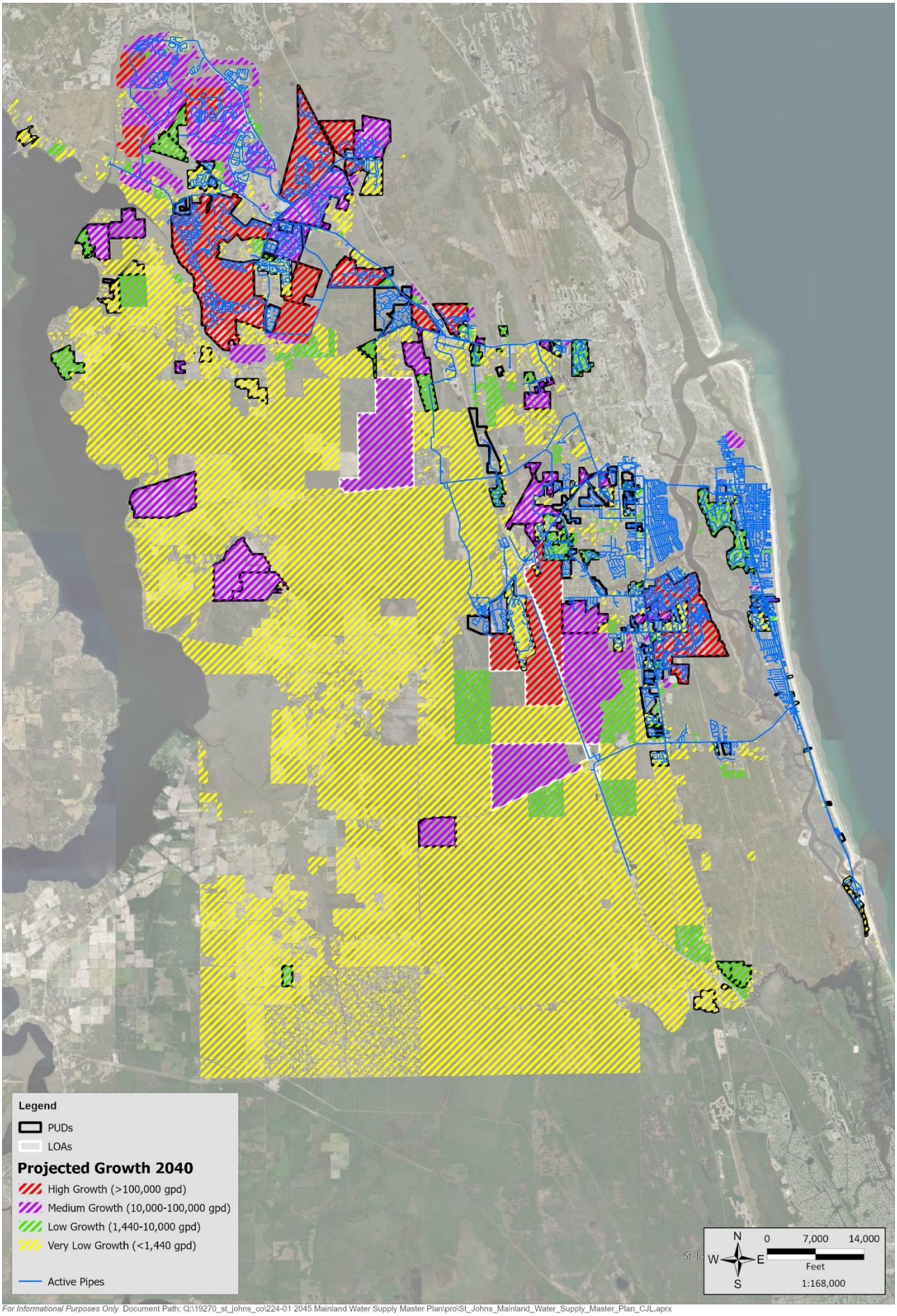

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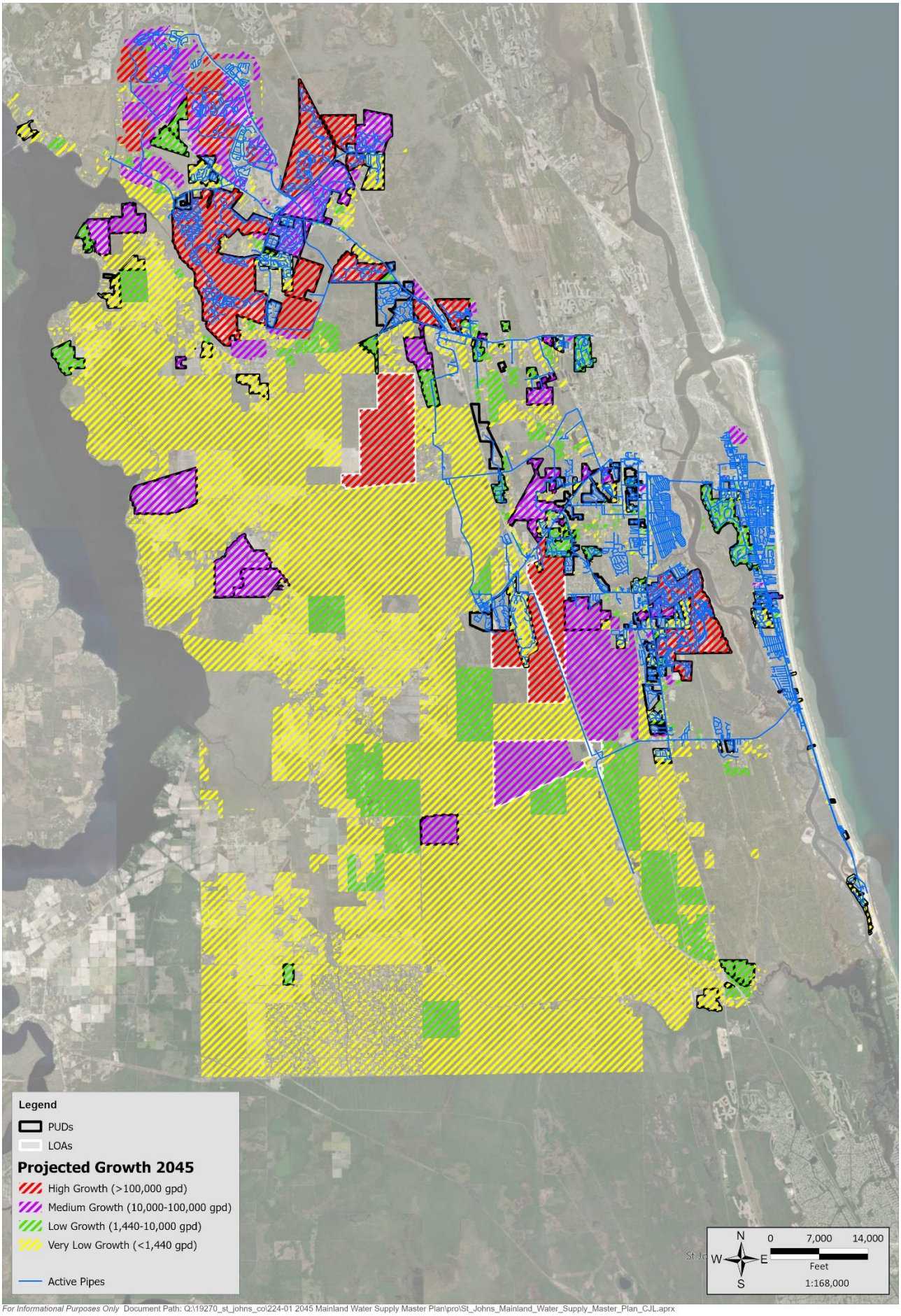

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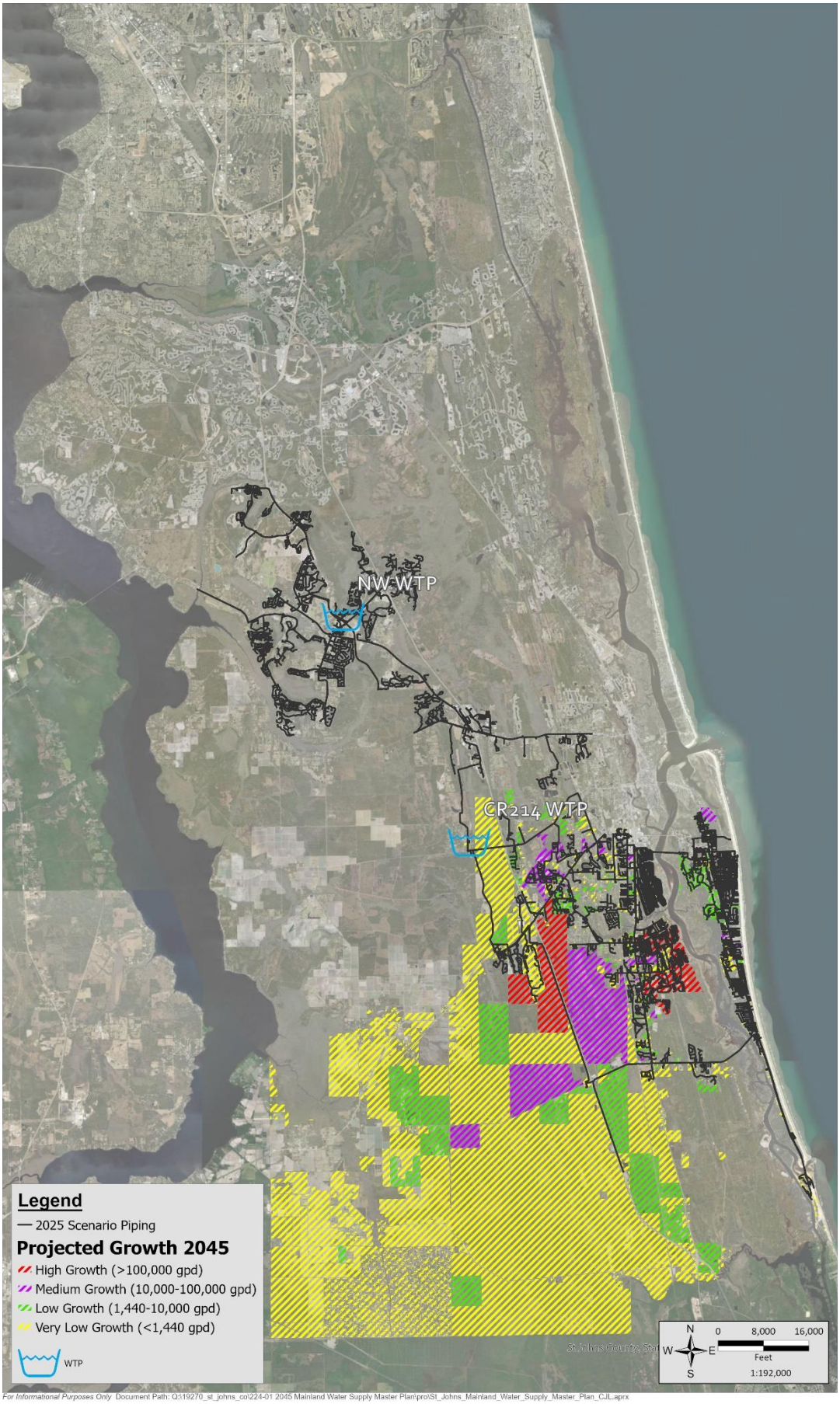
2045 CR214 Demand Allocation


NW WTP
CR214 WTP
Legend
2025 Scenario Piping
Projected Growth 2045
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Medium Growth (10,000-100,000 gpd)
Low Growth (1,440-10,000 gpd)
Very Low Growth (<1,440 gpd)
WTP
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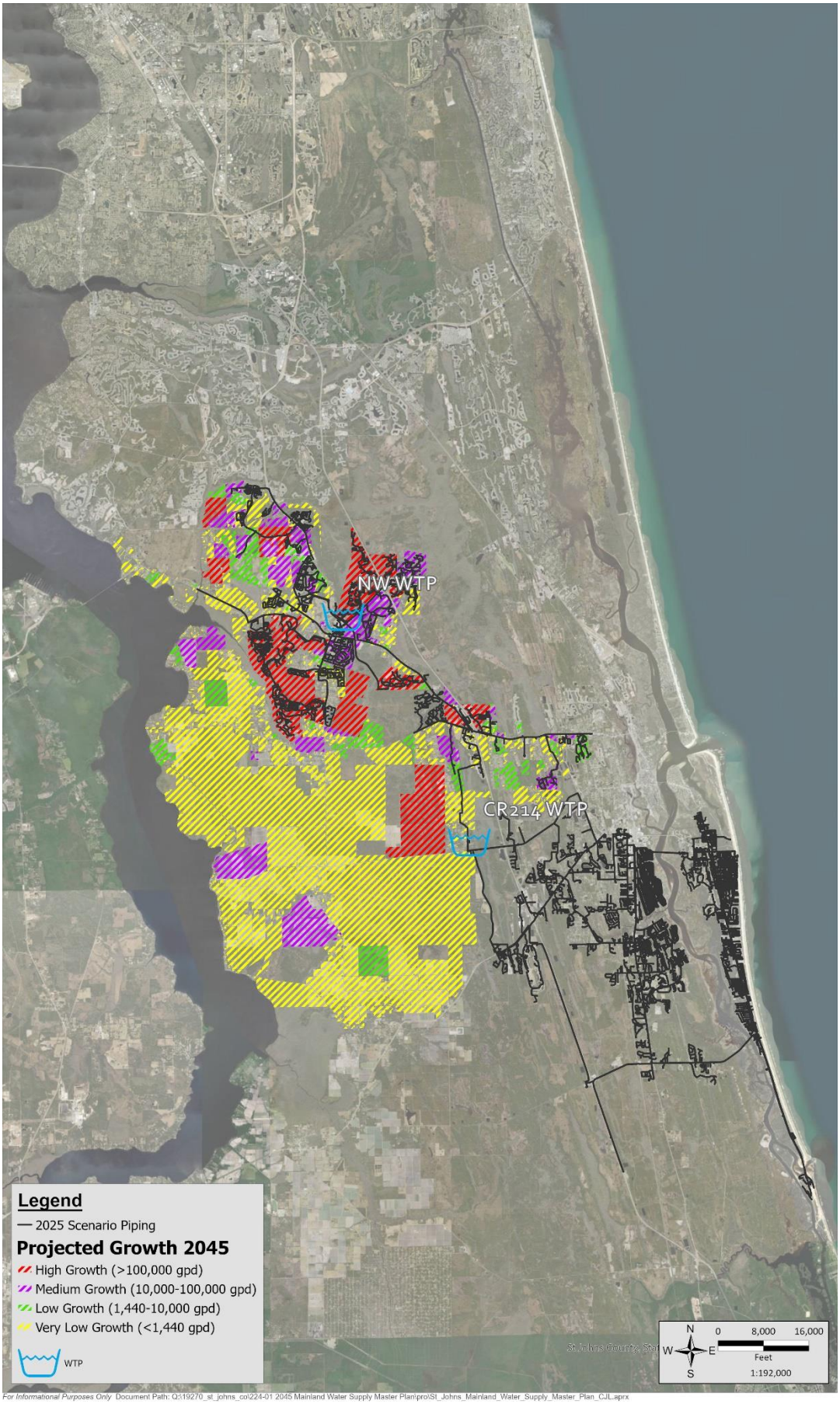
2045 NW Demand Allocation


NW WTP
CR214 WTP
Legend
2025 Scenario Piping
Projected Growth 2045
High Growth (>100,000 gpd)
Medium Growth (10,000-100,000 gpd)
Low Growth (1,440-10,000 gpd)
Very Low Growth (<1,440 gpd)
WTP
N
W
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TECHNICAL MEMORANDUM

St. Johns County Water Supply Master Plan (WSMP)

TO: Teri Lane Pinson, PE, PMP

FROM: Brett Goodman, PE; Will Mohrman, EI; John Horvath, PE; TJ Lillo, PE

DATE: November 13, 2025

SUBJECT: Model Updates and Calibration
Jones Edmunds Project No. 19270-224-01

This Technical Memorandum (TM) overviews the hydraulic model developed to evaluate system improvements over the planning horizon. The intent is to outline the development and summarize how the model is calibrated using existing 2024 pressure and flow information and provide modeling results that represent average and maximum day existing conditions in the system. Jones Edmunds will use this model to evaluate annual average daily demand (AADD), maximum daily flow (MDF), and maximum daily flow plus fire flow (MDF+FF) for planning years 2025 to 2045 that address growing demand and water supply issues and serve as the technical basis for recommendations on system improvements and capital project planning.

1 MODEL UPDATES AND CALIBRATION

The St. Johns County Utility Department (SJCUD) plans to use an updated water system hydraulic model to forecast the system's ability to meet the system's minimum level-of-service (LOS) criteria through the 2045 planning year. Jones Edmunds evaluated the sources of supply, distribution system, storage facilities, and pump stations to assess potential future capacity. A future TM will provide recommended improvements. Major steps in the model update and calibration include:

- Combining two models (Northwest [NW] and Mainland) to work together.
- Defining two calibration events for 2024.
- Calibrating the model.
- Adding future capital improvement plan (CIP) projects that are currently in design (e.g., not as-built) for 2025.
- Creating a new 2025 scenario.
- Inputting future water demands using the Bureau of Economic and Business Research (BEBR) projections, Letters of Authorization (LOA), and Planned Unit Developments (PUD).
- Evaluating model scenarios at 5-year growth projection increments.
- Assessing deficiencies.
- Updating the water treatment plant (WTP) and booster pump station (BPS) configurations and controls.

Jones Edmunds used the hydraulic model to predict potential system deficiencies. We reviewed those deficiencies with SJCUD staff to confirm the condition or revise the model.

1.1 Model Development

Jones Edmunds developed an extended period simulation (EPS) for the existing and future water distribution system hydraulic model, which included the following steps:

- Obtain relevant data needed to update the models as described below.
- Convert two separate existing InfoWater hydraulic models provided by SJCUD into InfoWater Pro and combine to work together as a single model.
- Update current and future piping using the up-to-date geographic information system (GIS) online database from SJCUD.
- Assign elevations to pipe network nodes using a light detection and radar (LiDAR)-based digital elevation model (DEM).
- Incorporate boundary condition elements (e.g., pumps and ground storage tanks [GSTs]) in the model.
- Spatially allocate customer demands to model nodes using InfoWater Pro and ArcGIS for current conditions.
- Complete an in-depth analysis of future demands using BEBR projections, PUDs, and LOAs to spatially allocate them in the model in 5-year increments up to 2045.
- Create two 2024 calibration scenarios, which were modeled to align with supervisory control and data acquisition (SCADA) data reflecting average and maximum daily demand (MDD) events.
- Incorporate construction projects in development to create 2025 scenarios, which will be used as the base scenario for future modeling.
- Perform a quality-control review of the resulting model including cross-checking input data, assumptions, boundary conditions, operational controls, and verifying pressures, flows, and responses to produce a model that matches observed system performance and meets the intended goals of the WSMP.

1.2 Data Collection

The following SJCUD-provided files were essential for developing and calibrating a GIS-based water distribution model to be used for master planning:

- GIS information including pipes, valves, tanks, pumps, CIP projects, PUDs, and LOAs.
- Future CIP projects in design.
- Monthly operating report (MOR) data from 2021 to 2024.
- Pump curves for each pump.
- SCADA data for 4 average-usage days and 3 maximum-usage days during the last 12 months.
- Pump controls as described in the *Existing and Future Conditions* TM.

1.3 BUILDING THE HYDRAULIC MODEL

1.3.1 EXISTING CONDITIONS MODEL

After completing data collection and converting it to InfoWater Pro, Jones Edmunds built the existing conditions hydraulic model for the 2024 calibration year that included the following data provided from SJCUD:

- GIS water-pressure pipes data.
- Updated pipe diameters, routing, and materials where inconsistencies were found (e.g., piping connectivity and diameter issues that did not match current GIS data).
- Updated storage information.
- Updated valve settings and locations (altitude, pressure-reducing and check valves).
- Updated pump controls.

After we completed the model updates and before any model calibration, we assigned initial Hazen-William coefficient, C, values of 120 to all existing modeled piping, resetting the calibration process. A higher C-factor means less resistance to flow; a lower C-factor means more resistance. A value of 120 may be more representative of older piping (compared to 140 for typical new piping), and was used as an initial conservative value to factor in increased internal pipe roughness, aging pipe, and varying material types within the system. Minor losses were accommodated within the Hazen-Williams coefficients and confirmed during the calibration process. The following sections discuss further calibration of individual Hazen-Williams coefficients.

1.3.2 ASSIGNING ELEVATIONS

A 5-foot-by-5-foot LiDAR-based DEM was available for the entire service area. GIS was used to create a raster elevation surface and apply the ground surface elevations to each model node based on their location on the raster surface.

Increasing the elevation of a node in the model by 2.31 feet will decrease the model-calculated pressure at the node by 1 pound per square inch gauge (psig). Conversely, decreasing the elevation of a node in the model by 2.31 feet will increase the model-calculated pressure at the node by 1 psig. Assigning ground-surface elevations to model nodes is common practice. However, assigning pipe-centerline elevations to model nodes is equally acceptable. When pipe-centerline elevations are used, they are usually calculated by subtracting an assumed burial depth, typically 3 feet, from the ground-surface elevations. Using pipe-centerline elevations means that the model-calculated pressures are the expected available pressures at the approximate burial depth; whereas, using ground-surface elevations means that the model-calculated pressures are the expected available pressures at grade. Since selecting the reference nodal elevations is somewhat arbitrary and the *Recommended Standards for Water Works* (i.e., *10-State Standards*) presents water system fire-flow (FF) pressure requirements in terms of pressure at grade, we selected the ground-surface elevations as the reference nodal elevations to be used for this model.

1.3.3 Boundary Condition Elements

To enable the hydraulic model to calculate pressures and flow rates that are expected in the system, boundary condition elements such as pumps and GSTs must be inserted into the model.

Jones Edmunds simulated the GSTs as tank model elements with floor elevation, diameter, side water depth, and inlet/outlet pipe configurations obtained from record drawings and data obtained from SJCUD.

SJCUD provided Jones Edmunds with pump information and controls for all pumps at WTPs and BPSs. The pumps in the model were set up to mimic the provided controls keeping tank levels at sufficient water levels.

1.3.4 Spatially Allocating Water System Demands

The existing conditions model scenario used a spatial demand from the original InfoWater models provided by SJCUD. Demands were then slightly increased to match current demands in the system.

Jones Edmunds spatially allocated the future demands for all areas based on the demand analysis in the *Existing and Future Conditions* TM.

1.3.5 Model Calibration

After the model was built and the boundary conditions inserted, Jones Edmunds implemented a calibration procedure.

After resetting the calibration process discussed in Section 1.3.1, C factors from the previously SJCUD calibrated InfoWater model were used for existing piping. Future piping (new pipes) was assigned a C factor of 130 to 140 since the pipes were recently installed and have a relatively smooth water transmission. Further calibration was completed to align with the SCADA average and MDD data by decreasing C factors in areas where needed. Figure 1 shows the C factors used on the current and future pipe network.

During the calibration process, we confirmed controls, configuration, valve settings, active valves, and pump flows by consulting with SJCUD staff and through modeling iterations. The following improvements were required to properly calibrate the existing models:

- A check valve at the 16th BPS is not currently active, which caused discrepancies in early modeling results.
- Closed valves at the Southground BPS were added to prevent looping and allow the Southground BPS to supply water to the south (Figure 2).
- Altitude valve settings were adjusted, which are described in the *Existing and Future Conditions* TM.
- Pump controls were adjusted, which are described in the *Existing and Future Conditions* TM.
- Confirmed the locations of pressure-reducing valves.
- New infrastructure constructed after the existing model was developed was added to the updated model.

- Capacity constraints at the County Road (CR) 214 WTP and NW to CR 214 transfer piping were confirmed.

Figure 1 Calibrated Hazen-Williams Coefficients

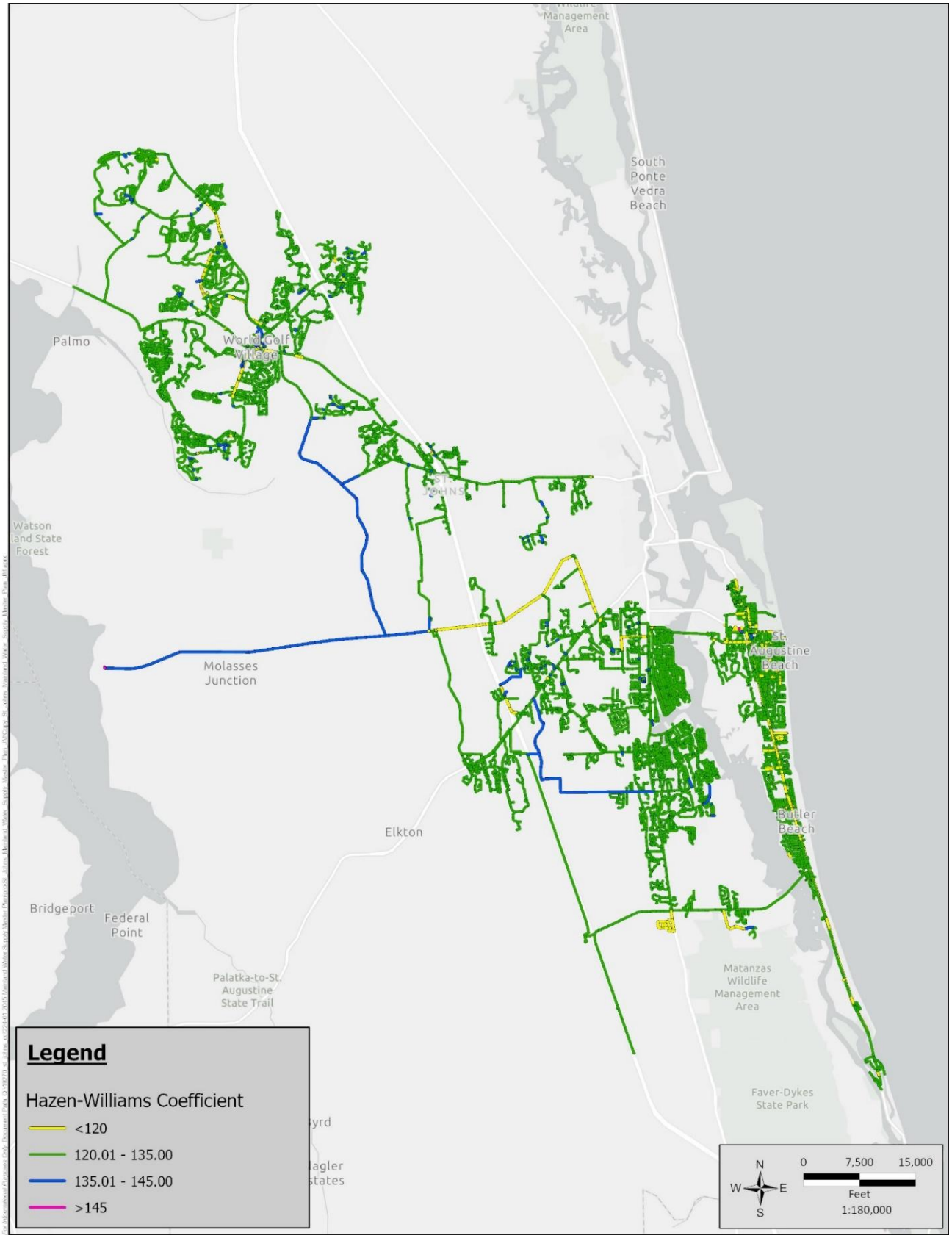


Figure 2 Southground Closed Valves



Using provided SCADA data, Jones Edmunds calibrated 2024 scenarios to align with the data. Tables 1 through 3 compare the calibrated model results with the SCADA data pressures, flow rates, and tank levels at various locations throughout the model. The graphs in Attachment 1 provide maximum daily scenario model results over SCADA data.

Table 1 2024 Model versus SCADA Junction Pressures

Element	SCADA System Pressures (psi)			Model System Pressures (psi)		
	Minimum	Maximum	Average	Minimum	Maximum	Average
AADD NW WTP Discharge	74.1	75.5	75.0	75.0	75.0	75.0
MDD NW WTP Discharge	73.6	76.8	75.0	75.0	75.0	75.0
AADD CR 214 WTP Discharge	58.3	112.4	92.2	68.2	110.1	92.1
MDD CR 214 WTP Discharge	84.3	136.6	114.5	91.3	136.5	119.8
AADD Lewis Point	57.4	75.9	67.6	61.6	70.0	67.3
MDD Lewis Point	61.8	74.7	70.9	61.9	72.5	67.0
AADD 16th BPS Discharge	38.3	80.1	62.5	57.1	61.9	60.9
MDD 16th BPS Discharge	50.1	80.9	61.5	50.7	60.3	58.2
AADD Southground BPS Discharge	55.1	85.1	78.5	58.3	80.0	76.7
MDD Southground BPS Discharge	63.9	84.2	78.8	55.2	80.0	76.3
AADD A1A Summerhouse	53.6	82.9	68.7	66.2	76.3	72.4
MDD A1A Summerhouse	53.7	79.3	71.7	68.2	75.1	72.5
AADD Shores BPS Discharge	48.6	74.3	62.9	55.5	67.4	60.4
MDD Shores BPS Discharge	52.1	73.1	66.2	57.5	67.0	61.9

Note: psi = pounds per square inch.

Table 2 2024 Model versus SCADA Pump Flows

Element	SCADA System Pump Flows (gpm)			Model System Pump Flows (gpm)		
	Minimum	Maximum	Average	Minimum	Maximum	Average
AADD NW WTP Discharge	1,974.9	6,772.8	3,990.4	1,479.4	6,888.2	3,712.2
MDD NW WTP Discharge	2,977.0	10,570.9	5,582.4	1,842.8	9,946.3	5,188.0
AADD CR 214 WTP Discharge	1,937.4	5,697.0	4,198.4	2,844.7	4,907.7	4,116.0
MDD CR 214 WTP Discharge	3,448.8	6,877.0	5,304.0	4,394.4	6,204.6	5,533.7
AADD 16th BPS Discharge	0	1,790.8	816.0	1,041.5	1,644.1	1,413.3
MDD 16th BPS Discharge	277.2	1,646.0	963.9	1,530.3	2,399.8	1,939.9
AADD Southground BPS Discharge	0	772.5	453.2	0	478.1	366.0
MDD Southground BPS Discharge	0	877.5	467.0	0	514.2	402.6
AADD Shores BPS Discharge	0	870.0	149.2	0	1038.4	286.2
MDD Shores BPS Discharge	0	895.0	252.8	0	1079.8	463.4

Notes: gpm = gallons per minute.

A minimum outlier was removed from CR 214 flow data to better compare data (~70 gpm).

Table 3 2024 Model vs SCADA Tank Levels

Element	SCADA Tank Level (Feet)			Model Tank Level (Feet)		
	Minimum	Maximum	Average	Minimum	Maximum	Average
AADD 16th BPS GST	13.0	18.5	15.6	14.9	17.3	15.9
MDD 16th BPS GST	16.7	22.1	18.4	13.3	18.1	15.0
AADD Southground BPS GST	12.8	18.5	16.1	18.0	23.0	21.1
MDD Southground BPS GST	16.1	23.7	19.2	19.9	23.4	21.6
AADD Shores BPS GST	13.0	18.1	16.1	12.9	19.0	16.4
MDD Shores BPS GST	16.1	25.0	20.0	17.8	26.2	20.9

1.3.6 Discussion

Tables 1 through 3 illustrate that modeling calibration closely followed observed SCADA data, but a higher margin of error occurs for flow (and some pressures) at the BPSs. This indicates that the automated controls and set points are unable to match the actual conditions. We attempted several combinations and iterations of controls and set points to replicate the observed conditions. Model instabilities and hydraulic imbalances in the model created significant challenges with matching the model to observed conditions. Some possible causes for these discrepancies include piping configuration (including missing check valves and/or closed valves), old/worn pumps, or manual operation of pumps and/or altitude valves.

Similar to past modeling efforts, the configuration of piping at Southground BPS was observed to be irregular; with all pipes turned on, the BPS would constantly cycle water into its own tank and fail to hold the 80-psi target pressure downstream of the pumps. Due to this issue, closed valves should be added to the BPS to allow water at the Southground BPS to only pump south while keeping the system connected on Anastasia Island. Figure 2 shows the closed valves which were included in the model to better illustrate real-life conditions.

Due to the flow and configuration discrepancies observed at the BPSs, anomalies apparent in the system require a much more detailed analysis. An additional investigation before the BPS upgrades are finalized is recommended to fully understand the system's performance. The BPS analysis could include additional field visits, data collection, pressure and flow monitoring, performance testing, and updating existing pump curves.

It is notable that when improvements to the transmission and distribution system are added and analyzed, the model is stable and runs with established automated controls and set points. This is another indication that there are likely physical conditions and manual operational procedures that cannot be replicated in the model during the calibration simulations.

While calibration highlighted some discrepancies at the booster pump stations due to site-specific conditions and operational practices that cannot be fully replicated in the model, the overall hydraulic model is a strong representation of the transmission and distribution system. It sufficiently reflects system performance and provides a reliable tool for evaluating and planning transmission system improvements.

2 2025 MODELING RESULTS

Jones Edmunds developed the following five base scenarios using the InfoWater Pro software:

- 2024 AADD EPS.
- 2024 MDD EPS.
- 2024 Maximum daily demand plus fire flow (MDD+FF) Steady State Simulation.
- 2025 AADD EPS.
- 2025 MDD EPS.

We created these scenarios using the methods and data described in Section 1. The 2024 scenarios were developed to calibrate and align pressure and flow data provided by SJCUD. We used the 2025 scenarios to analyze system results with additional CIP projects, increased demands, and the 2025 scenarios built into the model. Future scenarios were divided into alternatives, which will be addressed in a future *Alternatives* TM.

2.1 2025 Conditions Modeling

The 2025 scenarios will be used as base scenario conditions with updated piping (from CIP projects), an active check valve at the 16th BPS, updated demands, and the addition of a CR 208 BPS. The following sections describe the 2025 scenarios pressure and maximum pipe velocity results.

2.2 2025 Conditions Scenarios

To understand the current capacity of the water distribution system, Jones Edmunds developed three 2025 base scenarios (AADD, MDD, and MDD+FF). The 2025 base scenarios use the demands outlined in the *Existing and Future Conditions* TM. We simulated the 2025 demand conditions for AADD, MDD and MDD+FF as follows:

- The AADD scenario used demands totaling 10.47 million gallons per day (MGD).
- The MDD scenario used demands totaling 15.70 MGD.
- The MDD+FF scenario used demands totaling 15.70 MGD with FF simulations at each fire hydrant junction to run multiple steady-state snapshots.

2.3 Existing Conditions Model Results

Table 4 presents the model results for 2025 scenarios under AADD and MDD demands. The minimum and maximum pressures are at a specific node within the 24-hour model simulation. The average pressure results are the average of all nodal pressures across all time steps in the EPS simulation. Figures 3 and 4 present the minimum pressures in the model for AADD and MDD conditions, respectively.

Table 4 Existing Condition AADD and MDD Model Results – Junctions

Demand Condition	System Pressures (psi)		
	Minimum	Maximum	Average
AADD	41.2	86.3	65.0
MDD	41.1	135.0	69.2

Notes: Nodes just upstream of pumps and tanks are excluded due to low pressures based on model configuration and operation.

According to the 2023 St. Johns County *Standards Manual*, a minimum pressure of 20 psi shall be maintained throughout the distribution system during all flow conditions. Chapter 62-555.350(7), Florida Administrative Code (FAC) also states the following:

> *Except when a water main breaks or treatment or pumping equipment fails and except under circumstances that the supplier of water documents to be highly unusual and nonrecurring, suppliers of water shall maintain a minimum gauge pressure of 20 pounds per square inch throughout their drinking water distribution system up to each customer's point of connection to the water supplier's distribution system.*

The County's *Comprehensive Plan* states that the normal operating range of the potable water system shall be between 40 and 80 psi.

Figures 3 and 4 show that pressures less than 20 psi are not apparent in the average and maximum daily scenarios (excluding pump and tank nodes), and most of the pressure in the system is within the optimal range of 40 to 80 psi. Areas of pressure above 80 psi were observed during peak hours just downstream of the CR 214 WTP due to high output pressures to supply water to the entire system.

Table 5 and Figure 5 summarize the available FF (gpm) at 20 psi for the existing MDD+FF scenario. The main areas of concern are Mainland and Anastasia Island, and a future TM will identify upgrades and recommended CIP projects.

Table 5 Existing Condition MDD+FF Model Results

	Quantity of Hydrants Available for FF				
Flow (gpm)	<500	500–1,000	1,000–1,500	1,500–2,000	>2,000
Number of Hydrants	17	181	496	652	1,783

The model results were also used to evaluate maximum velocities. According to the 2023 St. Johns County *Standards Manual*, maximum day, non-FF conditions shall not exceed 8 feet per second (fps). Figures 6 and 7 present the existing condition maximum velocities model results.

Figure 3 Existing Condition AADD Model Results – Junctions

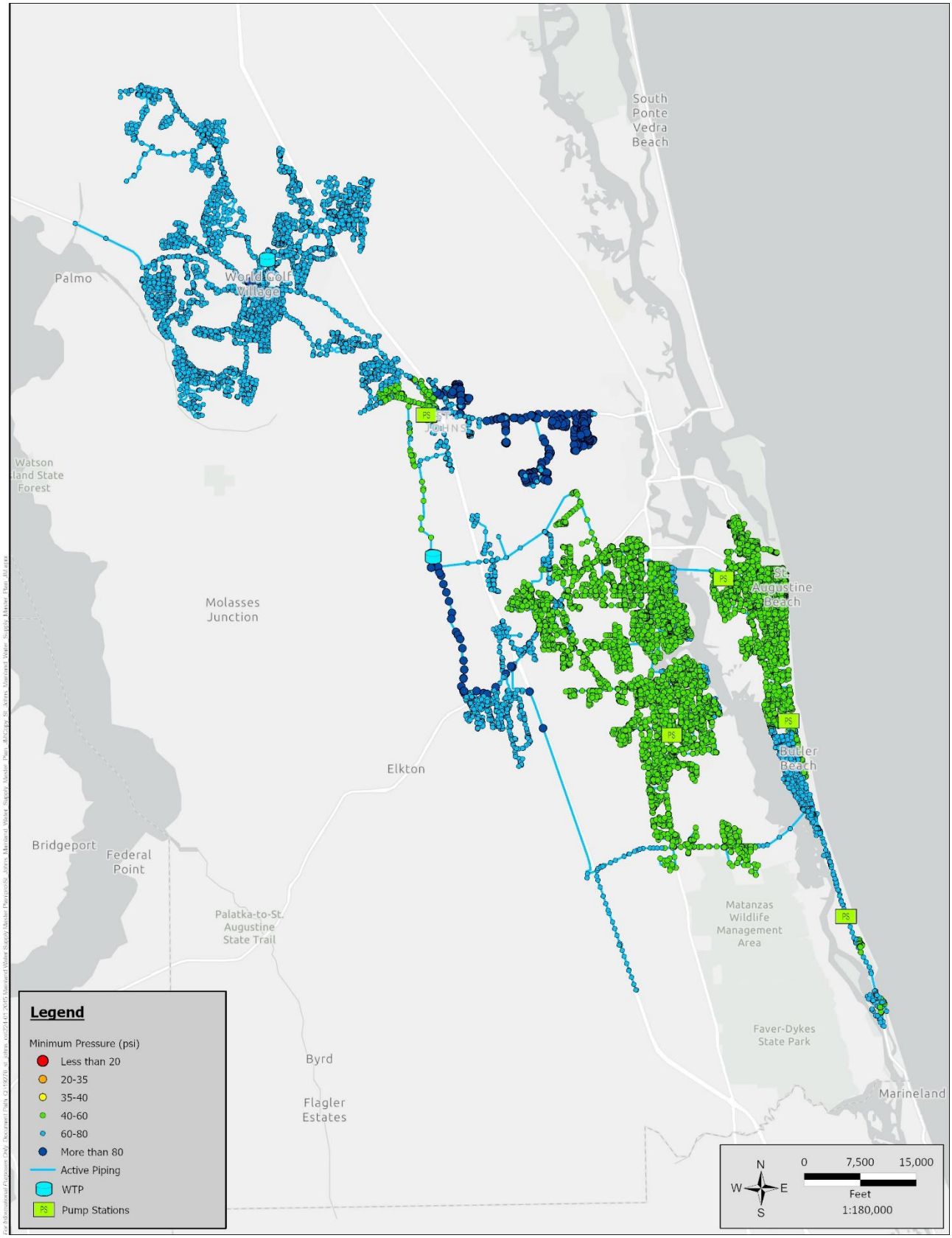


Figure 4 Existing Condition MDD Model Results – Junctions

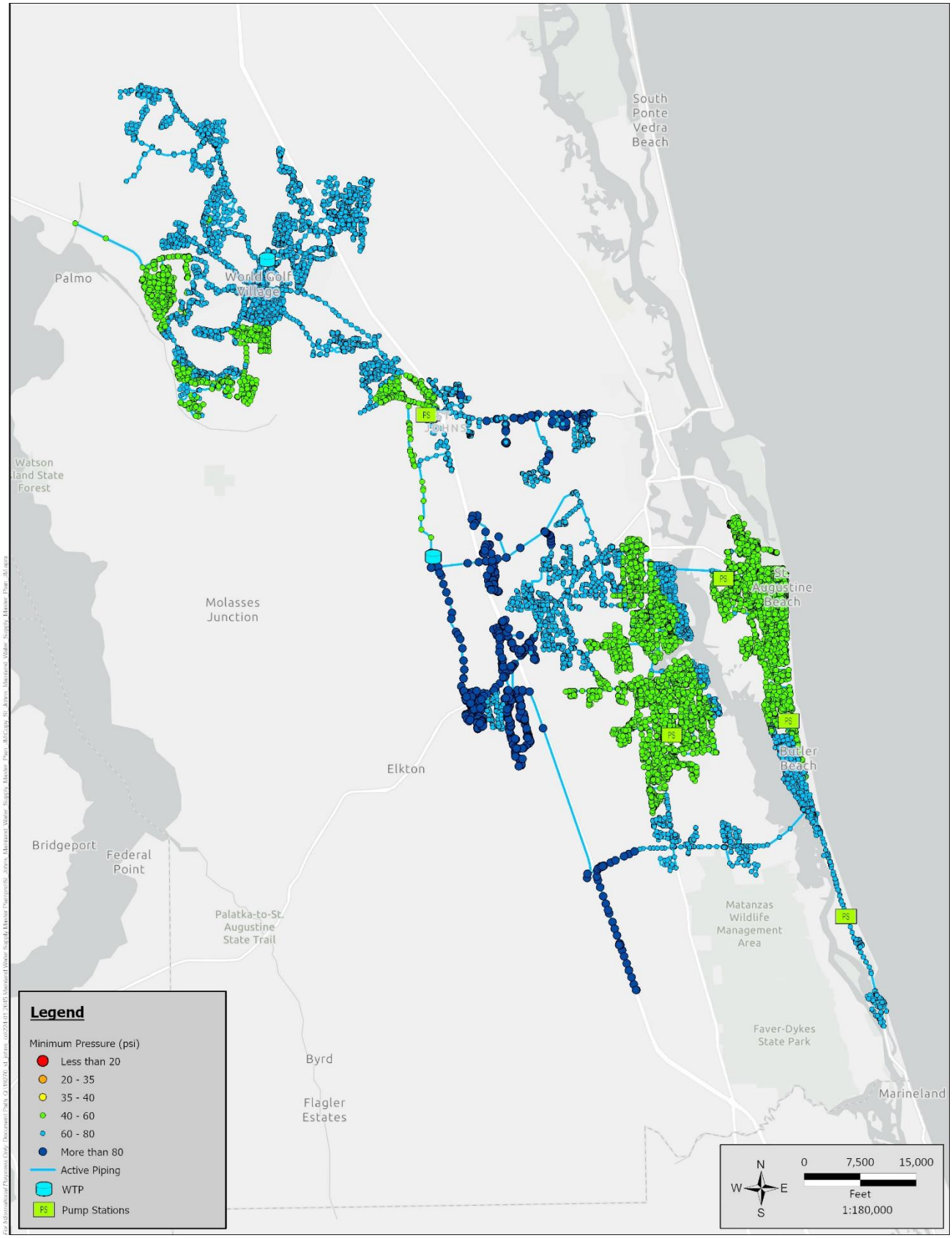


Figure 5 Existing Condition MDD+FF Model Results

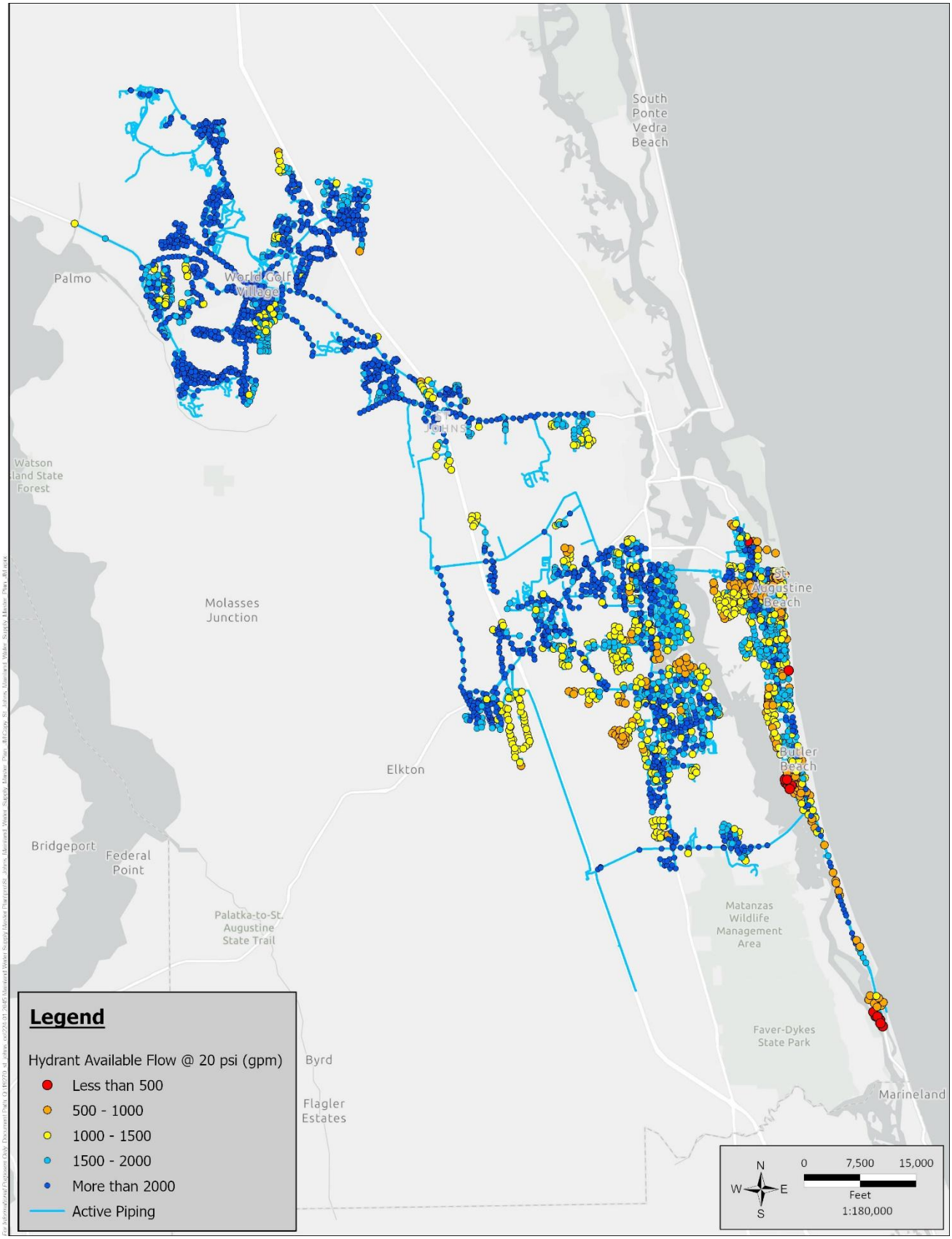


Figure 6 Existing Condition AADD Model Results – Piping Velocity

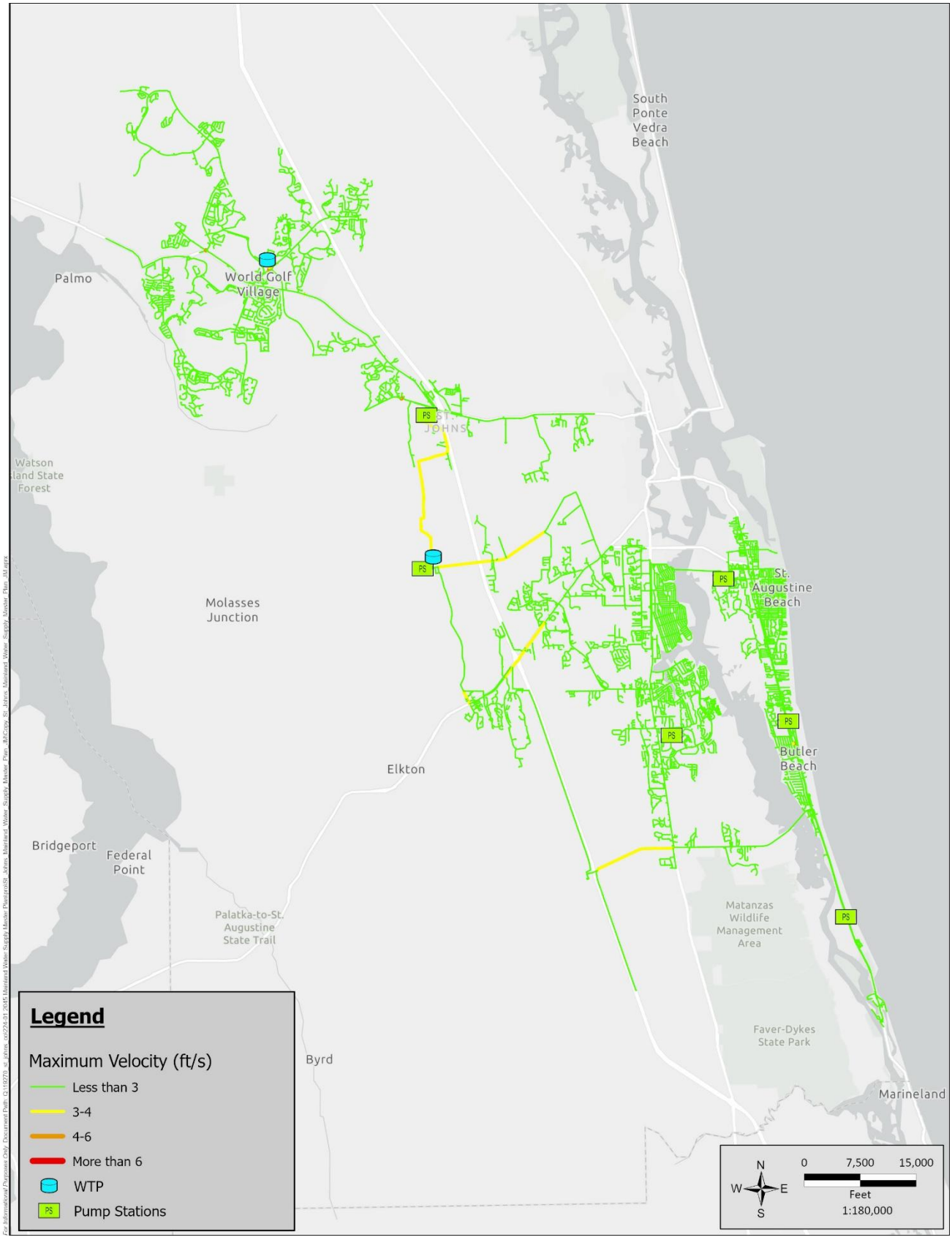
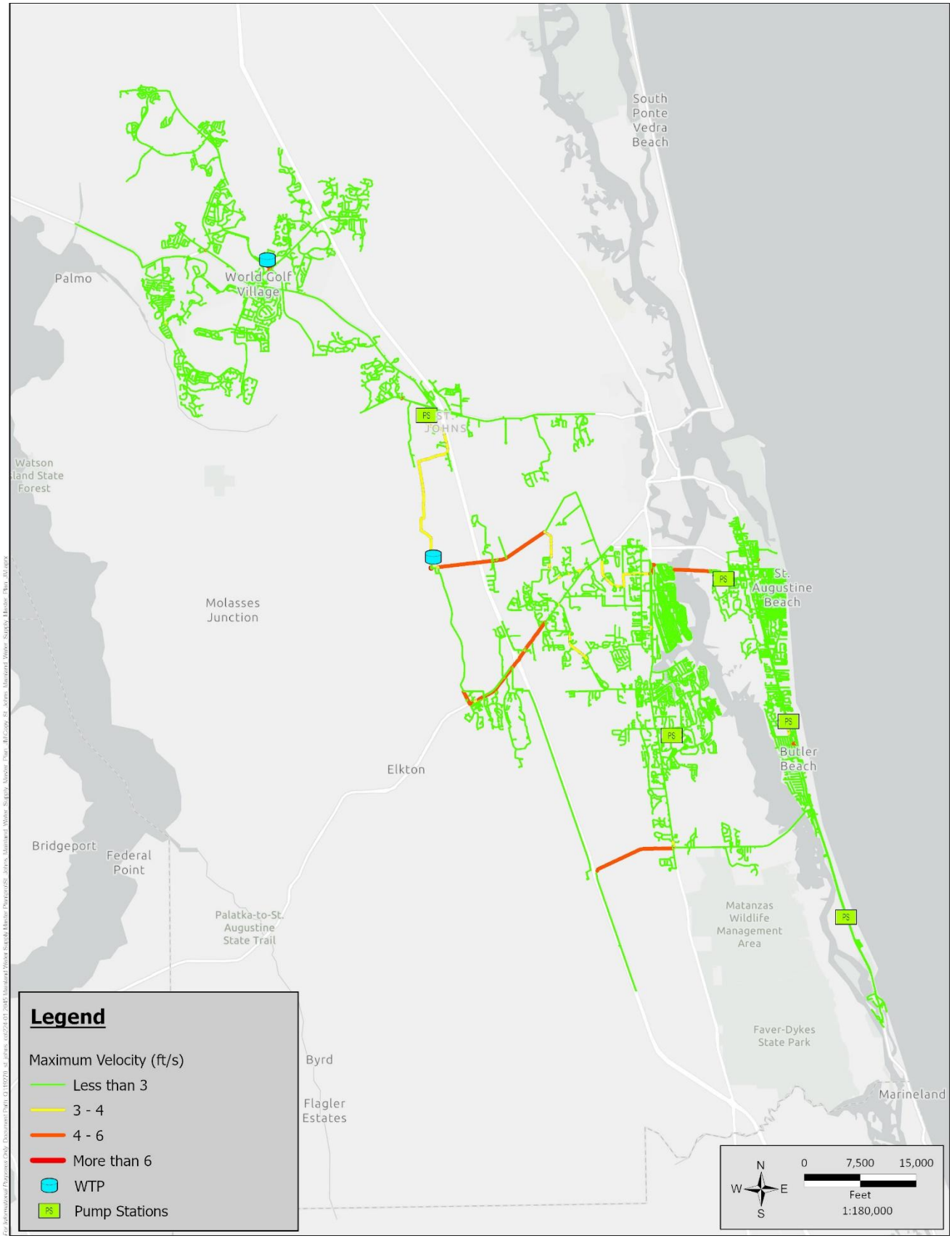


Figure 7 Existing Condition MDD Model Results – Piping Velocity



Figures 6 and 7 show that although no piping velocities exceed 6 fps, several areas do have a piping velocity over 4 fps. Areas identified with a velocity over 4 fps are typically associated with high head loss and a future TM will identify upgrades and recommended CIP projects. The TM will include future planning year modeling results and upgrades to address piping velocities, low pressures, and water supply issues.

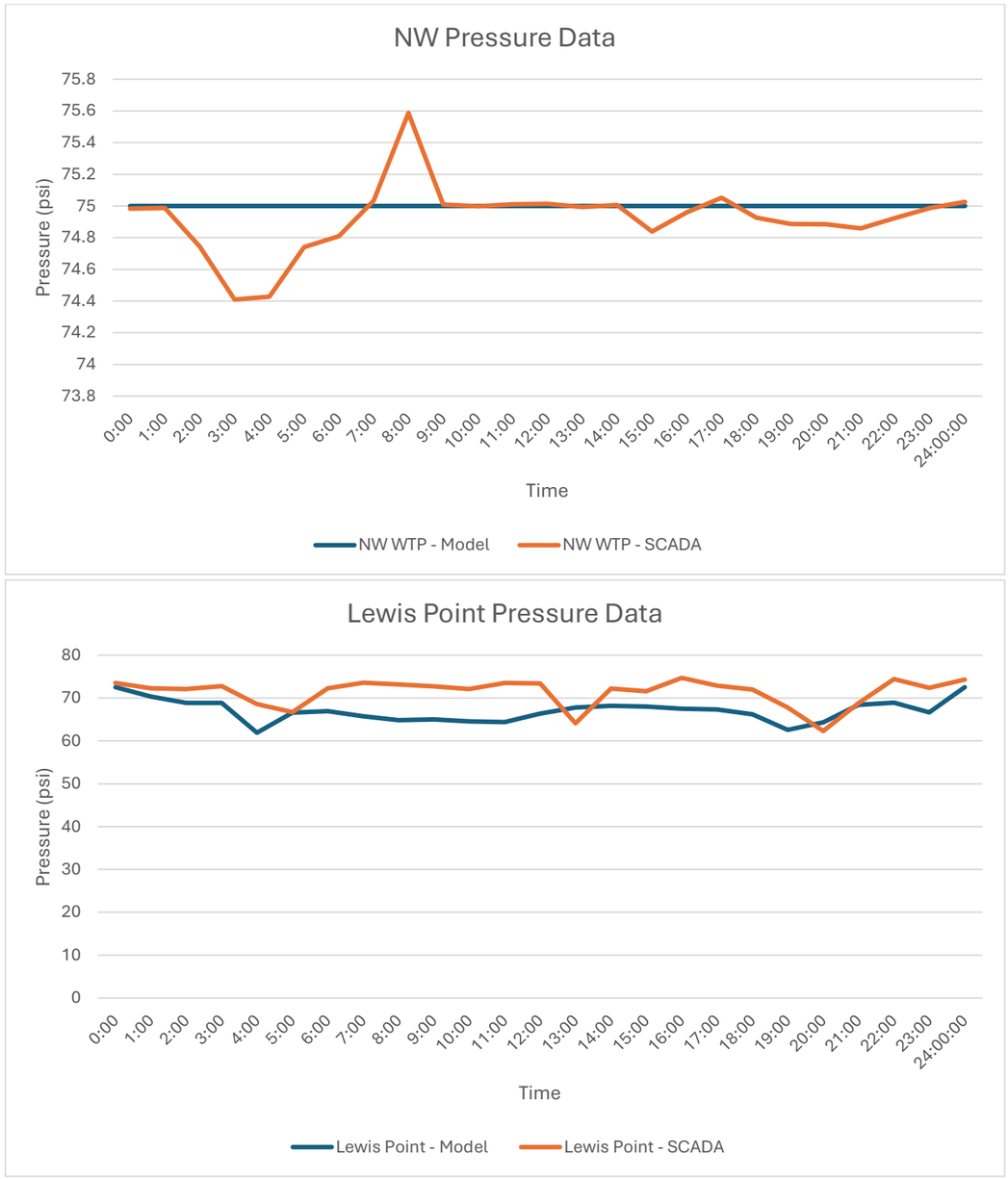
Using the base 2025 model, Jones Edmunds and SJCUD will identify potential constraints, support strategic infrastructure planning, and guide solutions.

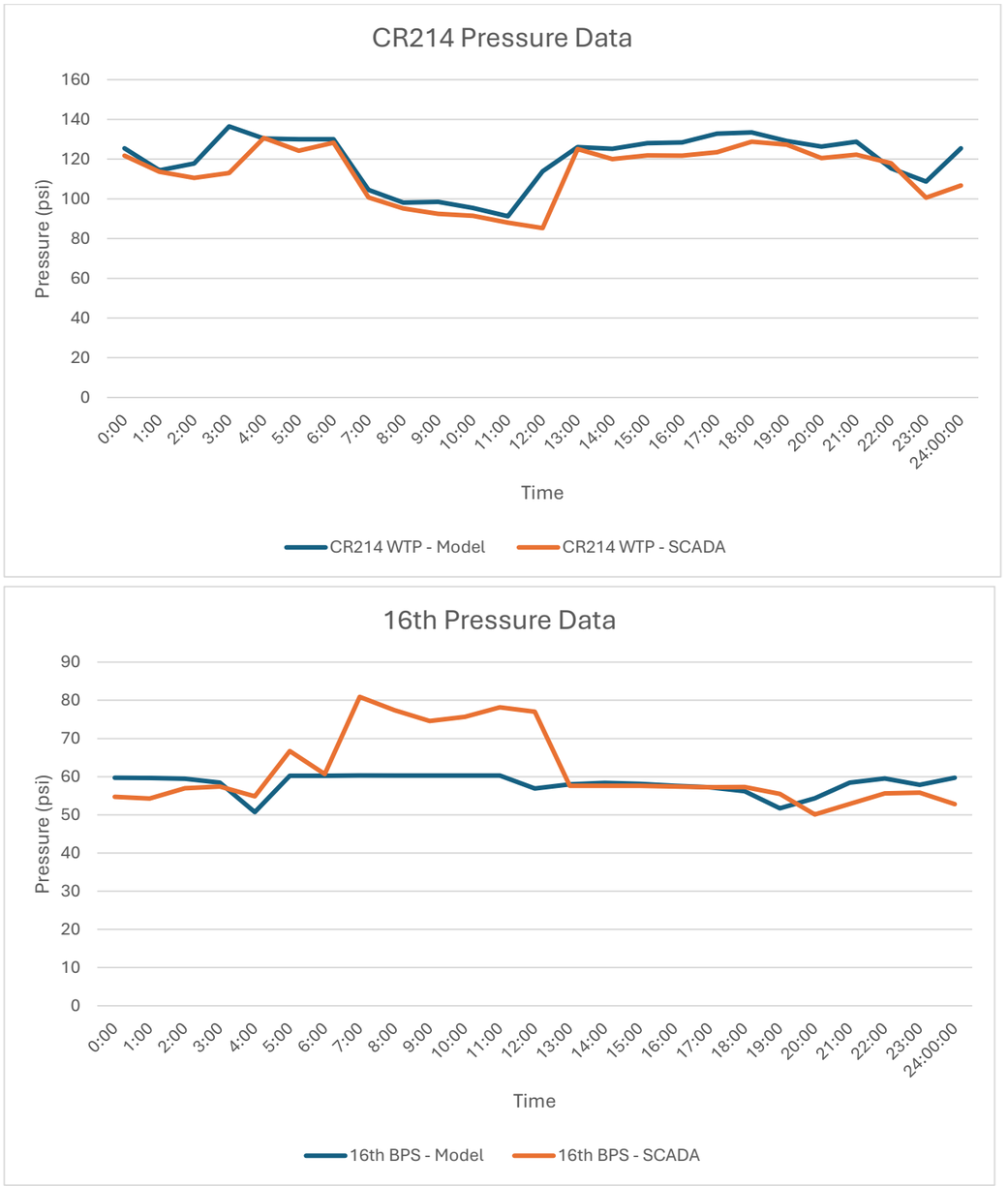
Attachment 1

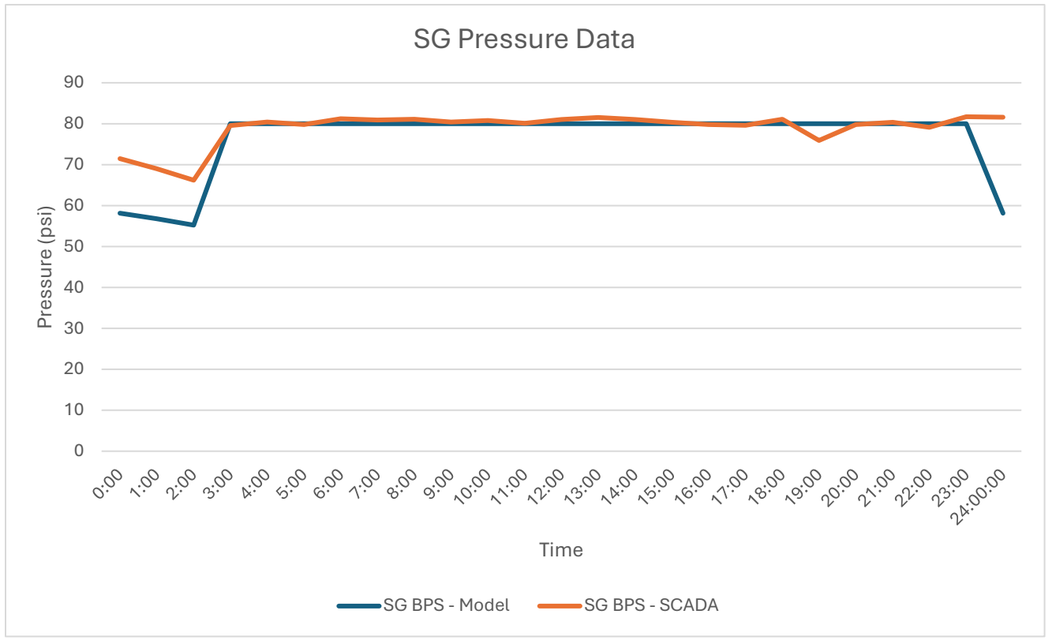
2024 MDD Calibration – SCADA versus Model Results

2024 Maximum Daily Demand Calibration - SCADA vs Model Results

Pressure Data



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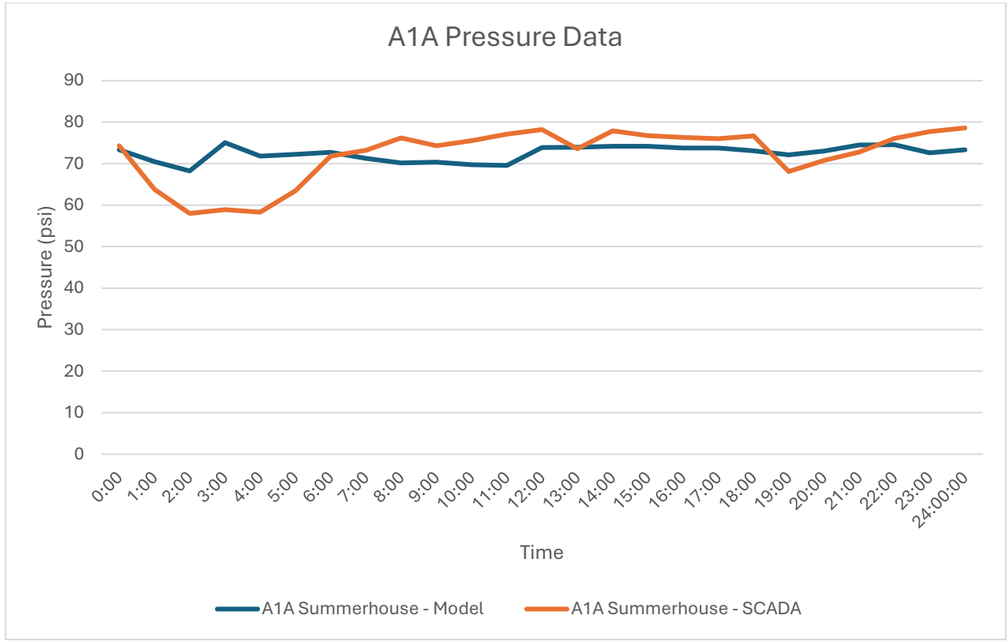
Time
SG BPS - Model
SG BPS - SCADA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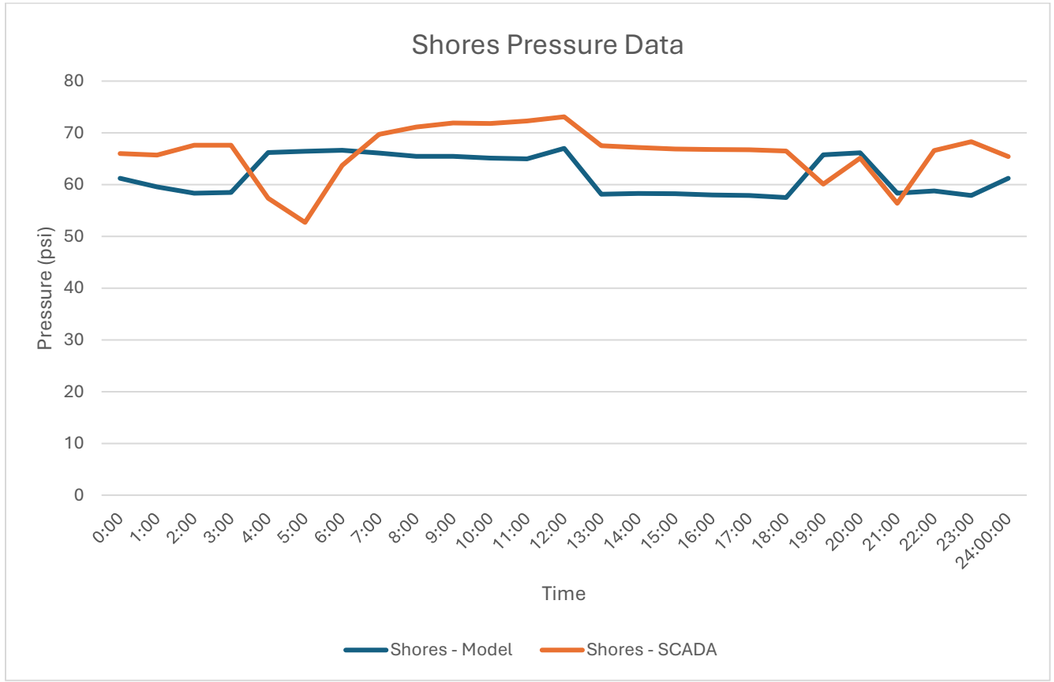
A1A Summerhouse - SCADA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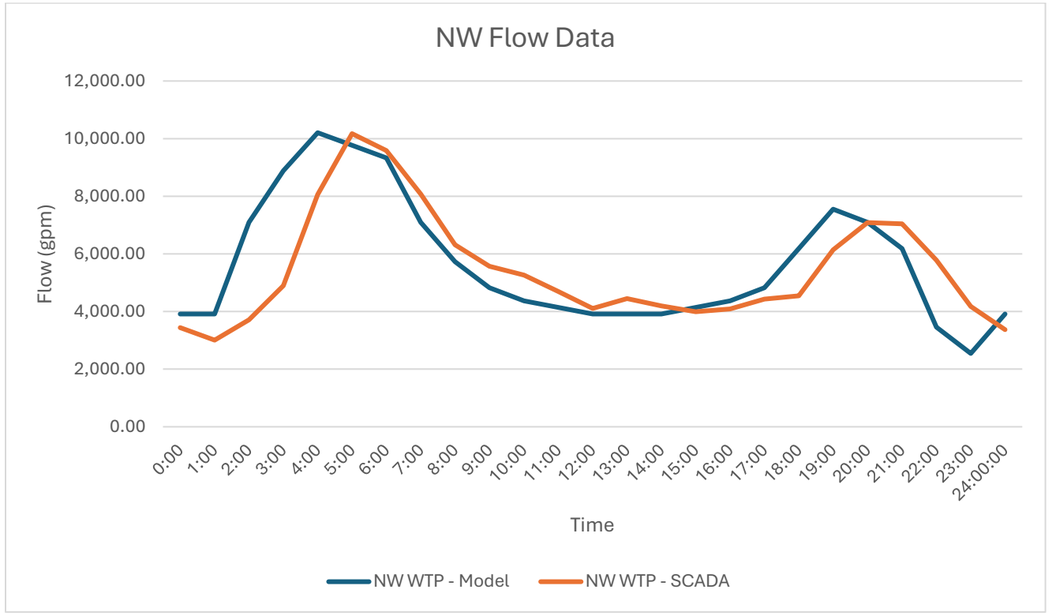
Time
Shores - Model
Shores - SCADA

Flow Data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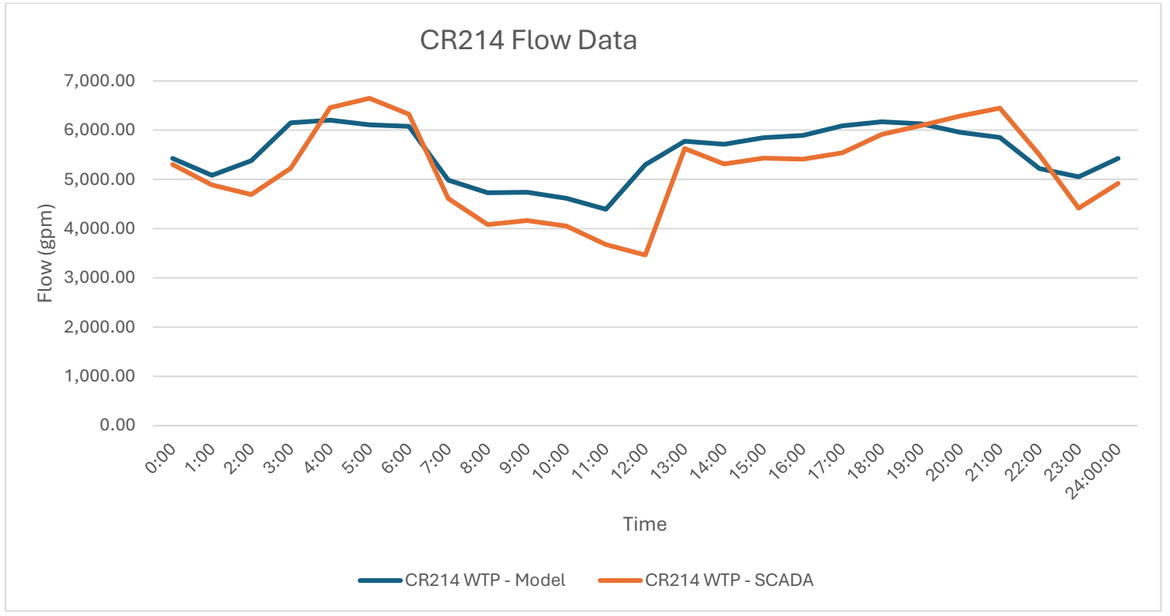
NW WTP - Model
NW WTP - SCADA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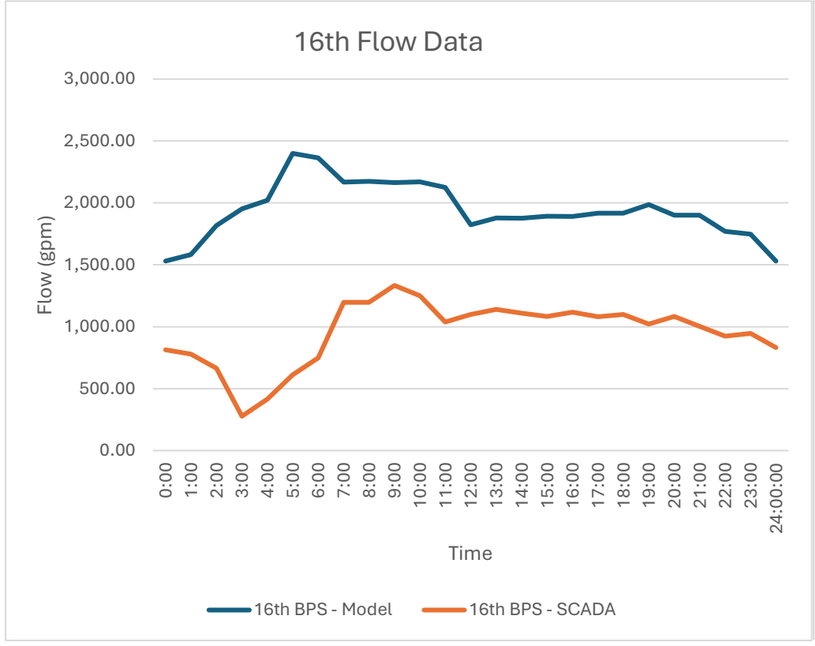
CR214 WTP - Model
CR214 WTP - SCADA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2,000.00
1,500.00
1,000.00
500.00
0.00
Flow (gpm)
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1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
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16:00
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Time
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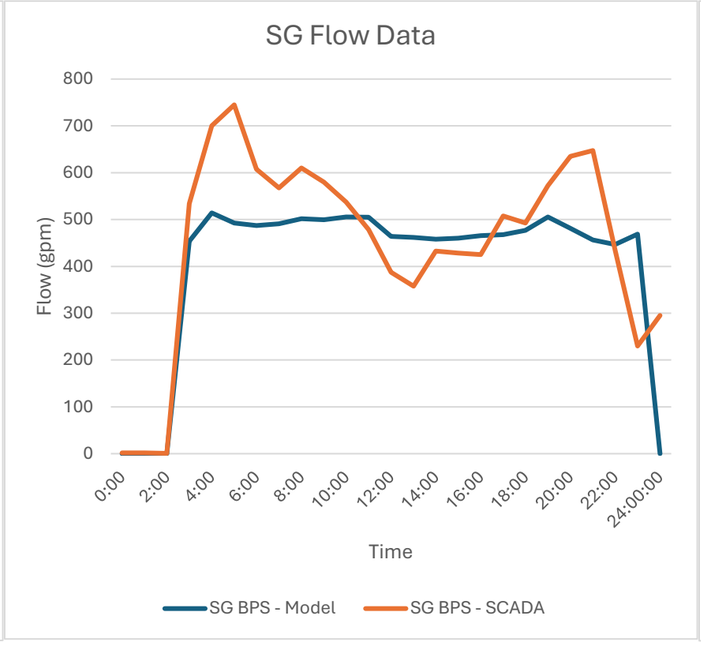
16th BPS - SCADA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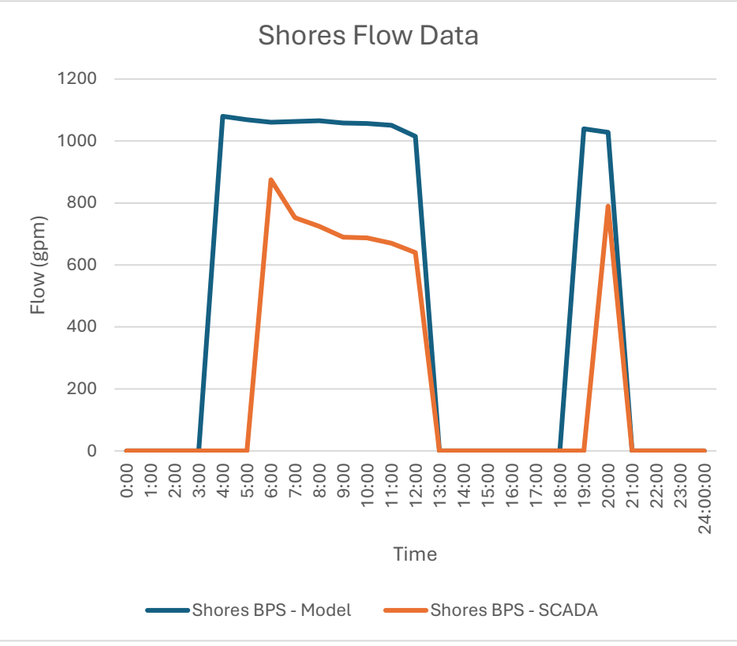
SG BPS - SCADA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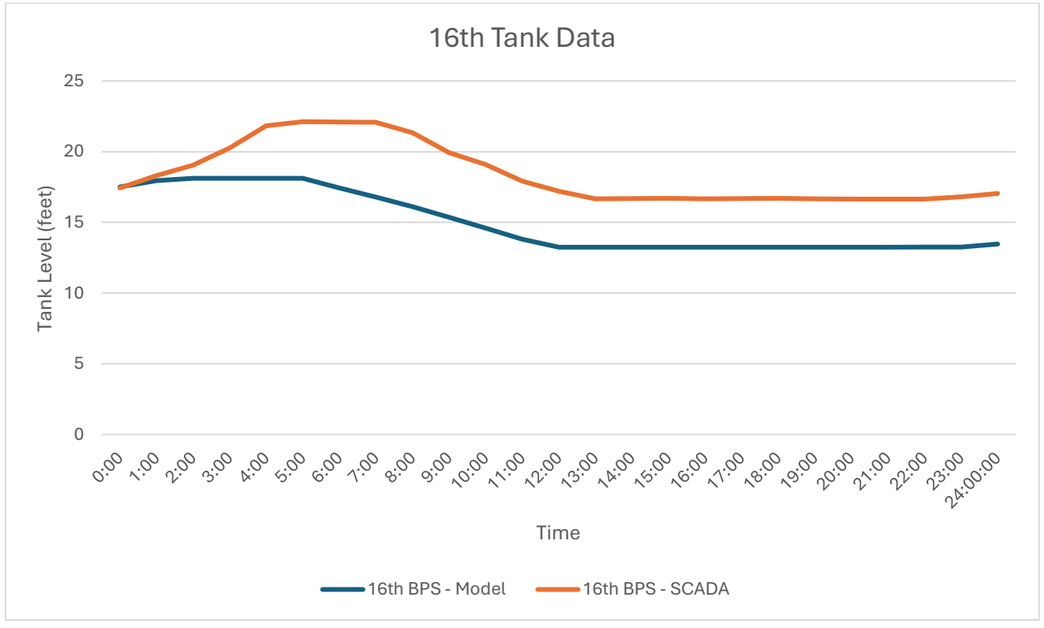
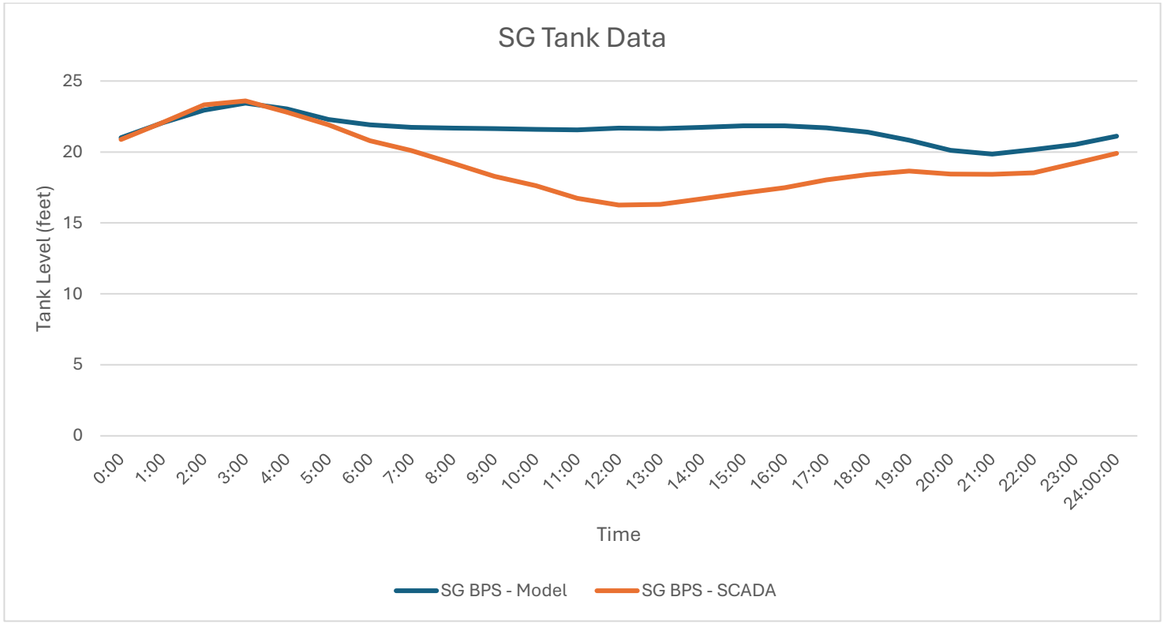
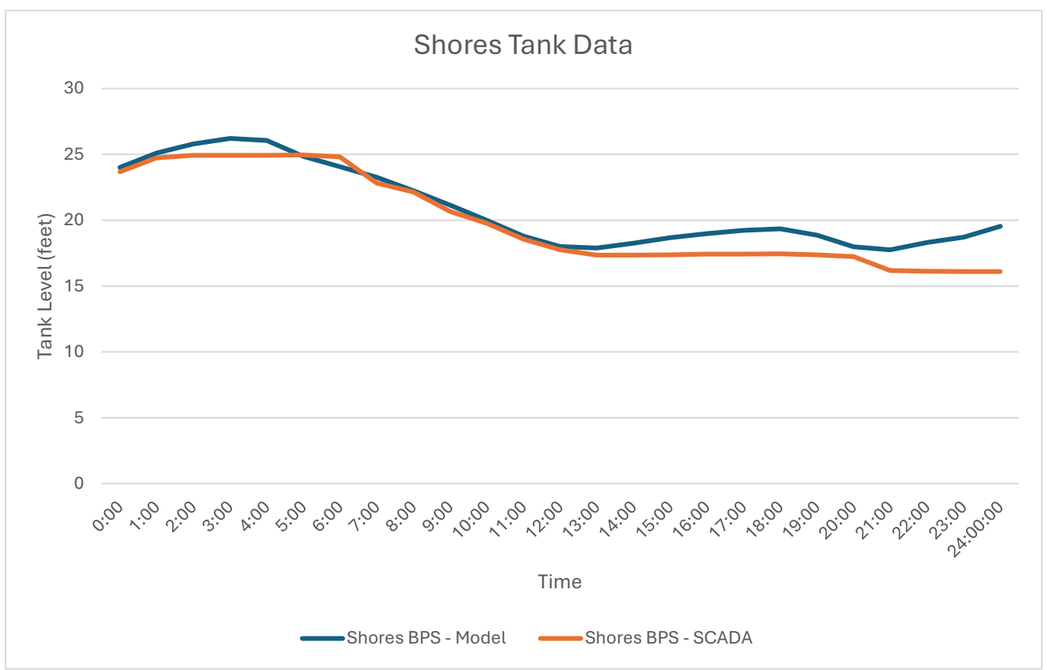
Time
Shores BPS - Model
Shores BPS - SCADA

Tank Level Data







TECHNICAL MEMORANDUM

St. Johns County Water Supply Master Plan

TO: Teri Lane Pinson, PE, PMP

FROM: Brett Goodman, PE; Will Mohrman, EI; John Horvath, PE

DATE: February 6, 2026

SUBJECT: Summary of Alternatives
Jones Edmunds Project No. 19270-224-01

1 INTRODUCTION

This Technical Memorandum (TM) summarizes the alternatives analysis used to develop the recommended infrastructure improvements for the St. Johns County Water Supply Master Plan (WSMP). The analysis was based on the 2024 calibrated hydraulic model updated to reflect 2025 baseline conditions including planned capital improvement projects scheduled to be completed in 2025. Notable inclusions in the baseline conditions were the County Road (CR) 208 Booster Pump Station (BPS), CR214 WTP downstream piping construction, and Cypress Point Water Main extension.

2 ALTERNATIVES ANALYSIS

2.1 INITIAL SCENARIOS

In collaboration with the St. Johns County Utility District (SJCUD) staff, we evaluated eight distinct scenarios described in Table 1 to assess the water supply options available for the region. We designed these scenarios to analyze the implications of having or not having the Anastasia Island (AI) Water Treatment Plant (WTP), Trout Creek (TC) WTP, and proposed West WTP in the overall water supply strategy. During our analysis, we determined that the continued rise in population and water usage will result in the complete depletion of the available water supply by 2030.

Jones Edmunds modeled the eight future scenarios using the 2045 maximum daily demands (MDD) outlined in the Existing and Future Conditions TM. To evaluate water system improvements, the following Level of Service (LOS) criteria were applied:

- Pressure Goals: Maintain optimal pressures between 40–80 psi.
- Pressure Limits: Set at 20–135 psi, with a minimum operational pressure of 40 psi.
    - Pressures below 35 psi only permitted during peak-hour tank filling.
    - Pressures near 130 psi only acceptable immediately downstream of the CR214 WTP during peak-hour demand.

Table 1 Initial Scenarios – 2045 Maximum Day Demands at Major Facilities

Description	Scenario 1 (MGD) NW Expansion + CR214 Expansion + TC/West	Scenario 2 (MGD) NW Expansion + TC/West + AI + CR214 repurpose	Scenario 3 (MGD) NW Expansion + CR214 no upgrade + TC/West	Scenario 4 (MGD) NW Expansion + CR214 no upgrade + TC/West + AI	Scenario 5 (MGD) NW Minor upgrade + CR214 Expansion + TC/West	Scenario 6 (MGD) NW Minor upgrade + CR214 no upgrade + TC/West	Scenario 7 (MGD) NW Minor upgrade + CR214 no upgrade + TC/West + AI	Scenario 8 (MGD) NW Expansion + CR214 Minor Expansion + TC/West
NW	12.00	12.00	12.00	12.00	8.10	8.10	8.10	8.10
CR214	10.01	0.00	7.20	7.20	10.01	7.20	7.20	9.39
AI	0.00	4.47	0.00	4.47	0.00	0.00	4.47	0.00
TC or West	5.33	10.87	8.14	3.67	9.23	12.04	7.57	9.85
Transfer	2.38	7.92	5.19	0.72	2.38	5.19	0.72	3.00
16th	Active	Repurposed	Active	Repurposed	Active	Active	Repurposed	Active
Shores	Active	Active	Active	Active	Active	Active	Active	Active
CR208	Active	Active	Active	Active	Active	Active	Active	Active
SG	Active	Active	Active	Active	Active	Active	Active	Active
Total	**27.3**	**27.3**	**27.3**	**27.3**	**27.3**	**27.3**	**27.3**	**27.3**
NW total	**14.95**	**14.95**	**14.95**	**14.95**	**14.95**	**14.95**	**14.95**	**14.95**
AI total	**4.47**	**4.47**	**4.47**	**4.47**	**4.47**	**4.47**	**4.47**	**4.47**
Mainland total	**7.92**	**7.92**	**7.92**	**7.92**	**7.92**	**7.92**	**7.92**	**7.92**

Notes:

1. Scenarios 1–4 and 8 involve the Northwest (NW) WTP at its planned expansion of 12 MGD.
2. Scenarios 5–7 are repeats that hold NW WTP at 8.1 MGD.
3. Scenario 8 represents an alternative to a minor upgrade to CR214.
4. NW scenarios with 12 MGD represent 18 wells used plus one backup well. NW scenario with 8.1 MGD represent 13 wells used plus one backup well.
5. CR214 scenarios with 10.01 MGD represent 15 wells used plus one backup well. CR214 scenarios with 7.2 MGD represent 11 wells used plus one backup well.

6 Scenario 8 is an alternative to Scenario 6 to reduce the transfer from 5.19 MGD to 3.0 MGD by moving 2.19 MGD from the transfer and TC/West to CR214 and adding four wells to CR214.

- Tank Recovery: Simulated over 72 hours of maximum daily demand.
    - Tanks must provide adequate fire flow storage and maintain at least 2–3 feet of water depth after 3 days of MDD.
- Pipeline Velocity:
    - Pipes with velocities > 6 feet/second identified as bottlenecks.
    - Pipes > 4 feet/second flagged for potential upgrades.
- Pressure Deficiencies: Areas with minimum pressures < 40 psi were documented for analysis and potential upgrades.
- Fire Flow Evaluation: Minimum 1,500 gallons per minute (GPM) available fire flow at 20 psi required near commercial land use.

During meetings with SJCUD staff, Jones Edmunds reviewed preliminary scenarios and identified our key findings:

- The current capacity of the CR214 WTP and its existing and proposed transfer facilities will play a vital role in meeting future water demand.
- If demand continues to grow on AI, the area will face system pressure and tank recovery challenges unless SJCUD upgrades major transmission lines from the Mainland system or constructs a new WTP on AI.
- In the NW, an additional water source from a TC WTP will sufficiently support future growth.
- Lowering transfer volumes could temporarily postpone the need for new water sources in the NW, but this strategy would require the Mainland system to supply more water overall.
- Transferring more than 2 MGD is limited by the current pumping capacity at the CR214 WTP without significant upgrades.
- The timing of the improvements is critical in the short term due to the observed constraint of water demand approaching the limit of system production capacity.

Based on these results, Scenarios 1, 4, 5, and 6 were identified as the most favorable for further analysis. We refined the scenarios to focused on the following solutions:

- **AI solutions**: Construct a new AI WTP and/or major transmission improvements between the CR214 WTP and AI.
- **Northwest solutions**: Expand water production at the NW WTP and develop a new wellfield.
- **Mainland solutions**: Develop additional WTPs (West or AI), increase transfer capacity, and upgrade the CR214 WTP.

2.2 REFINED ALTERNATIVES

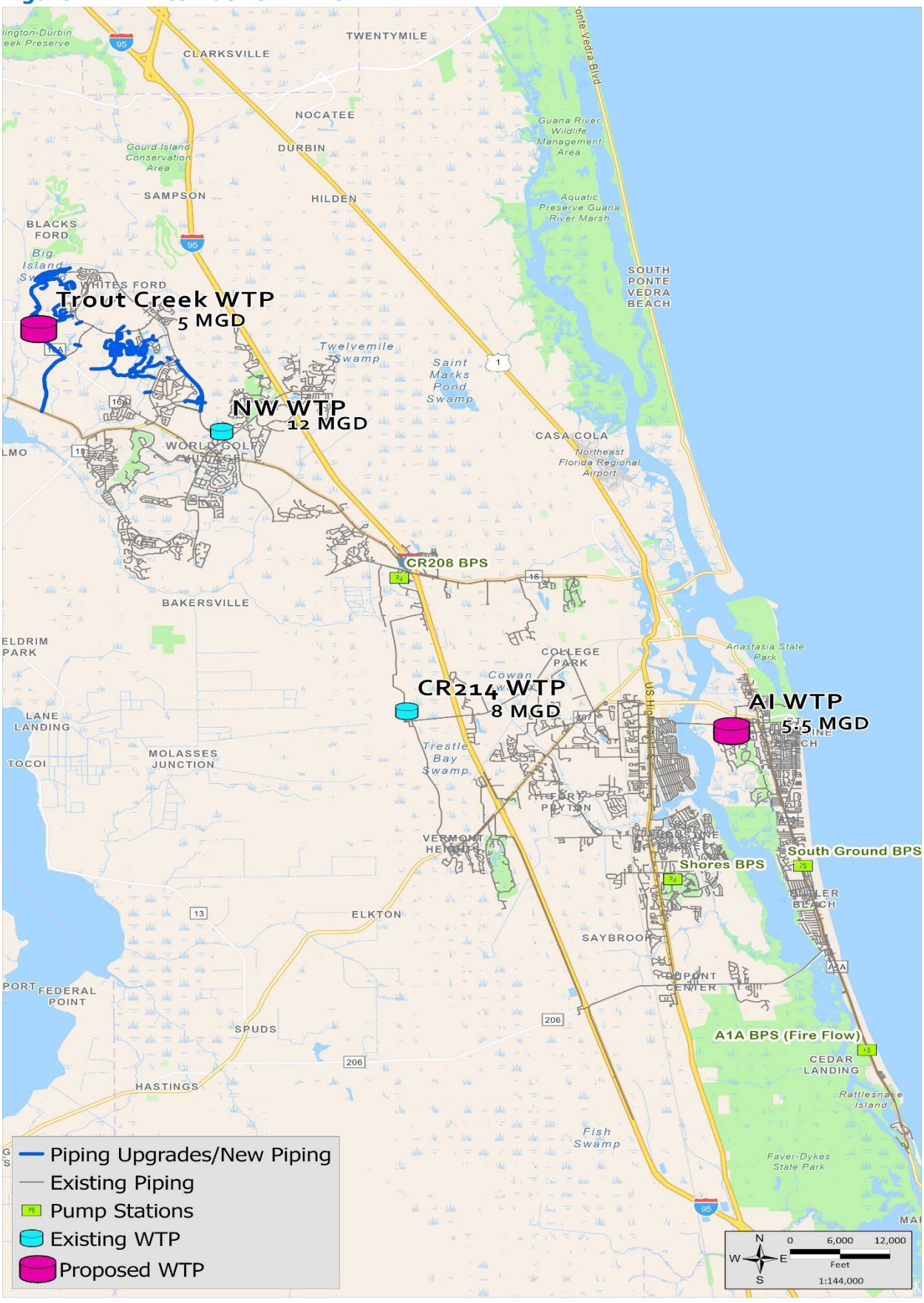
Four alternatives were evaluated to narrow the potential solutions into the recommended plan.

2.2.1 ALTERNATIVE 1 –NEW AI WTP

This alternative proposes to construct of a new WTP on AI. The facility would reduce reliance on transfers from the NW WTP and delay the need for new water supply production. For the Mainland system, separating AI from the CR214 WTP eliminates tank recovery issues without requiring major piping improvements.

Figure 1 illustrates the key upgrades required in Alternative 1. Due to the existing transfer and CR214 WTP capacities paired with increasing demands, Alternative 1 would require an AI WTP to be online by 2030. The feasibility of this option is directly tied to the SJCUD's ability to construct a new AI WTP within this timeframe.

Figure 1 Alternative 1 – New AI WTP



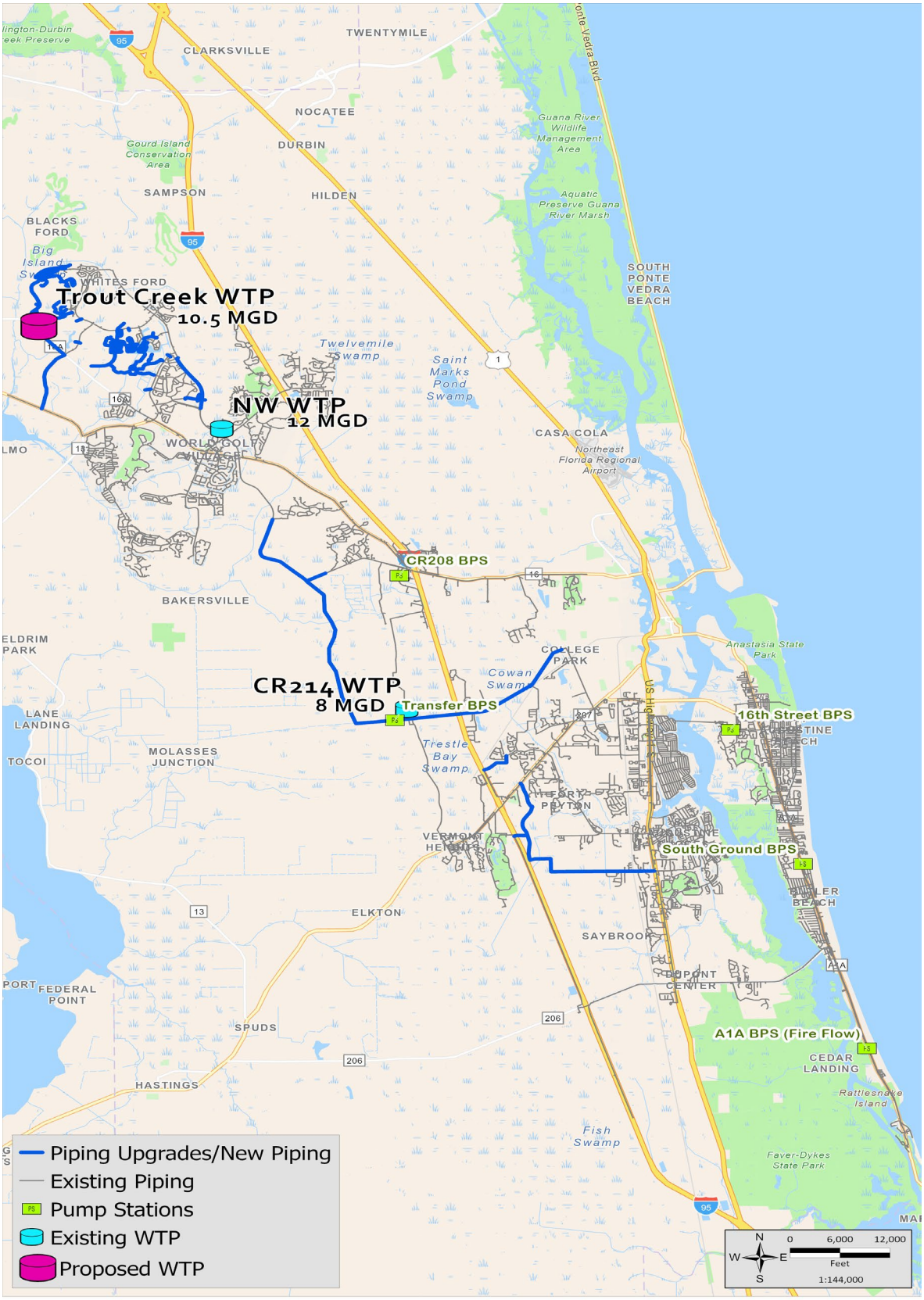
2.2.2 Alternative 2 – Additional NW Transfer Line

This alternative expands transfer capacity from the NW to the Mainland system by constructing new pipelines and a BPS near the CR214 WTP. The additional transfer would be supplied by the NW WTP and the new Trout Creek WTP to meet near-term demands. In addition to the 42,605 linear feet (LF) of 20-inch additional transfer piping, the alternative requires significant transmission system improvements including:

- I-95 to Watson Road Improvements (1,629 LF of 24-inch, 20,343 LF of 20-inch, and 8,290 LF of 16-inch piping).
- CR214 WTP to Holmes Boulevard Transmission Upgrade (22,803 LF of 16-inch piping replaced with 24-inch piping).
- Marketplace Drive to Quesada Road (4,010 LF of 10-inch piping).

Figure 2 illustrates the key upgrades required in Alternative 2. Due to the existing transfer and CR214 WTP capacities paired with increasing demands, Alternative 2 would require an additional transfer line to be online by 2030. The feasibility of this option is directly tied to SJCUD's ability to construct the new WTP, wellfield, transmission main and accompanying transfer BPS within this timeframe. An alternative to this option if construction is delayed is to increase the existing transfer capacity through pipe upsizing between the CR208 BPS and the CR214 WTP.

Figure 2 Alternative 2 – Additional NW Transfer Line

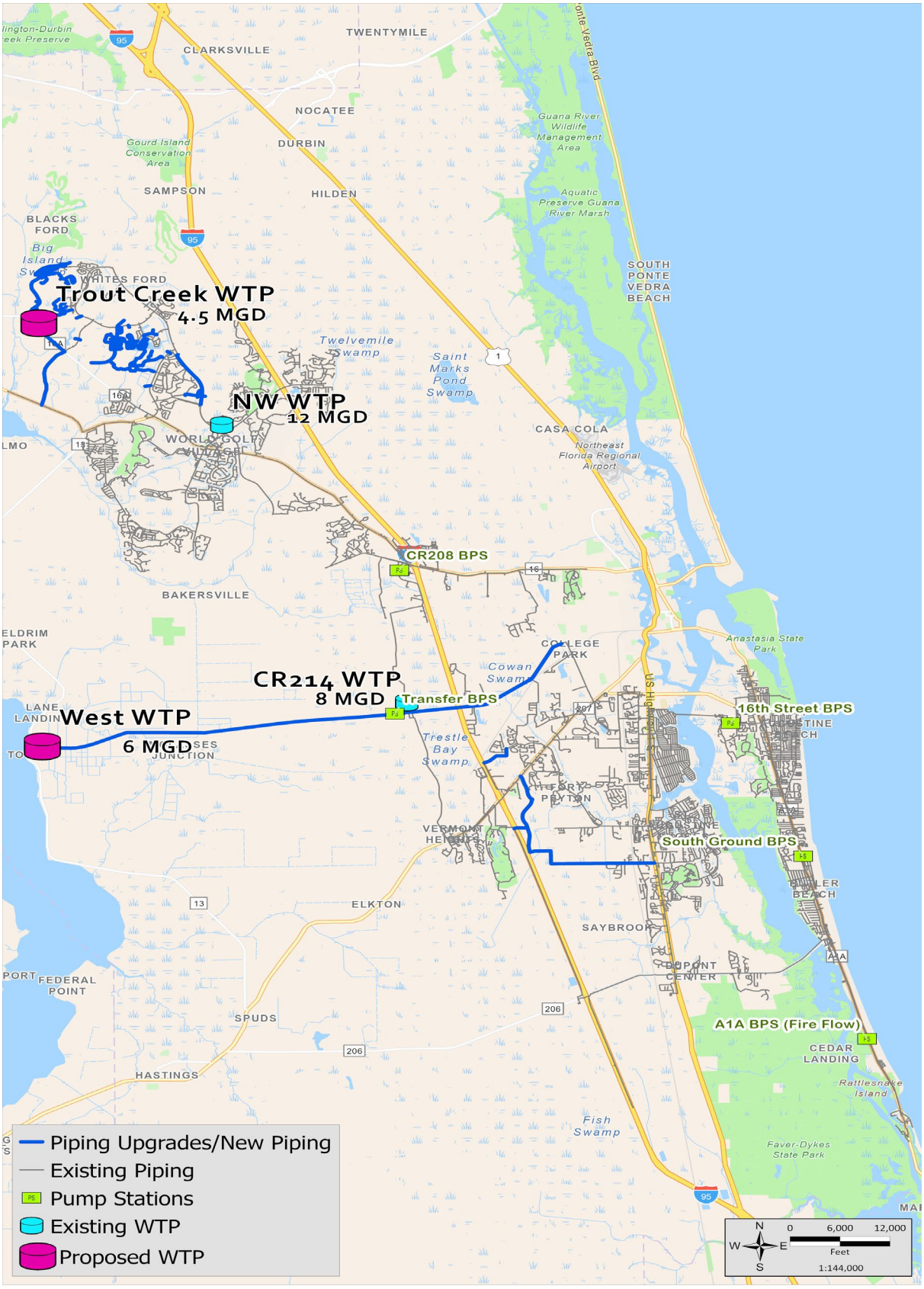


2.2.3 Alternative 3 – New West WTP

This alternative adds new supply capacity by constructing a West WTP. The facility would provide water to the Mainland and AI systems, reducing reliance on the CR214 WTP. However, a transfer BPS and significant piping improvements downstream of CR214 as required in Alternative 2 would still be required. In addition to the piping improvements downstream of CR214, Alternative 3 requires piping to connect from the West WTP to the new transfer BPS near CR214 (approximated to be 43,991 LF of 20-inch piping).

Figure 3 illustrates the key upgrades required in Alternative 3. Due to the existing transfer and CR214 WTP capacities paired with increasing demands, Alternative 3 would require a West WTP to be online by 2030. The feasibility of this option is directly tied to SJCUD's ability to construct a new West WTP within this timeframe.

Figure 3 Alternative 3 – New West WTP

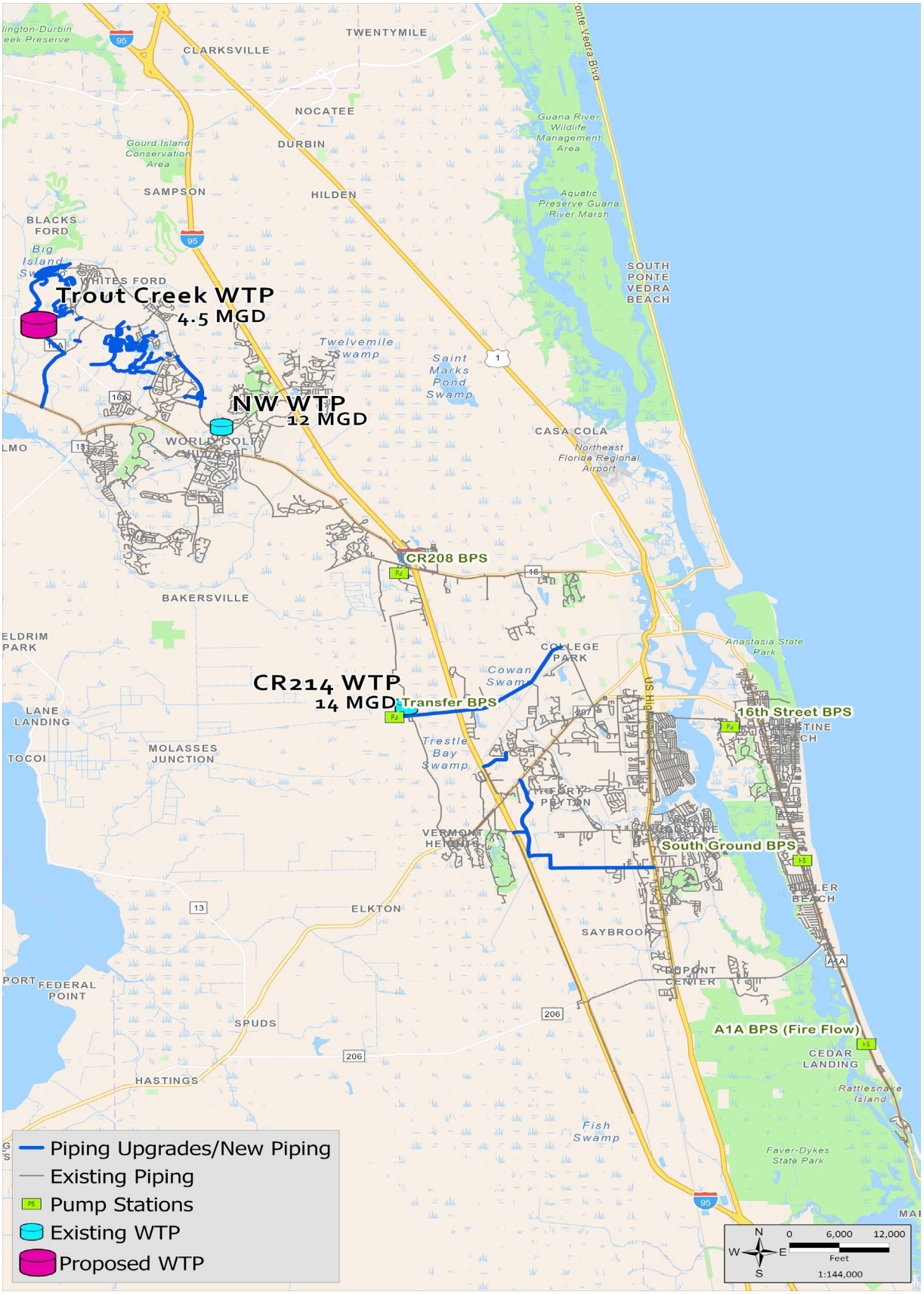


2.2.4 ALTERNATIVE 4 – EXPAND CR214 WTP

This alternative increases production at the CR214 WTP by adding wells and expanding treatment capacity. Although it enhances supply at an existing site, significant piping improvements downstream of CR214 as required in Alternative 2 would still be required along with an investment in a wellfield with a declining yield.

Figure 4 illustrates the key upgrades required in Alternative 4. Due to the existing transfer and CR214 WTP capacities paired with increasing demands, Alternative 4 would require CR214 WTP production capacity upgrades to be completed by 2030. The feasibility of this option is directly tied to the SJCUD's ability to complete WTP upgrades within this timeframe.

Figure 4 Alternative 4 – Expand CR214 WTP



2.2.5 ASSUMPTIONS

2.2.5.1 Water Treatment Plant and Transfer Capacity

Based on discussions with SJCUD staff, Jones Edmunds developed the alternatives to all have the same total 2045 production capacities of 30.5 MGD. The total capacity represents a 90-percent demand-to-capacity ratio by the end of the planning horizon. Table 2 and Table 3 summarize the plant and transfer capacities used in the alternatives analysis.

Table 2 Current Assumed Capacities

Facility / Item	Capacity / Yield (MDD)	Operational Details
NW WTP	12 MGD	Built out to maximum day flow capacity.
Existing Transfer Line Capacity	2024: 1.0 MGD 2025: 1.7 MGD Future: 2.0 MGD	Increased transfer capacity across time horizons.
Tillman Ridge/ CR214 WTP	Wellfield yield: 7.2 MGD (MDD) Max capacity: 8 MGD	Operational blend: 50/50 (reverse osmosis (RO)/raw groundwater). RO concentrate discharged to surface water.

Table 3 Future Alternative Capacities

Alternative	Plant and Corresponding 2045 Capacity
Alternative 1 New AI WTP	NW WTP: 12 MGD TC WTP: 5 MGD CR214 WTP: 8 MGD AI WTP: 5.5 MGD
Alternative 2 Additional NW Transfer	NW WTP: 12 MGD TC WTP: 10.5 MGD CR214 WTP: 8 MGD
Alternative 3 New West WTP	NW WTP: 12 MGD TC WTP: 4.5 MGD CR214 WTP: 8 MGD West WTP: 6 MGD
Alternative 4 Expand CR214 WTP	NW WTP: 12 MGD TC WTP: 4.5 MGD CR214 WTP: 14 MGD

Note: All alternatives assume surface water discharge of concentrate.

2.2.5.2 Wellfield Pumping Rate

To support the proposed treatment capacities, wellfield development was modeled with the assumptions depicted in Table 4.

Table 4 Wellfield Pumping Rates

Facility	Existing Wells	New Well Average Pumping Rate (MGD)	Average Pumping Rate (GPM)	RO Supply Factor
NW	Six existing and one recently completed	0.45	310	—
CR214	Eight existing	0.60	415	1.25 × ADF
TC	—	0.60	415	—
West	—	0.60	415	1.25 × ADF
AI	—	0.40	278	1.25 × ADF

The selected well pumping rates were derived from a combination of upwelling analyses and current wellfield production data presented in the Existing and Future Conditions TM. Upwelling evaluations were conducted to ensure that proposed extraction rates would not induce excessive vertical flow from deeper aquifer zones, which could compromise water quality or sustainability. These analyses helped define safe operational thresholds for each location, particularly in areas with known confining layers or variable transmissivity.

Additionally, historical production data from existing wells informed the average pumping rates. For example, the CR214 wells have consistently produced nearly 0.60 MGD, validating this rate as both achievable and sustainable. In contrast, the NW wells have shown slightly lower yields, supporting the selection of 0.45 MGD for new wells in that region. The AI wells were conservatively rated at 0.40 MGD due to limited aquifer thickness and higher susceptibility to saltwater intrusion.

The 1.25 × ADF multiplier was applied to the CR214, West, and AI wellfields to account for RO system concentrate production.

2.2.6 Impacts from 7.2-MGD Flow Limitation at the CR214 WTP

The CR214 WTP currently operates with a preferred MDD of 7.2 MGD, which presents a constraint in meeting future demands across the service area. The following summarizes how this flow limitation affects each proposed alternative.

2.2.6.1 Alternative 1 – New AI WTP

This alternative is not impacted by the production limitations at the CR214 WTP because it reduces demand on the CR214 WTP by introducing a new WTP on AI.

2.2.6.2 Alternative 2 – Additional NW Transfer Line

This alternative relies on expanding transfer capacity from the NW, particularly through the TC corridor. With limited output from the CR214 WTP, greater demand is placed on the

production from the NW and TC WTPs, which would be transferred to the Mainland system through the existing and new additional transfer lines.

2.2.6.3 Alternative 3 – New West WTP

By shifting supply to the west portion of the system, this alternative reduces reliance on the CR214 WTP. It increases production by adding the proposed West WTP and helps balance system demands. However, it does not directly resolve the flow constraint at the CR214 WTP without additional upgrades.

2.2.6.4 Alternative 4 – Expand CR214 WTP

This alternative directly addresses the flow limitation by expanding the CR214 WTP's production capacity. It includes additional wells and a new RO facility, enabling the CR214 WTP to meet future demands more effectively and enhancing overall system resilience.

2.2.7 Alternative Selection

Table 5 compares the four alternatives by summarizing the key benefits, challenges, and timing considerations for each option and provides a quick reference to support decision-making.

Key planning considerations identified from the alternatives analysis include:

- Transfer capacity emerges as an urgent and significant system constraint.
- No matter with is the preferred option, the NW WTP must reach its full build-out capacity of 12 MGD (MDD) by 2045 to meet demands.
- Capacity expansion at the TC WTP will also be necessary to support future requirements.
- Approximately 95 percent of needed improvements must occur before 2035, concentrating most of the investment at the beginning of the planning period.

Groundwater production and water quality at the TC WTP are especially critical to the success of the near-term plan because this source will play a central role in meeting demand within the next decade. Groundwater availability, quantity, and quality in the areas west and northwest of the CR214 WTP will be equally important in shaping the County's strategy after 2030. As Table 5 shows, each alternative offers distinct benefits and challenges.

Table 5 Summary of Alternatives

Alternative	Key Benefits	Key Challenges	Timing/Critical Needs
1 New AI WTP	▪ Reduces demand and operating pressures at the CR214 WTP. ▪ Eliminates tank recovery issues on AI. ▪ Avoids major piping upgrades.	▪ Coastal location introduces long-term vulnerability. ▪ New RO plant with brine disposal.	▪ Needed by 2030
2 Additional NW Transfer Line	▪ Increases transfer capacity with new pipeline and BPS. ▪ Provides the highest potential for best ground water quality.	▪ Requires major downstream piping improvements. ▪ Increases reliance on NW and TC WTPs' production. ▪ Requires a new transfer line with the blending BPS near CR214.	▪ Needed by 2030. ▪ TC WTP production is required by 2030.
3 New West WTP	▪ Provides new supply to Mainland/AI. ▪ Reduces demand on the CR214 WTP. ▪ Provides operational flexibility with existing transfer.	▪ Requires significant piping and BPS upgrades. ▪ Requires a new RO plant with brine disposal. ▪ Requires a new transfer line with the blending BPS near the CR214 WTP.	▪ Need the West WTP to be complete by 2030. ▪ Defers need for TC WTP until 2035.
4 Expand CR214 WTP	▪ Increases supply from existing facility. ▪ Uses current transfer capacity. ▪ Provides operational flexibility with existing 2-MGD transfer.	▪ Requires additional wells in declining wellfield. ▪ Requires significant piping upgrades. ▪ Has a high capital cost. ▪ Requires a new RO plant with brine disposal.	▪ Need the CR214 WTP to be expanded by 2030. ▪ Defers need for TC WTP until 2035

2.2.7.1 Cost Ranking and Sensitivity

The cost evaluation compared the four alternatives using screening-level estimates, which are shown in Table 6. Attachment A provides detailed cost breakdown for each alternative.

Table 6 Screening-Level Estimates of the Four Alternatives

Items	Alternative 1 (New AI WTP)	Alternative 2 (Additional NW Transfer)	Alternative 3 (New West WTP)	Alternative 4 (Expand CR214 WTP)
WTPs	$151,625,000	$43,750,000	$176,250,000	$168,750,000
Wells	$106,250,000	$84,375,000	$93,750,000	$87,500,000
Major Piping	–	$90,406,700	$91,714,500	$50,464,500
Booster Stations	–	$18,125,000	$15,625,000	$3,125,000
Sum	$257,875,000	$236,656,700	$377,339,500	$309,839,500

Note: All costs are shown in 2025 dollars. The estimates are AACE 18R-97 Class 5 screening EOPCC with an accuracy of -50 to +100%.

The following are the significant assumptions incorporated into the initial cost estimates:

- The number of wells depends on the assumed well capacities needed to sustain water quality.
- Treatment plant costs are incurred at full capacity when needed over the planning horizon.
- The AI WTP and West WTP are assumed to be RO facilities (wells produce 1.25x demand for concentrate production).
- Concentrate disposal is assumed to be surface water discharge.
- 25-percent contingency included in costs.

Alternatives 1 and 2 are the two lowest-cost alternatives based on the initial cost analysis and show the tradeoff between developing a new WTP on AI versus making significant upgrades to the transmission and distribution from the CR214 WTP. Alternatives 3 and 4 are more expensive because they include significant new WTP investments in addition to large transmission and distribution improvements.

A sensitivity analysis focused on well production rates and pipeline unit costs to understand the implications of these items to the cost rankings. Table 7 summarizes the results of the sensitivity analysis. Raising well production rates by 50 percent allows alternatives, such as Alternative 2 that depend more on new groundwater sources, to perform better because they require fewer wells to reach the same capacity. If well production rates remain close to baseline assumptions, options that include new treatment facilities or use existing infrastructure more effectively continue to have a comparative advantage.

Table 7 Cost-Sensitivity Summary of the Four Alternatives

Alternative	Original Total Cost	Well Cost Reduction[1]	Pipeline Cost Reduction[2]	Revised Total Cost
Alt 1 (New AI WTP)	$257,875,000	$43,750,000	$0	$214,125,000
Alt 2 (Additional NW Transfer)	$236,656,688	$37,500,000	$45,203,344	$153,953,344
Alt 3 (New West WTP)	$377,339,500	$37,500,000	$45,857,250	$293,982,250
Alt 4 (Expand CR214 WTP)	$309,839,500	$25,000,000	$25,232,250	$259,607,250

Note: Costs are shown in 2025 dollars. The estimates are AACE 18R-97 Class 5 screening EOPCC with an accuracy of -50 to +100%.

[1] Well production rates increased by 50%.

[2] Pipeline costs decreased by 50%.

Similarly, reducing pipeline unit costs by 50 percent significantly improved the performance of alternatives with major transmission components, such as Alternatives 2, 3, and 4. These options rely on extensive new piping to deliver water across the system, and cost reductions in this area narrowed the overall difference between alternatives.

As Table 7 shows, the relative cost-effectiveness of the alternatives strongly depends on assumptions regarding well productivity and pipeline costs. Alternative 2, which is most dependent on major transmission upgrades, becomes considerably more favorable under higher well yields and lower pipeline costs. Alternatives 3 and 4 also improve with reduced pipeline costs but remain constrained by the need for significant transmission investments. Alternative 1 is least affected by these variables because its cost is dominated by the capital investment for a new treatment facility.

2.2.7.2 Implementation Risk and Non-Cost Factors Screening

As part of the alternative's evaluation, the project team held a workshop to develop an additional screening method that included building a risk register to identify potential risks that could affect the implementation of each alternative. This method provided a structured framework to capture cost-related risks by implementing each alternative. Attachment B provides the workshop presentation.

The risk register began with the identification of potential constraints and drivers (C&Ds) that could influence project feasibility. These included concentrate disposal, groundwater withdrawal impacts, land acquisition, impact to operations, and resiliency.

For each identified risk, the team defined potential mitigation measures and then assigned a screening-level estimate of the potential cost magnitude if mitigation were required. This allowed for the quantification of risk exposure in terms of potential cost impacts, providing a way to compare alternatives not only on their base cost but also on their potential variability, contingency, or unknowns.

Table 8 displays the risk register.

Table 8 Risk Register

Constraint and Driver	Location	Description	Description of Potential Remedy	Alt 1	Alt 2	Alt 3	Alt 4
Concentrate Disposal	AI WTP	Surface water discharge is not permittable in the future.	Implement deep well injection.	$40	$0	$0	$0
	West WTP			$0	$0	$40	$0
	CR214 WTP			$40	$40	$40	$40
Groundwater Withdrawals	AI WTP	Private wells near the potential WTP would likely need mitigation of the impacts from a new wellfield.	Mitigate private wells by extending drop pipes and installing new pumping equipment.	$4	$0	$0	$0
	All	Upper Floridan withdrawals will increase MFL impacts to Keystone Heights lakes and the Santa Fe and Ichetucknee MFLs.	Buy into a regional project with other utilities.	$13	$10	$13	$10
	TC WTP	Private wells near the potential WTP would likely need mitigation of the impacts from a new wellfield.	Mitigate private wells by extending drop pipes and installing new pumping equipment.	$1	$1	$1	$1
Land Acquisition	All	Land availability for increased number of wells.	Use additional right-of-way and acquire additional land for wells and utility route from wells to plant.	$11	$7	$11	$8
Operations	CR214 WTP	Higher pressures in Mainland/ AI system require additional local improvements.	Install local improvements.	$1	$1	$1	$1
Resilience/ Reliability	CR214 WTP	Existing transfer is a single point of failure.	Build a redundant transfer line.	$22	$0	$0	$0
	CR214 WTP	Relies on a single river crossing.	Install a new river crossing.	$0	$15	$15	$15
		Total ($M)		**$133**	**$74**	**$120**	**$75**

Note: All costs are shown in 2025 dollars (in millions).

In addition to cost impacts, Jones Edmunds considered non-cost factors by developing a parallel scoring framework. This dual approach—quantifying cost risks and qualitatively scoring non-cost drivers—provided a more comprehensive idea of how each alternative might perform over the planning horizon. For example, alternatives with higher capital costs but lower mitigation costs and more favorable water quality or resilience characteristics could score better when both cost and risk were considered together.

Jones Edmunds ranked each factor according to its relative importance in selecting a water supply alternative and then scored each alternative against that factor on a scale of 0, 1, or 2 with 2 being the best. The product of the factor weight and the assigned score produced a weighted score for each alternative. The project team evaluated each alternative against the following non-cost factors:

- **Operational Benefits**: The ability to reduce operational pressures and offer lower operational costs.
- **Population Change:** The expected growth or decline in population that affects water demand, system sizing, and long-term planning for water supply infrastructure.
- **Funding/Bonding:** The ability to secure financing through bonds, grants, or other funding mechanisms, which influences project feasibility and timing.
- **Constructability:** The practicality of building a project considering site conditions, available technology, logistics, and potential challenges during construction.
- **Staffing:** The availability of qualified personnel to operate, maintain, and manage new or expanded facilities, including training requirements.
- **Vulnerability:** The degree to which the system is exposed to risks such as natural disasters, climate change, infrastructure failures, or cybersecurity threats.
- **Water Quality:** The capability of a project or facility to maintain or improve treated water quality to meet health standards and customer expectations.
- **Regulatory Risk:** The potential for changes in laws, permits, or compliance requirements that could affect the design, operation, or approval of a project.
- **Future Water Supply:** The ability of the system to sustainably meet long-term water demands through reliable sources, including considerations for drought, aquifer yield, and alternative supplies.

Table 9 summarizes the result of the project teams evaluation of non-cost factors.

Table 9 Non-Cost Factor Scoring

	Rank of Importance	Alternative				Alternative			
		1	2	3	4	1	2	3	4
		Raw				Weighted			
Operational Benefits	4	1	1	0.5	0.5	4	4	2	2
Population Change	4	2	1	1	1	8	4	4	4
Funding/Bonding	3	1.5	2	0	0	4.5	6	0	0
Constructability	1	0.5	2	0.5	1	0.5	2	0.5	1
Staffing	8	0	0.5	0	0.5	0	4	0	4
Vulnerability	8	0	2	1	2	0	16	8	16
Water Quality	2	1	2	1	0.5	2	4	2	1
Regulatory Risk	6	2	1	2	2	12	6	12	12
Future Water Supply	6	1	2	2	1	6	12	12	6
	Totals	**9**	**13.5**	**8**	**8.5**	**37**	**58**	**40.5**	**46**

Note: The most preferred alternative is the one with the highest score.

From an operational perspective, Alternative 1 (AI WTP) provided the greatest benefit to system pressures by reducing operating pressures and eliminating tank recovery issues in the Mainland system. Alternatives 2, 3, and 4 rely more heavily on transmission upgrades, which offer less direct hydraulic relief. In terms of staffing and O&M, traditional groundwater expansions such as Alternative 2 are less complex and require fewer new operators, whereas RO-based facilities (Alternatives 1, 3, and 4) introduce higher operational complexity but provide better treatment reliability.

Constructability and schedule feasibility were also critical. Alternative 2 was identified as the most achievable within the near-term window, given its reliance on pipeline and booster improvements rather than entirely new treatment facilities. Alternatives 1, 3, and 4 require longer timelines for permitting, wellfield development, and treatment plant construction, pushing their earliest feasible delivery dates beyond 2030.

With respect to resilience and vulnerability, Alternatives 1 and 3 carry greater long-term risks due to their coastal or river-adjacent siting, making them more susceptible to climate change, flooding, and storm surge. Alternative 4 is vulnerable due to reliance on a degrading wellfield at CR214. Alternative 2, while less exposed to environmental risks, heavily depends on the performance and water quality of the NW and TC wellfields.

In terms of adaptability and future opportunities, Alternatives 3 and 4 are better positioned to support eventual integration of new water sources, such as surface water or direct potable reuse. Alternative 2 provides strong near-term adaptability by leveraging fresh groundwater sources but may require further investment to integrate new treatment technologies in the long term.

Finally, financial considerations factored into the evaluation. Alternatives with higher overall capital costs, such as Alternatives 3 and 4, would place greater demands on bonding and rate structures. Alternatives 1 and 2 fit better within the current financial plan, offering lower costs and reduced impacts on funding capacity.

Taken together, the non-cost factor evaluation underscored that Alternative 1 provides significant operational benefits but introduces coastal risk and funding challenges. Alternatives 3 and 4 extend long-term adaptability but face cost, siting, and operational challenges. These trade-offs highlight the importance of balancing immediate system needs with flexibility, adaptability and resilience for future conditions. Alternative 2 offers the lowest cost and constructible near-term option while ranking the best on potential risk and non-cost factors, which makes it the basis of the recommended water supply plan.

Table 10 provides the final ranking of the alternatives.

Table 10 Final Ranking of the Four Alternatives

Alternative	Original Total Cost (Rank)	Revised Total Cost (Rank)	Potential Risk (Rank)	Initial Non-Cost Rank
Alt 1 – New AI WTP	$258 (2)	$214 (2)	$132 (4)	3
Alt 2 – Additional NW Transfer	$237 (1)	$153 (1)	$78 (1)	1
Alt 3 – New West WTP	$377 (4)	$294 (4)	$124 (3)	4
Alt 4 – Expand CR214 WTP	$310 (3)	$260 (3)	$79 (2)	2

Note: All costs are in 2025 dollars (in millions).

3 RECOMMENDED PLAN

The alternatives analysis highlights several key conclusions that inform both the short-term plan and long-term strategy for meeting future water supply needs:

- Developing additional fresh groundwater in the NW is necessary and preferable from a cost perspective.
- Large near-term transmission improvements are unavoidable to address immediate system constraints, particularly the transfer limitations at the CR214 WTP and the pressure and tank recovery issues on AI.
- The majority of investment will therefore need to occur within the next decade, with nearly 95 percent of improvements required before 2035.

Looking beyond the near term, groundwater production rates and water quality will remain the most significant uncertainties. Adaptive planning will be essential, ensuring that short-term investments in facilities such as the TC WTP and NW WTP transfers are paired with flexibility to incorporate future sources, whether through expanded RO facilities, additional wellfields, or surface water integration.

3.1 CAPITAL IMPROVEMENTS

Table 11 summarizes the proposed capital improvement program for the next 5 years following the implementation of Alternative 2. Pipeline costs were adjusted to reflect recent market conditions after reviewing initial screening level costs with SJCUD staff.

Table 11 2026 to 2030 Capital Improvement Program

Facility	Project Name	2026	2027	2028	2029	2030	Total
CR214 WTP	Plant Improvements (Clearwell, one Skid, and Cartridge Filters)		$2,600,000	$20,000,000			$22,600,000
	Install Four Wells		$12,500,000				$12,500,000
	Install One Well (TR51)	$3,125,000					$3,125,000
TC WTP	Engineering for 5-MGD MDD Capacity Facility		$2,708,000				$2,708,000
	5-MGD MDD Capacity			$20,833,000			$20,833,000
	Install Three Wells				$9,375,000		$9,375,000
NW WTP	Install Seven Wells		$21,875,000				$21,875,000
	Install One Well (NW8)	$3,125,000					$3,125,000
	Install One Well (NW9)	$3,125,000					$3,125,000
	Install One Well			$3,125,000			$3,125,000
Water Booster Facilities	Engineering for the 16th BPS Improvements		$563,000				$563,000
	Install Two New High-Service Pumps (HSPs) and Variable Frequency Drives Implementation on all Four Pumps at the 16th BPS		$3,125,000				$3,125,000
	Engineering for Shores Unit 2 BPS Upgrades			$175,000			$175,000
	Shores Unit 2 BPS Upgrades (Pumping Capacity)			$1,250,000			$1,250,000
	Engineering for Additional Transfer BPS and Blending Facility			$2,100,000			$2,100,000
	Additional Transfer BPS and Blending near the CR214 WTP to Boost Additional Transfer downstream of the CR214 WTP				$15,000,000		$15,000,000
Water Transmission Mains	Engineering for Additional Transfer Line				$1,897,000		$1,897,000
	Additional transfer line – 42,605 feet of 20-inch piping				$19,971,000		$19,971,000
	Engineering for 2031 CR214 to Holmes Improvement		$938,000				$938,000
	The CR214 WTP to Holmes Improvements – 22,803 feet of 16- to 24-inch upgrade		$12,818,000				$12,818,000
Fire Flow Improvements	Engineering for Commercial Drive to East of I-95			$124,000			$124,000
	Commercial Drive to East of I-95 – 3,141 feet of 12-inch piping			$883,000			$883,000
	Engineering for Downstream of CR208			$485,000			$485,000
	Downstream of CR208 – 9,247 feet of 12- to 16-inch upgrade (Also increases transfer capacity)			$3,465,000			$3,465,000
Alternative Water Supplies	County Wide Testing, Exploration, and Studies	$500,000	$500,000	$500,000	$500,000	$500,000	$2,500,000
	Total Budget	**$9,875,000**	**$57,627,000**	**$52,940,000**	**$46,743,000**	**$500,000**	**$167,685,000**

Notes: Engineering costs include permitting, design and construction phase. All costs are in 2025 dollars.

3.1.1 Wellfield and Raw Water Mains

Implementing the recommended plan will require investing in new groundwater production capacity to meet projected demands and maintain system reliability. The number, spacing, and configuration of production wells, as well as the associated raw water piping, will depend on site-specific hydrogeologic conditions and sustainable pumping rates achievable at each wellfield as further discussed in the Existing and Future Conditions TM.

As Table 12 summarizes, the near-term program identifies the recommended wells to be developed within the next 5 years to support expected growth and redundancy needs. Table 12 also outlines the total number of wells expected to be required over the full planning horizon, reflecting long-term production requirements under future demand alternatives.

Table 12 Recommended Production Wells

Alternative	NW WTP	TR/CR214 WTP	TC WTP	AI WTP	West WTP	Total
Alt 1 (New AI WTP)	13	5	8	12	0	38
Alt 2 (NW Transfer Line)	13	5	13	0	0	31
Alt 3 (New West WTP)	13	5	6	0	10	34
Alt 4 (Expand CR214)	13	13	6	0	0	32

Assumed Average Pumping Rates:

- NW = 0.45 MGD (310 GPM)
- CR214/TR = 0.6 MGD (415 GPM)
- Trout Creek = 0.6 MGD (415 GPM)
- West = 0.6 MGD (415 GPM)
- AI = 0.4 MGD (278 GPM)

3.1.2 Water Treatment Plants

Table 13 summarizes the WTP improvements that will be need to implement the recommended plan. Figure 5 shows the Mainland system's capacity and demands, and Figure 6 shows the NW and TC capacities and demands for the recommended alternative.

Table 13 Recommended Water Treatment Plant Improvements

Timeframe	Project Name	Project Details
2025–2030	CR214 WTP Improvements	Install a clearwell a skid, and cartridge filters to maintain 8-MGD production.
	TC WTP	Design and construct a 5-MGD MDD capacity facility.
2035–2038	TC WTP Expansion	Design and construct the expansion from 5 MGD to 10.5-MGD MDD capacity.

Figure 5 Mainland System Water Production Capacity and Demands

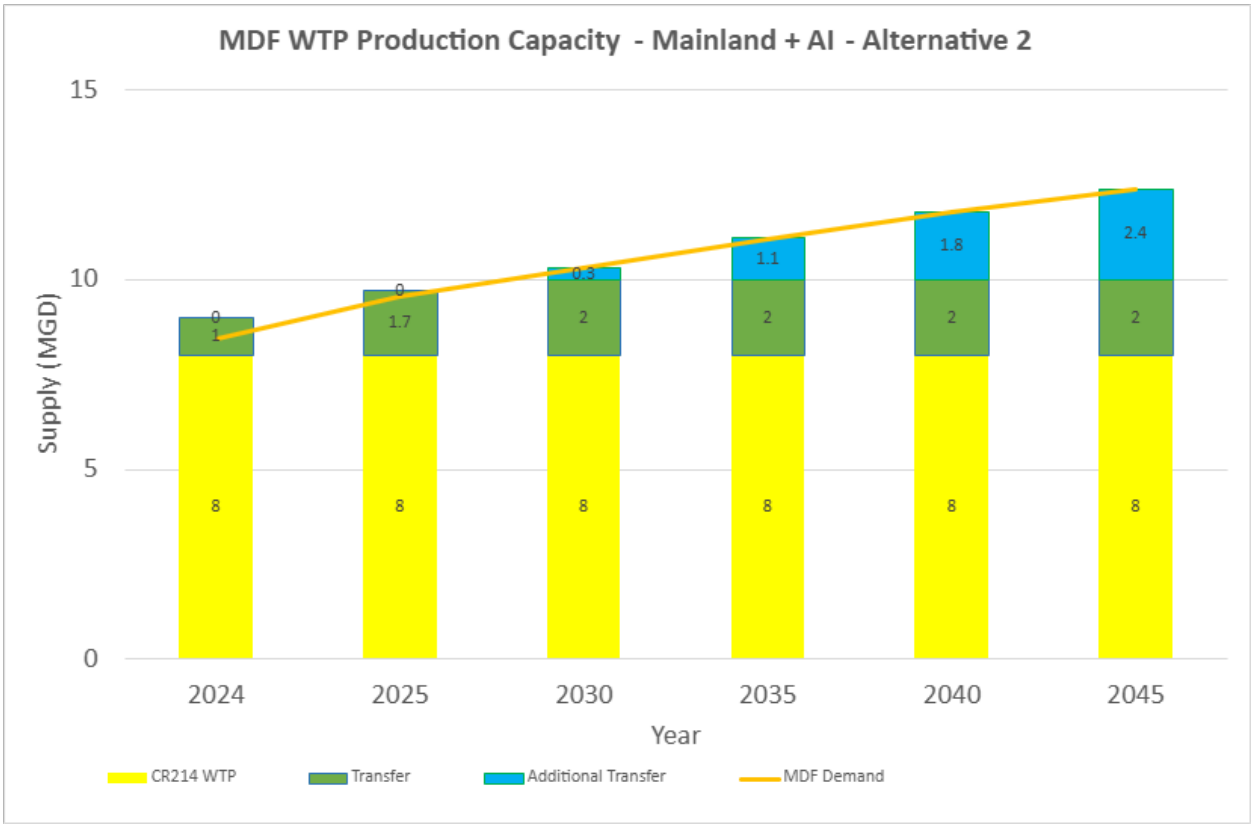
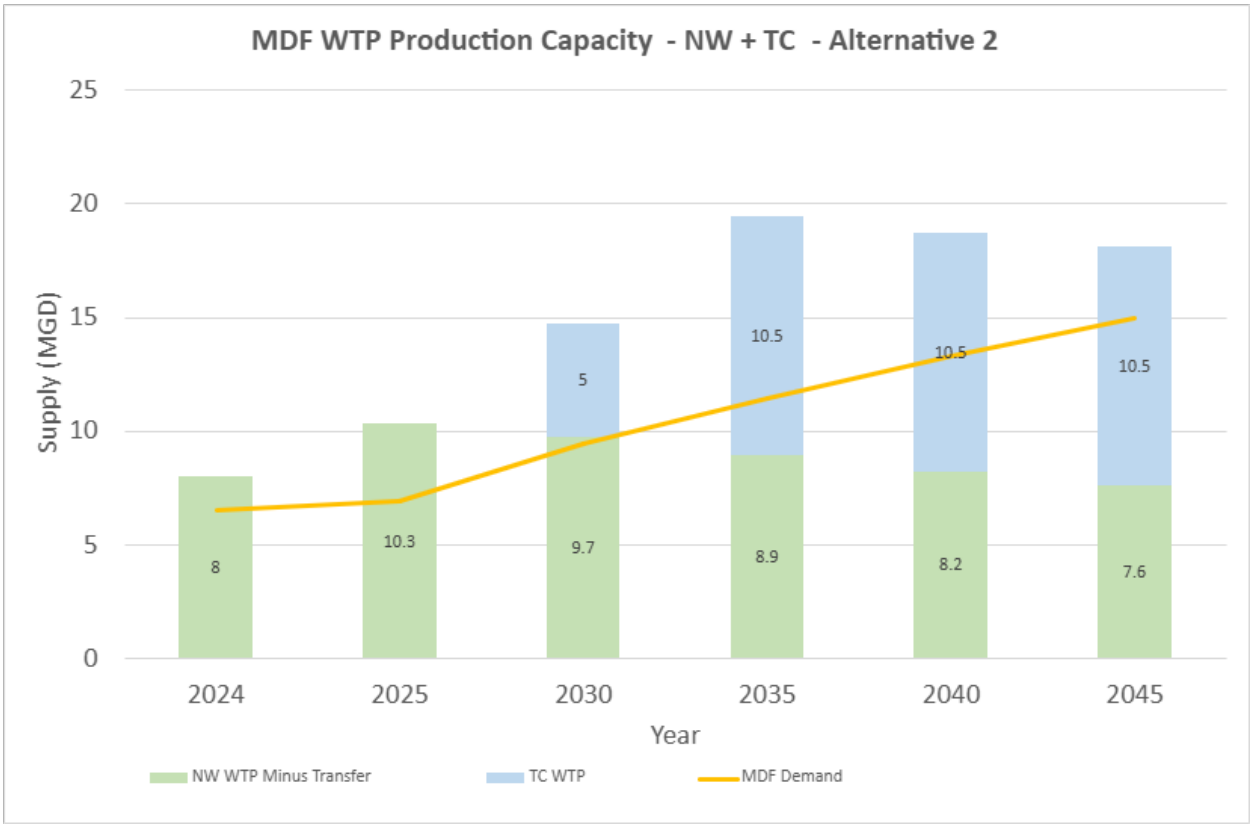


Figure 6 Northwest and Trout Creek Production Capacities and Demands



3.1.3 Transmission and Distribution

Table 14 shows recommended major transmission and distribution improvements included in Alternative 2.

Table 14 Recommended Transmission and Distribution Improvements

Timeframe	Project Name	Project Details
2025–2030	CR214 WTP to Holmes Boulevard Water Transmission Upgrade – Design/Build	22,803 feet of 16-inch piping upgraded to 24 inches
	Additional Transfer Line (Robinson Tract)	42,605 feet of 20-inch piping
2030–2035	NW Mainland Looping (Marketplace Drive to Quesada Road)	4,010 feet of 10-inch piping
	SW Mainland Looping (I95 to Watson Road Improvements)	1,629 feet of 24-inch piping and 20,343-feet of 20-inch piping, 8,290 feet of 16-inch piping

3.1.4 Booster Pumping Stations

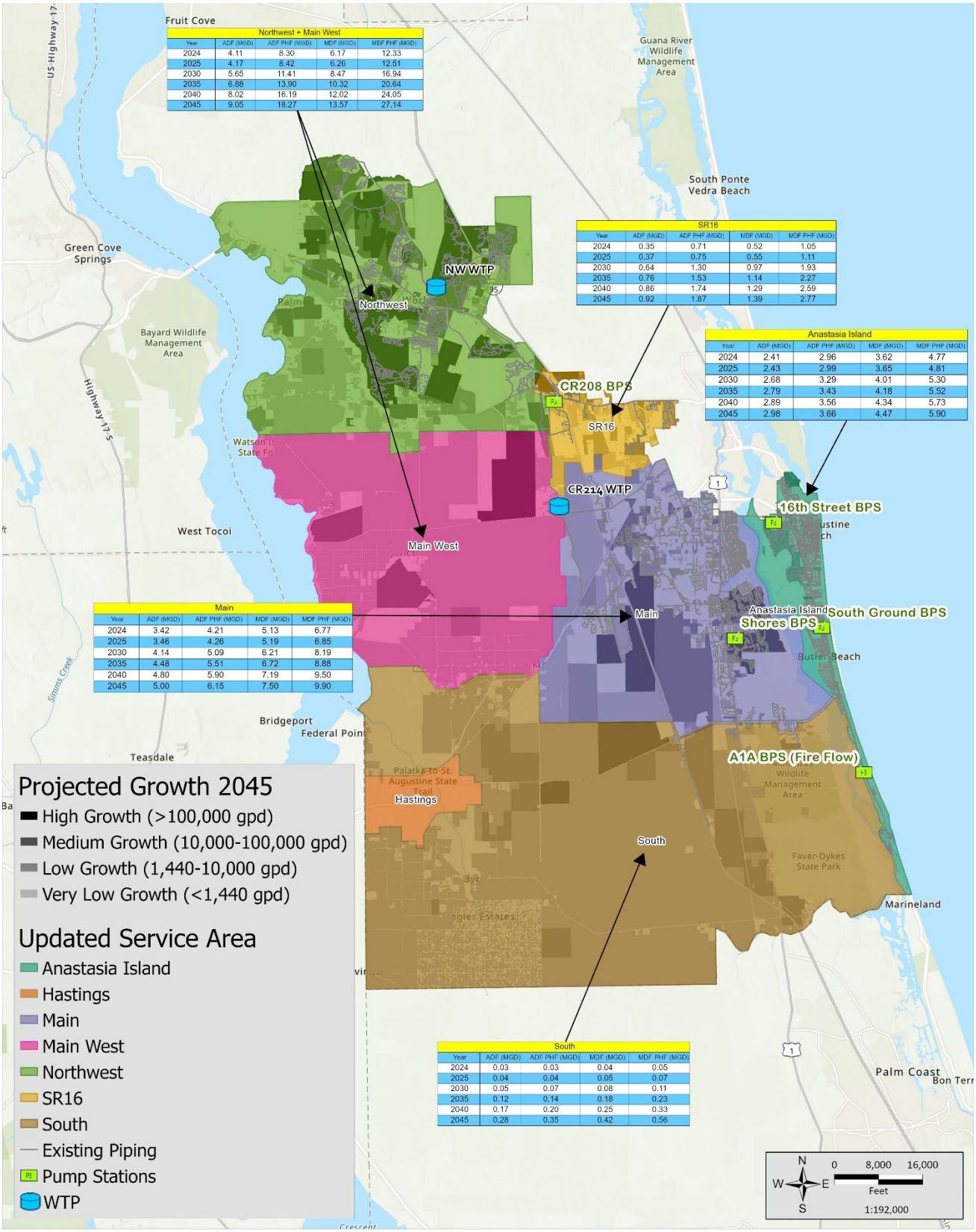
The following summarizes the recommendations for improvements at the BPSs. All improvements are recommended before 2035.

- **Shores:** Transmission and distribution improvements from I-95 to Watson Road eliminates the need for a BPS. However, an additional pump at Shores is needed for redundancy. Given the potential challenges with the I-95-to-Watson-Road corridor, we recommend installing the additional pump at Shores in 2028.
- **Southground:** No improvements recommended; high-service pump (HSP) 2 remains in standby for peak demands.
- **CR208:** No improvements recommended.
- **16th Street:** Implement VSP control and add two HSPs to maintain 80 psi with one HSP in standby.
- **New Transfer BPS:** Additional transfer BPS and blending near the CR214 WTP is required to pump additional transfer water from the NW into the Mainland.

3.1.5 Service Areas and Capacities

Figure 7 summarizes the new service areas and the growth in demands.

Figure 7 Future Services Areas and Demands



3.1.6 Fire Flow Improvements

Figure 8 and Figure 9 show the 2045 fire flow results. The key findings and recommendations from evaluating fire flows are outlined in the following.

Our analysis indicates that four residential hydrants within the AI service area are below the 500-GPM LOS threshold, as illustrated in Figure 9. These conditions are expected to improve following implementation of the larger transmission system improvements. Based on this, we recommend deferring local fire flow improvements in AI until after the transmission piping upgrades are completed.

For commercial hydrants with flows below 1,500 GPM, the results are summarized by service area:

- AI: Several commercial hydrants fall below the LOS. Immediate attention should be directed to locations with hydrant flow rates significantly below 1,500 GPM, including additional field verification of as-built piping and land use before implementing any improvements. For other deficient hydrants within the AI service area, we recommend deferring improvements until transmission system upgrades are completed or to conduct more detailed investigations to further refine the assessment.
- Mainland: We recommend moving forward with the improvement near Brainard Drive (206 linear feet of 8-inch piping adding looping and increased available fire flow to the area) while delaying other locations with low fire flow until broader system improvements are in place.

SR16: This area does not experience significant local benefits from the proposed large transmission improvements. We recommend proceeding with improvements in this corridor as shown Table 15. The improvements downstream of CR208 has an added benefit of increasing transfer capacity.

Table 15 SR16 Fire Flow improvements

Area	Size	Length (feet)
Downstream of CR208	12 to 16 inch	9,247
Commercial Drive	12 inch	3,141

In all service areas, we recommend additional field verification of as-built conditions and land-use information to validate model assumptions and refine the analysis results.

Figure 8 NW and SR16 2045 Fire Flow Results

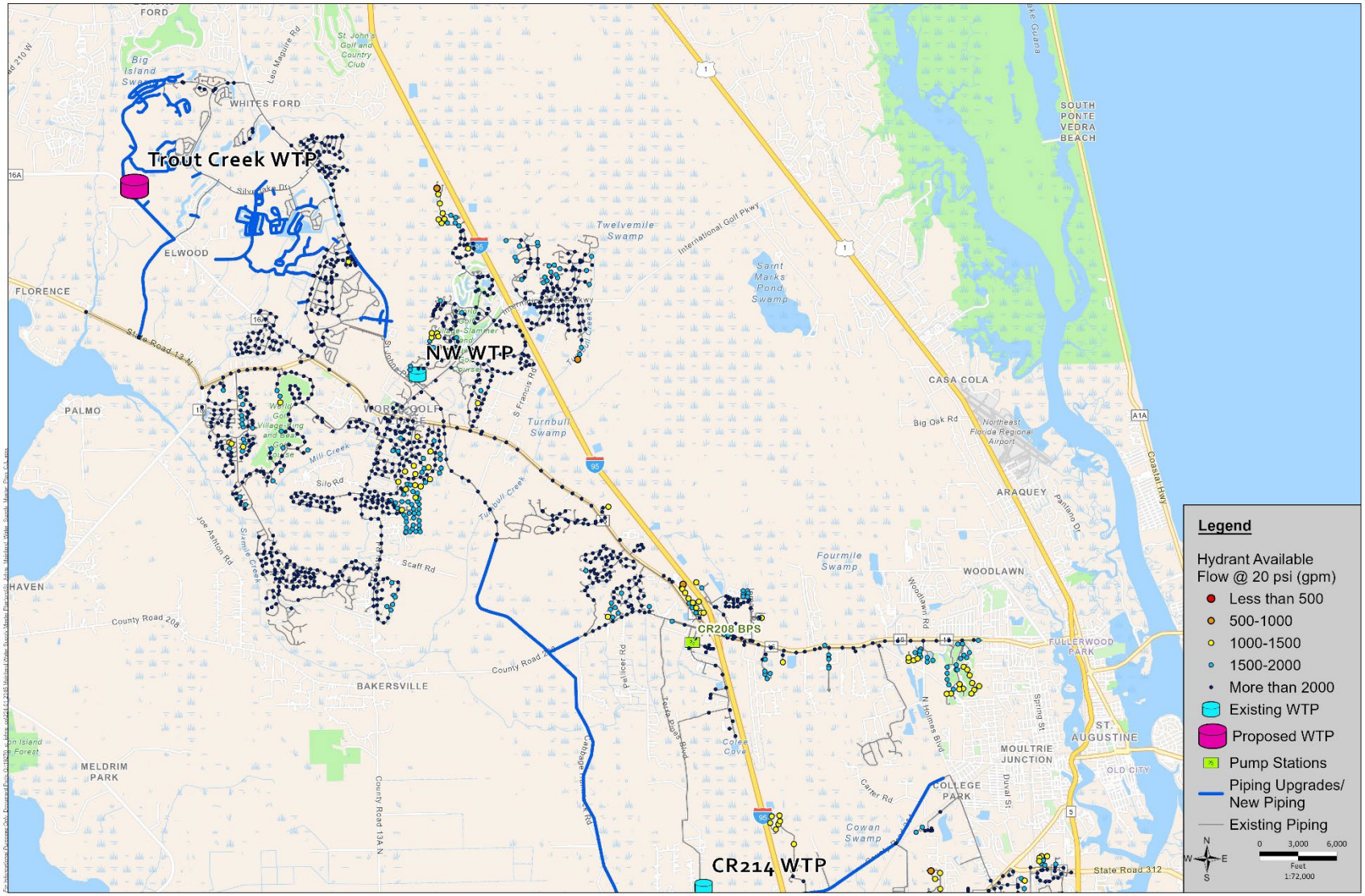
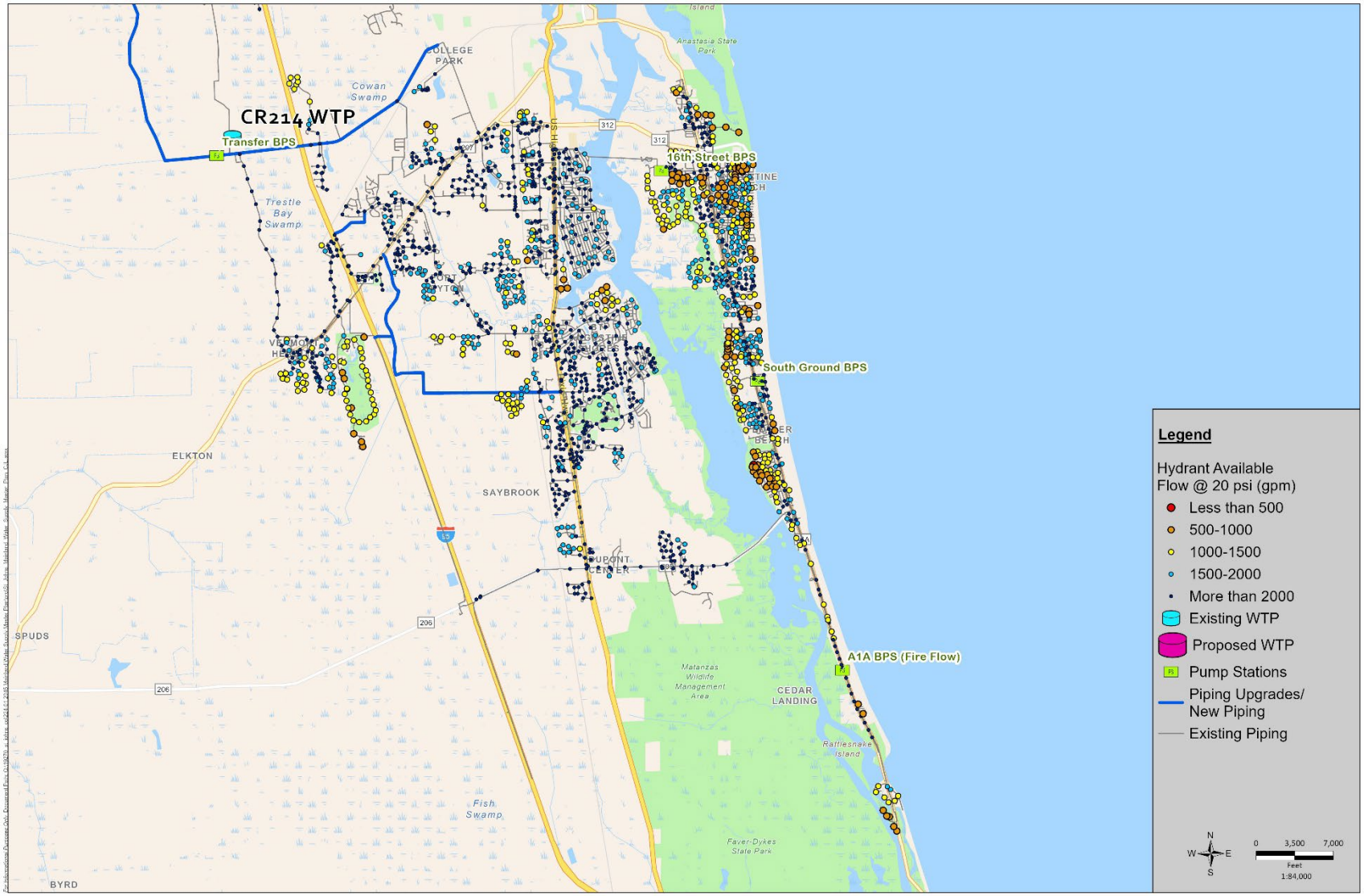


Figure 9 Mainland and AI 2045 Fire Flow Results



3.2 ADAPTIVE STRATEGY

The alternatives analysis demonstrates that SJCUD's water supply challenges require an adaptive strategy. The immediate constraint is transfer capacity between the NW and Mainland service areas that must be addressed to avoid shortfalls by 2030. Concurrently, groundwater production and water quality at the TC and NW wellfields are critical to ensuring a reliable base supply. SJCUD's groundwater sources will also face challenges in maintaining compliance with Minimum Flows and Levels (MFL) requirements.

In the near term (within the next 10 years), SJCUD should prioritize developing the TC WTP, expanding NW production capacity, and constructing targeted pipeline and booster pump improvements (including a new BPS) to strengthen transfer reliability. These projects are essential to meeting 2030 demand while maintaining system pressures and tank recovery performance.

The TC wellfield is expected to provide an important role in supporting future water supply needs. However, land availability for siting treatment facilities and acquiring additional well sites to mitigate lower sustainable pumping rates could present near-term challenges. These constraints suggest that more immediately exploring development of another wellfield site to ensure adequate capacity and operational flexibility may be necessary.

One potential alternative is the Palmo area, where preliminary groundwater quality data obtained from SJCUD indicate favorable conditions. Further evaluation of this site could confirm its viability for a new WTP and wellfield. If the initial investigation proves feasibility, Palmo could serve as a strategic addition to the supply portfolio (due to its potential for both groundwater and surface water sources), complementing TC while reducing pressure on limited land availability around the TC WTP.

Over time, SJCUD must maintain flexibility to adapt to changing groundwater conditions, regulatory requirements, future demand growth, and maintaining compliance with MFL requirements. By sequencing investments and maintaining flexibility, SJCUD can ensure reliability and resilience in its water supply system through 2045. As part of the County's long-term adaptive strategy, Jones Edmunds recommends that SJCUD evaluate participation in regional MFL mitigation projects while evaluating the alternative sources that can mitigate saltwater upwelling risks in existing and future wellfields. Although regional MFL initiatives may offer collaborative benefits and long-term groundwater allocations, they will not fully eliminate localized salinity challenges. Surface water alternatives could eliminate both MFL-related groundwater withdrawal constraints and salinity risks.

Table 16 summarizes the adaptive strategy recommendations.

Table 16 Adaptive Strategy Recommendations

Timeframe	Recommendation	Purpose / Focus Area
Near-Term	Proceed with additional water sources in NW and TC and a potential additional site in northwest part of County.	Expand groundwater supply capacity.
	Implement major transmission improvements, including a BPS/blending facility near the CR214 WTP.	Strengthen distribution.
	Explore groundwater quality and production potential (Palmo, West, and AI).	Assess future supply reliability.
	Determine the CR214 WTP ultimate capacity (to mitigate new transfer timing).	Optimize existing facility use.
	Continue participating in a MFL mitigation project, evaluate other MFL mitigation projects, and evaluate alternative water supplies that may reduce MFL impacts and mitigate saltwater upwelling.	Regulatory compliance and resource sustainability.
	Monitor water quality at all wellfields; add wells as needed.	Protect and sustain water quality.
Long-Term	Identify next water production center (AI, West, Palmo, or surface water).	Plan for future demand.
	Evaluate funding a long-term MFL mitigation project or develop alternative water supplies.	Secure sustainable water resources.
	Plan land acquisition strategy around future water supply sources.	Protect supply corridors.
	Fortify single points of failure in transmission and production facilities.	Increase system resilience.

Attachment A

Detailed Cost Breakdown for Each Alternative

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OPINION OF PROBABLE CONSTRUCTION COST - ALTERNATIVE 1

OWNER:	ESTIMATED BY:
Jones Edmunds & Associates, Inc.	**JHorvath**
CLIENT:	CHECKED BY:
St. Johns County	**JFrench**
PROJECT TITLE:	PROJECT SEGMENT
2045 Mainland Water Supply Master Plan	
PROJECT NUMBER:	DATE:
19270-224-01	**8/11/2025**
ESTIMATE TYPE (ROM, BUDGET, DEFINITIVE):	CONSTRUCTION OR PROJECT ESTIMATE:
Budget	**Construction**

WTP	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	NOTES/ASSUMPTIONS
1	**WATER TREATMENT PLANTS**				$ 103,000,000	$20/gal MDF for RO WTP plus $3M for surface water discharge brine disposal pipe.
1.1	Anastasia Island WTP (5.0 MGD MDF)	LS	1	$ 103,000,000		Construct 2030.
1.2	Trout Creek WTP (5.49 MGD MDF)	LS	1	$ 18,300,000	$ 18,300,000	$3.33/gal MDF for Conventional WTP. Construct 2035.
1.3	West WTP	LS	-	$ -	$ -	
	Subtotal WTPs				**$ 121,300,000**	
2	**NEW WELLS**					All well costs includes above-ground facilities at well head
2.1	AI	EA	11	$ 2,500,000	$ 27,500,000	Construct all by 2030.
2.2	NW	EA	12	$ 2,500,000	$ 30,000,000	Construct 10 by 2030, and 2 by 2035.
2.3	CR 214	EA	5	$ 2,500,000	$ 12,500,000	Construct all as soon as possible.
2.4	TC	EA	6	$ 2,500,000	$ 15,000,000	Construct 3 by 2035, 1 by 2040, and 2 by 2045.
2.5	West	EA	-	$ 2,500,000	$ -	
	Subtotal New Wells				**$ 85,000,000**	
3	**TRANSMISSION MAINS**				$ -	Likely not needed for this scenario - Mainland does not need upgrades with addition of
3.1	10-inch	LF	-	$ 300		AI. Assume no 10-inch.
3.2	16-inch	LF	-	$ 600	$ -	
3.3	20-inch	LF	-	$ 750	$ -	Helps results but not required - needed for Robinson development piping - can it be put on development in the future?
3.4	16- to 24-inch Upgrade	LF	-	$ 900	$ -	
3.5	24-Inch I95	LF	-	$ 900	$ -	
3.6	20-inch New Transfer	LF	-	$ 750	$ -	
3.7	16th BPS Improvements	LS	-	$ -	$ -	
3.8	Other Booster Pump Station	LS	-	$ -	$ -	
	Subtotal Transmission Mains				**$ -**	
	SUBTOTAL 1 THRU 3				**$ 206,300,000**	
4	**CONTINGENCY ALLOWANCE (25% OF BASE BID)**		25%		**$ 51,575,000**	Expected Accuracy Range for a Class 4 Estimate (Per AACE 18R-97 is -15% to 50%)
			TOTAL		**$ 257,875,000**	
			ROUNDED TOTAL		**$ 257,900,000**	

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OPINION OF PROBABLE CONSTRUCTION COST - ALTERNATIVE 2

OWNER:	ESTIMATED BY:
Jones Edmunds & Associates, Inc.	**JHorvath**
CLIENT:	CHECKED BY:
St. Johns County	**JFrench**
PROJECT TITLE:	PROJECT SEGMENT
2045 Mainland Water Supply Master Plan	
PROJECT NUMBER:	DATE:
19270-224-01	**8/11/2025**
ESTIMATE TYPE (ROM, BUDGET, DEFINITIVE):	CONSTRUCTION OR PROJECT ESTIMATE:
Budget	**Construction**

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	NOTES/ASSUMPTIONS
1	**WATER TREATMENT PLANTS**					
1.1	Anastasia Istland WTP	LS	-	$ -	$ -	
1.2	Trout Creek WTP (10.5 MGD MDF)	LS	1	$ 35,000,000	$ 35,000,000	$3.33/gal MDF for Conventional WTP. Construct 2030.
1.3	West WTP	LS	-	$ -	$ -	
	Subtotal WTPs				**$ 35,000,000**	
2	**NEW WELLS**					All well costs includes above-ground facilities at well head
2.1	AI	EA	-	$ 2,500,000	$ -	
2.2	NW	EA	12	$ 2,500,000	$ 30,000,000	Construct 10 by 2030, 2 by 2035.
2.3	CR 214	EA	5	$ 2,500,000	$ 12,500,000	Construct all as soon as possible.
2.4	TC	EA	10	$ 2,500,000	$ 25,000,000	Construct 3 by 2030, 2 by 2035, and 3 by 2040, and 2 by 2045.
2.5	West	EA	-	$ 2,500,000	$ -	
	Subtotal New Wells				**$ 67,500,000**	
3	**TRANSMISSION MAINS**					
					$ 1,203,000	2035-2045 - slightly helps tank recovery, may be good to put in 2035 for now - would require additional modeling to nail down date
3.1	10-inch	LF	4,010	$ 300		
3.2	16-inch	LF	28,633	$ 600	$ 17,179,800	2030
3.3	20-inch	LF	14,556	$ 750	$ 10,917,000	2030
					$ 20,522,700	2035-2045 - greatly helps tank recovery, may be good to put in 2035 for now - would require addional modeling to nail down date
3.4	16- to 24-inch Upgrade	LF	22,803	$ 900		
3.5	24-Inch I95	LF	1,629	$ 900	$ 1,466,100	2030
3.6	20-inch New Transfer	LF	28,049	$ 750	$ 21,036,750	2030
3.7	16th BPS Improvements	LS	1	$ 2,500,000	$ 2,500,000	Two new HSPs and VFD implementation on all 4 pumps
3.8	Booster Pump Station and Blending Facilities Near CR 214	LS	1	$ 12,000,000	$ 12,000,000	
	Subtotal Transmission Mains				**$ 86,825,350**	
	SUBTOTAL 1 THRU 3				**$ 189,325,350**	
4	**CONTINGENCY ALLOWANCE (25% OF BASE BID)**		25%		**$ 47,331,338**	Expected Accuracy Range for a Class 4 Estimate (Per AACE 18R-97 is -15% to 50%)
			TOTAL		**$ 236,656,688**	
			ROUNDED TOTAL		**$ 236,700,000**	

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OPINION OF PROBABLE CONSTRUCTION COST - ALTERNATIVE 3

OWNER:	ESTIMATED BY:
Jones Edmunds & Associates, Inc.	**JHorvath**
CLIENT:	CHECKED BY:
St. Johns County	**JFrench**
PROJECT TITLE:	PROJECT SEGMENT
2045 Mainland Water Supply Master Plan	
PROJECT NUMBER:	DATE:
19270-224-01	**8/11/2025**
ESTIMATE TYPE (ROM, BUDGET, DEFINITIVE):	CONSTRUCTION OR PROJECT ESTIMATE:
Budget	**Construction**

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	NOTES/ASSUMPTIONS
1	**WATER TREATMENT PLANTS**					
1.1	Anastasia Istland WTP	LS	-	$ -	$ -	
1.2	Trout Creek WTP (4.5 MGD MDF)	LS	1	$ 15,000,000	$ 15,000,000	$3.33/gal MDF for Conventional WTP. Construct 2035.
					$ 126,000,000	$20/gal MDF for RO WTP plus $6M for surface water discharge brine disposal
1.3	West WTP (6.0 MGD MDF)	LS	1	$ 126,000,000		pipe. Construct 2030.
	Subtotal WTPs				**$ 141,000,000**	
2	**NEW WELLS**					All well costs includes above-ground facilities at well head
2.1	AI	EA	-	$ 2,500,000	$ -	
2.2	NW	EA	12	$ 2,500,000	$ 30,000,000	Construct 7 by 2030, 3 by 2035, and 2 by 2045.
2.3	CR 214	EA	5	$ 2,500,000	$ 12,500,000	Construct all as soon as possible.
2.4	TC	EA	5	$ 2,500,000	$ 12,500,000	Construct 3 by 2035, 2 by 2040.
2.5	West	EA	8	$ 2,500,000	$ 20,000,000	Construct 6 by 2030, 2 by 2035.
	Subtotal New Wells				**$ 75,000,000**	
3	**TRANSMISSION MAINS**					
					$ 1,203,000	2035-2045 - slightly helps tank recovery, may be good to put in 2035 for now -
3.1	10-inch	LF	4,010	$ 300		would require additional modeling to nail down date.
3.2	16-inch	LF	28,633	$ 600	$ 17,179,800	2030
3.3	20-inch	LF	44,000	$ 750	$ 33,000,000	2030 - West WTP transfer main.
					$ 20,522,700	2035-2045 - greatly helps tank recovery. Put in 2035 for now - would require
3.4	16- to 24-inch Upgrade	LF	22,803	$ 900		addional modeling to nail down date.
3.5	24-Inch I95	LF	1,629	$ 900	$ 1,466,100	2030
3.6	20-inch New Transfer	LF	-	$ 750	$ -	
3.7	16th BPS Improvements	LS	1	$ 2,500,000	$ 2,500,000	Two new HSPs and VFD implementation on all 4 pumps
3.8	Booster Pump Station (no Blending)	LS	1	$ 10,000,000	$ 10,000,000	Needed due to pressure drop from West WTP.
	Subtotal Transmission Mains				**$ 85,871,600**	
	SUBTOTAL 1 THRU 3				**$ 301,871,600**	
4	**CONTINGENCY ALLOWANCE (25% OF BASE BID)**		25%		**$ 75,467,900**	Expected Accuracy Range for a Class 4 Estimate (Per AACE 18R-97 is -15% to 50%)
			TOTAL		**$ 377,339,500**	
			ROUNDED TOTAL		**$ 377,400,000**	

JonesEdmunds
Integrity • Knowledge • Service

OPINION OF PROBABLE CONSTRUCTION COST - ALTERNATIVE 4

OWNER:	ESTIMATED BY:
Jones Edmunds & Associates, Inc.	**JHorvath**
CLIENT:	CHECKED BY:
St. Johns County	**JFrench**
PROJECT TITLE:	PROJECT SEGMENT
2045 Mainland Water Supply Master Plan	
PROJECT NUMBER:	DATE:
19270-224-01	**8/11/2025**
ESTIMATE TYPE (ROM, BUDGET, DEFINITIVE):	CONSTRUCTION OR PROJECT ESTIMATE:
Budget	**Construction**

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	NOTES/ASSUMPTIONS
1	**WATER TREATMENT PLANTS**					
1.1	CR 214 (6.0 MGD MDF)	LS	1	$ 120,000,000	$ 120,000,000	$20/gal for RO WTP.
1.2	Trout Creek WTP (4.5 MGD MDF)	LS	1	$ 15,000,000	$ 15,000,000	$5/gal for Conventional WTP. Construct 2035.
1.3	West WTP	LS	1	$ -	$ -	
	Subtotal WTPs				**$ 135,000,000**	
2	**NEW WELLS**					All well costs includes above-ground facilities at well head
2.1	AI	EA	-	$ 2,500,000	$ -	
2.2	NW	EA	12	$ 2,500,000	$ 30,000,000	Construct 12 by 2030
2.3	CR 214	EA	11	$ 2,500,000	$ 27,500,000	Construct 6 by 2030, 3 by 2035, 2 by 2040.
2.4	TC	EA	5	$ 2,500,000	$ 12,500,000	Construct 3 by 2035, 2 by 2040.
2.5	West	EA	-	$ 2,500,000	$ -	
	Subtotal New Wells				**$ 70,000,000**	
3	**TRANSMISSION MAINS**					
					$ 1,203,000	2035-2045 - slightly helps tank recovery, may be good to put in 2035 for now - would require additional modeling to nail down date.
3.1	10-inch	LF	4,010	$ 300		
3.2	16-inch	LF	28,633	$ 600	$ 17,179,800	2030
3.3	20-inch	LF	-	$ 750	$ -	
					$ 20,522,700	2035-2045 - greatly helps tank recovery. Put in 2035 for now - would require addional modeling to nail down date.
3.4	16- to 24-inch Upgrade	LF	22,803	$ 900		
3.5	24-Inch I95	LF	1,629	$ 900	$ 1,466,100	2030
3.6	20-inch New Transfer	LF	-	$ 750	$ -	
3.7	16th BPS Improvements	LS	1	$ 2,500,000	$ 2,500,000	Two new HSPs and VFD implementation on all 4 pumps
3.7	Booster Pump Station (no Blending)	LS	-	$ 10,000,000	$ -	
	Subtotal Transmission Mains				**$ 42,871,600**	
	SUBTOTAL 1 THRU 3				**$ 247,871,600**	
4	**CONTINGENCY ALLOWANCE (25% OF BASE BID)**		25%		**$ 61,967,900**	Expected Accuracy Range for a Class 4 Estimate (Per AACE 18R-97 is -15% to 50%)
			TOTAL		**$ 309,839,500**	
			ROUNDED TOTAL		**$ 309,900,000**	

Attachment B

Alternatives Summary PPT



St. Johns County 2045 Mainland Water Supply Master Plan

Alternatives Summary

August 20, 2025

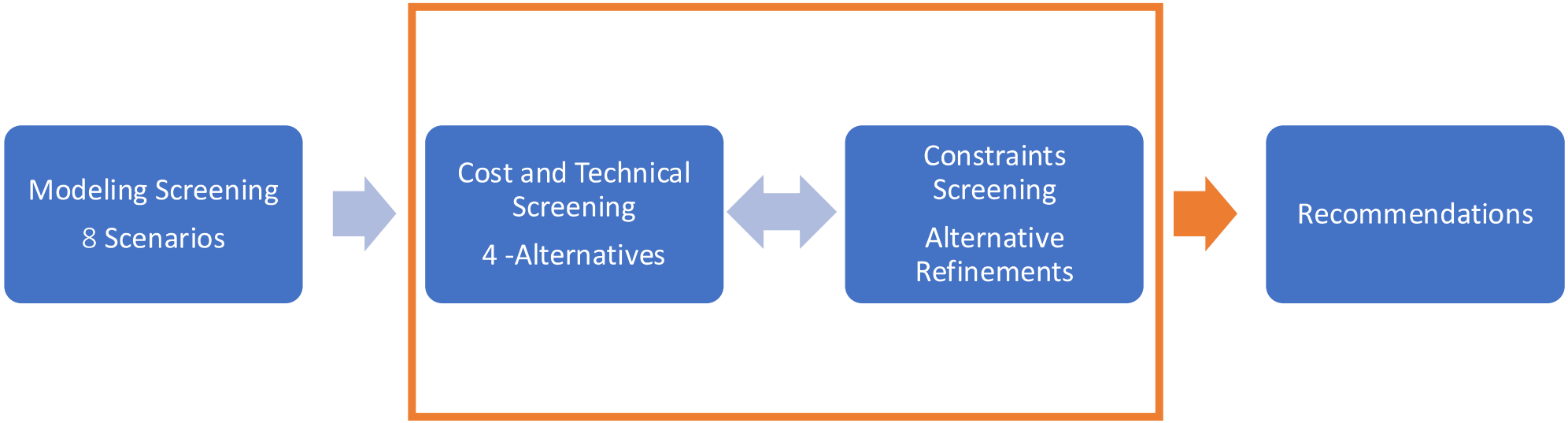
SJC Task Order No: 05

JE Project # 19270-224-01

JonesEdmunds

Our focus

Incorporating SJCUD's collective knowledge to make short-term plan and long-term strategy



Purpose

JonesEdmunds

Goal

- Recommend a short-term plan and create a long-term strategy

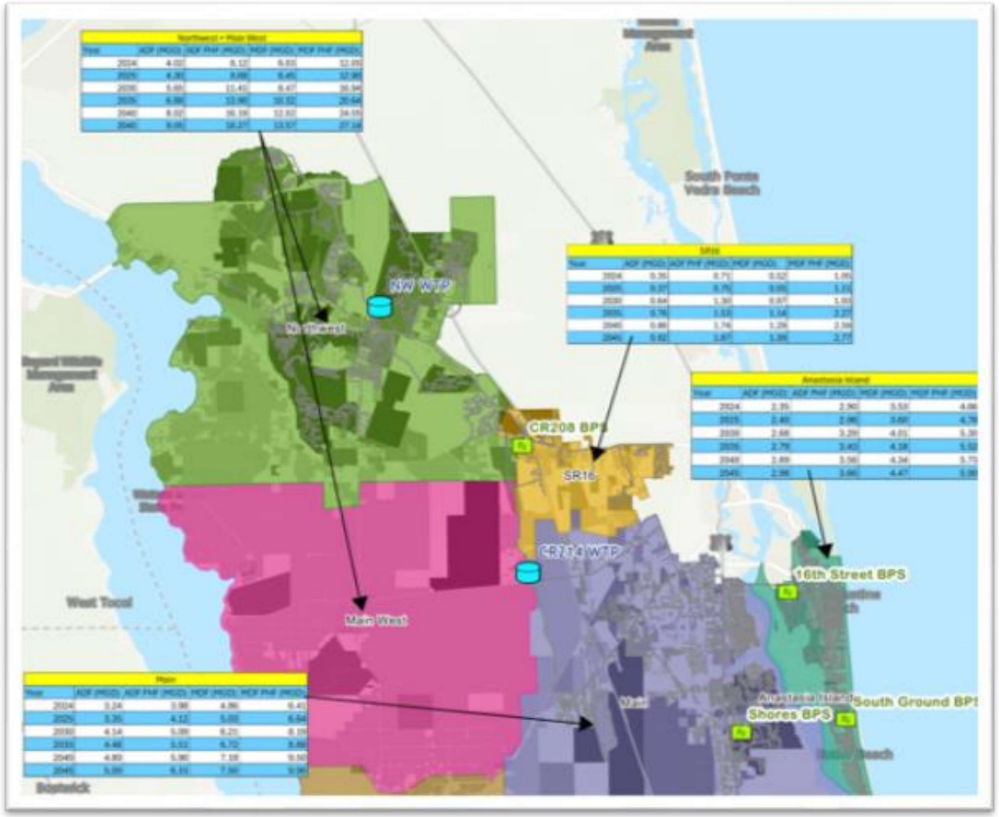
Method

✓Rank each alternative by cost

✓Perform sensitivity analysis on cost assumptions

○**Analyze potential risks with each alternative**

○**Evaluate potential non-cost factors**



Potential Solutions from Initial Scenarios

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- Anastasia Island (AI) solutions
  - Water Treatment Plant (WTP) on AI
  - Major Transmission improvements between CR214 WTP and AI
- NW Solutions
  - Growth requires new water production at NW and another wellfield
- Mainland solutions
  - Additional WTPs (West or AI)
  - Increase transfer
  - Upgrade CR214 WTP



Alternatives to help inform plan

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Alternative 1 – AI WTP

What are the operational and water supply benefits of an AI WTP?

Alternative 2 - Trout Creek WTP Only

What will be needed to maximize a better water source to the NW?

Alternative 3 - **Alternative 3 - Addition of West WTP**

What would a roadmap to surface water look like with a WTP west of CR214?

Alternative 4 - Expansion of CR214 WTP

What are opportunities at CR214 if fresher sources are not as productive and withdrawals can be mitigated?

Alternative 1 (New AI WTP)

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Summary

- Reduces demand at CR214 WTP
- Eliminates tank recovery issues
- Reduces operating pressures in Mainland
- Eliminates major piping upgrades needed in the system
- Needs to be online before 2030, if CR214 is held to 7.2 MGD (MDF)

Impacts

- Trout Creek timing depends on Mainland's reliance on transfer
  - Needed by 2030 with 2 MGD transfer
  - Needed by 2035 if transfer is reduced



Capacity MDF

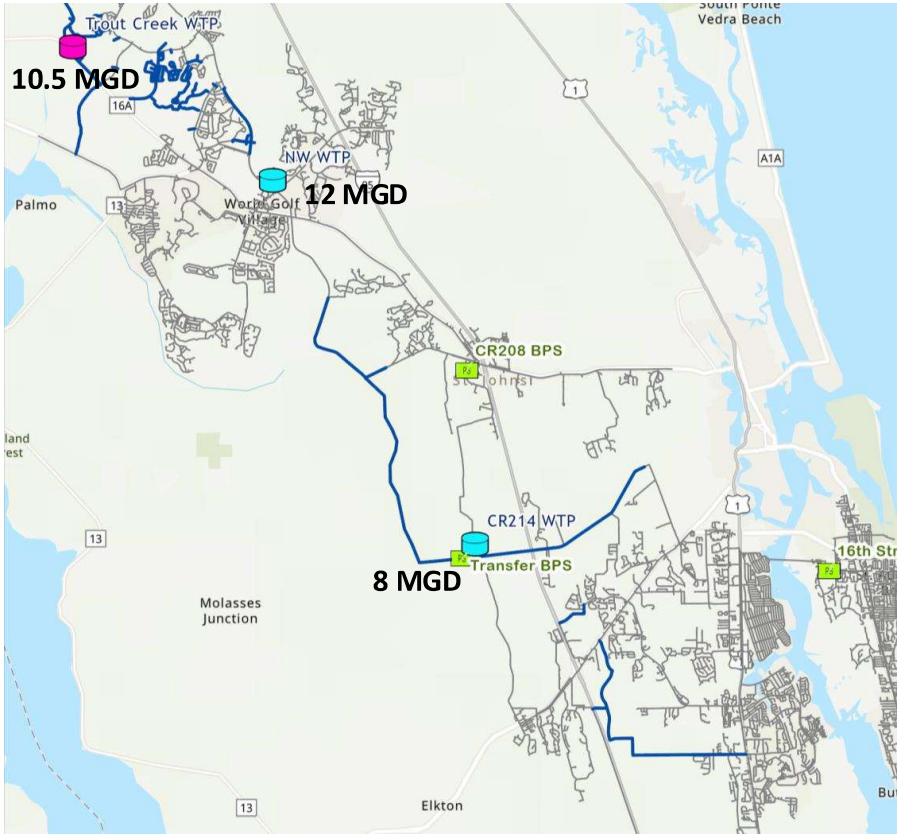
Alternative 2 (New NW Transfer – Robinson Tract)

Summary

- Increases capacity of transfer from NW to Mainland with new pipeline and BPS near CR214
- Needs to be online before 2030, if CR214 is held to 7.2 MGD (MDF)
- Requires major piping upgrades downstream of CR214

Impacts

- Requires more production from NW & Trout Creek
- Trout Creek required by 2030



Capacity MDF

Alternative 3 (West WTP)

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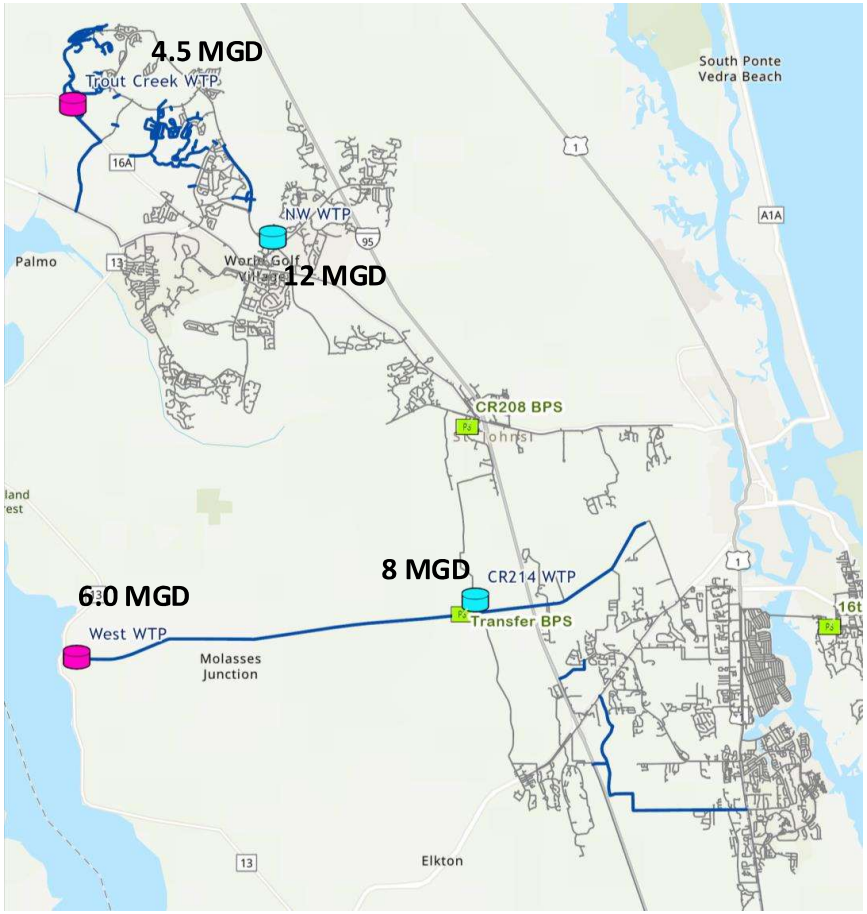
Summary

- Increases supply capacity to Mainland/Anastasia Island
- Reduces demand on CR214 WTP
- Needs to be online before 2030, if CR214 WTP is held to 7.2 MGD (MDF)
- Requires major piping upgrades downstream of CR214 WTP and BPS near CR214 WTP

Impacts

- Allows CR214 WTP to hold at current capacity near term and reduce production long term
- Pushes out Trout Creek WTP to 2035
- Existing transfer (2 MG) provides operational flexibility



Capacity MDF

Alternative 4 (Expand CR214)

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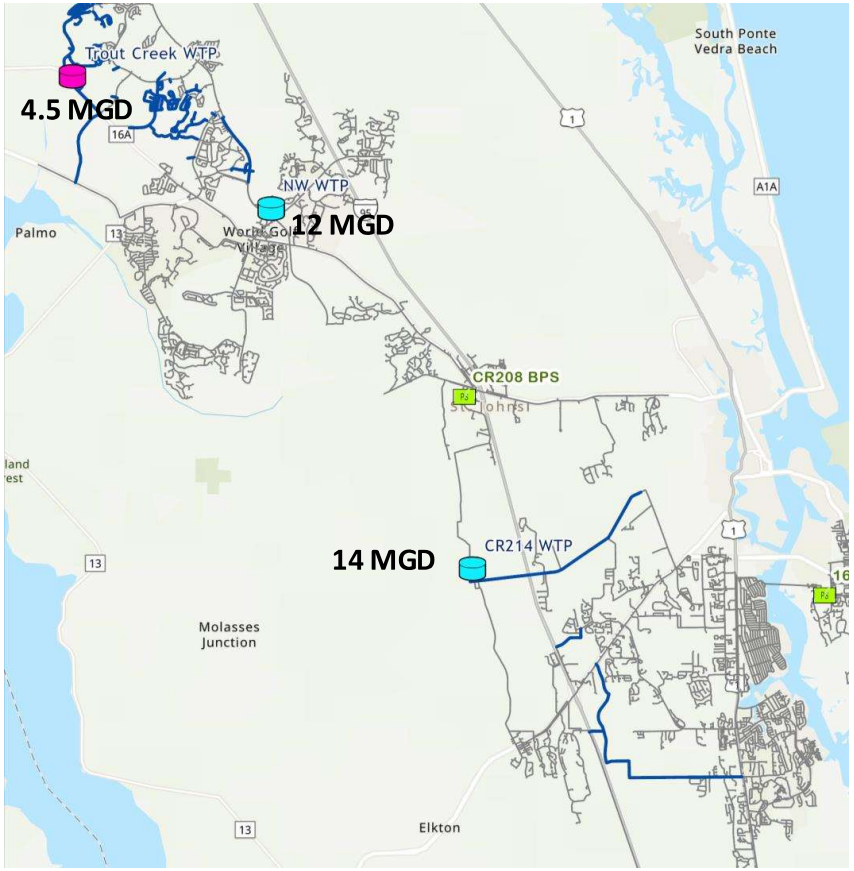
Summary

- Increases supply from CR214 WTP to meet future demands with current transfer constraint
- Requires major piping upgrades downstream of CR214 WTP
- Require significant investment at CR214 WTP
- Requires additional wells in degrading wellfield

Impacts

- Pushes out Trout Creek WTP to 2035
- Existing transfer (2 MG) provides operational flexibility



Capacity MDF

Key Takeaways

- Transfer capacity is an immediate constraint
- All alternatives require NW WTP to reach build-out of 12 MGD (MDF) by 2045
- All alternatives require Trout Creek WTP
- Heaviest investment is in near-term window (~95% of improvements needed before 2035)
- Groundwater production and quality at Trout Creek WTP critical to short term plan
- Groundwater production and quality AI / west / northwest of CR214 is critical to long term strategy

Cost and Sensitivity Analysis

JonesEdmunds

Alternative	Original Total Cost	Well Cost Reduction[1]	Pipeline Cost Reduction[2]	Revised Total Cost
Alt 1 (New Al WTP)	$257,875,000	$43,750,000	$0	$214,125,000
Alt 2 (Trout Creek WTP Only)	$236,656,688	$37,500,000	$45,203,344	$153,953,344
Alt 3 (West WTP)	$377,339,500	$37,500,000	$45,857,250	$293,982,250
Alt 4 (Expand CR 214 WTP)	$309,839,500	$25,000,000	$25,232,250	$259,607,250

[1] Well production rates increased by 50%

[2] Pipeline costs decreased by 50%

Constraints & Drivers (C&Ds) Assessment

- Use our collective knowledge to identify C&Ds
- Would C&Ds prevent SJCUD from implementing the lowest-cost near-term alternative?
- Screening level evaluation

Modified Methodology

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Create a risk register to quantify potential cost impacts (risk)

- Identify C&Ds that could impacts each alternative
- Define potential mitigation measures to overcome constraint
- Assign potential **magnitude (risk)** of mitigation measure (screening level)

Evaluate non-cost C&Ds factors

- Create a list of non-cost factors
- Assign weights of importance
- Score each factor

Risk Register

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(Cost in $Millions)

C&D	Location	Description	Description of Potential Remedy	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Concentrate Disposal	Anastasia Island WTP	Surface water discharge is not permittable in the future	Deep well injection	$40	$0	$0	$0
	West WTP			$0	$0	$40	$0
	CR214 WTP			$40	$40	$40	$40
Groundwater Withdrawals	Anastasia Island WTP	There are private wells located near the potential WTP that would likely need mitigation of the impacts from a new wellfield	Mitigate private wells by extending drop pipes and installing new pumping equipment	$4	$0	$0	$0
	All	Upper Floridan withdrawals will increase MFL impacts to Keystone Heights lakes and the Santa Fe and Ichetucknee MFLs.	Buy into a regional project with other utilities	$13	$10	$13	$10
	Trout Creek WTP	There are private wells located near the potential WTP that would likely need mitigation of the impacts from a new wellfield	Mitigate private wells by extending drop pipes and installing new pumping equipment	$1	$1	$1	$1
Land Acquisition	All	Land availability for increased number of wells	Utilize additional ROW and acquire additional land for wells and utility route from wells to plant	$11	$7	$11	$8
Operations	CR214 WTP	Higher pressures in Mainland/AI system require additional local improvements	Install local improvements	$1	$1	$1	$1
Resilience/ Reliability	CR214 WTP	Existing transfer is a single point of failure	Build redundant transfer line	$22	$0	$0	$0
	CR214 WTP	Relies on single river crossing	Install new river crossing	$0	$15	$15	$15
			Total ($M)	**$133**	**$74**	**$120**	**$75**

Cost Sensitivity Analysis (Rank)

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Alternative	Original Total Cost	Revised Total Cost[a,b]	Potential Risk
Alt 1 (New AI Plant)	$258 (2)	$214 (2)	$133 (4)
Alt 2 (TC Only)	$237 (1)	$153 (1)	$74 (1)
Alt 3 (West WTP)	$377 (4)	$294 (4)	$120 (3)
Alt 4 (Expand CR 214)	$310 (3)	$260 (3)	$75 (2)

[a] *Well production rates increased by 50%*

[b] *Pipeline costs decreased by 50%*

Non-Cost Factors

JonesEdmunds

Alternative	Original Total Cost	Revised Total Cost[a,b]	Potential Risk	Non-Cost Factors
Alt 1 (New AI Plant)	$258 (2)	$214 (2)	$133 (4)	?
Alt 2 (TC Only)	$237 (1)	$153 (1)	$74 (1)	?
Alt 3 (West WTP)	$377 (4)	$294 (4)	$120 (3)	?
Alt 4 (Expand CR 214)	$310 (3)	$260 (3)	$75 (2)	?

[a] *Well production rates increased by 50%*

[b] *Pipeline costs decreased by 50%*

Approach to Non-Cost C&D Factors

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Factor Rank

- Rank each C&D factor from high to low

Alternative Score

- Assign each alternative a score of 0, 1, or 2 for each factor

Factor Weighted Score

- Team Rank x Factor Score

Alternative Rank

- Sum all Factor scores for each alternative and Rank

Factors – Rank from Highest to Lowest	
	Adjustable for Population Growth/Changes in Demand
	Operational Benefits
	Staffing
	Future Water Supply Opportunity
	Future Regulatory Risk (Not concentrate)
	Funding/Bonding
	Constructability
	Vulnerability
	Long-term Wellfield WQ Confidence

Non-cost factors

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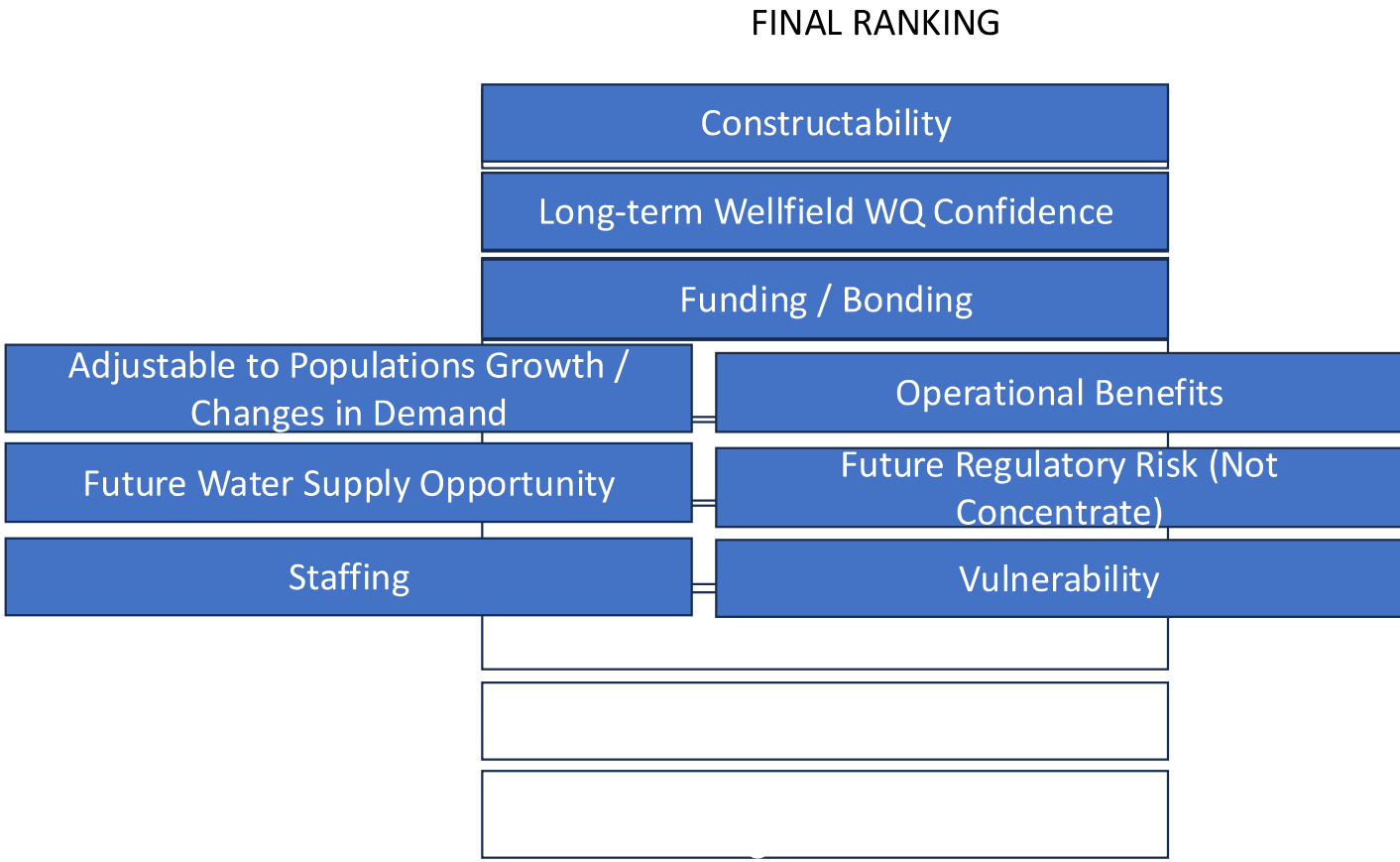

Factors and Scoring Descriptions

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Factor	Scoring Description
Adjustable for Population Growth/Changes in Demand	(2) Flexible in AI/214 + NW
	(1) Flexible in one service area
	(0) No Flexibility
Operational Benefits	(2) Most Benefit
	(1) Some Benefits
	(0) No Benefits/Risky
Staffing	(2) Minimal staffing
	(1) Part time staffing
	(0) Full time staffing
Future Water Supply Opportunity	(2) Surface Water
	(1) Direct Potable Reuse
	(0) None
Future Regulatory Risk (Not concentrate)	(2) Most adaptable to future regs
	(1) Minor improvements needed to adapt to future regs
	(0) Could be at risk if future regs are passed

Factors and Scoring Descriptions

JonesEdmunds

Factor	Scoring Description
Funding/Bonding	(2) Straight forward financing
	(1) Creative Financing Needed
	(0) Not Feasible
Constructability	(2) Schedule can be met
	(1) Creative Scheduling Needed
	(0) Not Feasible
Vulnerability	(2) Most resilient to climate challenges
	(1) Outside Evac Zone, but flooding could be issue
	(0) Hurricane Evac Zone, Susceptible to Sea Level Rise
Long-term Wellfield WQ Confidence	(2) More Confident
	(1) Less Confident
	(0) No Confidence

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Adjustable for Population Growth/Changes in Demand	(2) Flexible in AI/214 + NW	2	1	1	1
	(1) Flexible in one service area				
	(0) No Flexibility				

Alt. 1 provides more flexibility to growth with water production facilities in all major service areas

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Operational Benefits	(2) Most Benefit	1	1	.5	.5
	(1) Some Benefits				
	(0) No Benefits				

Operating pressure – Alternative 1 (AI WTP) lowers pressures in Mainland System more than transmission improvements in Alternatives 2, 3 and 4

Other factors – O&M and operational complexity

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Staffing	(2) Minimal staffing	0	0.5	0	0.5
	(1) Part time staffing				
	(0) Full time staffing				

Traditional groundwater plants (Alt. 2) don't need full time staffing but still requires part time operator

Each plant will need new staffing

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Future Water Supply Opportunity	(2) Surface Water	1	2	2	1
	(1) Direct Potable Reuse				
	(0) None				

Alternatives with RO (Alt 1 and 4) are closer to being able to adapt DPR and Alternative 3 has the ability to adapt to surface water in the future

Alternative 2 has the ability to expand groundwater to NW (look at sensitivity)

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Future Regulatory Risk (Not concentrate)	(2) Most adaptable to future regs	2	1	2	2
	(1) Improvements needed to adapt to future regs				
	(0) Could be at risk if future regs are passed				

RO facilities (Alt 1, 3, 4) have a higher capacity to meet current and future drinking water standards than conventional groundwater treatment systems

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Funding/Bonding	(2) Supported by current rates	1.5	2	0	0
	(1) Requires moving and adjusting priorities (Creative Financing Needed)				
	(0) Rate Increase needed				

Alternatives that have higher overall costs will require additional bonding. Alt 1 and 2 costs have lower cost and fit better into current financial plan.

Bonding capacity in the window / requires rates increase

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Constructability	(2) Schedule can be met	0.5	2	0.5	1
	(1) Aggressive Scheduling Needed				
	(0) Schedule not possible				

Alternative 2 is likely the easiest to meet the schedule. All other alternatives will require more aggressive delivery

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Vulnerability	(2) Most resilient to climate challenges	0	2	1	2
	(1) Outside Evac Zone, but flooding could be issue				
	(0) Hurricane Evac Zone, Susceptible to Sea Level Rise				

Water production facilities near coast (Alt 1) and SJR (Alt 3) are likely more vulnerable to long term climate change and flooding

Factor Scoring

JonesEdmunds

Factor	Scoring Description	Alt 1	Alt 2	Alt 3	Alt 4
Long-term Wellfield WQ Confidence	(2) More Confident	1	2	1	0.5
	(1) Less Confident				
	(0) No Confidence				

Wellfields that are in northwest part of County (Alt 2) have a higher likelihood of having better water quality at comparable pumping rates

Initial Ranks and Weighted Scores (Higher is Better)

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Factor	Rank of Importance	Scoring Description	Raw Score				Weighted Score			
			Alt 1	Alt 2	Alt 3	Alt 4	Alt 1	Alt 2	Alt 3	Alt 4
Adjustable for Population Growth/Changes in Demand	7	(2) Flexible in AI/214 + NW	2	1	1	2	14	7	7	14
		(1) Flexible in one service area								
		(0) No Flexibility								
Operational Benefits	6	(2) Most Benefit	2	1	1	1	12	6	6	6
		(1) Some Benefits								
		(0) No Benefits/Risky								
Staffing	2	(2) Minimal staffing	0	1	0	0	0	2	0	0
		(1) Part time staffing								
		(0) Full time staffing								
Future Water Supply Opportunity	5	(2) Surface Water	1	0	2	1	5	0	10	5
		(1) Direct Potable Reuse								
		(0) None								
Future Regulatory Risk (Not concentrate)	1	(2) Most adaptable to future regs	2	1	2	2	2	1	2	2
		(1) Improvements needed to adapt to future regs								
		(0) Could be at risk if future regs are passed								
Funding/Bonding	4	(2) Straight Forward Financing	1	2	0	0	4	8	0	0
		(1) Creative Financing Needed								
		(0) Not Feasible								
Constructability	8	(2) Schedule can be met	1	2	1	1	8	16	8	8
		(1) Aggressive Scheduling Needed								
		(0) Schedule not possible								
Vulnerability	3	(2) Most resilient to climate challenges	0	2	1	2	0	6	3	6
		(1) Outside Evac Zone, but flooding could be issue								
		(0) Hurricane Evac Zone, Susceptible to Sea Level Rise								
Long-term Wellfield WQ Confidence	9	(2) More Confident	1	2	1	1	9	18	9	9
		(1) Less Confident								
		(0) No Confidence								
		Non-cost Scoring Total	**10**	**12**	**9**	**10**	**54**	**64**	**45**	**50**

Initial Alternative Ranking

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Alternative	Non-Cost Weighted Score	Rank
Alt 1 - New AI WTP	54	2
Alt 2 - TC WTP Only	64	1
Alt 3 - West WTP	45	4
Alt 4 - Expand CR 214 WTP	50	3

Initial Screening

JonesEdmunds

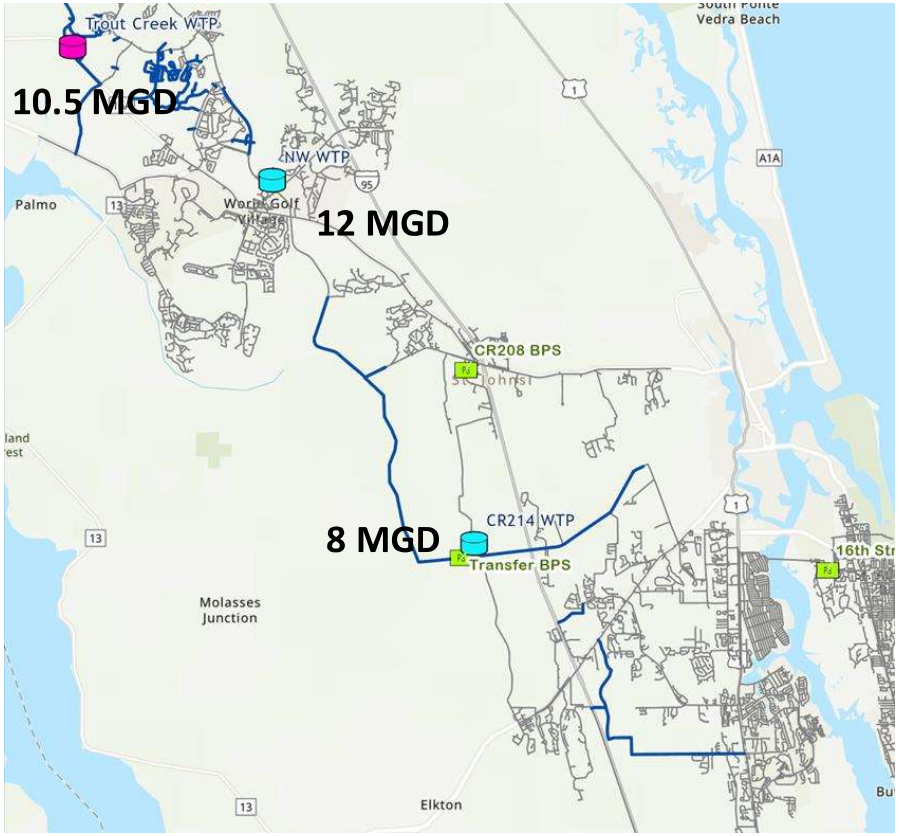
Alternative	Original Total Cost	Revised Total Cost[a,b]	Potential Risk	Initial Non-Cost Rank
Alt 1 - New Al WTP	$258 (2)	$214 (2)	$132 (4)	3
Alt 2 - TC WTP Only	$237 (1)	$153 (1)	$78 (1)	1
Alt 3 - West WTP	$377 (4)	$294 (4)	$124 (3)	4
Alt 4 - Expand CR 214 WTP	$310 (3)	$260 (3)	$79 (2)	2

[a] *Well production rates increased by 50%*

[b] *Pipeline costs decreased by 50%*

Summary

- Developing fresher groundwater in the NW is needed and preferrable based on cost
- Large near-term transmission improvements are required
- Groundwater production rates and water quality are risks and require mitigation through additional exploration of sources, land availability and MFL mitigation strategies



Capacity MDF

Immediate Plan (Next 10 yrs)

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Recommendations
Proceed with additional water sources in NW – Trout Creek
Initiate the implementation of major transmission improvements including BPS / blending facility near CR214 WTP
Explore groundwater quality and production (AI and West)
Determine CR214 WTP ultimate capacity (mitigates new transfer timing)
Continue to participate in MFL mitigation project and evaluate other alternatives
Monitor water quality at all wellfields. Build additional wells as needed to preserve water quality

Long-Term Strategy

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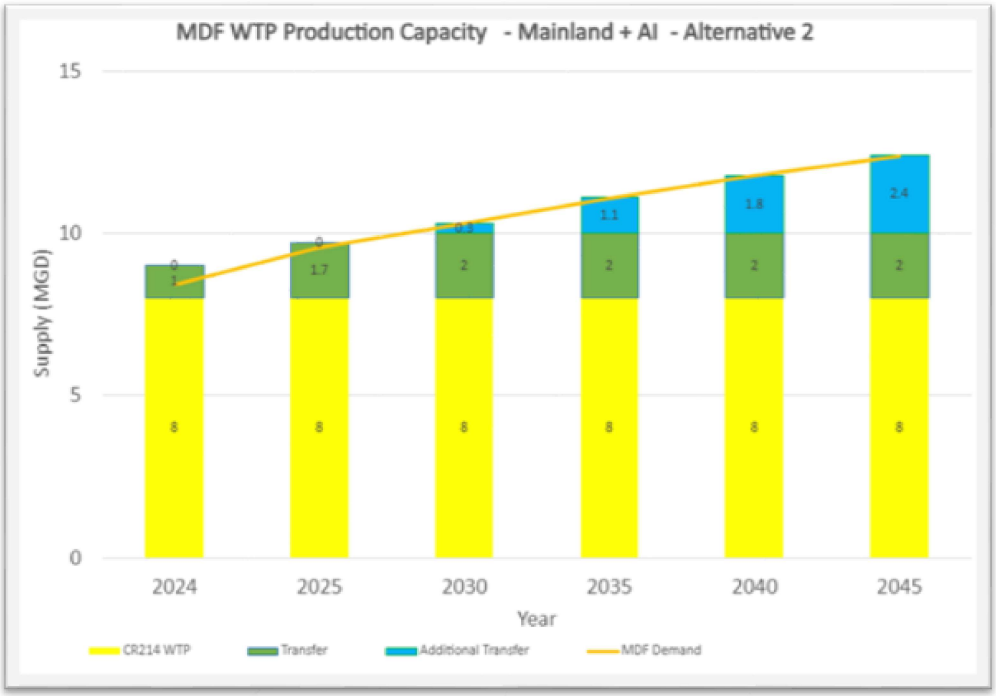
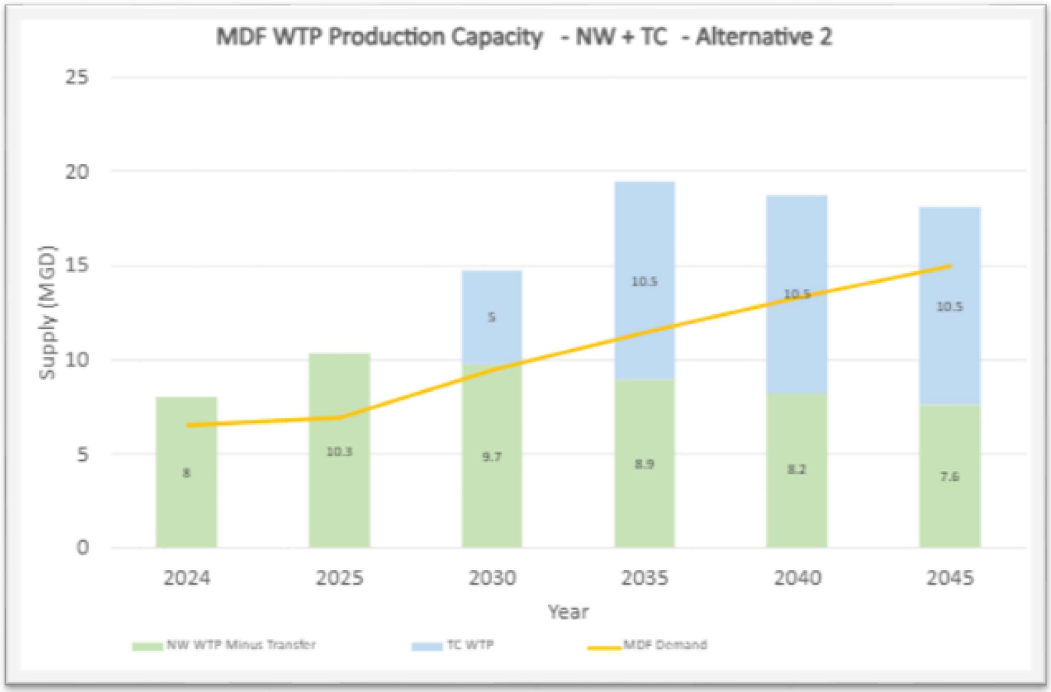
Recommendations
Identify next water production center (AI, West or River)
Evaluate funding long term MFL mitigation project or implement alternative water supplies
Plan land acquisition strategy around water supply sources
Fortify single points of failure in transmission and water production facilities

Alternative 2 – Demands vs. Capacity (MDF)





- Transfer is added to Mainland as capacity and subtracted from NW capacity

Alt. 2 Detailed Projects - 2025 to 2035

JonesEdmunds

Alternative 2 - Trout Creek Only

Time Frame	Project Name	Project Details	Cost
2025-2030	Trout Creek WTP	10.5 MGD MDF Capacity	$43,750,000
	NW Wells	Install 10 Wells	$31,250,000
	CR214 Wells	Install 5 Wells	$15,625,000
	Trout Creek Wells	Install 3 Wells	$9,375,000
	SW Mainland Looping (I-95 to Watson Rd Improvements)	1,629' of 24" Piping and 28,633' of 16" Piping	$23,307,375
	Additional Transfer Line (Robinson Tract)	42,605' of 20" Piping	$39,942,188
	16th BPS Improvements	Two new HSPs and VFD implementation on all 4 pumps	$3,125,000
	Additional Transfer BPS and Blending near CR214	BPS to boost additional transfer to meet pressure downstream of CR214	$15,000,000
2030 - 2035	NW Mainland Looping (Marketplace Dr. to Quesada Rd)	4,010' of 10" Piping	$1,503,750
	CR214 to Holmes Blvd Water Transmission Upgrade - Design/Build	22,803' 16" Piping Upgraded to 24"	$25,653,375
	Trout Creek Wells	Install 2 Wells	$6,250,000
	NW Wells	Install 2 Wells	$6,250,000
		2025-2035 Total	**$221,031,688**

St. Johns County Utility
Environmental Laboratory

CHAIN OF CUSTODY RECORD

Accreditation # E52485

A/C Balance

Facilty Name: Trout Creek							Collector 1 Jeff Hatcher					Project:		PH	TEMP
							Collector 2					Report #			
Phone: (904) 209-2687		Special Instructions: In House Sample					Matrix:		# of Containers	Container Type and Size	Preservation	Field Data		7.75	28.0
Fax: (904) 209-2747							Wastewater								
e-mail: jhatcher@sjcfl.us							Surface								
Preservation: I= Ice S= Sulfuric Acid N= Nitric Acid							Potable								
Container Type: P= Plastic G= Glass AG= Amber glass V= Vial							Groundwater	X							
T= Thio-bag AP= Amber Plastic							Other								
Field ID	Sample ID	Date	Time	Comp	Grab	Location Description						Analysis Requested			
Well #1	25-05254	6/24/2025	1:03		X	Trout Creek Well #1						Anion Cation Balance			
Comments: 10.3°C ; pH: 1.6															
pH < 2 ~~□~~ Yes □ No		Preservative Added HNO3				Date: 6-25-25		Note:All sample analysis are based on wet weight unless otherwise noted.							
						Time: 1406									
Relinquished By (Signature):						Date: 6/24/2025		Received By (Signature):				Receiving Laboratory: St. Johns County Utility Environmental Lab.			
						Time: 1:50									
Relinquished To Lab By (Signature):						Date:		Received To Lab By (Signature):							
						Time:									

Page ____ of ____

COC-202501386

Sample Receipt Checklist

For Report # CoC-202501386

Please record the temperature of the samples requiring thermal preservation.

Sample # **25-05254** through **25-05254** Thermometer Used: T7 Temperature °C 10.30 pH 1.60

Did you label the bottles and the COC with the Sample ID Number?	Yes	X	No	
Did the client fill out the COC completely?	Yes	X	No	
Location, date, and time of sample collection	Yes	X	No	
Name of Collector	Yes	X	No	
Container Type and size	Yes	X	No	
Preservation type	Yes	X	No	
Sampe matrix type	Yes	X	No	
Was acidification date and time noted?	Yes	X	No	
Are the samples collected in the appropriate containers?	Yes	X	No	
Are the samples in hold for the test requested?	Yes	X	No	
Is there enough of the sample to analyze all parameters requested?	Yes	X	No	
Are the samples preserved properly?	Yes	X	No	
Are the sample containers intact?	Yes	X	No	

Preservation Type	**Storage Location**	**Comments**
I, N	Refrig #8	

St. Johns Utility Environmental Laboratory
3930 Inman Rd, St. Augustine, FL 32084
Phone: (904) 209-2667 Fax: (904) 209-2668

Certification # E52485

LABORATORY REPORT

Test Results For: SJC Utility Dep

Received Date: 6/24/2025

Report #: CoC-202501386

DATA RESULTS

Lab#	Site	Date Collected	Time Collected	Method	Analyte	Result	Qualifier/DF/MDL/PQL	Units	Analyst	Date	Time
25-05254	Well #1	6/24/2025	1:08 pm	EPA 310.2	Alk_HCO3	105		mg/L	amg	6/30/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 310.2	AlkCO3	7.69	U / DF 1 / 7.69 / 38.45	mg/L	amg	6/30/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	Cl SM 4500E-2011	Cl SM 4500E-2011	30.423		mg/L	amg	7/3/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 120.1	Cond-L	976		µMHO@25°C	bcm	6/25/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	ASTM D516-90	SO4 DW	385.660	i / DF 20 / 82 / 410	mg/L	amg	6/25/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	SM 2540C-2015	TDS	690		mg/L	jad	6/30/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 200.7	Ca	94		mg/L	mpc	6/27/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 200.7	Fe	0.1993		mg/L	mpc	6/27/2025	
Test Comments:											

Qualifiers:

K = Actual value is less than reported value

Q = Sample analyzed outside of holding time

J^ = SJCUEL is not accredited for this method. Data is for process control only

U - Under the method detection limit

Y = Analysis from unpreserved or improperly preserved sample

B = Results based on colony counts outside of acceptable range

DF=Dilution Factor / MDL=Method Detection Limit / PQL = Practical Quantification Limit

J = Questionable data / see comments

i = The result is between the LOD and LOQ. DEP allows values with an "i" qualifier to be reported at the MDL level.

V = Analyte was detected in both the sample and method blank

Data Accuracy Uncertainty: Samples are analyzed with method required calibration and QA/QC samples whenever applicable. Both calibration and QA/QC samples are used to establish method performance. The validity and certainty of the reported sample results are established by method performance and quality control data. If requested, this data can be provided along with sample results. The applicable method and QA/QC data ascertain data accuracy and certainty. This report shall not be reproduced except in full, without the written approval of the laboratory. This report meets all TNI Standards. SJCUEL is a TNI Certified Facility and is compliant with all requirements and specifications. Contact person is Kevin Johns @ 904-209-2662. ***SJCUEL is always looking to improve our service. If you have any suggestions, comments or any other feedback please let us know by calling 904-209-2662. Or email kjohns@sjcfl.us***

Laboratory Supervisor: 

Date 7/16/2025

St. Johns Utility Environmental Laboratory
3930 Inman Rd, St. Augustine, FL 32084
Phone: (904) 209-2667 Fax: (904) 209-2668

Certification # E52485

LABORATORY REPORT

Test Results For: SJC Utility Dep

Received Date: 6/24/2025

Report #: CoC-202501386

DATA RESULTS

Lab#	Site	Date Collected	Time Collected	Method	Analyte	Result	Qualifier/DF/MDL/PQL	Units	Analyst	Date	Time
25-05254	Well #1	6/24/2025	1:08 pm	EPA 200.7	K	3.3498		mg/L	mpc	6/27/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 200.7	Mg	58.2		mg/L	mpc	6/27/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	EPA 200.7	Na	14.344		mg/L	mpc	6/27/2025	
Test Comments:											
25-05254	Well #1	6/24/2025	1:08 pm	SM 2340B-2011	Hardness	474		mg/L	mpc	7/1/2025	
Test Comments:											

Qualifiers:

K = Actual value is less than reported value

Q = Sample analyzed outside of holding time

J^ = SJCUEL is not accredited for this method. Data is for process control only

U - Under the method detection limit

Y = Analysis from unpreserved or improperly preserved sample

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Laboratory Supervisor: 

Date 7/16/2025

MAP SHOWING A TOPOGRAPHIC SURVEY OF THE FUTURE TROUT CREEK WATER TREATMENT PLANT, OFFICIAL RECORDS BOOK 6144, PAGE 785 OF THE CURRENT PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA, ALSO LYING IN SECTION 2, TOWNSHIP 6 SOUTH, RANGE 27 EAST, OF SAID COUNTY.
FOR: ST. JOHNS COUNTY UTILITY DEPARTMENT

SURVEYORS NOTES:

1. THIS IS NOT A BOUNDARY SURVEY. PROPERTY AND RIGHT OF WAY LINES SHOWN HEREON ARE APPROXIMATE ONLY AND DO NOT CONSTRUE OWNERSHIP.
2. NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
3. NO UNDERGROUND UTILITIES, INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED, EXCEPT AS SHOWN.
4. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHT OF WAY AND/OR OWNERSHIP WERE FURNISHED THIS SURVEYOR, EXCEPT AS SHOWN.
5. BEARING DATUM BASED ON STATE PLANE COORDINATES, FLORIDA EAST ZONE, IN UNITS OF US SURVEY FEET, REFERENCE TO THE NAD 83/2011. ST. JOHNS COUNTY GEODETIC NETWORK CONTROL POINTS 13-2 AND 13-9 BEARING S59°16'28"E AND THE NORTHEASTERLY RIGHT OF WAY LINE OF COUNTY ROAD 16A BEARING N44°38'53"W.
6. THIS IS A TOPOGRAPHIC SURVEY.
7. THE ACCURACY OF THIS SURVEY MEETS THE REQUIREMENTS FOUND IN STANDARDS OF PRACTICE AND IS PREMISED ON THE EXPECTED USE OF THE SURVEY. THE EXPECTED USE/PURPOSE OF THIS SURVEY IS TOPOGRAPHIC FOR DESIGN.
8. PIPE SIZE, MATERIAL AND INVERTS ARE AS BEST ASCERTAINED DUE TO FIELD CONDITIONS.
9. EVERY ATTEMPT WAS MADE IN THE FIELD TO IDENTIFY THE TREES ON THIS SURVEY BY SIZE AND SPECIES. NO DENDROLOGIST WAS ON STAFF AND THE IDENTIFICATION OF THE TREES IS OUTSIDE OUR EXPERTISE. THEREFORE THERE MAY BE MISIDENTIFIED TREES SHOWN ON THIS SURVEY.
10. TREES 8" DIAMETER OR LARGER AT DESIGNATED BREAST HEIGHT WERE LOCATED, PINE TREES WERE NOT LOCATED FOR THIS SURVEY.
11. ELEVATIONS BASED ON NAVD 88, US SURVEY FEET, IF ANY.
12. BENCHMARK BASIS: NGS PUBLISHED BENCHMARK N 482 ELEVATION = 21.31 FEET.
13. THE INTENDED FEATURES LOCATED AND SHOWN ON THIS SURVEY ARE ALL THOSE WITH ABOVE GROUND INDICATORS.
14. THE PROPERTY LINES AND RIGHT OF WAYS SHOWN ON THIS SURVEY ARE BASED ON, ADJOINING DEEDS, LOCALLY ACCEPTED FIELD MONUMENTATION, DRAWING FILE FROM DRMP AND RIGHT OF WAY MAP FOR STATE ROAD NO. 23, FINANCIAL PROJECT NO. 4229382 PREPARED BY DRMP INC.

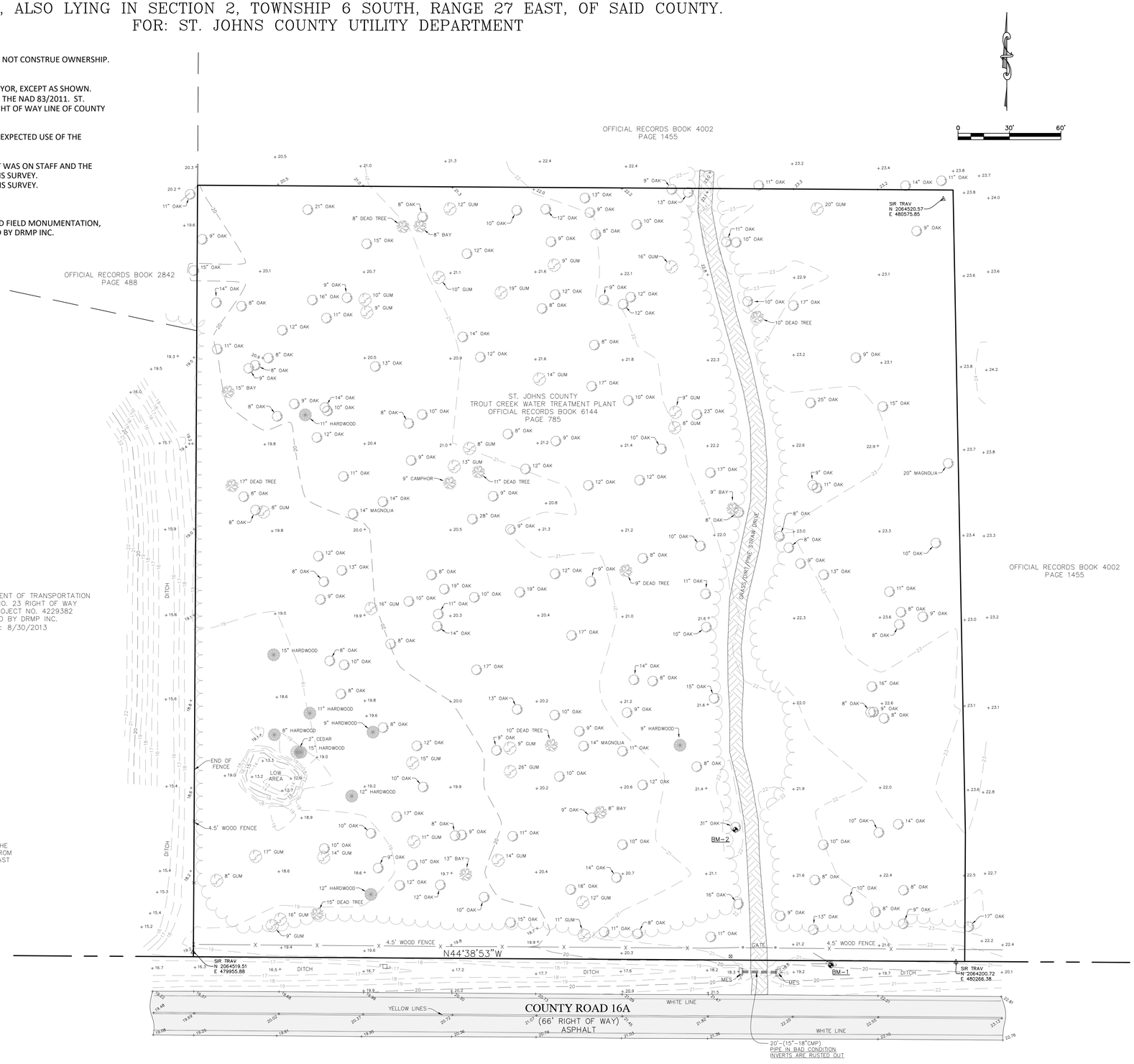
LEGEND

BM	BENCHMARK/VERTICAL CONTROL
×21.6	ELEVATION SHOT
	WOOD UTILITY POLE WITH GUY ANCHOR
	CONCRETE UTILITY POLE
⊠	TELEPHONE/CABLE RISER
●	WOOD POST
MES	MITERED END SECTION
CMP	CORRUGATED METAL PIPE
△	HORIZONTAL CONTROL/TRAVERSE POINT
SIR TRAV	SET 1/2" IRON ROD WITH RED CAP "SJC TRAV"
	TREE LINE
	RIGHT OF WAY

FLORIDA DEPARTMENT OF TRANSPORTATION
STATE ROAD NO. 23 RIGHT OF WAY
FINANCIAL PROJECT NO. 4229382
PREPARED BY DRMP INC.
DATED: 8/30/2013

BENCHMARK 1
LARGE MAGE SPIKE WITH DISK "ST. JOHNS COUNTY" SET ON THE SOUTHWEST FACE OF A WOOD UTILITY POLE; 30.5 FEET NORTHEAST FROM THE CENTERLINE OF COUNTY ROAD 16A; 200.0 FEET NORTHWEST FROM THE CENTERLINE OF A ROCK/DIRT DRIVE TO RESIDENCE NO. 7965; 43.2 FEET NORTHWEST FROM THE CENTERLINE OF A DIM WOODS ROAD WITH A CONCRETE HEADWALL ON BOTH SIDES.
ELEVATION = 22.95 (NAVD 88 FEET)

BENCHMARK 2
LARGE MAGE SPIKE WITH DISK "ST. JOHNS COUNTY" SET ON THE WEST FACE OF A 31 INCH OAK TREE; 8.9 FEET NORTHWEST FROM THE CENTERLINE OF A DIM WOODS ROAD; 110.5 FEET NORTHEAST FROM THE CENTERLINE OF COUNTY ROAD 16A
ELEVATION = 23.92 (NAVD 88 FEET)
N. 2064346
E. 480230



ST. JOHNS COUNTY LAND MANAGEMENT SYSTEMS
SURVEYING AND MAPPING DIVISION
500 SAN SEBASTIAN VIEW
ST AUGUSTINE, FLORIDA 32084
DONALD A. BRADSHAW P.S.M. NO. 5513
Phone (904) 209-0770 Email: dbradshaw@sjcfl.us

THIS DRAWING MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA STATE BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027 FLORIDA STATUTES; SUBJECT TO ALL NOTES AND NOTATIONS SHOWN HEREON.

AMENDMENTS

FUTURE TROUT CREEK WATER TREATMENT PLANT

TOPOGRAPHIC SURVEY
DATE: 12/11/2025
LAST FIELD DATE: DECEMBER 4, 2025

DRAWN BY: J.MANNING
FILE NUMBER: S-1387
SHEET NO. 1 OF 1

T:\Survey\LandProjects25\TROUT CREEK WATER TREATMENT PLANT\dwg\TROUT CREEK WATER TREATMENT PLANT-TOPO.dwg Plotted: 12/11/2025 7:53 AM By: Jim Manning

SJCUD Trout Creek Well Site

St. Johns County, Florida

DELINEATION REPORT

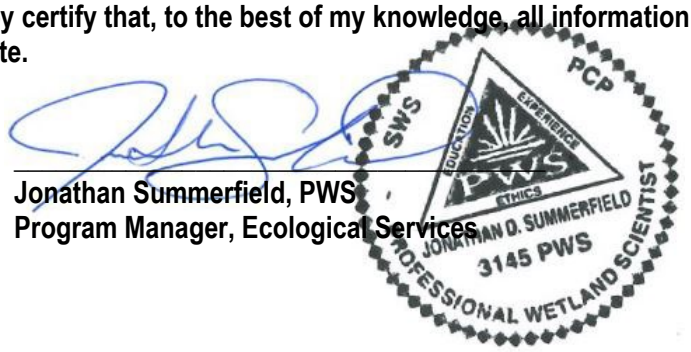
Prepared By

SES Environmental Resource Solutions LLC

3550 St. Johns Bluff Road South
Jacksonville, FL 32224

December 2025

I hereby certify that, to the best of my knowledge, all information contained in this report is true and accurate.



Jonathan Summerfield, PWS
Program Manager, Ecological Services

Introduction and Overview

This report summarizes the methodologies and results of wetland delineation efforts for the Trout Creek site located in St. Johns County, Florida. The site located north of County Road 16A, east of Hardwood Landing Road in St. Augustine, Florida.

Methodology

The boundaries of on-site aquatic resources, including forested wetlands, were established by SES Environmental Resource Solutions LLC (ERS) pursuant to the *Corps of Engineers Wetlands Delineation Manual* (1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0; November 2010), and Chapter 62-340, Florida Administrative Code.

ERS initially evaluated on-site site conditions in November 2025. As part of these efforts, ERS reviewed U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) soil maps, U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) Mapping, previous permit records, and topographic data.

ERS conducted a field delineation of the site, evaluating the landward extent of on-site wetlands by evaluating the vegetative composition of on-site habitats, hydric soil characteristics, and hydrology indicators, as defined in the *Corps of Engineers Wetlands Delineation Manual*, applicable regional supplements, *The Florida Wetlands Delineation Manual*, and NRCS *Field Indicators of Hydric Soils of the United States*. Utilizing the U.S. Army Corps of Engineers (USACE) and Florida Department of Environmental Protection (FDEP) methodologies for delineating wetlands, ERS placed flags along the boundaries of each wetland. These flags were located by ERS utilizing a GPS system rated for sub-meter accuracy.

General Site Information

The Trout Creek well site is located in an area of St. Johns County that was historically utilized for silvicultural purposes but has experienced significant development pressure in the past two decades. Several linear wetland systems and creeks carry regional run off to the south/southwest to Palmo Cove in the St. Johns River. The primary named wetland systems associated with the site is Trout Creek, located west of the site. The site is currently undeveloped and, like surrounding properties, utilized for silvicultural purposes.

Specific Site Conditions

The Trout Creek site generally slopes to the southwest toward Trout Creek, a traditional navigable water with regular flow. Upland habitat within the site is best described as Hardwood – Conifer Mixed (FLUCFCS 434), dominated by a canopy of slash pine (*Pinus elliottii*), loblolly pine (*Pinus taeda*), live oak (*Quercus virginiana*), water oak (*Quercus nigra)*, laurel oak (*Quercus laurifolia*), magnolia (*Magnolia grandiflora*), and sweetgum (*Liquidambar styraciflua*). Subcanopy and groundcover species include gallberry (*Ilex glabra*), highbush blueberry (*Vaccinium corymbosum*), saw palmetto (*Serenoa repens*), bracken fern (*Pteridium aquilinum*), deer moss (*Cladonia rangiferina*), broomsedge (*Andropogon virginicus)*, and sawtooth blackberry (*Rubus pensilvanicus*).

Wetlands within the Trout Creek site are best described as Wetland Forested Mixed (FLUCFCS 630) and include a canopy of slash pine, loblolly pine, tupelo (*Nyssa biflora*), sweetgum, and red maple (*Acer rubrum*). Subcanopy and groundcover species include maidencane (*Panicum hemitomon*), Virginia chain fern (*Woodwardia virginica*), netted chain fern (*Woodwardia areolata*), cinnamon fern (*Osmunda cinnamomea*), broomsedge, fetterbush (*Lyonia lucida*), and sawtooth blackberry. This wetland is located adjacent to man-made ditches located off-site. These ditches drain along the side of State Road 16 toward Trout Creek.

Wetland Boundary Determination

ERS staff took all parameters identified in the *Corps of Engineers Wetlands Delineation Manual* and *The Florida Wetlands Delineation Manual* into consideration during field delineation efforts based on existing site conditions. Rainfall conditions were taken into consideration during the delineation efforts as well.

Hydrophytic vegetation was documented in the on-site wetland, with a mix of hydrophytic and upland vegetation immediately uphill of the established wetland boundary. While USACE and FDEP vegetative indices differ, the boundaries of the delineations were not affected by these differences. USDA hydric soils and observed evidence of wetland hydrology were the primary indicators utilized to establish wetland boundaries.

Pursuant to the USACE delineation methodology, wetlands must exhibit all three indicators, vegetation, hydrology, and hydric soils, to be classified as a wetland. The delineated wetlands on each site meet these criteria.

FDEP utilizes specific tests to identify the landward extent of wetlands. Specifically, Chapter 62-340, F.A.C., outlines four sections for determining a wetland boundary. These are commonly referred to as the A, B, C, and D tests. Under these tests, FDEP reviews the same parameters used in USACE delineation, though some vegetative species indicators and hydrology indicators differ. Hydric soil classification is consistent between the agencies, utilizing the NRCS *Field Indicators of Hydric Soils of the United States.*

The FDEP delineation was established utilizing the B-test, which requires 80% of the vegetation within the wetland be obligate or facultative wet (using state vegetation lists) and have either a hydrology indicator (using state-defined hydrology indicators) or hydric soil. With regards to these sites, while some amounts of wetland vegetation extend above the wetland boundary, sufficient coverage to meet the 80% aerial coverage is not present. In addition, hydrology indicators and hydric soil indicators do not persist beyond the wetland boundary to require use of other tests under 62-340, F.A.C.

Jurisdiction

The delineated wetland is jurisdictional to FDEP. The wetland within the Trout River site is not directly connected to the adjacent off-site drainage ditches and should not be considered federally-jurisdictional.

Wildlife Considerations

A preliminary survey for faunal species listed as endangered, threatened, or of special concern by the U.S. Fish and Wildlife Service (FWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC) was conducted. The listed species survey also included the identification and mapping of habitat suitable for protected fauna.

In preparation for the field inspection, a Geographic Information System (GIS) database search and map review was conducted for the project corridor and surrounding areas for the occurrence of protected species or their habitat. Data compiled by the Florida Natural Areas Inventory (FNAI), which contains documented occurrences of species listed by FWS and/or FWC, were reviewed. Attention was focused on those species listed by FWC (Chapter 68A-27 F.A.C.) and FWS (50 CFR 17.11-12).

The field survey was conducted by a biologist with professional experience conducting assessments throughout Florida and southern Georgia. Noted species occurrence records from agency GIS data and areas suitable for listed species occupation were identified prior to the field survey and were investigated for the presence of those species during the site assessment. The GIS databases indicate no occurrence records of federal- or state-listed species within the project area or in the immediate vicinity.

Neither state- nor federally-listed fauna, nor their sign (e.g., scat, footprints, burrows, nests, etc.) were observed during the field survey. Additionally, no critical habitat for listed species was observed within the project area.

General Site Photos



Photo 1: General view of on-site uplands.



Photo 2: View of borrow area within wetland.



Photo 3: General view of wetland from southwest property corner.



SES Environmental Resource Solutions LLC
3550 St. Johns Bluff Rd S • Jacksonville, FL 32224
(904) 285-1397 • www.bbch-llc.com

Uplands / Wetlands

SJCUD: Trout Creek

St. Johns County, Florida

Project No:	123.25.008
Drawn By:	DF
Reviewed By:	DY
Approved By:	JDS
Date:	Dec 2025
EXHIBIT NUMBER	1

T:\Env\JAX_GIS\Projects\FY2026\SER\G123_26_008_SJCUD_PDB\SJCUD PDB.aprx

ST. JOHNS COUNTY UTILITY DEPARTMENT

ST. JOHNS COUNTY, FLORIDA

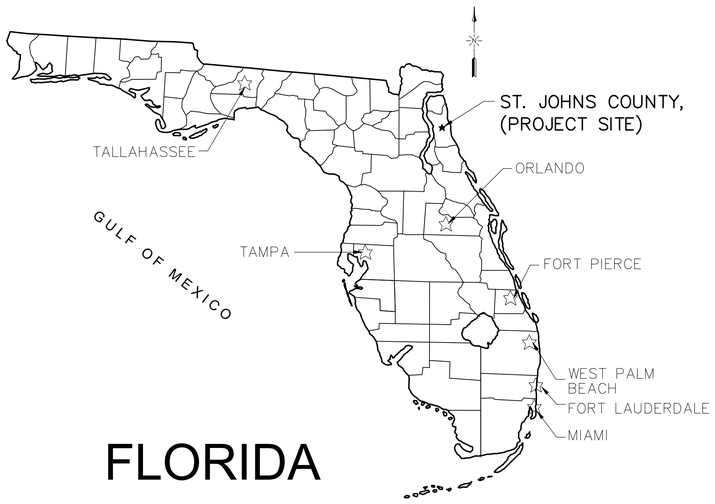
SJCUD PROJECT NO: XXXX-XXXX-XXXX-XXXX

TROUT CREEK TEST PRODUCTION AND EXPLORATORY WELLS

100% DESIGN

JANUARY 2026

7980 County Road 16A,
Saint Augustine, FL 32092



VICINITY PLAN
NTS



AREA MAP
NTS

CDM Smith
4651 Salisbury Road, Suite 420
JACKSONVILLE, FL 32256
TEL: 904-731-7109
FL. COA NO: EB-0000020
PROJECT NUMBER: 6334-253373

XREFs: [] Images: []
Last saved by: NGUYENFQ Time: 1/19/2026 1:40:01 PM
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INDEX OF SHEETS

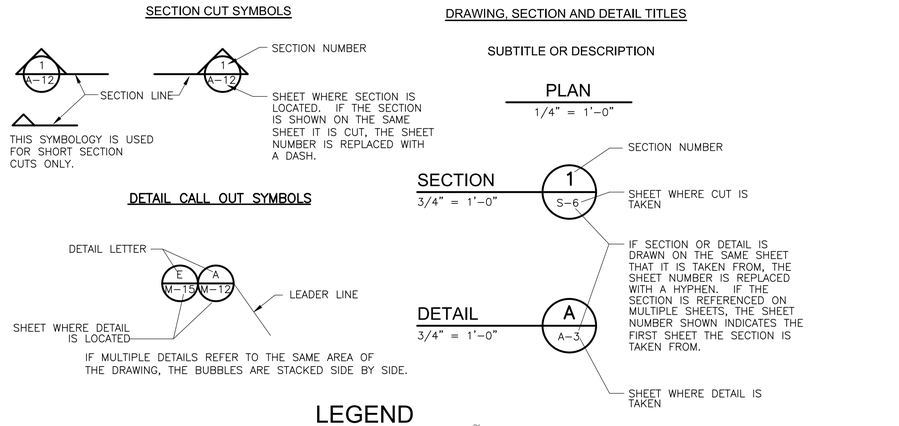
SHEET	TITLE
GENERAL	
G–0	COVER SHEET AND LOCATION MAP
G–1	GENERAL NOTES AND INDEX OF SHEETS
CIVIL	
C–1	TREE REMOVAL PLAN
C–2	SITE PLAN
C–3	WELL SECTIONS
CD–1	CIVIL DETAILS

GENERAL NOTES

GENERAL NOTES:

1. ALL UTILITY, SITE, AND WELL WORK SHALL COMPLY WITH THE ST. JOHNS COUNTY UTILITY DEPARTMENT (SJCUD) WATER, WASTEWATER, AND REUSE STANDARDS AND SPECIFICATIONS, JANUARY 2023, AND ALL APPLICABLE CONTRACT DOCUMENTS. ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITHIN THEIR RESPECTIVE SCOPES OF WORK.
2. EXISTING GROUND ELEVATIONS, UTILITY LOCATIONS, STRUCTURES, AND FEATURES SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. ALL SUBCONTRACTORS SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY THE DESIGN–BUILDER OF ANY DISCREPANCIES.
3. DIMENSIONS SHOWN ARE APPROXIMATE. SUBCONTRACTORS SHALL VERIFY DIMENSIONS AND FIELD CONDITIONS PRIOR TO COMMENCING WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DISCREPANCIES THAT COULD HAVE BEEN IDENTIFIED THROUGH REASONABLE FIELD VERIFICATION.
4. WELL DRILLING SUBCONTRACTOR AND CIVIL/SITE SUBCONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES ABOVE AND BELOW GROUND PRIOR TO EXCAVATION. UTILITY LOCATE REQUESTS SHALL BE MADE IN ACCORDANCE WITH SUNSHINE STATE ONE CALL REQUIREMENTS. COORDINATION SHALL BE THROUGH THE DESIGN–BUILDER.
5. ALL SUBCONTRACTORS SHALL PROTECT EXISTING UTILITIES, STRUCTURES, PAVEMENTS, AND FACILITIES DURING CONSTRUCTION. ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE RESPONSIBLE SUBCONTRACTOR'S EXPENSE.
6. CIVIL/SITE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL MEASURES, SITE ACCESS, CLEARING, GRADING, AND RESTORATION ACTIVITIES. MEASURES SHALL BE INSTALLED PRIOR TO GROUND DISTURBANCE AND MAINTAINED UNTIL FINAL STABILIZATION.
7. WELL DRILLING SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CLEAN AND EFFICIENT OPERATIONS OF DRILLING–RELATED CONVEYANCE ACTIVITIES, SUMPS, AND FLUID MANAGEMENT SYSTEMS WITHIN THE APPROVED LIMITS OF DISTURBANCE.
8. FLOODING, GROUNDWATER CONTROL, AND DEWATERING ASSOCIATED WITH CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR PERFORMING THE WORK, AND SHALL BE MANAGED TO PREVENT OFFSITE IMPACTS.
9. CIVIL/SITE SUBCONTRACTOR SHALL HAUL AWAY ALL EXCESS MATERIAL, UNSUITABLE SOILS, DEBRIS, AND WASTE GENERATED BY ITS WORK. MATERIAL NOT SUITABLE FOR REUSE AS BACKFILL SHALL BE DISPOSED OF AT APPROVED OFFSITE LOCATIONS.
10. WELL DRILLING SUBCONTRACTOR SHALL RESTORE DRILLING PADS, ACCESS AREAS, AND WORK ZONES TO EQUAL OR BETTER CONDITION THAN EXISTING UPON COMPLETION OF DRILLING AND TESTING, UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE DESIGN–BUILDER.
11. CIVIL/SITE SUBCONTRACTOR SHALL RESTORE ALL TRENCH BACKFILL, PAVEMENT, SHOULDERS, SWALES, AND DISTURBED AREAS IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND APPLICABLE STANDARDS. ALL TRENCH WORK WITHIN PAVEMENT SHALL BE RESURFACED TO FULL DEPTH OR AS SHOWN ON THE PLANS.
12. ALL SUBCONTRACTORS SHALL PROVIDE AND MAINTAIN OSHA–COMPLIANT BARRICADES, FENCING, AND TRAFFIC CONTROL DEVICES AS REQUIRED TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL. ACCESS TO NON–WORK AREAS SHALL BE RESTRICTED.
13. ALL DISTURBANCE SHALL BE CONFINED TO SJCUD PROPERTY, RIGHTS–OF–WAY, OR UTILITY EASEMENTS SHOWN ON THE PLANS.
14. CIVIL/SITE SUBCONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT ACCESS IMPROVEMENTS NECESSARY TO SUPPORT CONSTRUCTION ACTIVITIES, INCLUDING STABILIZATION FOR WET OR SATURATED CONDITIONS, CONSISTENT WITH THE APPROVED PLANS AND SCHEDULE.
15. PROPERTY CORNERS, BENCHMARKS, AND SURVEY MONUMENTS WITHIN OR ADJACENT TO CONSTRUCTION LIMITS SHALL BE PROTECTED. CIVIL/SITE SUBCONTRACTOR SHALL REPLACE OR RESET ANY DISTURBED SURVEY MARKERS AT ITS EXPENSE.
16. EXISTING UTILITY SIZES, MATERIALS, AND LOCATIONS SHOWN ARE BASED ON RECORD INFORMATION. ALL SUBCONTRACTORS SHALL POTHOLE AND VERIFY UTILITIES AS REQUIRED TO SAFELY PERFORM THE WORK AND SHALL COORDINATE CONFLICTS THROUGH THE DESIGN–BUILDER.
17. ALL SUBCONTRACTORS SHALL COORDINATE WORK SEQUENCING THROUGH THE DESIGN–BUILDER TO MINIMIZE CONFLICTS, REWORK, AND IMPACTS TO COMPLETED WORK.
18. CIVIL/SITE SUBCONTRACTOR SHALL IMPLEMENT AND MAINTAIN BEST MANAGEMENT PRACTICES (BMPS) IN ACCORDANCE WITH THE APPROVED SWPPP UNTIL FINAL STABILIZATION IS ACHIEVED.
19. CIVIL/SITE SUBCONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITH SEED, OR DIRECTED BY THE DESIGN–BUILDER.

SECTION AND DETAIL NUMBERING SYSTEM



LEGEND

	NEW MAIN THIS PROJECT		NEW MAIN TO BE CONST. UNDER EXISTING UTILITY
10" F.M.	EXISTING FORCE MAIN		NEW MAIN TO BE CONST. OVER EXISTING UTILITY
T	EXISTING BURIED TELEPHONE		EXISTING WOOD UTILITY POLE
	EXISTING GATE VALVE		EXISTING CONCRETE UTILITY POLE
W	EXISTING AIR RELEASE VALVE		EXISTING LIGHT POLE
P	EXISTING POWER DUCTS OR CABLES	TH–1	SOIL BORING
O.H.P.	OVERHEAD POWER	BM	BENCH MARK
CATV	EXISTING CABLE TELEVISION	1	EXISTING CHAIN LINK FENCE
C.B. 15" S.S.	EXISTING STORM SEWER W/CATCH BASIN		NEW CHAIN LINK FENCE
F.H.	FIRE HYDRANT	12.00	EXISTING CONTOUR
MB	EXISTING MAIL BOX	12.00	PROPOSED CONTOUR
	EXISTING GUY WIRE & ANCHOR	12.00	EXISTING SPOT ELEVATION
ECB	EXISTING ELECTRICAL CONTROL BOX	12.00	PROPOSED SPOT ELEVATION
CO	EXISTING CLEANOUT		
	EXISTING BACKFLOW PREVENTER		NEW STRUCTURES
E	ELECTRICAL MANHOLE		ANTENNAE
	ELECTRICAL ACCESS COVER	W	WATER METER
	CONCRETE GUY POLE	WV	WATER VALVE
	HOSE BIB	W	WATERLINE MARKER
	PUMP	T	TELEPHONE RISER
	SIGN	S	SEWER VALVE
	TREE (AS NOTED)	D	DRAINAGE MANHOLE
	SPRINKLER	S	SANITARY MANHOLE
	RIGHT OF WAY	A	AIR RELEASE VALVE
	EASEMENT		LIMITS OF CLEARING
	EOP / EDGE OF PAVEMENT		FPL PULL BOX
	MILL & OVERLAY		BOLLARD
	TREE LINE		
	WETLAND		
	SILT FENCE		
	ASPHALT PAVEMENT REMOVAL AND RESTORATION		

ABBREVIATIONS

ADJUSTABLE	ADJ	ELEVATION	EL, ELEV	REQUIRED	REQ'D	MINIMUM	MIN
ALUMINUM	AL, ALUM	EDGE OF PAVEMENT	EOP	RESTRAINED JOINT	RJ	MOUNTED	MTD
ANGLE	<	NOMINAL	NOM	RIGHT OF WAY	R/W	SCHEDULE	SCH
BARE ROOT	BR	NOT TO SCALE	NTS	ROOM	RM	SECTION	SEC
BELOW	BEL	NUMBER	NO	EXISTING	EXIST	SHEET	SH, SHT
BENCHMARK	BM	ON CENTER	OC	FIBERGLASS REINFORCED PIPE	FRP	SIDEWALK	SDWK
BETWEEN	BTWN	OPTION	OPT	FINISH	FIN	SLIP–ON JOINT	SJ
CENTER LINE	℄	OPPOSITE	OPP	FLANGE	FLG	SQUARE	SQ
CENTER TO CENTER	CC	OPENING	OPNG	FLOOR	FL	STAINLESS STEEL	SS
CONCRETE	CONC	OR EQUAL	O/E	FURNISHED BY OTHERS	FBO	STANDARD	ST'D
CORRUGATED METAL PIPE	CMP	OUTSIDE CLEARANCE	OC	FEET/FOOT	FT	STEEL	STL
CENTER (ED)	CTR	PERFORATED	PERF	GALVANIZED STEEL PIPE	GSP	STEEL PIPE	SP
DESIGN/BUILDER	D/B	PIECE	PC	HIGH	H	SYMMETRICAL	SYMM
DIAMETER	DIA, DIAM	POINT	PT	HIGH POINT	HP	THICK	THK
DIAGONAL	DIAG	POLYETHYLENE	PE	HEIGHT	HT	TIED JOINT	TJ
DIMENSION	DIM	POLYVINYLCHLORIDE	PVC	LONG	LG	TYPICAL	TYP
DISCHARGE	DISCH	POUND(S)	LB(S)	LOW POINT	LP	TEMPORARY	TEMP
DRAWING	DWG	PLATE	PL	MATERIAL	MTL	UTILITY EASEMENT	UE
DUCTILE IRON PIPE	DIP	PRECAST	PRCST	MANUFACTURING	MFG	VERTICAL	VERT
DUCTILE IRON	DI	RADIUS	RAD, R	MANUFACTURER	MFR	WATER	WTR
EACH	EA	REINFORCED CONCRETE PIPE	RCP	MAXIMUM	MAX	WATER LEVEL	WL
				MECHANICAL	MECH	WATER MAIN	WM
				METAL	MET	WEATHERPROOF	WPF
				MECHANICAL JOINT	MJ	WEST	W
				METAL REINFORCED PLASTIC PIPE	MRPP	WITH	W/

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. OVERTON
DRAWN BY: F. NGUYEN
SHEET CHK'D BY: F. NGUYEN
CROSS CHK'D BY: L. SAMEL
APPROVED BY: J. OVERTON
DATE: JANUARY 2026

CDM Smith
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FL COA No. EB-0000020

ST. JOHNS COUNTY UTILITY DEPARTMENT
ST. JOHNS COUNTY, FLORIDA

TROUT CREEK TEST PRODUCTION AND MONITORING WELLS

GENERAL NOTES AND INDEX OF SHEETS

JAMES JEFFREY OVERTON LICENSE No 70362 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JAMES OVERTON
PE NO. 70362

PROJECT NO. 6334–305125
FILE NAME:

SHEET NO.
G-1

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XREFs: [CDMS_2436] Images: []
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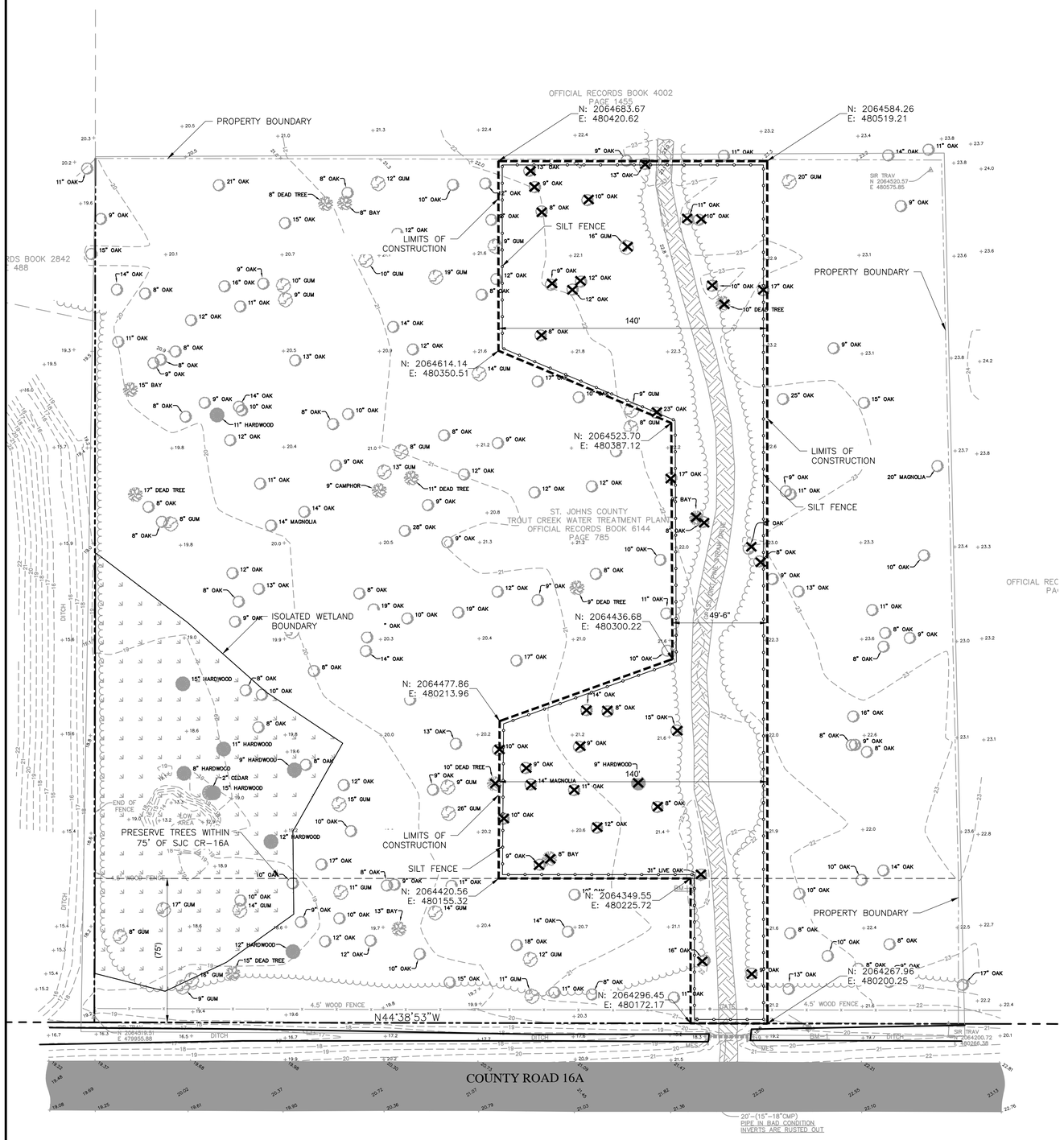

PLAN

1" = 30'-0"

TREE REMOVAL TABLE			
Point #	Description	Northing	Easting
364	9" OAK	2064292.0504	480212.9076
366	16" OAK	2064314.3146	480200.4868
371	15" OAK	2064409.0403	480275.3411
377	8" OAK	2064475.5858	480362.2326
378	9" BAY	2064479.5179	480361.2260
379	17" OAK	2064503.6273	480366.8653
380	23" OAK	2064533.2235	480385.3032
413	13" OAK	2064668.6883	480428.3755
414	9" OAK	2064660.6687	480424.4147
420	10" OAK	2064558.9589	480452.8648
421	17" OAK	2064538.3502	480470.0427
422	11" OAK	2064592.2393	480468.6360
423	16" GUM	2064604.7886	480435.8053
424	10" OAK	2064636.4563	480438.8424
428	12" OAK	2064608.9344	480406.3967
429	12" OAK	2064609.1680	480400.3707
430	9" OAK	2064618.9576	480394.1616
443	8" OAK	2064649.2913	480417.8716
444	8" OAK	2064604.1859	480371.6582
485	10" OAK	2064587.9900	480472.4516

TREE REMOVAL TABLE			
Point #	Description	Northing	Easting
486	13" OAK	2064628.4219	480473.4076
494	8" OAK	2064448.9611	480369.0260
495	8" OAK	2064440.3902	480368.2291
535	31" LIVE OAK	2064347.0646	480231.0360
563	9" HARDWOOD	2064403.8336	480241.8806
564	12" OAK	2064402.8237	480210.1245
565	8" OAK	2064388.0488	480239.9790
566	11" OAK	2064425.0351	480215.7566
567	14" MAGNOLIA	2064443.1885	480201.8454
614	9" OAK	2064451.0591	480206.1472
615	10" OAK	2064440.6597	480179.2532
617	10" OAK	2064467.9114	480202.6658
622	14" OAK	2064449.7818	480249.8931
623	9" OAK	2064439.1014	480233.5320
624	8" OAK	2064441.5081	480257.1322
659	8" BAY	2064408.9445	480181.3321
660	9" OAK	2064410.3441	480175.5742

Tree Requirements

Preserved Tree Inches (75' Buffer From ROW)

Tree ID	Tree Type	Caliper Inches
335	Oak	17
336	Oak	9
337	Oak	8
338	Oak	8
340	Oak	10
355	Oak	13
362	Oak	10
363	Oak	8
365	Oak	10
367	Oak	11
653	Oak	11
654	Gum	11
655	Oak	8
656	Gum	12
657	Oak	14
658	Oak	10
661	Oak	18
662	Gum	14
663	Oak	11
664	Oak	15
718	Bay	13
719	Oak	10
720	Oak	8
721	Oak	9
722	Oak	12
723	Gum	11
725	Oak	10
727	Oak	9
728	Hardwood	12
729	Oak	12
750	Oak	10
754	Oak	10
755	Gum	14
903	Gum	8
904	Gum	17
965	Gum	16
966	Gum	9
	Total	418

Required Tree Inches: Area

Lot Area Requirement	Inches
4.74 Acres @ 40"/Acre	190
LESS Preserved Tree Inches	418
Inches Required	0

40 inches/Acre requirement is satisfied

N

1" = 20'

10 0 20

GENERAL NOTES

1. CONTRACTOR SHALL CONFINE ALL CLEARING, GRADING, STAGING, AND DRILLING ACTIVITIES TO THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. NO WORK IS PERMITTED OUTSIDE THESE LIMITS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER AND OWNER.

JAMES JEFFREY OVERTON LICENSE No 70362 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JAMES OVERTON
PE NO. 70362

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. OVERTON
DRAWN BY: F. NGUYEN
SHEET CHK'D BY: J. OVERTON
CROSS CHK'D BY: L. SAMEL
APPROVED BY: J. OVERTON
DATE: JANUARY 2026

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4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

ST. JOHNS COUNTY UTILITY DEPARTMENT
ST. JOHNS COUNTY, FLORIDA

TROUT CREEK TEST PRODUCTION AND MONITORING WELLS

TREE REMOVAL PLAN

PROJECT NO. 6334-305125
FILE NAME:

SHEET NO.
C-1

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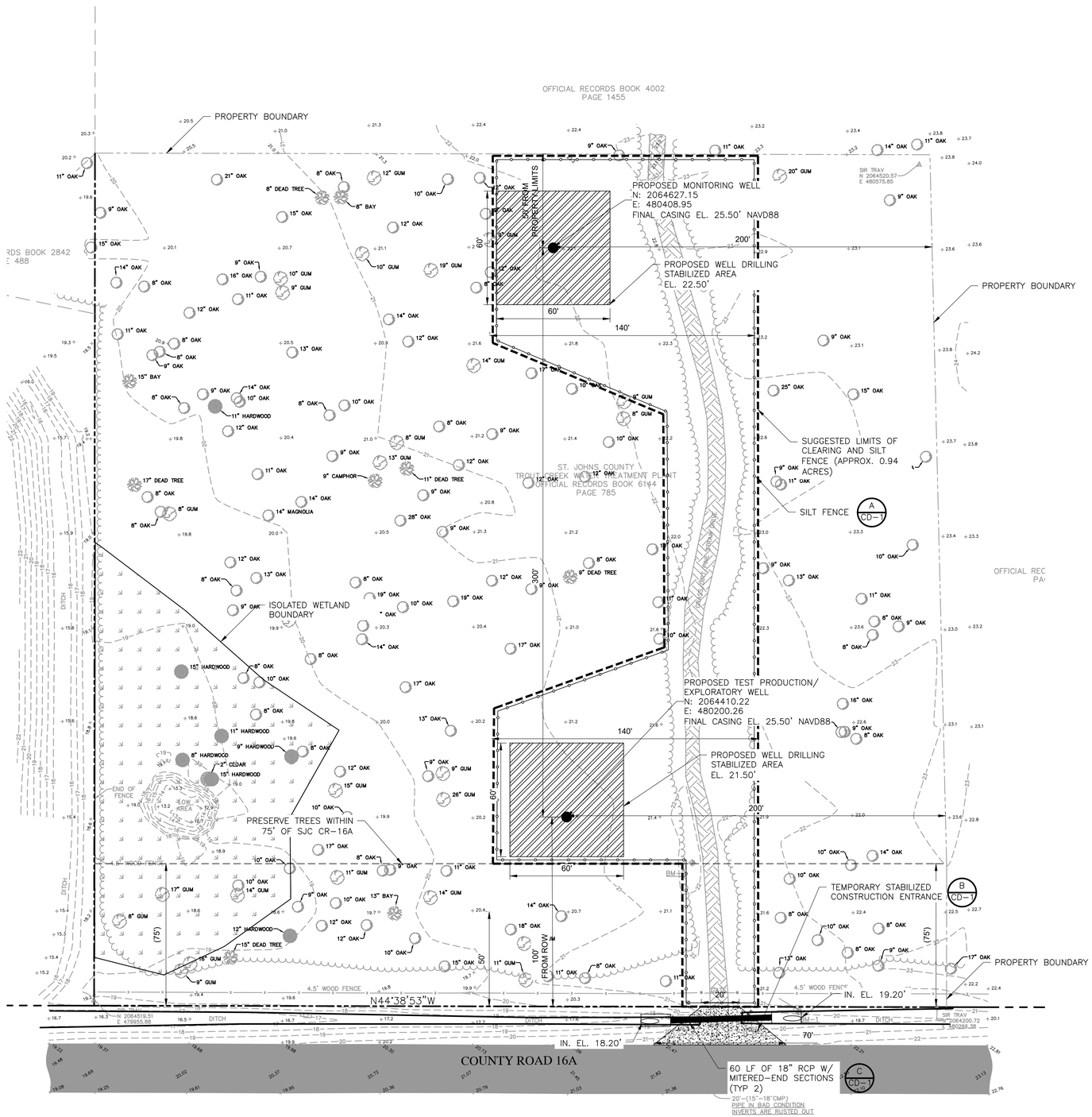

PLAN
1" = 30'-0"

SITE WORK & WELL DRILLING NOTES

1. WELL DRILLING SUBCONTRACTOR SHALL CONFINE ALL CLEARING, GRADING, STAGING, AND DRILLING ACTIVITIES TO THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. NO WORK IS PERMITTED OUTSIDE THESE LIMITS WITHOUT PRIOR WRITTEN APPROVAL FROM THE DESIGN-BUILDER.
2. CIVIL/SITE SUBCONTRACTOR, AS APPLICABLE, SHALL CONSTRUCT TEMPORARY ACCESS ROADS, WORK PADS, AND STAGING AREAS ONLY WITHIN THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. ACCESS IMPROVEMENTS SHALL BE REMOVED AND AREAS RESTORED UPON COMPLETION OF DRILLING ACTIVITIES UNLESS OTHERWISE DIRECTED BY THE DESIGN-BUILDER.
3. CIVIL/SITE SUBCONTRACTOR SHALL PERFORM CLEARING AND GRUBBING WITHIN THE APPROVED LIMITS OF CLEARING. PROTECTED VEGETATION AND WETLANDS OUTSIDE THESE LIMITS SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO MOBILIZATION AND SHALL NOT BE DISTURBED.
4. CIVIL/SITE SUBCONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO INITIATING CLEARING OR DRILLING ACTIVITIES AND THROUGHOUT CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE INSTALLED, INSPECTED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH THE APPROVED PLANS AND APPLICABLE REGULATORY REQUIREMENTS.
5. NO WETLAND IMPACTS ARE AUTHORIZED AS PART OF THIS WORK. ALL SUBCONTRACTORS SHALL MAINTAIN APPROPRIATE SETBACKS FROM WETLANDS AND SURFACE WATERS. ANY UNANTICIPATED CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE DESIGN-BUILDER, WHO WILL COORDINATE WITH THE ENGINEER AND OWNER.
6. CIVIL/SITE SUBCONTRACTOR SHALL CONSTRUCT DRILLING PADS AND ACCESS AREAS TO PROVIDE A LEVEL AND STABILIZED WORKING SURFACE CAPABLE OF SUPPORTING DRILLING EQUIPMENT, ASSOCIATED OPERATIONS, AND SAFE ACCESS.
7. WELL DRILLING SUBCONTRACTOR SHALL CONSTRUCT DRILLING SUMPS, SPOILS, AND FLUIDS MANAGEMENT FACILITIES WITHIN THE DESIGNATED WORK AREAS. ALL SPOILS AND ACCUMULATED FLUIDS SHALL BE REGULATED, CONTAINED, AND MANAGED IN ACCORDANCE WITH APPLICABLE PERMITS AND SPECIFICATIONS. NO MATERIALS SHALL BE STOCKPILED OUTSIDE APPROVED LIMITS OF DISTURBANCE.
8. CIVIL/SITE SUBCONTRACTOR SHALL PROVIDE TEMPORARY STABILIZATION MEASURES, INCLUDING AGGREGATE, MATS, GEOTEXTILE, OR OTHER APPROVED METHODS, AS NECESSARY TO MAINTAIN SAFE AND RELIABLE SITE ACCESS DURING WET OR SATURATED CONDITIONS. STABILIZATION MEASURES SHALL BE SUFFICIENT TO SUPPORT CONSTRUCTION TRAFFIC AND SHALL BE IMPLEMENTED AS NEEDED TO MAINTAIN THE APPROVED PROJECT SCHEDULE.
9. UPON COMPLETION OF DRILLING AND TESTING, CIVIL/SITE SUBCONTRACTOR SHALL RESTORE ALL DISTURBED AREAS NOT REQUIRED FOR PERMANENT FACILITIES TO EXISTING OR APPROVED GRADES. RESTORATION SHALL INCLUDE SEEDING, SODDING, OR OTHER STABILIZATION MEASURES AS SHOWN ON THE PLANS OR DIRECTED BY THE DESIGN-BUILDER.
10. WELL DRILLING SUBCONTRACTOR, IN COORDINATION WITH THE CIVIL/SITE SUBCONTRACTOR, SHALL VERIFY THE LOCATION OF PROPERTY BOUNDARIES AND LIMITS OF DISTURBANCE PRIOR TO COMMENCING WORK. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE DESIGN-BUILDER.
11. ALL SUBCONTRACTORS SHALL COORDINATE CLOSELY WITH THE DESIGN-BUILDER TO SUPPORT SEQUENCING OF DRILLING, TESTING, DEMOBILIZATION, AND SITE RESTORATION ACTIVITIES. MEANS AND METHODS SHALL BE PLANNED TO MINIMIZE REWORK AND AVOID IMPACTS TO COMPLETED WORK BY OTHERS.

N

1" = 20'
10 0 20

JAMES JEFFREY OVERTON
LICENSE
No 70362
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
JAMES OVERTON
PE NO. 70362

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. OVERTON
DRAWN BY: F. NGUYEN
SHEET CHK'D BY: F. NGUYEN
CROSS CHK'D BY: L. SAMEL
APPROVED BY: J. OVERTON
DATE: JANUARY 2026

CDM Smith
4651 Salisbury Road, Suite 420
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FL COA No. EB-0000020

ST. JOHNS COUNTY UTILITY DEPARTMENT
ST. JOHNS COUNTY, FLORIDA
TROUT CREEK TEST PRODUCTION AND MONITORING WELLS

SITE PLAN

PROJECT NO. 6334-305125
FILE NAME:
SHEET NO. C-2

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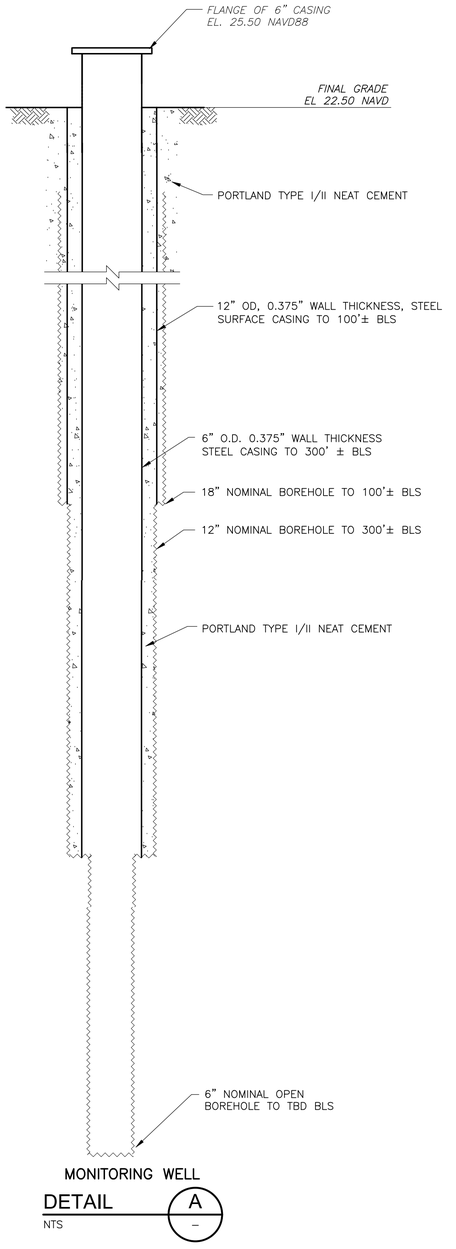


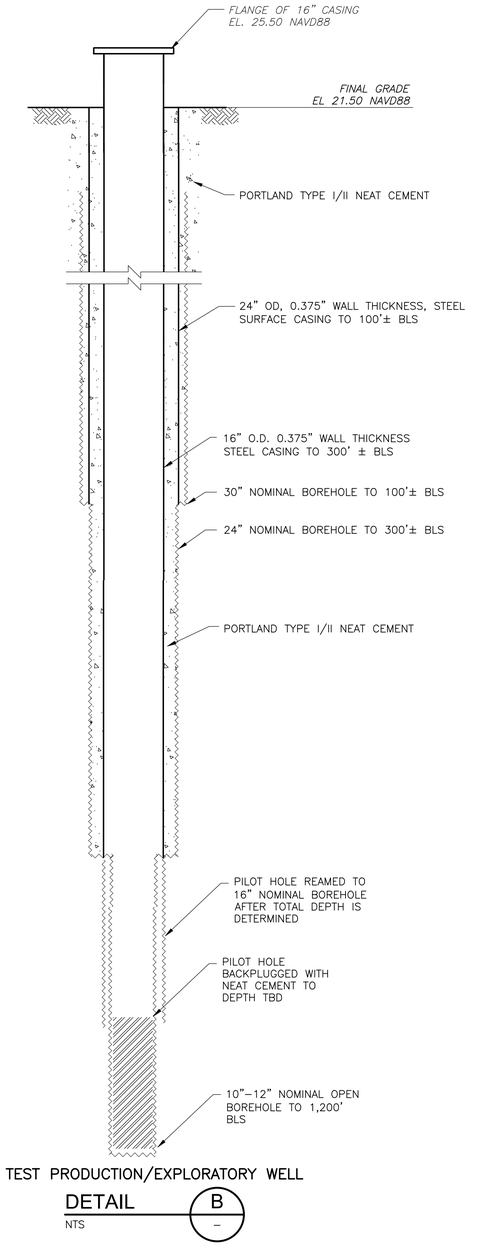
MONITORING WELL

DETAIL A

NTS

NOTES:

1. THE PROJECT SITE IS NOT IN A FLOOD–HAZARD ZONE AND THEREFORE DOES NOT HAVE A BASEFLOOD ELEVATION (BFE) PER THE NATIONAL FLOOD–HAZARD LAYER (NFHL) PROVIDED BY FEMA.



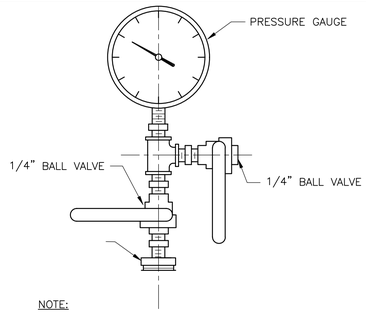
TEST PRODUCTION/EXPLORATORY WELL

DETAIL B

NTS

NOTES:

1. THE PROJECT SITE IS NOT IN A FLOOD–HAZARD ZONE AND THEREFORE DOES NOT HAVE A BASEFLOOD ELEVATION (BFE) PER THE NATIONAL FLOOD–HAZARD LAYER (NFHL) PROVIDED BY FEMA.



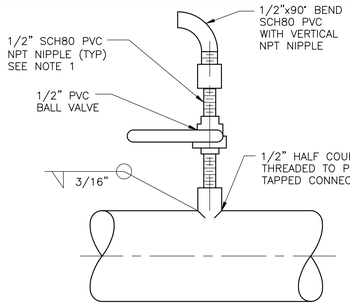
NOTE:

1. GAUGE SHALL BE ASHCROFT PLUS MODEL AC 35–1009SW–02L–60# OR APPROVED EQUAL.

PRESSURE GAUGE

DETAIL C

NTS



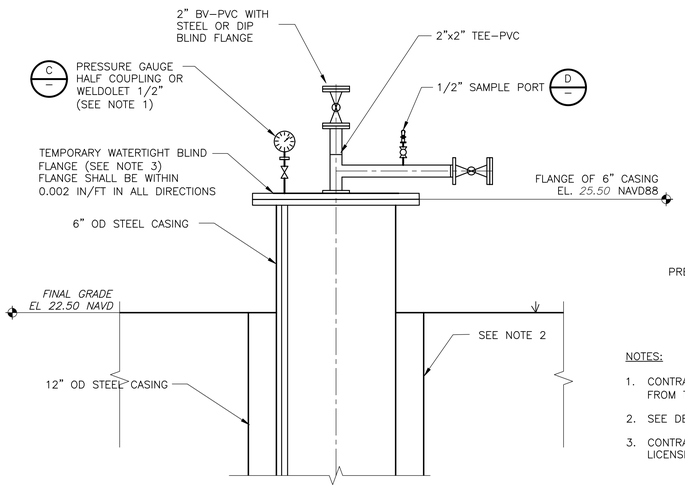
NOTE:

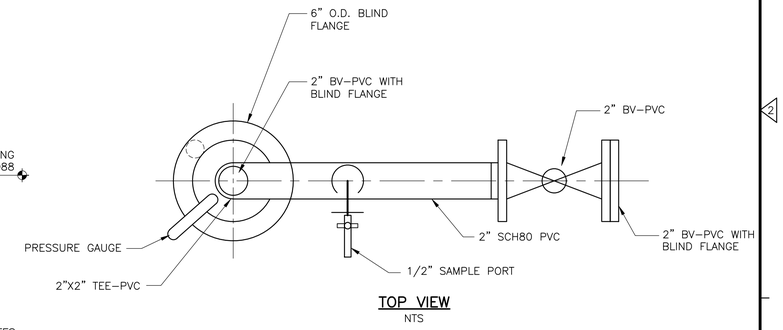
1. PIPE SHALL BE SCHEDULE 80 PVC WITH NTP (NATIONAL PIPE THREAD) FITTINGS AND FLANGES. 150 POUND CLASS BY SWAGELWOK, OR EQUAL. FLANGE GASKETS SHALL BE 1/16–INCH MINIMUM NEOPRENE. FLANGE BOLTS SHALL BE HEX–HEAD ASTM A193 GRADE B&M, AND NUTS SHALL BE HEX–HEAD ASTM A194 GRADE 8M. PIPE THREAD SEALANTS SHALL BE USED IN ACCORDANCE WITH THE FITTINGS MANUFACTURER, BUT SHALL NOT CONTAIN HAZARDOUS SUBSTANCES OR DELETERIOUS COMPOUNDS THAT WOULD CAUSE A VIOLATION OF WATER QUALITY HEALTH–EFFECTS STANDARDS IF SUBSEQUENTLY INTRODUCED DURING OPERATIONS. FIELD WELDING SHALL ONLY BE DONE WITH THE ENGINEER'S APPROVAL BY APPROPRIATELY CERTIFIED WELDERS.

SAMPLE PORT

DETAIL D

NTS





TOP VIEW

NTS

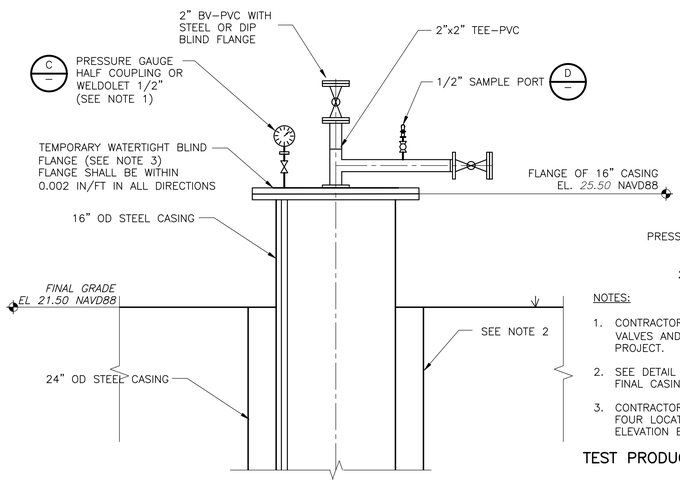
NOTES:

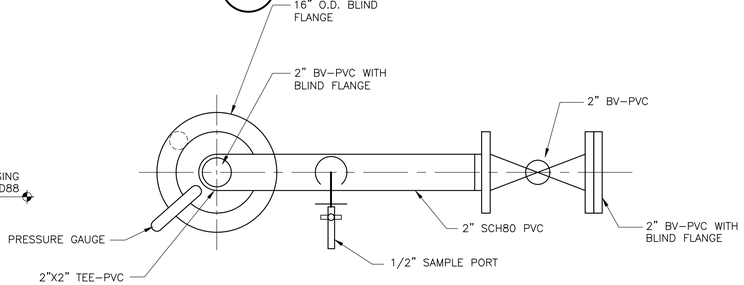
1. CONTRACTOR SHALL TURN OVER ALL TEMPORARY APPURTENANCES (PRESSURE GAUGES, SAMPLE PORTS, VALVES AND FITTINGS) FROM THE TEMPORARY WELLHEAD TO OWNER (SJCUD) AT THE COMPLETION OF THE PROJECT.
2. SEE DETAIL A FOR MATERIALS OF CONSTRUCTION. WALL THICKNESS AND DEPTH OF SURFACE CASING AND FINAL CASING.
3. CONTRACTOR SHALL ENSURE THAT THE TEMPORARY BASE FLANGE ELEVATION IS MEASURED IN AT LEAST FOUR LOCATIONS BY A LICENSED SURVEYOR. THE FINAL FLANGE SHALL BE CONSTRUCTED TO A LOWER ELEVATION BY OTHERS.

MONITORING WELL TEMPORARY WELLHEAD DETAIL

DETAIL E

NTS





TOP VIEW

NTS

NOTES:

1. CONTRACTOR SHALL TURN OVER ALL TEMPORARY APPURTENANCES (PRESSURE GAUGES, SAMPLE PORTS, VALVES AND FITTINGS) FROM THE TEMPORARY WELLHEAD TO OWNER (SJCUD) AT THE COMPLETION OF THE PROJECT.
2. SEE DETAIL B FOR MATERIALS OF CONSTRUCTION. WALL THICKNESS AND DEPTH OF SURFACE CASING AND FINAL CASING.
3. CONTRACTOR SHALL ENSURE THAT THE TEMPORARY BASE FLANGE ELEVATION IS MEASURED IN AT LEAST FOUR LOCATIONS BY A LICENSED SURVEYOR. THE FINAL FLANGE SHALL BE CONSTRUCTED TO A LOWER ELEVATION BY OTHERS.

TEST PRODUCTION/EXPLORATORY WELL TEMPORARY WELLHEAD DETAIL

DETAIL F

NTS

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DESIGNED BY: J. OVERTON
DRAWN BY: F. NGUYEN
SHEET CHK'D BY: F. NGUYEN
CROSS CHK'D BY: L. SAMEL
APPROVED BY: J. OVERTON
DATE: JANUARY 2026

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

ST. JOHNS COUNTY UTILITY DEPARTMENT
ST. JOHNS COUNTY, FLORIDA

TROUT CREEK TEST PRODUCTION AND MONITORING WELLS

WELL SECTIONS

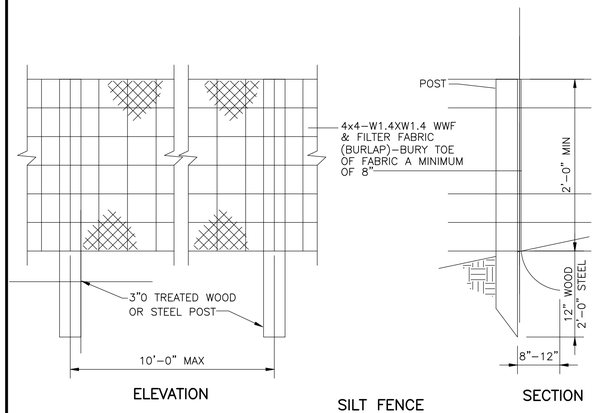
JAMES JEFFREY OVERTON LICENSE No 70362 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JAMES OVERTON
PE NO. 70362

PROJECT NO. 6334–305125
FILE NAME:

SHEET NO.
C-3

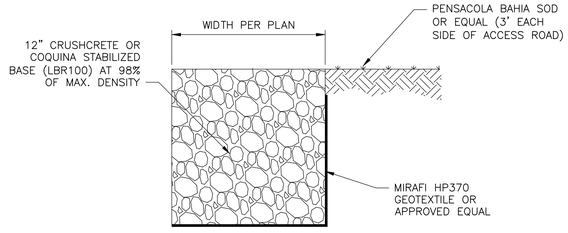
100% SUBMITTAL - NOT FOR CONSTRUCTION



ELEVATION SECTION

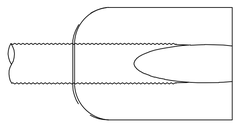
SILT FENCE

DETAIL A
NTS

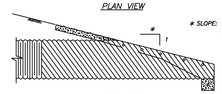


TYPICAL ACCESS ROAD SECTION (LBR100)

DETAIL B
NTS



PLAN VIEW



CROSS SECTION

* SLOPE: 1:4 MITER: TO 6' PIPE FOR PIPES 18" AND SMALLER.
1:2 TOP PIPES 24" AND LARGER.
1:2 MITER: TO 6' PIPE FOR PIPES 18" AND SMALLER.
1:1 TOP PIPES 24" AND LARGER.

GENERAL NOTES:
1. MINIMUM 12" FILL OVER TOP OF CULVERT.
2. EDGES MUST BE STABILIZED WITH A MINIMUM OF ONE 24" ROW OF SOD FOR ALL END TREATMENTS.
3. FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS SHALL BE USED AS A GUIDELINE FOR ALL END TREATMENTS. REFER TO INDICIES 261, 266, & 272.
4. CULVERTS MUST BE INSTALLED AT START OF CONSTRUCTION.
5. MINIMUM CULVERT SIZE IS 15".
6. MITERED END SECTIONS REQUIRED ON ALL CULVERT INSTALLATIONS.
7. GRATES REQUIRED FOR CULVERTS LARGER THAN 24".
8. SIDE SLOPES SHALL BE 2:1 (OR LESS) FOR 15", 18", & 24" CULVERTS, AND 4:1 FOR CULVERTS GREATER THAN 24".
9. TOE REQUIRED FOR PIPES GREATER THAN 24".

POURED IN PLACE MITERED END SECTION

DETAIL C
NTS

XREFs: [CDMS_2436] Images: []
Last saved by: NGUYENFQ Time: 1/19/2026 12:54:23 PM
pw:\\cdmsmith-gx02-pw.bentley.com:pw_p11\6334\305125\04 Design Services NM_100#\02 Civil\10 BIM_CADD\TroutC-2.dwg
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. OVERTON
DRAWN BY: F. NGUYEN
SHEET CHK'D BY: F. NGUYEN
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APPROVED BY: J. OVERTON
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ST. JOHNS COUNTY UTILITY DEPARTMENT
ST. JOHNS COUNTY, FLORIDA

TROUT CREEK TEST PRODUCTION AND MONITORING WELLS

CIVIL DETAILS

JAMES JEFFREY OVERTON LICENSE No 70362 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JAMES OVERTON
PE NO. 70362

PROJECT NO. 6334–305125
FILE NAME:

SHEET NO.
CD-1

100% SUBMITTAL - NOT FOR CONSTRUCTION

ADDENDUM #01

June 3, 2026

To: **Prospective Respondents**
From: **St. Johns County Purchasing Department**
Subject: **RFQ No: 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects**

This Addendum #01 is issued for further Respondents' information and is hereby incorporated into the RFQ Documents. Each Respondent must incorporate any and all revisions, clarifications, and/or supplemental information provided in all issued addenda with the submitted Qualifications. Respondents must complete and submit Attachment "L", acknowledging all issued addenda with their Qualifications as provided in the RFQ Documents.

Revisions/Clarifications:

The County provides the following revisions and/or clarifications to be incorporated into the RFQ Documents:

1. Part 1: General Terms and Conditions, Section D. Designated Point of Contact is hereby revised to state the following:

   The County's Designated Point of Contact for this RFQ is **Diana Fye, Senior Procurement Coordinator**, St. Johns County Purchasing Department. Any and all questions and/or inquiries shall be directed to the Designated Point of Contact in writing, via email at dfye@sjcfl.us. In the event the Designated Point of Contact is absent or otherwise unavailable for more than three (3) business days, firms may contact Kayla Lauro, via email at klauro@sjcfl.us.

Questions/Answers:

The County provides the following answers to the questions submitted below:

1. What is the anticipated schedule for bidding and construction of this project?
Answer: See Part II Scope of Service; Subsection E. Project Schedules of the RFQ Document.

2. Could you please provide the anticipated due date for the Stage II submittal, along with any associated requirements such as page limitations, format requirements, or other applicable submittal criteria?
Answer: Shortlisted firms will have approximately 14 days to complete the Stage II Submittal. Detailed instructions for the Stage II Submittals, including due date, format requirements, and page limitations, will be provided directly to shortlisted firms following completion of the Stage I evaluation. Stage II Submittals will be based on the Evaluation Criteria identified in Part IV Evaluation and Award; Subsection D. Stage 2: Approach, Schedule, QC, and Cost Control/Budget Compliance.

3. Will the County permit the use of 11" x 17" pages within the submittal, and if so, will each 11" x 17" sheet count as one page toward any applicable page limitations?
Answer: No.

4. What is the due date and time for the submission of the Stage 2 documents?
   Answer: See answer to Question #2.

5. The RFQ states, "The Qualifications must not exceed forty (40) pages in length, which does not include the County issued attachments, table of contents, addenda, and section separators." This page limit appears to refer to the Stage 1 - Qualifications submission. Please provide the page limit for the Stage 2 - Approach, Schedule, QC, and Cost Control/Budget Compliance submission.
   Answer: See Answer to Question #2.

6. The RFQ states, "NO RESPONDENT, OR KEY PERSONNEL OF A RESPONDENT, MAY PARTICIPATE IN MORE THAN ONE (1) RESPONSE TO THIS RFQ. PARTICIPATION IN MULTIPLE RESPONSES SHALL RESULT IN THE DISQUALIFICATION AND REMOVAL FROM CONSIDERATION ALL RESPONDENTS INVOLVED." Please consider removing this requirement, so that subconsultants of which may be key personnel may serve on more than one prime team.
   Answer: This requirement does not apply to subcontractors. It applies only to Respondents and the key personnel of a Respondent. The requirement is not being removed.

7. The 40-page limit defined in the RFQ states the County issued attachments, table of contents, addenda, and section separators are not included in the page count. Are the other required attachments such as the licenses, certificates, insurance, and other attachments excluded from the 40 pages as well?
   Answer: No. Only the County-provided attachments are exempt. Other attachments listed are part of the Respondent's Qualification Submission.

SUBMITTAL DEADLINE FOR QUALIFICATIONS REMAINS: THURSDAY, JUNE 18, 2026, AT 4:00PM (EDST)

END OF ADDENDUM NO. 01

ADDENDUM #02

June 8, 2026

To: **Prospective Respondents**
From: **St. Johns County Purchasing Department**
Subject: **RFQ No: 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects**

This Addendum #02 is issued for further Respondents' information and is hereby incorporated into the RFQ Documents. Each Respondent must incorporate any and all revisions, clarifications, and/or supplemental information provided in all issued addenda with the submitted Qualifications. Respondents must complete and submit Attachment "L", acknowledging all issued addenda with their Qualifications as provided in the RFQ Documents.

Questions/Answers:
The County provides the following answers to the questions submitted below:

1. We seek expressed written approval to use St. Johns County logo within the graphics of our proposal submission for this RFQ: 2902 Professional Engineering Services for Four (4) Water Infrastructure Projects. Is this something we can request from you? If not, could you please point us to the person we should talk to for this?
   Answer: No. The St. Johns County logo is not to be used within Respondent Submittals.

2. Will projects completed within the past ten (10) years be accepted as part of the submission for Section 3 Project Experience?
   Answer: No. Only project experience within the past five (5) years will be accepted, as specified in Part III H: Qualification Submittal Instruction Section 3: Related Experience.

SUBMITTAL DEADLINE FOR QUALIFICATIONS REMAINS: THURSDAY, JUNE 18, 2026, AT 4:00PM (EDST)

END OF ADDENDUM NO. 02

ADDENDUM #03

June 11, 2026

To: **Prospective Respondents**
From: **St. Johns County Purchasing Department**
Subject: **RFQ No: 2902; Professional Engineering Services for Four (4) Water Infrastructure Projects**

This Addendum #03 is issued for further Respondents' information and is hereby incorporated into the RFQ Documents. Each Respondent must incorporate any and all revisions, clarifications, and/or supplemental information provided in all issued addenda with the submitted Qualifications. Respondents must complete and submit Attachment "L", acknowledging all issued addenda with their Qualifications as provided in the RFQ Documents.

Revisions/Clarifications:
The County provides the following revisions and/or clarifications to be incorporated into the RFQ Documents:

1. Part V Contract Requirement: Section I - Indemnification is hereby revised to state the following:

   INDEMNIFICATION
   Consultant shall indemnify and hold harmless the County and its officers and employees ("Indemnified Party"), from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of awarded Consultant or other persons employed or utilized by awarded Consultant in the performance of the Contract.

   To the extent permitted by law and as limited by and pursuant to the provisions of Section 725.08, Florida Statutes, the awarded Consultant shall indemnify, defend, and hold harmless the County, including the County's officers and employees ("Indemnified Parties"), from liabilities, damages, losses, and costs, including but not limited to, reasonable attorney's fee, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the awarded Consultant and persons employed or utilized by the awarded Consultant in the performance of the awarded Contract. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the County's sovereign immunity. This indemnification shall survive the termination of the awarded Contract. Additionally, the awarded Consultant agrees to include the include the following indemnification in all contracts with contractors/subcontractors who perform work in connection with the awarded Contract.

   This indemnification will not be valid in the instance where the loss is caused by the gross negligence, or willful, wanton or intentional misconduct of any Indemnified Party.

   If any provision(s), or portion(s) of a provision(s), of this Section, or the application thereof to any person or circumstance shall, to any extent, be held to be invalid, illegal or unenforceable for any reason whatsoever, the validity, legality and enforceability of the remaining provision(s), or part of the provision(s), shall not in any way be affected or impaired thereby; and shall be interpreted to

the fullest extent possible to be enforceable and to give effect to the intent manifested by the provision(s), or portion(s) thereof, held invalid, illegal or unenforceable.

Nothing herein is intended to serve as a waiver of sovereign immunity liability beyond the limits set forth in Section 768.28, Florida Statute.

SUBMITTAL DEADLINE FOR QUALIFICATIONS REMAINS: THURSDAY, JUNE 18, 2026, AT 4:00PM (EDST)

END OF ADDENDUM NO. 03