

CONTRACT FOR PROFESSIONAL CONSULTING SERVICES

This Contract is made on _____, by and between the City of Pompano Beach, a municipal corporation of the State of Florida, hereinafter referred to as “City,” and Hazen and Sawyer, P.C., a New York corporation, authorized to do business in the State of Florida, hereinafter referred to as the “Consultant”.

WHEREAS, the Consultant is able and prepared to provide such services as City requires under the terms and conditions set forth herein; and

WHEREAS, the City Commission has approved the recommendation that Consultant be employed by the City and authorized the negotiation of contractual terms.

NOW, THEREFORE, in consideration of the mutual promises herein, the City and the Consultant agree as follows:

ARTICLE 1 – SERVICES/CONSULTANT AND CITY REPRESENTATIVES

The Consultant’s responsibility under this Contract is to provide professional consulting services as more specifically set forth in RLI No. 25-072 attached hereto as Exhibit “A” and incorporated herein in its entirety.

The Consultant’s representative shall be Janeen Wietgreffe

The CITY’s representative shall be City Engineer or designee,

ARTICLE 2 – TERM

The CONSULTANT shall adhere to the schedule given in each work authorization after receiving the “Notice to Proceed.”

Reports and other items shall be delivered or completed in accordance with the detailed schedule set forth in individual Work Authorizations as negotiated.

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

ARTICLE 3 – PAYMENTS TO CONSULTANT

A. City agrees to pay Consultant in consideration for its services described herein. It is the intention of the parties hereby to ensure that unless otherwise directed by the City in writing, Consultant will continue to provide services as specified in Exhibit “A” for the term of this Contract.

B. Price Formula. City agrees to pay Consultant as negotiated on a Work Authorization basis. Each work authorization shall specifically identify the scope of the work to be performed and the fees for said services. As set forth in RLI No. 25-072, professional services under this contract will be restricted to the amounts required by §287.055, Florida Statutes.

C. Fee Determination. Each individual Work Authorization may be negotiated for fees to be earned by Time and Materials with a Not to Exceed Amount, Lump Sum, or a combination of both methods for subtasks contained therein. The total amount to be paid by the City under a Work Authorization shall not exceed specified amounts for all services and materials including “out of pocket” expenses as specified in Paragraph E below and also including any approved subcontracts unless otherwise agreed in writing by both parties. The Consultant shall notify the City’s Representative in writing when ninety (90%) of the “not to exceed amount” for the total Work Authorization has been reached. The Consultant will bill the City on a monthly basis, or as otherwise provided. Time and Materials billing will be made at the amounts set forth in Exhibit “B” for services rendered toward the completion of the Scope of Work. Where incremental billings for partially completed items are permitted, the total billings shall not exceed the estimated percentage of completion as of the billing date. It is acknowledged and agreed to by the Consultant that the dollar limitation set forth in this section is a limitation upon and describes the maximum extent of City’s obligation to pay Consultant, but does not include a limitation upon Consultant’s duty to perform all services set forth in Exhibit “A” for the total compensation in the amount or less than the guaranteed maximum stated above.

D. Invoices received by the City from the Consultant pursuant to this Contract will be reviewed and approved in writing by the City’s Representative, indicating that services have been rendered in conformity with the Contract, and then will be sent to the City’s Finance Department for payment. All invoices shall contain a detailed breakdown of the services provided for which payment is being requested. In addition to detailed invoices, upon request of the City’s representative, Consultant shall provide City with detailed periodic Status Reports on the project. All invoice payments by City shall be made after the Work has been verified and completed. Unless disputed by City as provided herein, upon City’s receipt of a Proper Invoice as defined in §218.72, Florida Statutes, as amended, City shall forward Consultant payment for work performed within forty-five (45) days for all goods and services provided.

City may temporarily remove for review any disputed amount, by line item, from an invoice and shall timely provide Consultant written notification of any such disputed charge. Consultant shall provide clarification and a satisfactory explanation to City, along with revised copies of all such documents if inaccuracies or errors are discovered, within ten (10) days of receipt of City’s notice of the disputed amount.

In the event City has a claim against Consultant for Work performed hereunder which has not been timely remedied in accordance with the provisions of this Article 3, City may withhold payment for the contested amount, in whole or in part, to protect itself from loss on account of defective Work, claims filed or reasonable evidence indicating probable filing of claims by other parties against Consultant, and/or Consultant’s failure to make proper payments to subcontractors or vendors for material or labor. When the reason(s) for withholding payment are removed or resolved in a manner satisfactory to City, payment shall be made.

E. "Out-of-pocket" expenses shall be reimbursed up to an amount not to exceed amounts included in each Work Authorization. All requests for payment of "out-of-pocket" expenses eligible for reimbursement under the terms of this Contract shall include copies of paid receipts, invoices, or other documentation acceptable to the City's Representative and to the Finance Department. Such documentation shall be sufficient to establish that the expense was actually incurred and necessary in the performance of the Scope of Work described in a Work Authorization and this Contract. All out-of-pocket, reimbursables and expenses shall be billed at actual amount paid by Consultant, with no markup.

F. Final Invoice. In order for both parties herein to close their books and records, the Consultant will clearly state "Final Invoice" on the Consultant's final/last billing to the City. This final invoice shall also certify that all services provided by Consultant have been properly performed and all charges and costs have been invoiced to the City. Because this account will thereupon be closed, any and other further charges not properly included on this final invoice are waived by the Consultant.

ARTICLE 4 – CONTRACT DOCUMENTS

This Agreement consists of the Solicitation set forth in Exhibit "A", the Consultant's Response set forth in Exhibit "B" (collectively, the "Work") and, the Insurance Requirements set forth in Exhibit "C," all of which are attached and made a part of this Agreement. It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto in accordance with Article 26 – Modification of Work. In the event of any conflict or inconsistency between this Agreement and the provisions in the incorporated Exhibits, resolution shall be attained by giving precedence in the following order: (i) this Agreement, (ii) Exhibit "A", and (iii) Exhibit "C".

ARTICLE 5 – TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Contract by the Consultant shall also act as the execution of a truth in negotiation certificate, certifying that the wage rates, overhead charges, and other costs used to determine the compensation provided for this Contract are accurate, complete and current as of the date of the Contract and no higher than those charged the Consultant's most favored customer for the same or substantially similar service. Should the City determine that said rates and costs were significantly increased due to incomplete, non-current or inaccurate representation, then said rates shall be adjusted accordingly.

ARTICLE 6 – TERMINATION

City shall have the right to terminate this Contract, in whole or in part, for convenience, cause, default or negligence on Consultant's part, upon ten (10) business days advance written notice to Consultant. Such Notice of Termination may include City's proposed Transition Plan and timeline for terminating the Work, requests for certain Work product documents and materials, and other provisions regarding winding down concerns and activities.

If there is any material breach or default in Consultant's performance of any covenant or obligation hereunder which has not been remedied within ten (10) business days after City's written Notice of Termination, City, in its sole discretion, may terminate this Contract immediately and Consultant shall not be entitled to receive further payment for services rendered from the effective date of the Notice of Termination.

In the event of termination, City shall compensate Consultant for all authorized Work satisfactorily performed through the termination date under the payment terms set forth in Article 3 above and all Work product documents and materials shall be delivered to City within ten (10) business days from the Notice of Termination. If any Work hereunder is in progress but not completed as of the date of the termination, then upon City's written approval, this Contract may be extended until said Work is completed and accepted by City.

This Contract may be cancelled by the Consultant, upon thirty (30) days prior written notice to the City's Representative, in the event of substantial failure by the City to perform in accordance with the terms of this Contract through no fault of the Consultant.

ARTICLE 7 – PERSONNEL

The Consultant is, and shall be, in the performance of all work services and activities under this Contract, an independent Contractor, and not an employee, agent or servant of the City. All persons engaged in any of the work or services performed pursuant to this Contract shall at all times, and in all places, be subject to the Consultant's sole direction, supervision, and control and shall not in any manner be deemed to be employees of the City. The Consultant shall exercise control over the means and manner in which it and its employees perform the work. This contract does not create a partnership or joint venture between the parties.

The Consultant represents that it has, or will secure at its own expense, all necessary personnel required to perform the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the City, nor shall such personnel be subject to any withholding for tax, Social Security or other purposes by the City, nor be entitled to any benefits of the City including, but not limited to, sick leave, pension benefits, vacation, medical benefits, life insurance, workers or unemployment compensation benefits, or the like from the City.

All of the services required hereunder shall be performed by the Consultant or under its supervision, and all personnel engaged in performing the services shall be fully qualified and, if required, authorized or permitted under state and local law to perform such services.

Any changes or substitutions in the Consultant's key personnel, as may be listed in Article 1, must be made known to the City's Representative at the time substitution becomes effective.

The Consultant warrants that all services shall be performed by skilled and competent personnel to the degree exercised by consultants performing the same or similar services in the same location at the time the services are provided.

ARTICLE 8 – SUBCONTRACTING

Consultant may subcontract any services or work to be provided to City with the prior written approval of the City's Representative. The City reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make determination as to the capability of the subcontractor to perform properly under this Contract. The City's acceptance of a subcontractor shall not be unreasonably withheld. The Consultant is encouraged to seek small business enterprises and to utilize businesses that are physically located in the City of Pompano Beach with a current Business Tax Receipt for participation in its subcontracting opportunities.

ARTICLE 9 – FEDERAL AND STATE TAX

The City is exempt from payment of Florida State Sales and Use Taxes. The City will provide the Consultant with the current state issued exemption certificate. The Consultant shall not be exempted from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the City, nor is the Consultant authorized to use the City's Tax Exemption Number in securing such materials.

The Consultant shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes and benefits with respect to this Contract

ARTICLE 10 – AVAILABILITY OF FUNDS

The City's performance and obligation to pay under this Contract is contingent upon appropriation for various projects, tasks and other professional services by the City Commission.

ARTICLE 11 - INSURANCE REQUIREMENTS

The Consultant shall not commence work under this Contract until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the City, nor shall the Consultant allow any Subcontractor to commence work on its sub-contract until the aforementioned approval is obtained.

CERTIFICATE OF INSURANCE, reflecting evidence of the required insurance, shall be filed with the Risk Manager prior to the commencement of the work. The Certificate shall contain a provision that coverage afforded under these policies will not be cancelled, will not expire and will not be materially modified until at least thirty (30) days prior written notice has been given to the City. Policies shall be issued by companies authorized to conduct business under the laws of

the State of Florida and shall have adequate Policyholders and Financial ratings in the latest ratings of A. M. Best and be part of the **Florida Insurance Guarantee Association Act**.

Insurance shall be in force until all work required to be performed under the terms of the Contract is satisfactorily completed as evidenced by the formal acceptance by the City. In the event the Insurance Certificate provided indicates that the insurance shall terminate and lapse during the period of this Contract, the Consultant shall furnish, at least ten (10) days prior to the expiration of the date of such insurance, a renewed Certificate of Insurance as proof that equal and like coverage for the balance of the period of the Contract and extension thereunder is in effect. The Consultant shall not continue to work pursuant to this Contract unless all required insurance remains in full force and effect.

Limits of Liability for required insurance are shown in Exhibit "C."

The City of Pompano Beach must be named as an additional insured for the Automobile and Commercial General Liability Coverage.

For Professional Liability, if coverage is provided on a claims made basis, then coverage must be continued for the duration of this Contract and for not less than one (1) year thereafter, or in lieu of continuation, provide an "extended reporting clause" for one (1) year.

Consultant shall notify the City Risk Manager in writing within thirty (30) days of any claims filed or made against the Professional Liability Insurance Policy.

For Workers' Compensation Insurance, coverage shall be maintained during the life of this Contract to comply with statutory limits for all employees, and in the case of any work sublet, the Consultant shall require any Subcontractors similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the Consultant. The Consultant and his Subcontractors shall maintain during the life of this Contract Employer Liability Insurance.

ARTICLE 12 – INDEMNIFICATION

A. Consultant shall at all times indemnify, hold harmless the City, its officials, officers, employees, volunteers and other authorized agents from and against any and all claims, demands, suit, damages, attorneys' fees, fines, losses, penalties, defense costs or liabilities suffered by the City to the extent caused by any negligent act, omission, breach, recklessness or misconduct of Consultant and/or any of its agents, officers, or employees hereunder, including any inaccuracy in or breach of any of the representations, warranties or covenants made by the Consultant, its agents, officers and/or employees, in the performance of services of this contract. To the extent considered necessary by City, any sums due Consultant hereunder may be retained by City until all of City's claims for indemnification hereunder have been settled or otherwise resolved, and any amount withheld shall not be subject to payment or interest by City.

B. Consultant acknowledges and agrees that City would not enter into this Contract without this indemnification of City by Consultant. The parties agree that one percent (1%) of the total compensation paid to Consultant hereunder shall constitute specific consideration to Consultant for the indemnification provided under this Article and these provisions shall survive expiration or early termination of this Contract.

C. Nothing in this Agreement shall constitute a waiver by the City of its sovereign immunity limits as set forth in section 768.28, Florida Statutes. Nothing herein shall be construed as consent from either party to be sued by third parties.

ARTICLE 13 – SUCCESSORS AND ASSIGNS

The City and the Consultant each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Contract and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Contract. Except as above, neither the City nor the Consultant shall assign, sublet, encumber, convey or transfer its interest in this Contract without prior written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the City, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City and the Consultant.

ARTICLE 14 – REMEDIES

The laws of the State of Florida shall govern this Contract. Any and all legal action between the parties arising out of the Contract will be held in Broward County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power or remedy hereunder shall preclude any other or further exercise thereof.

ARTICLE 15 – CONFLICT OF INTEREST

The Consultant represents that it has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder, as provided for in the Code of Ethics for Public Officers and Employees (Chapter 112, Part III, Florida Statutes). The Consultant further represents that no person having any interest shall be employed for said performance.

The Consultant shall promptly notify the City's representative, in writing, by certified mail, of a potential conflict(s) 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 work that the Consultant may undertake and request an opinion of the City as to whether the association, interest or circumstance would, in the opinion of the City, constitute a conflict of interest if entered into by the Consultant. The City agrees to notify the Consultant of its opinion by certified mail within thirty (30) days of

receipt of notice by the Consultant. If, in the opinion of the City, the prospective business association, interest, or circumstance would not constitute a conflict of interest by the Consultant, the City shall so state in the notice and the Consultant shall at its option, enter into said association, interest or circumstance and it shall be deemed not a conflict of interest with respect to services provided to the City by the Consultant under the terms of this Contract.

ARTICLE 16 – EXCUSABLE DELAYS

The Consultant shall not be considered in default by reason of any failure in performance if such failure arises out of causes reasonably beyond the control of the Consultant or its subcontractors and without their fault or negligence. Such causes include, but are not limited to, acts of God; natural or public health emergencies; freight embargoes; and abnormally severe and unusual weather conditions.

Upon the Consultant’s request, the City shall consider the facts and extent of any failure to perform the work and, if the Consultant’s failure to perform was without it, or its subcontractors fault or negligence, the Contract Schedule and/or any other affected provision of this Contract shall be revised accordingly; subject to the City’s rights to change, terminate, or stop any or all of the work at any time.

ARTICLE 17 – DEBT

The Consultant shall not pledge the City’s credit or attempt to 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 Contract.

ARTICLE 18 – DISCLOSURE AND OWNERSHIP OF DOCUMENTS

The Consultant shall deliver to the City’s representatives for approval and acceptance, and before being eligible for final payment of any amounts due, all documents and materials prepared by and for the City under this Contract.

All written and oral information not in the public domain or not previously known, and all information and data obtained, developed, or supplied by the City or at its expense will be kept confidential by the Consultant and will not be disclosed to any other party, directly or indirectly, without the City’s prior written consent unless required by a lawful order. All drawings, maps, sketches, programs, data base, reports and other data developed, or purchased, under this Contract for or at the City’s expense shall be and remain the City’s property and may be reproduced and reused at the discretion of the City.

A. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Consultant shall comply with Florida’s Public Records Law, as amended. Specifically, the Consultant shall:

1. Keep and maintain public records required by the City in order to perform the service.

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

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Consultant does not transfer the records to the City.

4. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Consultant, or keep and maintain public records required by the City to perform the service. If the Consultant transfers all public records to the City upon completion of the contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the 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 City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

B. Failure of the Consultant to provide the above described public records to the City within a reasonable time may subject Consultant to penalties under 119.10, Florida Statutes, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK

100 W. Atlantic Blvd., Suite 253

Pompano Beach, Florida 33060

(954) 786-4611

RecordsCustodian@copbfl.com

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 Contract and the consummation of the transactions contemplated thereby.

ARTICLE 19 – CONTINGENT FEES

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 Contract 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 Contract. Violation of this Article shall constitute a forfeiture of this Contract by Consultant.

ARTICLE 20 – ACCESS AND AUDITS

The Consultant shall maintain adequate records to justify all charges, expenses, and cost incurred in estimating and performing the work for at least three (3) years after completion of this Contract. The City shall have access to such books, records and documents as required in this section for the purpose of inspection or audit during normal business hours, at the Consultant's place of business.

ARTICLE 21 – NONDISCRIMINATION

The Consultant warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status and sexual orientation.

ARTICLE 22 – INTERPRETATION

The language of this Contract has been agreed to by both parties to express their mutual intent and no rule of strict construction shall be applied to either party hereto. The headings are for reference purposes only and shall not affect in any way the meaning or interpretation of this Contract. All personal pronouns used in this Contract shall include the other gender, and the singular, the plural, and vice versa, unless the context otherwise requires.

ARTICLE 23 – AUTHORITY TO PRACTICE

The Consultant hereby represents and warrants that it has and will continue to maintain all licenses and approvals required conducting its business, and that it will at all times conduct its business activities in a reputable manner. Proof of such licenses and approvals shall be submitted to the City's representative upon request.

ARTICLE 24 – SEVERABILITY

If any term or provision of this Contract, or the application thereof to any person or circumstances shall, to any extent be held invalid or unenforceable, to remainder of this Contract, or the application of such terms or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision of this Contract shall be deemed valid and enforceable to the extent permitted by law.

ARTICLE 25 – ENTIRETY OF CONTRACTUAL AGREEMENT

The City and the Consultant agree that this Contract, together with the Exhibits hereto, sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and off equal dignity herewith. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto in accordance with Article 26 – Modification of Work.

ARTICLE 26 – MODIFICATION OF SCOPE OF WORK

The City reserves the right to make changes in the Scope of Work, including alterations, reductions therein or additions thereto. Upon receipt by the Consultant of the City's notification of a contemplated change, the Consultant shall, in writing: (1) provide a detailed estimate for the increase or decrease in cost due to the contemplated change; (2) notify the City of any estimated change in the completion date; and (3) advise the City if the contemplated change shall affect the Consultant's ability to meet the completion dates or schedules of this Contract.

If the City so instructs in writing, the Consultant shall suspend work on that portion of the Scope of Work affected by a contemplated change, pending the City's decision to proceed with the change.

If the City elects to make the change, the City shall initiate a Work Authorization Amendment and the Consultant shall not commence work on any such change until such written amendment is signed by the Consultant and the City Manager, and if such amendment is in excess of two hundred thousand dollars (\$200,000.00), it must also first be approved by the City Commission and signed by the appropriate City Official authorized by the City Commission

The City shall not be liable for payment of any additional or modified work, which is not authorized in the manner provided for by this Article.

ARTICLE 27 – NOTICE

All notices required in this Contract shall be sent by certified mail, return receipt requested, to the following:

FOR CITY:

Greg Harrison
City Manager
City of Pompano Beach
Post Office Drawer 1300
Pompano Beach, Florida 33061
Email: Greg.Harrison@copbfl.com

FOR CONSULTANT:

Janeen Wietgreffe, Vice President
4000 Hollywood Blvd
Hollywood, FL 33021
Office: (954) 987-0066
Email: jwietgreffe@hazenandsawyer.com

ARTICLE 28 – OWNERSHIP OF DOCUMENTS

All finished or unfinished documents, data, reports, studies, surveys, drawings, maps, models and photographs prepared or provided by the Consultant in connection with this Contract shall become property of the City, whether the project for which they are made is completed or not, and shall be delivered by Consultant to City within ten (10) days of notice of termination. If applicable, City may withhold any payments then due to Consultant until Consultant complies with the provisions of this section.

ARTICLE 29 – PROMOTING PROJECT OBJECTIVES

Consultant, its employees, subcontractors, and agents shall refrain from acting adverse to the City's interest in promoting the goals and objectives of the projects. Consultant shall take all reasonable measures necessary to effectuate these assurances. In the event Consultant determines it is unable to meet or promote the goals and objectives of the projects, it shall immediately notify the City and the City, may then in its discretion, terminate this Contract.

ARTICLE 30 – PUBLIC ENTITY CRIMES ACT

As of the full execution of this Contract, Consultant certifies that in accordance with §287.133, Florida Statutes, it is not on the Convicted Vendors List maintained by the State of Florida, Department of General Services. If Consultant is subsequently listed on the Convicted Vendors List during the term of this Contract, Consultant agrees it shall immediately provide City written notice of such designation in accordance with Article 27 above.

ARTICLE 31 – GOVERNING LAW; VENUE; WAIVER OF JURY TRIAL

This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any litigation arising from, related to, or in connection with this Agreement shall be in the Seventeenth Judicial Circuit in and for Broward County, Florida, or in the United States District Court for the Southern District of Florida, or United States Bankruptcy Court for the Southern District of Florida, as applicable. BY ENTERING INTO THIS AGREEMENT, THE PARTIES EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.

ARTICLE 32 – EMPLOYMENT ELIGIBILITY

By entering into this Contract, the Consultant becomes obligated to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility." This includes but is not limited to utilization of the E-Verify System to verify the work authorization status of all newly hired employees, and requiring all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply will lead to termination of this Contract, or if a subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit or County Court no later than twenty (20) calendar days after the date of termination. If this Contract is terminated for a violation of the statute by the Consultant, the Consultant may not be awarded a public contract for a period of one (1) year after the date of termination

ARTICLE 33 - BINDING EFFECT

The benefits and obligations imposed pursuant to this Contract shall be binding and enforceable by and against the parties hereto.

ARTICLE 34 - SCRUTINIZED COMPANIES

By execution of this Agreement, in accordance with the requirements of F.S. 287.135 and F.S. 215.473, Consultant certifies that Consultant is not participating in a boycott of Israel. Consultant further certifies that Consultant is not on the Scrutinized Companies that Boycott Israel list, not on the Scrutinized Companies with Activities in Sudan List, and not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, nor has Consultant been engaged in business operations in Syria. Subject to limited exceptions provided in state law, the City will not contract for the provision of goods or services with any scrutinized company referred to above. In accordance with Section 287.135, Florida Statutes as amended, a company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with any agency or local government entity for goods or services of:

A. Any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel; or

B. One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company:

i. Is on the Scrutinized Companies with Activities in Sudan List of the Scrutinized Companies with Activities in Iran Terrorism Sectors List, created pursuant to Section 215.473, Florida Statutes; or

ii. Is engaged in business operations in Syria.

C. Submitting a false certification or being placed on a list created pursuant to Section 215.473, Florida Statutes relating to scrutinized active business operations in Iran after Consultant has submitted a certification, shall be deemed a material breach of contract. The City shall provide notice, in writing, to Consultant of the City's determination concerning the false certification. Consultant shall have five (5) days from receipt of notice to refute the false certification allegation. If such false certification is discovered during the active contract term, Consultant shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If Consultant does not demonstrate that the City's determination of false certification was made in error then the City shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes, as amended from time to time.

ARTICLE 35 - AFFIDAVIT OF COMPLIANCE WITH ANTI-HUMAN TRAFFICKING LAWS

In accordance with section 787.06 (13), Florida Statutes, the undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury that:

Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes, entitled "Human Trafficking".

ARTICLE 36 - AFFIDAVIT OF COMPLIANCE WITH FOREIGN ENTITY LAWS

The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

A. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes.

B. The government of a foreign country of concern does not have a controlling interest in Entity.

C. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.

D. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes.

E. Entity is not a partnership, association, corporation, organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity.

F. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes.

G. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.

ARTICLE 37 – ANNUAL BUDGETARY FUNDING/CANCELLATION.

This Agreement and all obligations of the City hereunder requiring the expenditure of funds are subject to and contingent upon annual budgetary funding and appropriations by the City Commission.

THE REMAINDER OF THE PAGE IS INTENTIONALLY LEFT BLANK

“CITY”

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year hereinabove written.

Attest:

CITY OF POMPANO BEACH

KERVIN ALFRED, CITY CLERK

By: _____
REX HARDIN, MAYOR

APPROVED AS TO FORM:

By: _____
GREGORY P. HARRISON, CITY MANAGER

MARK E. BERMAN, CITY ATTORNEY

(SEAL)

"CONSULTANT"

Hazen and Sawyer, P.C.

Witnesses:

Guillermo A. Regalado
Signature
Guillermo Regalado, Vice President
Name Typed, Printed or Stamped

By: Janeen Wietgreffe
Janeen Wietgreffe, Vice President

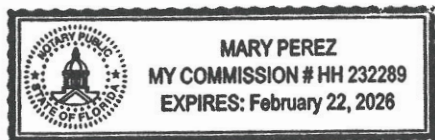
[Signature]
Signature
Enrique Vadivello, Asst Vice President
Name Typed, Printed or Stamped

STATE OF Florida
COUNTY OF Broward

The foregoing instrument was acknowledged before me, by means of physical presence or online notarization, this 10th day of February, 2026, by Janeen Wietgreffe, as Vice President of Hazen and Sawyer, P.C., a New York corporation, authorized to do business in Florida, on behalf of the corporation, who is personally known to me or who has produced _____ as identification.

NOTARY'S SEAL:

Mary Perez
NOTARY PUBLIC, STATE OF Florida



Mary Perez
(Name of Acknowledger Typed, Printed or Stamped)
HH 232289
Commission Number

- Exhibit A – Cover Page**
- 1. Recommendation Tabulation**
 - 2. Solicitation RLI25-072**
 - 3. Addendum 1-5**
 - 4. Sunbiz**



Florida's Warmest Welcome

RLI #:	<u>RLI25-072</u>	Tentative City Commission Meeting Date*:	<u>TBD</u>
RLI Title:	<u>Water and Reuse Treatment Plant Projects - CCNA</u>	# Notified:	<u>145</u> # Downloaded: <u>14</u>
		# of Responses Rec'd:	<u>6</u> # of "No Bids": <u>1</u>
For:	<u>Utilities</u> (Department)	RFP Opening Date:	<u>OCTOBER 15, 2025</u>

POSTING OF RFP RECOMMENDATION/TABULATION: RLI Recommendations and Tabulations will be posted in the eBid System IonWave on December 16, 2025, at 9:10 PM and will remain posted for 72 hours. Any person who may be adversely affected by the decision or intended decision shall file a notice of protest in writing within 72 hours of posting the notice of the decision or intended decision. The formal written protest shall be filed within ten (10) days after the date the notice of protest is filed. Failure to file a notice of protest or a formal written protest shall constitute a waiver of proceedings under this chapter. Section 120.57(3)(b), Florida Statutes, states that "The formal written protest shall state with particularity the facts and law upon which the protest is based." Saturdays, Sundays, state holidays, and days when the City is closed shall be excluded from the computation of the 72-hour time period provided. Filings shall be at the office of the Director of Procurement and Contracts, 1010 NE 3rd Avenue, Pompano Beach, FL 33060. Any person who files an action protesting an intended decision shall post with the City, at the time of filing the formal written protest, a protest bond, payable to the City of Pompano Beach, Florida, in an amount equal to one percent (1%) of the estimated value of the contract. Failure to submit the protest bond within the time allowed for filing a bond shall constitute a waiver of the right to protest. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the protest bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

(*) The Cone of Silence, as stated in the solicitation, is in effect until the City Commission approves or rejects it. Confirm with the Purchasing Agent of record for the date the Cone of Silence has concluded.

RECOMMENDATION TABULATION

The City of Pompano Beach, Florida, issued Request for Letters of Interest (RLI25-072) Water and Reuse Treatment Plant Projects pursuant to the Consultants' Competitive Negotiation Act (CCNA). The solicitation closed with the receipt of six (6) Letters of Interest, all of which were reviewed and determined to be responsive and responsible submissions.

- ARCADIS US, INC.
- CAROLLO ENGINEERS, INC.
- HAZEN AND SAWYER.
- MCCAFFERTY BRINSON CONSULTING, LLC.
- STANTEC CONSULTING INC.
- TETRA TECH, INC.

On December 16, 2025, the appointed Evaluation Committee convened in accordance with the RLI, Procurement and Contracts Procedure Manual, and the Sunshine Law. The Committee conducted a comprehensive review of all responsive submissions, applying the published evaluation criteria to score and rank each firm.

Based on the evaluation results, the Evaluation Committee hereby recommends an award to the following five (5) highest-ranked firms (*) under RLI25-072 – Water and Reuse Treatment Plant Projects (CCNA):

FIRM	RANKING
MCCAFFERTY BRINSON CONSULTING, LLC.	1
CAROLLO ENGINEERS, INC.	2
ARCADIS US, INC.	3
HAZEN AND SAWYER (*)	4
STANTEC CONSULTING INC. (*)	5

(*) HAZEN AND SAWYER and STANTEC CONSULTING INC. received identical evaluation scores. Accordingly, the Evaluation Committee determined that both firms are recommended for the award.

By: Michael Lee Date: 12/16/2025
Purchasing Agent



**REQUEST FOR LETTER OF INTEREST
RLI 25-072**

**WATER AND REUSE TREATMENT PLANT PROJECTS -
CONTINUING CONTRACTS (CCNA)**

**BID OPENING:
October 1st, 2025, 2:00 PM**

**VIRTUAL PRE-BIDDERS CONFERENCE:
September 10, 2025, 10:00 AM**

**For access, go to:
<https://pompanobeachfl.gov/pages/meetings>**

⋮

Issue Date: August 28, 2025

**CITY OF POMPANO BEACH, FLORIDA
REQUEST FOR LETTER OF INTEREST (RLI)**

RLI 25-072 WATER AND REUSE TREATMENT PLANT PROJECTS - CONTINUING CONTRACTS (CCNA)

Pursuant to Section 287.055, Florida Statutes Consultant's Competitive Negotiation Act (CCNA), the City of Pompano Beach (the "City") invites professional companies/firms to submit a Letter of Interest (RLI) to provide engineering services at the Pompano Beach Water Treatment Plant on a continuing as-needed basis.

The selected firm shall demonstrate specific experience and capabilities and must have qualified personnel and expertise in the specified disciplines.

This RLI is subject to the "Cone of Silence," which imposes certain restrictions on communications concerning the RLI process.

The Cone of Silence shall take effect once this solicitation is released to the General Public. Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72 hours following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response." (F.S. 287.057 (25)).

Any firm or lobbyist for a firm is prohibited from having any communications concerning any solicitation for a competitive procurement with any member of the City Commission, City Clerk, City Manager's Office, any Evaluation Committee Member, or any other City of Pompano Beach employee after Procurement and Contracts releases a solicitation to the General Public. All communications must go through the eBid System (IonWave) or the Purchasing Agent assigned to this solicitation. No other member of the City Commission, City Clerk, City Manager's Office, any Evaluation Committee Member, or any other City of Pompano Beach employee should be contacted concerning this RLI. Any information that amends any portion of this RLI received by any method other than an Addendum issued to the RLI is not binding on the City of Pompano Beach.

The City will receive proposals until **2:00:00 p.m. (EST), October 1, 2025**. Proposals must be submitted electronically through the eBid System (IonWave) on or before the due date and time as provided herein. Any proposal received after the due date and time specified will not be considered. Any uncertainty regarding the time a proposal is accepted will be resolved against the firm.

Firms must be registered on the City's eBid System in order to view the solicitation documents and respond to this Solicitation. The complete solicitation document can be downloaded for free from the eBid System as a PDF at <https://www.pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the firm receives from any source other than the eBid System. The firm is solely responsible for downloading all required documents. To attend the virtual public meeting, go to <https://www.pompanobeachfl.gov/pages/meetings> to find the Zoom link.

Procurement and Contracts Department
City of Pompano Beach, Florida

SCHEDULE OF EVENTS

RLI NUMBER:	RLI25-072
RLI TITLE:	WATER AND REUSE TREATMENT PLANT PROJECTS – CONTINUING CONTRACTS (CCNA)
RELEASE DATE:	8/28/2025, at 12:00 P.M.
PREBIDDERS CONFERENCE VIRTUAL ZOOM MEETING	9/10/2025, at 10:00 A.M.
WRITTEN QUESTIONS AND INQUIRIES ARE DUE ON OR BEFORE:	9/22/2025, at 12:00 P.M.
RLI RESPONSES DUE DATE/TIME:	10/1/2025, at 02:00 P.M.
EVALUATION COMMITTEE MEETINGS	TBD
RECOMMENDATION FOR AWARD:	TBD
DIRECT ALL INQUIRIES TO:	https://pompanobeachfl.ionwave.net
E-PROPOSAL SUBMITTALS ONLY:	https://pompanobeachfl.ionwave.net
PROPOSAL VIRTUAL OPENING:	https://www.pompanobeachfl.gov/meetings

Non-Mandatory Pre-Proposal Meeting

The non-mandatory Pre-Proposal Meeting will be held via a Virtual Zoom Meeting on **9/10/2025, at 10:00 a.m.** (local). The Zoom link is available on the City's Meetings webpage: <https://www.pompanobeachfl.gov/meetings>

A. Introduction

The City is seeking professional companies/firms to work on various projects for the Water Treatment Plant. The projects range in magnitude from small-scale to extensive or specialized designs.

The types of projects to be undertaken may include, but are not limited to, the following:

- Reuse Water Treatment Plant Projects
- Water Treatment Plant Projects

B. Compliance with CCNA

As a result of this RLI, all services provided under the contract must adhere to the latest provisions of the Florida Consultants' Competitive Negotiation Act (CCNA), as outlined in Section 287.055, Florida Statutes, including any subsequent amendments. The maximum allowable costs for projects or studies conducted under this contract are subject to the limits set by the CCNA, which are periodically adjusted.

The Respondent acknowledges that all services under this contract shall comply with the latest provisions of the Florida Consultants' Competitive Negotiation Act (CCNA), pursuant to Section 287.055, Florida Statutes, and any amendments.

The maximum allowable costs for projects or studies conducted under this contract shall not exceed the limits

established by the CCNA as periodically adjusted. The limits are calculated annually based on the Consumer Price Index (CPI) or as determined by the Department of Financial Services.

Respondents are responsible for ensuring that their proposals align with the applicable statutory limits in effect at the time of submission and contract execution.

C. Scope of Services

The City intends to engage one or more qualified professional companies/firms to provide continuing consulting and specified works. The scope of services may include, but is not limited to, the following:

1. Prepare studies and recommend methods of operation and/or treatment.
2. Prepare preliminary design reports and/or design alternative recommendations. This may include various types of utility modeling, surveying, and field data analysis.
3. Prepare all required bidding/construction documents for projects. This will include survey, design plan, technical specification, and cost estimate preparations. Attend all required pre-design, design, bidding, and bid award meetings.
4. Attend the pre-bid conference, prepare possible bid addendums for plan revisions, and assist in making bid award recommendations for contracting/construction services.
5. Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e., State, County, and City).
6. Provide construction engineering/management services for projects. Services during construction may include shop drawing/contractor submittal reviews and approvals, inspection and approval of project improvements, possible plan revisions, and review and approval of contractor pay applications.
7. Provide project close-out services. These may include preliminary and final project acceptance, preparation and approval of punch list items, and project certification as required by all permitting agencies.
8. Firms must have experience in municipal water and reuse treatment plant projects and be licensed to practice Professional Engineering in the State of Florida, Florida State Statute 471, by the Board of Professional Regulation.

D. Task/Deliverables

Tasks and deliverables will be determined per project. Each project shall require the City to receive a signed Work Authorization (WA) form from the awarded company/firm. The forms shall be completed and include the agreed-upon scope, tasks, schedule, cost, and deliverables for the project. The awarded company(s)/firm(s) must provide all applicable insurance requirements.

E. Term of Agreement/Contract

The contracts will be for five (5) years with no renewals, commencing upon award by the appropriate City officials.

F. Project Web Requirements:

1. This project will utilize the City-provided project management software, a web-based project management tool. This application is a collaboration tool that will allow all project team members continuous access through the Internet to essential project data and up-to-the-minute decision and approval status information. The City's project management software is a comprehensive project and program management system that the City will use to manage all project documents, communications, and costs between the lead consultant, sub-consultants, design consultants, contractors, and the City. City provided project management software includes extensive reporting capabilities to facilitate detailed project reporting in a web-based environment that is accessible to all parties and easy to use. Training will be provided for all companies/firms selected to provide services for the City of Pompano Beach.

2. Lead and sub-consultants shall conduct project controls outlined by the City, project manager, and/or construction manager, utilizing City-provided project management software. The city shall provide the designated web-based application license(s) to the prime consultant and sub-consultants. No additional software will be required.

The lead consultant and sub-consultants shall log into the project website daily and, as necessary, be kept fully apprised of project developments and required action items. These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Correspondence, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, City Change Directives, Potential Change Orders, Change Order Requests, Change Orders and the like. All supporting data, including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety SDS sheets, Substitution Requests, and the like, will be submitted in digital format via p.

G. Required Proposal Submittal

Sealed proposals shall be submitted electronically through the eBid System on or before the due date and time as provided herein. Firm shall upload the response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 10 MB, the response must be split and uploaded as two (2) separate files.

Information to be included in the proposal: To maintain comparability and expedite the review process, proposals must be organized as specified below, with the sections clearly labeled.

Title page:

Show the RLI number, the name of the Firm's company/firm, address, telephone number, name of the contact person, and the date.

Table of Contents:

Include a clear identification of the material by section and by page.

Letter of Transmittal:

Briefly state the Firm's understanding of the RLI solicitation and express a positive commitment to provide the services described herein. Please state the name(s) of the person(s) who will be authorized to make representations for the Firm, their title(s), office, and email addresses and telephone numbers. Please limit this section to two (2) pages.

Technical Approach:

Companies/Firms or teams shall submit their sample technical approach to the tasks described in the solicitation, including details of how each phase of the proposed project would be completed and how their company/firm proposes maintaining time schedules and cost controls.

References:

References for past projects aligning with the scope identified in this solicitation in the past seven years. Describe the scope of each project in physical terms and by cost, describe the Firm's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to the Firm's activities with the project.

Project Team Form:

Prepare and submit a completed "Project Team" form. This form aims to identify the proposed team's key members, including any specialty subconsultants. This information is intended for informational purposes only and does not constitute a contractual offer, obligation, or basis for procurement decisions.

Organizational Chart:

Specifically, identify the management plan (if needed) and provide an organizational chart for the project team. The Firm must describe, at a minimum, the basic approach to these projects, including the reporting hierarchy of staff and sub-consultants. Clarify the individual(s) responsible for coordinating separate components of the scope of services.

Statement of Skills and Experience of Project Team:

Describe the experience of the entire project team as it relates to the types of projects described in the Scope of Services section of this solicitation. Include the experience of the prime consultants as

well as other project team members, i.e., additional personnel, sub-consultants, branch office, team members, and other resources anticipated to be utilized for this project. Name specific projects [successfully completed within the past five (5) years] where the team members have performed similar projects previously.

Resumes of Key Personnel:

Include resumes for key personnel for prime and sub-consultants.

Office Locations:

Identify the office's location from which services will be rendered and the number of professional and administrative staff at the prime office. Also, identify the location of office(s) of the prime and/or sub-consultants that may be utilized to support any or all of the professional services listed above, as well as the number of professional and administrative staff at the prime office location.

If companies/firms are situated outside the local area (Broward, Palm Beach, and Miami-Dade counties), include a brief statement as to whether or not the companies/firms will arrange for a local office during the term of the agreement/contract, if necessary.

Litigation:

Disclose any litigation within the past five (5) years arising out of your company/firm's performance,

including status/outcome.

City Forms:

The Firm Information Page Form and any other required forms must be completed and submitted electronically through the City's eBid System. The City reserves the right to request additional information to ensure the Firm is financially solvent. It has sufficient financial resources to perform the agreement/contract and shall provide proof of its financial solvency. At its sole discretion, the City may ask for additional proof of financial solvency, including additional documents post-proposal opening and prior to evaluation that demonstrate the Firm's ability to perform the resulting agreement/contract and provide the required materials and/or services.

Reviewed and Audited Financial Statements:

Firms shall be financially solvent and appropriately capitalized to be able to service the City for the duration of the agreement/contract. Firms shall provide a complete financial statement of the company's/firm's most recent audited financial statements, indicating the organization's financial condition. Must be uploaded to the Response Attachments tab in the eBid System as a separate file titled "FINANCIAL STATEMENTS" and marked "CONFIDENTIAL."

Financial statements provided shall not be older than twelve (12) months before the date of filing this solicitation's response. The financial statements must be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserves the right to reject financial statements in which the financial condition shown is twelve (12) months or more before the submittal date.

The City is a public agency subject to Chapter 119, Florida's Public Records Law, and must provide the public with access to public records; however, financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure.

The City reserves the right to request additional information to ensure the Firm is financially solvent. It has sufficient financial resources to perform the agreement/contract and shall provide proof of its financial solvency. At its sole discretion, the City may ask for additional proof of financial solvency, including additional documents post-proposal opening and prior to evaluation that demonstrate the Firm's ability to perform the resulting agreement/contract and provide the required materials and/or services.

A combination of two (2) or more of the following may substitute for audited financial statements:

- 1) Bank letters/statements for the past three (3) months
- 2) Balance sheet, profit and loss statement, cash flow report
- 3) IRS returns for the last two (2) years
- 4) Letter from CPA showing profits and loss statements (certified)

H. Insurance

The contractor/consultant shall not commence services under the terms of this agreement/contract until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the City's Risk Manager. If you are responding to a solicitation and have questions regarding the insurance requirements, don't hesitate to get in touch with the City's Procurement and Contracts Department at (954) 786-4098. If the agreement/contract has already been awarded, please direct any inquiries and proof of the requisite

insurance coverage to City staff responsible for oversight of the subject project/contract.

The contractor/Consultant is responsible for delivering to the City for timely review and written approval/disapproval Certificates of Insurance, which evidence that all insurance required hereunder is in full force and effect and which name the city as an additional insured on a primary basis on all such coverage.

Throughout the term of this agreement/contract, the City, by and through its Risk Manager, reserves the right to review, modify, reject, or accept any insurance policies required by this agreement/contract, including limits, coverages, or endorsements. The City reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as the City review or acceptance of insurance maintained by the contractor/consultant, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by the contractor/consultant under this agreement/contract.

Throughout the term of this agreement/contract, the contractor/consultant and all sub-contractors/sub-consultants or other agents hereunder shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements:

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. The contractor/consultant further agrees to be responsible for the employment, control, and conduct of its employees and any injury sustained by such employees during their employment.
2. Liability Insurance.
 - (a) Naming the City of Pompano Beach as an additional insured as the City's interests may appear, on General Liability Insurance only, relative to claims which arise from the firm's negligent acts or omissions in connection with contractor/consultant's performance under this agreement/contract.
 - (b) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

Type of Insurance

Limits of Liability

GENERAL LIABILITY: Minimum \$1,000,000 Per Occurrence and
\$2,000,000 Per Aggregate

* Policy to be written on a claim incurred basis

X	comprehensive form	bodily injury and property damage
X		
X	premises - operations	bodily injury and property damage
X	explosion & collapse hazard	

	underground hazard	
X	products/completed	bodily injury and property damage
X		combined
	operations hazard	
X	contractual insurance	bodily injury and property damage
X		combined
X	broad form property	bodily injury and property damage
X	damage	combined
X	independent contractors'	personal injury
X		
X	personal injury	
X		
	sexual abuse/molestation	Minimum \$1,000,000 Per Occurrence
—		and
		Aggregate
—	liquor legal liability	Minimum \$1,000,000 Per Occurrence and Aggregate

AUTOMOBILE LIABILITY: Minimum \$1,000,000 Per Occurrence and Aggregate.
 Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.

- XX comprehensive form
- XX owned
- XX hired
- XX non-owned

REAL & PERSONAL PROPERTY

— comprehensive form Agent must show proof they have this coverage.

EXCESS LIABILITY

Per Occurrence Aggregate

— other than umbrella bodily injury and \$1,000,000 \$1,000,000
 property damage combined

PROFESSIONAL LIABILITY

Per Occurrence Aggregate

XX * Policy to be written on a claims made basis \$1,000,000 \$1,000,000

(c) If Professional Liability insurance is required, the Consultant agrees the indemnification and hold harmless provisions set forth in the agreement/contract shall survive the termination or expiration of the agreement/contract for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

CYBER LIABILITY		Per Occurrence	Aggregate
___	* Policy to be written on a claims made basis	\$1,000,000	\$1,000,000
<u>XX</u>	Network Security / Privacy Liability		
___	Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)		
___	Technology Products E&O - \$1,000,000 (only applicable for vendors supplying technology related services and or products)		
___	Coverage shall be maintained in effect during the period of the agreement/contract and for not less than four (4) years after termination/ completion of the agreement/contract.		

3. Employer's Liability. If required by law, the Consultant and all sub-subcontractors/sub-consultants shall, for the benefit of their employees, provide, carry, maintain, and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

4. Policies: Whenever, under the provisions of this agreement/contract, insurance is required of the Awarded Firm, the Awarded Firm shall promptly provide the following:

- (a) Certificates of Insurance evidencing the required coverage;
- (b) Names and addresses of companies providing coverage;
- (c) Effective and expiration dates of policies; and
- (d) A provision in all policies affording thirty (30) days' written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any required insurance policies be canceled before the expiration date or modified or substantially modified, the issuing company/firm shall provide thirty (30) days' written notice to the City.

6. Waiver of Subrogation. The awarded company/firm waives any and all rights of subrogation against the City, its officers, employees, and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement/contract to waive subrogation without an endorsement, then the awarded company/firm shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy that includes a condition to the policy not specifically prohibiting such an endorsement or voids coverage should the Awarded Firm enter into such an agreement/contract on a pre-loss basis.

I. Selection/Evaluation Process

A Selection/Evaluation Committee (Committee) will be appointed to select the most qualified company(ies)/ firm(s). The Committee will present its findings to the City Commission. The City Manager will approve a selection evaluation committee to assist in evaluating the Letter of Interest(s) received and to select the most qualified firm(s). All Letters of Interest will be evaluated by the Evaluation Committee and Procurement and Contracts staff based on the information submitted by the Submitting Firm(s) in response to this RLI. The Committee's findings will be presented to the City Commission.

Based upon the evaluation, the Evaluation Committee will recommend one Submitting Firm to the City Commissioners for the award and execution of an Agreement.

Proposals will be evaluated using the following criteria:

Line	Criteria	Points Range
1	Prior experience of the company/firm with projects of a similar size and Complexity within past seven years.:	0-40
	a) Number of similar projects	
	b) Complexity of similar projects	
	c) References from past projects performed by the company/firm per HB-683	
	d) Litigation within the past five (5) years arising out of the company's/firm's performance (list, describe outcome)	
2	Qualifications of personnel including sub-contractor/sub-consultants:	0-35
	a) Organizational chart for project	
	b) Number of technical staff	
	c) Qualifications of technical staff:	
	d) Number of licensed staff	
	e) Education of staff	
	f) Experience of staff on similar projects	
3	Proximity of the nearest office to the project location:	0-15
	a) Location	
	b) Number of staff at the nearest office	
4	Local Vendors Program Participation	0-10
	TOTAL	100

NOTE:

Financial statements required as submittals to prequalify for a solicitation will be exempt from public disclosure; however, financial statements submitted to prequalify for a solicitation and not required by the City may be subject to public disclosure.

The City Commission has the authority to (including, but not limited to) approve the recommendation, reject the recommendation, and direct staff to re-advertise this solicitation or, review the responses themselves and/or request oral presentations and determine a ranking order that may be the same or different from what was originally presented to the City Commission.

Tie Breaker:

In case there is a tie for the highest-ranked firms, the recommendations shall be made by giving preference to the following items in this order:

- 1) Maintenance of a Drug-Free Workplace in accordance with the requirements of 287.087, F.S.
- 2) Local Vendor Program Participation
- 3) Coin Toss

Technicalities:

Failure to respond, provide detailed information, or provide requested proposal elements may reduce points in the evaluation process. The Committee may recommend rejecting any Letter of Interest containing material deviations from the RLI. The Committee may recommend waiving any irregularities and technicalities. If only one (1) responsive proposal is received, the Committee will proceed without scoring the one (1) responsive statement received and may recommend that Procurement and Contracts Department staff negotiate the best terms and conditions with that sole firm, or may recommend rejecting the proposal.

Committee's Recommendations:

The Evaluation Committee may recommend rejecting the Letter of Interest received or awarding the contract. A complete recording shall be made of each meeting (evaluation and negotiation session) conducted by the Committee by the Purchasing Agent. The Committee may choose to conduct one (1) or more exempt negotiation sessions with as many ranked responsive firms, in its sole judgment, as it deems appropriate before making its recommendation for award, starting with the highest-ranked firm first, then the second highest-ranked firm, and so on. The Committee also has the discretion to recommend negotiations with only a single responsive firm if the Committee chooses to do so. During any such negotiations, the City staff assigned to negotiate reserves the right to negotiate any term, condition, or specification during an exempt negotiation session with the highest-ranked responsive firm.

Determination of Award:

The City Commission shall consider the Committee's award recommendation for this RLI and may approve such a recommendation. The City Commission may also, at its option, reject the Evaluation Committee's recommendation, or it may also reject all statements received, in which case the City may choose to re-advertise this solicitation "as is" or by adopting a modified version.

J. Hold Harmless and Indemnification

Firm covenants and agrees that it will indemnify hold harmless the City, its officials, employees, volunteers and other authorized agents from and against any and all claims, demands, suits, damages, attorneys' fees, fines, losses, penalties, defense costs or liabilities suffered by the City to the extent caused by any negligent act,

omission, breach, recklessness or misconduct of Consultant and/or any of its agents, officers, or employees hereunder, including any inaccuracy in or breach of any of the representations, warranties or covenants made by the Consultant, its agents, officers and/or employees, in the performance of services of this agreement/contract. To the extent considered necessary by City, any sums due Consultant hereunder may be retained by City until all of City's claims for indemnification hereunder have been settled or otherwise resolved, and any amount withheld shall not be subject to payment or interest by City.

K. Right to Audit

Awarded company's/firm's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, sub-contract/sub-consultants files (including proposals of successful and unsuccessful firms), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to the agreement/contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during regular working hours, by City's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the Awarded Firm or any of its payees pursuant to the execution of the agreement/contract. Such records subject to the examination shall also include but are not limited to, those necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with the agreement/contract.

For the purpose of such audits, inspections, examinations, and evaluations, the City's agent or authorized representative shall have access to said records from the effective date of the agreement/contract, for the duration of the service, and until five (5) years after the date of final payment by the City to awarded company/firm pursuant to the agreement/contract.

The City agent or its authorized representative shall have access to the awarded company's/firm's facilities, all necessary records, and adequate and appropriate workspace to conduct audits in compliance with this article. The City agent or authorized representative shall give auditees reasonable advance notice of intended audits.

The awarded company/firm shall require all sub-contractors/sub-consultants, insurance agents, and material suppliers (payees) to comply with this article's provisions by inserting the requirements in any written agreement/contract. Failure to obtain such written agreements/contracts that include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the contractor/consultant pursuant to the agreement/contract.

L. Retention of Records and Right to Access

The City is a public agency subject to Florida Statutes Chapter 119. The awarded company/firm shall comply with Florida's Public Records Law, as amended. Specifically, the awarded company/firm shall:

1. Keep and maintain public records required by the City in order to perform the service;
2. Upon request from the City's custodian of public records, provide the City 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 provided in Florida Statutes Chapter 119, or as otherwise provided by law;
3. Ensure that public records that are exempt or confidential and exempt from public record are maintained.
4. Requirements are not disclosed except as authorized by law;
5. Ensure that public records that are exempt or confidential and exempt from public records disclosure

requirements are not disclosed except as authorized by law for the duration of the agreement/contract term and following completion of the agreement/contract if the awarded company/firm does not transfer the records to the City; and

6. Upon completion of the agreement/contract, transfer all public records in possession of the awarded company/firm at no cost to the City, or keep and maintain public records required by the City to perform the service. If the awarded company/firm transfers all public records to the City upon completion of the agreement/contract, the awarded company/firm shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the awarded company/firm keeps and maintains public records upon completion of the agreement/contract, the awarded company/firm shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format compatible with the City's information technology systems.

M. Communications

No negotiations, decisions, or actions shall be initiated or executed by the company/firm as a result of any discussions with any City employee. Only those communications in writing from the City may be considered duly authorized expressions on behalf of the City. In addition, only communications that are in writing from an authorized representative of the company/firm will be recognized by the City as duly authorized expressions on behalf of the respective company/firm.

N. No Discrimination

No discrimination shall be made on the basis of race, sex, color, age, religion, or national origin in the operations conducted under any agreement/contract with the City.

O. Independent Contractor

The awarded company/firm will conduct business as an independent contractor/consultant under the terms of the agreement/contract. Personnel services provided by the awarded company/firm shall be provided by employees of the awarded company/firm and subject to supervision by the awarded company/firm, and not as City officers, employees, or agents. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies, and other similar administrative procedures applicable to services rendered under the agreement/contract shall be those of the awarded company/firm.

P. Staff Assignment

The City of Pompano Beach reserves the right to approve or reject, for any reason, Firm's staff assigned to this project at any time. Background checks may be required.

Q. Agreement/Contract Terms

The agreement/contract resulting from this solicitation shall include, but not be limited to, the following terms:

- The agreement/contract shall include, at a minimum, the entirety of this solicitation and the awarded proposal. The City of Pompano Beach City Attorney shall prepare it.
- If the City defends any claim, demand, cause of action, or lawsuit arising out of any act, action, negligent acts or negligent omissions, or willful misconduct of the contractor/consultant, its employees, agents, or servants during the performance of the agreement/contract, whether directly or indirectly, awarded The company/firm agrees to reimburse the City for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action, or lawsuit.

R. Waiver

It is agreed that no waiver or modification of the agreement/contract resulting from this solicitation or of any covenant, condition, or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it. No evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting the agreement/contract or the right or obligations of any party under it unless such waiver or modification is in writing, duly executed as previously provided. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

S. Survivorship Rights

The agreement/contract resulting from this solicitation shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representatives, successors, and assigns.

T. Manner of Performance

Firm agrees to perform its duties and obligations under the agreement/contract resulting from this solicitation professionally and in accordance with all applicable local, federal, and state laws, rules, and regulations.

Firm agrees that the services provided under the agreement/contract resulting from this solicitation shall be provided by educated, trained, experienced, certified, and licensed employees in all areas encompassed within its designated duties. Firm agrees to furnish the City of Pompano Beach with all documentation, certification, authorization, license, permit, or registration currently required by applicable laws, rules, and regulations. Firm further certifies that it and its employees are now in and will maintain good standing with such governmental agencies and that it and its employees will keep all licenses, permits, registration, authorization, or certification required by applicable laws or regulations in full force and effect during the term of the agreement/contract. Failure of the Firm to comply with this paragraph shall constitute a material breach of the agreement/contract.

U. Acceptance Period

Proposals submitted in response to this solicitation must be valid for no less than one hundred and twenty (120) days from the closing date.

V. Conditions and Provisions

The completed proposal (together with all required attachments) must be submitted electronically to the City on or before the time and date as written herein. By electronically submitting a proposal, all firms shall agree to comply with all of this solicitation's conditions, requirements, and instructions as written or implied herein. All proposals and supporting materials submitted will become the property of the City.

Firm's response shall not contain any alteration to the document posted other than entering data in the spaces provided or including attachments as necessary. By submission of a response, Firm affirms that a complete set of solicitation documents was obtained from the eBid System only, and no alteration of any kind has been made to this solicitation. Exceptions or deviations to this proposal may not be added after the due date.

All firms are required to provide all information requested in this solicitation. Failure to do so may result in the proposal being disqualified.

The City reserves the right to postpone or cancel this solicitation or reject all proposals if, in its sole discretion, it deems it to be in the City's best interest to do so.

The City reserves the right to waive any technical or formal errors or omissions and to reject all proposals or to award an agreement/contract for the items herein, in part or whole, if it is determined to be in the City's best interests to do so.

The City shall not be liable for any costs incurred by the Firm in preparing proposals or for any work performed therein.

W. Standard Provisions

1. Governing Law

Any agreement/contract resulting from this solicitation shall be governed by the laws of the State of Florida, and the venue for any legal action relating to such agreement/contract will be in Broward County, Florida.

2. Licenses

In order to perform public work, the awarded company/firm shall be licensed to do business in Florida, if an entity, and hold or obtain such Contractor and Business Licenses if required by State Statutes or local ordinances.

3. Conflict of Interest

To determine any possible conflict of interest, each Firm must disclose if any Elected Official, Appointed Official, or City Employee is also an owner, corporate officer, or an employee of the company/firm. Suppose any Elected Official, Appointed Official, or City Employee is an owner, corporate officer, or employee. In that case, the Firm must file a statement with the Broward County Supervisor of Elections pursuant to Florida Statute, Section 112.313.

4. Drug-Free Workplace

The awarded company(s)/firm(s) will be required to verify that they will operate a "Drug-Free Workplace" as outlined in Florida Statute, Section 287.087.

5. Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction by a public entity crime may not submit a proposal on an agreement/contract to provide any goods or services to a public entity, may not submit a proposal on an agreement/contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, sub-contractor, consultant or sub-consultant under agreement/contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute, Section 287.017, for Category Two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

6. Patent Fees, Royalties, And Licenses

Suppose the awarded company/firm requires or desires to use any design, trademark, device, material, or process covered by letters patent or copyright. In that case, the awarded company/firm and his surety shall indemnify and hold harmless the City from any and all claims for infringement because of the use of any such patented design, device, trademark, copyright, material, or process in connection with the work agreed to be performed and shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay because of any infringement at any time during or after completion of the work.

7. Permits

The Awarded Firm shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations, codes, and ordinances to perform the work required in these specifications and to conform to the requirements of said legislation.

8. Familiarity with Laws

It is assumed the selected company(ies)/firm(s) will be familiar with all federal, state, and local laws, ordinances, rules, and regulations that may affect/their services pursuant to this solicitation. Ignorance on the part of the company/firm will not relieve the company/firm from responsibility.

9. Withdrawal of Proposals

A company/firm may withdraw its proposal without prejudice, no later than the advertised deadline for submission of proposals by written communication to the Procurement and Contracts, 1190 N.E. 3rd Avenue, Building C, Pompano Beach, Florida 33060.

10. Composition of Project Team

Company(ies)/Firm(s) are required to commit that the principals and personnel named in the proposal will perform the services throughout the contractual term unless otherwise provided for by way of a negotiated agreement/contract or written amendment to same executed by both parties. No diversion or substitution of principals or personnel will be allowed unless a written request that sets forth the qualifications and experience of the proposed replacement(s) is submitted to and approved by the City in writing.

11. Invoicing/Payment

All invoices should be sent to the contract's user department. Per Florida Statutes, Chapter 218, payment will be made within forty-five (45) days after receipt of a proper invoice.

12. Public Records

- a. The City of Pompano Beach is a public agency subject to Florida Statutes, Section 119. The awarded company/firm shall comply with Florida's Public Records Law, as amended. Specifically, the Awarded Firm shall:
 - i. Keep and maintain public records required by the City in order to perform the service;
 - ii. Upon request from the City's custodian of public records, provide the City 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 provided in Florida Statutes, Section 119, or as otherwise provided by law;
 - iii. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the agreement/contract term and following completion of the agreement/contract if the awarded company/firm does not transfer the records to the City; and
 - iv. Upon completion of the agreement/contract, transfer all public records in possession of the awarded company/firm at no cost to the City, or keep and maintain public records required by the City to perform the service. If the awarded company/firm transfers all public records to the City upon completion of the agreement/contract, the awarded company/firm shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the awarded company/firm keeps and maintains public records upon completion of the agreement/contract, the contractor/consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format compatible

- with the City's information technology systems.
- b. Failure of the contractor/consultant to provide the above-described public records to the City within a reasonable time may subject the contractor/consultant to penalties under Florida Statute Section 119.10, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONTRACTOR/CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S/CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT/CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK
100 W. Atlantic Blvd., Suite 253, Pompano Beach, Florida 33060
Phone: (954) 786-4611
RecordsCustodian@copbfl.com

X. Questions, Communication, and Addendums

All questions regarding this solicitation will be submitted using the Questions feature in the eBid System. Oral and other interpretations or clarifications will be without legal effect. Addendum/Addenda will be posted to this solicitation in the eBid System, and it is the firm's responsibility to obtain all addenda before submitting a response to this solicitation.

Issuing a written addendum or posting an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods for interpretation, clarification, or additional information. If any addendum is issued to this solicitation, the addendum will be issued via the eBid System. Before submitting its response, each firm shall be responsible for contacting the City's Procurement and Contracts Department at (954) 786-4098 to determine if an addendum was issued and to make such an addendum a part of its proposal. Each addendum will be posted to the solicitation in the eBid System.

Y. Protest Procedures

The Protest Procedures established within the Procurement and Contracts Procedures Manual and Section 120.57, Florida Statutes, must be followed to file a valid Protest to this solicitation. Protests concerning the proposed solicitation award must be filed in writing with the Procurement and Contracts Director to be considered. They may only be filed by bidders or firms whose solicitation or award may aggrieve. The initial protest must be addressed to the following:

Director of Procurement and Contracts, City of Pompano Beach
1010 N.E. 3rd Avenue, Pompano Beach, Florida 33060

END OF THE RLI



**City of Pompano Beach
Procurement and Contracts Department
1010 N.E. 3rd Avenue
Pompano Beach, Florida, 33060**

September 4, 2025

ADDENDUM #1

RLI25-072 Water and Reuse Treatment Plant Projects - CCNA

To Whom It May Concern,

Addendum #1 is posted on the City's eBid website: <http://pompanobeachfl.ionwave.net>. Acknowledge receipt of this Addendum using the Addendum Attribute on the Attributes tab in the eBid System.

Internal software settings have been adjusted to solve a technical issue.

The deadline for receiving written questions in the eBid System is **September 22, 2025, at 12:00:00 p.m. (local)**.

The deadline for accepting proposals in the eBid system is **October 1, 2025, at 2:00:00 p.m. (local)**.

The remainder of the solicitation is unchanged at this time.

Sincerely,

Jeffrey English,
Purchasing Agent.

cc: website



**City of Pompano Beach
Procurement and Contracts Department
1010 N.E. 3rd Avenue
Pompano Beach, Florida, 33060**

September 8, 2025

ADDENDUM #2

RLI25-072 Water and Reuse Treatment Plant Projects - CCNA

To Whom It May Concern,

Addendum #2 is posted on the City's eBid website: <http://pompanobeachfl.ionwave.net>. Acknowledge receipt of this Addendum using the Addendum Attribute on the Attributes tab in the eBid System.

All documents for this solicitation have been updated to allow access to the public.

The deadline for receiving written questions in the eBid System is **September 22, 2025, at 12:00:00 p.m. (local).**

The deadline for accepting proposals in the eBid system is **October 1, 2025, at 2:00:00 p.m. (local).**

The remainder of the solicitation is unchanged at this time.

Sincerely,

Jeffrey English,
Purchasing Agent.

cc: website



**City of Pompano Beach
Procurement and Contracts Department
1010 N.E. 3rd Avenue
Pompano Beach, Florida, 33060**

October 1, 2025

ADDENDUM #3

RLI25-072 Water and Reuse Treatment Plant Projects - CCNA

To Whom It May Concern,

Addendum #3 is posted on the City's eBid website: <http://pompanobeachfl.ionwave.net>. Acknowledge receipt of this Addendum using the Addendum Attribute on the Attributes tab in the eBid System.

The link to a recording of the pre-proposal meeting is as follows:

[https://copb-purchasing.s3.us-east-1.amazonaws.com/RLI25-072_Water+and+Reuse+Treatment+Plant+Projects++CCNA/Pre-Proposal+Meeting+for+RLI25-072+Water+and+Reuse+Treatment+Plant+Projects+\(CCNA\).mp4](https://copb-purchasing.s3.us-east-1.amazonaws.com/RLI25-072_Water+and+Reuse+Treatment+Plant+Projects++CCNA/Pre-Proposal+Meeting+for+RLI25-072+Water+and+Reuse+Treatment+Plant+Projects+(CCNA).mp4)

RLI25-072_meeting_saved_chat.txt, which contains the meeting's participants, has been uploaded to the Attachments tab of the City's eBid System.

The Addendum-2 notice has been uploaded to the Attachments tab of the City's eBid System.

The deadline for receiving written questions in the eBid System has passed.

The deadline for accepting proposals in the eBid system is **October 1, 2025, at 2:00:00 p.m. (local)**.

The remainder of the solicitation is unchanged at this time.

Sincerely,

Jeffrey English,
Purchasing Agent.

cc: website



**City of Pompano Beach
Procurement and Contracts Department
1010 N.E. 3rd Avenue
Pompano Beach, Florida, 33060**

October 1, 2025

ADDENDUM #4

RLI25-072 Water and Reuse Treatment Plant Projects - CCNA

To Whom It May Concern,

Addendum #4 is posted on the City's eBid website: <http://pompanobeachfl.ionwave.net>. Acknowledge receipt of this Addendum using the Addendum Attribute on the Attributes tab in the eBid System.

The deadline for receiving written questions in the eBid System has passed.

The deadline for accepting proposals in the eBid system has been extended to **October 8, 2025, at 2:00:00 p.m. (local)**.

The remainder of the solicitation is unchanged at this time.

Sincerely,

Jeffrey English,
Purchasing Agent.

cc: website



**City of Pompano Beach
Procurement and Contracts Department
1010 N.E. 3rd Avenue
Pompano Beach, Florida, 33060**

October 2, 2025

ADDENDUM #5

RLI25-072 Water and Reuse Treatment Plant Projects - CCNA

To Whom It May Concern,

Addendum #5 is posted on the City's eBid website: <http://pompanobeachfl.ionwave.net>. Acknowledge receipt of this Addendum using the Addendum Attribute on the Attributes tab in the eBid System.

The deadline for accepting questions has been extended to **October 7, 2025, at 12:00 p.m. (local)**

The deadline for accepting proposals in the eBid system is **October 15, 2025, at 2:00:00 p.m. (local)**.

The remainder of the solicitation is unchanged at this time.

Sincerely,

Jeffrey English,
Purchasing Agent.

cc: website



RLI25-072 Addendum 5

Hazen and Sawyer Supplier Response

Event Information

Number: RLI25-072 Addendum 5
 Title: Water and Reuse Treatment Plant Projects - CCNA
 Type: Request for Letters of Interest
 Issue Date: 8/28/2025
 Deadline: 10/15/2025 02:00 PM (ET)
 Notes: Pursuant to Section 287.055, Florida Statutes Consultant's Competitive Negotiation Act (CCNA), the City of Pompano Beach (the "City") invites professional companies/firms to submit a Letter of Interest (RLI) to provide engineering services at the Pompano Beach Water Treatment Plant on a continuing as-needed basis.

The selected firm shall demonstrate specific experience and capabilities and must have qualified personnel and expertise in the specified disciplines.

This RLI is subject to the "Cone of Silence," which imposes certain restrictions on communications concerning the RLI process.

The Cone of Silence shall take effect once this solicitation is released to the General Public. Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72 hours following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the

Hazen and Sawyer Information

Contact: Julie Forgione
 Address: 4000 Hollywood Boulevard
 Suite 750 North
 Hollywood, FL 33021
 Phone: (954) 987-0066
 Email: southeastmarketing@hazenandsawyer.com
 Web Address: hazenandsawyer.com

By submitting this Response I affirm I have received, read and agree to the all terms and conditions as set forth herein. I hereby recognize and agree that upon execution by an authorized officer of the City of Pompano Beach, this Response, together with all documents prepared by or on behalf of the City of Pompano Beach for this solicitation, and the resulting Contract shall become a binding agreement between the parties for the products and services to be provided in accordance with the terms and conditions set forth herein. I further affirm that all information and documentation contained within this response to be true and correct, and that I have the legal authority to submit this response on behalf of the named Supplier (Offeror).

Janeen Wietgreffe

Signature

Submitted at 10/15/2025 12:44:42 PM (ET)

jwietgreffe@hazenandsawyer.com

Email

Requested Attachments

Letter of Interest

Hazen and Sawyer_Water and
 Reuse Treatment Plant
 Projects_RLI 25-072.pdf

The electronic version of the Letter of Interest must be uploaded to the Response Attachments tab. Section G of the RLI includes the submittal requirements. Firm shall upload the response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 10 MB, the response must be split and uploaded as two (2) separate files.

Tier 1/ Tier 2 Local Business Form

03 T1_T2_Form_Hazen.pdf

To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete the Tier 1/ Tier 2 Local Business form from the attachments tab and upload it here.

Proposer Information Page Form

01 Proposer Information Page
 Form and Licenses_Hazen.pdf

Proposer Information Page

Qualification of Bidders Form

01a Qualifications of Bidders
 Form_Hazen.pdf

Qualification of Bidders Form from the attachments tab must be completed and uploaded to this tab.

Local Business Program Forms

04 Local Business Program
 Forms_Hazen.pdf

Local Business Program Forms (A, B, C, and D) from the attachments tab must be completed and uploaded to this tab.

Project Team Form

02 Project Team Form and
 Attachment_Hazen.pdf

Submit a completed "Project Team" form. This form aims to identify the proposed team's key members, including any specialty subconsultants.

W9 Request for Taxpayer Identification Number and Certification

Form W-9_Hazen and Sawyer.pdf

Response Attachments

CONFIDENTIAL FINANCIAL STATEMENTS_Hazen.pdf

Attached are Hazen and Sawyer's Confidential Financial Statements.

Bid Attributes

1 Local Business

Is your company a Local Business located within the City of Pompano Beach City Limits as required by the Local Business Program? (A copy of your current City of Pompano Beach Business Tax Receipt may be requested.)

2 Local Business Participation Percentage

If you have indicated local business participation on the Local Business Participation Form Exhibit A enter the percentage of the contract that will be performed by local Pompano Beach businesses.

3 Drug-Free Workplace

STATEMENT UNDER SECTION 287.087, FLORIDA STATUTES ON DRUG-FREE WORKPLACE
**REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB FOR THE RFP IN THE EBID SYSTEM.
 PROVIDE THIS INFORMATION ELECTRONICALLY.**

Preference must be given to Contractors submitting certification with their bid or proposal, certifying they have a drug-free workplace in accordance with Section 287.087, Florida Statutes. This requirement affects all public entities of the State and becomes effective January 1, 1991.

Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- (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 dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
 - (3) Give each employee engaged in providing the commodities or contractual services that are under bid, a copy of the statement specified in subsection (1).
 - (4) In the statement specified in subsection (1) notify the employees that as a condition of working on the commodities or contractual services that are under bid, 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 Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace, no later than five (5) days after such conviction.
 - (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 an employee who is so convicted.
 - (6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.
- As the person authorized to sign this statement, I certify that his company/firm complies with the above requirements.

By choosing YES, I hereby certify that the company/firm complies with all the above requirements

4 Conflict of Interest

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". (Note: If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.) Indicate Yes or No below with the drop down menu.

5 Vendor Certification Regarding Scrutinized Companies Lists (Any Dollar Amount)

Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to electronically sign on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

 Certified**6 Terms & Conditions**

Check the box indicating you agree to the terms and conditions of this solicitation.

 Agree**7 Acknowledgement of Addenda**

Check this box to acknowledge that you have reviewed all addenda issued for this solicitation.

 Yes



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Entity Name](#) /

Detail by Entity Name

Foreign Profit Corporation
HAZEN AND SAWYER, P.C.

Filing Information

Document Number	841657
FEI/EIN Number	13-2904652
Date Filed	10/18/1978
State	NY
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	08/10/1987
Event Effective Date	NONE

Principal Address

4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Changed: 03/09/2016

Mailing Address

498 Seventh Ave, 11th Floor
New York, NY 10018

Changed: 01/22/2016

Registered Agent Name & Address

CORPORATION SERVICE COMPANY
1201 HAYS STREET
TALLAHASSEE, FL 32301

Name Changed: 06/30/2005

Address Changed: 06/30/2005

Officer/Director Detail

Name & Address

Title VP

Davis, Patrick A
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Chiriboga, Fernando B
999 Ponce de Leon Blvd.
Suite 1150
Coral Gables, FL 33134

Title VP, Director, Secretary

Haubner, Gary
7870 East Kemper Road
Suite 300
Cincinnati, OH 45249

Title President, Director

Stone, Alan
4011 WestChase Blvd.
Suite 500
Raleigh, NC 27607

Title Senior Vice President, Director

TAYLOR, ROBERT B
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP, CFO

Crayon, William
498 Seventh Ave, 11th Floor
New York, NY 10018

Title VP, Director

Carney, Patricia A
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Page, Jayson J
999 Ponce de Leon Blvd.
Suite 1150
Coral Gables, FL 33134

Title VP

Joykutty, Shajan
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Muniz, Albert
2101 NW Corporate Blvd.
Suite 301
Boca Raton, FL 33431

Title VP

Dieffenthaler, Andre A.
1000 N. Ashley Drive
Suite 1000
Tampa, FL 33602

Title VP

Wietgreffe, Janeen M.
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Cooke, JOHN PHILIP
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Regalado, Guillermo
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

Pfeffer, Kurt A
2101 NW Corporate Blvd.
Suite 301
Boca Raton, FL 33431

Title Associate Vice President

Baar, David A
1000 N. ASHLEY DRIVE
SUITE 1000
TAMPA, FL 33602

Title VP

Kish, Christopher L.
999 PONCE DE LEON BLVD
SUITE 1150
CORAL GABLES, FL 33134

Title Associate Vice President

Koroshec, John C.
2101 NW CORPORATE BLVD
SUITE 301
BOCA RATON, FL 33431

Title VP

McMahon, Jennifer N.
4000 HOLLYWOOD BLVD.
SUITE 750N
HOLLYWOOD, FL 33021

Title VP

Myers, Ervin B., Jr.
2420 S. LAKEMONT AVENUE
SUITE 325
Orlando, FL 32814

Title Associate Vice President

Schroeder, John P.
1000 N. ASHLEY DRIVE
SUITE 1000
TAMPA, FL 33602

Title Associate Vice President

Bulman, Gerrit R
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title VP

GRIBORIO, ALONSO G
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title ASSOCIATE VICE PRESIDENT

VADIVELLO, ENRIQUE
4000 Hollywood Blvd.
Suite 750N
Hollywood, FL 33021

Title ASSOCIATE VICE PRESIDENT

Castro, Orlando J
999 PONCE DE LEON BLVD.
SUITE 1150
CORAL GABLES, FL 33134

Title ASSOCIATE VICE PRESIDENT

Kremers, Holly P
1000 N. ASHLEY DRIVE
SUITE 1000
TAMPA, FL 33602

Title ASSOCIATE VICE PRESIDENT

Brown, George
4000 HOLLYWOOD BLVD.
750N
HOLLYWOOD, FL 33431

Title ASSOCIATE VICE PRESIDENT

Blanton, Kenneth
2420 S. LAKEMONT AVENUE
SUITE 325
ORLANDO, FL 32814

Title ASSOCIATE VICE PRESIDENT

Curtis, Evan
2101 NW CORPORATE BLVD.
SUITE 301
BOCA RATON, FL 33431

Title ASSOCIATE VICE PRESIDENT

Holmes, Frederick
2420 S. LAKEMONT AVENUE
SUITE 325
ORLANDO, FL 32814

Title ASSOCIATE VICE PRESIDENT

Owen , Christine
1000 N. ASHLEY DRIVE
SUITE 1000
TAMPA, FL 33602

Title ASSOCIATE VICE PRESIDENT

Porter, Jacob
1000 N. ASHLEY DRIVE
SUITE 1000
TAMPA, FL 33602

Title Associate Vice President

Rogers, Glenn Frederick III
1404 Dean Street
Suite 300
Ft Myers, FL 33901

Title Associate Vice President

Andary, Elie
4000 HOLLYWOOD BLVD.
SUITE 750N
Hollywood, FL 33021

Title Associate Vice President

Coleman, Andrew
1000 N. ASHLEY DRIVE
SUITE 1000
Tampa, FL 33602

Title Associate Vice President

Rani, Rama
 2101 NW CORPORATE BLVD.
 SUITE 301
 BOCA RATON, FL 33431

Annual Reports

Report Year	Filed Date
2025	01/13/2025
2025	07/03/2025
2026	01/13/2026

Document Images

01/13/2026 -- ANNUAL REPORT	View image in PDF format
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01/14/2019 -- ANNUAL REPORT	View image in PDF format
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01/22/2016 -- ANNUAL REPORT	View image in PDF format
02/23/2015 -- ANNUAL REPORT	View image in PDF format
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01/26/2012 -- ANNUAL REPORT	View image in PDF format
01/04/2011 -- ANNUAL REPORT	View image in PDF format
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Exhibit B – Cover Page

- 1. Consultant's Response**
- 2. Local Business Forms**
- 3. Consultant's Proposal**
- 4. Consultant's Rate Sheet**



RLI25-072 Addendum 5

Hazen and Sawyer Supplier Response

Event Information

Number: RLI25-072 Addendum 5
 Title: Water and Reuse Treatment Plant Projects - CCNA
 Type: Request for Letters of Interest
 Issue Date: 8/28/2025
 Deadline: 10/15/2025 02:00 PM (ET)
 Notes: Pursuant to Section 287.055, Florida Statutes Consultant's Competitive Negotiation Act (CCNA), the City of Pompano Beach (the "City") invites professional companies/firms to submit a Letter of Interest (RLI) to provide engineering services at the Pompano Beach Water Treatment Plant on a continuing as-needed basis.

The selected firm shall demonstrate specific experience and capabilities and must have qualified personnel and expertise in the specified disciplines.

This RLI is subject to the "Cone of Silence," which imposes certain restrictions on communications concerning the RLI process.

The Cone of Silence shall take effect once this solicitation is released to the General Public. Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72 hours following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the

Hazen and Sawyer Information

Contact: Julie Forgione
 Address: 4000 Hollywood Boulevard
 Suite 750 North
 Hollywood, FL 33021
 Phone: (954) 987-0066
 Email: southeastmarketing@hazenandsawyer.com
 Web Address: hazenandsawyer.com

By submitting this Response I affirm I have received, read and agree to the all terms and conditions as set forth herein. I hereby recognize and agree that upon execution by an authorized officer of the City of Pompano Beach, this Response, together with all documents prepared by or on behalf of the City of Pompano Beach for this solicitation, and the resulting Contract shall become a binding agreement between the parties for the products and services to be provided in accordance with the terms and conditions set forth herein. I further affirm that all information and documentation contained within this response to be true and correct, and that I have the legal authority to submit this response on behalf of the named Supplier (Offeror).

Janeen Wietgreffe

Signature

Submitted at 10/15/2025 12:44:42 PM (ET)

jwietgreffe@hazenandsawyer.com

Email

Requested Attachments

Letter of Interest

Hazen and Sawyer_Water and
 Reuse Treatment Plant
 Projects_RLI 25-072.pdf

The electronic version of the Letter of Interest must be uploaded to the Response Attachments tab. Section G of the RLI includes the submittal requirements. Firm shall upload the response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 10 MB, the response must be split and uploaded as two (2) separate files.

Tier 1/ Tier 2 Local Business Form

03 T1_T2_Form_Hazen.pdf

To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete the Tier 1/ Tier 2 Local Business form from the attachments tab and upload it here.

Proposer Information Page Form

01 Proposer Information Page
 Form and Licenses_Hazen.pdf

Proposer Information Page

Qualification of Bidders Form

01a Qualifications of Bidders
 Form_Hazen.pdf

Qualification of Bidders Form from the attachments tab must be completed and uploaded to this tab.

Local Business Program Forms

04 Local Business Program
 Forms_Hazen.pdf

Local Business Program Forms (A, B, C, and D) from the attachments tab must be completed and uploaded to this tab.

Project Team Form

02 Project Team Form and
 Attachment_Hazen.pdf

Submit a completed "Project Team" form. This form aims to identify the proposed team's key members, including any specialty subconsultants.

W9 Request for Taxpayer Identification Number and Certification

Form W-9_Hazen and Sawyer.pdf

Response Attachments

CONFIDENTIAL FINANCIAL STATEMENTS_Hazen.pdf

Attached are Hazen and Sawyer's Confidential Financial Statements.

Bid Attributes

1 Local Business

Is your company a Local Business located within the City of Pompano Beach City Limits as required by the Local Business Program? (A copy of your current City of Pompano Beach Business Tax Receipt may be requested.)

2 Local Business Participation Percentage

If you have indicated local business participation on the Local Business Participation Form Exhibit A enter the percentage of the contract that will be performed by local Pompano Beach businesses.

3 Drug-Free Workplace

STATEMENT UNDER SECTION 287.087, FLORIDA STATUTES ON DRUG-FREE WORKPLACE
**REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB FOR THE RFP IN THE EBID SYSTEM.
 PROVIDE THIS INFORMATION ELECTRONICALLY.**

Preference must be given to Contractors submitting certification with their bid or proposal, certifying they have a drug-free workplace in accordance with Section 287.087, Florida Statutes. This requirement affects all public entities of the State and becomes effective January 1, 1991.

Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- (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 dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
 - (3) Give each employee engaged in providing the commodities or contractual services that are under bid, a copy of the statement specified in subsection (1).
 - (4) In the statement specified in subsection (1) notify the employees that as a condition of working on the commodities or contractual services that are under bid, 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 Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace, no later than five (5) days after such conviction.
 - (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 an employee who is so convicted.
 - (6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.
- As the person authorized to sign this statement, I certify that his company/firm complies with the above requirements.

By choosing YES, I hereby certify that the company/firm complies with all the above requirements

4 Conflict of Interest

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". (Note: If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.) Indicate Yes or No below with the drop down menu.

5 Vendor Certification Regarding Scrutinized Companies Lists (Any Dollar Amount)

Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to electronically sign on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

 Certified**6 Terms & Conditions**

Check the box indicating you agree to the terms and conditions of this solicitation.

 Agree**7 Acknowledgement of Addenda**

Check this box to acknowledge that you have reviewed all addenda issued for this solicitation.

 Yes

COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB FOR THE RLI IN THE EBID SYSTEM.

PROPOSER INFORMATION PAGE

RLI 25-072, Water and Reuse Treatment Plant Projects - Continuing Contracts (CCNA)
 (number) (RLI name)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the RLI. I have read the RLI and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by: 

Name (printed) Janeen Wietgreffe, PE, PMP Title Vice President

Company (Legal Registered) Hazen and Sawyer, P.C. dba Hazen and Sawyer

Federal Tax Identification Number 13-2904652

Address 4000 Hollywood Boulevard, Suite 750 North

City/State/Zip Hollywood, FL 33021

Telephone No. (954) 987-0066 Fax No. N/A

Email Address jwietgreffe@hazenandsawyer.com

COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB FOR THE RLI IN THE EBID SYSTEM.

PROJECT TEAM

RLI NUMBER 25-072

Federal I.D.# 13-2904652

PRIME

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	Janeen Wietgrefe, PE, PMP	29	MS, BS
Project Manager	Monica Pazahanick, PE	18	MS, BE
Asst. Project Manager	Anthony Niemiec, Jr., PE, BCEE	11	MS, BS
Other Key Member	Monique Durand, PE	22	MS. BSE
Other Key Member	Alonso Griborio, PhD, PE	30	PhD, MS, BS

SUB-CONSULTANT

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	Craven Thompson & Associates, Inc. 3563 NW 53rd Street, Fort Lauderdale, FL 33309	Richard Crawford, PSM
Landscaping	Craven Thompson & Associates, Inc. 3563 NW 53rd Street, Fort Lauderdale, FL 33309	Scott Peavler, RLA
Engineering	N/A	
Other Key Member	Corporate Project Services, Inc. 8451 SW 27th Street, Miramar, FL 33025	Esther Lambert (1) Recardo Nicholson (1)
Other Key Member	Design Kollaborative Architects Planners, Inc. 200 N.E. 1st Avenue, Suite 115, Pompano Beach, FL 33060	Andre Capi, Blaise McGinley (2)
Other Key Member	GMAwater, LLC 125 S. State Road 7, Suite 104-260, Wellington, FL 33414	Steven Memberg, PG (3)
Other Key Member	Florida Engineering & Testing, Inc. 250 SW 13th Avenue Pompano Beach, FL 33069	Reza Javidan, PE (4)

(use attachments if necessary)

- (1) Construction Management/Inspections
- (2) Architecture
- (3) Permitting/Regulatory Compliance
- (4) Testing Services

PROJECT TEAM ATTACHMENT			
PRIME			
Role	Name of Individual Assigned to Project	Number of Yrs. Exp.	Education, Degrees
Principal-in-Charge	Janeen Wietgrefe, PE, PMP	29	MS, Environmental Engineering, University of North Carolina, 1997 BS, Environmental Engineering, University of Florida, 1995
Project Manager	Monica Pazahanick, PE	18	MS, Environmental Engineering, University of Arkansas, 2007 BE, Environmental Engineering, Catholic University of Bolivia, Cochabamba, 2004
Asst. Project Manager	Anthony Niemiec, Jr., PE, BCEE	11	MS, Environmental Engineering, Manhattan College, 2015 BS, Civil Engineering, Manhattan College, 2014
Technical Advisory Committee	Patrick Davis, PE	45	BS, Civil Engineering, University of Massachusetts, 1980
Technical Advisory Committee	Erick Rosenfeldt, PhD, PE	26	PhD, Civil and Environmental Engineering, Duke University, 2007 MS, Civil and Environmental Engineering, Duke University, 2003 BS, Chemical Engineering, Washington University, 1999
Technical Advisory Committee	Darren Lytle, PhD, PE	35	Ph.D., Environmental Engineering, University of Illinois at Champaign-Urbana, 2005 MS, Environmental Engineering, University of Cincinnati, 1991 BS, Civil Engineering, University of Akron, 1990
Technical Advisory Committee	J. Philip Cooke, PE	36	ME, Environmental Engineering, University of Florida, 1990, BSME, Environmental Engineering, University of Florida, 1989
Technical Advisory Committee	William Becker, PhD, PE, BCEE	44	PhD, Environmental Engineering, Johns Hopkins University, 1995 MS, Environmental Engineering, Clarkson University, 1981 BS, Civil and Environmental Engineering, Clarkson University, 1979 Adjunct Professor, Columbia University

PROJECT TEAM ATTACHMENT			
PRIME			
Role	Name of Individual Assigned to Project	Number of Yrs. Exp.	Education, Degrees
Water Lead; Water Process Mechanical; Master Planning/ Feasibility Study	Monique Durand, PE	22	MS, Environmental Engineering, Virginia Tech, 2005 BSE, Environmental Science, Midwestern State University, 2003
Reuse Water Lead	Alonso Griborio, PhD, PE	30	PhD, Engineering and Applied Sciences, University of New Orleans, 2004 MS, Environmental Engineering, Universidad del Zulia, Venezuela, 2000 BS, Civil Engineering, Universidad Rafael Urdaneta, 1994
Membrane Operations Optimization	Jayson Page, PE	27	MS, Environmental Engineering, Manhattan College, 1997 BS, Environmental Science, State University of New York, Purchase College, 1995
Membrane Operations Optimization	Paul Biscardi PhD, PE	14	PhD, Environmental Engineering, University of Central Florida, 2016 MS, Environmental Engineering, University of Central Florida, 2013 BS, Environmental Engineering, University of Central Florida, 2011
Membrane Operations Optimization	Tyler Davis, PE	35	BS, Chemical Engineering, Georgia Institute of Technology, 1990
Membrane Operations Optimization	Nathan Rothe, PE	13	MS, Environmental Science and Engineering, Colorado School of Mines, 2007 BS, Engineering with an Environmental Specialty, Colorado School of Mines, 2003
Water Process Mechanical	George Brown, PE	30	BS, Environmental Engineering, University of Florida, 1996
Water Process Mechanical; Master Planning/Feasibility Study	Jennifer McMahon, PE	27	MS, Environmental Engineering, Georgia Institute of Technology, 1997 BS, Civil Engineering, Georgia Institute of Technology, 1995
Permitting/Regulatory Compliance	Rama Rani, PG, GISP, CC-P	26	MS, Environmental Sciences, Ohio University, 1996 B.Arch., Regional Engineering College, Trichy, India, 1990

PROJECT TEAM ATTACHMENT			
PRIME			
Role	Name of Individual Assigned to Project	Number of Yrs. Exp.	Education, Degrees
Permitting/Regulatory Compliance; Grants/Funding	Marta Alonso, PE, ENV SP	22	MSE, Environmental Engineering, Johns Hopkins University, 2003 BS, Civil Engineering, Johns Hopkins University, 2002
Asset Management	Alexandra Kelly, PE, ENV SP	10	MS, Environmental Engineering, University of Florida, 2017 BS, Environmental Engineering/Ecosystem Science & Policy, University of Miami, 2016
Asset Management	Ryan Nagel, PE, PMP, ENV SP	29	MS, Environmental Engineering, North Dakota State University, 1998 BS, Civil Engineering, North Dakota State University, 1996 MBA, Finance, University of Kansas, 2002
Construction Management	Elie Andary, PhD, PE	23	Ph.D., Civil Engineering, Florida International University, 2019 ME, Civil Engineering, Florida International University, 2017 MS, Construction Engineering and Management, University of Florida, 2003 BE, Civil Engineering, Lebanese American University, 2000
Construction Management	Leonardo Galvan	35	Associate Graduate Technical Degree, School of Industrial Electricity, Madisonville, Kentucky, 1990
Reuse Water; Capital Improvement Planning	Patricia Carney, PE, BCEE, DBIA	35	ME, Manhattan College, 1991, Environmental Engineering BS, Manhattan College, 1990, Civil Engineering
Reuse Water	John Koroshec, PE	46	BS, Civil/Environmental Engineering, Michigan Technological University, 1983
Wells/Hydrogeology	Gerrit Bulman, PG	23	MS, Geological Sciences, University of Alabama, 2005 BS, Geological Sciences, Brown University, 2000

PROJECT TEAM ATTACHMENT			
PRIME			
Role	Name of Individual Assigned to Project	Number of Yrs. Exp.	Education, Degrees
Wells/Hydrogeology	Angela Giuliano, PG	13	MS, Hydrogeology and Environmental Geology, East Carolina University, 2014 BS, Environmental and Engineering Geology, Radford University, 2009
Wells/Hydrogeology	Michael Wengrenovich, PE	46	BS, Civil Engineering, Clarkson College, 1979
Climate Resilience/ Stormwater	Lucia Medina, PE	11	ME, Civil Engineering and Project Management, Vanderbilt University, 2013 BE, Civil Engineering and Studio Art, Vanderbilt University, 2012
Climate Resilience/ Stormwater	Robert Taylor, Jr., PE	40	MS, Agricultural Engineering, University of Florida, 1987 BS, Agricultural Engineering, University of Florida, 1985
Sustainability	Enrique Vadiveloo, PE, ENV SP	20	ME, Environmental Engineering, University of Florida, 2005 BS, Environmental Engineering, University of Florida, 2004
Grants-Funding	Sharon Simington	21	BSAS, University of South Florida, 2027 AA, University of South Florida, 2002
Hydraulic Modeling	Guillermo Regalado, PE	37	MSc, Irrigation Engineering, Catholic University of Leuven, Belgium, 1992 BS, Civil Engineering, Pontificia Universidad Javeriana, Colombia, 1988
Hydraulic Modeling	Nandita Ahuja, PE	11	MS, Civil Engineering, Virginia Tech, 2015 BE, Environmental Engineering, Delhi College of Engineering, 2012
Instrumentation/SCADA	Evan Curtis, PE	31	BS, Civil Engineering, Carnegie Mellon University, 1994
Instrumentation/SCADA	Alfredo Jimenez	15	BS, Electrical Engineering, Florida International University, 2016
Electrical	John Burke, PE	59	BS, Electrical Engineering, University of Florida, 1966
Electrical	Jose Cano, PE	8	BS, Florida International University, 2017, Electrical Engineering

PROJECT TEAM ATTACHMENT			
PRIME			
Role	Name of Individual Assigned to Project	Number of Yrs. Exp.	Education, Degrees
HVAC/Plumbing	David Witte, PE, CEM	17	ME, Civil Engineering, The Cooper Union, 2010 BS, Mechanical Engineering, University of Massachusetts Amherst, 2003
Structural	Jean Paul Silva, PE	30	MS, Civil/Structural Engineering, City University of New York, 2000 BS, Civil Engineering, Universidad del Valle, Republic of Colombia, 1996
Structural	Casey Andersen, PE	6	BS, Civil Engineering, Florida Gulf Coast University, 2013 BS, Professional Golf Management, Florida Gulf Coast University, 2013
Economic Analysis/Finance	Grace Johns, PhD	44	PhD, Agricultural and Natural Resource Economics University of California, Berkeley, 1986 BS, Food and Resource Economics, University of Florida, 1981
Economic Analysis/Finance	Gabriel Lara, PhD	14	Ph.D. Environmental Economics, Penn State University 2024 M.S. Applied Economics, Johns Hopkins University 2017 B.S. Economics, Penn State University, 2011 B.A. Intl. Politics, Penn State University, 2011
Capital Improvement Planning	Adrian Myrie, EI	3	ME, Civil Engineering, University of Florida, 2022 BS, Civil Engineering, University of Florida, 2021

LOCAL BUSINESS EXHIBIT "A"
 CITY OF POMPANO BEACH, FLORIDA
 LOCAL BUSINESS PARTICIPATION FORM

Solicitation Number & Title: RLI 25-072; Water and Reuse Treatment Plant Projects - Continuing Contracts (CCNA)

Prime Contractor's Name: Hazen and Sawyer

Name of Firm, Address	Contact Person, Telephone Number	Type of Work to be Performed/Material to be Purchased	Contract Amount or %
Design Kollaborative Architects/Planners, Inc. S#115 200 N.E. 1st Avenue, Pompano Beach, FL 33060	Andre Capi 954-941-3329	As-needed architectural and site planning services.	15%
Florida Engineering & Testing, Inc. 250 SW 13th Avenue; Pompano Beach, FL 33069	Christine Chang 954-781-6889	Testing services, geotechnical and construction materials testing, inspection services.	5%

LOCAL BUSINESS EXHIBIT "A"

LOCAL BUSINESS EXHIBIT "D" – Page 2

Bidder Company Name Hazen and Sawyer**Qualifications Of Bidders**

To demonstrate qualifications to perform the work, and to be considered for award, each bidder shall submit at least three (3) business customer references. Provide information for business customers for whom you have performed work of this nature which you list as references, excluding the City of Pompano Beach. (Use an attachment if necessary.)

1. Name and address of customer: City of Plantation

400 NW 73rd Avenue, Plantation, FL 33317

Contact person name, telephone number and email address: _____

Danny (Daniel) Pollio, Utilities Director; (954) 797-2209; dpollio@plantation.org

Description of services provided and date(s) of service: 2000–Present

Hazen has been providing general professional consulting engineering services to the City of Plantation since 2000. Hazen has provided services to the City for a wide range of projects including studies, design, permitting and construction management services in both the water and wastewater fields including facilities at water and wastewater treatment plants, collection systems, distribution systems and neighborhood improvement projects.

2. Name and address of customer: Town of Jupiter Utilities

210 Military Trail, Jupiter, FL 33458

Contact person name, telephone number and email address: _____

Amanda Barnes, PE, Utilities Director; (561) 741-2537; amandab@jupiter.fl.us

Description of services provided and date(s) of service: 2000–Present

Since 2000, Hazen has served as general consultant for the Town of Jupiter for Professional Engineering Services for Stormwater and Water Capital Improvements. Hazen's water-related capital projects have involved additional system storage and high-service pumping, extension and improvements to the transmission system, and renewal and replacement at existing treatment facilities. Hazen has also provided assistance to the Town in almost every aspect of its stormwater program.

3. Name and address of customer: City of Hallandale Beach

630 NW 2nd Street, Hallandale Beach, FL 33009

Contact person name, telephone number and email address: _____

Mark Gambrill, PE, City Engineer; (954) 457-3045; mgambrill@hallandalebeachfl.gov

Description of services provided and date(s) of service: 2001–Present

Hazen provides general consulting services for water treatment and wastewater transmission system projects. General consulting services are provided on an as-requested basis and consist of engineering services ranging from studies, hydraulic models and master planning services through detailed design and construction oversight services.

Bidder Company Name Hazen and Sawyer**Qualifications Of Bidders**

To demonstrate qualifications to perform the work, and to be considered for award, each bidder shall submit at least three (3) business customer references. Provide information for business customers for whom you have performed work of this nature which you list as references, excluding the City of Pompano Beach. (Use an attachment if necessary.)

4. Name and address of customer: City of Cooper City

11791 SW 49th Street, Cooper City, FL 33330

Contact person name, telephone number and email address: _____

Akin Ozaydin, Utilities Director/City Engineer; (954) 434-4300 #111; aozaydin@coopercity.gov

Description of services provided and date(s) of service: 2009–Present

Since 2009, Hazen has served as one of Cooper City's consultants for Continuing Professional Engineering Services. Work assignments under this contract encompass a range of disciplines including technical, institutional, and regulatory aspects of water, reclaimed water, wastewater, sanitary sewer, stormwater and water and wastewater treatment facilities.

5. Name and address of customer: City of Hollywood Department of Public Utilities

1621 North 14th Avenue, Hollywood, FL 33022

Contact person name, telephone number and email address: _____

Vincent (Vin) Morello, Director; (954) 967-4455; vmorello@hollywoodfl.org

Description of services provided and date(s) of service: 1984–Present

Since 1984, the firm has been providing general engineering consultant services for water treatment plant and wastewater treatment plant projects to the City. Hazen was most recently reselected in 2023. Work has included numerous projects for the City's wastewater plant, wastewater collection and transmission system, and reuse transmission system; pump station upgrades and replacement, stormwater management program, stormwater utility, ocean outfall services, instrumentation and controls, and successful anticipation and management of many of the most pressing regulatory issues including Class 1 Injection Well Rule Changes, Ocean Outfalls, Bird Rule, and Reclaimed Water.

TIER 1/TIER 2 COMPLIANCE FORM

IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

TIER 1 LOCAL VENDOR

_____ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

_____ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

_____ My firm does not qualify as a Tier 1 Vendor.

TIER 2 LOCAL VENDOR

_____ My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

Or

_____ My firm does not qualify as a Tier 2 Vendor.

I certify that the above information is true to the best of my knowledge.

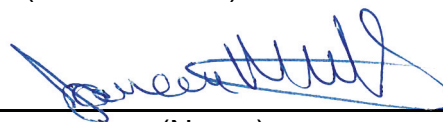
10/3/2025

(Date)

Hazen and Sawyer

(Name of Firm)

BY:



(Name)

Janeen Wietgreffe PE, PMP, Vice President

LOCAL BUSINESS EXHIBIT "B"
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number RLI 25-072

TO: Hazen and Sawyer
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

an individual

a corporation

a partnership

a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Testing services; geotechnical and construction materials testing
and inspection services

at the following price: TBD*

10/9/25
(Date)

Florida Engineering & Testing, Inc.
(Print Name of Local Business Contractor)

250 S.W. 13th Avenue
(Street Address)

Pompano Beach, FL 33069
(City, State Zip Code)

BY: 
(Signature)

IMPORTANT NOTE: Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

* Actual percentage will be determined on assigned work authorizations and required scope of services.

THIS FORM IS NOT APPLICABLE.

LOCAL BUSINESS EXHIBIT "C"

LOCAL BUSINESS
UNAVAILABILITY FORM

BID # _____

I, _____
(Name and Title)

of _____, certify that on the _____ day of

_____, _____, I invited the following LOCAL BUSINESSES to bid work items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Said Local Businesses:

- ___ Did not bid in response to the invitation
- ___ Submitted a bid which was not the low responsible bid
- ___ Other: _____

Name and Title: _____

Date: _____

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "D"
GOOD FAITH EFFORT REPORT
LOCAL BUSINESS PARTICIPATION

BID # RLI 25-072

1. What portions of the contract have you identified as Local Business opportunities?

Architecture, site planning, building and/or facility renovations and designs

Testing services; geotechnical and construction materials testing;

Inspection services

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

Yes. Hazen called and/or emailed local businesses and provided.

a copy of the RFP.

3. Did you send written notices to Local Businesses?

Yes No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

Yes No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

Hazen called and/or emailed local businesses.

7. List the Local Businesses you will utilize and subcontract amount.

Florida Engineering & Testing \$ 5%*

Design Kollaborative (DK) Architects/
Planners, Inc. (DK Architects) \$ 10%*

\$

8. Other comments: None

* Estimated percentage. Actual % will be determined on assigned work authorizations and required scope of services.

LOCAL BUSINESS EXHIBIT "B"
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number RLI 25-072

TO: Hazen and Sawyer
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

an individual

a corporation

a partnership

a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

As-needed architectural and site planning services

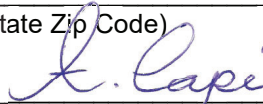
at the following price: TBD*

10/10/25
(Date)

Design Kollaborative Architects Planners (dba)
DK Architects
(Print Name of Local Business Contractor)

200 NE 1st Street, Suite 115
(Street Address)

Pompano Beach, FL 33060
(City, State Zip Code)

BY: 
(Signature)

IMPORTANT NOTE: Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

* Actual percentage will be determined on assigned work authorizations and required scope of services.



Florida's Warmest Welcome

Letter of Interest (RLI 25-072)

Water and Reuse Treatment Plant Projects – Continuing Contracts (CCNA)

October 15, 2025



1. Title Page

Title Page

Project Name and Number

Water and Reuse Treatment Plant Projects – Continuing Contracts (CCNA)
Letter of Interest (RLI 25-072)

Name of the Proposer's Firm

Hazen and Sawyer

Address

4000 Hollywood Blvd.
Suite 750 North
Hollywood, FL 33021

Phone

(954) 987-0066

Name of Contact Person

Janeen Wietgreffe, PE, PMP
Vice President

Date

October 15, 2025





2. Table of Contents

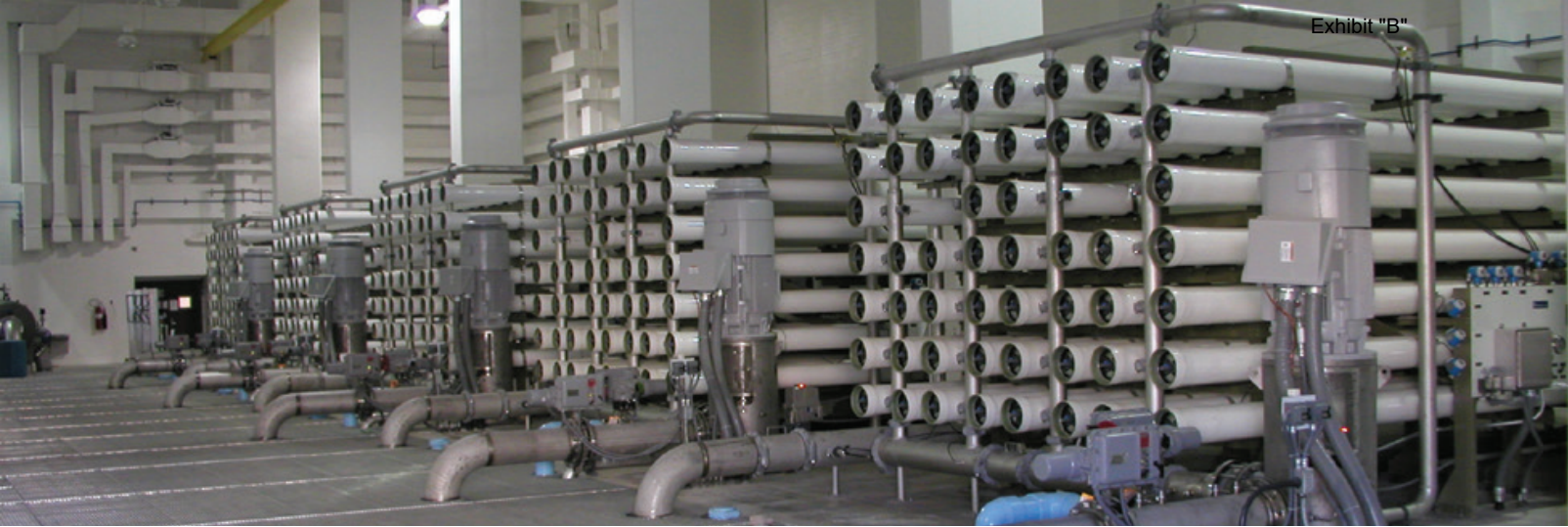


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3. Letter of Transmittal





Hazen and Sawyer
4000 Hollywood Boulevard, Suite 750N
Hollywood, FL 33021 • (954) 987-0066

October 15, 2025

City of Pompano Beach
100 W. Atlantic Boulevard
Pompano Beach, FL 33060

Re: Water and Reuse Treatment Plant Projects – Continuing Contracts (CCNA), RLI 25-072

Dear Evaluation Committee Members:

The City of Pompano Beach is committed to protecting public health and providing its residents with a safe and dependable drinking water supply. The City also has a long history of cost-effectively developing its utility infrastructure, continuously seeking strategies that are environmentally sound and fiscally responsible to its utility customers. Hazen and Sawyer (Hazen) is excited about the prospect of providing continuing professional services in the water and reuse disciplines to support the City in executing the projects in its Capital Improvement Program (CIP).

We have assembled an experienced team of local engineers and support staff, augmented by key experts, to provide expertise for any water or reuse treatment plant project. Due to Hazen's sole focus on water engineering and the variety of water-related projects performed by our proposed team, we are ready to assist the City with solving any issues and challenges that may lie ahead.

Our Florida staff of over 250 professionals has been involved in the implementation of more than \$8 billion in water-related projects in Florida over the past ten years. These Florida projects include planning, design, permitting, bidding, construction administration/management services, value engineering, and facility optimization of water, wastewater, stormwater, and reuse water treatment, storage, and conveyance systems.

We have served many municipalities in Broward County, and thus **have a thorough understanding of local conditions, regulations, suppliers, contractors, and stakeholder issues and concerns.**

We present four key attributes which make Hazen the right team to serve Pompano Beach for this contract:



Trusted. Our demonstrated expertise and experience and strong proactive leadership on projects with our clients throughout the tri-county area and nationwide, help you achieve your goals and results in quality deliverables. This is evidenced by our decades of repeat service in South Florida.



Local. Hazen, with an established regional design center in Broward County for 57 years, is one of Florida's leading engineering consulting firms and one of the few consultants totally focused exclusively in the areas of water, reuse water, wastewater, and stormwater engineering services. With Hazen, the City has the benefit of a local firm with dedicated personnel knowledgeable about the sensitivities of Florida, backed by a national company with the resources to solve a multitude of challenges. This contract will be managed from our regional headquarters in Hollywood, Florida, which is home to 75 employees.



Responsive. The Hazen team understands the importance of responding promptly to each work assignment under continuing services contracts, developing concise scopes, successfully executing work assignments, and effectively managing our resources. Our team, with multiple leaders and strong depth of resources, is ready to respond and successfully manage multiple assignments simultaneously. Hazen has served as general consultant for more than 80 utilities in Florida. Many of these utilities have retained us for multiple continuing contracts and long-standing, repeat assignments.



Proven. Our proven approach to planning, management, design, permitting, bidding, and construction are all targeted at managing and reducing risk and keeping project costs efficient and predictable. Our thoroughness in planning flexibility for the future is proven now as the City embarks on expanding the membrane plant within the original building footprint.

As a Vice President and proposed Principal-in-Charge, Janeen Wietgreffe, PE, PMP, is an authorized agent of the firm and has full authority to commit the resources necessary for the completion of each assignment. The name of the contracting agent and primary contact person for this RFQ is as follows:

Hazen and Sawyer
Janeen Wietgreffe, PE, PMP, Vice President
4000 Hollywood Boulevard, Suite 750 North, Hollywood, FL 33021
(954) 987-0066 (phone)
jwietgreffe@hazenandsawyer.com

Please feel free to contact us should you have any questions or would like to discuss our qualifications further. We can be reached at (954) 987-0066 or jwietgreffe@hazenandsawyer.com or mpazahanick@hazenandsawyer.com.

Sincerely,

Hazen and Sawyer

Janeen Wietgreffe, PE, PMP
Principal-in-Charge and Vice President

Monica Pazahanick, PE
Project Manager and Senior Associate



4. Technical Approach

4 Technical Approach

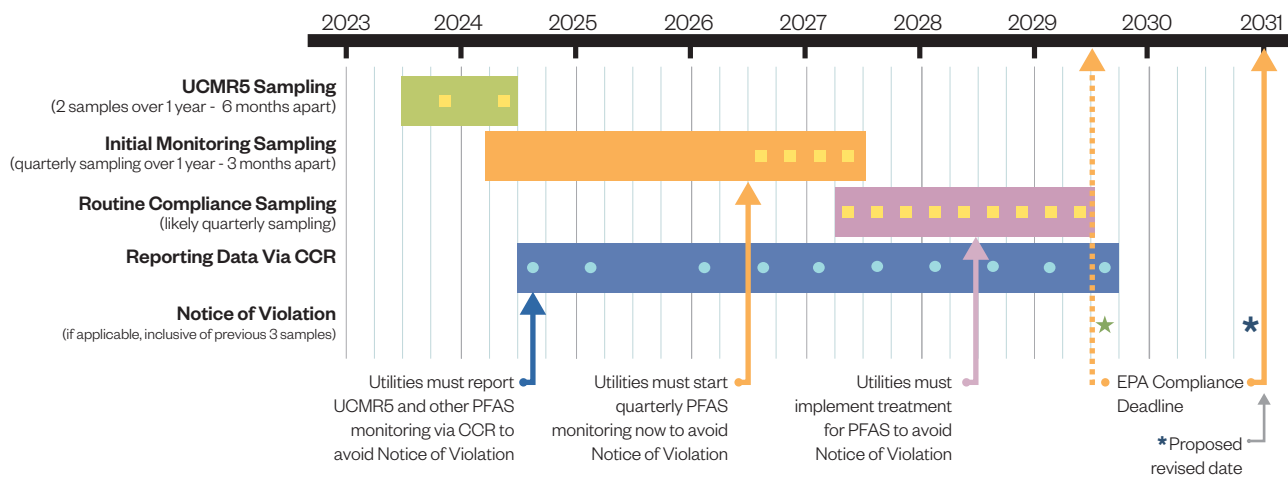
The Hazen team includes membrane plant designers with **experience spanning three decades in South Florida** and reuse engineers who recently expanded Broward County’s reuse system to 20 mgd.

Understanding of Services Required for this Continuing Contract

Engineering services for City of Pompano Beach under this professional services agreement will involve a variety of assignments for which our team is specifically qualified. We understand the City’s prioritized CIP and are ready to assist the City with completing those projects in an accelerated, cost-effective manner.

Water. Hazen designed the City’s original 10-mgd nanofiltration treatment plant with the flexibility for growth in the future. Our understanding is that the City is expanding the nanofiltration plant to 30 mgd, by adding five 2.5-mgd skids and increasing the treatment capacity of the existing skids to 2.5 mgd each. Hazen is supportive of this path to PFAS compliance. The conversion to 100% membrane requires optimal corrosion control treatment (OCCT) studies to ensure the stability of the finished water. The Hazen team is prepared to commence on projects related to this important conversion, **including investigating blending alternatives to reduce the capital and operational costs of compliance.**

Protecting public health and safety is the #1 priority of the City.
Hazen will support the City on the pathway to PFAS compliance.



- Required Sampling events
- Required reporting of sampling results
- ★ Notice of Violation



Reuse Water. Hazen’s technical approach to reuse planning in Pompano Beach builds on decades of regional experience and a comprehensive understanding of water reclamation systems. Our expertise spans the full lifecycle of water reclamation systems, from planning and permitting to design, construction, and operations, ensuring compliance with Florida Department of Environmental Protection (FDEP) regulations and alignment with the City’s long-term infrastructure goals.

We begin with targeted studies and operational recommendations, followed by preliminary design reports that incorporate utility modeling and field data. Our team prepares complete bidding and construction documents, manages permitting across all agencies, and provides full construction-phase support from submittal reviews to project certification. This end-to-end approach ensures regulatory compliance, cost efficiency, and seamless integration with the City’s infrastructure goals.



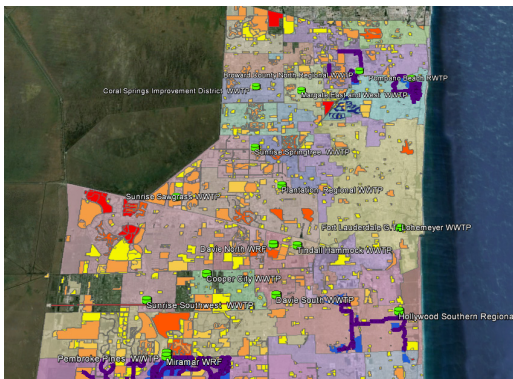
The City operates a tertiary filter facility, which treats secondarily treated water from Broward County’s North Regional WWTP. This award-winning facility is in need of routine maintenance as well as potential expansion. The Hazen team’s experience at other local reuse facilities ensures rapid response to issues arising at this facility as well as cost-effective detailed designs for improvements.

Sample Technical Approach

As requested, a sample Hazen technical approach for similar work appears on pages 4-19–4-27.

Hazen’s proven expertise in reuse water systems, backed by decades of successful planning, design, and implementation across South Florida, provides a solid foundation to ensure the success of the City of Pompano Beach’s reuse projects. This includes our direct experience with the Pompano Beach reuse system through leadership in developing the Broward County Regional Reuse Master Plan and a long-standing history of collaboration with Broward County.

Project Spotlight



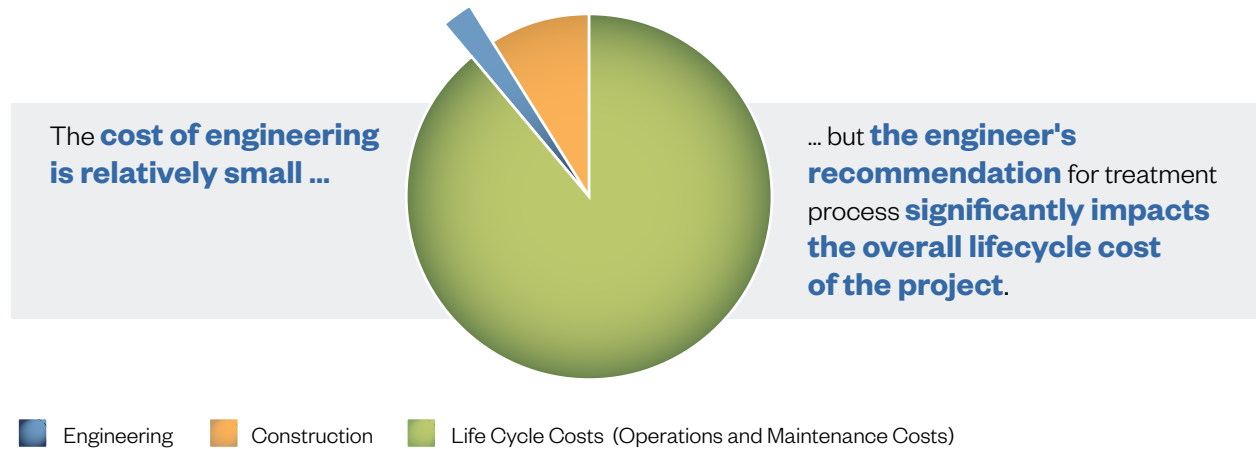
Broward County Regional Reuse Master Plan

The Broward County Regional Reuse Master Plan coordinated municipal and County efforts to identify the most cost-effective reuse water opportunities. It introduced a Google Earth-based planning tool, evaluated climate change impacts, and engaged 28 municipalities and agencies. As part of the Master Plan, Hazen supported Pompano Beach’s strategy by estimating demand, designing distribution networks, and coordinating with 17 public works projects.

Understanding of the City’s Capital Improvements Plan (CIP)

Hazen has reviewed the City’s CIP, and we have a detailed understanding of the types of projects the City will be soliciting under this contract.

Selecting a Cost-Conscious Engineer Ensures the Lowest Life Cycle Cost Alternatives are Considered



City of Pompano Beach

Sample Projects from the City’s Water Treatment Capital Improvement Plan

Project	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
05-886 WTP - Maintenance	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
07-932 Well Maintenance Program	\$250,000	\$250,000	\$150,000	\$150,000	\$150,000
08-952 WTP Membrane Element Replacement					\$300,000
11-194 WTP Electrical Rehab	\$27,000,000				
19-349 Wellfield Performance and Relocation		\$1,000,000			
20-384 Water Treatment and reuse Storage Tank Cleaning				\$120,000	
24-003 Deep Well - Monitor Well Replacement	\$3,950,000				
24-023 Emerging Contaminants	\$10,000,000	\$20,000,000		\$1,500,000	
25-001 WTP Storage Building	\$500,000				

Selecting the most appropriate solution will have long lasting cost implications to the City.

City of Pompano Beach

Sample Projects from the City’s Reuse Capital Improvement Plan

Project	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
05-887 Reuse Treatment Plant Maintenance	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
06-904 Reuse Distribution Expansion	\$425,000	\$425,000	\$3,000,000	\$3,000,000	\$3,000,000
28-WS-001 Reuse Ground Storage Tank				\$1,500,000	\$6,250,000



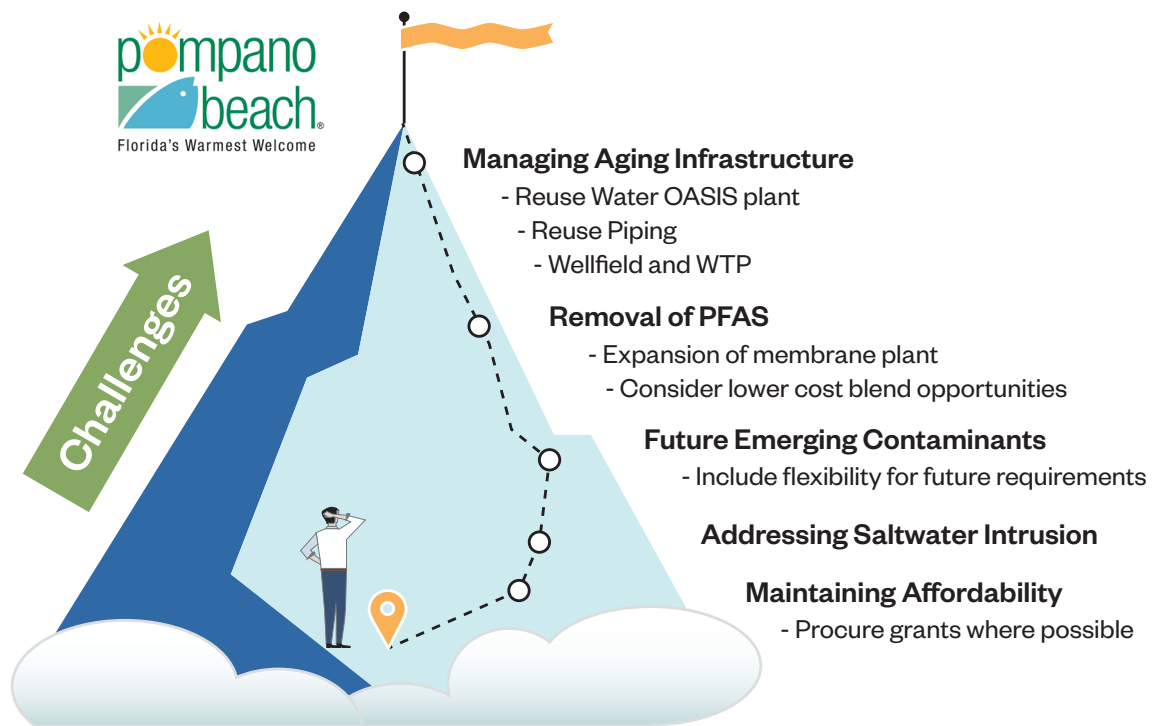
Monique Durand, PE
Proposed Water Lead

Our Water and Reuse Water Leads are **specialists, prepared to provide technical guidance as well as lead specific task orders** for the City.



Alonso Griborio, PhD, PE
Proposed Reuse Lead

The Hazen team is ready to work with the City to address these challenges. Our team’s understanding of the challenges that the City faces will facilitate rapid and efficient design decisions. Hazen’s exclusive focus on water, wastewater, reuse water, conveyance, and stormwater engineering means that we will provide Pompano Beach with expertise ranging from planning, design, permitting, modeling, funding assistance, construction support services, and everything in between and beyond. Our experienced team looks forward to establishing a partnership with the City.



The Hazen team—a committed partner to provide the City of Pompano Beach with valuable and responsive technical services.

With our unmatched membrane experience in South Florida, unique blend of industry-leading PFAS expertise, reuse treatment facilities experience, deep understanding of local conditions, funding assistance experience, and a proven track record, **Hazen offers an unparalleled combination of attributes to address your challenges, ensuring Pompano Beach's success, resilience, and sustainability.**



Unmatched Membrane Plant Experience in South Florida

Benefits to Pompano Beach

- Our unparalleled experience with design, permitting, construction, and start-up of new membrane facilities **will bring lessons learned to your projects.**
- **We know the complexities of the membrane process** and can provide cost-effective solutions to treatment challenges.
- **We can identify treatment innovations** and provide operational methodologies and tools to improve WTP performance.
- **We have a proven track record of successfully delivering cost-effective membrane facility designs** that are easily understood by contractors to facilitate construction.



Leader in Local and National PFAS Projects and Applied Research

Benefits to Pompano Beach


- Our commitment to leading applied research allows us to develop **cutting-edge PFAS solutions to address potential future regulatory challenges.**
- **We have extensive bench and pilot testing capabilities** through our applied research team, which provides the City with access to advanced process testing capabilities.
- Our recent, similar experience assisting utilities with evaluating PFAS management alternatives focuses on addressing clients' challenges and **will allow us to provide efficient solutions.**
- Hazen is **the only firm considering the potential long-term UIC implications of PFAS, ensuring that we mitigate against those risks during design efforts.**



Extensive Funding and Grant Assistance Experience/ Affordability Analyses

Benefits to Pompano Beach

- **Hazen offers funding experts locally** and nationally who are solely dedicated to funding planning, administration, and compliance.
- **Hazen assisted in securing over \$1 billion in state and federal funding** in Florida.
- **Hazen informs design decisions** to maximize the funding amounts.
- Our Water Funding team has conducted comprehensive, multiple agency funding projects for clients including the Cities of Oakland Park, Hallandale Beach, Delray Beach, Arcadia, Daytona Beach, and Lakeland; Miami-Dade Water and Sewer Department; and Hillsborough County.



Top Technical Resources and Deep Bench of Local Talent to Meet Your Challenges

Benefits to Pompano Beach

- **Hazen has the largest water resources design center in South FL**, providing a deep bench of local talent readily available to advance your projects and address any challenges.
- The Hazen team's responsive, one-stop shop will meet the wide range of project needs under this continuing services contract.
- **We bring a comprehensive understanding of key water supply issues** and vast experience in design and permitting Biscayne and Floridan Aquifers.
- **We will harness our detailed local understanding of water quality goals** to provide creative and cost-effective solutions for solving your pressing regulatory challenges, including detailed decision criteria modeling.

1021-761

Approach to Continuing Services Contracts

We have developed our approach methodology with the City's needs and objectives in mind.

The Hazen team understands the importance of responding promptly to each work assignment under continuing services contracts, developing concise scopes, successfully executing work assignments, and effectively managing our resources. We are ready to respond and successfully manage a variety of assignments. By leveraging our resources, we are able to maintain the highest level of responsiveness.

The Hazen team has the commitment, understanding, experienced staff, technical expertise, and thorough project planning approach to provide the City with successful projects across the range of water and reuse assignments that will be awarded under this contract. Hazen has been providing these services to South Florida clients for over 55 years.

We recognize that budget constraints often impart challenging limitations, and **we will work with the City to ensure an appropriate approach and schedule for each work assignment.**



Our knowledge of the City and its future growth translates into a more efficient and cost-effective way to approach the City's needs.

Our approach is simple and straightforward.

Hazen empowers local leadership and provides highly technical local resources. **Though the size of assignments under these types of contracts range from small to large, Hazen treats each with the utmost importance and attention.** We have extensive experience on continuing services contracts, having served as a general consultant for more than 80 utilities in Florida over our 57-year presence in the state. Continuing service contracts make up the majority of our workload. Clients have shown confidence in our capabilities to deliver, and in return, we have invested in the communities we serve by establishing full-service offices with expertise in a range of specialty disciplines. We believe that the combination of local presence with full design capabilities, availability, and responsiveness are key factors to our success. Hazen takes great pride in being the firm that clients first call when they face challenges that require assistance.

Work Assignment Philosophy and Scope Development

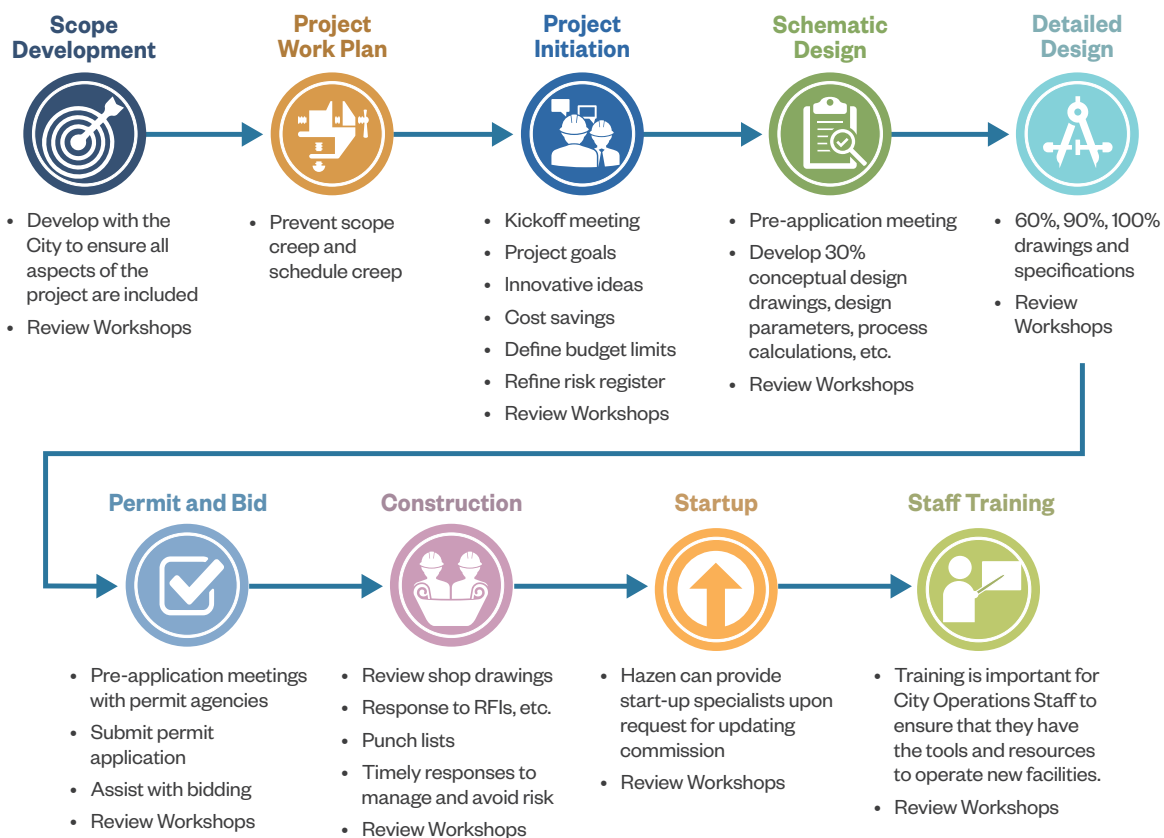
Upon being awarded an assignment, Hazen will develop an appropriate and concise scope of work with the City of Pompano Beach to ensure that there is a clear understanding of the City's expectations. We recognize that budget constraints often impart challenging limitations, and we will work with the City to ensure an appropriate approach and schedule for each project. Hazen's goal will be to design a project that is cost effective and designed with minimal disruption to your facilities.

As part of developing the scope of work for a given assignment, specific issues that present challenges will be identified during a pre-scoping meeting. The pre-scoping meeting will be conducted with City staff and key team members as appropriate for that assignment. Our expertise in a wide range of disciplines will provide the City with a detailed understanding of the challenges each assignment may face. More importantly, this meeting will be our opportunity to discuss the goals and objectives of the City for that particular assignment.

Hazen encourages client involvement in the decision-making process on a regular basis throughout the design phase. In addition to typical information exchanged during progress meetings, critical criteria are developed and discussed together with all members of the design and construction team. All members are encouraged to participate and offer insight relative to the importance of each topic discussed during the meeting.

As part of our approach to this contract, we will schedule periodic deliverables for review by City staff so that staff has the opportunity to review and approve the initial concepts. This allows for constructive feedback throughout each assignment, which avoids unnecessary reworking of the project documents late in the project phase, saving time and money. For design projects, this is done generally through 30 percent, 60 percent, 90 percent, permitting, and final design submittals, with interim meetings held to review specific design concepts, if necessary. Should the City realize an economic advantage by contracting directly with a subcontractor for a portion of the work, the flexibility of our management approach allows for such accommodations. Next, our project manager will select the appropriate member from our team to manage the technical aspects of the work assignment. This approach allows us to be engaged in multiple work assignments, as the management responsibilities can be spread out over the breadth of skills and experience of our team.

Project Life Cycle Approach



1021-761

Project Management Approach

Our project management approach is based on our experience with similar management, design, and implementation assignments and focuses on several key objectives.

Our project management approach **focuses on several key objectives:**



Project Management Plan

One of the cornerstones of Hazen's project approach is early planning.

Our Project Manager, **Monica Pazahanick, PE**, will adhere to Hazen's guidelines for project management, which include development of a Project Management Plan (PMP) at the onset of each work assignment. The PMP identifies all team members, contact information, and a date-specific timeline for milestones and deliverables. The PMP also clearly defines each team member's responsibilities, budget assignments, and expectations. Ms. Pazahanick will also use the firm's computerized, web-based tool (Deltek Vantagepoint) to help with project planning, monitoring, and reporting. She will serve as the main point of contact with the City of Pompano Beach for each work assignment, along with the selected technical lead. She will oversee execution of all tasks and the performance of the task leaders. The City's Project Manager will be kept informed of any delay or possible cost issue through regular communication. This will allow the City and our team to monitor the progress and budget to identify and resolve issues prior to them negatively impacting the project. We will facilitate early decision making to keep each assignment on schedule. The key aspects of our project management plan are highlighted on the next page along with the benefits to the City of Pompano Beach.

Anticipating Major Challenges and How We Approach Solutions







We understand the importance of proactively developing a plan to address major challenges from the start of a project and to be prepared in the event a change is necessary. Hazen proposes to include in the PMP a Change Management Plan (CMP) to document procedures for managing changes (scope, schedule, and budget).

The plan will require that:

- Problems must be addressed in a timely manner.
- The impact(s) of proposed changes—whether implemented or not—must be documented.
- Approved changes must be clearly defined in the scope/schedule/budget.
- Project baselines should be changed only when necessary (i.e., focus should be placed on maintaining the original scope/schedule/budget to the greatest extent possible).

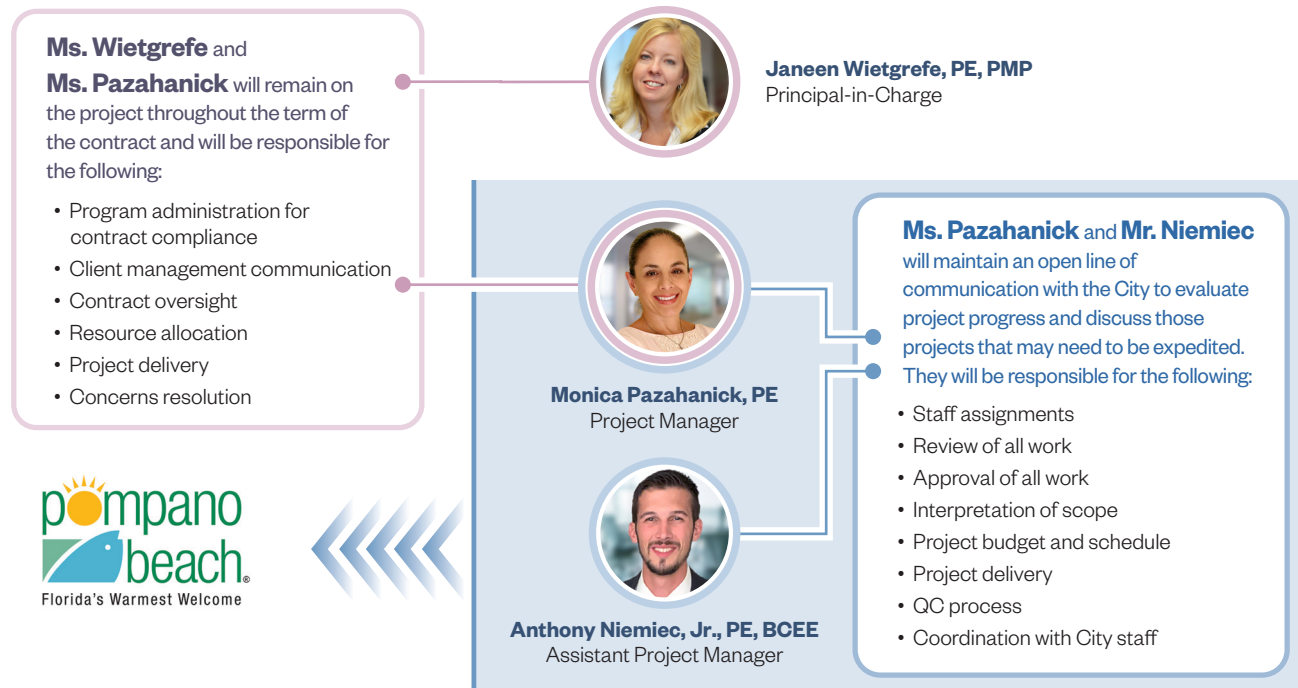
If a potential change of scope is identified, Ms. Pazahanick will communicate the information to the City's Project Manager. The two project managers will discuss the matter and decide whether a change should be incorporated into the project, what the potential impacts are, the degree of risk associated with and without the change, and what level of authorization is needed from the City before proceeding. Ms. Pazahanick will also keep the respective task manager, as applicable, continually updated on all potential changes.

Key Aspects of Project Management Plan

Keys to a Successful Project	Approach to Meeting Project Budget, Goals, Timetables, and Quality Criteria	Benefits
 Effective project management	<ul style="list-style-type: none"> • Develop clear scope-of-work using WBS structure concepts. • Maintain regular City and project team communication. • Submit monthly progress reports. • Effectively use electronic tracking/PM systems. 	Reduces scope creep and schedule slippage.
 Proactive cost and schedule control	<ul style="list-style-type: none"> • Maximize use of City standards. • Assign milestone dates and budget goals for subtasks. • Provide bi-monthly schedule updates. • Apply value engineering opportunities at project onset. 	Avoid unexpected changes to budget and schedule late in the project.
 Assignment of personnel	<ul style="list-style-type: none"> • Technical expertise. • Local presence and familiarity. • Previous experience on similar projects. • Availability over the duration of the work assignment. 	Ensures availability and involvement of experienced engineers throughout the project.
 Regular and thorough QA/QC	<ul style="list-style-type: none"> • Assign QA/QC tasks to experts in the specific field. • Involve QA/QC team at project onset. • Identify specific QA/QC milestones. 	Ensures lessons learned are incorporated into the design and provides assurances that QA/QC reviews are being regularly performed.
 Anticipate and control risks during implementation	<ul style="list-style-type: none"> • Develop a risk register to document potential risks that could affect schedule, budget, and quality. • Regularly update the risk register. • Document actions to minimize risk. 	Identifies project risks and potential mitigation strategies to mitigate unexpected impacts to budget, schedule, and deliverables.
 Provide necessary documentation	<ul style="list-style-type: none"> • Utilize comprehensive logging, tracking, reporting system. • Provide access to all parties. • Use Sharepoint or similar contract manager software. 	Improves efficiency of project team and reduces potential conflicts during construction.

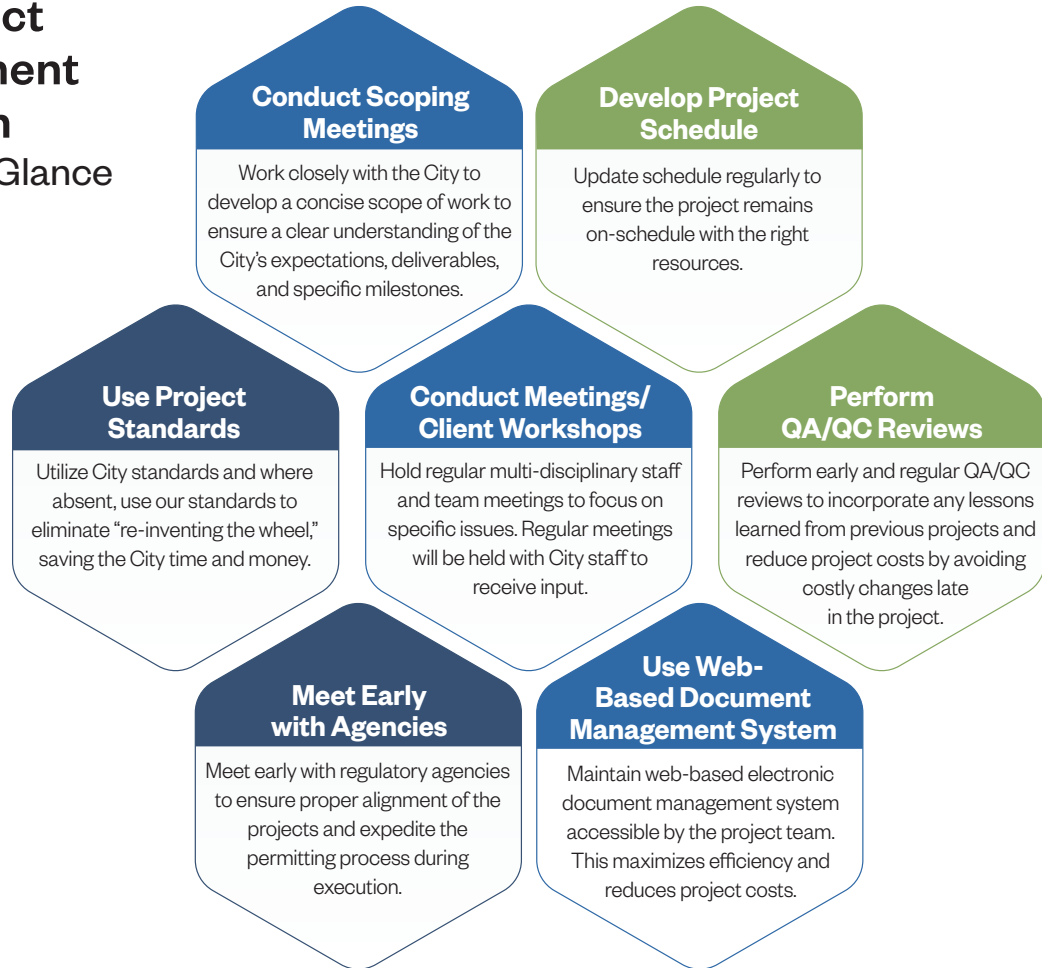
Our Management Approach

Hazen is committed to accomplishing our engineering, design, construction administration, and start-up assignments with the requisite quality, within schedule and cost limitations, and meeting any special needs of our clients. To this end, quality assurance programs on our projects include both quality assurance and control, as well as project scheduling, management and budgetary control measures as part of our integrated quality management program.



Hazen's projects are internally managed using a strong project manager approach in concert with a structured support team. The Hazen team will be led by our Project Manager, **Monica Pazahanick, PE**, and supported by Assistant Project Manager, **Anthony Niemiec, Jr., PE, BCEE**. Ms. Pazahanick's understanding of the City's infrastructure and procedures will help facilitate efficient planning, design, modeling, permitting, construction management, and coordination through our proposed discipline leads. She will be responsible for maintaining full knowledge of all aspects of each work assignment. **This approach ensures consistent availability and responsiveness to the City's needs at all times.** Our project management framework results in direct lines of communication and responsibility and allows for simplified and centralized project coordination.

Our Project Management Approach at-a-Glance



Current Workload

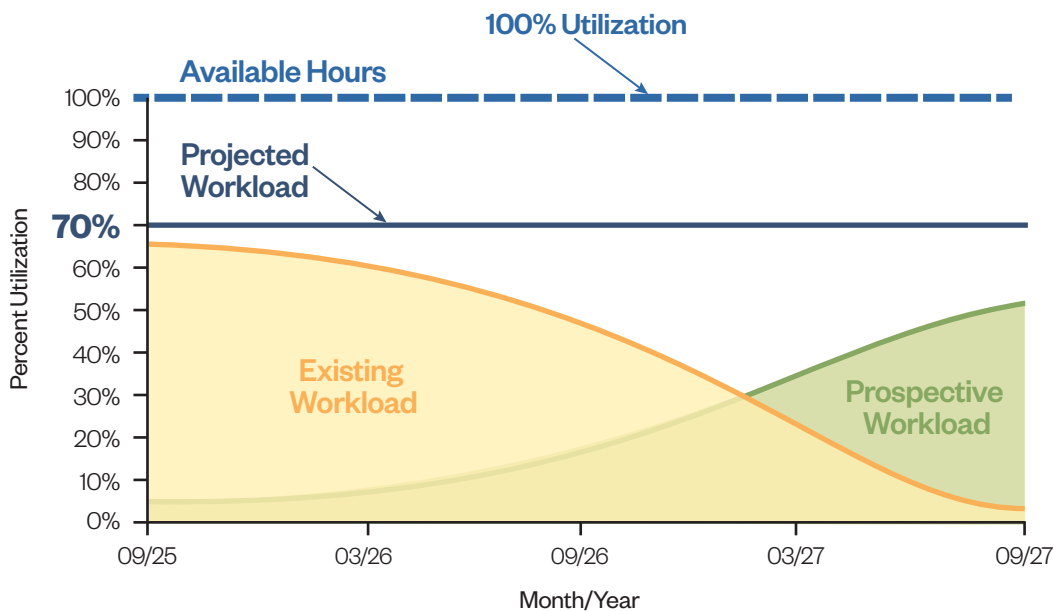
Should we be selected for this contract, **we commit that the individuals identified on our organizational chart will be available to the City.**

Hazen strives to maintain a well-balanced workload, which allows our staff to be appropriately allocated to projects, but not overly committed, so they have the ability to provide first-class service to our existing clients and the flexibility to take on new assignments and opportunities with our clients. To achieve these goals, Hazen has a conservative approach of only undertaking new assignments when workload permits and adequate staff is available to provide the complete range of services required, and for the expected duration of the project.

Our proposed Project Manager, Monica Pazahanick, PE, and our proposed Principal-in-Charge, Janeen Wietgreffe, PE, PMP, will maintain regular communications with the City. Through this communication, we will be able to anticipate required resources and proactively plan staff assignments. Should unforeseen circumstances occur, and project acceleration is required, our team has the necessary support and backup staff at all levels with experience in all disciplines required. If additional resources are necessary to support our team, Hazen maintains sufficient staff in our 10 Florida offices and has the capacity to draw upon our firm-wide staff members.

Staff Availability

This chart demonstrates our anticipated availability for this project, considering all other active projects. Hazen is committed to keeping our professional resources available to the City to provide the services described in the RFQ.



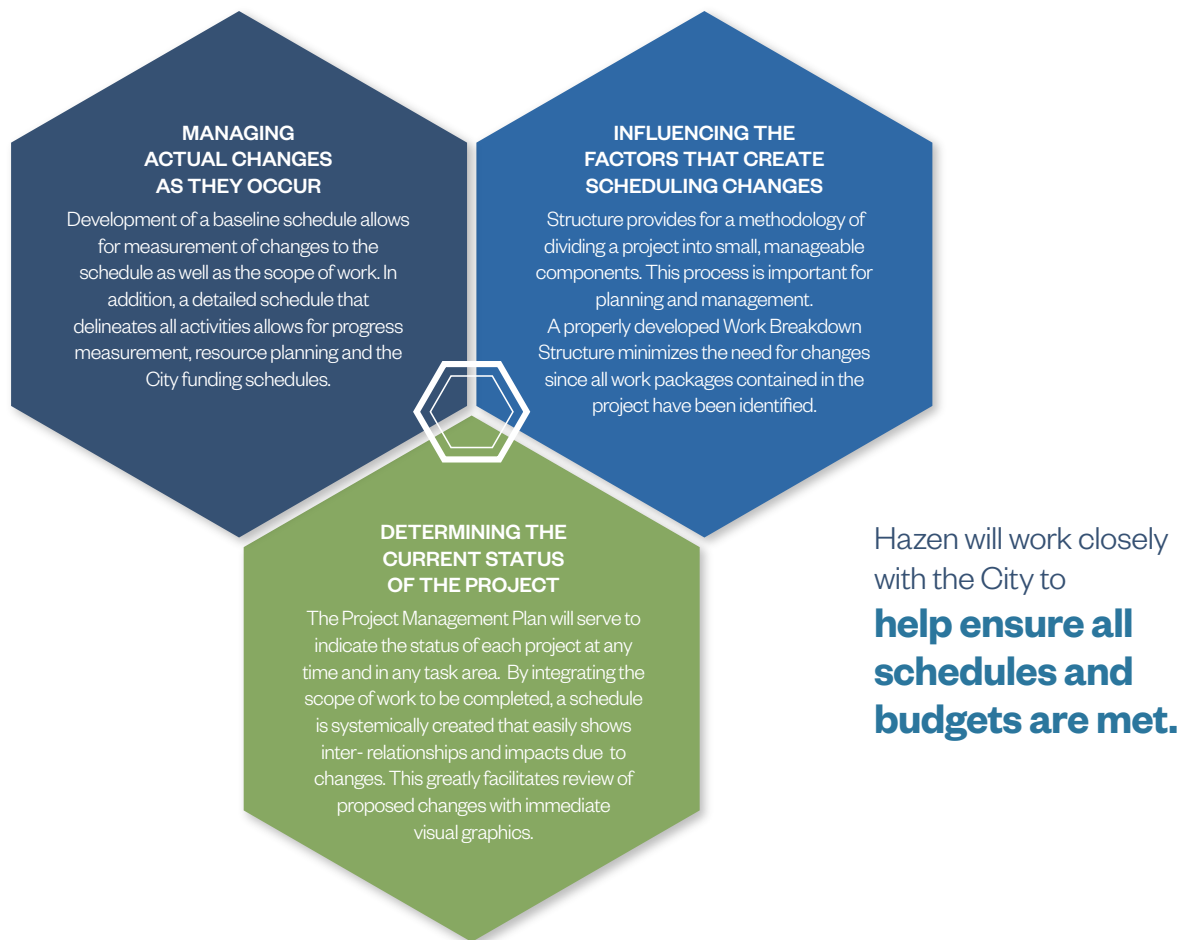
We foresee adequate staff availability to work on these projects, and **we are confident that all projects will be completed on schedule.**

Scheduling Methodology (Timeline) for Effectively Managing and Executing Work in the Optimum Time

To ensure that schedules are met in accordance with the City’s time frame, project schedules are developed immediately following the issuance of a notice to proceed for each individual assignment.

Hazen subscribes to the Project Management Institute’s (PMI) approach for project management, including specific areas such as planning, executing, monitoring and controlling, and close-out. For lengthy and complex projects, a detailed project schedule will be developed in Primavera or Microsoft Project. The project schedule details the steps required to complete the project utilizing a critical path methodology. Using scheduling software provides a time management tool to better track progress of the project in real time. These types of scheduling techniques are tailored to the complexity of the project and reporting preferences of our clients.

Ms. Pazahanick and Mr. Niemiec will be responsible for ensuring that the overall schedule for each assignment is met. We know that task assignments come in various shapes and sizes, and we adapt our delivery approach accordingly. All City of Pompano Beach projects will get the same focus and attention to detail.



Cost Control

Hazen is committed to cost control during all phases of the project. This commitment is supported by effective design management, construction cost management, and a Cost Estimating Group delivering highly accurate estimates.

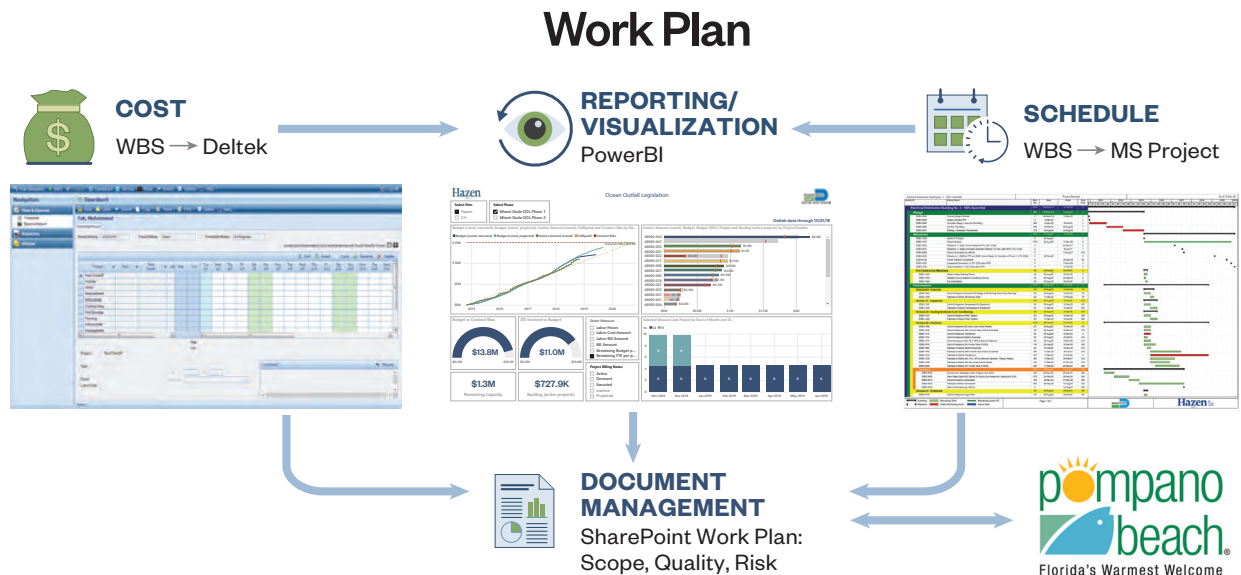
We will initiate each work assignment using Work Breakdown Structure practices to clearly define tasks, schedules, and budgets. Deliverables will be submitted to allow sufficient time for client review prior to meetings to discuss concepts, finalize design criteria, and allow for client input. As each project progresses, we will monitor progress and adjust proactively before problems occur.

Hazen encourages client involvement in the decision-making process on a regular basis throughout the design phase. In addition to typical information exchanged during progress meetings, critical criteria are developed and discussed together with all members of the design team (consulting engineer, client operations and maintenance, engineering, and administration). All members are encouraged to participate and offer insight relative to the importance of each topic discussed during the meeting.

Cost Control of the Design Process

Ms. Pazahanick, with the designated Technical Lead as applicable, for each assignment, will closely monitor the progress of each activity to identify issues that could negatively impact the budget and/or schedule, and if issues arise, develop a corresponding corrective action plan. We will provide the City with monthly progress reports and use Deltek Vantagepoint to provide rapid and accurate, real-time accounting of project labor, subconsultants, and other expenditures. These project data facilitate keeping the project on schedule and on budget. We also use reporting visualization tools such as Power BI® to track progress schedule and budget. These tools can be used to facilitate communication and reporting to Pompano Beach.

We understand that designing projects to budget starts with detailed scope development and cost estimating during preliminary design and continues during detailed design development, **while collaborating with the City.**



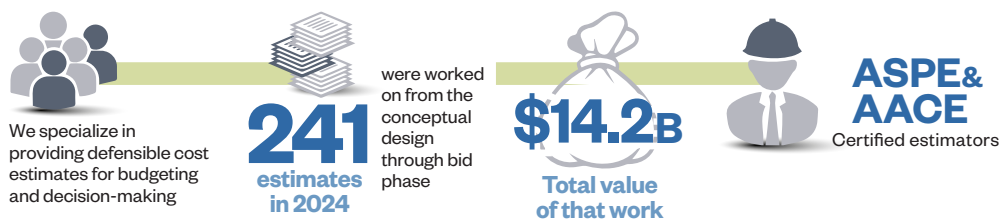
1021-761

Cost Control During Construction

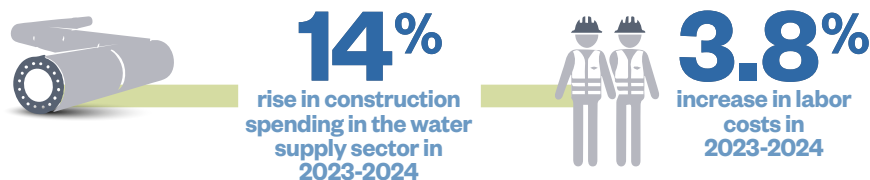
Our commitment to cost control is supported by effective design management, construction cost management, and an estimating group delivering highly accurate estimates. In addition to providing experienced construction managers and resident engineers to keep projects on schedule and minimize change orders, we use proven methods such as pre-bid reviews, partnering, dispute review boards, and timely handling of all documents and requests. We also incorporate best-practice technologies to expedite requests for information (RFI), review and markup drawings, and permitting, thereby reducing delays and preventing errors.

We will leverage our AACE-certified Cost Estimators

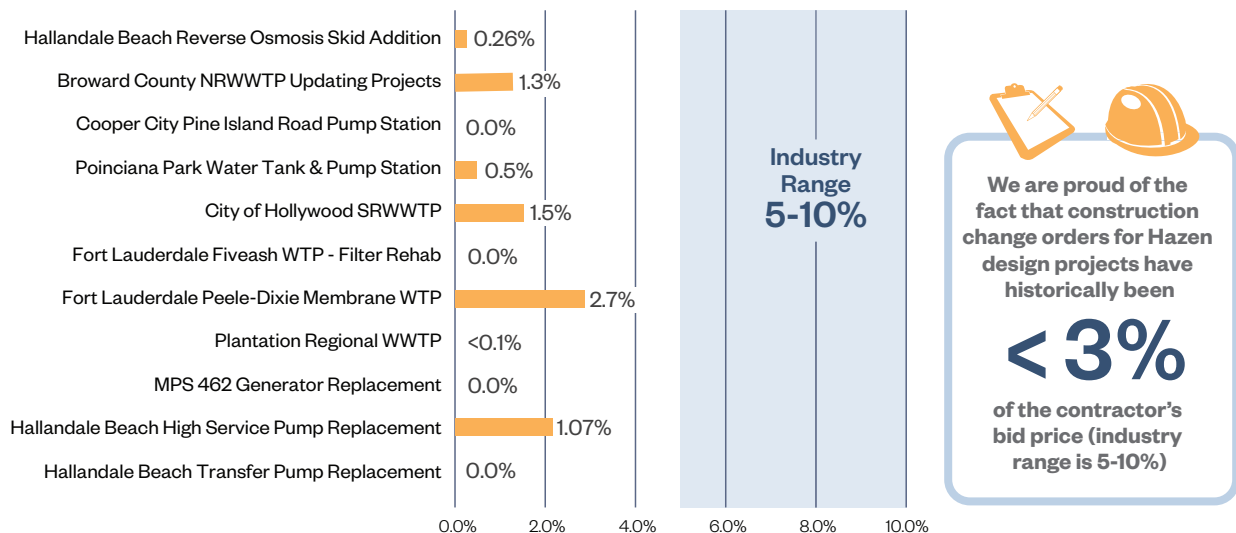
to provide an accurate budget for the City's CIP projects.



Our knowledge of construction market conditions will inform the cost estimate. We understand the changing dynamics of the industry.



Hazen's historical low change order percentage demonstrates our thorough design and conscientious oversight of construction, **protecting our clients' infrastructure investments.**



1021-761

Quality Management Approach

One of the most important aspects of our management approach is our Project Quality Assurance/Quality Control (QA/QC) Plan. Hazen has a corporate QA/QC policy that is implemented on all projects.

Every project is required to have a QC Plan, and execution and adherence to the plan is strictly enforced.

This policy requires reviews at various project design milestones and review of construction documentation. A complex design's real value lies in its proper implementation, and documenting that implementation is useful when it comes to addressing post-construction questions. We commit that all design deliverables and other important project correspondence, from planning through design and construction, will not be transmitted to the City prior to review by our designated QA/QC Reviewers. Our firm has a Chief Quality Officer, **J. Philip Cooke, PE** (a senior partner of the firm located at Hazen's Hollywood, FL office), regional quality coordinators (all partners in the firm), and local office liaisons.

Our QC plan involves review at various project milestones:

- When a task is assigned, Ms. Pazahanick will develop a QA/QC plan.
- The conceptual review is done early in the project and takes advantage of our senior staff's vast knowledge and experience to identify a "better way" to accomplish project goals. We encourage client participation in this stage of review, which is often a part of the scope development.
- The preliminary review checks for compliance with the project schedule and budget and involves performing checks on calculations, discipline specific issues, inter-discipline coordination, preliminary cost estimates, and regulatory compliance.
- The draft review performs more in-depth coordination, using check lists, coordination of specifications and drawings, updates to the cost estimate, construction phasing review, constructability review, and legal review of front-end documents. This is typically performed for interim deliverables such as 60% and 90% submittals.
- Final review verifies previous reviews have been completed with issues addressed, constructability review has been completed, applicable permits obtained or otherwise addressed, construction cost estimates are complete, and that the project is ready for construction.

Ms. Pazahanick will ensure the **successful implementation of quality control reviews.** She will develop a quality control plan as part of the project work plan for each work assignment.

Quality Control Approach

Develop QC Plan



- Establish QC reviewers
- Identify QC review milestones
- Set review schedule & budget



Perform QC Reviews



- Receive and document comments
- Document how comments are addressed



Update Documents to incorporate comments



- Meet with QC reviewers to discuss/resolve comments
- Inform QC reviewers how comments were addressed

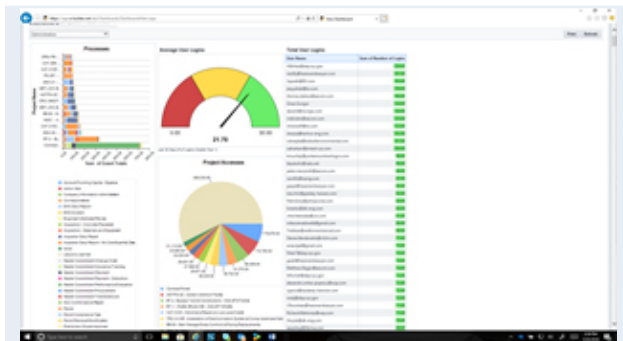


Submit to Pompano Beach



Available Facilities, Technological Capabilities, and Other Available Resources

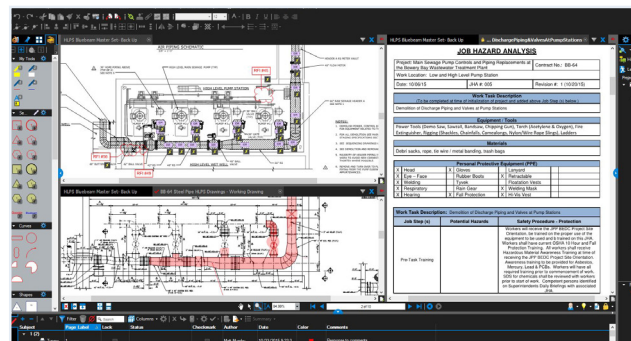
Hazen has the personnel, resources, facilities, and equipment to perform and successfully complete the projects that will be assigned under this continuing services contract. We have over 250 staff members located in our 10 Florida offices and in-house expertise in all of the major disciplines noted in the RLI. We also have the capacity to draw upon our 2,200+ firm-wide staff members, if necessary.



Cloud-Based Systems

All Hazen team members are familiar with cloud-based systems including SharePoint, Procore, and e-Builder.

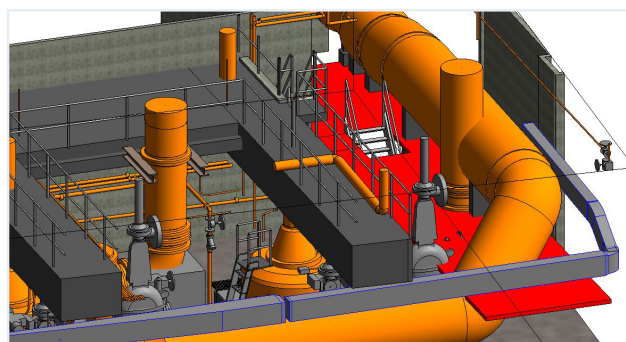
- We will adapt document control to meet the City's desired requirements, level of accessibility, and cost.
- Project information/records are available at all times.
- Common file cabinet allows for project information to be shared with the entire team.



Bluebeam®

We use Bluebeam throughout the life of a project, from preliminary design and into construction.

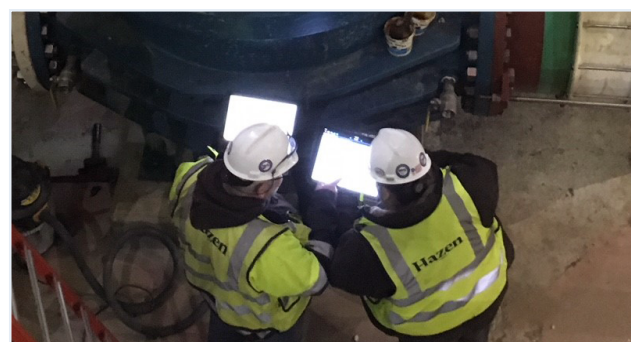
- Allows team members to concurrently review plans and automatically creates a log of comments to facilitate QA/QC activities.
- Provides instant access to details, shop drawings, RFIs, etc. through hyperlinks on the contract drawings. No need to open additional windows or carry extra documents.
- Creates redline drawings as work is installed, thus initiating close-out as the project progresses.



BIM

Hazen embraces the use of the BIM model.

- Facilitates coordination between the various project trades (i.e., electrical, piping, HVAC, equipment).
- Simulates critical and dangerous work activities. Can run various scenarios through the model to identify clashes, risks and develop remedies.
- Creates a final as-built project record.



Tablets

We use tablets extensively in the field. All project information is available to our staff in the field in real time.

- Information is stored on the Cloud. Field staff has access to the information that they need, when they need it, and at the physical location where it is needed.
- Condition assessment inspections can be conducted efficiently using tablets that allow the user to immediately upload photos and notes.
- On-site access to the full project record, including shop drawings, allows more collaborative interaction with the contractor.



Sample Technical Approach



April 18, 2024

Wilhelmina Montero, PE
Senior Project Manager
Department of Public Utilities - ECSD
1621 N 14th Avenue
Hollywood, FL 33022

**Re: City of Hollywood Water Treatment Plant Per and Polyfluoroalkyl Substances (PFAS)
Removal Regulatory Compliance Evaluation**

Dear Ms. Montero:

As requested, Hazen and Sawyer (HAZEN) visited the City of Hollywood (CITY) and reviewed the CITY's needs for comparing alternatives to remove per- and polyfluoroalkyl substances (PFAS) at the WTP. While the CITY operates the best available technology for PFAS removal, membrane reverse osmosis and nanofiltration, part of the treatment is comprised of treatment technology that does not remove PFAS, conventional lime softening. As such, the CITY has requested HAZEN develop a scope to assist the CITY in deciding the final treatment configuration to provide optimal removal of PFAS below the regulatory limits.

Based on this discussion, HAZEN presents the following scope of services.

Scope of Services

Background

The CITY owns and operates a series of potable water supply wells and treats the Biscayne Aquifer well water through lime softening and nanofiltration treatment plus treats the Floridan Aquifer well water through reverse osmosis treatment. The CITY also treats Biscayne Aquifer well water from the Broward County South Regional Wellfield (SRW at Brian Piccolo Park) through the nanofiltration plant. These three treatment process streams blend together to provide high quality drinking water to the residents of Hollywood and adjacent areas outside the City (parts of Town of Davie, City of Dania Beach and the Seminole Tribe of Florida).

However, PFAS has recently been detected in the CITY's wells. The final regulations require those compounds be removed to below the regulatory limits (4 parts per trillion) prior to the deadline (five years from final issuance of the rule – issued April 2024 – for a required completion date of March 2029).

PFAS are a group of manufactured chemicals used to make coatings that resist heat, oils, stains, grease, and water. Throughout production and use, PFAS can migrate into soil and water, eventually entering drinking water sources. PFAS do not break down naturally in the environment, making them a persistent contaminant that can accumulate over time.

Hazen

Task 1 – Kickoff Meeting / Data Collection and Review

Subtask 1.1 Kickoff Meeting

HAZEN will conduct and lead a kickoff meeting with City staff within two weeks after receiving the Notice to Proceed. The purpose of this task is to discuss the overall workplan and schedule and identify project protocols, establish coordination between Hazen and CITY staff, and collect any additional available documents from the CITY. Prior to the meeting HAZEN will provide CITY with data anticipated to be required including, but not limited to the information listed in Subtask 1.2. The CITY will provide HAZEN with required data within the first four weeks of receipt of a Project Notice-to Proceed.

HAZEN will prepare an agenda prior to the meeting and electronically distribute meeting minutes following the meeting.

Subtask 1.2 Review Existing Data

HAZEN will request data from the CITY for review. Data will include, but are not limited to, the following:

- All available PFAS data
- Raw water quality data for last five years (including monthly and annual analyses)
- Monthly WTP operating reports for last 1 to 5 years
- WTP drawings, including process flow diagrams and site layouts
- Chemical usage data and current chemical injection points
- Current corrosion control strategy and related data
- Overall site plan depicting location of raw water wells and WTP
- Purchase price from Broward County South Regional Wellfield
- Current operation and maintenance costs for Lime softening
- Current lime solids disposal data
- Current operation and maintenance costs for Nanofiltration
- Current operation and maintenance costs for Reverse Osmosis
- Current membrane reject disposal data
- South Florida Water Management District (SFWMD) Water Use Permit

HAZEN will review and assimilate this data for use on this project.



Task 2 – Review SFWMD Water Use Permit

HAZEN will review and evaluate CITY's current SFWMD Water Use Permit No. 06-00038-W for both the Biscayne and Floridan aquifers, documenting existing permit allocations, remaining timeframe, and the feasibility of increasing allocations. The water use permit review will provide HAZEN with information needed for Task 4 and Task 5. The evaluation of treatment alternatives will consider the CITY's water use permit allocations and associated treatment efficiencies.

HAZEN will submit a draft memorandum to CITY summarizing the results of the Water Use Permit Review and evaluation. HAZEN will meet with CITY to discuss and will incorporate CITY's comments into a final memorandum.

Task 3 – PFAS Data Collection and Mass Balance Modeling

HAZEN will review and summarize the CITY's PFAS data, major WTP summary raw and finished water quality parameters, and WTP flow data. HAZEN will create a PowerBI dashboard with the collected data that will serve as a central location for the CITY's PFAS efforts. The dashboard will be used to create a PFAS mass balance model that will provide a cost-effective tool to represent treatment of PFAS based on current plant operations and potential plant modifications, including finished water stability and corrosion control requirements.

HAZEN will provide a draft and final PowerBI dashboard and model to the CITY. CITY will review the draft dashboard and provide comments to HAZEN within seven days.

Task 4 – Develop Alternatives and Conceptual Costs

HAZEN will develop treatment alternatives for consideration by the CITY. The alternatives will be developed with a conceptual schematic and an opinion of probable construction cost. Each alternative will include recommended improvements to pretreatment and posttreatment facilities in addition to the membrane skid or ion exchange (IX) additions. HAZEN will summarize the potential corrosion issues of treatment modifications with respect to the Lead and Copper Rule. HAZEN will also summarize the disposal considerations for IX resin and membrane concentrate. The impact of each treatment alternative on the CITY's water use permit allocations and water loss limitations will also be evaluated.

HAZEN will also identify monthly operational costs for the alternatives, based on the CITY's current costs.

HAZEN will calculate the 20 year net present worth of each alternative based on initial capital construction costs, energy costs, labor and chemical costs.

Initially, these alternatives may likely include the following:

- Construct three nanofiltration skids for treatment of the Biscayne Aquifer/Discontinue Lime Softening
- Construct four reverse osmosis skids for treatment of the Floridan Aquifer/Discontinue Lime Softening

Hazen

- Construct a combination of nanofiltration and reverse osmosis skids/Discontinue Lime Softening
- Construct Ion Exchange (for PFAS removal) to treat lime softened water
- Purchase Bulk finished water from Broward County/Discontinue Lime Softening

Task 5 - Perform Decision Criteria Modeling

HAZEN will develop qualitative criteria for consideration by the CITY. HAZEN will develop a scoring methodology. HAZEN will present preliminary weightings for each criterion. Initially, criteria for consideration include: protection of public health and environment, ease of permitting, PFAS removal effectiveness, reliability, corrosion control considerations, waste disposal, ease of operations and maintenance, and constructability.

Next, HAZEN will develop a decision criteria matrix, which will summarize the criteria and the associated scoring ranges for each criterion. HAZEN will lead a workshop to assist the CITY in scoring each alternative. During this workshop, CITY will review and revise the criteria, weightings and scoring ranges developed by HAZEN. Once a CITY consensus is reached on the criteria, weightings and scoring ranges, HAZEN will assist the CITY with scoring each alternative.

HAZEN will document the scorings and rankings performed by the CITY at this workshop.

Task 6 – Prepare Technical Memorandum

HAZEN will prepare a brief technical memorandum (TM) to document the development of the alternatives, criteria for evaluation, summary results of the workshop and provide a final recommendation to the CITY. HAZEN will also summarize the capital costs and operating costs of each alternative in a summary table. The summary cost table will also include a summary of the 20-year net present worth of each alternative.

HAZEN will deliver the TM electronically, in draft format, for the CITY's review. After receipt of the City's comments, HAZEN will update the TM and deliver the final TM electronically to the CITY.

It is Hazen's understanding that the CITY will use the information in the TM to decide on a compliance approach for Final PFAS Regulations. HAZEN will then prepare a scope to design the selected alternative.

Task 7 - Review Options for Delivery Methods

HAZEN will prepare a summary of three delivery methods; conventional design-bid-build (DBB), progressive design-build, and construction manager at risk (CMAR) and provide a recommendation to CITY. HAZEN will present the three methods to the CITY, summarizing the benefits and risks of each method in a two hour workshop. HAZEN will facilitate the discussion and summarize the final decision of the CITY in a memorandum following the workshop.



Task 8 - Funding Application Support

The Environmental Protection Agency (EPA) offers various grants to support community-based projects that address environmental and public health issues. EPA's Community Grant appropriations are State and Tribal Assistance Grant (STAG) infrastructure grants to improve water infrastructure and water quality through funding for drinking water, wastewater, and stormwater projects.

Pre-Award Phase

While Congress directs Community Grant funds to specified recipients for defined projects, recipients are required to fulfill statutory and regulatory requirements before EPA can award grant funding. These requirements include but are not limited to providing necessary information for the National Environmental Policy Act (NEPA) environmental review, review of any pre-award costs, and submitting a complete grant application package.

Subtask 8.1 - NEPA Environmental Review

As required by EPA's NEPA implementing regulations ([40 CFR 6.100-6.406](#)), EPA must complete the NEPA review process before awarding a grant for design and/or construction.

The requirement for an environmental review under NEPA generally does not apply to grants solely for planning activities, such as infrastructure assessments, watershed plans, and wastewater capital improvement plans.

- HAZEN will coordinate meetings with the CITY and with the EPA Regional Contact to determine the applicability of the NEPA requirement.
- HAZEN will prepare all documentation in accordance with [40 CFR 6.100-6.406](#) for CITY review and comment.
- HAZEN will request other appropriate federal and non-federal agencies to be joint lead or cooperating agencies as a means of encouraging early coordination and cooperation with federal agencies, state and local governments, and federally recognized Indian tribes with jurisdiction by law or special expertise.
 - Deliverable:
 - Draft National Environmental Policy Act (NEPA) documentation for CITY review and comment.
 - Final NEPA documentation for CITY review and public advertisement for public comment period.



Subtask 8.2 - Pre-Award Costs and Procurement Review

Costs incurred prior to grant awards may be eligible for reimbursement if the costs are in conformance with applicable federal and EPA regulations. Incurred costs are financial obligations: costs owed by an entity as a result of a transaction. The costs may have been paid or remain unpaid. The regulations at [2 CFR 200.458](#) require that pre-award costs be incurred "...directly pursuant to the negotiation and in anticipation of the Federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the Federal award and only with the written approval of the Federal awarding agency. If charged to the award, these costs must be charged to the initial budget period of the award, unless otherwise specified by the Federal awarding agency or pass-through entity."

For Community Grants projects identified in the FY 2023 Appropriations Act, pre-award costs must be incurred on or after October 1, 2022, to be considered for eligibility. Notwithstanding, and consistent with [2 CFR 1500.9](#), all costs incurred before EPA makes the award are at the recipient's risk. EPA shall review the eligibility of such costs on a case-by-case basis prior to approving the project budget and awarding the grant.

- HAZEN will aid in defining pre-award costs and assist in the procurement as it pertains to the federal rules and regulations stipulated by EPA.

Subtask 8.3 - Application Forms, Workplan and Submitting an Application

Upon completion of an environmental review under NEPA, development of a project workplan, and review of any pre-award costs (including any costs related procurement), applicants should submit a complete grant application package to EPA. The workplan and application must include any pre-award costs. Recipients must ensure that their organizations have registered with the federal government's System for Award Management (SAM). Recipients must have an active registration/record with SAM.gov and complete the Grants.gov registration process to apply for any federal funding. The complete grant application includes several forms. These forms must be downloaded from the Community Grant opportunity package on Grants.gov - generic versions of the standard forms not downloaded from the Grants.gov website will not be accepted. In addition to the required forms, grant applicants must submit a project workplan that describes the proposed project, the milestone schedule, the need for the project, and the anticipated environmental and public health benefits (outputs and outcomes).

- HAZEN will assist the CITY in registration in SAM.gov, if needed.
- HAZEN will download all forms required, complete the portions needed within the forms, and prepare the grant work plan in accordance with EPA's regulations.

HAZEN will compile all documentation for the CITY's electronic submission to EPA.



Subtask 8.4 - Additional Funding Options

HAZEN will assist the CITY in the identification and guidance of alternative funding sources. HAZEN will provide comprehensive information to include programmatic details and eligibility criteria that meet the specifics of the project.

Task 9 - Public Education and Outreach Materials

Communicating with customers about the multiple potential sources of PFAS and the possible adverse health effects presents challenges for water utilities. It is possible that the CITY might receive public scrutiny in implementing this project due to the sensitive nature of PFAS and the costs associated with additional treatment.

HAZEN will assist the CITY with public communications support regarding PFAS up to the limits of the work defined in this task including:

Subtask 9.1 - Campaign Planning and Management

Planning Workshop: HAZEN shall facilitate a Planning Workshop with CITY staff to confirm goals and objectives, identify opportunities and strategies, and align on a campaign strategy and schedule.

Campaign Plan: HAZEN shall develop a communications plan for the PFAS Outreach Campaign that incorporates the goals, objectives, opportunities, strategies, and schedule identified during the planning Workshop.

Campaign Management: HAZEN shall participate in periodic meetings to review campaign, stakeholder feedback, industry development, and any opportunities or threats that arise. Support response to media inquiries and/or inquiries from key stakeholders.

Subtask 9.2 - Materials Development

HAZEN shall develop the PFAS communications materials as outlined below:

- **PFAS and Hollywood Community Outreach Presentation**: HAZEN shall develop one PowerPoint presentation for use with the City Council and at public meetings that explain the various PFAS exposures and preventative measures to residents of the CITY.

Public Statements/FAQ: HAZEN shall develop a series of key messages regarding PFAS exposure to CITY customers for use by any public-facing CITY staff or other key stakeholders and a FAQ document that features answers to the most common questions on PFAS.

Website Content: HAZEN shall develop content for CITY developed PFAS webpages, including updates for UCMR 5 and other related updates. It is assumed that the CITY will upload the information to the webpage, as submitted electronically by HAZEN.

Hazen

- Social Media Posts: HAZEN shall develop drafts of up to six (6) social media posts for use by the CITY, including language and visuals. It is assumed that the CITY will schedule/publish the posts to their various social networks, as submitted electronically by HAZEN.

Task 10 - Additional Optional Services

HAZEN shall provide, if required, additional engineering services for the project if level of effort associated with previous tasks is exceeded as well as services associated with development of short video as follows:

HAZEN shall lead the development of a short (~three minutes) video on overall PFAS exposure for use on the CITY's website, social media, and other digital platforms. Task will include, developing storyboard, identify and manage CITY's videographer vendor (if desired), manage editing process and final production.

Assumptions

1. Additional services, if required, will be provided under a separate work authorization.
2. HAZEN will not perform detailed design work under this phase of work. HAZEN will evaluate the listed conceptual alternatives based on conceptual costs from equipment vendors and similar projects. These conceptual cost estimates will be Class 5 costs estimates as defined by the ACE International Standard 18-R97.
3. All costs will be considered conceptual and will neither reflect future escalation nor reflect the unknowns in the current bidding environment.
4. HAZEN will utilize the demand projections from the Master Plan.
5. Hydrogeological and hydraulic modeling are not included in this effort.
6. Water use permit modifications are not included in this effort.
7. Membrane Concentrate treatment options for disposal are not included in this effort. It is assumed that deep injection well disposal will be acceptable and if treatment of concentrate is required, options will be developed in the future under separate work authorization.
8. The CITY will be responsible for updating the CITY's website and social media sites with the information under Task 9.
9. It is assumed that videographer services required for Task 10 will be provided by the CITY.
10. Engineering assistance related to legal services will not be provided under this scope of services.
11. It is assumed that Post-Award Phase assistance of the EPA grant, if needed, will be included in a subsequent Work Authorization.

Hazen

12. It is assumed the CITY will provide documents that are required to complete the Final Community Grants Application Package.

Compensation

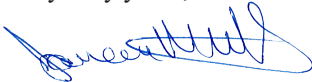
Hazen will complete Tasks 1-10 for the Not-to-Exceed amount of \$385,168.00. Consultant will invoice by task per the following:

Task	Amount
Task 1 - Kickoff Meeting / Data Collection and Review	\$26,119.00
Task 2 - Review Water Use Permit	\$20,091.00
Task 3 - PFAS Data Collection and Mass Balance Modeling	\$25,250.00
Task 4 - Develop Alternatives and Conceptual Costs	\$52,231.00
Task 5 – Perform Decision Criteria Modeling	\$41,062.00
Task 6 – Prepare Technical Memorandum	\$32,824.00
Task 7 - Review Delivery Options	\$20,059.00
Task 8 - Funding Application Support	\$63,567.00
Task 9 - Public Education and Outreach Materials	\$65,093.00
Task 10 - Additional Optional Services	\$38,195.00
Total (NTE)	\$385,168.00

Schedule

Hazen will complete the Tasks 1-10 within 180 days of receipt of notice to proceed (NTP).

Very truly yours,



Janeen M. Wietgreffe, PE, PMP
Vice President

cc: Monique Durand, PE



5. References

5 References

Our clients' testimonials serve as the driving force behind our **commitment to delivering unmatched quality and building enduring relationships.**

At Hazen, our clients' feedback is of paramount importance, serving as the cornerstone of our reputation and success. Listening to their perspectives validates our commitment to excellence and guides our continuous improvement. Their invaluable insights shape our practices, foster trust, and ensure we consistently meet and exceed expectations. Selected client quotes are included below.

Hazen has been associated with Plantation and a part of our team for over 20 years. **We feel their team's expertise and attention to detail places them at the top of their field.**

Daniel Pollio
Utilities Director
City of Plantation

There were no problems with Hazen on this project. They were very professional and **worked with us as a team understanding the desires/needs of the Town.**

Amanda Barnes, PE
Utilities Director
Town of Jupiter

...The firm performs in a timely manner, produces technologically sound documents and works well with contractors **to ensure the City's interests are protected.**

Martha S. Graham, PE
Public Works Director
City of St. Augustine

... Hazen provides design professionals that are highly qualified with **extensive relevant experience to each assignment...**

Alan W. Garcia, PE
Director
Broward County Water and Wastewater Services

Extremely professional. Leadership and staff **possess a wealth of experience and knowledge.**

Francois Domond, PE
Director of Utilities Department
City of Miramar

Assessment of related past experience includes a review of client references. Our past record of similar accomplishments is extensive. We encourage the City to contact each reference as we are proud of our proven success at meeting the goals and objectives of our clients. **As requested, references for past projects within the past seven years appear on the following pages.**

Client References

Client	Project(s)	Contact Information
	Membrane Softening Facility and RO Skid #1 Addition/RO Skid #2 Addition	Client Reference: Mark Gambrell, PE City Engineer (954) 457-3045 mgambrell@hallandalebeachfl.gov
	East Water Treatment Plant 12-mgd Membrane Softening Plant Expansion Remembraning, and Chemical Storage Facilities	Client Reference: Daniel Pollio Utilities Director (954) 797-2209 dpollio@plantation.org
	PFAS Removal and Regulatory Compliance Evaluation	Client Reference: Vincent Morello Director (954) 967-4455 vmorello@HollywoodFL.org
	Wastewater Reclamation Facility Reuse Phase I Expansion to 7.5 mgd	Client Reference: Francois Domond, PE Director of Utilities Department (954) 883-6813 fdomond@miramarfl.gov
	Jupiter Professional Engineering Services for Stormwater and Water Capital Improvements	Client Reference: Amanda Barnes, PE Utilities Director (561) 741-2537 AmandaB@jupiter.fl.us
	North Regional WWTP Reclaimed Water Plant Expansion to 26 mgd	Client Reference: Alan Garcia, PE Director - Broward County Water and Wastewater Services (954) 831-0705 agarcia@broward.org
	Wastewater Treatment Plant Permit Renewal; PFAS Study and Pilot Testing at WTP	Client Reference: Marta Reczko Assistant Director Utilities (954) 884-3632 mreczko@margatefl.com

Detailed project sheets for each of these references appear on the following pages.



Project Highlights

- Biscayne Aquifer
- Membrane treatment
- Ability to remove PFAS
- Optimized use of City's existing infrastructure
- Will ultimately replace lime softening when piping is connected to new PW-9 or to future Floridan Aquifer wells

Membrane Softening Facility and RO Skid #1 Addition/RO Skid #2 Addition

Hallandale Beach, FL

Hazen provided design and permitting of the City of Hallandale Beach's (City's) RO skids addition to the existing membrane plant, which was also designed by Hazen.

The RO Skid #1 was designed for a permeate production capacity of 2 mgd with a feed water salinity of 5,000 mg/L of total dissolved solids. Pretreatment design included raw water sand separators, five micron cartridge filtration, anti-scalant and sulfuric acid addition.

Hazen designed the RO skid to be flexible for treatment of raw water from the Broward County South Regional Wellfield (BCSRW) and from the City wells, both of which contain PFAS and the potential intrusion of salt water. Hazen also configured the proposed raw water piping modifications necessary to enable the full flexibility for the RO skids.

The RO skids, designed for a range of salinities, including saline Floridan Aquifer water, will be equipped with an energy recovery turbine. This turbine will recover energy from the concentrate and provide a pressure boost for the second stage feed, saving the City electrical costs associated with feed pumping.

The two RO skids are added into the existing membrane building Hazen designed in the early 2000s with flexibility for the future. This foresight enabled the City to immediately respond to the PFAS removal requirement and maintain their existing water use allocation from the SFWMD.

The City of Hallandale Beach facility utilizes deep well injection as its primary means of concentrate disposal. Hazen completed the design, permitting, and construction oversight of the injection well in 2007. The injection well consists of a 11¾-inch-diameter tubing set. A dual-zone monitoring well was also constructed as part of the project.

Project Duration

Completion Dates:

Membrane Plant: 2008

Injection Well: 2007

RO Skid #1: 07/2025

RO Skid #2: Ongoing

Project Cost

Membrane Plant: \$12 million

Injection Well: \$4 million

RO Skid #1: \$4.4 million

RO Skid #2: \$7 million

Client Reference

Marc Gambrill, PE

City Engineer

City of Hallandale Beach

630 NW 2nd Street

Hallandale Beach, FL 33009

(954) 457-3045

mgambrill@hallandalebeachfl.gov



Project Highlights

- Biscayne Aquifer
- Membrane treatment
- Ability to remove PFAS
- Expansion of existing 6-mgd membrane softening facility to 12 mgd
- Maintained finished water stability

East Water Treatment Plant 12-mgd Membrane Softening Plant Expansion, Remembraning, and East WTP Chemical Storage Facilities

Plantation, FL

Hazen provided design, permitting, bid and award services, and construction management services for the expansion of the City of Plantation's (City's) existing 6-mgd membrane softening facility to 12 mgd.

Select projects under Hazen's continuing services utilities contract with the City of Plantation are highlighted below:

Membrane Expansion: Design, permitting, and construction oversight of the expansion of an existing membrane plant from 6 to 12 mgd, a new clearwell, and new transfer and high service pumping facilities sized to meet the higher flow rates provided during this expansion. Services included detailed design, permitting, bid and award services for the addition of three 2-mgd nanofiltration skids (hybrid arrays), a nanofiltration booster pump, and a permeate flushing system within the existing membrane building. The design incorporated all the necessary piping and valving required to utilize both existing storage tanks for finished water and for deep well injection of the concentrate streams.

Construction management services included consulting with the City and

contractors to track construction progress, including attendance at a pre-construction conference and weekly coordination meetings attended by the Resident Project Representative (RPR), City, and contractors. Services also included processing of shop drawings, monitoring of all required project records, negotiations regarding the scope and cost of any necessary contract change orders, review, and recommendation of progress payments to the contractors and the performance of comprehensive inspections of the project to establish project substantial and final completion.

Hazen also provided an RPR to perform field observation during construction, to confirm the contract documents were being fulfilled and to protect the City against defects and deficiencies in the work of the contractors. Construction was completed in 2003.

Project Duration

Remembraning Services completed in 2019; Construction completion for Phase I and Phase II Chemical Storage Facilities, 2021 and 2024, respectively.

Project Cost

Membrane Softening Plant Expansion and Remembraning: \$565,790 (design); \$4.6 million (construction)
Chemical Storage Facilities: \$1.1 million (fee)

Client Reference

Daniel Pollio
Utilities Director
City of Plantation
400 NW 73rd Avenue
Plantation, FL 33317
(954) 797-2209
dpollio@plantation.org

Maintenance of Plant Operations (MOPO): Hazen designed the expansion and pump replacement for the City to provide uninterrupted treatment and pumping into the distribution system. Skid startups and pump startups occurred in parallel with existing operations. The City did not experience any down time. Hazen completed the start-up of the facility, including meetings with the contractor to review responsibilities for the phased startup of the facility and compliance with regulatory agency reporting requirements.

Remembraning: Hazen provided services for replacement of membranes (design, contract development, bid assistance, construction oversight, and operational assistance) for the East WTP 12-mgd Membrane Softening Plant and Central 12-mgd Membrane Softening Plant in 2019. Hazen prepared projections for various manufacturers' proposed membrane combinations, calculated economics of feed pressure vs. amount of sodium hydroxide addition to achieve desired alkalinity for each membrane proposer; witnessed proof testing by manufacturer to demonstrate performance (feed pressure and alkalinity requirements), and prepared recommendation for purchase based on result.

East WTP Chemical Storage Facilities: Hazen provided engineering and construction management services for design and construction of the replacement of six chemical storage and feed facilities at the East WTP. To meet the City's budget, the project was bid and awarded in two phases. MOPO was developed to allow demolition activities and new construction to take place without interfering with the water production activities.



Project Highlights

- Improvements to an existing operating lime softening treatment plant
- Affordability analysis
- Public communications/ education
- Evaluate options for PFAS removal, including the addition of a bolt-on ion exchange system
- Membrane treatment expansion

PFAS Removal and Regulatory Compliance Evaluation

Hollywood, FL

The City of Hollywood owns and operates a series of potable water supply wells and treats the Biscayne Aquifer with well water through lime softening and nanofiltration treatment and also treats the Floridan Aquifer well water through reverse osmosis treatment. The City also treats Biscayne Aquifer well water from the Broward County South Regional Wellfield at Brian Piccolo Park through the nanofiltration plant.

These three treatment process streams blend together to provide high quality drinking water to the residents of Hollywood and adjacent areas outside the City, such as parts of Town of Davie, City of Dania Beach and the Seminole Tribe of Florida. PFAS has recently been detected in the City's wells. The final regulations require those compounds be removed to below the regulatory limits (4 parts per trillion) prior to the compliance deadline.

This multi-phase project includes planning, design, permitting, construction, and startup services for improvements to the existing water treatment plant to remove PFAS to below the regulatory limits.

Hazen completed the multi-criteria decision analysis evaluation for the City to determine the recommended alternative. The evaluation yielded the addition of membrane filtration skids to replace the lime softening facilities

as the most advantageous option for the City. Hazen is assisting the City with its EPA Community Grant application and advising on alternative funding sources for PFAS improvements.

Under this project, Hazen will also provide public communication support for the City concerning PFAS. Hazen will organize workshops and townhalls to inform residents, create social media posts and website content, and develop responses to public statements and frequently asked questions about PFAS.

Hazen is preparing to design the first additional membrane softening skid to the existing plant under Phase 2. Phase 2 also includes performing a detailed corrosion control study and developing a preliminary design report for the design of the remaining membrane softening kids, chemical systems, post-treatment systems, and electrical systems.

Project Duration

Phase 1: 11/2024-Present
Phase 2: 11/2024-Present
Phases 3-5: Upcoming

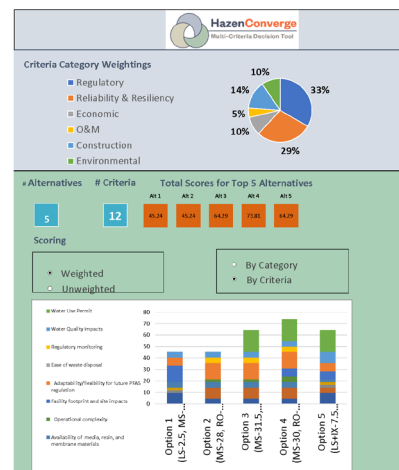
Project Cost

Phase 1: \$385,170 (fee)
Phase 2: \$2 million (est. fee)
Phases 3-5: Upcoming

Client Reference

Vincent (Vin) Morello
Director
City of Hollywood
Department of Public Utilities
1621 North 14th Avenue
Hollywood, FL 33022
(954) 967-4455
vmorello@HollywoodFL.org

Hazen Converge Summary





Project Highlights

- Demand validation and permit revision
- Hazen provided design, permitting, bidding assistance, and engineering services during construction for reclaimed water treatment and distribution expansion to 7.5 mgd

Wastewater Reclamation Facility Reuse Phase I Expansion to 7.5 mgd

Miramar, FL

The Reclaimed Water Expansion Phase I project includes expansion of the existing 5-mgd reclaimed water treatment and distribution system processes to 7.5 mgd.

Hazen assisted the City in obtaining a paper uprating of existing facilities from 4 mgd to 5 mgd in late 2017. The Reclaimed Water Expansion Phase I project includes expansion of the existing 5-mgd reclaimed water treatment and distribution system processes to 7.5 mgd.

New facilities included two filter feed pumps, sand filters, expansion to the existing sodium hypochlorite system, a ground storage tank, and a high-service pump. Hazen provided design, permitting, bidding assistance, and engineering services during construction, including inspection services.

Previously, in 2008, Hazen provided detailed design, permitting, bid and construction management services to expand the existing 2-mgd reclaimed water treatment and distribution processes to 4 mgd.

Project Duration

2017-2018 (design); 7.5 mgd

2019-2020 (construction)

Project Cost

Total Fee: \$1,318,245

Construction Cost: \$5.5 million
(WWRF Phase I Expansion to 7.5 mgd)

Client Reference

Francois Domond, PE
Director of Utilities Department
City of Miramar
Utilities Department
13900 Pembroke Road
Miramar, FL 33027
954.883.6813
fdomond@miramarfl.gov



Project Highlights

- Membrane treatment
- Ability to remove PFAS
- Water quality/process evaluation
- Designed first major split-feed NF process in the U.S.
- Design, permitting, and pilot testing oversight services for a new 14.5-mgd nanofiltration facility
- Center-feed design provides annual 30% savings in electrical costs
- Concentrate is blended into the reclaimed water system saving disposal costs

Professional Engineering Services for Stormwater and Water Capital Improvements

Town of Jupiter, FL

Since 2000, Hazen has served as general consultant to the Town of Jupiter. Hazen's water-related capital projects have involved additional system storage and high-service pumping, extension and improvements to the transmission system, and renewal and replacement at existing treatment facilities.

Additionally, Hazen has provided assistance to the Town in almost every aspect of its stormwater program.

Select water projects are highlighted below.

IX System PFAS Evaluation.

The Town operates an ion exchange (IX) system that treats a portion of their water treatment plant's raw water. This system effectively reduces color and total organic carbon (TOC) while preserving beneficial minerals like calcium, which are essential for remineralizing water processed through reverse osmosis. To ensure compliance with proposed maximum contaminant levels (MCL) for PFAS and to maintain reliable operation, in 2025, Hazen completed a PFAS evaluation for the Town that included evaluating, decommissioning the ion exchange system and replacing with

nanofiltration skids vs. adding a second stage of ion exchange for PFAS removal. Hazen evaluated the existing condition of the ion exchange and determined sizing requirements for the new ion exchange skid. Hazen evaluated the cost of the new ion exchange vessels and resin disposal costs against the capital and operational costs of a new nanofiltration skid. The Hazen evaluation yielded the new nanofiltration skid as the most cost-effective option, and the Town is moving forward with that approach to PFAS compliance.

Sodium Hypochlorite System Addition.

Hazen completed a sodium hypochlorite system addition for the WTP in 2022. Hazen worked within the Town's limited budget to design an interim outdoor sodium hypochlorite storage system, including

Project Duration

Design & Permitting Completion:

2007 (Nanofiltration Facility)
2022 (Hypochlorite System Addition)

Construction Completion:

2010 (Nanofiltration Facility);
2022 (Hypochlorite System Addition)

Project Cost

\$2 million (fee)
\$37 million (construction)

Client Reference

Amanda Barnes, PE
Utilities Director
Town of Jupiter
210 Military Trail
Jupiter, Florida 33458
(561) 741-2537
amandab@jupiter.fl.us

metering pumps and piping to application points. The Hazen team completed the design drawings for the Town to oversee permitting and construction. The system was operational within 18 months of design initiation.

Previously, under a separate contract, Hazen designed the nanofiltration (NF) facility to replace the lime softening facility and blend with the Town of Jupiter's (Town's) reverse osmosis (RO) plant. Hazen's center port design saves the Town 30% in annual electrical costs for the facility. Hazen provided design, permitting, and pilot testing oversight services for the new 14.5-mgd nanofiltration facility (NF), expandable to 17 mgd.

Awards

- American Membrane Technology Association
- Membrane Facility of the Year Award (2019 & 2020)
- FDEP Most Outstanding Class A Water Treatment Plant Award (2014)



Project Highlights

- Planning, design, and construction services
- Integrated structural and process design to filter and disinfect 16-mgd of secondary effluent
- Expansion of reclaimed water treatment facility from 10 mgd to 26 mgd
- Process design of upflow sand bed filters with Ecowash

North Regional WWTP Reclaimed Water Plant Expansion to 26 mgd

Broward County, FL

Hazen provided integrated process mechanical and structural design to filter and disinfect an additional 16 mgd of secondary effluent using upflow sand bed filters.

Broward County Water and Wastewater Services (BCWWS) owns and operates the North Regional Wastewater Treatment Plant (NRWWTP), providing a permitted wastewater treatment capacity of 95-mgd AADF. 10 mgd of the treated wastewater is currently reclaimed for on-site as well as offsite use.

In light of the requirements proposed by the ocean outfall legislation, the County decided to take the necessary measures to expand the existing Reclaimed Water Facility.

Hazen was part of the team selected to provide planning, design, and construction services related to the County's Reclaimed Water Expansion, increasing the reclaimed capacity to a total of 26 mgd.

The Reclaimed Water Expansion project consisted of several phases that involved retrofitting existing facilities and providing the necessary support, across all disciplines, for the site to sustain this increase in capacity. The work effort for this project included modifications to the filter feed and distribution

pump stations, filtration and chlorination basins, chemical and air compression facilities, as well as a 14,000-square-foot electrical distribution building, ensuring the necessary electrical capacity for the plant's projected growth.

Hazen had several roles on this project, including the **integrated structural and process design to filter and disinfect 16 mgd of secondary effluent using upflow sand bed filters, a total of 64 modules and 3,200 square feet of filtration area.** Additionally, Hazen was responsible for replacement of the existing air compressors with a new air compressor facility capable of meeting the demand from the existing and proposed continuous backwash filters running at full capacity. Hazen also served as electrical lead for design of the proposed electrical building that will be serviced by two 13.2-kV primary feeders and will house six Tier 4 emergency generators, service transformers, switch gear and controls.

Project Duration

2016-2020

Project Cost

\$54 million

Client Reference

Alan Garcia, PE, Director
Broward County
Water and Wastewater Services
2555 West Copans Road
Pompano Beach, Florida 33069
(954) 831-0705
agarcia@broward.org



Wastewater Treatment Plant Permit Renewal

Margate, FL

The City of Margate was required to complete a permit renewal package with multiple tasks and companion documents. **One of these tasks included a new reuse feasibility study requirement as of January 2025.** Hazen provided the evaluations necessary to meet FDEP requirements within an expedited project timeline to prevent an expired permit.

The goal of this project is to secure an operating permit renewal for the City. Hazen developed a permit renewal package in an expedited timeline to keep the City in compliance with FDEP requirements and regulations. The permit renewal package included an application form, capacity analysis report, operation and maintenance report, collection system action plan, power outage contingency plan, and reuse feasibility study.

The Reuse Feasibility Study is a critical component of the City's wastewater treatment plant permit renewal. The study provides a comprehensive evaluation of reclaimed water alternatives, including effluent management strategies and the technical and financial feasibility of multiple reuse scenarios—from no action to reuse of over 75% of the average annual daily flow. The

facility, composed of two semi-independent treatment trains, does not currently operate a reuse program. The study was developed in accordance with Florida Department of Environmental Protection guidelines and supports regulatory compliance and long-term planning for sustainable water reuse.

The permit renewal project helped the client quickly put together a permit renewal application to meet FDEP requirements and avoid noncompliance consequences. The City is currently awaiting FDEP approval.

Project Highlights

- Conducted a Reuse Feasibility Study which provides a comprehensive evaluation of reclaimed water alternatives, including effluent management strategies and the technical and financial feasibility of multiple reuse scenarios.
- Completed all tasks within a three-month time frame, including data request and collection, evaluations, preliminary result workshops with the City, report write-ups, and delivery to FDEP.

Project Duration

6/2025-Present (Ongoing and waiting for FDEP approval)

Project Cost

\$402,200 (fee)

Client Reference

Marta Reczko
Assistant Director Utilities
City of Margate
901 NW 66 Avenue
Margate, FL 33063
(954) 884-3632
mreczko@margatefl.com



Project Highlights

- Evaluation and recommendation of PFAS removal treatment technologies
- Pilot testing of adsorbent media options, including IX, GAC, and FLUORO-SORB® for PFAS removal
- Utilized Hazen PFAS prediction tool to evaluate IX resin selection
- Gathered water quality data to understand the impact of TOC on IX resin performance
- Pilot testing will define full-scale design and O&M costs

PFAS Study and Pilot Testing at WTP

Margate, FL

The City of Margate's Water Treatment Plant is a 10.1-mgd lime softening facility that has been experiencing elevated levels of per- and polyfluoroalkyl substances (PFAS), particularly PFOA and PFOS, in both the City's wells and finished water. The existing lime softening processes are insufficient to achieve compliance with the recently promulgated EPA maximum contaminant levels (MCL).

The City contracted Hazen to develop a PFAS Management Plan that includes a desktop evaluation of three adsorptive media options: granular activated carbon (GAC); two ion exchange (IX) resins; and FLUORO-SORB® using Hazen PFAS Prediction Model, along with an assessment of membrane alternatives using projection software as part of Phase 1. In the next phase of this project, the performance of GAC, two IX products, and FLUORO-SORB® will be evaluated in a pilot-scale system to determine treatment longevity, quantified by bed volumes processed and the time to breakthrough of the earliest regulated compound beyond an established threshold needed to meet water quality goals.

The outcome of this project will guide recommendations in the PFAS Management Plan for the City of Margate. The number of bed volumes treated for each adsorbent will inform the City of Margate on the effectiveness of each option for PFAS removal in full-scale design and its associated operational and maintenance costs. Additionally, by performing pilot-scale assessments with the selected adsorbents, other important operational factors, such as head loss accumulation as a function of water throughput and seasonal fluctuations in influent water quality, can be evaluated as they play a critical role in determining the most suitable adsorbent for full-scale implementation.

Project Duration

12/2024–Present

Project Cost

\$490,895 (fee)

Client Reference

Marta Reczko
Assistant Director Utilities
City of Margate
Dept. of Environmental &
Engineering Services (DEES)
901 NW 66 Avenue
Margate, FL 33063
(954) 884-3632
mreczko@margatefl.com



Supplemental Project Experience



Continuing Professional Engineering Services (2009-Present)

City of Cooper City, FL

Since 2009, Hazen has served as one of Cooper City's consultants for Continuing Professional Engineering Services.



Work under this contract encompass a range of disciplines, including technical, institutional, and regulatory aspects of water, reclaimed water, wastewater, sanitary sewer, stormwater, and water and wastewater treatment facilities. Projects have included the 0.5-mg water storage tank, the Pine Island Road Pump Station, Lift Station 2 and 49 improvements through design-build, master plan update of the feasibility review of infrastructure improvements for wastewater, and the effluent reuse and disposal master plan. Select projects are highlighted below:

George A. Haughney WTP Nanofiltration Element Replacement. The project included replacing 1204 membrane elements in the City's four nanofiltration skids, replacement of permeate check valves, installation of a new SDI monitor, and performance testing. Work included reviewal of shop drawings and supervising work in the field to ensure compliance with the requirements of the contract document. Membrane Autopsy of a lead and tail element was performed to help optimize anti-scalant dosing.

WTP 0.5-mg Storage Tank. Hazen designed and oversaw construction of the prestressed concrete tank that replaced the City's original 0.5-mg steel tank. The site, located at 11791 SW 49th Street, was occupied by an existing water tank with associated above/below grade utilities. The existing tank measured approximately 65 feet in diameter and approximately 25 to 30 feet in height. The replacement tank consists of an approximately 65-foot-diameter tank, with a storage capacity of 0.5 million gallons of water, and a finished floor elevation at or near existing grades. Test borings were advanced to depths of approximately 60 to 65 feet below ground surface along the perimeter of the existing water storage tank. The purpose of these

Client Reference

City of Cooper City
11791 SW 49th Street
Cooper City, FL 33330
Akin Ozaydin, PE, GC
Utilities Director/City Engineer
(954) 434-4300 ext. 111
aozaydin@coopercityfl.org

Project Details

Contract Duration:
2009-Present

Project Cost:
\$2.17 million (fees to date)

Project Highlights

- Planning, design, permitting, and construction management services.
- Constructed the 0.5-mgd water storage tank at the WTP below budget and ahead of schedule.
- Identified potential for 41% electrical savings for the Wastewater Treatment Facility, Aeration System Optimization Analysis Project

services was to provide information and geotechnical engineering recommendations relative to subsurface soil/rock conditions, groundwater conditions, foundation design and construction, and earthwork. Project ahead of schedule and below budget.

Pine Island Road Pump Station. Hazen provided design, permitting, bid/award phase, and construction oversight services for a pump station (with three high-service pumps) to convey water from a water storage tank to the distribution system. Hazen served as Engineer-of-Record for civil, mechanical, electrical, structural, architectural, controls, and plumbing. The project was completed below budget and one month ahead of schedule. The City's original budget was \$2.2 million. The construction cost was \$1.8 million with net zero change in contract price. Our team delivered the design and all permits nearly one month ahead of the 370 calendar day schedule.

Design-Build for Lift Stations 2 and 49. Hazen was responsible for overall project management for the design-build project of Lift Stations No. 2 and No. 49. Work included upgrades to Lift Stations 2 and 49. The project included installation of necessary connections and startup of bypass pipes and pumping equipment, demolition of existing structures, pumps and piping, applying special coating to wetwell, installing discharge piping and submersible pumps, and testing and startup of lift stations.

Effluent Reuse and Disposal Master Plan. The City owns and operates three package wastewater treatment plants that discharge treated effluent to an onsite injection well and to the City of Hollywood Southern Region Wastewater Treatment Plant (SRWWTP) where it is primarily further treated by filtration and disinfection and utilized for public access reuse. The "Ocean Outfall Rule" is the common name to House Bill 7139 and Senate Bill 1302 which required the cessation (later modified to allow for peak flows) of ocean outfall based wastewater effluent disposal and mandate the implementation of effluent reuse programs. Under this project, Hazen calculated the required reclaimed water implementation to be roughly 1 mgd (0.956 mgd) and identified the cost of alternatives for reclaimed water production and distribution (or injection). This study identified significant costs for the production and treatment of such minimal flows, Hazen recommended partnerships with other utilities for the production of reclaimed water. As such, the City explored multiple virtual solutions and culminated their planning efforts

by negotiating a deal with City of Miramar to produce 1 mgd at the Miramar Reclamation Facility.

Master Plan Update and Feasibility Review of Infrastructure Improvements. In 2007, the City completed a 20-Year Water and Wastewater Capital Improvement Master Plan (Master Plan). Subsequently, revised population growth data was published and indicated a decrease in projected wastewater capacity needs. In addition, the City also requested that Hazen prepare and update to Section 7.3.6 ("Additional Capacity Needs") based on the revised wastewater projections. Hazen evaluated multiple alternatives, including purchasing an existing steel package plant from another utility; construction of a new steel plant, construction of a prestressed concrete tank. Multiple configurations existed for each alternative, including whether additional treatment capacity was added and/or digestion capacity. Hazen prepared cost estimates and summarized the benefits of each alternative for the City's consideration.

East WTP Tank Demolition. In 2014, the City decided to demolish the East Plant water storage tanks and pump station. Hazen prepared detailed design drawings and technical specifications, including demolition and surface restoration. In addition, Hazen retained specialists to perform sampling and analysis of structures to determine the need for lead based paint and asbestos mitigation requirements. The specialists located both asbestos and lead; Hazen incorporated removal requirements into the contract documents. Hazen permitted the project through the Broward County Health Department and assisted the City with bidding services.

Wastewater Treatment Facility, Aeration System Optimization Analysis. Hazen provided engineering services for an evaluation of strategies to improve the efficiency of the aeration system. A life-cycle cost evaluation and payback analysis were completed. A net present worth (NPW) life-cycle cost evaluation and payback analysis were completed for replacing coarse bubble diffusers with fine bubble diffusers, install automatic DO control system, replacing existing blowers with turbo blowers or multi-stage centrifugal blowers. The report's recommendations concluded that a 41% reduction in aeration energy consumption and \$87,000 in electricity savings per year could be achieved for a payback period of approximately 7.1 years, by implementing the proposed improvements.

Professional Engineering Services for Stormwater and Water Capital Improvements

Town of Jupiter, FL

Since 2000, Hazen has served as general consultant, responsible for managing and completing well over 100 assignments.



Hazen has provided assistance to the Town in almost every aspect of its stormwater program, including multiple updates over the years to the Town's Stormwater Master Plan; modeling; design; NPDES permitting; stormwater system upgrades, including pump stations, storm sewers, and BMPs; asset management; rate/financial analysis; plan review; construction oversight; grant assistance; and public outreach.

Hazen's water-related capital projects have involved additional system storage and high-service pumping, extension and improvements to the transmission system, and renewal and replacement at existing treatment facilities.

At the peak of its Community Investment Program, we largely acted as a Program Manager and extension of Town staff, assisting with implementation of capital projects, helping coordinate infrastructure with that of the development community and sister governments, and assisting with oversight of numerous utility-related programs and initiatives. In addition to CIP-related efforts, select water and stormwater task assignments are highlighted below:

IX System PFAS Evaluation. The Town operates an ion exchange (IX) system that treats a portion of their water treatment plant's raw water. This system effectively reduces color and total organic carbon (TOC) while preserving beneficial minerals like calcium, which are essential for remineralizing water processed through reverse osmosis. To ensure compliance with proposed maximum contaminant levels (MCL) for PFAS and to maintain reliable operation, in 2025, Hazen completed a PFAS evaluation for the Town that included evaluating, decommissioning the ion exchange system and replacing with nanofiltration skids vs. adding a second stage of ion exchange for PFAS removal. Hazen evaluated the existing condition of the ion exchange and determined sizing requirements for the new ion exchange skid. Hazen evaluated the cost of the new ion exchange vessels and resin disposal costs against the capital and operational costs of a new nanofiltration skid. The Hazen evaluation yielded the new nanofiltration

Client Reference

Town of Jupiter Utilities
210 Military Trail
Jupiter, FL 33458
Amanda Barnes, Utilities Director
(561) 741-2537 (phone)
amandab@jupiter.fl.us

Project Details

Contract Duration:
2000-Present

Project Cost:
\$6.6 million (fees to date)
\$40 million (construction to date)

Project Highlights

- Since 2000, Hazen has served as general consultant for the Town of Jupiter, supporting its stormwater initiatives and water-related capital improvement projects.
- Most recently, Hazen completed a PFAS evaluation for the Town that included evaluating, decommissioning the ion exchange system and replacing with nanofiltration skids vs. adding a second stage of ion exchange for PFAS removal.

Professional Engineering Services for Stormwater and Water Capital Improvements continued

skid as the most cost-effective option, and the Town is moving forward with that approach to PFAS compliance.

Sodium Hypochlorite System Addition. Hazen completed a sodium hypochlorite system addition for the WTP in 2022. Hazen worked within the Town's limited budget to design an interim outdoor sodium hypochlorite storage system, including metering pumps and piping to application points. The Hazen team completed the design drawings for the Town to oversee permitting and construction. The system was operational within 18 months of design initiation.

10-Year Water Supply Facilities Work Plan. The purpose of the Work Plan was to identify and plan for the water supply sources and facilities needed to serve existing and new development within the municipality's jurisdiction. Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare and adopt updated Work Plans into their comprehensive plans. Hazen researched and reported on the following main elements to produce the work plan; regional issues affecting water supply; population projections; water demand projections; water supply sources and treatment capacities; water supply projects; water conservation and reuse; and intergovernmental coordination activities. Hazen also reviewed the municipality's current Comprehensive Plan related to water supply and provide suggested revisions to the Comprehensive Plan to be compliant and consistent with the Updated Work Plan.

Lead and Copper Rule Revisions (LCRR) Compliance Assistance. The Town provides drinking water to a service area of 88,000 in northern Palm Beach County. Hazen worked with the Town to develop a multi-phase LCRR compliance program. Phase I of the project included historical record review and development of an initial water service line inventory along with regulatory coordination with FDEP and FDOH. Hazen assisted the Town with development of an action plan to achieve compliance with LCRR requirements by the EPA's October 16, 2024 deadline.

2022 Water Master Plan Update. The Water Master Plan was developed through a collaborative approach and will provide a comprehensive evaluation of the Town's Water Utility anticipated future challenges including sustainability of water supply sources, climate change/coastal resiliency, existing and future regulatory compliance, membrane treatment

concentrate management disposal, condition assessment of existing treatment plant infrastructure, and financial positions. The project included review of historical data and regulatory compliance and development of 25-year capital plan.

Old Dixie Highway (Juno Street) Stormwater Pump Station. Hazen provided hydraulic modeling, design, permitting, and construction management services for a new 50-cfs (32 mgd) stormwater pump station, wetwell, stormwater treatment device, and valve vault in the public right-of-way. The design also included a 36" diameter underground utility crossing beneath the FEC railroad through a 60" diameter casing constructed by jack and bore, and open-cut crossing across Alternate A1A (FDOT roadway), outfall structure to a FEC-owned canal, 48" diameter RCP and stormwater manholes and inlet structures connecting the new pump station to the existing stormwater system. Hazen also provided permitting services and applied for permits with FDOT, SFWMD, FEC, Loxahatchee River District, and the Town of Jupiter. The project required extensive stakeholder coordination with multiple utilities including underground fiberoptic cable, force main, and water main relocations, and obtaining an easement from a private developer.

Resilience & Climate Adaptation. Hazen incorporates future rainfall and sea level rise projections into designs to reduce long-term costs and risks. The Elsa/Paulina Stormwater Project demonstrates this forward-looking approach, with flexibility for future infrastructure needs. Hazen also reviewed Town codes against state requirements and peer communities, recommending updates to strengthen resiliency, such as seawall heights, freeboard standards, and adaptation action areas.

Fisherman's Landing Improvements. This project consists of replacement of existing aging and undersized water mains with new larger PVC C900 and ductile iron pipe. New water mains will be installed to loop the distribution system to eliminate unnecessary dead ends. The work will be performed by open cut and horizontal directional drill methods. Valves and existing fire hydrants will be replaced, as well as new isolation valves and new fire hydrants installed. The water main improvements will improve the level of service and reliability of the distribution system in this area.

Continuing Consulting Engineering Services

City of Plantation, FL

Hazen has provided services to the City for a wide range of projects including studies, design, permitting and construction management services at the Regional WWTP, East WTP, and Central WTP.



Assignments have included facilities for the City's water and wastewater treatment plants, collection systems, distribution systems, and neighborhood improvement projects. A representative sampling of project assignments awarded under the general consulting contract is included below.

East and Central Water Treatment Plants Membrane Replacement. In 2011, the City decided to start a program for replacement of the aging membranes to improve overall water quality and to reduce operation and maintenance costs. Hazen was responsible for membrane pilot testing and data evaluation, performing calculations for full-scale membrane performance projections, post-treatment stabilization modifications, and conducting present worth evaluations for the membrane manufacturer selection. Hazen pilot tested 8-inch elements from two membrane manufacturers on a full-scale train to provide an alternative for replacement of the elements the plant had been using for many years.

The membrane replacement resulted in energy savings of about 35% to 45% at the East Water Treatment Plant (EWTP) and Central Water Treatment Plant (CWTP). The membrane selection utilized a hybrid array to allow rejection of target ions and passage of elements that contribute to the overall water stability based on target finished water quality goals and to minimize corrosion potential on the distribution system.

Water Master Plan. Hazen developed the Plantation Water Master Plan that defines short- and long-term planning goals through the year 2040, including goals that serve to optimize operation and management of the City's entire water system. The Master Plan identifies recommended capital improvements for: 1) water supply; 2) treatment; 3) distribution system quality; and 4) distribution system capacity.

Client Reference

City of Plantation
400 NW 73rd Avenue
Plantation, FL 33317
Daniel Pollio, Utilities Director
(954) 797-2209
dpollio@plantation.org

Project Details

Contract Duration:
2000-Present

Project Cost:
\$11.9 million (fees to date)
Construction costs vary per project

Project Highlights

- Effected \$200,000 in annual savings at the Regional WWTP by conversion to fine bubble.
- Selected membrane elements for replacement with an electric savings of 35% to 45%.
- Development of the Plantation Water Master Plan that defines short- and long-term planning goals through the year 2040.

Continuing Consulting Engineering Services continued

A key task for this project included the development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. Benefits of the service area-wide water distribution system hydraulic model include synchronization with the City's GIS water atlas, which will minimize efforts associated with future model updates. The model provides the ability to simulate water age as it moves from the WTP to customers. Model results are being used to prioritize capital improvement projects targeting the replacement of aging infrastructure, as well as for the evaluation of operational alternatives designed to reduce pumping energy costs.

Diffused Aeration. The City of Plantation operates the Regional Wastewater Treatment Plant (RWWTP), an 18.9-mgd facility based on a three month average daily flow (TMADF) basis. The RWWTP facility utilized a mechanically aerated activated sludge treatment process for secondary treatment. Hazen completed an Energy Savings Analysis that projected the City would increase the efficiency of their aeration process and save over \$200,000 annually in electricity costs by converting their mechanical aeration process to fine bubble diffused aeration. After this study, the City retained Hazen to provide design, permitting and engineering services for the conversion of the surface aerators to fine bubble. Our work for the City included determination of oxygen demands, selection of blower technology, and design of a new blower facility and aeration system. After the system start-up, the energy bills demonstrated that the City started realizing the expected energy savings.

East and Central WTPs Scale Inhibitor Pilot Testing. Both the EWTP and CWTP utilize membrane technology to treat the Biscayne Aquifer supply. Each of the facilities has

a treatment capacity of 12.0 mgd and utilizes multiple membrane arrays configured to operate at 85% recovery.

Pilot testing of several scale inhibitors was conducted at the EWTP to determine the suitability of these products with the existing water supply, treatment process recovery and the Dow FilmTec membrane elements. Hazen's services included coordinating the scale inhibitor pilot testing operation, performing calculations and conducting an evaluation to select a new formulation to improve operations at the facility, and providing assistance to the City during the scale inhibitor chemical procurement process. The City has witnessed higher recovery rates and longer time periods between cleanings.

12-mgd Membrane Softening Plant Expansion. Hazen designed the expansion of Plantation's existing 6-mgd membrane softening facility to the build out treatment capacity of 12-mgd. Our design services included the addition of three 2-mgd arrays, a third membrane booster pump and the addition of a permeate flushing system within the existing membrane building. Also included in the design were the addition of a clearwell, transfer pumps and high service pumps sized to meet the higher flow rates provided during the expansion. Final design was complete in November 2002 and construction was complete in 2003.

Injection Well Services. The City of Plantation operates four injection wells at three sites: two at the wastewater treatment plant and one at each of the water treatment plants. Hazen has assisted the City with a number of permitting issues associated with each of the wells. In addition, Hazen designed a cemented-in-place fiberglass injection tubing to replace the failed liner in the tubing and packer well at the CWTP. Also, at the RWWTP, Hazen designed a new deep dual zone monitor well to replace failed injection well monitor tubes.

General Water Consultant Services (1998-Present)

City of Fort Lauderdale, FL

Hazen has been providing general water engineering services to the City of Fort Lauderdale Utilities Department under a general consultant contract since 1998.



Work assignments provided under this contract have included: Fiveash WTP HS Pumps; Fiveash WTP Upgrades; Fiveash WTP Operational Control Plan Design; Poinciana Park and 2nd Ave. Storage Tank and PS Replacements Design and Construction Services; Saltwater Intrusion Monitoring; Fiveash WTP Basis of Design Report (BODR) Study; Water Master Plan 2006 Update; Peele-Dixie Membrane Procurement Bid Package Study; Dixie Wellfield Modeling; Peele-Dixie WTP Hourly Tasks for Construction Field Services; Fiveash WTP Consolidated Phase 1 Construction Services; Dixie Wellfield Design and Construction Services; South Andrews Avenue Water Main Improvements; and Peele-Dixie Membrane Softening WTP Design and Construction Services.

A sample of projects completed or ongoing under this contract during the last five years is listed below:

- Intracoastal Waterway Pipeline Crossing at Las Olas Design-Build
- Hydrotreator Influent Pipe Modification Design
- Fiveash WTP Reliability Upgrades and Disinfection System Replacement Design and Permitting
- 2018 Bond Report
- 2020 Water Supply Plan
- Peele-Dixie WTP Injection Well Mechanical Integrity Testing FY2020
- Water Use Permit Update for the C-51 Reservoir Supply
- Total Coliform Rule Level 2 Assessment

Client Reference

City of Fort Lauderdale
949 Northwest 38th Street
Oakland Park, FL 33309
Miguel Arroyo, Water and
Wastewater Treatment Manager
(954) 828-7806
marroyo@fortlauderdale.gov

Project Details

Contract Duration:
1998-Present

Project Cost:
\$20.5 million (fees to date)
\$172 million (construction to date)

Project Highlights

- Planning design, permitting, and/or construction management services for water treatment, water distribution, water supply, water distribution, regulatory assistance, and financial studies.
- Designed 4,160-volt power distribution at the Dixie Wellfield; resulted in \$200,000 savings over City's traditional approach.
- Won the Intracoastal Waterway Pipeline Crossing - DBIA 2017 Project of Year Award

General Water Consultant Services (1998-Present) continued

- Water Master Plan 2006 Update
- Peele-Dixie Membrane Procurement Bid Package Study
- Dixie Wellfield Modeling
- Peele-Dixie WTP Hourly Tasks for Construction Field Services
- Fiveash WTP Consolidated Phase 1 Construction Services
- Dixie Wellfield Design and Construction Services
- Fiveash WTP Upgrades Phase II
- Fiveash WTP Upgrades Phase III
- South Andrews Avenue Water Main Improvements
- Peele-Dixie Membrane Softening WTP Design and Construction Services
- Central New River Water Main Crossings
- Second Avenue Pump Station Improvements Design Services
- Dixie Wellfield Well Abandonment Design Services
- Water Supply Planning Assistance

General Consulting Services (2001-Present)

City of Hallandale Beach, FL

Since the 1990s, Hazen has been providing general consulting services for water treatment and wastewater transmission system projects to the City of Hallandale Beach.



General consulting services are provided on an as-requested basis and consist of engineering services ranging from studies, hydraulic models and master planning services through detailed design and construction oversight services.

Wastewater Master Plan. Under the most recent GC agreement (2016 Continuing Professional Architectural and Engineering Services Firms), Hazen recently completed the Wastewater Master plan that defined both short- and long-range planning goals through the year 2035. This plan also identified the operational and maintenance needs of the City for the wastewater system. The City utilized this plan for adjustment of future Capital Improvement Plan (CIP) needs.

Water and Wastewater Model Updates. The wastewater master plan was developed based on the wastewater model that was developed by Hazen under the 2014 Water and Wastewater Model Updates project under the previous GC agreement. The model update involved reforecasting water demand projections and wastewater flow projections, updating the hydraulic model configuration to match updated piping throughout the City, calibrating the hydraulic model, running various scenarios through the hydraulic model, and determining what potential improvements are necessary to correct any present and future system deficiencies. The model updates project formulated the basis for the water improvements and wastewater transmission improvements CIP.

Water Treatment Plant Renewal and Replacement Planning. Hazen provided the City of Hallandale Beach a team of senior mechanical, electrical, controls, and water treatment process engineers to assess the condition of the above-ground assets at its lime softening/membrane water treatment plant. Hazen's expertise in lime softening treatment facilities allowed the team to rapidly assess the remaining useful life

Client Reference

City of Hallandale Beach
630 NW 2nd Street
Hallandale Beach, FL 33009
Mark Gambrell, PE
City Engineer
(954) 457-3045
mgambrell@hallandalebeachfl.gov

Project Details

Contract Duration:
2001-Present

Project Cost:
\$4.2 million (fees to date)
Construction costs vary per project

Project Highlights

- General Consultant for water treatment and wastewater transmission system projects.
- Experience with permitting agencies (e.g., FDEP, SFWMD).
- Continuous water supply planning services saved the City \$12 million in wellfield relocation costs.
- Designed membrane plant to blend with lime-softened water, saving \$6 million in capital and \$400,000 in annual operating costs.

General Consulting Services (2001-Present) continued

of the WTP's major lime softening assets to develop a 20-year plan of capital improvements to sustain the capacity of the existing infrastructure. The City is presently using the recommended improvements and associated budgetary costs for planning CIP projects.

Brackish Water Reverse Osmosis (BWRO) Train Addition

Updates. Hazen provided preliminary and detailed design services for the addition of a reverse osmosis skid to the existing membrane plant, including appurtenant pretreatment and chemical facilities. The BWRO train was designed with the flexibility to treat multiple raw water sources. The NF plant was designed with space, piping and electrical provisions to add two, 2.0 mgd (treated water capacity) BWRO trains in the future. The first RO skid is presently completing construction and startup. The second RO skid and piping to connect the City wells is anticipated to begin design shortly. The two RO trains, with the addition of the City wells feed piping, will remove PFAS from the City supply.

Water Supply Well PW-9. Hazen designed and oversaw construction of the City's Biscayne Aquifer production well, PW-9, along with equipping the well with pumps, piping, valves, electrical and controls. The well is completely automated and controlled from the water treatment plant through radio telemetry. It was constructed on-time and within budget and provides the City with an additional 0.5 mgd beyond their previous permit allotment.

Additional Projects. In addition to the above described projects, Hazen also completed the following projects under the ongoing GC Agreements (2012, 2016, and 2020):

- Fire Hydrant Model
- Salt Water Wells Services During Construction
- Deep Injection Well Operating Permit 2015
- Injection Well Mechanical Integrity Test
- Biscayne Aquifer Modeling for Regional Water Availability Rule
- Operational Assistance FY 2014-2015
- CRS Verification Services
- Utility Rate Study Update
- Chateau Square Development Review
- Diplomat Development Review
- Nine Hundred Development Review
- Oasis Phase II Development Review

- Operational Assistance FY 2015-2016
- Wastewater Master Plan
- SSES Planning Activities Under SRF Funding
- Operational Assistance FY2016-2017
- Water Treatment Plant Infrastructure Assessment/ Renewal and Replacement Planning
- Operational Assistance FY 2017-2018
- SFWMD Water Use Permit Renewal
- Operational Assistance FY 2018-2019
- Operational Assistance FY 2019-2020

Additionally, Hazen recently prepared the Water Supply Plan Update 2019 based on the SFWMD Lower East Coast Water Supply Plan Update in 2018. Hazen is also scoping required services for compliance with the Water Infrastructure Act of 2018, specifically preparation of the Risk Assessment and the Emergency Response Plan Updates.

Under the previous general consulting agreement (transportation planning and engineering, traffic studies, utilities, roadways, geotechnical consulting and testing services), Hazen completed the design of a new Biscayne Aquifer well (PW-9) and the design of a third membrane skid. The design of the membrane skid is flexible for future water supply considerations (increased salinity in City wells, blends with County water supply solely). Hazen assisted the City with long term water supply planning considerations while adapting the design of both facilities (well and membrane skid) accordingly. Hazen will be completing bidding services for the well in 2019.

Membrane Plant. In addition to the general consulting services contracts, Hazen also provided services for the expandable membrane softening facility from 2001 through 2007. Hazen provided pilot testing, design, bidding, permitting, and construction management services for the membrane facility which included 6 mgd membrane skids initially with all associated pretreatment facilities (chemicals, cartridge filters) and all post-treatment facilities (degasifiers, chemical stabilization, and blending with lime softened water). Hazen designed the facility with flexibility for the future and the City is presently benefiting from the foresight. Hazen continues to provide operational assistance services to the membrane facility on an as-requested basis under the general consulting agreement.

Continuing Services Contract

City of Deerfield Beach, FL

Since 2018, Hazen has provided water treatment plant, wellfield engineering, injection well regulatory compliance, risk/resilience, stormwater, and other environmental engineering services under a continuing services contract with the City.



Services provided under this contract range from planning and design to permitting, bidding, and construction administration services in connection with water treatment and supply/distribution and wastewater collection facilities, effluent disposal and reuse, environmental assessment, and/or miscellaneous infrastructure improvements. Work also includes general consulting, stormwater and environmental engineering design, on-site representation, and cost estimating services.

Select assignments awarded under the contract are highlighted as follows:

West Water Treatment Plant Chemical Systems Replacement. Hazen led the design and permitting of upgrades to the West WTP Chemical Storage and Feed Facilities. The West WTP utilizes several chemicals as part of the overall nanofiltration (NF) and reverse osmosis (RO) treatment processes, including sulfuric acid, antiscalant, corrosion inhibitor, and sodium hydroxide (a.k.a., caustic). These chemical systems were designed as part of the original membrane plant design under prior building code requirements and as such, required improvement to achieve current code requirements. Because maintenance challenges associated with the underground piping for these chemicals has increased, the City decided to replace these chemical systems along with all associated piping. The project includes demolition of existing sulfuric acid, antiscalant, corrosion inhibitor, and caustic storage and feed facilities and replacement with new improved facilities.

Deep Injection Well System Mechanical Integrity Testing. Hazen prepared planning documents for the mechanical integrity testing of the City's Class I industrial deep injection well at the West WTP. Work included management of field services and regulatory communication during testing and submittal of a certified report to FDEP following testing of the well.

Client Reference

City of Deerfield Beach
290 Goolsby Blvd.
Deerfield Beach, FL 33442
Joshua Niemann, Assistant
Director of Environmental Services
(954) 480-4369 (phone)
jniemann@deerfield-beach.com

Project Details

Contract Duration:
2018-Present

Project Cost:
\$988,000 (fees to date)
Construction costs vary per
project

Project Highlights

- Assisted the City with meeting all regulatory milestones for the injection wells by collaboratively tracking changes in performance and designing a rehabilitation program to restore capacity. Hazen's efforts have protected the use and reliability of existing infrastructure.
- Hazen avoids conflicts during construction by preparing a detailed Maintenance of Plant Operations (MOPO), ensuring the contractor understands the limits of construction at the fully operational WTP.

Deep Injection Well System Rehabilitation and Rerating.

For this multi-phase project, Hazen is providing services to investigate and restore capacity of the City's Class I injection well. The first phase involved planning, permitting, contract document preparation, and procurement assistance. Hazen prepared a technical memorandum (TM) for the evaluation of the deep injection well system performance, as well as planning documents, specifications, and contract for rehabilitation and rerating of the City's Class I industrial deep injection well at the West Water Treatment Plant. The TM outlines the history of performance issues, previous work and recommendations, and current capacity losses. Hazen also prepared a plan for investigating and mitigating additional capacity losses. The second ongoing phase includes injectivity testing, oversight of contractor rehabilitation activities including geophysical logging, tubing brushing, reverse air development, and acidization to restore injection capacity.

West Water Treatment Plant FDEP UIC Class I Injection Well, IW-1, FDEP Operation Re-Permitting. Hazen prepared the application for operation re-permitting, coordinated with the FDEP, reviewed operational data, and updated the injection well system Operation and Maintenance Manual. We continue to provide post-application services and correspondence with FDEP.

Stormwater Utility Fee Update & Non-ad Valorem Implementation.

Hazen provided assistance in the update and modification of the City's Stormwater Utility Program. Work was accomplished in two phases. Phase I will update the most recent impervious area GIS and develop stormwater utility fee financing scenarios, in accordance with the City's existing Citywide Stormwater Master Plan. The fee adjustment will cover future capital improvement expenses as described in the City's CIP and will evaluate the impact of different funding methods including PayGo and financing through a government loan program or commercial lending. Phase II will encompass the work required to implement the stormwater fee as a non-ad valorem stormwater assessment on the property tax bill starting in Fiscal Year 2024.

America's Water Infrastructure Act (AWIA) Compliance.

The City developed the Risk and Resilience Assessment (RRA) in compliance with the AWIA and requested Hazen complete the AWIA compliance by preparing the Emergency Response Plan (ERP). Hazen developed the ERP based on the City's RRA and ensured the City submitted certification to the EPA to confirm completion of the ERP prior to the deadline. Further, Hazen identified incident specific responses to be developed under future efforts. Hazen is presently providing services related to the five-year recertification effort.

General Water and Wastewater Services

City of Miramar, FL

Since the 1990s, Hazen has worked with the City's water, wastewater, and reuse services on all phases of project implementation to provide cost-effective and innovative solutions to meet their growth and regulatory needs.



Hazen has assisted the City in the successful implementation of over \$110 million in infrastructure improvements to the City's water, wastewater, and reuse systems. These projects have encompassed all aspects of utility-related engineering, including studies, facilities planning, design, cost estimation, permitting, construction administration, startup services, and regulatory assistance for both water and wastewater infrastructure, as well as assistance in the establishment of a stormwater utility, construction of new administration and fleet maintenance facilities, and a new city-wide Local Area Network / Wide Area Network (LAN/WAN) communications system. In addition to these technical efforts, Hazen has also worked with the City on unique activities, such as grants procurement and "good neighbor" community involvement programs. Below are a few project highlights, illustrating Hazen's continued support and in-depth knowledge of the City's system.

Wastewater Reclamation Facility. Hazen has worked with the City on all phases of their Wastewater Reclamation Facility—from inception to the latest reuse facilities expansion from 4 mgd to 7.5 mgd.

- Wastewater system master planning
- Planning, design, and construction of the Miramar WWRF, including fine mechanical screens, forced vortex type grit removal, activated sludge treatment with fine bubble aeration, final clarification, effluent pump station and deep well injection, with an initial capacity of 7.4 mgd, as well as reuse facilities to produce 2 mgd of reclaimed water for irrigation.
- Planning, design and construction of the wastewater and reclaimed water transmission systems.

Client Reference

City of Miramar
Utilities Department
13900 Pembroke Road
Miramar, FL 33027
Francois Domond, PE
Director of Utilities Department
(954) 883-6813
fdomond@miramarfl.gov

Project Details

Project Duration:
1993-Ongoing

Project Cost:
\$1.27 million (est. fee-to-date)

Construction costs varies per project

Project Highlights

- Implementation of infrastructure improvements to the City's water, wastewater, and reuse systems.
- Assisted the City with their water system needs, performing studies/assessments, specialty plant evaluations, and construction management services at the West WTP.
- Conversion of the East WTP from lime softening to membrane softening, including upgrades to meet finished water quality goals and rehabilitation.

General Water and Wastewater Services continued

Other wastewater projects have involved hydraulic modeling, transmission system expansion, sewer system rehabilitation, I/I program management, pump station design and rehabilitation, telemetry assistance, and rate studies.

West WTP. Hazen has assisted the City with its water system needs, performing studies/assessments, specialty plant evaluations, and construction management services at the West WTP. Select projects:

- **Membrane Softening Expansion Construction Management Services:** Construction administration services to implement the plant's 3-mgd membrane softening expansion, including constructability review, stringent construction sequencing constraints to maintain uninterrupted service, comprehensive inspections to ensure construction according to the contract documents, start-up services, compliance with regulatory agencies, and record drawing development.
- **Taste and Odor Investigation:** Treatment process evaluation involving investigation of taste and odor complaints and high turbidity following the addition of reverse osmosis treatment of Floridan aquifer supply water (designed by a different firm). The problem was traced to iron sulfide precipitation, pH shift, and deficient degasification facilities. Hazen recommended segregating NF and RO permeate, whereby the City modified the permeate piping with successful results.
- **Chemical Hazard / Forensic Engineering Evaluation:** As a result of accidental sulfuric acid leaks, Hazen examined the chemical system hazards associated with the existing facility, including probable cause of spills, air sampling program evaluating potential risk from release, effects of spills on concrete containment, and recommended remedial actions.

City of Miramar East WTP. Within the last ten years, Hazen has assisted the City with converting the East WTP from lime softening to membrane softening, including upgrades to meet finished water quality goals and rehabilitation. Select projects include:

- **Ammoniation Feed System and Construction Services:** Evaluation to assess the feasibility of installing an ammonia feed system to mitigate production of disinfection byproducts while maintaining adequate disinfection in the distribution system. Hazen designed the ammonia feed system following the study and performed construction oversight.

- **East WTP Process Enhancements/Renovation Preliminary Design:** Planning and design of plant conversion from lime softening to membrane treatment. Based on initial evaluation of the City's raw water supply data and infrastructure, Hazen determined that additional raw water capacity would be needed to implement membrane softening. At the City's request, Hazen evaluated multiple raw water supply augmentation alternatives for 3 mgd (blended treatment) and 6 mgd (full conversion) membrane treatment. Based on comparison of the qualitative considerations and estimated \$/gpd for each alternative, the City decided to proceed with preliminary design of full plant conversion to 6 mgd membrane softening treatment, including the installation of new production wells and raw water transmission piping. Hazen developed the preliminary design report and drawings to implement 6 mgd of membrane softening treatment capacity at the EWTP while maximizing use of existing facilities and re-purposing the Chemical Building to accommodate new processes. Treatment plant improvements included raw water wells and piping, sand separation and cartridge filters, membrane feed pumps, two 2-stage membrane units designed with the flexibility, raw water blending flexibility, concentrate and permeate pipelines, post-treatment, chemical feed and storage upgrades, electrical and I&C upgrades, miscellaneous building modifications, and site work. Hazen developed the project delivery schedule for design and construction of the proposed improvements. The City elected to proceed via Design-Build construction delivery.

Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP). In 2020, Hazen performed an RRA of the City's water system, including the East WTP, West WTP, raw water wells, storage tanks, pump stations and pipelines, to meet their regulatory requirement under America's Water Infrastructure Act (AWIA) of 2018. The RRA involved workshops with leaders from utility departments and emergency response agencies, field inspections of critical assets, identification of threats and vulnerabilities to the water system, risk calculations using a tool developed by Hazen, recommendations of mitigation measures to improve resilience, and development of a report that is "for official use only" and certified by the US EPA. The detailed RRA report provides an implementation plan for capital and operational needs for risk and resilience management of the City's water system. Hazen also developed an ERP for the City that includes response protocols for emergencies/events identified as threats during the RRA.

General Consultant Services (1984-Present)

City of Hollywood, FL

Having partnered with the City of Hollywood on many projects continuously since 1984, Hazen brings a profound understanding of the issues facing the utility, as well as the historical context surrounding each issue.



Since 1984, the firm has been providing general engineering consultant services for water treatment plant (WTP) and wastewater treatment plant (WWTP) projects to the City. Hazen was reselected in 2002 and again in 2017 and 2023). Projects have included the City's wastewater plant, wastewater collection and transmission system, and reuse transmission system; pump station upgrades and replacement; stormwater management program; stormwater utility; ocean outfall services; instrumentation and controls; and successful anticipation and management of many of the most pressing regulatory issues including Class 1 Injection Well Rule Changes, ocean outfalls, Bird Rule, and reclaimed water. Selected projects Hazen has been involved with at the Southern Regional WWTP are highlighted below:

Reuse Water System Expansion Phase 2. Update of the City's reuse high-service pump model and replacement of existing reuse pumps to provide flexibility to better serve existing customers on demand with provisions to serve additional future customers. Construction was completed in 2017.

Headworks Rehabilitation and Replacement. This project involved rehabilitation of headworks facility, replacement of the bar screens, grit pumps, slide gate replacement, large-diameter plant pipe lining, grit pipe replacement, bypass pumping, specialty coatings, and lighting upgrades. Hazen provided detailed design, permitting, bidding, and technical services during construction.

Clarifier Nos. 5-8 Flow Distribution Box Rehabilitation. Inspection of deteriorated mixed-liquor distribution box, detailed design of rehabilitation including replacement of transfer pumps, bypass pumping, specialty coatings and electric actuator replacement.

Client

City of Hollywood
1621 North 14th Avenue
Hollywood, FL 33020
Vincent (Vin) Morello, PE
Public Works Director
(954) 967-4455
vmorello@HollywoodFL.org

Project Details

Contract Duration:
1984-Present

Project Cost:
\$2.3 million (est. fees to date since
2017 contract renewal)

Project Highlights

- Careful consideration of construction sequencing in order to maintain plant operations at all times.
- Detailed design, bidding, permitting, and construction administration services for numerous projects.
- Permitting assistance with effluent disposal system through FDEP and SFWMD.

General Consultant Services (1984-Present) continued

PLC System Upgrade. Complete replacement of 15 WWTP PLCs, shop drawing review, and contractor coordination.

Aquifer Recharge Pilot Study. Design, construction, start-up, operation and testing of a pilot plant to determine the feasibility of MF, IX, AOP, BAC as treatments alternative to RO for use with a highly saline effluent for aquifer recharge.

Reclaimed Water (Regulatory). When the state of Florida implemented the Antidegradation Rule and placed the Southern Regional WWTP under a building moratorium by denying a permit for expansion of the SRWWTP, Hazen and the City jointly negotiated a solution with Tallahassee through implementation of a reclaimed water system. Hazen also argued for a 25% reduction in the later Ocean Outfall Rule Change reuse mandate by convincing the state to credit the City for existing industrial reuse.

SRWWTP RAS PS No. 2 Rehabilitation. The existing RAS PS No. 2 was constructed in 1973 and is critical to the proper functioning biological process at the wastewater treatment plant. Severe cracking of the walls and revisions to the operating levels within the neighboring clarifier trough in order to meet new regulatory requirements provided a pathway for multiple leaks to penetrate the interior of the pump station. In addition, electrical and mechanical equipment had reached the end of their useful life and required replacement. The design work was completed in March 2015 and construction was completed in June 2017.

SRWWTP Facility Permit Renewal. The City of Hollywood operates the Southern Regional Wastewater Treatment Plant (SRWWTP) under the existing Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Permit number FL0026255 which was due to expire on August 27, 2017. Permit renewal activities were initiated in January 2017 and the new permit was issued on June 30, 2017 (effective date of August 30, 2017). A key element to NPDES limits negotiated with FDEP under the new permit was the relaxation of minimum total residual chlorine limits (TRC) for disinfection to 0.3 mg/L and maximum TRC limits for toxicity of 2.0 mg/L.

SRWWTP Injection Well MIT. An expansion of the effluent disposal system at the Hollywood SRWWTP included the

construction of two deep injection wells (IW-1 & IW-2) which were placed into service in 2003. A condition of the operating permit from the FDEP requires mechanical integrity testing (MIT) to be performed on a regular basis. Dates for mechanical integrity testing are established based on the date of the casing pressure test and must be performed once every five years.

SRWWTP RAS PS No. 1 Rehabilitation. Existing RAS Pump Stations No. 1 and No. 2 were constructed in 1973 and are critical to the proper functioning biological process at the wastewater treatment plant. Based on the success of the replacement of RAS Pump Station No. 2, a replacement of the pumps, motors, valves, variable frequency drives, motor control center, disconnects, walkway, and other miscellaneous repairs within the station were requested. Design was completed in December 2019 and completion of construction is anticipated in the Fall of 2023.

Construction of Injection Wells 1 and 2. Design, permitting, procurement, and construction services for the two 24-inch injection wells constructed at the Southern Regional WWTP.

SRWWTP Emergency Outfall Repair. Hazen developed an emergency environmental response plan after a segment of the City's 60-inch Ocean Outfall in 2008 was punctured by a developer's geotechnical subcontractor. Hazen negotiated the plan with FDEP and Broward County Environmental and Growth Management Department (EPGMD) to obtain authorization for the discharge of secondary effluent into the Intracoastal Waterway to facilitate repair of the damaged pipe. Upon completion of the repairs, Hazen successfully dye tested the outfall to confirm the pipe's integrity and allow it to be placed back into service.

Wastewater Master Plan. The Wastewater Master Plan (WWMP) developed a Capital Improvements Program to meet the needs of the City's Wastewater Collection and Transmission, Treatment, Disposal, and Reuse systems through 2045. The WWMP included the development of wastewater flow projections, an update and calibration of the wastewater hydraulic model, and system-wide condition assessments. The Master Plan considered a range of factors including population growth, re-development, storm surge and sea level rise, septic-to-sewer conversions, and regulatory changes.

General Consulting Services (2004-Present)

City of Sunrise, FL

Hazen has served the City of Sunrise on a range of planning, design, permitting, and/or construction management services projects since 2004, including water and wastewater treatment plants, water supply wells, and effluent disposal wells.



The City owns and operates three wastewater treatment plants that are interconnected via force mains and about 250 lift stations (214 city-owned). Service areas include Sunrise, Weston, and portions of Davie and Southwest Ranches. Some of the work provided under this contract to date is summarized below:

Sawgrass WWTP Headworks Influent Line Improvements. Work includes modifications to the headworks and reconfiguration of major influent force mains at the Sawgrass WWTP. Work includes grouting, abandonment and bypassing of existing force mains, replacement and relocation of the WWTP's magnetic flow meter, above ground rerouting of force mains, fit-tings and valving, and demolition of two previously decommissioned buildings. Hazen is currently performing construction administration services for the project.

Southwest WWTP Injection Well and Injection Well Pump Station. The Southwest WWTP (SW WWTP) facility is permitted for 0.99-mgd annual average daily flow (AADF) of wastewater treatment and disposal via rapid infiltration basins. Effluent disposal to the rapid infiltration basins is limited due to reduced percolation rates over time, attributed to algae growth and sedimentation. The City requested that Hazen perform design, permitting, and bidding for a Florida Department of Environmental Protection (FDEP) Underground Injection Control (UIC) Class I deep injection well, monitoring well, and surface facilities to serve as the primary disposal location for SW WWTP treated effluent. Surface facilities include an effluent disposal force main and injection well pump station.

Southwest WWTP RAS Piping and Water Main Replacement Design and Bidding. This project included the design, permitting, bidding, and construction of

Client Reference

Rodrigo de Castro, PE, CFM
Director of Utilities
City of Sunrise
777 Sawgrass Corporate Parkway
Sunrise, Florida 33325
(954) 888-6055
rdecastro@sunrisefl.gov

Project Details

Contract Duration:
2004-Present

Project Cost:
\$18 million (estimated fees to date)

Project Highlights

- Preparation of a Water and Wastewater Master Plan to be used as primary guide for capital improvements planning and implementation through 2040.
- Engineering consultant for wastewater infrastructure projects.
- Produced Water and Wastewater Hydraulic Model Update.
- Provided design, permitting, and bidding services for an FDEP UIW Class I deep injection well, monitoring well, and effluent disposal force main and IW pump station.

General Consulting Services (2004-Present) continued

two 8-inch Return Activated Sludge (RAS) gravity lines and installation of a 12-inch potable water main loop to be located at the Southwest WWTP and surrounding residential neighborhood. The work included replacement of pipelines, installation of interconnecting valves, and modification to the RAS pump station wet well. Services provided included surveying, civil engineering design, permitting, coordination with utility providers for adjustments and/or relocations, preparation of quantity calculations, engineers estimate of probable construction costs, and bidding assistance. Contract administration services included construction observation; responding to RFIs; review of shop drawings, as-builts, and testing during construction; and project certification.

Springtree WTP Electrical Upgrades Phase 1 and Phase 2.

To facilitate the equipment that required immediate replacement, the City and Hazen developed a two-phased approach to address the facility's needs. The work is phased as follows: Phase 1 includes replacement of low voltage (480V) motor control centers, MCC-1 and MCC-2; replacement of low voltage (480V) Unit Substations 1 and 2 with a new (480V) main-tie-main switchboard and outdoor, liquid-filled, pad-mounted transformers; replacement of high-service pump variable frequency drives (VFD) including demolition of the isolation transformers; and replacement of high-service pumps, motors, and ancillary piping and appurtenances. Phase 2 includes replacement of the plant's medium voltage (5kV) main switchgear and generator switchgear, including controls; and replacement of the plant's medium voltage (5kV) electrical distribution equipment within the main electrical building (e.g. MV-MCC-1A/B).

Biosolids Management Improvements. This project included preliminary design and phasing of sludge thickening, anaerobic digestion, and centrifuge dewatering facilities at the 20-mgd Sawgrass WWTP and the 10-mgd Springtree WWTP, which were completed in 2011. Detailed design, permitting, construction oversight, and startup of the centrifuge

dewatering systems at both facilities (including sludge conveyance, polymer, and truck loading systems) were completed in 2016. This project also included a new hypochlorite storage/feed facility at Springtree.

SW WWTP Renewal and Replacement (R&R) and High-Level Disinfection Improvements. Hazen recently completed design, permitting, construction management, and startup of comprehensive improvements associated with R&R of aging facilities at the plant and the addition of deep bed filters for high level disinfection. Facilities designed included: headworks and influent pump station upgrades, filter influent pump station, deep bed sand filters, chlorine contact basins, bulk hypochlorite facility, MCC and emergency power, on-site lab facility, modification of tertiary clarifier, rehabilitation of oxidation ditches, secondary clarifiers, and percolation ponds.

Lift Station Upgrades and Force Main Design. Hazen established design criteria, design points, and operating ranges for a number of lift stations that have already been prioritized for rehabilitation. The task was completed by evaluating modeling results, lift station collection area characteristics, historical SCADA data, flow meter readings, and pressure readings. Hazen is designing upgrades for six lift stations to increase their capacity and meet the updated City standards. Services include permitting, bidding/award, and construction management services. A force main is also being designed, which will accommodate rerouting and increasing flows.

Injection Well Pumping System. Hazen designed the expansion of the effluent injection well pumping system at the Sawgrass WWTP. Various alternatives to increase the long-term capacity of the system were evaluated. Hazen recommended, designed, and provided services during construction for the addition of a third pumping station to increase capacity of the injection well pumping system to more than 52.6 mgd.



6. Project Team Form

(Also uploaded to the Response Attachments tab in the eBid System as a separate file.)



7. Organizational Chart

7 Organizational Chart

The Hazen team has the expertise and depth of resources to deliver. We have a deep bench of **experienced, local staff** who have worked together on water and reuse water projects for many South Florida clients. Our team is committed to providing quality, prompt, and responsive services while meeting the City’s needs, goals, and objectives.

We have assembled a qualified team to serve the City of Pompano Beach, as demonstrated in the organizational chart on the next page. Our team has been streamlined to provide efficient and effective service. **Our proposed key team members are primarily local South Florida staff**, which is a significant benefit to the City in that access to a range of experienced engineers and construction management and inspection staff are just a short drive away. **Our Southeast regional headquarters, located in Hollywood, is approximately 25 minutes away from Pompano Beach’s facilities.** Our Project Manager, **Monica Pazahanick, PE**, will be supported by Assistant Project Manager, **Anthony Niemiec, Jr., PE, BCEE**, along with our proposed team members that represent major engineering and support disciplines. We commit that the principals and personnel named in our proposal will perform services throughout the contractual term unless otherwise provided for by way of a negotiated agreement/contract or written amendment to same executed by both parties.

Brief bios detailing the relevant experience of key team members are provided in this section. Resumes are located in Section 9.

Subconsultants

Hazen continuously upholds our commitment to including certified minority, small, and/or woman business enterprises (MBE/SBE/WBE) on our team. We have included two minority-certified firms on our team: Corporate Project Services, Inc. and GMAwater, LLC, to participate on this continuing contract. We have also included Craven Thompson & Associates, Inc. to provide as-needed survey services. Additionally, we are committed to giving back to the community and utilizing Pompano Beach-based firms for services, such as printing, whenever possible. **All of our subconsultants have prior experience working with Hazen, bringing specialized expertise and qualifications to deliver top-notch services for the City.**



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PRINCIPAL-IN-CHARGE

✦ Janeen Wietgreffe, PE, PMP

PROJECT MANAGER

✦ Monica Pazahanick, PE

ASSISTANT PROJECT MANAGER

✦ Anthony Niemiec, Jr., PE, BOEE

TECHNICAL ADVISORS

- ✦ Patrick Davis, PE
- ✦ Erik Rosenfeldt, PhD, PE
- ✦ Darren Lytle, PhD, PE
- ✦ J. Philip Cooke, PE
- ✦ William Becker, PhD, PE, BOEE

WATER LEAD

✦ Monique Durand, PE

REUSE WATER LEAD

✦ Alonso Griborio, PhD, PE

MEMBRANE OPERATIONS OPTIMIZATION

- ✦ Jayson Page, PE
- ✦ Paul Biscardi PhD, PE
- Tyler Davis, PE
- Nathan Rothe, PE

WATER PROCESS MECHANICAL

- ✦ George Brown, PE
- ✦ Monique Durand, PE
- ✦ Jennifer McMahon, PE

PERMITTING/REGULATORY COMPLIANCE

- ✦ Rama Rani, PG, GISP, CC-P
- Marta Alonso, PE, ENV SP
- Steven Memberg, PG³

ASSET MANAGEMENT

- ✦ Alexandra Kelly, PE, ENV SP
- Ryan Nagel, PE, PMP, ENV SP

CONSTRUCTION MANAGEMENT

- ✦ Elie Andary, PhD, PE
- Leonardo Galvan
- Esther Lambert²
- Recardo Nicholson²

LANDSCAPE ARCHITECTURE

- ✦ Scott Peavler, PLA¹

REUSE WATER

- ✦ Patricia Carney, PE, BOEE, DBIA
- John Koroshec, PE

WELLS/HYDROGEOLOGY

- ✦ Gerrit Bulman, PG
- Angela Giuliano, PG
- Michael Wengrenovich, PE

MASTER PLANNING/ FEASIBILITY STUDY

- ✦ Monique Durand, PE
- ✦ Jennifer McMahon, PE

HYDRAULIC MODELING

- ✦ Guillermo Regalado, PE
- Nandita Ahuja, PE

CLIMATE RESILIENCE/ STORMWATER

- ✦ Lucia Medina, PE
- Robert Taylor, Jr., PE

SUSTAINABILITY

- ✦ Enrique Vadiveloo, PE, ENV SP

GRANTS/FUNDING

- ✦ Sharon Simington
- Marta Alonso, PE, ENV SP

SURVEY

- ✦ Richard Crawford, PSM

INSTRUMENTATION/SCADA

- ✦ Evan Curtis, PE
- Alfredo Jimenez

ELECTRICAL

- ✦ John Burke, PE
- Jose Cano, PE

HVAC/PLUMBING

- ✦ David Witte, PE, CEM

STRUCTURAL

- ✦ Jean Paul Silva, PE
- Casey Andersen, PE

ECONOMIC ANALYSIS/FINANCE

- ✦ Grace Johns, PhD
- Gabriel Lara, PhD

CAPITAL IMPROVEMENT PLANNING

- ✦ Patricia Carney, PE, BOEE, DBIA
- Adrian Myrie, EI

ARCHITECTURE

- ✦ André Capi, LEED AP⁴
- Blaise McGinley, RA⁴

TESTING SERVICES

- ✦ Reza Javidan, PE⁵

SUBCONSULTANTS

✦ Resume included.

1. Craven Thompson & Associates, Inc.
2. Corporate Project Services, Inc. *
3. GMAwater, LLC *

4. Design Kollaborative (DK) Architects/Planners, Inc. *
5. Florida Engineering & Testing, Inc. *

* Certified Minority, Small, County, and/or Woman Business Enterprise



Ms. Wietgrefe, Ms. Pazahanick, and Mr. Niemiec will remain on the project throughout the term of the contract and be responsible for the following:

- Direction of all work
- Review of all work
- Approval of all work
- Program administration for contract compliance
- Interpretation of scope
- Project budget
- Coordination with City staff

They will be supported by our Water and Reuse Water Leads, **Monique Durand, PE**, and **Alonso Griborio, PhD, PE**, respectively.



29 years of experience

Janeen Wietgrefe, PE, PMP
Principal-in-Charge



18 years of experience

Monica Pazahanick, PE
Project Manager



11 years of experience

Anthony Niemiec, Jr., PE, BCEE
Assistant Project Manager



22 years of experience

Monique Durand, PE
Water Lead



30 years of experience

Alonso Griborio, PhD, PE
Reuse Water Lead

Basic Approach to Projects

Hazen’s approach to managing this contract for the City of Pompano Beach has been shaped by continuous improvement over decades of experience throughout the region, as well as our proposed team members extensive experience participating on similar continuing services contracts. Hazen understands that this contract directly supports the City’s mission of providing exceptional municipal services in a fiscally responsible manner and commits to partnering with the City to address any and all needs that may arise over the life of this contract.

Assignments under this contract may include any aspect of water and reuse water treatment plant projects—projects that Hazen is well suited to efficiently deliver. We understand that task order assignments come in various shapes and sizes, and we will adapt our delivery approach accordingly. For larger assignments, we develop a comprehensive project work plan to guide execution. Smaller assignments may require a more streamlined approach to ensure the project team receives the necessary information efficiently. In such cases, the Project Manager may directly carry out the work, allowing us to maintain a lean, focused team and minimize engineering costs. We prioritize gathering and integrating meaningful input from all stakeholders throughout the scope development and execution of each assignment. Regular communication is the key to success. Further, our rigorous QA/QC methodology is conscientiously applied to every project, regardless of size, complexity, or schedule.

Key Elements of our Approach

The overall approach Hazen will take on this contract is underscored by our commitment to collaborate with the City. Additional key elements that will result in successful projects include the following:



Collaborative Partnership

We will collaborate with the City on assignments under this contract, starting with pre-scoping meetings and continuing with design workshops, where we will engage both Engineering and Operations staff to ensure all stakeholders have an opportunity for input.



Proven Record

Our Project Manager and all our Project Engineers have experience working on similar projects to those anticipated under this project. They know how to effectively deliver these projects and communicate with the key stakeholders.



Technical Expertise

Hazen will bring the right team for each project under this contract, including involvement of key technical staff and QC reviewers during the scoping phase. Hazen is home to many leading water and wastewater industry experts, and our corporate structure allows us to easily access these resources and bring them onto City projects as needed.



Responsive and Available

Our Project Manager, Monica Pazahanick, PE, as well as our team members, take great pride in being both responsive and dependable. Hazen is invested in the City and will be there when you need us, for as long as you need us.



8. Statement of Skills and Experience of Project Team

8 Statement of Skills and Experience of Project Team

The Hazen team’s ability to consistently deliver quality services and work products is a direct result of having the **right team members committed to the project.**

We have assembled a qualified team to serve the City, as demonstrated in the organizational chart in Section 7. Our project team emphasizes concise and direct communication lines between key Hazen staff and the City. We understand that clients select consultants based on team qualifications, and we have proposed individuals who will work on your project—what you see is what you get. In addition, many of our team members have worked together on previous and current projects.

Our proposed key team members are primarily local South Florida staff, which is a significant benefit to the City in that access to a range of experienced engineers and construction management and inspection staff are just a short drive away. **Our team leadership consists of staff members who have worked together for many years, with some relationships spanning 20+ years.** The most experienced individuals lead our projects, ensuring that our clients are provided with effective and efficient project development, implementation, and completion. Our team leadership is further strengthened by seasoned technical experts (in all required disciplines), who have performed numerous projects of a similar nature. **Monique Durand, PE,** and **Alonso Griborio, PhD, PE,** will serve as the technical leads for the Water and Reuse disciplines, respectively.

Resumes detailing the relevant experience of key team members are provided in Section 9.



Monica Pazahanick, PE
Project Manager

Monica Pazahanick, PE will serve as Project Manager throughout the term of the contract and will be responsible for the following:

- Direction of all work
- Review of all work
- Approval of all work
- Interpretation of scope
- Program administration for contract compliance
- Project budget
- Coordination with City staff



Anthony Niemiec, Jr., PE, BCEE
Assistant Project Manager

11
years of experience



Monique Durand, PE
Water Lead

22
years of experience



Alonso Griborio, PhD, PE
Reuse Water Lead

30
years of experience

Experienced Team Leaders

Delivering Proven Success for Florida Municipal Projects

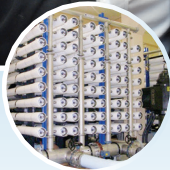


Principal-in-Charge

Janeen Wietgreffe, PE, PMP

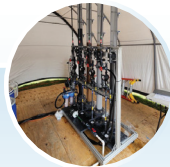
Ms. Wietgreffe has extensive experience in the design, piloting, construction oversight, and/or testing of membrane plants in South Florida for over 20 years.

- Has managed and/or participated in a variety of water resource projects, including water supply planning and evaluation, water treatment design, water distribution, and reuse and wastewater planning and treatment.
- Can perceive the potential treatment and/or permitting issues and steer the team clear of those obstacles.



City of Hallandale Beach 6-mgd Expandable Membrane Plant

- Project Manager/Process Mechanical Engineer for the design, construction, and start-up phases. The facility included a concentrate booster pump station for injection well disposal.



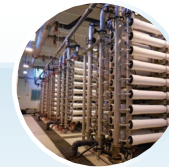
City of Margate PFAS Study and Pilot Testing

- Project Director for the City's PFAS Management Plan, overseeing evaluation and pilot testing of treatment alternatives to inform full-scale design recommendations.



City of Fort Lauderdale Peele-Dixie Membrane Plant

- Project Manager/Process Mechanical Engineer for a 12-mgd membrane softening facility, two 4-MG storage tanks, related chemical storage and feed facilities, air strippers/clearwell, concentrate booster and high-service transfer pump stations.



City of Plantation 6-mgd Expansion of the East WTP

- Project Manager for WTP expansion from 6 mgd to 12 mgd. Scope included the addition of three 2-mgd hybrid membrane arrays, a third membrane booster pump, and a permeated flushing system.

With 29 years of South Florida membrane plant expertise,

Ms. Wietgreffe will ensure this contract is appropriately staffed with the right engineers to deliver each work order on time and within budget.



Project Manager
Monica Pazahanick, PE

Ms. Pazahanick has 18 years of experience to ensure projects stay on track and avoid costly delays. She offers deep local insight to help the City navigate challenges efficiently.

- Streamlines permitting, design, and construction to keep projects moving smoothly.
- Fosters strong coordination with all stakeholders to minimize miscommunication and risk.
- Expertise in planning, design, permitting, bidding, and construction management of water treatment plants using advanced membrane technology, as well as conceptual and detailed design of reverse osmosis (RO) treatment.



City of Delray Beach Owner's Representative for Design-Build Construction of a New Membrane Water Treatment Plant

- Deputy Project Manager and Owner's Representative for the \$282 million new WTP construction, installation of six new surficial aquifer (SAS) wells, SAS well rehab, construction of a deep injection well and monitor wells.



Village of Wellington Reuse Phase 1

- Project Manager for modifications to improve hydraulic loading of the wetland to help balance water quality treatment and aesthetic improvements including the installation of a new pressure discharge with flowmeter and electric control valve, and a recirculation pump station bypass.



City of West Melbourne Greenfield Reverse Osmosis (RO) Water Treatment Plant and Production Wells

- Process Design Lead for preliminary process/mechanical design of the RO Process Building, including cartridge filters, RO membrane skids, RO cleaning systems, and overall process building layout.



Palm Beach County Water Treatment Plant 11 Upgrades

- Design Project Manager for project components that include new clearwell and transfer pump station, degasifiers and odor control systems, expansion of chemical systems, new ground storage tank, concentrate booster pump station, deep injection well, and more.



Assistant Project Manager
Anthony Niemiec, Jr., PE, BCEE

11 years of experience working on a variety of water, wastewater, and reuse projects including new facilities and rehabilitation and upgrades. His expertise includes project management, design, construction services, and applied research.

Project Manager, Construction Manager, Project Engineer, and Resident Project Representative on a variety of projects including wastewater, reuse system, water storage tanks, deep injection well systems, and injection well pump stations.



City of Miramar Wastewater Reclamation Facility Reuse Expansion to 7.5 mgd

- Served as Deputy Project Manager/Resident Project Representative for construction administration and inspections of the reuse system expansion from 5 to 7.5 mgd, which included two filter feed pumps, sand filters, improvements to the existing sodium hypochlorite system, a 900,000-gallon concrete ground storage tank, and a high-service pump.



City of Sunrise Southwest WWTP Injection Well (IW) and Injection Well Pump Station

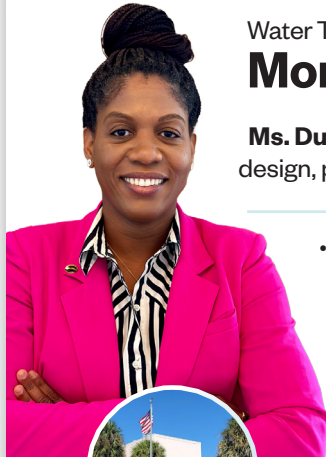
- Served as Project Engineer for design, permitting, and bidding for an FDEP UIC Class I deep injection well, monitoring well, and effluent disposal force main and IW pump station to serve as the primary disposal location for SW WWTP treated effluent.



City of Miami Beach Pump Station 28 Rehabilitation

- Engineer-of-Record for PS 28 rehab, the City's largest wastewater pump station. Scope includes replacement of three 250-HP sewage pumps, three 350-HP booster pumps, and associated mechanical piping/valving; rehab and hardening of the influent screening structure and below-grade pump room; new odor control system; and electrical systems upgrades.

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Water Treatment Plant Lead
Monique Durand, PE

Ms. Durand has 22 years of experience managing multi-disciplinary teams in the planning, design, permitting, bidding/award, and construction management of water treatment facilities.

- Projects include water treatment plant design and upgrades, Lead and Copper Rule compliance, groundwater rule compliance, and water supply planning and evaluation.
- Leads PFAS evaluations, pilot testing and alternatives analyses treatment projects for the Cities of North Lauderdale, Plantation, Margate, and Hollywood.



City of Hollywood WTP Upgrades for PFAS Compliance

- Project Manager for the City's multi-phase PFAS treatment project, leading planning, design, construction, and startup services to upgrade the WTP and achieve compliance with regulatory limits.



City of North Lauderdale Engineering Services for Water Treatment Plant Improvement

- Project Manager overseeing PFAS treatment planning and design for the City's lime softening WTP, including water quality analysis, pilot testing, process evaluation, design, permitting, and funding assistance.



City of Plantation East and Central WTPs and Regional WWTP Chemical Improvements

- Project Manager for design of improvements to six chemical storage facilities at the East WTP under a phased approach.



City of Deerfield Beach West WTP Chemical Systems Replacement

- Project Manager and Lead Mechanical Engineer for the design of upgrades to chemical systems, including NF and RO chemical facilities. Responsible for overall project management and multi-disciplinary design coordination.

Reuse Water Lead

Alonso Griborio, PhD, PE

Mr. Griborio has 30 years of experience in WWTP assessment and optimization.

His recent leadership on projects include Margate's Reuse Feasibility Study and the startup and optimization of Broward County's North Regional WWTP Reclaimed Water Expansion.

- Extensive experience in the design, startup, and optimization of wastewater treatment and water reuse systems.
- Internationally-recognized expert in wastewater treatment and water quality assessment.



Miami-Dade County South District WWTP 285-mgd High Level Disinfection Project

- Plant hydraulic evaluation and the conceptual and basic design for the yard piping, new effluent pump station, new 195-foot-diameter secondary clarifiers, high-level disinfection facilities, injection well loop system and the potable reuse and irrigation water systems.



City of Sunrise Southwest WWTP Repair and Replacement Upgrades and High-Level Disinfection/Reuse Facilities

- Served as Process Engineer during start-up, including supporting City staff in meeting effluent compliance requirements and providing training for O&M-related activities.



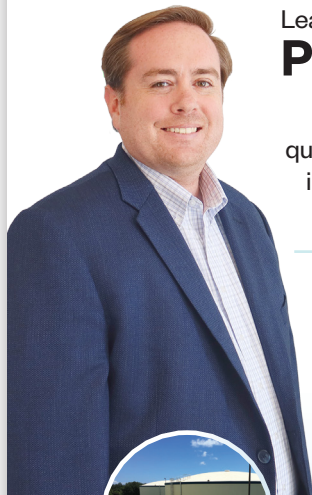
City of Margate WWTP Reuse Feasibility Study

- As Project Manager and Technical Lead, led the Reuse Feasibility Study, a critical component of the City's WWTP permit renewal. The study provided a comprehensive evaluation of reclaimed water alternatives.



Broward County North Regional Wastewater Treatment Plant Reclaimed Water Expansion

- Project Engineer for the startup and optimization of the Reclaimed Water Expansion at NRWWTP, increasing reclaimed water capacity to 26 mgd through fine-tuning and commissioning support.



Leading Florida Membrane Expert
Paul Biscardi, PhD, PE

Dr. Biscardi brings 14 years of experience, with a specialization in drinking water quality and advanced treatment. He has significant experience with membrane processes, including reverse osmosis, nanofiltration, ceramic membranes, and membrane filtration, and serves as Hazen's Southeast region's Membrane Process Expert.

- Expertise with developing phased treatment strategies to address changing water quality or regulations.
- Serves as the membrane process specialist for projects ranging from piloting through design and into startup/operations.



Seminole Tribe of Florida Brighton Reservation WTP Upgrades and Injection Well

- Responsible for both process design related to the reverse osmosis membranes and several detailed design components.



West Melbourne New WTP Design and Production Wells

- Process Specialist for the design of a new 5-mgd drinking water plant utilizing membrane treatment.



Toho Water Authority Harmony WTP Upgrade and Expansion

- Process Specialist for the upgrade and expansion of an existing 1.3-mgd MIEX water treatment facility to a 2.6-mgd nanofiltration facility.



Toho Water Authority Buenaventura Lakes WTP Upgrade and Improvements

- Lead Water Process Expert/Engineer for design, permitting, and construction services to improve reliability and water quality.



Membrane Operations Optimization
Jayson Page, PE

Mr. Page's expertise includes repurposing aging water treatment plants with modern processes, delivering cost and time savings.

- Led design of membrane treatment facilities, including Hallandale Beach 6-mgd Nanofiltration Plant, Miramar East WTP rehab, and Seminole Tribe of Florida's Hollywood Reservation 3-mgd membrane softening improvements.
- Directed Miami-Dade WASD water management strategy for PFAS, wellfield management, and treatment options.



City of Pompano Beach 10-mgd Membrane Softening WTP

- As Project Engineer, Mr. Page performed the bench-, pilot-, and full-scale tests of the combined process, as well as facility design.



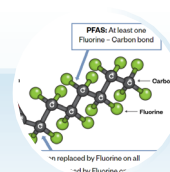
City of Hallandale Beach 6-mgd Nanofiltration Plant

- As Project Manager, Mr. Page led engineering for the nanofiltration plant, including design of pre- and post-treatment, membrane treatment, blending with lime-softened water, and planning for future RO facilities.



Pebble Beach Community Services District

- As Project Engineer, Mr. Page designed the unique MF/RO system for the production of "custom" water for the Pebble Beach golf course.



Miami-Dade Water and Sewer Department PFAS Management Plan

- As Project Director, Mr. Page led support efforts to address PFAS in the wellfield supply, and analyze occurrence patterns, wellfield management, and treatment options to reduce PFAS levels.

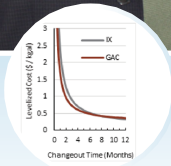
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Wells/Hydrogeology
Gerrit Bulman, PG

Mr. Bulman has managed permitting, bidding, construction, and testing of industrial and municipal deep injection wells, ASR wells, reverse osmosis (RO) supply wells, monitoring wells, and stormwater drainage wells, as well as wellfield rehabilitation projects, throughout Florida.

- Serves as the Hydrogeology and Injection Well Lead for Florida.
- Extensive knowledge of FDEP, SFWMD, and other state/local regulatory agencies.
- Two decades of consumptive use permitting experience.



MDWASD PFAS Management Plan

- Prepared a hydrogeologic review memo of WASD's Interim Correction Plan PFAS Groundwater Modeling.



MDWASD Ocean Outfall Legislation Injection Well Program Management

- Management of the design, permitting, procurement, and construction of new wells.
- 19 Class I injection wells and ~ six Floridan Aquifer monitoring wells.



Toho Water Authority Sunbridge Water Treatment Well #3

- Hydrogeologist for the design, bidding, construction, testing, and reporting of the third Floridan Aquifer supply well at the Sunbridge WTP.



Plantation Consumptive Use Permit (CUP) Renewal

- Assistance with renewal of a 20-year SFWMD CUP to withdraw up to 17.1 mgd from Biscayne Aquifer wells and the second phase that includes a water conservation plan, wellfield operating plan, and a ground-water modeling impact evaluation.

Our team is strengthened by one of our **national experts in emerging contaminants.**



Our team is strengthened by our national experts, including Erik Rosenfeldt, PhD, PE, Hazen's Corporate Drinking Water Practice Lead and **nationally-recognized PFAS expert.**




Dr. Rosenfeldt provides VALUE
 to Pompono Beach




- He can leverage industry-leading PFAS research for the City.
- He can leverage Hazen's national PFAS experts to assist the City with any aspect of treatment or management.
- He will engage with the City as his priority PFAS client to provide superior technical service with a collaborative spirit.

Dr. Rosenfeldt's extensive water treatment expertise will provide valuable insight to help the City tackle emerging contaminants of concern.




1021-761




Additional Key Staff Bios




	Qualifications	Relevant Experience
 <p>Patrick Davis, PE Technical Advisor 45 Years of Experience</p>	<p>Mr. Davis has served as Project Director on over \$900 million of public works construction and has been involved in an engineering capacity on over \$1.6 billion of constructed local public works projects in Florida. With 45+ years of Florida-specific experience, Mr. Davis has assumed a leading role in assisting public utilities and providing regulatory advice on water supply and treatment issues, as well as all facets of wastewater rules.</p>	<ul style="list-style-type: none"> • Chaired the Criteria Review Committee for the City of Pompano Beach Membrane Plant. • Expert on wastewater effluent management issues, notably those related to reuse (filtration/ high level disinfection), toxicity and Class I injection well disposal. • Served as Project Director on the Broward County Water Reuse Feasibility Study and Water Reuse Master Plan. • Has served as Project Director/Officer-in-Charge on numerous general services contracts, and brings a long and successful track record of completing assignments in South Florida. • Works closely with State and Federal Regulatory Agency officials on permitting and policy issues.
 <p>Darren Lytle, PhD, PE Technical Advisor 35 Years of Experience</p>	<p>Dr. Lytle is an expert in drinking water treatment and distribution and serves as the firm's National Water Applications Specialist. For 34 years he worked as an Environmental Engineer in the US EPA's Water Supply and Water Resources Division.</p>	<ul style="list-style-type: none"> • Investigated and published over 125 peer-reviewed manuscripts and presented numerous talks on drinking water systems • Expertise includes distribution system corrosion control and water quality (e.g., red water control, lead and copper corrosion control); filtration (emphasis on removal of particles, and microbial contaminants and pathogens from water); biological water treatment; and iron and arsenic removal. • Extensive track record working with organizations, groups, academics, and communities, tackling real-world challenges including Flint, Michigan's lead crisis, Toledo, Ohio's harmful algal blooms, and Milwaukee, Wisconsin's cryptosporidiosis outbreak.
 <p>J. Philip Cooke, PE Technical Advisor 36 Years of Experience</p>	<p>Mr. Cooke has a wealth of experience working on local projects throughout his 35-year career. He has participated in a variety of wastewater, water quality, and reuse projects in South Florida.</p>	<ul style="list-style-type: none"> • Extensive experience obtaining construction and operating permits with local, State of Florida, and federal regulatory agencies. • Participated in a variety of water, wastewater, pipeline, marine outfall, and reuse projects in South Florida throughout his career. • For the Broward County NRWWTP Reuse Feasibility Study, evaluated capital and operations and maintenance costs, assisted in defining necessary user charges and fees, and evaluated the technical feasibility of each reuse alternative for the WWTP expansion to 95 mgd. • Served as Project Manager for the Hollywood Wastewater Master Plan, which identified over \$230 million in collection, transmission, treatment, and disposal capital improvements needed through 2025.





	Qualifications	Relevant Experience
 <p>William Becker, PhD, PE, BCEE Technical Advisor 44 Years of Experience</p>	<p>Dr. Becker is a Board Certified Environmental Engineer with 43 years of experience in drinking water treatment. He is Hazen's Corporate Drinking Water Practice Leader, and is a nationally-respected water quality and process expert who has been involved with more than 100 bench and piloting projects throughout the U.S.</p>	<ul style="list-style-type: none"> • National expert in water chemistry and drinking water treatment processes. • Has helped more than 100 utilities of all sizes evaluate, test, select, and design disinfection systems including gaseous chlorine, sodium hypochlorite, chlorine dioxide, ozone, and UV. • Trusted advisor for several of the country's largest utilities and has been called on to help utilities face public scrutiny for water quality events including water boil orders and chlorine burns. • Performed technical review of conceptual design upgrades to Fort Lauderdale's Fiveash 70-mgd lime softening facility. • Author of over 200 technical presentations, papers, publications, and WaterRF reports.
 <p>George Brown, PE Water Process Mechanical 30 Years of Experience</p>	<p>Mr. Brown has extensive experience managing and participating in numerous designs related to water treatment, water supply, pipelines, pumping stations, storage tanks, and reclaimed water projects. He has an extensive resume of water treatment plant upgrade designs.</p>	<ul style="list-style-type: none"> • Served as Project Manager and Pipeline Design Engineer for design and permitting of the City of Pompano Beach's Western Wellfield expansion. • Served as the Project Manager and Engineer-of-Record (civil, mechanical, landscaping, and irrigation) for Fort Lauderdale's Fiveash WTP Reliability Upgrades project (70-mgd lime softening plant). • Served as Project Manager and Civil and Mechanical Engineer-of-Record for design and permitting of upgrades to the North Miami Winson WTP, a 9.3-mgd lime softening WTP. • Managed design and construction of water supply wells in the Biscayne, Upper Floridan, and Lower Hawthorn aquifers.
 <p>Jennifer McMahon, PE Water Process Mechanical; Master Planning/Feasibility Study 27 Years of Experience</p>	<p>Ms. McMahon offers extensive experience in the water and wastewater industry including project management; and civil, mechanical, and process design of wastewater treatment, transmission, collection, and reuse systems and potable water treatment and distribution systems. She is skilled in detailed design, project management, and construction management; and provides quality control reviews for numerous design projects.</p>	<ul style="list-style-type: none"> • Served as Project Manager and Lead Design Engineer and Construction Manager for the Miramar Wastewater Reclamation Facility Reuse Expansion (reuse facilities were expanded from 2 to 4 mgd, an 4 mgd to 7.5 mgd subsequently). • Provided quality control review services for design of the Broward County Reclaimed Water Expansion to 26 mgd. • Served as the Design Manager and Lead Process Mechanical Engineer for the upgrade of Broward County's Master Pump Station 440 inline booster wastewater pumping station. • Served as Project Manager and Lead Design Engineer of a 30-inch-diameter raw water main from the City of Fort Lauderdale's Dixie wellfield to the Peele-Dixie WTP.

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	Qualifications	Relevant Experience
 <p>Rama Rani, PG, GISP, CC-P Permitting/Regulatory Compliance 26 Years of Experience</p>	<p>Ms. Rani has over 26 years of experience in hands-on surface and groundwater modeling at regional, sub-regional, and local-scale projects spanning from a simple water budget to detailed surface water-groundwater integrated models.</p>	<ul style="list-style-type: none"> • Water resources expertise includes modeling for resiliency, flood protection, water supply, riverine and coastal flood hazard analysis, land development and transportation, as well as municipal, county, and state-wide watershed planning and management plans. • Served as Lead Modeler for calibration, implementation and application of several regional scale models, including resiliency and sea-level rise assessments. • Worked in both agency and consulting roles over this time and has the unique skillset of being creative to combine both experiences to provide sound technical solutions for clients. • Extensive experience in MIKE Suite of software, MODFLOW, SEAWAT, OASIS, UKISS, SWMM, HEC-RAS, HEC-HMS, ICPR, MODPATH, MOC, FRACMAN and Aqtesolv models.
 <p>Alexandra Kelly, PE, ENV SP Asset Management 10 Years of Experience</p>	<p>Ms. Kelly has 10 years of experience in the water/wastewater industry. While her focus is condition assessment and asset management, her project experience also includes inflow and infiltration rehabilitation, construction management, and project management.</p>	<ul style="list-style-type: none"> • Serves as Hazen’s Southeast Regional Asset Management Lead. • Project Manager for the Miami-Dade Water and Sewer Department Hialeah and Preston WTPs Asset Maintenance Optimization. • Assisted the City of West Palm Beach in a condition assessment and risk scoring of approximately 1,800 assets at their surface water treatment plant, in order to inform the City’s Master Plan. • Deputy Project Manager/Condition Assessment Lead for Fort Lauderdale’s Wastewater Pump Station Asset Inventory, Condition Assessment, and Asset Management Plan.
 <p>Elie Andary, PhD, PE Construction Management 23 Years of Experience</p>	<p>With over 22 years of experience in construction management, Mr. Andary serves as Hazen’s Southeast Region Lead for Construction Management Services. He has a proven track record managing complex projects, resolving conflicts/issues, defining project requirements, coordinating life cycles, and maintaining quality control.</p>	<ul style="list-style-type: none"> • Solid local construction experience especially for the Broward County NRWTP (served as the Construction Manager for the Septage Receiving Facility at the NRWTP). • Served as a Construction Manager on the Miami-Dade Water and Sewer Department’s \$618 million South District WWTP High Level Disinfection Program. • Served as Construction Manager for construction of Laboratory Building and fine bubble diffused aeration system at the Plantation Regional WWTP.

	Qualifications	Relevant Experience
 <p>Patricia Carney, PE, BCEE, DBIA Reuse Water; Capital Improvement Planning 35 Years of Experience</p>	<p>Ms. Carney has extensive experience in the analysis, design, permitting, and construction management of water, wastewater, and stormwater conveyance and treatment systems. She has worked on water/wastewater projects her entire career and is experienced in detailed design of large treatment plants.</p>	<ul style="list-style-type: none"> Served as Project Manager for Hazen’s work for the Broward County Reclaimed Water High-Level Disinfection Facilities Expansion project, where Hazen’s responsibilities included design of 16 mgd of up-flow filters, chlorine contact chamber, and a new electrical distribution building, as a subconsultant to another firm. Designed and/or managed design of stormwater systems throughout Broward County and assisted clients with determining and prioritizing vulnerabilities. Winner of multiple Design Build Institute of America (DBIA) awards for her design achievements.
 <p>Lucia Medina, PE Climate Resilience/ Stormwater 11 Years of Experience</p>	<p>Ms. Medina’s experience includes process and civil design, database management, hydrologic and hydraulic modeling, project coordination, and permitting assistance. She has worked on several local resilience projects and has extensive experience using hydraulic, hydrologic, and groundwater modeling to assess stormwater vulnerabilities.</p>	<ul style="list-style-type: none"> Recently assisted in evaluating potential impacts of sea level rise on specific infrastructure for the City of Coral Gables; developed a model used to gauge the effects of storm surge and king tide on critical infrastructure within the City. Project Supervisor for the modeling task for the City of Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services project; role included providing models to showcase both existing and future scenarios with variable time horizons. Provides permitting assistance regarding the Environmental Resource Permit and the Surface Water Management License for both the conceptual permit as well as for seven neighborhood modifications to the conceptual permit for the City of Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services project.
 <p>Enrique Vadiveloo, PE, ENV SP Sustainability 20 Years of Experience</p>	<p>Mr. Vadiveloo has participated in a variety of local wastewater treatment, water treatment and reuse projects including process design, detailed design, facility planning, pilot testing, and regulatory review. As Hazen’s Southeast Region Water Reuse Practice Leader, he has experience developing cost-effective projects to meet reuse demands.</p>	<ul style="list-style-type: none"> Serves as Wastewater Senior Technical Consultant and Project Manager for the \$2 billion, Miami-Dade Ocean Outfall Program. Served as Deputy Project Manager for the Broward County Regional Reuse Master Plan, which builds upon current municipal and County efforts and coordinates a regional approach to reuse planning, maximizing cost-effective reuse development for 24 utilities in Broward County. Served as Project Engineer for the Miami-Dade County’s South District Water Reclamation Plant Project, which piloted and designed a 21-mgd indirect potable reuse plant.

	Qualifications	Relevant Experience
 <p>Sharon Simington Grants/Funding 21 Years of Experience</p>	<p>Ms. Simington brings depth of experience working with local governments to fund infrastructure projects that better communities. As the Southeast Regional Funding Program Leader for Hazen, she focuses her experience on water, wastewater, and stormwater utilities projects and provides the planning, application, and administration for capital improvement projects.</p>	<ul style="list-style-type: none"> • Vast knowledge and experience with a multitude of funding agencies with the ability to leverage a variety of programs to accomplish funding needs. • Committed to project success through communication, knowledge of funding programs, and experience in the industry with a wide range of water, wastewater, stormwater, water quality, and water supply projects. • Funding leader on many challenging projects within the state of Florida including City of Tavares Downtown CRA Stormwater Improvements, Hernando County Airport WRF expansion, City of Oak Hill Indian Harbor Estates, City of Satellite Beach SW Improvements.
 <p>Guillermo Regalado, PE Hydraulic Modeling 37 Years of Experience</p>	<p>Mr. Regalado has served as a modeling team leader and project director for a variety of wastewater, water resources, and water supply in South Florida. He has 37 years of experience in various hydraulic engineering topics, including applying hydraulic, hydrologic, and water quality engineering models for water, wastewater, and stormwater master plans.</p>	<ul style="list-style-type: none"> • Updated the InfoWater hydraulic model for Broward County's Reclaimed Water Transmission System. • Vast experience in Broward County and Florida, including hydraulic models for the Cities of Plantation, Sunrise, Fort Lauderdale, and Apopka; and Miami-Dade, Broward, Collier, and Polk Counties. • Led the update and calibration of Miami-Dade County's Water Distribution System InfoWater model and the Update and Calibration of Miami-Dade's Wastewater Collection and Transmission System using InfoWorks.
 <p>Evan Curtis, PE Instrumentation/SCADA 31 Years of Experience</p>	<p>Mr. Curtis is an expert in the design of instrumentation and controls (I&C) for water and wastewater treatment and pumping facilities. These projects involve existing system evaluations, design of improvements and construction phase services, as well as hands-on design/build services including equipment procurement, programming, training and startup.</p>	<ul style="list-style-type: none"> • Hazen's Corporate and Southeast Region I&C Discipline Group Leader; develops firm-wide technical standards and resources. • I&C Engineer for several local projects for Broward County including the NRWWTP SCADA System Replacement Project, Master Pump Station 310 Relocation, Master Pump Station 440 Upgrades, and several bid packages under the NRWWTP Facility Improvements project. • Experience in process and mechanical design of various water and wastewater facilities. • Serves as Lead I&C Engineer, Technical Advisor, or as Project Manager on projects that are largely I&C-focused.

	Qualifications	Relevant Experience
 <p>John Burke, PE Electrical 59 Years of Experience</p>	<p>Mr. Burke's experience includes providing complete electrical, control and instrumentation interface design and construction management for new water and wastewater treatment plants, as well as the electrical design for additions and modifications to existing plants.</p>	<ul style="list-style-type: none"> • Provided electrical design quality assurance/ quality control review for the award-winning Broward County Water Treatment Plant 3C Potable Water Ground Storage Tank and Pump Station project. • Project Manager for the recently completed Electrical Master Plan for the Broward County NRWTP, which addressed planning for interim and long-term additions that may occur as specific requirements of the outfall rule are fully developed and implemented.
 <p>David Witte, PE, CEM HVAC/Plumbing 17 Years of Experience</p>	<p>Mr. Witte's experience includes mechanical system design and analysis for water/wastewater facilities. He has provided design services during construction for HVAC systems including review of shop drawing submittals, RFI responses, and writing change orders.</p>	<ul style="list-style-type: none"> • Design experience includes schematic design and planning for HVAC and plumbing systems, life-cycle cost analyses, calculating heating and cooling loads for spaces, pressure drop calculations for air and hydronic systems, sizing and selecting equipment, developing bid documents, and construction cost estimating. • Project Engineer for development of plumbing and HVAC construction documents for Sarasota's Water Treatment Plant Water Quality Improvements Project which included minor interior renovation of operations building, and updated restrooms and locker rooms.
 <p>Jean Paul Silva, PE, FRSE Structural 30 Years of Experience</p>	<p>Mr. Silva's experience includes structural analysis and design. He is involved in the design of new facilities as well as structural condition assessment, rehabilitation and upgrade of existing facilities, and construction administration. He also serves as Regional Manager for structural engineering work in Florida, coordinating all structural work for Hazen's Southeast region.</p>	<ul style="list-style-type: none"> • Served as Structural Engineer for various assignments for Broward County Water and Wastewater Services under Hazen's 2002 and 2008 General Consultant Services for Water and Wastewater agreements, including 1A WTP, 2A WTC, 3C Water Tank and NRWTP projects. • Served as Structural Engineer for the design of upgrades and rehabilitation of the North Miami 9.3-mgd lime softening WTP.
 <p>Grace Johns, PhD Economic Analysis/Finance 44 Years of Experience</p>	<p>Dr. Johns is responsible for economic and financial studies for Hazen, including the monetization of benefits that reflect stakeholder willingness-to-pay for projects. She is an expert in cost-benefit analysis of environmental regulations, best management practices, and stormwater investments.</p>	<ul style="list-style-type: none"> • Local experience includes serving as managing economist for the Broward County Flood Risk Assessment and Resilience Plan; developing an Excel-based evaluation model for the Reclaimed Water Evaluation Model for Countywide Reuse Master Plan; and managing the Cost-Effectiveness Values, Water Availability and Potential Water Savings for Alternative Water Sources and Conservation Programs. • Has completed dozens of economic impact analyses and economic contribution studies for Florida's water management districts.

Subconsultants



CORPORATE PROJECT SERVICES, INC.

Role: Construction Management

Since 2006, **Corporate Project Services, Inc. (CPSi)** has been providing services in project management for capital construction projects and programs in South Florida.

CPSi is certified with Broward County as a Small Business Enterprise (SBE) and with Palm Beach County as a Small/Minority/Women Business Enterprise.

CPSi has successfully worked with multi-disciplinary teams for over 10 years, and has extensive experience working with Hazen on projects including Broward County Water and Wastewater Services Capacity Improvement and the Facility Improvement construction projects, Palm Beach County Water Utilities Department SRWRF Secondary Clarifier and Effluent Filtration Improvement project, and the Miami-Dade Water and Sewer Department's High Level Disinfection program.



Role: Survey; Landscape Architecture

Craven Thompson & Associates (CTA) is a multi-disciplinary consulting firm that combines their expertise in surveying, civil engineering, land planning, and landscape architecture to creatively solve the challenges of their public and private clients.

Founded over 57 years ago, the firm offers a wide variety of services such as infrastructure analysis and design, geographic information services (GIS), master planning, 3D laser scanning, municipal consulting, site, landscape and irrigation design, and streetscape design, as well as a multitude of other services. In addition to conventional boundary topographic and construction surveys, CTA is experienced in providing the latest in 3D laser scanning - high definition surveying, geodetic control, PLSS retracement, hydrographic, cadastral, photogrammetric control, right-of-way, and construction surveys.



Role: Permitting/Regulatory Compliance

GMAwater, LLC (GMA) specializes in the technical, policy, and regulatory aspects of sustainable water resources. GMA consists of a team of professionals with decades of combined experience who manage multiple disciplines necessary to solve the complex water-related challenges facing local governments, landowners, and businesses. GMA provides insight into cost-effective future water supply for municipalities to maximize existing infrastructure while considering regulatory constraints.

GMA municipal clients include the Cities of Pompano Beach, Sunrise, Hallandale Beach, Naples, Homestead, Plantation, Miramar, Margate, West Melbourne, and Fort Lauderdale, and both Palm Beach and Broward Counties. Recent projects include consumptive use permitting for several major municipal water suppliers, including those with historical saltwater intrusion and wetland issues.

For the City of Pompano Beach, GMAwater modified and renewed the consumptive use permit in 2020 for public water supply, incorporating population and water supply projections through 2065 to justify delivery of offset water from the City's portion of Phase 1 of the C-51 Reservoir. GMA is currently working on a subsequent permit modification to account for the additional raw water supply needed for the City's upgraded water treatment process by leveraging its distribution of reclaimed water and historic use.

Subconsultants



Role: As-needed Architectural and Site Planning Services

DK Architects is an architecture design firm based in Pompano Beach, Florida, with over 40 years of experience serving the state. Known for its deep understanding of local needs, the firm is recognized as one of the most trusted in the area. DK Architects operates on core principles of integrity, sustainability, cost effectiveness, and a strong sense of community, consistently exceeding client expectations.

The firm offers a comprehensive range of services, including architectural site planning, civil engineering, landscape architectural design, photometric engineering, fast tracking, value engineering, construction management, prototype development, and project feasibility. Additional capabilities include inspections, windstorm certifications, and site assessments. DK Architects also has a longstanding history of collaboration with the City of Pompano Beach and other municipal authorities, further reinforcing its reputation for reliability and cooperative performance.



Role: Construction Materials Testing and Geotechnical Services

Established in 1994, **Florida Engineering & Testing, Inc. (FE&T)**, a certified M/WBE, is a multi-disciplinary engineering and consulting services firm that provides geotechnical engineering, construction materials testing, special inspections, and environmental engineering services. The firm's engineering and testing operations focus on the tri-county area, but their service extends throughout all of South Florida. FE&T owns and operates their own drilling equipment and support vehicles. The firm is also a CMEC & FDOT-certified testing laboratory.

FE&T has participated in Hazen projects, including the Broward County 2002 General Consultant for Water and Wastewater Services agreement, the North Regional WWTP Capacity Improvements (Booster Pumps) project, and the Facility Improvements (Fast-Track) project; and the Plantation Regional WWTP Improvements project.

Similar Projects Completed Within the Past Five Years

The Hazen’s team similar project experience within the past five years is highlighted in the table below.

Client and Project Name/ Project Duration	Brief Description	Key Team Members
Water Projects		
<p>City of Hallandale Beach RO Skids #1 and #2 Additions</p> <p>Project Duration Start Date: 01/2024 Completion: RO Skid #1: 07/2025 RO Skid #2: Ongoing</p>	<p>Hazen provided design and permitting of Hallandale Beach’s RO skids addition to the existing membrane plant, which was also designed by Hazen. Hazen designed the RO skid to be flexible for treatment of raw water from the Broward County South Regional Wellfield and from the City wells, both of which contain PFAS and the potential of salt water intrusion. The RO skid was also equipped with an energy recovery turbine, saving the City electrical costs associated with feed pumping. The two RO skids are added into the existing membrane building Hazen designed in the early 2000s with flexibility for the future. This foresight enabled the City to immediately respond to the PFAS removal requirement and maintain their existing water use allocation from the SFWMD.</p>	<p>Janeen Wietgreffe, PE, PMP Jennifer McMahon, PE George Brown, PE Jean Paul Silva, PE Evan Curtis, PE Alfredo Jimenez</p>
<p>City of Plantation East and Central WTPs Remembraning; East WTP Chemical Storage Facilities</p> <p>Project Duration Remembraning Services completed in 2019; Construction completion for Phase I and Phase II Chemical Storage Facilities, 2021 and 2024, respectively.</p>	<p>Under Hazen’s continuing services utilities contract, Hazen provided services for replacement of membranes (design, contract development, bid assistance, construction oversight, and operational assistance) for the East WTP 12-mgd Membrane Softening Plant and Central 12-mgd Membrane Softening Plant in 2019. For the East WTP Chemical Storage Facilities project, Hazen provided engineering and construction management services for design and construction of the replacement of six chemical storage and feed facilities. To meet the City’s budget, the project was bid and awarded in two phases. MOPO was developed to allow demolition activities and new construction to take place without interfering with the water production activities. Both phases were constructed and are operational.</p>	<p>Janeen Wietgreffe, PE, PMP Monique Durand, PE Jennifer McMahon, PE George Brown, PE Jean Paul Silva, PE Evan Curtis, PE Alfredo Jimenez</p>
<p>City of West Melbourne Greenfield Reverse Osmosis WTP and Production Wells</p> <p>Project Duration Preliminary and final design completed in 2023 and 2024, respectively. Estimated construction completion, 12/2026.</p>	<p>This project included design of a new 5-mgd greenfield RO membrane WTP and four Floridan aquifer water supply wells, along with three monitoring wells. The WTP design included four treatment trains with the ability to add a train for future expansion. The WTP will include pre-treatment systems, post-treatment systems consisting of degasifiers and clearwell, chemical feed systems, storage, and high-service pumping necessary to produce high quality, finished water. Hazen provided engineering services including design, permitting, and bidding for the water treatment plant. Hazen is currently providing construction period services.</p>	<p>Monica Pazahanick, PE Janeen Wietgreffe, PE, PMP Monique Durand, PE Jennifer McMahon, PE Jayson Page, PE Paul Biscardi, PhD, PE Gerrit Bulman, PG Jean Paul Silva, PE Evan Curtis, PE Alfredo Jimenez</p>
<p>Town of Jupiter Sodium Hypochlorite System Addition</p> <p>Project Duration 10/2021-10/2022</p>	<p>As a work assignment under Hazen’s Town of Jupiter Professional Engineering Services for Stormwater and Water Capital Improvements, Hazen completed a sodium hypochlorite system addition for the WTP. Hazen worked within the Town’s limited budget to design an interim outdoor sodium hypochlorite storage system, including metering pumps and piping to application points. The Hazen team completed the design drawings for the Town to oversee permitting and construction. The system was operational within 18 months of design initiation.</p>	<p>Janeen Wietgreffe, PE, PMP George Brown, PE Jean Paul Silva, PE Evan Curtis, PE</p>

Client and Project Name/ Project Duration	Brief Description	Key Team Members
<p>City of Hollywood PFAS Removal and Regulatory Compliance Evaluation</p> <p>Project Duration Phase 1: 11/2024-Present Phase 2: 11/2024-Present Phases 3-5: Upcoming</p>	<p>The City of Hollywood owns and operates a series of potable water supply wells and treats the Biscayne Aquifer with well water through lime softening and nanofiltration treatment and also treats the Floridan Aquifer well water through reverse osmosis treatment. The City also treats Biscayne Aquifer well water from the Broward County South Regional Wellfield at Brian Piccolo Park through the nanofiltration plant. These three treatment process streams blend together to provide high quality drinking water to the residents of Hollywood and adjacent areas outside the city. PFAS has recently been detected in the City’s wells. This multi-phase project includes planning, design, permitting, construction, and startup services for improvements to the existing water treatment plant to remove PFAS to below the regulatory limits. Hazen will also provide public communication support for the City concerning PFAS.</p>	<p>Janeen Wietgreffe, PE, PMP Monique Durand, PE George Brown, PE Jennifer McMahan, PE Nathan Rothe, PE Gerrit Bulman, PG Adrian Myrie Darren Lytle, PhD, PE Sharon Simington</p>
<p>City of Deerfield Beach West WTP Chemical Systems Replacement</p> <p>Project Duration 05/2022–07/2024 (Design) 10/2024 (Permitting) Project anticipated to be bid in 2026.</p>	<p>As a work assignment under Hazen’s Continuing Services Contract, Hazen led the design and permitting of upgrades to the West WTP Chemical Storage and Feed Facilities, which utilizes several chemicals as part of the overall nanofiltration and reverse osmosis treatment processes, including sulfuric acid, antiscalant, corrosion inhibitor, and sodium hydroxide. These chemical systems were designed as part of the original membrane plant design under prior building code requirements and as such, required improvement to achieve current code requirements. Because maintenance challenges associated with the underground piping for these chemicals has increased, the City decided to replace these chemical systems along with all associated piping. The project includes demolition of existing sulfuric acid, antiscalant, corrosion inhibitor, and caustic storage and feed facilities and replacement with new improved facilities.</p>	<p>Janeen Wietgreffe, PE, PMP Monique Durand, PE Jean Paul Silva, PE Jennifer McMahan, PE Alfredo Jimenez Jose Cano, PE Casey Andersen, PE Adrian Myrie George Brown, PE</p>
<p>Town of Jupiter Ion Exchange (IX) System PFAS Evaluation</p> <p>Project Duration 2024-2025</p>	<p>As a work assignment under Hazen’s Town of Jupiter Professional Engineering Services for Stormwater and Water Capital Improvements contract, Hazen completed a PFAS evaluation for the Town that included evaluating, decommissioning the ion exchange system and replacing with nanofiltration skids vs. adding a second stage of ion exchange for PFAS removal. Hazen evaluated the existing condition of the IX and determined sizing requirements for the new IX skid. Hazen also evaluated the cost of the new IX vessels and resin disposal costs against the capital and operational costs of a new nanofiltration skid, which yielded the new nanofiltration skid as the most cost-effective option. The Town is moving forward with that approach to PFAS compliance.</p>	<p>Janeen Wietgreffe, PE, PMP Tyler Davis, PE</p>
<p>City of Margate PFAS Study and Pilot Testing at WTP</p> <p>Project Duration 12/2024–Present</p>	<p>The City of Margate’s WTP is a 10.1-mgd lime softening facility that has been experiencing elevated levels of PFAS, particularly PFOA and PFOS, in both the City’s wells and finished water. Hazen developed a PFAS Management Plan that includes a desktop evaluation of three adsorptive media options: granular activated carbon (GAC); two IX resins; and FLUORO-SORB® using Hazen PFAS Prediction Model, along with an assessment of membrane alternatives using projection software as part of Phase 1. In the next phase of this project, the performance of GAC, two IX products, and FLUORO-SORB® will be evaluated in a pilot-scale system to determine treatment longevity. The outcome of this project will guide recommendations in the PFAS Management Plan for the City.</p>	<p>Janeen Wietgreffe, PE, PMP Alonso Griborio, PhD, PE Monique Durand, PE Nathan Rothe, PE Adrian Myrie</p>

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Client and Project Name/ Project Duration	Brief Description	Key Team Members
Reuse Projects		
Broward County North Regional WWTP Reclaimed Water Plant Expansion to 26 mgd Project Duration 2016-2025	In light of the requirements proposed by the ocean outfall legislation, the County has decided to take the necessary measures to expand the existing Reclaimed Water Facility. Hazen provided integrated process mechanical and structural design to filter and disinfect an additional 16 mgd of secondary effluent using upflow sand bed filters. The Reclaimed Water Plant Expansion project consisted of several phases that involve retrofitting existing facilities and providing the necessary support, across all disciplines, for the site to sustain this increase in capacity.	Janeen Wietgreffe, PE, PMP Patricia Carney, PE, BOCEE, DBIA Patrick Davis, PE Jean Paul Silva, PE Casey Andersen, PE John Burke, PE Lucia Medina, PE
City of Miramar Wastewater Reclamation Facility Reuse Phase I Expansion to 7.5 mgd Project Duration 2017-2018 (design) 2019-2020 (construction)	The Reclaimed Water Expansion Phase I project included expansion of the existing 5-mgd reclaimed water treatment and distribution system processes to 7.5 mgd. New facilities included two filter feed pumps, sand filters, expansion to the existing sodium hypochlorite system, a ground storage tank, and a high-service pump. Previously, Hazen also assisted the City in obtaining a paper uprating of existing facilities from 4 mgd to 5 mgd.	Jennifer McMahon, PE Anthony Niemiec, Jr., PE, BOCEE J. Philip Cooke, PE Monique Durand, PE Casey Andersen, PE Elie Andary, PhD, PE Jean Paul Silva, PE John Burke, PE
City of Margate WWTP Permit Renewal Project Duration 6/2025-Present (Ongoing and waiting for FDEP Approval)	The City of Margate was required to complete a permit renewal with tasks that were beyond the resources and expertise of the utility. One of these tasks included a new reuse feasibility study requirement as of January 2025. Hazen provided the evaluations necessary to meet FDEP requirements within an expedited project timeline to prevent an expired permit for the City.	Alonso Griborio, PhD, PE Janeen Wietgreffe, PE, PMP Jose Cano, PE Alexandra Kelly, PE, ENV SP
City of Plant City Potable Reuse Pilot Project Duration Study Completion: 11/2023	Plant City evaluated alternatives to develop an indirect potable reuse project concept to utilize at least 1.5 mgd of reclaimed water to develop new potable water supply through aquifer recharge. The project will verify treatment of reclaimed water through pilot testing to simulate full-scale treatment. Hazen led the potable reuse pilot test and feasibility study. The pilot system includes membrane filtration, reverse osmosis, and UV advanced oxidation. The system is designed to evaluate the feasibility, costs, and benefits of direct and indirect potable reuse under current and potential future regulatory conditions.	Paul Biscardi, PhD, PE

Firm Qualifications

Hazen’s roots go back over 100 years to the accomplishments of Allen Hazen, one of the pioneers of modern water supply engineering and co-developer of the Hazen-Williams formula for fluid flow in pipes in 1903. Hazen was established by Hazen’s son Richard and Alfred W. Sawyer in 1951. Together they created a company culture focused on the profession—not just the business—of engineering. Their legacy is a firm with a reputation for high-quality work and customer service. Since 1951, Hazen has focused on two critical activities: Helping our clients provide safe drinking water to their customers and controlling water pollution and resultant effects on the environment. Hazen’s exclusive focus is water resources engineering. We provide comprehensive capabilities in areas including, but not limited to, evaluation, planning, design, and permitting; hydraulic modeling; regulatory compliance; grant funding; construction management and administration; and startup, training, and operations assistance.

Location of Office from Which Work will be Performed

4000 Hollywood Boulevard,
Suite 750N
Hollywood, FL 33021
(954) 987-0066 (phone)
www.hazenandsawyer.com

Our mission is to provide reliable and efficient professional services to City by utilizing **cost-effective measures and innovative industry initiatives** to successfully complete each assignment awarded under this contract.

Office Locations

Hazen’s company headquarters is located in New York City. In Florida, which is within Hazen’s Southeast Region, we have ten offices strategically located to provide full engineering services to our local clientele. **Hazen has served utilities with complete in-house engineering services from our regional headquarters/design center in Hollywood, Florida, since 1968, and will be the lead office serving the City of Pompano Beach.**

<p>PERFORMED WORK ON</p> <p>90%</p> <p>of the MEMBRANE PLANTS in Broward County</p>	<p>#1</p> <p>LARGEST WATER AND WASTEWATER DESIGN CENTER in South Florida</p>	<p>\$8 BILLION</p> <p>IN FLORIDA PUBLIC WORKS INFRASTRUCTURE over the past 10 years</p>
<p>OVER 100 MGD</p> <p>OF WELLFIELD REHABILITATION AND IMPROVEMENTS in South Florida</p>	<p>MORE THAN 1 BILLION GPD</p> <p>OF PLANT UPGRADES designed over the last 10 years in Florida</p>	<p>EXPERIENCE WITH 70%</p> <p>OF THE CLASS I INJECTION WELLS in Broward County</p>

We bring **the right experience.**

Hazen

<p>SOUTHEAST REGIONAL HEADQUARTERS in Broward County</p> <p>SINCE 1968</p>	<p>10 OFFICES</p> <p>in Florida and more than 60 OFFICES IN U.S. AND ABROAD</p>	<p>MORE THAN 2,200</p> <p>STAFF FIRMWIDE, with 250+ staff in Florida</p>
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Our projects earn local and national awards

Hazen has received numerous awards for completed projects, which is an indication of the quality of our work. To provide the City with an indication of the quality of our work, selected awards are highlighted below, including projects with which proposed team members have been involved.

2024

ASCE 2024 State Section Sustainable Project of the Year Award

Cocoplum 1 Regional Pump Station and Force Main Improvements
Coral Gables, FL

2022

ASCE-FL Section Large Project of the Year; ACEC-FL Grand Award; Trenchless Technology Honorable Mention

City of Fort Lauderdale Emergency Pipeline Project, [Fort Lauderdale, FL](#)

Envision Bronze Award from the Institute of Sustainable Infrastructure

Cocoplum 1 Regional Pump Station and Force Main Improvements
Coral Gables, FL

2021

ACEC-FL Grand Award; Trenchless Technology Honorable Mention; ASCE-FL Broward Branch Project of the Year

City of Fort Lauderdale Emergency Pipeline Project, [Fort Lauderdale, FL](#)

DBIA Design-Build Honor Award – Water/Wastewater

San Carlos Pumping Station Rehabilitation Project, [Tampa, FL](#)

2019

American Membrane Technology Association Membrane Facility of the Year Award (2019 & 2020)

Town of Jupiter 14.5-mgd Nanofiltration WTP, [Jupiter, FL](#)

ASCE Palm Beach Outstanding Project of the Year

ECRWRF Biosolids Improvements Project, [West Palm Beach, FL](#)

2018

“Resilient Project of the Year” in the Green Utility Category by the Resilient Utility Coalition

Cocoplum 1 Regional Pump Station and Force Main Improvements
Coral Gables, FL

ENR Mid-Atlantic Best Water/Environment Project of the Year DBIA Best Water Project

SWIFT Research Center
[Hampton Roads, VA](#)

2017

Best Overall in Water/Wastewater Category – Florida Region Design-Build Institute of America Award

Intercoastal Waterway Crossings at Las Olas Boulevard
[Fort Lauderdale, FL](#)

2016

ACEC – NY Engineering Excellence Award

NYCDEP Croton Water Filtration Plant
[New York, NY](#)

Envision® Platinum Award

Nashville Equalization Facility
[Nashville, TN](#)

2015

2015 FES Technical Achievement

Bear Out and West Bridges Emergency Rehabilitation and Water Main Replacement, [Miami-Dade County, FL](#)

2014

FDEP Most Outstanding Class A Water Treatment Plant Award

Town of Jupiter 14-5-mgd Nanofiltration WTP

DBIA Florida Region Award

MDWASD Government Cut Utility Relocation Project,
[Miami-Dade County, FL](#)

FICE Florida Grand Conceptor Award; ACEC National Recognition Award

South District WWTP High Level Disinfection Upgrade
[Miami-Dade County, FL](#)

ACEC National Recognition Award

New York City Wastewater Resiliency Plan, [New York, NY](#)

DBIA National Award of Merit

Indiana American Water Hidden Lake Water Treatment Facility

2011

South Florida APWA Project of the Year

Broward WTP 3C Potable Water Ground Storage Tank & Pump Station
[Broward County, FL](#)

2008

APWA Project of the Year

Water Treatment Plant Expansion
[City of Hallandale Beach, FL](#)

CMAA Project Achievement Award; Southeast Construction Best Civil Project of the Year

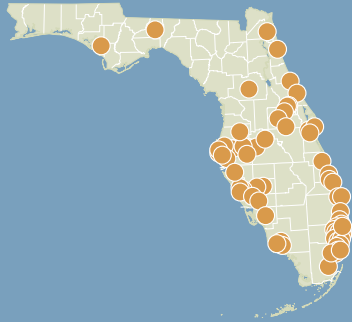
Peele-Dixie Water Treatment Plant
[City of Fort Lauderdale, FL](#)

The Hazen team provides a wide range of services and will be responsive to your needs with our **local one-stop shop.**



Our local team is readily available on short notice to meet the wide range of project disciplines under this contract.

General Consulting Experience



Hazen has served as general consultant for more than 80 utilities in Florida. Many of these utilities have retained us for multiple continuing contracts and are long-standing, repeat assignments.

Our general consulting assignments include water, wastewater, reuse water, and stormwater experience. We are also providing planning, design, permitting, construction, start-up, and troubleshooting of membrane treatment plants along with the refurbishment and replacement of water and wastewater infrastructure.

<p>Water Supply Led the design and permitting of more than 50 facilities in Florida with an installed capacity of over 1.5 billion gallons per day</p>		<p>Wastewater Treatment Designed 1+ billion gallons per day of plant upgrades in the last 10 years (cumulative capacity)</p>	
<p>Water Treatment Designed 1+ billion gallons per day of plant upgrades over the last 15 years (cumulative capacity)</p>		<p>Water Distribution Designed more than 3.2 million linear feet of water pipe larger than 6 inches</p>	
<p>Pumping Systems Designed new or upgraded more than 150 pump stations throughout Florida</p>		<p>Stormwater Management Assisted many communities with master planning for stormwater impacts</p>	
<p>Resilience Assisted many coastal communities with planning for sea level rise and stormwater impacts</p>		<p>Asset Management Physically assessed more than 10,000 assets and 20 treatment plants throughout Florida</p>	
<p>Construction Management Oversaw construction of more than \$8 billion in water infrastructure over the past decade</p>		<p>Effluent Disposal Designed and overseeing construction of deep injection wells in Broward County.</p>	
<p>Instrumentation Instrumentation & control system design and process optimization studies on numerous projects since the firm's founding in 1951.</p>		<p>Reuse Water Worked on reuse water projects at 24 facilities in Florida and involved in Florida's regulation process for direct and indirect potable reuse.</p>	
<p>Hydraulic Modeling Modeling expertise includes 2,000+ sewer lift stations and 4,000+ miles of water and force mains</p>		<p>Wastewater Collection Provided I/I flow reduction and rehabilitation for 6,740+ miles of sewer</p>	

Hazen’s extensive experience working on general consulting contracts (current and past) is highlighted in the map below.



General Consulting Experience

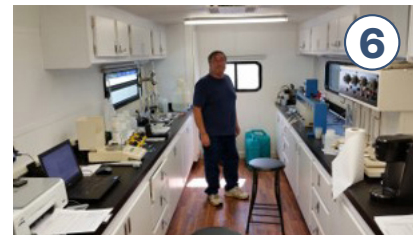
- | | | |
|----------------------------|--|---|
| Bay County | City of Plantation | |
| Brevard County | City of Port St. Lucie | |
| Broward County WWS | City of Sarasota | |
| Charlotte County Utilities | City of St. Augustine | |
| City of Arcadia | City of St. Petersburg | |
| City of Boca Raton | City of Stuart | |
| City of Cape Coral | City of Sunrise | |
| City of Casselberry | City of Tallahassee | |
| City of Clearwater | City of Tamarac | |
| City of Cooper City | City of Tampa | |
| City of Cocoa Beach | City of Venice | |
| City of Coral Gables | Collier County | |
| City of Daytona Beach | East Central Regional Water | |
| City of Deerfield Beach | Reclamation Facility Operations Board | |
| City of Dunedin | Gainesville Regional Utilities | |
| City of Fort Lauderdale | Hernando County | |
| City of Fort Myers | Hillsborough County | |
| City of Haines City | JEA | |
| City of Hallandale Beach | Lee County Utilities | |
| City of Hialeah | Loxahatchee River District | |
| City of Hollywood | Manatee County | |
| City of Homestead | Marion County | |
| City of Largo | Miami-Dade Water and Sewer Department | |
| City of Lakeland | Miami-Dade Aviation Department | |
| City of Marco Island | Northwest Florida Water Management District | |
| City of Margate | Orange County Utilities | |
| City of Melbourne | Orlando Utilities Commission | |
| City of Miami Beach | Palm Beach County Water Utilities Department | |
| City of Miramar | Pasco County Utilities | |
| City of Naples | Peace River Manasota Regional Water Supply | |
| City of North Lauderdale | Authority | Southwest Florida Water Management District |
| City of North Miami | Pinellas County | St. Johns River Water Management District |
| City of North Miami Beach | Polk County Utilities | Tampa Bay Water |
| City of North Port | St. Lucie County | Toho Water Authority |
| City of Oakland Park | Sarasota County | Town of Bay Harbor Islands |
| City of Ocoee | Seminole County | Town of Highland Beach |
| City of Oldsmar | Seminole Tribe of Florida | Town of Jupiter |
| City of Orlando | South Central Regional Wastewater Treatment | University of Florida Utilities Commission, City of |
| City of Pembroke Pines | and Disposal Board | New Smyrna Beach |
| City of Plant City | South Florida Water Management District | Village of Wellington |
| | | Villages Community Development Districts |
| | | Withlacoochee Regional Water Supply Authority |

Water Treatment Plant Experience



Designed more than
1 BILLION
gallons per day
of plant upgrades
over the last
15 years

Hazen has performed work on 90% of the membrane plant capacity in Broward County. Our experience includes reverse osmosis, nanofiltration, and lime softening facilities. We have designed more than 15 membrane plants in South Florida (new and improvements to membrane and lime softening facilities).



1. Fort Lauderdale Peele Dixie Membrane Plant
Design and construction oversight for a 12-mgd membrane softening facility, two 4-MG storage tanks, related chemical storage and feed facilities, air strippers/clear well, and high service and transfer pump stations.

2. Pompano Beach 10-mgd Membrane Softening WTP
Design and construction management services for a new membrane softening facility in the early 2000s. The facility was designed to replace an equivalent volume of existing WTP lime softening capacity.

3. North Miami Winson Water Treatment Plant
Design and permitting of upgrades to aging facilities at the lime softening water treatment plant including pumping facilities, filters, storage tanks, raw water supply wells, etc. Design team included civil, process mechanical, HVAC, structural, architectural, electrical, controls, landscaping, and irrigation disciplines.

4. Town of Jupiter Nanofiltration Facility
Design, permitting, and pilot testing oversight services for a new 14.5-mgd Nanofiltration Facility (expandable to 17 mgd). Innovative center-feed design provides annual 30% savings in electrical costs.

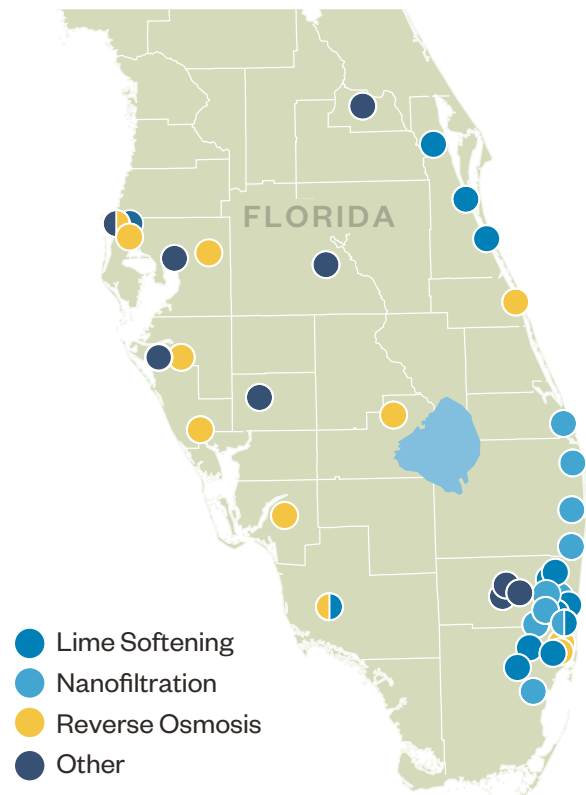
5. Hallandale Beach Water Treatment Plant
Design, bidding, permitting, and construction management services, as well as oversight, pilot testing, start-up coordination, and first-year operational assistance for the 6-mgd nanofiltration plant; design for addition of a RO skid to the existing plant, including appurtenant pretreatment and chemical facilities; condition assessment of the WTP's facilities; and preparation of an R&R report.

6. Cooper City Bench-Scale Testing
Conducted bench-scale testing with Hazen's mobile laboratory to assess the impact on disinfection by-products of changing the chlorination strategy from monochloramine to free chlorine in the water tanks.

Unparalleled membrane experience

provides cost-effective solutions to challenges.

The Hazen team is the leader in the planning, design, permitting, and construction oversight of membrane facilities in Southeast Florida, bringing lessons learned to your projects.



HAZEN HAS PERFORMED PLANNING AND/OR DESIGN FOR **OVER 30** WATER TREATMENT PLANTS IN FLORIDA

Hazen designed a third of the membrane plants in Broward County. Our extensive experience in designing more membrane plants in the County than any other consultant allows us to apply lessons learned and provide innovation solutions to WTP design challenges.

\$42.2 million: City of Fort Lauderdale 12-mgd Peele Dixie Membrane Plant and Wellfield – Testing, pre-design, and design of 12-mgd finished water membrane plant; 15-mgd raw water wellfield and pipeline; and 5.8-mgd deep injection well for concentrate disposal.

\$37 million: Town of Jupiter Nanofiltration Facility – Design, permitting and pilot testing oversight services for a new 14.5-mgd nanofiltration facility, expandable to 17 mgd. Innovative center-feed design provides annual 30% savings in electrical costs.

\$20 million: City of Hallandale Beach 6-mgd Membrane Softening Facility – Design, bidding, permitting, construction management services, as well as oversight, pilot testing, start-up coordination, and first-year operational assistance.

\$4 million: Plantation East Water Treatment Plant 12-mgd Membrane Softening Plant Expansion – Design, permitting, bid/award services, and construction management services for expansion of the existing 6-mgd membrane softening facility to 12 mgd.

\$12.5 million: Miramar East 6-mgd Membrane Softening Plant – As part of a conventional design-bid-build project, Hazen provided preliminary design for a new membrane plant.

\$666 million: Fort Lauderdale Prospect Lake Clean Water Center – 50-mgd nanofiltration and ion exchange facility to replace the aging Fiveash WTP (Owner's Representative).

We will leverage our expertise in the delivery of similar membrane plant projects (nanofiltration of the Biscayne Aquifer) in SE Florida to ensure that Pompano Beach's drinking water customers are protected to the maximum extent and in the most immediate timeframe possible.

Project	Year Completed	Plant Size	Planning and/or Testing	Water supply design, permitting, and/or bidding	Membrane treatment design, permitting, and bidding	Deep injection well design, permitting, and bidding	Construction administration	Nanofiltration ¹	Reverse Osmosis ²
Hazen performed studies, piloting, membrane plant design and/or construction oversight for almost 90% of the membrane plants in Broward County.									
City of Hallandale Beach – Membrane Softening Facility Reverse Osmosis Skid Addition	2016	6 mgd	●	●	●			●	●
City of Hallandale Beach – 6-mgd Membrane Softening Plant	2008	6 mgd	●	●	●	●	●	●	
City of Plantation – 12-mgd East and Central WTPs Membrane Replacement	2018	12 mgd	●	●			●	●	
City of Fort Lauderdale – Peele-Dixie 12-mgd Membrane Plant and Wellfield	2008	12 mgd	●	●	●	●	●	●	
Town of Jupiter, FL – 14.5-mgd Nanofiltration Plant	2007	14.5 mgd	●		●			●	
City of Plantation – East 12-mgd WTP Membrane Softening Plant Expansion	2003	12 mgd	●		●		●	●	
City of Miramar – East 6-mgd Membrane Softening Facility Preliminary Design/Design Criteria Package Development	2015	6 mgd			● ³			●	
City of Miramar – West WTP Membrane Softening Facility Expansion Construction Management Services	2002	3 mgd					●	●	
Seminole Tribe of Florida – Brighton Reservation Reverse Osmosis WTP Upgrades	2016	1.6 mgd	●	●	●	●	●		●
Seminole Tribe of Florida – Hollywood Reservation Water Treatment Plant Upgrades	2016	3 mgd			●		●	●	
Collier County – South Regional 8-mgd WTP Reverse Osmosis Expansion and Concentrate Disposal System (in association with another firm)	2008	8 mgd	●	●	●	●	●		●
Miami-Dade Water and Sewer Dept. – South Miami Heights 20 mgd Membrane Treatment Plant	2007	20 mgd	●					●	●
City of Pompano Beach – 10-mgd Membrane Treatment Plant	2002	10 mgd	●	●	●	●	●	●	
Brevard County – South Mainland Regional RO Water Treatment Plant	2008		●	●	●				●
City of Hialeah – 4-mgd RO Facility Conceptual Design (expandable to 35 mgd)	2006	4 mgd	●						●
Town of Davie – 4-mgd Membrane Plant	2003	4 mgd	●					●	
City of Vero Beach – 2-mgd RO Element Replacement	2003	2 mgd	●		●		●		●
City of North Miami Beach – Feasibility Study and Pre-Design for New 50-mgd Membrane WTP	2000	50 mgd	●	●				●	
City of Plantation – East and Central WTPs Scale Inhibitor Pilot Testing	2014	12 mgd	●					●	
City of Stuart – Alternative Water Supply Plan	2018	6 mgd	●						●
Tampa Bay Water – Seawater Desalination Facility Expansion Feasibility Study	2021	25 mgd	●	●				●	●
Pinellas County – Reverse Osmosis System Evaluation	2016	3 mgd	●	●	●		●		●
Martin County – Tropical Farms WTP	1997	1.5 mgd	●	●	●	●	●	●	●

1. Evaluation of Nanofiltration/Membrane Softening of Biscayne Aquifer 2. Evaluation of Reverse Osmosis of Floridan Aquifer 3. Preliminary Design Services Only

Our membrane water plant experts **bring over 20 years of unmatched experience** in the planning, design, permitting, and construction of membrane WTPs in SE Florida that treat the Biscayne Aquifer and the Floridan Aquifer.

Our team's conduits to efficiency and expertise navigating the complexities of the membrane process enables us to provide cost-effective solutions to treatment challenges.



Fort Lauderdale Peele-Dixie Membrane Plant and Dixie Wellfield Improvements



PROJECT HIGHLIGHTS

- Design and construction oversight/start-up services for a 12-mgd membrane softening facility, two 4-mg storage tanks, related chemical storage and feed facilities, air strippers/clear well, and high-service and transfer pump stations.
- Planning, design, permitting, bidding assistance, and services during construction for the 20-mgd Biscayne Aquifer wellfield and 16,000 feet of raw water pipeline.
- Design and construction oversight including construction and development of six new Biscayne water supply wells and new raw water pumping facilities.

Hallandale Beach Membrane Softening Facility



PROJECT HIGHLIGHTS

- Design, bidding, permitting, and construction management services for replacement of a 6-mgd membrane facility.
- Oversight of start-up and completion activities for the facility.
- Hazen provided membrane start-up specialists, both process experts and key instrumentation personnel, specifically to facilitate the contractor's startup of the membrane plant.

Jupiter 14.5-mgd Nanofiltration Facility



PROJECT HIGHLIGHTS

- Design, permitting, and pilot testing oversight services for the 14.5-mgd Nanofiltration Facility (expandable to 17 mgd).
- The center-feed design has proven an annual 30% savings in electrical costs for the facility.
- Designed first major split-feed nanofiltration process in the U.S.

Miramar East Membrane Softening Facility



PROJECT HIGHLIGHTS

- Preliminary design of a new 6-mgd membrane softening facility to replace the aging lime softening plant, including process and energy optimization.
- Reconfigured 30% Design to become the design criteria package for plant delivery.
- Design of new raw water supply facilities, including five new Biscayne Aquifer wells and associated transmission piping and a concentrate disposal system.

Plantation East WTP



PROJECT HIGHLIGHTS

- Design and construction oversight of the expansion of an existing membrane plant from 6 to 12 mgd, a new clearwell, and new transfer and high-service pumping and chemical facilities sized to meet the higher flow rates provided during this expansion.

Pompano Beach 10-mgd Membrane Softening WTP



PROJECT HIGHLIGHTS

- Conducted a pilot study that led to the City's decision to implement nanofiltration technology to meet future water quality regulations and goals.
- Provided design, permitting, and construction management services for the new membrane softening facility and concentrate disposal system.

Our WTP design team has successfully delivered (or are currently involved) numerous SE Florida membrane projects through construction.

We know the complexities of the membrane process and can provide cost-effective solutions to treatment challenges.

Current Projects

West Melbourne New WTP Design and Test/Production Well



PROJECT HIGHLIGHTS

- Performed piloting, preliminary/final design, and bidding services for a new 5-mgd membrane WTP.
- Responsible for complete design of the WTP, which will consist of four RO membrane treatment trains with flexibility for future expansion.
- Provided design, permitting, and well oversight to collect hydrogeological data for the test/production well; expedited design of four water supply wells.

Delray Beach Owner's Representative for Design-Build of New WTP



PROJECT HIGHLIGHTS

- Owner's Representative for new WTP, installation of six Surficial Aquifer System (SAS) wells, rehabilitation of existing SAS wells, and construction of deep injection well and monitor wells.
- Assisted the City with scope validation of the new WTP, including documentation of the treatment selection and determination of the initial capacity.

Fort Lauderdale Prospect Lake Clean Water Center

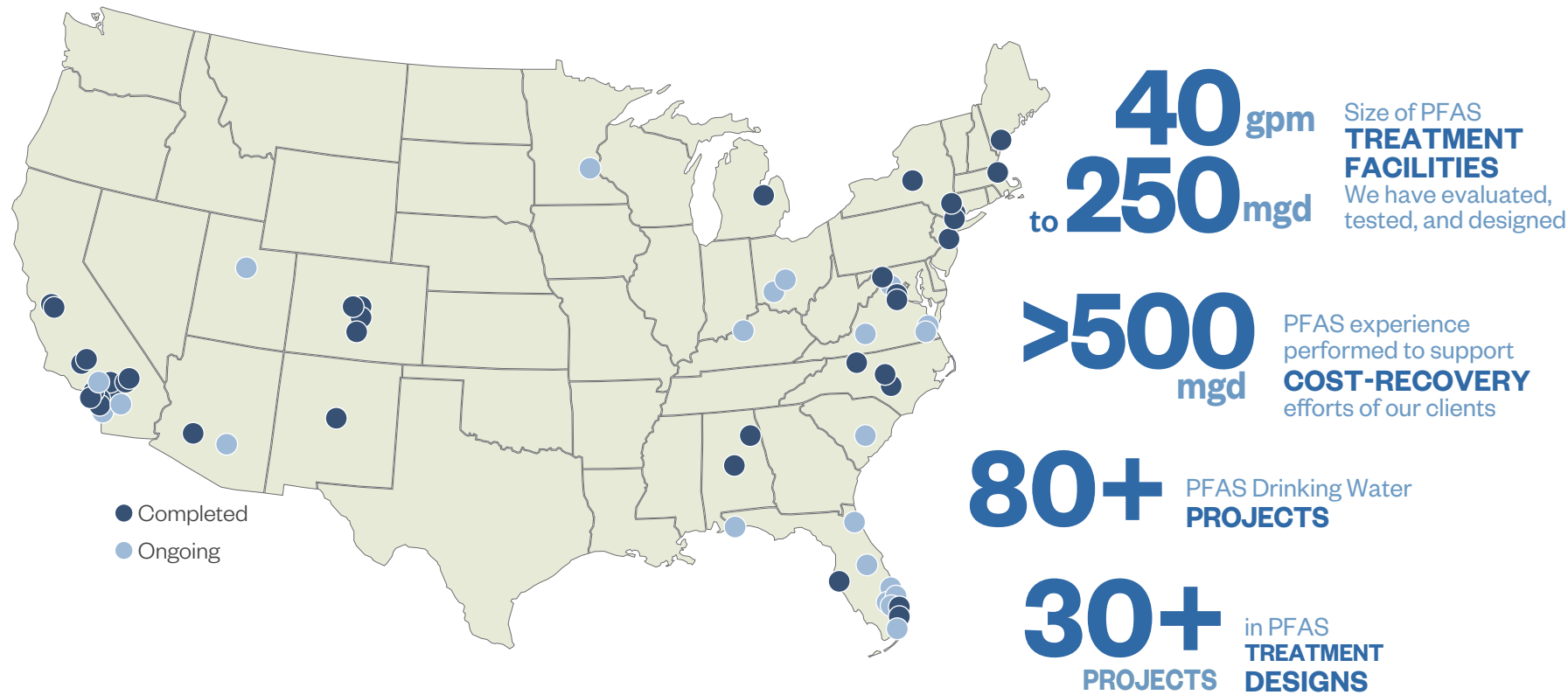


PROJECT HIGHLIGHTS

- Owner's Representative to review design and oversee construction of the new 50-mgd WTP that will use a combination of nanofiltration and ion-exchange treatment technology.
- When construction commences, Hazen will provide multiple inspectors and resident project representatives and also provide process specialists during the start-up phase.

Hazen is a national leader in PFAS treatment.

Hazen continues to push the envelope in PFAS management, having led numerous applied research and innovation initiatives designed to fill data gaps for new and existing technologies, bringing leading edge solutions that are rooted in the latest science but founded on real-world operational needs. Our multidisciplinary PFAS experts have brought solutions to drinking water and wastewater utilities across the country while also contributing to work focused on PFAS communication, treatment cost modeling, and residuals management.

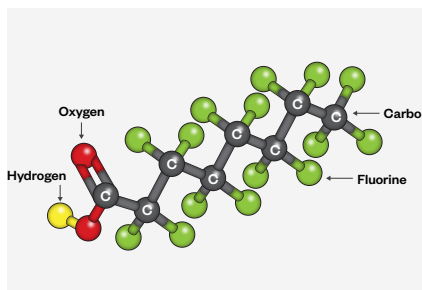


Select PFAS Treatment Projects

	Capacity	Evaluation/ Study	Bench/ Pilot Testing	Conceptual Design	Engineering Design
PFAS Management Plan Miami-Dade Water and Sewer Dept., FL	60 mgd 120 mgd 238 mgd	●	●	●	
Winson WTP PFAS Piloting City of North Miami, FL	9 mgd	●	●		
Cooper City WTP PFAS Removal City of Cooper City, FL	7 mgd				●
Hollywood WTP Upgrades for PFAS Compliance* City of Hollywood, FL	39 mgd	●	●	●	●
Partial Surface Water Treatment GAC for PFOA and PFOS Removal Gadsden, AL	12 mgd	●	●	●	●
Williams Station PFAS/Softening Feasibility Evaluation San Jose Water, CA	20 mgd	●	●	●	
PFAS Compound Treatment Evaluation Brick Township Municipal Utilities Authority, Brick, NJ	20 mgd	●	●		
P.O. Hoffer Water Treatment Facility Advanced Treatment Evaluation for Emerging Contaminants Public Works Commission of the City of Fayetteville, NC	20 mgd	●	●	●	●
Conceptual Design of PFAS in Groundwater Wells Danvers, MA	Up to 2 mgd	●		●	●
Design and Permitting of PFAS and 1,4-Dioxane Treatment City of Monterey Park, CA	10 mgd	●	●	●	●
PFAS Design-Build City of Stockton, CA	3.6 mgd	●		●	●
Groundwater Treatment Facilities Los Angeles DWP, CA	17 mgd 24 mgd 49 mgd	●	●	●	●
Santa Clara and Honby Wells PFAS Treatment Santa Clarita Valley Water Agency, CA	3.5 mgd	●	●	●	●
Design of Post-filter GAC for Removal of PFAS and other CECs City of Sanford, NC	20 mgd	●	●	●	●
PFAS Analysis and Conceptual Plans City of Paramount, CA	8.5 mgd	●		●	
GAC Design for Treatment of PFOA and PFOS City of White Plains, NY	2.5 mgd		●	●	●
GAC Design PFOA & PFOS Removal and Permitting Assistance Dycker New York American Water, NY	41 mgd		●	●	●
Evaluation of GAC and AIX for PFAS Removal in Groundwater Epcor, NM	200 mgd 2 mgd	●		●	
PFAS Treatment Assessment Fairfax Water, VA	125 mgd 275 mgd	●		●	
PFAS Alternatives Study and Detailed Design Rubidoux CSD, CA	5 mgd	●		●	●
Sustainable Water Infrastructure for Tomorrow Advanced WTP Hampton Roads Sanitation District, VA	1 mgd			●	●
Malone and Willow Glen PFAS Feasibility San Jose Water, CA	12 mgd	●		●	
GAC Treatment Chino Basin Desalter Authority, CA	3.4 mgd	●		●	●

* Phase I planning scope submitted for approval.

Ongoing Project Highlights



Miami-Dade Water and Sewer Dept. PFAS Management Plan
Miami-Dade County, FL

- Holistic system-wide evaluation of PFAS management
- Evaluating GAC, IX, RO, and rapid groundwater treatment technologies



Cooper City Re-Membraning
City of Cooper City, FL

- Replacement of membrane elements to remove PFAS
- Currently in construction



Hallandale Beach Reverse Osmosis Skid Addition
City of Hallandale Beach, FL

- Detailed design services for reverse osmosis treatment of brackish water
- Removal of PFAS in source water



Plantation PFAS Communications
City of Plantation, FL

- Campaign planning, management, and materials development to assist with public communications support regarding PFAS

The Hazen team brings **unmatched local experience** in membrane plants, emerging contaminants of concern, and the Floridan and Biscayne Aquifers.

<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>PFAS removal</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div>	<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Organics removal</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div>
	<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Color removal</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> </div>

We will incorporate our 57 years of local design, permitting, and construction experience, as well as 20+ years of specific local membrane treatment experience, into the design of your projects. **We will leverage our expertise in delivering similar membrane plant projects (nanofiltration of the Biscayne Aquifer) in southeast Florida** (City of Fort Lauderdale’s Peele-Dixie Membrane Plant, City of Plantation’s 6-mgd Expansion of the East WTP, and Hallandale Beach 6-mgd Expandable Membrane Plant) **to ensure that Pompano Beach’s drinking water customers are protected to the maximum extent and in the most immediate time frame possible.**

Our expertise in the Biscayne Aquifer, SFWMD CUP, WTP operations, and design/ construction **ensures the City develops a flexible treatment system for future needs.**

Project Spotlight

Pompano Beach 10-mgd Membrane Softening WTP Pompano Beach, FL

The Pompano Beach facility was designed by Hazen after the early 2000s Information Collection Rule, which addressed Disinfection By-Product limits and HAA5 inclusion. Facing similar regulatory challenges today with emerging contaminants, the City opted for a flexible, expandable blended nanofiltration system. The design reused existing structures, saving costs and leveraging stranded assets, including filters above the hydraulic gradeline. The project also included deep well injection for concentrate disposal and wellfield rehabilitation. Hazen’s foresight in designing for the ability to upgrade within the existing membrane building allows the City to comply with PFAS regulations within the regulatory timeframe.



Hazen's expertise in
bench and pilot testing
 encompasses numerous WTPs in South Florida.

A small sample of our experience is illustrated in the table below.

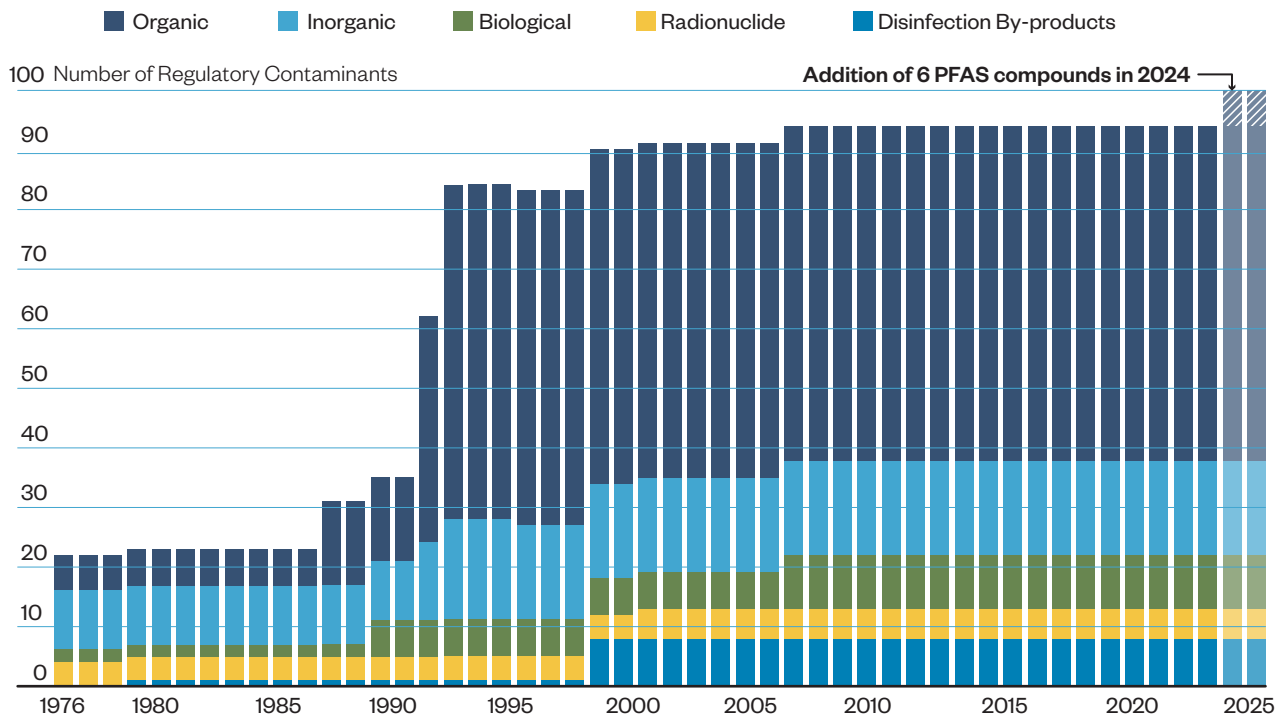
Client	Capacity/Type	Study	Task/Focus
Broward County	Port Everglades Port Authority	Pilot Scale	Designed and Constructed a Corrosion Control Pilot Plant To Determine Optimum Lead and Copper Corrosion Control Alternatives for the Port Authority
City of Boca Raton	20-mgd Softening	Bench	Process Optimization, Color
City of North Miami Beach	20-mgd Softening	Bench & Full Scale	Process Optimization, Color, Organics, DBPs
City of Pompano Beach	40-mgd Cold Lime Softening	Bench & Full Scale	Enhanced Softening D/DBP Compliance Color Removal
Miami-Dade Hialeah	170-mgd Cold Lime Softening	Bench & Full Scale	Enhanced Softening D/DBP Compliance Color Removal
City of Fort Lauderdale	70-mgd Cold Lime Softening	Bench & Pilot Scale	Evaluated Enhanced Softening, Color, TOC Removal, DBP Reduction, Organics Removals
City of Hallandale Beach	6-mgd RO, 6-mgd Conventional Softening	Bench Scale	Softening Process Optimization and Softener Effluent Turbidity Reduction Alternatives
Miami-Dade Water and Sewer Department	18-mgd MF, RO, UV AOP	Bench and Pilot	Project for emerging contaminants of concern (NDMA, 1,4 Dioxane and other micropollutants) in an indirect potable application
City of Margate	13.5 mgd Lime Softening	PFAS Testing & Pilot	Treatment technology selection for PFAS removal

This expertise is significant, as Hazen understands the water quality, treatment potential, and associated challenges
 of the Biscayne and Floridan Aquifers.

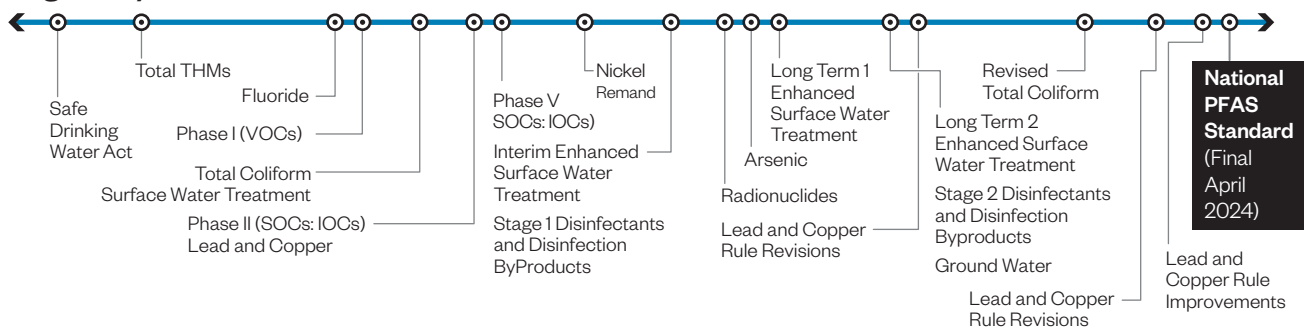
The Hazen team will closely monitor **potential regulatory changes** that might impact your organization.

Hazen has successfully assisted numerous Florida utilities with navigating the dynamic nature of regulatory policies regarding water supply and treatment. We will also endeavor to alert you to risk factors attendant to a range of possible future regulations.

Growth of Regulatory Contaminants in Drinking Water



Regulatory Milestones



With the finalization of the new PFAS regulation, the number of regulated contaminants will increase to 100, with all of the new contaminants being “organic compounds.”

Process Optimization Studies - Water Treatment

Hazen performs **process optimization studies** **REGULARLY** for current clients.



CITY OF PLANTATION Scale Inhibitor Optimization

Hazen provided pilot testing of several scale inhibitor chemicals at the East Water Treatment Plant (EWTP) and Central Water Treatment Plant (CWTP).

Pilot testing was efficiently accomplished with the assistance of Hazen by testing in a single element pilot unit without interfering with or jeopardizing the operation of the full-scale plant.

The pilot study at the EWTP concluded that the use of a polyphosphonate-based chemical is consistent with previous experiences treating Biscayne aquifer supplies and results in better performance than other types of scale inhibitors.

Ultimately, as a result of switching scale inhibitors, the City of Plantation is presently experiencing longer operations between cleanings and operating at higher recovery rates.

Hazen **MAXIMIZES PRODUCTION** and **MINIMIZES ENERGY** with energy recovery turbines.

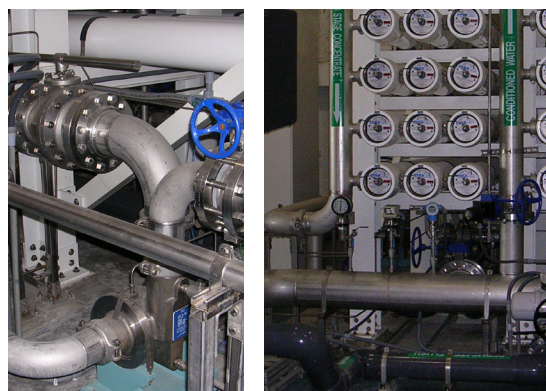
Hallandale Beach Energy Savings

The RO skid, which Hazen designed for a range of salinities, will be equipped with an energy recovery turbine. This turbine will recover energy from the concentrate and provide a pressure boost for the second stage feed, **saving the city electrical costs associated with feed pumping.**




Collier County Energy Savings

For this 8-mgd membrane expansion project, Hazen designed an innovative energy recovery turbine with a control valve system that allows energy recovery over the life of the plant and over a range of salinities. **Over \$4M in energy costs over 20 years was saved.**



Hydrogeological Experience

Hazen experience includes

50+ individual facilities
 with an installed capacity of over
1.5 BILLION gallons per day
 across the state.

Hazen has considerable expertise in design, permitting, and construction oversight of **water supply wells**. Our team includes some of the most experienced wellfield development professionals in the State of Florida.

Our groundwater professionals have all been educated in Florida water resources and have spent their careers focused on Florida’s unique water resources challenges and water management permitting processes. The Hazen team is prepared to assist with all facets of water resource development, including planning and groundwater modeling, design, water use permitting, procurement, construction, operation, monitoring, reporting, rehabilitation, and maintenance.

In addition, our team has extensive experience in Florida Department of Environmental Protection Underground Injection Control (UIC) projects throughout the state. Hazen has been involved in design, permitting, testing, and/or construction management of Class I deep injection wells in South Florida since 1978.



Hallandale Beach

Drilling of Floridan Aquifer test well in the 1980s.
 Completed design of Biscayne Aquifer well in 2019



Fort Lauderdale

Siting/design/permitting/drilling oversight of Biscayne wells and Floridan wells



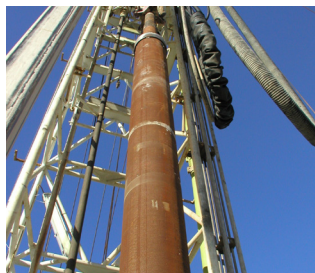
Collier County

Creation of a new wellfield utilizing two distinct water sources and securing those permits



Pompano Beach

Siting/design/permitting/construction management services capacity evaluation of four new water supply wells



City of Fort Lauderdale Alternative Water Supply Planning

For the City of Fort Lauderdale, Hazen designed and provided services for construction of two Floridan Aquifer test wells, collected water quality data, and utilized the data to plan expansion of the Peele-Dixie Water Treatment Plant. The planning documents prepared by Hazen provided the City with a road map to quickly implement the alternative water supply in advance of a supply shortfall. Hazen also assisted the City in the conversion of a conventional lime softening plant to the existing nanofiltration membrane facility. Hazen’s forward-thinking approach during the original design of the nanofiltration facility provided the City with the flexibility to incorporate reverse osmosis skids within the existing treatment scheme.

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Our most experienced, local water supply and deep injection well experts will help the City meet its water supply needs.

The Hazen team offers extensive experience in all aspects of water supply planning and design, water use permitting, groundwater modeling, demand forecasting, meeting with state and local agencies and elected officials to represent our clients on water supply-related issues, and anticipating the needs of our clients due to new rules or rule changes. **Our team of Florida-registered Professional Geologists and Professional Engineers led by Gerrit Bulman, PG, George Brown, PE, Angela Giuliano, PG, and Rama Rani, PG, have spent their careers focused on Florida’s unique water resources challenges and water use permitting.**

The Hazen team is prepared to support the City’s water supply needs, **as evidenced by our qualified staff and relevant experience summarized on the following pages.**



Mr. Brown has participated in the design of numerous water supply wells, wellheads, and raw water conveyance systems throughout South Florida.



Mr. Bulman and Ms. Giuliano have provided the hydrogeologic services for well permitting, construction, testing, and rehabilitation throughout South Florida.



GMAwater
Water Resources and Environmental Consultants
Mr. Memberg has 20 years of water resource investigations and regulatory experience across statewide and regional agencies.

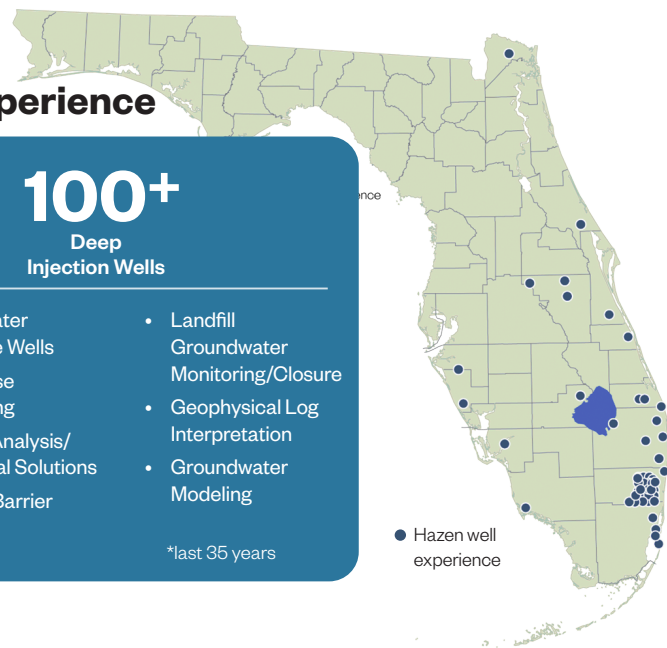


Ms. Rani brings two decades of experience with the South Florida Water Management District, leading the Groundwater Modeling group.

Florida Groundwater Facilities Experience

50+ Individual Facilities	100+ Water Supply Wells*	100+ Deep Injection Wells
<ul style="list-style-type: none"> ASR Wells Design Permitting Procurement Construction Operation Monitoring 	<ul style="list-style-type: none"> Reporting Rehabilitation Maintenance Aquifer Testing Mechanical Integrity Testing Monitoring Wells 	<ul style="list-style-type: none"> Stormwater Drainage Wells Water Use Permitting Impact Analysis/ Analytical Solutions Salinity Barrier Landfill Groundwater Monitoring/Closure Geophysical Log Interpretation Groundwater Modeling

*last 35 years



The Hazen team has worked with and led water supply planning efforts for many Florida clients, including Fort Lauderdale, Hallandale Beach, Margate, Naples, West Melbourne, and Plantation; Toho Water Authority; and Broward and Collier Counties. Our team, including GMAwater, has worked together on numerous consumptive use projects throughout the state, including several within Broward County. Our team also has extensive consumptive use permitting for major municipal water suppliers, including those with historical saltwater intrusion and wetland issues by developing operational programs for existing wellfields, utilizing groundwater modeling to evaluate regional surface water recharge, and avoiding wetland impacts.

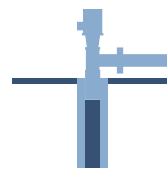
Hazen has also been involved in the planning, design, permitting, testing, start-up, and construction management

of Class I deep injection wells in South Florida since 1978.

Hazen maintains local staff and a full support team led by **Gerrit Bulman, PG, and Angela Giuliano, PG**, to assist with injection well permitting and mechanical integrity testing. Mr. Bulman and Ms. Giuliano bring extensive injection well planning, design, permitting, bidding, and construction management experience. **Over the past decade, Mr. Bulman has assisted utilities in Broward and Miami-Dade Counties with the most challenging UIC regulatory issues at the State and Federal (EPA) levels.**

Hazen continues a legacy of involvement in scientific and regulatory discussion. Following discussions with utilities, the FDEP and the EPA, Mr. Bulman presented on UIC Regulatory Considerations for PFAS Disposal in Florida at the 2023 Florida Section AWWA Fall Conference and at the 2024 American Membrane Technology Association (AMTA) conference.

A representative sampling of our team's deep injection well experience appears on the following pages.



Hazen has been involved in the design, construction, MIT, and/or permitting of over

70% of the

56 Class I injection wells in Broward County.

Project Spotlight

Dixie Wellfield Improvements

Fort Lauderdale, FL

Hazen provided planning, design, permitting, assistance with bidding, and services during construction for a 20-mgd Biscayne Aquifer wellfield along with 16,000 feet of raw water pipeline to supply the planned 12-mgd Peele-Dixie Membrane Water Treatment Plant (WTP).



A deep well for disposal of concentrate was recommended in the Membrane Feasibility Report.

Hazen has been involved in over 70% of the deep injection wells in Broward County.



1 Margate WWTP

- UIC injection well testing and permitting services
- MIT for injection wells in the City in 2008, 2013, 2018 and 2023 (ongoing), as well as the 2015 and 2020 UIC permit renewals.



2 Plantation East WTP, Central WTP, Regional WWTP

- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well at RWWTP
- Design tubing replacement for one 11.8"-dia. deep injection well at CWTP
- Construction management for one 11.8"-dia. deep injection well at EWTP
- Multiple MIT and operating permit renewals
- Dual zone monitor well repair



3 Sunrise Sawgrass WWTP and WTP Injection Wells

- Operating Permit Renewals
- Prepared and submitted plans for MITs to FDEP
- Witness testing during MITs and FDEP report submittal
- Update the Injection Well O&M Manual
- Submitted plans to plug and abandon a dual zone monitor well to FDEP and provided services during construction



4 Cooper City WTP

- Design and permitting of one 14"-dia. deep injection well
- Construction management for one 14"-dia. deep injection well
- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well
- Initial MIT and operating permit



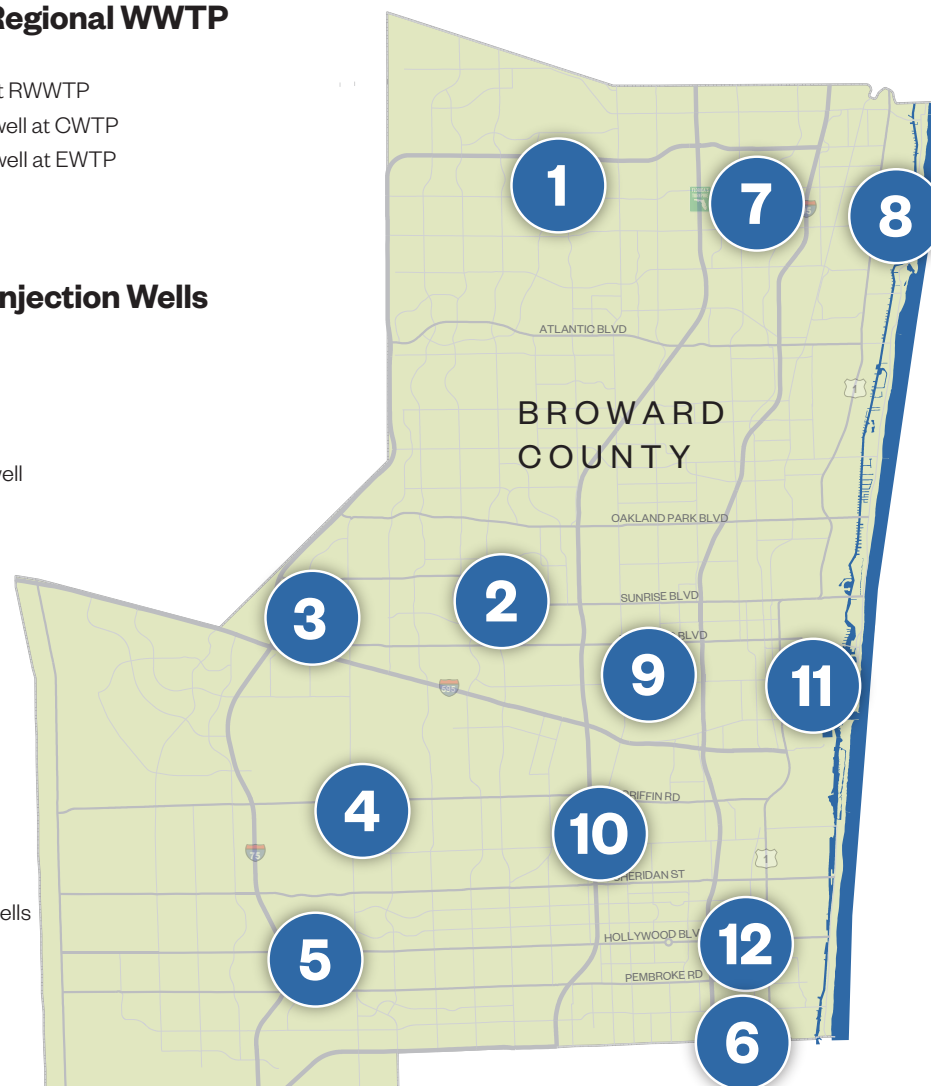
5 Miramar WRF

- Design and permitting of two 24"-dia. deep injection wells
- Construction management for two 24"-dia. deep injection wells
- Design and permitting of two dual zone monitor wells
- Construction management for two dual zone monitor wells
- Multiple MIT and operating permit renewals
- Monitor well integrity testing evaluation



6 Hallandale Beach WTP

- Design and permitting of one 11.8"-dia. deep injection well
- Construction management for two 11.8"-dia. deep injection well
- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well
- Multiple MIT and operating permit renewals



7 Broward NRWTP

- Design and permitting of eight 24"-dia. deep injection wells
- Construction management for eight 24"-dia. deep injection wells
- Design and permitting of six dual zone monitor wells
- Construction management for six dual zone monitor wells
- Multiple MIT and operating permit renewals



8 Deerfield Beach West WTP

- UIC injection well testing and permitting services
- 2021 MIT
- 2023 Operation Permit Renewal
- 2024 injection well rehabilitation and rerating (ongoing)



9 Fort Lauderdale Peele-Dixie WTP

- Design and permitting of one 16"-dia. deep injection well
- Construction management for one 16"-dia. deep injection well
- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well
- Multiple MIT and operating permit renewals



10 Seminole Tribe Hollywood Reservation

- Design and permitting of two 16"-dia. deep injection wells
- Construction management for two 16"-dia. deep injection wells
- Design and permitting of one dual zone monitor well



11 Fort Lauderdale G.T. Lohmeyer WWTP

- Design and permitting of five 24"-dia. deep injection wells
- Construction management for four 24"-dia. deep injection wells
- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well
- Initial MIT and operating permits



12 Hollywood SRWWTP

- Design and permitting of two 24"-dia. deep injection wells
- Construction management for two 24"-dia. deep injection wells
- Design and permitting of one dual zone monitor well
- Construction management for one dual zone monitor well
- Multiple MIT and/or operating permit renewals

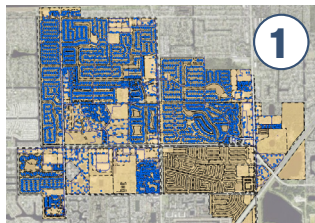
Lead and Copper Rule Revisions Experience

Hazen is a team leader with
LEAD AND COPPER
 with unmatched
 experience
**NATIONALLY
 AND IN FLORIDA**



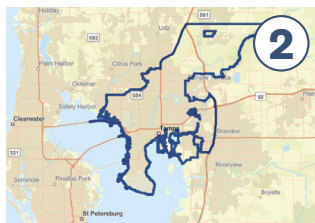
Hazen has developed a team of experts who are assisting over 425 systems nationwide **to comply with the Lead and Copper Rule Revisions (LCRR).**

Hazen has led the way in coordinating with state regulators **and securing funding for service line identification and replacement.**



1. City of North Lauderdale LCRR Compliance Assistance

Hazen is providing the City of North Lauderdale a holistic strategy to be in compliance with the LCRR that includes development of a lead service line (LSL) Inventory, detailed LSL Replacement Plan, and updated sample plans that reflect revised sample location criteria with inclusion of schools and daycares. Hazen also assists the City with a public relations campaign and explores all viable funding sources for the City's LCRR compliance program.



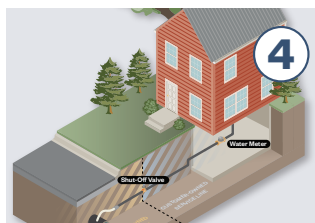
2. City of Tampa LCRR Compliance Assistance

Hazen is assisting the City with development of their LSL in preparation for the LCRR compliance deadline. For this first phase of work, Hazen reviewed the City's existing inventory and conducted additional record and code review. Hazen's investigation resulted in an updated timeline where lead was an acceptable service line material based on historical plumbing codes. Hazen prepared documentation to support development of the inventory and is continuing efforts to help finalize the inventory for submission to Florida Dept. of Health.



3. City of Lakeland Corrosion Control Evaluation

Hazen conducted a desktop study for optimized corrosion control for the City of Lakeland by analyzing historical water quality, lead and copper compliance sampling results, and sequential sampling and scale analysis on harvested lead goosenecks. Using GIS and available water main and meter installation dates, Hazen provided guidance to the City to locate these goosenecks in the system. Hazen provided recommendations for follow-up bench-scale testing to confirm optimal corrosion inhibitor dose.



4. City of Daytona Beach LCRR Compliance Assistance

Hazen is helping the City update their compliance program to meet requirements of the US Environmental Protection Agency's LCRR and Lead and Copper Rule Improvements. Five core elements identified for the compliance program are LSL inventory, sampling plans for compliance sites and schools and childcare facilities, public education and outreach, LSL replacement plan, and corrosion control optimization.

Regulatory Compliance with LCRR and PFAS

Select LCRR and PFAS experience within the last five years is presented in the table below.

LCRR Project Experience

Client/Location	Customers	LCRR Compliance	LSL Inventory	LSL Identification	LSL Replacement Plan	Sampling and Monitoring	Customer Outreach	Funding Support	GIS and Program Tracking Dashboard	Geospatial LSL Likelihood Analysis Modeling or ML	Implementation Assistance	Multi-Year Program	Regulatory Coordination
Town of Jupiter, FL	88,000	■	■	■		■							■
Miami Beach LCRR Program Assistance, FL	90,000	■	■	■	■	■	■	■	■	■	■	■	■
City of Tallahassee, FL	200,000	■	■	■		■	■						■
City of Fort Lauderdale, FL	220,000	■				■					■		■
City of Tampa, FL	720,000	■	■	■									■
Miami-Dade WASD, FL	2,300,000	■	■	■	■	■	■	■	■	■	■	■	■
Sweetwater Authority, CA	200,000	■	■	■	■		■	■	■				
City of Richmond, VA	230,000	■	■	■	■	■	■				■	■	■
Los Angeles Department of Water & Power, CA	4,000,000	■	■	■		■	■	■	■	■	■	■	■
City of Tempe, AZ	185,000	■	■	■		■	■	■		■	■	■	■
Baltimore, MD	400,000	■	■	■	■	■	■	■		■	■	■	■
City of Kingman, AZ	33,000	■	■								■		
Soldier Canyon, CO	65,000	■	■	■	■	■	■	■	■	■	■	■	■
City of Englewood, CO	49,000	■	■	■	■	■	■	■	■	■	■	■	■
City of Glendale, AZ	250,000	■	■	■		■	■	■				■	■
City of Peoria, AZ	200,000	■	■	■		■	■	■				■	■
Charles County, MD	75,000	■	■	■	■	■	■	■	■	■	■	■	■
Leesburg, VA	60,000	■	■	■	■	■	■	■	■	■	■	■	■
Washington Suburban Sanitary Commission, MD	1,800,000	■	■	■	■		■						■
City of Chesapeake, VA	200,000	■	■	■	■			■	■	■	■	■	■
Connecticut Water, CT	105,000	■	■	■	■	■	■				■		
City of Gainesville, GA	159,000	■	■	■		■	■		■	■	■		■
Clayton County, GA	275,000	■	■	■		■	■		■	■	■		■
City of Buffalo, NY	276,000	■				■	■				■	■	■
Cobb County-Marietta Water Authority, GA	950,000	■				■	■				■		■
Virginia Beach, VA	450,000	■	■	■					■	■	■	■	■
Spotsylvania County, VA	230,000	■	■	■					■	■	■		
City of Winchester, VA	30,000	■	■	■	■				■	■			■
Cape Fear Public Utility Authority, NC	190,000	■					■				■	■	■
Charlotte Water, NC	818,000	■									■		■
City of Greensboro, NC	290,000	■				■					■		■
City of Atlanta, GA	1,200,000	■				■					■		■
Erie County Water Authority, NY	920,000	■				■			■		■	■	■
Chandler, AZ	260,000	■	■	■		■	■	■	■	■	■	■	■
Goodyear, AZ	102,000	■	■	■				■		■	■		■

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Water Distribution Experience

Hazen's experience in water conveyance systems covers the full range of services, including initial planning, preliminary and detailed design, permitting, hydraulic modeling including numerous hydraulic studies and network analyses, and construction management. We have supported municipalities in the relocation of utilities for road conflicts, expanded distribution systems to create loops for improving water quality, and assisted with the rehabilitation and replacement of water distribution piping.

The major capital investment of a water utility is in the water distribution system. These systems consist of transmission mains, distribution lines, services, and meters.

Our recent water main experience includes a key project with Fort Lauderdale, the Las Olas Boulevard Intracoastal Waterway Crossing. For this project, Hazen prepared a design criteria package (DCP) for replacement of a 16-inch sub-aqueous water main with a deeper 20-inch water main to cross the Intracoastal Waterway at Las Olas Boulevard, as well as provided permitting assistance. The City decided to install a new 16-inch diameter sub-aqueous wastewater force main on the south side of the Las Olas Boulevard Bridge. Hazen partnered with another consultant to prepare the DCP documents for the sewage force main.

The Las Olas Boulevard Intracoastal Waterway Crossing was recognized with the 2017 **Design-Build Institute of America's Florida Region Best Overall in Water/Wastewater Award.**

Las Olas Boulevard Intracoastal Waterway Crossing

City of Fort Lauderdale, FL

Dredging planned for the Intracoastal Waterway (ICW) required rapid replacement of the City of Fort Lauderdale's water main at the Las Olas Boulevard bridge at a deeper elevation or risk cutting of the water main. The City completed the replacement water main crossing of the ICW at Las Olas Boulevard in record time (6 months) via collaborative design-build procurement to accelerate project delivery. The design-build resulted in completing the project 20 percent faster than traditional methods. Hazen served as the design criteria professional for the water main replacement. Another team member prepared the DCP drawings for the 16-inch force main intracoastal waterway crossing.




DBIA
Design-Build '17
BEST OVERALL IN
WATER/WASTEWATER

Las Olas Boulevard Intracoastal
Waterway Crossing, City of Fort Lauderdale
Florida Region Design-Build Institute of America Awards



Reuse Water Experience

Hazen has worked at
 **24** reclaimed water facilities in Florida totaling over
400 MILLION gallons per day in capacity

Reuse water is a core business of Hazen. We are a leader in the planning and implementation of effluent reuse water programs in Florida.

Our expertise covers the planning, permitting, design, construction, and operations of water reclamation facilities and distribution systems across the full range of treatment processes, water quality, and regulatory requirements.

For over five decades, Hazen has worked with local utilities staff to evaluate, plan, and implement reuse water opportunities to satisfy our clients' most challenging needs while achieving and exceeding the regulatory requirements of the Florida Department of Environmental Protection.

Hazen's Florida reuse experience dates back to 1986. We've completed numerous projects since then, and Hazen is at the forefront of reuse water research.

1986: Loxahatchee River District

Master planning and implementation of the first regional reuse system in South Florida.



1. City of Hollywood Indirect Potable Reuse Pilot Test

Pilot testing demonstrated that advanced oxidation provides effective treatment for recharging the aquifer with highly treated wastewater effluent at a lower cost than reverse osmosis.

2. Broward County North Regional WWTP Reclaimed Water Plant Expansion to 26 mgd

Process mechanical and structural design to filter and disinfect additional secondary effluent using upflow sand bed filters.

3. City of Miramar Wastewater Reclamation Facility Reuse Phase I Expansion to 7.5 mgd

The Reclaimed Water Expansion Phase I project included expansion of the existing 5-mgd reclaimed water treatment and distribution system processes to 7.5 mgd.

4. Plant City Potable Reuse Pilot

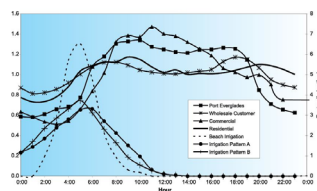
Hazen led a pilot study to evaluate the feasibility, costs, and benefits of direct and indirect potable reuse under current and potential future regulatory conditions.

Master Planning Experience



Hazen has extensive Florida water, wastewater, and reuse master planning experience including the **Plantation Water Master Plan** and the **Broward County Reuse Master Plan**.

Hazen has performed master planning for the Cities of Miramar, North Miami, Hollywood, Sunrise, Plantation, Hallandale Beach, Fort Lauderdale; Broward, Miami-Dade, and Palm Beach Counties; Riviera Beach Utility District; Town of Jupiter; Village of Islamorada; Tampa Bay Water; and others. Hazen is also experienced in utilizing all major water and sewer system modeling software programs in its master planning efforts, including the Bentley series (i.e., SewerGems, WaterGems, SewerCAD, etc), the Innovyze series (i.e., InfoWater, InfoSWMM, InfoWorks ICM, etc.), ICPv4, and the U.S. Army Corps of Engineers' HEC models. **Engaging with other similar utilities throughout Broward County enables Hazen to extract the valuable, similar experiences and apply the lessons learned directly to Pompano Beach.**



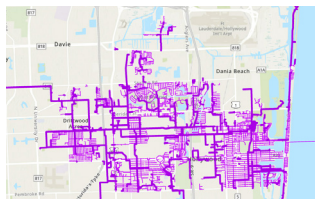
City of Fort Lauderdale Water Master Plan

Hazen master planned water infrastructure improvements for the City of Fort Lauderdale in 2000 and again in 2006. The master plan recommended a community investment plan to increase capacity, reliability, and enhance water quality. Additionally, the plan addressed alternative water supplies.



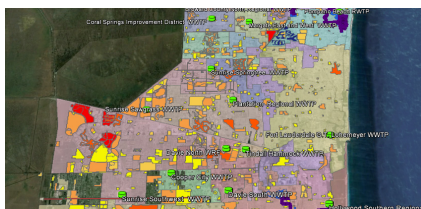
City of Sunrise Water and Wastewater Facilities Master Plan

Assisted with the development of the City's five-year Water and Wastewater Facilities Master Plan. Hazen's work focused on the evaluation of future wastewater flows and loading and determining required short-term and long-term needs at each of the City's wastewater facilities for the 2015 and 2030 time horizons.



City of Hollywood Wastewater Master Plan

Hazen completed the City's most recent Wastewater Master Plan in 2007, and is currently updating the Wastewater Master Plan. Services include data collection, condition assessments of all wastewater facilities, and a master plan reflective of the most up-to-date wastewater collection system and treatment facilities.




Broward County Regional Reuse Master Plan

Hazen developed the county-wide reuse water master plan that identified the most cost-effective opportunities for reuse development in the county. The evaluation of the potential reuse water projects included significant consideration of climate change and the effects of climate change on water resources throughout the county, including sea level rise, potentially longer droughts, heavier rainfalls, and flooding.

The scope of the master plan included: compilation of existing information from municipal and county reuse studies and data for all the treatment facilities in the county; determination of reuse opportunities by identifying potential slow rate land application users across the county; and development of a Google Earth-based reuse water master planning tool and criteria evaluation model for use in determining and comparing reclaimed water opportunities.

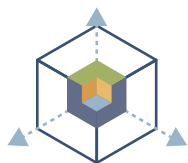
Hydraulic Modeling Experience

Modeling for **municipalities in Florida**, including

1,700+
sewer lift stations 
& **3,500+** miles of
water and force mains

Cutting-edge hydraulic modeling capabilities allow Hazen to better understand the behavior of the systems we design and improve their long-term performance—a **key to successful and sustainable water engineering.**





We regularly apply our modeling capabilities to evaluate many types of engineered and natural systems, including sewer collection and transmission systems, storm sewer networks, water transmission and distribution systems, reservoir watersheds, and treatment plants of all sizes.

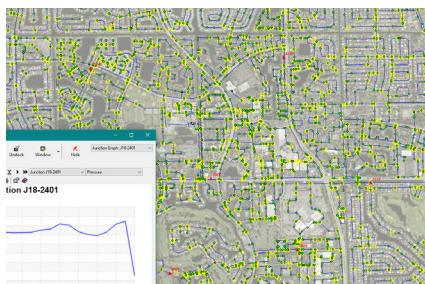


Practical experience tying models to the real world is what sets us apart.

Our modelers specialize in integrating GIS with models using any commercially-available software package and working closely with field engineers, operators, and designers to bridge the gap between models and reality.

Most often, we employ hydraulic surge analysis, computational fluid dynamics (CFD), sewer system modeling, and water quality modeling to help municipalities:

-  Create water and sewer master plans
-  Meet regulatory requirements
-  Identify methods to improve water quality
-  Assist with wastewater collection and transmission and water storage, transmission and distribution designs



City of Plantation Water Master Plan

Hazen developed the Plantation Water Master Plan that defines short- and long-term planning goals through the year 2040, including goals that serve to optimize operation and management of the City's entire water system. The Master Plan identifies recommended capital improvements for: water supply, treatment, distribution system quality, and distribution system capacity.

A key task included development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. Benefits of a

service area-wide water distribution system hydraulic model include synchronization with the City's GIS water atlas, which will minimize efforts associated with future model updates. The model provides the ability to simulate water age as it moves from the WTP to customers. The model also supports the evaluation of fire flow availability across the entire service area. Improvements to address specific fire flow deficiencies can be identified and tested using the model. Model results are being used to prioritize capital improvement projects targeting the replacement of aging infrastructure, as well as for the evaluation of operational alternatives designed to reduce pumping energy costs.

Applied Research Experience

Hazen has completed more than

85 cutting-edge pilots



including innovative drinking water technologies, potable reuse demonstrations, and resource recovery investigations.

Hazen’s Research and Innovation Program advances process design and implementation of novel technologies and approaches that can help address challenges faced by our clients.



Our applied research program is focused on advancing new technologies and solving emerging water quality challenges that are directly applicable to our clients. We have completed and are participating in more than \$35 million in grant-funded research projects addressing industry concerns including disinfection byproducts control, emerging contaminants, PFAS, algal toxins, and studying advanced treatment techniques like ozone, GAC, ion exchange, biological filtration, and others through bench and pilot testing. As a firm, we are dedicated to advancing the industry through our applied research efforts, with a few noteworthy example projects described in greater detail below.

Applied Research Statistics

Publications

400+
national and international publications

Pilots

80+
cutting-edge pilots in the past seven years

Research Portfolio

Completed research projects have amounted to over
\$35M

Research Grants

95+
grant-funded projects since 2010

Hazen Innovators

54 Hazen staff providing key contributions to research projects
11 Hazen PIs or co-PIs on external funded research projects

WRF 4913: Industry Guidance for Treatment of Short-Chain PFAS

Project Highlights

This project developed guidance for utilities, consulting engineers, and regulators to understand treatment impacts of short-chain PFAS. The project team performed bench, pilot, and full-scale testing to develop an understanding of cost and feasibility implications associated with implementing ion exchange, GAC, membranes, novel adsorbents, and destructive technologies to address short-chain PFAS. Guidance developed as part the project provides recommendations for testing and methods for directly comparing data to decide on sustainable long-term solutions to PFAS challenges, considering today’s regulations and potential regulatory futures.



Resilience Experience

Hazen has provided **RESILIENCE** services for **28 FLORIDA CLIENTS** since **1968**



Hazen understands the importance of characterizing and communicating climate-related risks that span source water availability, source water quality, and infrastructure integrity in terms of magnitude, timing, and consequence.

Hazen has influenced and managed sustainable, resilient infrastructure development in Florida and around the globe for over six decades.

Our approach demonstrates our expertise in evaluating and preparing for the possible effects of climate uncertainty. Our climate adaptation strategies concentrate on maintaining the highest level of protection for our communities at a sustainable investment rate.

Climate Resilience Toolkit Steps to Resilience



Vulnerability considers what assets are most susceptible to threats.
Risk considers the consequences of threats to assets most likely to be affected.



1. City of Hollywood Vulnerability Assessment and Adaptation Plan

Hazen conducted a citywide climate change vulnerability assessment for the City of Hollywood, prioritizing vulnerabilities, developing adaptation strategies, creating an adaptation plan, informing the public about risks and adaptation opportunities, and building the capacity of the City to include climate change data in decision-making.

2. Miami-Dade WASD Rapid Action Plan

Developed methodology to establish criticality and vulnerability rankings of County facilities based on flood potential in current and future conditions.


3. Broward Countywide Risk Assessment and Resilience Plan

Hazen led the development of the Countywide Risk Assessment and Resilience Plan consisting of a detailed hydrologic (stormwater) model, robust economic model, visualization platform, and a written plan to provide the foundation for collective mitigation of future flooding throughout the county.

4. City of Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services

Hazen developed the stormwater master plan and implemented designs to address chronic flooding and other stormwater management issues.

Asset Management Experience

Assessments for over
7,800
 assets 
 and **14** treatment plants
 in Southeast Florida

Our Asset Management Services Group combines top technical knowledge with innovative, informed, and responsive solutions that have resulted in immediate and long-term cost savings to clients nationwide.

Hazen’s Asset Management Services Group includes nationally-recognized professionals in engineering, asset management strategic planning, asset management business processes and principles, infrastructure assessment and planning, risk assessment (condition and criticality), rehabilitation and renewal planning, data collection and management, and information technology assessments.

Rising operating costs, aging infrastructure, regulatory pressures, simultaneously ongoing programs, and a customer base that is resistant to rate increases means the Utility must find ways to extract greater value from their existing assets. Many utilities already implement several of the elements of asset management programs—they just may not refer to these tasks collectively as asset management. The Hazen Team provides an integrated suite of asset management services and tools for both above- and below-ground assets that cover all aspects of the asset’s whole life cycle, including safety, operational performance, levels of service, contractual requirements, and maintenance requirements.

More than **200**
Asset Management
Projects in the past 5 years

Asset Management Services

Asset Condition & Risk Management	Asset Management Road Map	Regulatory Requirements	CIP Planning & Affordability
			
			
Operations Optimization	Maintenance Management	Reporting & Planning	Asset Renewal & Replacement

Our approach is to provide expertise, tools, technologies, and procedures that will empower clients to achieve excellence in assets that require excessive maintenance.

We realize that one size does not fit all, so we are flexible in our approach and can work with utilities to implement a full asset management program, or alternatively, a primary approach which targets key assets.

Funding/Grant Management Experience

Hazen has helped clients obtain & administer over
 **\$4 BILLION**
 in state and federal funding for W/WW in the last ten years, including over **\$1 BILLION** in Florida.

Hazen provides comprehensive funding assistance for a wide range of projects, including major expansion, rehabilitation, and replacement, energy incentives, and disaster relief.

Funding Assistance Approach

Proactive Approach to key emerging opportunities.

Hazen’s four-step approach allows us to respond to the quickly-changing infrastructure funding landscape.

Strategize



Strategize about applicable, available, and achievable funding options

Inform



Inform design decisions to maximize the funding sources and amounts

Conform



Conform to all permitting, engineering report, and contract requirements

Secure



Secure funds from application through contract phase

Hazen also provides funding strategy and implementation plan development, funding application preparation and supporting documentation (planning, environmental, financial), and reporting and compliance for the life of a project.

- Hazen offers funding experts locally and nationally who are solely dedicated to funding planning, administration, and compliance.
- Our team knows the process from all angles of funding— from project management to including boots-on-the-ground experience. We have experience in funding a multitude of projects “all things water.” Our team offers experts in hazard mitigation and lead service line funding.

Hazen’s funding success includes the following sources:



\$1.4 Billion
 in funding approvals over 4 years



FEMA \$1.1 Billion
 in funding to recover from disasters and harden infrastructure



\$350 Million
 to fund resilient infrastructure



\$1.0 Billion
 across the country



Sharon Simington
 Southeast Regional Funding Program Lead

Financial Viability Experience



Hazen provides economics and financial services to provide **sound fiscal planning necessary for effective decision-making.**



Infrastructure Strategy and Performance: Triple Bottom Line (TBL) Analysis / Multi-Criteria Decision Analysis (MCDA): Choose and design projects considering social, economic, financial, and environmental impacts in a transparent manner. Assess economic feasibility: Benefits / Costs.



Water Resources and Community Sustainability: Project economic feasibility analyses, water demand forecasting, integrated planning, and funding evaluations to assist in developing resilient projects that efficiently use our natural resources.



Financial Viability: Make better decisions - Capital Improvement Program (CIP) evaluations, Financial Capability Assessments (FCA), affordability assessments, fiscal impact studies.



Rate Studies: Estimate revenue requirements, cost of service, and short and long-term rate levels and structures to meet utilities' financial needs. Hazen developed its own dynamic rate model that can be used for water, wastewater, and stormwater programs.



Economic & Financial Services (EFS)

Selected Recent Projects

- **Bond Feasibilities Studies:** Prepared financial sufficiency evaluation for Tampa Bay Water using rate model to support issuance of \$130 million in revenue bonds. EFS portion of \$150K fee was about \$35K.
- **Stormwater Rate Studies:** Conducted feasibility and SW rate development study for North Palm Beach Village; Fee was \$100K; Stormwater Fee Update for Deerfield Beach, FL; Fee: \$75K.
- **Biosolids:** Conducted financial evaluation of PPP alternatives for a Post-Dewatering Biosolids Facility for WSSC in Maryland; Fee was \$85K.
- **Water Rate Studies:** Performing multiple water and sewer rate studies including rate study for Cartersville, GA; Fee is \$90K.
- **Economic Evaluations:**
 - Conducting economic evaluation of alternative development scenarios for Hardee County, FL; Fee is \$138K
 - Conducting Cost Benefit Analysis for Resiliency Study for Broward County; Fee is \$50K.
 - Economic Valuation of Biscayne Bay for SFWMD and Miami-Dade; Fee is \$250K.

Permitting Experience

Hazen has developed excellent relationships with local regulatory agencies and has an



extensive understanding of their regulatory practices.

With decades of experience providing utility engineering permitting and monitoring regulatory compliance,

Hazen can assist our clients with as-needed permitting. This familiarity stems from Hazen’s 57 years of providing engineering services to municipalities in Florida.

Hazen possesses technical strength coupled with an understanding of the varying environmental regulatory issues that our clients face. We have developed excellent relationships with local regulators and have worked closely with operations staff of local utilities to review plant records, perform detailed facility inspections, coordinate sampling and testing programs, and develop tools based on the computerized operational system to track permit compliance. This allows us to quickly prepare and process permit applications, avoiding potential permitting delays. In addition, these relationships enable Hazen to expedite the permitting process with various regulatory agencies including Broward County, FEMA, Florida Department of Transportation, Florida Water Management Districts, and the Florida Department of Environmental Protection. This ability to quickly secure permits from the various regulatory agencies that have jurisdiction over our client’s projects, allows for the rapid implementation of improvements.



Construction Engineering & Inspection Experience



Hazen has extensive experience with the bidding process and

construction engineering & inspection

of many types of facilities.

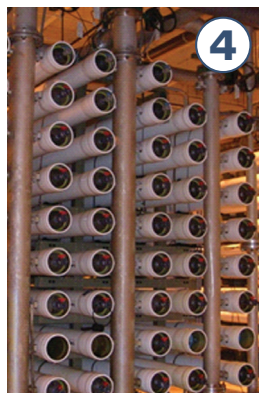
Hazen offers unique value in managing the construction of upgrades and new facilities.

We maintain a database of construction “lessons learned” that we will apply to the City’s projects to minimize claims to the maximum practical extent.

In addition to offering experienced construction managers, inspectors, and resident engineers to keep projects on schedule and minimize change orders, we use proven methods such as prebid reviews, partnering, disputes review boards, and the timely handling of documents and requests. We incorporate best-practice technologies to expedite requests for information, review and markup of drawings, and permitting, reducing delays, and preventing errors. We approach construction services with a goal to provide regular, effective communication to help keep the project moving forward and to make sure any issues are brought up in a timely manner.

Construction Management Services

Project Planning	Resident Engineering	Cost Management	Vendor Management	Risk Management
<ul style="list-style-type: none"> · Project Administration · Cost Controls · Document Management · Scheduling 	<ul style="list-style-type: none"> · Inspection · Constructability Reviews · Quality Control 	<ul style="list-style-type: none"> · Cost Estimating · Budget Control · Grant Management 	<ul style="list-style-type: none"> · Change Order Management · Claims Prevention & Resolution · Equipment Pre-Purchase 	<ul style="list-style-type: none"> · Quality Assurance · Startup & Testing · Commissioning · Project Closeout



1. City of Fort Lauderdale Phase II Las Olas Blvd Force Main Replacement

Hazen provided construction engineering and inspection services during the installation of approximately 3,100 linear feet (LF) of 16-inch diameter force main under Las Olas Boulevard.

2. City of Hallandale Beach Membrane Softening Facility

Hazen provided design, bidding, permitting, and construction management services and oversight, pilot testing, start-up coordination, and first-year operational assistance for a 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at the City’s water treatment plant.

3. Broward County Wastewater Master Pump Station 310

Hazen provided construction engineering and inspection services during construction of a sewage pump station designed by Hazen with a combined pumping capacity of 7.7-mgd.

4. City of Plantation East WTP 12-mgd Membrane Softening Plant Expansion and Remembraning

Hazen provided design, permitting, bid/award services, and construction management services for expansion of the City of Plantation’s existing 6-mgd membrane softening facility to 12 mgd.



Subconsultants Project Experience





G.T. Lohmeyer WWTP Stormwater Improvements

Fort Lauderdale, FL

Craven Thompson & Associates, Inc. surveyed, designed, permitted, and provided construction, engineering, and inspection services for the project.

The G.T. Lohmeyer Wastewater Treatment Plant (WWTP) is bounded on the north by SE 18th Street, on the south by Plant, on the west by Harbor Shops Development, and on the east by Eisenhower Boulevard. The project area had historically experienced regular flooding events on the northside of the site. The flooding occurred during 1-inch plus rainfall events and not only caused flooding within the site, but also overflows the perimeter elevations causing flooding on SE 18th Street and within the adjacent properties to the north.

The objective of this project was to provide drainage improvements in SE 18th Street adjacent to the north side of the G.T. Lohmeyer Wastewater Treatment Facility to relieve flooding conditions.

The improvements provided to the City by Craven Thompson & Associates included 326 linear feet of 6-inch x 6-inch exfiltration trench and three drainage wells.

Project Cost

\$48,878 (fee)
\$217,940 (construction)

Client

City of Fort Lauderdale
Public Works Department
100 N. Andrews Avenue
Fort Lauderdale, Florida 33301



Consumptive Use Permit Renewals

Hallandale Beach and West Palm Beach, FL

GMAwater was instrumental in aiding the Cities of Hallandale Beach and West Palm Beach with the modeling analyses required for their successful renewal applications for long-term consumptive use permits.

Hallandale Beach

The purpose of this project was to maximize the use of existing treatment infrastructure and new withdrawal facilities and aid the City of Hallandale Beach with securing a long-term consumptive use permit (CUP). GMAwater efforts included modeling services to achieve compliance with restricted area allocation rules, saline water intrusion, and pollution.

GMAwater also conducted modeling analyses to maximize use of the Biscayne Aquifer and evaluate the feasibility of increasing withdrawals with impacts offset by a surface water reservoir. Analyses included the following key elements:

- Numerical modeling using the best available information for proposed groundwater withdrawals to determine impacts to the Regional System.
- Investigations of saltwater intrusion and pollution sources and impacts on water supply.

- Assessment of compliance with restricted allocation area criteria (Regional Water Availability Rule), which is a limiting factor for additional groundwater use.
- Determination of multiple withdrawal configurations to minimize the potential for impacts.

West Palm Beach

GMAwater authored technical memorandum in support of the City of West Palm Beach's application for CUP renewal. Their analyses were instrumental in extending the permit duration to 30 years with an alternative water supply and calculating future demands to support infrastructure improvements. GMAwater also helped the City protect base condition water use from potential reductions caused by South Florida Water Management District (SFWMD) rule criteria.

Project Cost

\$25,000 (fee: Hallandale Beach)
\$40,000 (fee: West Palm Beach)

Client

City of Hallandale Beach
630 NW 2nd Street
Hallandale Beach, FL 33009

Palm Beach County Water Utilities
8100 Forest Hill Blvd
West Palm Beach, FL 3341



North Regional Wastewater Treatment Plant – Solids and Fine Bubble Projects

Broward County, FL

Florida Engineering & Testing, Inc. (FE&T) was engaged by Hazen and Sawyer on a Solids project and a Fine Bubble project, which were part of an overarching program to provide engineering services for facilities improvements at the 95-mgd North Regional Wastewater Treatment Plant (NRWWTP) in Broward County.

Solids Project: The solids treatment facilities at the NRWWTP included biosolids thickening, stabilization, and dewatering facilities that required updating. Improvements included installing dissolved air flotation (DAF) pumps and equipment, digester covers, digester gas mixing systems, digester sludge equipment, gas piping, belt filter presses and two new centrifuges.

Fine Bubble Project: The NRWWTP biological treatment system is comprised of five treatment modules that were converted

from mechanical surface aeration to fine bubble diffused aeration. Updates involved related blower, electrical, and yard piping modifications.

FE&T was tasked with the performance of construction materials testing in support of planned facilities improvements. Materials testing included proctor tests, Limerock Bearing Ratios (LBRs) tests, density tests, and compressive strength testing of concrete cylinders, among others.

Project Cost

\$53 million

Client

Owner/Client:
Broward County Water and
Wastewater Services
2555 West Copans Road
Pompano Beach, FL 33069

FE&T acted a subconsultant to:
Janeen Wietgreffe
Project Director
Hazen and Sawyer
4000 Hollywood Blvd
Suite 750
Hollywood, FL 33021



ECRWF Headworks Bypass/Aeration Basin 5 Upgrades Project

West Palm Beach, FL

The project consisted of construction of a New Headworks Bypass System, as well as upgrades to existing Aeration Basin No. 5, and expansion of the electrical power distribution from the existing Blower Electrical Building to Aeration Basin No. 5 equipment.

The work of the project comprised the following items:

- New Headworks Bypass System, including modifications to the existing bypass structure at Aeration Basin No. 5, a new coarse screenings facility, Junction Box No. 3, and associated gates, valves, bypass piping, electrical and controls.
- Upgrades to existing Aeration Basin No. 5, including removal of grit and debris from the aeration basin, structural demolition, new baffle walls and walkways, fine bubble diffusers, process air piping and valves, pipe supports, anaerobic zone and swing zone vertical mixers and modifications to the influent and effluent structures.
- Electrical power distribution from the existing Blower Electrical Building to Aeration Basin No. 5 equipment.
- Instrumentation and controls to implement automated and manual master aeration controls for Aeration Basins No.'s 1-5 and existing aeration blowers.
- Site work, including but not limited to, new process yard piping, grading, and paving.

Corporate Project Services, Inc. created a document management system, uploading project specifications and drawings into the PMIS, and processed project documentation, including submittals and requests for information, and created project user accounts and provided training.

Project Highlights

- Created a document management system, including uploading project specifications and drawings into the PMIS
- Processed project documentation, including submittals and requests for information
- Created project user accounts and provided training

Project Cost

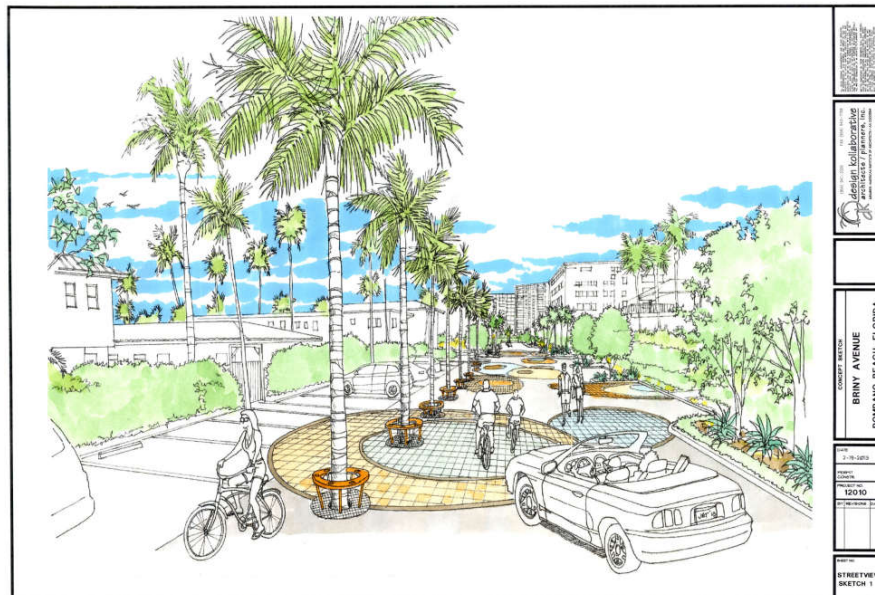
\$24.9 million

Client

City of West Palm Beach
Engineering and Public Works
Department
4375 Easley Drive
West Palm Beach, FL 33417



**BRINY AVENUE POMPANO BEACH
COMPLETE STREETS – SHARED ROAD
STREETScape AND UNDERGROUNDING**



BUDGET \$5,000,000

DURATION 39 Months

200 NE 1st AVENUE * SUITE 115 * POMPANO BEACH, FLORIDA 33060

PHONE:954/941-3329

E-MAIL: dk@dk-group.com

FAX:954/943-7708



9. Resumes of Key Personnel



Management Team Resumes





Janeen Wietgreffe, PE, PMP

Principal-in-Charge

Ms. Wietgreffe has extensive experience in the design, piloting, construction oversight, and/or testing of membrane plants in South Florida for over 21 years. She has served in capacities ranging from Project Director and Lead Process Mechanical Design Engineer to Project Manager and Design Manager.

Education

MS, Environmental Engineering,
University of North Carolina, 1997

BS, Environmental Engineering,
University of Florida, 1995

Certification/License

Professional Engineer: FL, NY

Project Management Professional (PMP)

AWWA Utility Risk and Resilience
Certificate

Areas of Expertise

- Design of Advanced Water Treatment Processes
- Membrane Treatment Process Design
- Water Resource Engineering and Planning
- Planning, Design, and Construction Administration of Water and Wastewater Treatment Facilities
- Quality Assurance

Experience

- 29 total years
- 24 years with Hazen

Professional Activities

American Water Works Association
Southeast Desalting Association
Water Environment Federation
American Society of Adaptation
Professionals

VALUE TO POMPANO BEACH

- Authority to ensure that the Hazen team provides the resources to meet the requirements of this project.
- Understands the historic trends of the Biscayne Aquifer and permitting requirements.
- Previous design, piloting, and/or testing of membrane plants.
- Previous pilot and operational assistance provides insight for sulfuric acid and antiscalant addition.

Membrane Softening Facility, City of Hallandale Beach, FL

Project Manager/Process Mechanical Engineer. The City retained Hazen to provide pilot testing, design, bidding, permitting, and construction management services for a new 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at its water treatment plant. Total buildout capacity of the new membrane facility will be 13 mgd, which includes up to 4 mgd of brackish water reverse osmosis treatment capacity. Hazen completed design, permitting, and construction oversight of the membrane facility. Ms. Wietgreffe provided process mechanical support throughout the design, construction, and startup phases, as well as construction management/office services.

14.5-mgd Nanofiltration Facility Design, Town of Jupiter, FL

Project Manager/Process Mechanical Engineer. Ms. Wietgreffe provided process mechanical support throughout the predesign and design phases. The Town added a \$38 million nanofiltration facility to treat the surficial aquifer. The nanofiltration treatment was designed to blend with ion exchange and reverse osmosis.

Peele-Dixie Membrane Plant, City of Fort Lauderdale, FL

Project Manager/Process Mechanical Engineer. Ms. Wietgreffe served as Project Manager and Process Mechanical Engineer for design and construction oversight services included a 12-mgd membrane softening facility, two 4-MG storage tanks, related chemical storage and feed facilities, air strippers/clearwell, concentrate booster, and high-service transfer pump stations. Ms. Wietgreffe also completed startup and completion activities for this facility.

Janeen Wietgreffe, PE, PMP

Membrane Conceptual Analysis, Town of Davie, FL

Project Manager/Process Mechanical Engineer. Ms. Wietgreffe served as Project Manager and Process Mechanical Engineer for the comprehensive evaluation of nanofiltration at the conventional water treatment plant for the Town of Davie. She performed an engineering analysis of the feasibility of incorporating a 4-mgd nanofiltration treatment facility with the lime softening plant; sized nanofiltration equipment, including pretreatment and post-treatment facilities, and prepared a conceptual cost estimate; and directed a single element pilot for the Town of Davie and led process mechanical design through conceptual and 30-percent stages.

Membrane Softening Facility Expansion,

City of Plantation, FL

Project Manager. Ms. Wietgreffe served as Project Manager for expansion of the City of Plantation's existing 6-mgd membrane softening facility to 12 mgd. This project included the addition of three 2-mgd hybrid membrane arrays, a third membrane booster pump, and the addition of a permeated flushing system within the existing membrane building. Additionally, a 12-mgd firm capacity transfer pump station and 18-mgd firm capacity high-service pump station were also constructed under this project.

Water Master Plan, City of Plantation, FL

Project Director. Hazen was responsible for development of a Master Plan that defines short- and long-term planning goals through the year 2040, including goals that serve to optimize operation and management of the City's entire water system. Hazen utilized InfoWater for development and calibration of a new water distribution system hydraulic model.

Water and Wastewater Continuing Engineering Services, City of Plantation, FL

Project Manager. Since the 2000s, Hazen has been providing general consulting engineering services to

the City. As Project Manager, Ms. Wietgreffe provides multiple engineers to assist with operational assistance at the East and Central membrane plants and at the Regional Wastewater Treatment Plant, as well as complete design through construction management services for various facility projects.

Alternative Water Supply Plan, City of Stuart, FL

Project Engineer. Ms. Wietgreffe served as a Project Engineer for the City's alternative water supply plan, responsible for criteria development, criteria weighting, and analysis of the alternative water supplies per the developed criteria and weights. This project focuses on master planning new Upper Floridan Aquifer water supply wells, reverse osmosis treatment facilities, and concentrate disposal. Wells in the Upper Permeable Zone (UPZ) and the Avon Park Permeable Zone (APPZ) were evaluated. Groundwater modeling found that the water quality of the APPZ would degrade rapidly; UPZ water quality would degrade at much slower rate. Planning included construction cost estimating, phased implementation scheduling, bid package identifications, State Revolving Fund application assistance, and financial analysis of rate adjustment to fund the investment.

Countywide Risk Assessment and Resilience Plan, Broward County, FL

Deputy Project Manager. The project involved the development of a cutting-edge, actionable, resilient infrastructure resilience plan inclusive of redevelopment strategies consisting of a visualization platform to aid regional planning and project tracking and written plan. This provided the foundation for collective mitigation of future flooding, inclusive of water management infrastructure, transportation systems, critical infrastructure, green infrastructure, land use, basin-scale redevelopment, and land use planning based on a comprehensive countywide risk assessment.



Monica Pazahanick, PE

Project Manager

Ms. Pazahanick has 18 years of experience in the field of water and wastewater treatment. Her work includes planning, design, permitting, bidding, and construction management services for treatment plants, pump stations, and chemical systems.

Education

MS, Environmental Engineering,
University of Arkansas, 2007

BE, Environmental Engineering, Catholic
University of Bolivia, Cochabamba,
2004

Certification/License

Professional Engineer: FL, AR

Areas of Expertise

- Water and Wastewater Process and Mechanical Design

Experience

- 18 total years
- 9 years with Hazen

Professional Activities

American Water Works Association
American Membrane Technology
Association

VALUE TO POMPANO BEACH

- Experience managing and leading projects, which have included elements of preliminary design, detailed design, permitting, bidding, and construction management.
- Has worked with a number of Florida clients on projects involving membrane treatment, reverse osmosis, and conventional lime softening.
- Project Manager for several projects for the City of Pompano Beach including the Water Treatment Plant Evaluation, Reuse Treatment Facility Permit Renewal, and Concentrate Disposal Evaluation projects. "under previous employment"

Lime Softening vs Nanofiltration Water Treatment Plant Evaluation, City of Pompano Beach, FL *

Project Manager. This project included inspection of existing facilities, evaluation of the lime softening water treatment plant current conditions and upgrade recommendations for the next 20 years. The project also included cost comparison of nanofiltration water treatment plant expansion versus upgrading the lime softening plant, including operational costs, and identification of advantages and disadvantages; and evaluation of incorporating ion exchange within the existing treatment processes.

Reuse Treatment Facility Permit Renewal, Pompano Beach, FL *

Project Manager. This project includes the preparation of permitting package, inspection of existing facilities, development of permit modification documentation as well as coordination between the City and FDEP.

Southern Region Water Reclamation Facility (SRWRF) Headworks and Effluent Pumping Improvements, Palm Beach County, FL

Process Mechanical Design Lead. Ms. Pazahanick served as Process Mechanical Design Lead for this project, which included detailed design, cost estimating, permitting, bidding services, and construction management administration for the replacement of three existing influent screens with four, new center flow band screens with integral washer compactors,

*Experience prior to Hazen

Monica Pazahanick, PE

automated screenings and grit conveyance and loading systems, and screenings plugging monitoring. The project also includes replacement of an existing 25-Hp effluent transfer pump with a new 200-Hp vertical turbine pump with associated variable frequency drive to match existing 200-HP effluent transfer pumps. A detailed sequence of construction and project constraints were developed for the SRWRF headworks improvements to allow construction while maintaining plant operations.

Concentrate Disposal Evaluation, City of Pompano Beach, FL *

Project Engineer. Ms. Pazahanick served as Project Engineer for this project, which included the economical and non-economical evaluation of alternatives for concentrate disposal during emergency events, and evaluation of using concentrate blending with effluent from the City's reuse facility.

Owner's Representative for Design-Build Construction of a New Membrane Water Treatment Plant, City of Delray Beach, FL

Deputy Project Manager. As the City's Owner Representative, Ms. Pazahanick and the Hazen team provide technical assistance to the City through multiple project phases. Some of the specific tasks include the evaluation/validation of treatment alternatives, development of progressive Design-Build documents for advertisement, assistance in the review of documents provided by the proposers, assistance in the development and technical review of scope of work and fees from the selected Design-Build team, preparation and provision of the project to the City Commission, facilitating funding assistance, and managing document control. Phase 1 support services include engineering services during the pre-design phase, Phase 1 detailed design, and schedule and cost reviews.

Greenfield Reverse Osmosis Water Treatment Plant and Production Wells, City of West Melbourne, FL

Process Design Lead. This project includes design of a new 5-mgd greenfield reverse osmosis membrane WTP and four Floridan aquifer water supply wells, along with three monitoring wells. The WTP design includes four treatment trains with the ability to add a train for future expansion. The WTP will include pre-treatment systems, post-treatment systems consisting of degasifiers and

clearwell, chemical feed systems, storage, and high-service pumping necessary to produce high quality, finished water. Hazen provided engineering services including design, permitting, and bidding for the WTP.

Building 11 Improvements and Rehabilitation, City of Boca Raton, FL

Project Manager. Ms. Pazahanick serves as Project Manager for the City's Water Treatment Plant Building 11 Improvements and Rehabilitation preliminary and detailed design. Building 11 is the lime softening treatment process chemical building housing the lime, polymer, and brine process mechanical equipment, ancillary equipment as well as the electrical room. This project includes full rehabilitation and hardening of the building as well as replacement of the process mechanical equipment, electrical and I&C. Ms. Pazahanick directly coordinated design elements between the design team and the City. She currently serves as Project Manager for construction management services, where she coordinates construction coordination activities between the Contractor and the City, monitors project schedule and budget, and closely coordinates and communicates with the design discipline leads for proper inspection and compliance with design requirements.

South County Regional Water Treatment Plant Water Quality Evaluation, Collier County, FL

Project Manager. The project involved evaluation of different treatment technologies used for the removal of organics that would allow the plant to use free chlorine as the primary disinfection method. As part of this project, pilot testing and desktop evaluations were performed to determine the performance of three different alternatives, including fluidized and fixed bed ion exchange (IX) as pretreatment to lime softening and nanofiltration membranes in combination with IX.

Springtree Reverse Osmosis WTP, City of Sunrise, FL

Design Engineer. This project included preparation of construction drawings and specifications for a 3-mgd treatment capacity with 1.5 mgd installed during Phase 1. The project design included conversion of an ASR well to a Floridan aquifer production well, pre-treatment (sand strainers and cartridge filters), 2-stage reverse osmosis membrane treatment, post-treatment (degasification and air scrubbers), and chemical systems.



Anthony Niemiec, Jr., PE, BCEE

Assistant Project Manager

Mr. Niemiec has worked on a variety of water, wastewater, and reuse projects including new facilities and rehabilitation and upgrades. His expertise includes design, project management, construction management, and applied research.

Education

MS, Environmental Engineering, Manhattan College, 2015

BS, Civil Engineering, Manhattan College, 2014

Certification/License

Professional Engineer: FL

BOEE Diplomate, American Academy of Environmental Engineers (DEE), 2024

Areas of Expertise

- Project Management
- Construction Management
- Wastewater Process
- Wastewater Treatment Plant Design
- Pump Station Design
- Hydraulics

Experience

- 11 total years
- 10 years with Hazen

Professional Activities

American Water Works Association

Florida Water Environment Association

American Society of Civil Engineers

Chi Epsilon (Civil Engineering Honor Society)

VALUE TO POMPANO BEACH

- Proven leadership for treatment plant upgrades, pump stations, and deep injection wells — ensuring regulatory compliance and operational efficiency.
- Cost-effective design and construction management, with experience delivering infrastructure improvements under tight schedules and funding constraints.

Miramar Wastewater Reclamation Facility Reuse Expansion to 7.5 mgd, City of Miramar, FL

Project Engineer/Resident Engineer. Mr. Niemiec served as Project Engineer for the City's Wastewater Reclamation Facility Reuse Expansion project. The reuse facilities were expanded from 5 mgd to 7.5 mgd. Mr. Niemiec also served as Resident Engineer during construction of the reuse system. The expansion included two filter feed pumps, sand filters, improvements to the existing sodium hypochlorite system, a 900,000-gallon prestressed concrete ground storage tank, and high-service pumps.

Continuing Consulting Services for Water, Wastewater, Wastewater Reuse, and Natural Gas Utilities Projects, City of Sunrise FL

Project Manager/Lead Engineer. Hazen has served as a professional engineering consultant to the City of Sunrise on water and wastewater infrastructure projects since 2004. Mr. Niemiec has provided services on this general consulting contract since 2017, and has served as Deputy Project Manager for Hazen's overall contract since 2021. He has served as Project Manager on multiple projects, including the Springtree WTP Electrical Upgrades Phases 1 and 2, LS 299 Wastewater Transmission System Hydraulic Analysis, Evaluation of the Disposal Capacity at Southwest WWTP, and Wastewater Transmission System Remote Flow Monitoring Study.

Sunrise Southwest WWTP Injection Well and Injection Well Pump Station Preliminary Design Report, City of Davie, FL

Project Engineer. Mr. Niemiec is serving as the Engineer of Record for the Injection Well Pump Station component of the project. The City currently discharges high level disinfection quality effluent to rapid infiltration basins. The project includes design, permitting, and bidding services for a Florida Department of Environmental Protection (FDEP) Underground Injection

Anthony Niemiec, Jr., PE, BCEE

Control (UIC) Class I deep injection well, monitoring well, surface facilities to serve as the primary disposal location for SW WWTP treated effluent. Surface facilities include a effluent disposal force main and injection well pump station.

Water Storage Tank Replacement Design, Cooper City, FL**Project Engineer/Resident Project Representative.**

Mr. Niemiec served as Project Engineer for the planning, design, permitting, bidding, and construction of the replacement of the City of Cooper City's 0.5-MG finished water storage tank. As a result of routine annual inspections, the City determined the existing steel storage tank should be replaced with a new 0.5-MG prestressed concrete tank.

PS 28 Rehabilitation CMS, City of Miami Beach, FL

Engineer-of-Record. Engineer-of-Record for rehabilitation of the Pump Station 28, which is the largest wastewater pump station in the city. The scope of the project includes the replacement of three 250 HP dry pit sewage pumps, three 350 HP booster pumps and all associated mechanical piping and valving, rehabilitation and hardening of the existing influent screening structure and dry pit below grade pump room, new odor control system, and all new electrical systems and components housed in a new electrical/generator building that meets current flood elevation requirements. The project also includes design of approximately 1,050 linear feet of 30-inch force main to replace an existing force main that has reached the end of its useful life.

Hollywood Reservation 3-mgd WWTP, Seminole Tribe of Florida, Hollywood, FL

Project Engineer. Project Engineer for civil, mechanical, and process design of a new 3-mgd wastewater treatment facility. The project includes pretreatment grit removal and screening facilities, odor control, sequence batch reactors, digesters, effluent pump station, and chemical storage and feed facilities. The project also includes aeration blower facilities, RAS and WAS facilities, an on-site lift station, electrical and emergency generator facilities, deep injection well pump station and monitoring well facilities.

Evaluation of the Disposal Capacity at Southwest WWTP, City of Sunrise, FL

Engineer-of-Record. Mr. Niemiec served as a Project Engineer for the design, permitting, bidding and construction of the disposal capacity at Southwest WWTP, Hazen and Sawyer

tion of two 8-inch Return Activated Sludge (RAS) gravity lines and installation of a 12-inch potable water main loop to be located at the Southwest WWTP and surrounding residential neighborhood. The work included replacing pipelines, installing interconnecting, valves, and modification to the RAS Pump Station wet well. Services provided included surveying, civil engineering design, permitting, coordination with utility providers for adjustments and or relocations, preparing quantity calculations, engineers estimate of probable costs, and bidding assistance.

Sunrise Sawgrass WWTP Dissolved Air Flotation Thickener Improvements Design, City of Sunrise, FL

Project Manager/Engineer-of-Record. Design of all process mechanical improvements at the City's WWTP's existing dissolved air flotation (DAF) thickening building. Improvements includes replacement of the two (2) parallel DAF thickening treatment units. Each DAF thickening treatment unit consists of a pressure retention tank, back-pressure control valve, recirculation pump, flotation tank, and longitudinal sludge skimmer. The DAF facility also requires appurtenant equipment, including two (2) polymer feed skids, three (3) WAS feed pumps, four (4) TWAS pumps, and two (2) air compressors.

North Regional Wastewater Treatment Plant (NRWWTP) Facility Improvements – Phase III (5) Biological (95 mgd), Broward County, FL

Project Engineer. Mr. Niemiec served as Project Engineer for improvements to the biological facilities at the NRWWTP. His responsibilities included detailed design for replacement of scum pumps, waste activated sludge pumps, return activated sludge pumps, and installation of various flow meters, control valves, and other ancillary facilities.

Sunrise Sawgrass WWTP Headworks Influent Piping Improvements CMS, City of Sunrise, FL

Project Engineer. Mr. Niemiec assisted with construction administration services for this project, which included the following: installation of above ground influent piping to the headworks, abandon sections of influent piping which is routed under the Headworks Building, reroute influent piping for improved access to isolation valves, provide structural design of stairs between the existing headworks upper level and aeration basin upper deck for staff cross access, demolish old headworks and replacement of the facilities 36-inch influent flow meter assembly.



Monique Durand, PE

Water Lead; Water Process Mechanical; Master Planning/
Feasibility Study

Ms. Durand has 22 years of experience in the planning, design, permitting, bidding/award, and construction management of water treatment facilities, including LCRR and groundwater rule compliance, master planning, and water supply planning and evaluation.

Education

MS, Environmental Engineering, Virginia Tech, 2005

BS, Environmental Science, Midwestern State University, 2003

Certification/License

Professional Engineer: FL

Areas of Expertise

- Water Treatment Plant Design and Construction
- Water Supply Planning
- Chemical Systems
- Groundwater Rule Compliance
- Lead and Copper Rule Compliance
- Construction Administration of Water Supply Facilities
- Taste and Odor Issues

Experience

- 22 total years
- 19 years with Hazen

Professional Activities

American Water Works Association

Water Environment Federation

National Forum for Black Public Administrators

VALUE TO POMPANO BEACH

- Works directly on City of Plantation East and Central membrane treatment plants, providing continuous operational assistance, and recently completed design and construction oversight of chemical system replacement for East WTP.
- Currently involved in PFAS projects for the Cities of Plantation and Hollywood.

East Water Treatment Plant Chemical Storage Facilities, City of Plantation, FL

Project Manager. Ms. Durand oversaw the design of improvements to six chemical storage facilities at the East WTP. She was also responsible for overall project management and multidisciplinary design coordination. Her responsibilities included preparation of preliminary basis of design report, detailed design of associated improvements to chemical systems, preparation of detailed design/bid drawings and technical specifications, preparation of permitting submittals, participation in meetings with regulatory agencies, and responding to requests for additional information submitted by regulatory agencies. Ms. Durand serves as Project Manager for the construction of these improvements.

West Water Treatment Plant Chemical Systems Replacement, City of Deerfield Beach, FL

Project Manager/Lead Project Engineer. Ms. Durand is leading the design of upgrades to chemical systems at the Deerfield Beach West WTP, including nanofiltration and reverse osmosis chemical facilities. Her project responsibilities include preparation of preliminary Basis of Design Report, detailed design of associated improvements to chemical systems, preparation of detailed design/bid drawings and technical specifications, preparation of permitting submittals, participation in meetings with regulatory agencies and response to requests for additional information submitted by regulatory agencies. Ms. Durand is also responsible for the overall project management and multidisciplinary design coordination.

Monique Durand, PE

PFAS Removal and Regulatory Compliance Evaluation, *City of Hollywood, FL*

Project Manager. The City owns and operates a series of potable water supply wells where PFAS has recently been detected. This multi-phase project includes planning through construction and startup services for improvements to the existing WTP to remove PFAS to below the regulatory limits.

Engineering Services for Water Treatment Plant Improvement, *City of North Lauderdale, FL*

Project Manager. The City owns and operates a series of potable water supply wells and treats the Biscayne Aquifer well water through lime softening. Per- and polyfluoroalkyl substances (PFAS) have recently been detected in the City's wells. The City's existing lime softening WTP cannot remove these contaminants. Ms. Durand serves as Project Manager and will oversee professional engineering services including, but not limited to, water supply planning, water quality analysis, treatment process evaluation, pilot testing, preliminary design report, detailed design, technical specifications, contract documents, permitting, bidding, and funding identification and application assistance.

Hollywood Water Treatment Plant Improvements, *Seminole Tribe of Florida, Hollywood, FL*

Project Engineer. The project involved development of a conceptual design report for improvements to the Hollywood WTP. Project scope included an assessment of overall plant safety, reliability and redundancy, recommendations for improving chemical storage and feed facilities, recommendations for a new raw water supply well, assessment of membrane treatment facilities, and evaluation of finished water quality goals.

Water Supply Facilities Work Plan Update, *Cities of Hallandale Beach and Plantation, FL*

Project Manager/Lead Engineer. Ms. Durand served as Project Manager and Lead Project Engineer for the preparation of the 10-year Water Supply Facilities Work Plan for the City of Hallandale Beach and the City of Plantation. The Plan assessed projected water demands and potential alternative sources of water for each City. Project responsibilities included preparation of the

updated Work Plan, coordination with regulatory agencies and client, participation in review meetings, and assistance with Comprehensive Plan updates.

Winson Water Treatment Plant Bid Package 1: Filter Rehabilitation, *City of North Miami, FL*

Project Manager. Ms. Durand oversaw construction administration for the rehabilitation of the filters at the Winson WTP, which included replacement of filter media, surface wash agitator system, underdrains, and filter pipe gallery for four existing filter basins. Her responsibilities included general project management, shop drawing and other submittal review; contract interpretation and clarification; evaluation of change orders; periodic field visits; project progress meeting coordination; startup and testing coordination; and project closeout.

Water Master Plan, *City of Plantation, FL*

Project Manager/Lead Project Engineer. The Water Master Plan provided the City with a comprehensive evaluation of their water supply, treatment, storage, and distribution systems. Ms. Durand's responsibilities included development and use of a distribution system hydraulic model, review of historical water quality data, and identification of capital improvement needs relative to maintaining the reliability of the water system components through the year 2040.

Lead and Copper Rule Revision Compliance Project, *City of North Lauderdale, FL*

Project Manager. Hazen is providing the City of North Lauderdale a holistic strategy to be in compliance with the LCRR that includes development of a lead service line (LSL) Inventory, detailed LSL Replacement Plan, and updated sample plans that reflect revised sample location criteria with inclusion of schools and daycares. Hazen will also assist the City with a public relations campaign and explore all viable funding sources for the City's LCRR compliance program.



Alonso Griborio, PhD, PE

Reuse Water Lead

Dr. Griborio has over 30 years of experience in wastewater treatment plant assessment and optimization. He brings deep technical expertise in water reuse, demonstrated through his contributions to numerous initiatives across Florida, including recent leadership of the City of Margate's Reuse Feasibility Study.

Education

PhD, Engineering and Applied Sciences, University of New Orleans, 2004

MS, Environmental Engineering, Universidad del Zulia, Venezuela, 2000

BS, Civil Engineering, Universidad Rafael Urdaneta, 1994

Certification/License

Professional Engineer: FL, NY, LA

Areas of Expertise

- Design
- Modeling
- System startup

Experience

- 30 total years
- 19 years with Hazen

Professional Activities

American Water Works Association

Water Environment Federation

Florida Water Environment Association

Louisiana Professional Engineering and Land Surveying Board

VALUE TO POMPANO BEACH

- Internationally-recognized expert in wastewater treatment and water quality assessment.
- Specialization in the planning, analysis, and design of municipal and industrial wastewater facilities.
- Extensive experience in the design, startup, and optimization of wastewater treatment and water reuse systems.

Margate WWTP Reuse Feasibility Study, City of Margate, FL

Project Manager and Technical Lead. Dr. Griborio led the City of Margate's Reuse Feasibility Study, a critical component of the City's wastewater treatment plant permit renewal. The study provided a comprehensive evaluation of reclaimed water alternatives, including effluent management strategies and the technical and financial feasibility of multiple reuse scenarios—from no action to reuse of over 75% of the average annual daily flow. The facility, composed of two semi-independent treatment trains, does not currently operate a reuse program. The study was developed in accordance with Florida Department of Environmental Protection guidelines and supports regulatory compliance and long-term planning for sustainable water reuse.

North Regional Wastewater Treatment Plant Reclaimed Water Expansion, Broward County, FL

Project Engineer, Startup and Commissioning Support. Dr. Griborio supported the startup and fine-tuning of the North Regional Wastewater Treatment Plant's Reclaimed Water Expansion project, which increased reclaimed water capacity to 26 mgd. His involvement focused on optimizing system performance during commissioning, ensuring that operational parameters for the continuous backwash sand filters, chlorine contact basins, chemical dosing systems, and filter feed controls were aligned with design intent and regulatory requirements. Dr. Griborio collaborated closely with the operations team and design engineers to troubleshoot and refine system functionality, contributing to a smooth transition from construction to full-scale operation.

Alonso Griborio, PhD, PE

Thomas P. Smith Water Reclamation Facility Upgrades, City of Tallahassee, FL

Process Engineer / Lead QC Engineer. Hazen provided design, permitting, and full construction-phase services for the Thomas P. Smith Water Reclamation Facility (TPSWRF) Improvements Project. The TPSWRF, rated at 26.5 mgd on an AADF basis, utilized an activated sludge process to produce secondary effluent. To reduce nutrient loading to the Southeast Farm Sprayfield, the entire plant was upgraded to Advanced Wastewater Treatment (AWT) standards. The project also involved new biosolids processing facilities since the City eliminated land application of Class B biosolids as part of this project. Dr. Griborio served as Process Engineer for field stress testing and development of a calibrated CFD modeling for six existing secondary clarifiers as part of a complete upgrade from secondary treatment to enhanced BNR. He also participated as QC Engineer for the civil/mechanical design.

Wastewater Reclamation Facility Capacity Analysis and Re-Rating, City of Miramar, FL

Lead Process Engineer. Hazen assisted the City of Miramar in determining the capacity required at the Wastewater Reclamation Facility (WWRF) through the planning year 2045. This included validating population projections previously prepared by the City, hydraulic and BioWin modeling of the WWRF to determine treatment limitations, performance of a capacity analysis for each unit process, performance of a condition assessment of major equipment and unit processes, and development of a final Capacity and Re-Rating Report to summarize the results.

Southwest WWTP Repair and Replacement Upgrades and High-Level Disinfection/Reuse Facilities, City of Sunrise, FL

Process Engineer. Hazen provided design, permitting, and full construction-phase services for the Southwest WWTP repair and replacement upgrades and reuse facility improvements. This project includes rehabilitation of two oxidation ditches, two secondary clarifiers, new RAS pump station, new headworks structures and new filtration and chlorination facilities for the upgrade of this 0.99 mgd plant to high level

disinfection. Dr. Griborio served as Process Engineer during the start-up of the facility, helping the City's staff to get into compliance with effluent requirements and providing training for O&M related activities.

North Regional Wastewater Treatment Plant, Broward County, FL

Process Engineer. Dr. Griborio was responsible for designing and implementing a monitoring plan to test the ability of this plant to operate under biological nutrient removal mode and to determine cost-effective process modifications that would achieve the necessary reduction in nutrient loadings. The team led by Dr. Griborio conducted a field investigation that included data collection and in-situ analyses using portable laboratory equipment, and additional analyses by outside laboratories. This project, conducted over a period of 6-months, showed that 70% removal in total nitrogen and total phosphorus could be achieved with minor process modifications and no capital expenditure. Dr. Griborio also participated in additional process modeling and analysis of the BNR options using BioWin to show that lower effluent limits could be achieved by installing baffles and an internal nitrified recycle flow.

Regional Wastewater Treatment Plant Diffused Aeration Upgrades, City of Plantation, FL

Project Manager and Process/Mechanical Engineer. Dr. Griborio served as Project Manager and Process/Mechanical Engineer for various WWTP upgrades that included the conversion of mechanical surface aerated basins to fine-bubble diffused aeration. The project included installation of four multi-state centrifugal blowers, process air piping, fine bubble membrane disc diffusers, automatic dissolved oxygen control, swing-selector zones and activated sludge diffusion for the treatment of the headworks foul air. During design, it was estimated that this project would result in electrical and chemical cost savings of over \$200,000 per year. After project construction, the energy bill for the plant confirmed the estimated savings.



Patrick Davis, PE

Technical Advisory Committee

With 45 years of Florida-specific experience, Mr. Davis has assumed a leading role in assisting public utilities and providing regulatory advice on water supply and treatment issues, as well as all facets of wastewater rules.

Education

BS, Civil Engineering, University of Massachusetts, 1980

Certification/License

Professional Engineer: FL, NY, MA, VA, NC

Areas of Expertise

- Planning, Permitting, Design and Construction of Wastewater, Water and Stormwater Facilities
- Water Resource and Reuse Planning
- Project Management

Experience

- 45 total years
- 43 years with Hazen

Professional Activities

American Society of Civil Engineers

American Water Works Association

- National AWWA Dual Distribution Committee

ASHRAE, NSPE, TAPPI

Underground Injection Practices Control

Water Environment Federation

VALUE TO POMPANO BEACH

- Has served as project director on over \$900 million of public works construction and has been involved in an engineering capacity on over \$1.6 billion of constructed local public works projects in Florida.
- Works closely with State and Federal Regulatory Agency officials on permitting and policy issues.
- Expert on wastewater effluent management issues, notably those related to reuse (filtration/high level disinfection).

Broward County Regional Reuse Master Plan, Broward County, FL

Project Director. Mr. Davis served as Project Director for the development of a Regional Reuse Master Plan as mechanism to enhance and proliferate the existing reclaimed water infrastructure throughout the County. Following a series of stakeholder workshops, which including input from over 28 municipalities, a countywide reclaimed water master plan was developed that identified the most cost-effective opportunities for reuse development in the County. The evaluation determined that large scale spray irrigation of reclaimed water was most resilient to the effects of climate change.

South Central Regional Wastewater Treatment and Disposal Board (SCRWT&DB) 100% Reuse, Cities of Boynton Beach and Delray Beach, FL

QA/QC. Hazen provided funding assistance, preliminary design, design, permitting, bidding, and construction phase engineering services associated with all necessary improvements, upgrades, and expansions to produce 100% reuse. This consisted of a 2 mg and a 3 mg above-ground storage tank as well as additional reuse distribution pumps to serve the expanded off-site reuse customer base within the Cities of Boynton Beach and Delray Beach, Florida.

Countywide Water Recycling Feasibility Study, Broward County, FL

Project Director. Mr. Davis directed the study, which identified and analyzed reuse options for 13 wastewater treatment plants serving all of Broward County (over 1 million residents). The study emphasized environmental, technical, and financial feasibility of reuse of all wastewaters generated in the County and included dual distribution, industrial, commercial, wetlands,

Patrick Davis, PE

hydrodynamic saltwater intrusion barriers, and other reuse options.

6-mgd Nanofiltration (plus 6-mgd Reverse Osmosis) Membrane Treatment Facility, City of Hallandale Beach, FL

Project Director. Mr. Davis assisted the City with multiple facets of the project including negotiations with the South Florida Water Management District, testifying in court regarding technical issues related to the site acquisition of land for the concentrate disposal well, and managing the design and construction services for the membrane facility.

14.5-mgd Nanofiltration Facility, Town of Jupiter, FL

Project Director. The Town of Jupiter operates a water treatment plant with four independent treatment processes: lime softening, ion exchange, and reverse osmosis (RO) and Nanofiltration (NF). The Town retained Hazen to design, permit and oversee pilot testing and provide technical assistance during construction for its 14.5-mgd NF Facility (expandable to 17 mgd).

Water System Upgrades, City of Fort Lauderdale, FL

Officer-in-Charge. Mr. Davis was in charge of all water treatment plant study and design tasks; development of a water master plan; design/construction of the new 12-mgd Peele Dixie Membrane Treatment Facility; and rehabilitation of a 70-mgd lime-softening water treatment plant (Fiveash WTP), just to name a few. He participated in the master planning that formed the basis of the program and served as designer for all construction contracts. This contract included management and design of numerous water supply, treatment, storage and distribution projects under the City of Fort Lauderdale, WaterWorks 2011—a \$690-million citywide program management project to overhaul the City's water, sanitation, and sewer infrastructure.

Implementation of 8-mgd Reclaimed Water System, City of Hollywood, FL

Project Director. Mr. Davis conducted effluent reuse filter full-scale test studies. He directed the implementation of the City of Hollywood 8-mgd reclaimed water system. Mr. Davis also directed a

hydrodynamic salinity barrier study for the City to recycle 4 to 20 mgd of reclaimed water. Mr. Davis was in charge of the toxicity removal study for the City of Hollywood related to reuse (organo-phosphate removal).

East Water Treatment Plant and Western Membrane Softening Plant, City of Miramar, FL

Project Director. For the East WTP, Mr. Davis provided engineering services for rehabilitation of facility, which included evaluation of the existing plant and addition of two new membrane nanofiltration units to replace the current lime softening capacity. For the Western plant, he oversaw Hazen's forensic engineering work to determine the cause of several problems and to recommend remedial action.

City of Plantation Advanced Wastewater Treatment Pilot Project, Plantation, FL

Project Director. Mr. Davis served as Project Director for construction and testing of a dual membrane pilot treatment plant for the City of Plantation, which included microfiltration and reverse osmosis technology to evaluate recharging the Biscayne Aquifer with highly treated reclaimed water through surface water discharge.

East Water Treatment Plant Expansion to 12 mgd, City of Plantation, FL

Project Director. Hazen provided design, permitting, bid and award services, and construction management services for expansion of the City's existing 6-mgd membrane softening facility to 12 mgd and a new clearwell, new transfer and high service pumping facilities sized to meet the higher flow rates provided during this expansion. Services included detailed design, permitting, bid and award services for the addition of three 2-mgd NF skids (hybrid arrays), a NF booster pump, and a permeate flushing system within the existing membrane building.

18-mgd Lime Softening Water Plant Performance and Upgrade, City of North Miami Beach, FL

Project Director. Mr. Davis was responsible for reviewing the City's 18-mgd lime softening water plant performance and upgrade with respect to the SDWA regulations.

1021-761



Erik Rosenfeldt, PhD, PE

Technical Advisory Committee

Dr. Rosenfeldt's work has focused on drinking water and reuse technology, evaluating, implementing, and optimizing conventional and advanced treatment processes for a variety of water quality concerns, including PFAS and emerging contaminants.

Education

PhD, Civil and Environmental Engineering, Duke University, 2007

MS, Civil and Environmental Engineering, Duke University, 2003

BS, Chemical Engineering, Washington University, 1999

Certification/License

Professional Engineer: VA, NY, MA, MI

Areas of Expertise

- Physical/Chemical Processes
- Disinfection Byproducts
- Water Process Technology
- Bench/Pilot Testing
- Water Chemistry
- PFAS/Emerging Contaminants
- Advanced Oxidation

Experience

- 26 total years
- 15 years with Hazen

Professional Activities

American Water Works Association

Organic Contaminants Research Committee

International Ultraviolet Association

- Board Member
- Executive Operating Committee

VALUE TO POMPANO BEACH

- Hazen's Drinking Water Practice Leader and an internationally recognized expert in ozone, advanced oxidation, and biofiltration technologies.
- Extensive water quality project experience throughout Florida.
- Has designed and performed cutting edge research, along with numerous bench, pilot, and full-scale studies for evaluating the implementation of traditional and cutting-edge technologies in drinking water and reuse.

PFAS Treatment Pilot, Miami-Dade Water and Sewer Department, Miami-Dade County, FL

PFAS Expert. In response to the finalization of the National Primary PFAS Standard, the Miami-Dade Water and Sewer Department (WASD) has embarked on an aggressive piloting and technology evaluation project designed to identify, evaluate, and select treatment technology capable of meeting the new federal standards. Dr. Rosenfeldt is serving as the PFAS treatment expert, developing pilot protocols, reviewing pilot results, and leading the conceptual designs for all viable treatment options at each of WASD's three water treatment facilities.

PFAS Management Plan, WASD, Miami-Dade County, FL

Technical Lead. Miami-Dade has been proactively performing water quality sampling at the wells serving the three regional systems since 2019. The results of this sampling have indicated the presence of per- and polyfluoroalkyl substances (PFAS) in the wellfield supply water. Hazen assisted in proactively developing an understanding of PFAS occurrence patterns, wellfield management, and treatment options available for reducing levels of PFAS in the finished drinking water. Dr. Rosenfeldt was involved in developing evaluation of management and treatment options for controlling PFAS.

PFOA/PFOS Evaluation, Peoples Water Service Company, Pensacola, FL

Technical Advisor and Quality Assurance Reviewer. The project involved a study to develop a treatment concept and cost opinion of a PFAS treatment system capable of reducing PFAS concentrations at one of the client's well treatment facilities. The effort focused on developing a single treatment

Erik Rosenfeldt, PhD, PE

facility for the well with the highest PFAS concentration. Tasks includes an analysis of PFAS data, target-level determinations, short-term mitigation efforts, technology evaluations, and concept development (concept design options, layout development, and cost estimates) for long-term PFAS mitigation.

Advanced Reuse Treatment Technology Pilot

Testing, [City of Hollywood, FL](#)

Process Expert. Mr. Rosenfeldt provided technical assistance in developing, planning, and executing pilot testing of advanced treatment technologies, including ion exchange, MF membranes, UV advanced oxidation, ozone, and biological filtration with the goal of reducing levels of emerging contaminants. The project included developing novel methods for evaluating treatment efficiency for removal of emerging contaminants and for assessing biological conditions favoring both formation and degradation of nitrosamines in biological filtration.

Cyanotoxins Response Expert Panel, [City of West](#)

[Palm Beach, FL](#)

Technical Lead. The City of West Palm Beach, in response to the 2021 Cylindrospermopsin event, convened an expert panel to review the event and look for short- and long-term solutions to improve resiliency of the treatment process for cylindrospermopsin. Hazen focused on the treatment optimization and improvements, utilizing data analysis of in-plant monitoring, process modeling using the AWWA Hazen-Adams CyanoTOX tool, and bench testing to find process optimization and low-cost process improvements to greatly increase the ability of the water treatment plant for addressing cylindrospermopsin and other algal toxins. In addition, Dr. Rosenfeldt assisted the City in communicating the results of the holistic evaluation to the Mayor, City Council, and community groups.

PFAS Management and Treatment Evaluation, [City of Terre Haute, IN](#)

Technical Advisor/QA/QC. Hazen is developing PFAS management and treatment solutions for 6 groundwater facilities throughout Indiana, including understanding PFAS concentrations, performance of GAC, IX, and alternative media, developing concept-level site plans, and capital and annual operating cost estimates to

directly compare technologies for long-term PFAS treatment.

Groundwater PFAS Control, [Confidential Client, NM](#)

Treatment Evaluation Lead. Hazen developed tiered solutions for addressing near-term and long-term PFAS challenges through treatment for a >100 well groundwater system impacted by PFAS in New Mexico. Dr. Rosenfeldt evaluated treatment solutions including GAC and ion exchange technology, along with centralized vs. decentralized treatment strategies to meet current /future treatment goals. The ultimate recommendation involved conceptual design of a mobile, trailer-mounted GAC system that could be moved between impacted wells, with a plan identifying triggers for future centralized treatment.

Advanced Treatment Evaluation for Multiple Emerging Contaminants, [Fayetteville Public Works Commission, NC](#)

Technical Advisor. Hazen is assisting the utility with monitoring and treatment evaluations for unregulated contaminants of concern with known health advisory levels, including brominated DBPs, algal toxins, 1,4-dioxane, and PFAS. Treatment evaluations of technologies include ozone and UV AOP, biological filtration, and GAC and ion exchange for control of multiple emerging contaminants of concern.

Advanced Treatment Evaluation, [Raleigh Water, NC](#)

Technical Advisor. Hazen is conducting bench-scale testing of PAC to confirm doses and contact time for PFAS control at the E.M. Johnson Water Treatment Plant. The goal is to utilize an interim approach such as PAC to meet near-term requirements while investigating technologies to address future requirements. Hazen is also conducting pilot testing to assess effectiveness of innovative strategies for PFAS control, including: Replacement of existing filter media with GAC; Post-filter GAC contactors; Post-filter Ion exchange, and; Post-filter contactors with novel sorbents, such as Fluorosorb and mixed media. Pilot testing will inform opportunities for partial treatment or blending strategies to minimize new infrastructure needed to meet the proposed PFAS rule.



Darren Lytle, PhD, PE

Technical Advisory Committee

Dr. Lytle has more than 35 years of experience in drinking water treatment and distribution research, and related federal regulatory development and technical support. He currently serves as Hazen's National Water Applications Specialist.

Education

PhD, Environmental Engineering,
University of Illinois at Champaign-
Urbana, 2005

MS, Environmental Engineering,
University of Cincinnati, 1991

BS, Civil Engineering, University of
Akron, 1990

Certification/License

Professional Engineer: OH

Areas of Expertise

- Drinking Water Treatment
- Biological Water Treatment
- Inorganic Contaminant Removal
- Corrosion Control
- Water Distribution System Issues

Experience

- 35 total years
- 1 year with Hazen

Professional Activities

American Water Works Association

- Drinking Water Distribution System Research Committee
- Inorganic Contaminants Research Committee
- Biological Water Treatment Water Quality Committee

VALUE TO POMPANO BEACH

- Extensive expertise in water treatment processes and their impact on distribution system quality and material corrosion.
- Brings decades of experience from previous role at the U.S. EPA's Office of Research and Development.

Prospect Lake Clean Water Center, City of Fort Lauderdale, FL

Subject Matter Expert. Hazen is providing Owner's Representative Services for the design and construction of a new 50-mgd nanofiltration and ion-exchange WTP. This new \$670 million state-of-the-art WTP replaces the Fiveash WTP. The new Prospect Lake Clean Water Center will utilize state-of-the-art membrane and ion exchange treatment processes. This change in treatment technology warrants a comprehensive OCCT Study to ensure it is optimized to protect the City's customers. Dr. Lytle serves as the City's subject matter expert and will provide technical oversight for the study.

Lead and Copper Rule Revision (LCRR) Compliance Project, City of North Lauderdale, FL

Subject Matter Expert. The City of North Lauderdale has partnered with Hazen to address its current PFAS issue. Dr. Lytle is providing post-treatment corrosion control pipe loop testing recommendations that will help the City optimize PFAS treatment plant design to protect the City from lead and copper release.

Membrane Water Treatment Plant, City of Coral Springs, FL

Subject Matter Expert. Hazen is responsible for professional consulting services for a membrane water treatment plant (WTP). Under this effort, Hazen will be performing services related to the design, permitting and construction oversight of a 12-mgd membrane water treatment plant. Dr. Lytle will be responsible for the associated corrosion control evaluation, which consists of a corrosion desktop study, baseline tap water sampling, scale analysis of collected distribution materials, and bench-scale corrosion

Darren Lytle, PhD, PE

testing. This phase is intended to anticipate the impact of the treatment change (lime softening to membrane softening), establish a corrosion control baseline, and investigate alternative water stabilization and corrosion control treatment strategies at the WTP.

Water Quality and Distribution, City of Flint, MI

Technical Advisory Committee. Dr. Lytle was invited by the City of Flint to join the committee and provide technical advice to the committee and City through regular meetings, calls, and other requests. The committee was established to address water quality issues in Flint's drinking water distribution system and, most recently, largely publicized and widespread cases of elevated lead in residents' tap water. Major drinking water distribution system water quality changes were triggered following a change in the City's water source. The problems in Flint captured the attention of the nation.*

U.S. EPA Safe Drinking Water Act – Phase V: Lead and Copper Rule, Cincinnati, OH

Drinking Water Expert. Dr. Lytle was integral to the EPA's Lead and Copper Rule (LCR) and the revisions to the LCR under the 6-year review process. He assisted the industry by making fundamental, scientifically-based recommendations regarding chemical corrosion inhibitor dosing and the water quality changes that reduce lead and copper solubility, protecting public health.*

U.S. EPA Safe Drinking Water Act – Phase V: Arsenic Rule, Cincinnati, OH

Drinking Water Expert. Dr. Lytle was integral to the development of the EPA's Arsenic Rule, which has improved the drinking water industry by providing useful and insightful approaches regarding the most appropriate methods for helping water systems reduce arsenic levels to safe levels below the regulatory maximum contaminant level (MCL). He served as one of two leaders on the EPA's full-scale arsenic demonstration program, which was initiated by the EPA administrator and extended by Congress.*

Response to a Drinking Water Lead Emergency, Newark, NJ

Technical Expert. Dr. Lytle assisted the City of Newark, NJ with a drinking water lead emergency, and concerns over filter effectiveness and lead reduction claims. He performed field assessments including investigative lead sampling and made recommendations regarding strategies to reduce elevated lead in drinking water.*

U.S. Environmental Protection Agency Office of Research and Development, Safe and Sustainable Water Research Program, Cincinnati, OH**Environmental Engineer and National Expert.**

Dr. Lytle developed cutting edge drinking water research programs to address Federal Regulatory development processes. He managed research program budget and insured federal government service procurement requirements were met. Dr. Lytle implemented research program in a timely manner while maintaining high quality standards, and delivered research findings to government clients.*

** Experience Prior to Hazen*



J. Philip Cooke, PE

Technical Advisor Committee

Mr. Cooke has served as both a Project Manager and Project Engineer for numerous reuse water projects in Florida, particularly those serving Broward County's southern region. His additional experience includes directing the planning, design, and permitting of water and wastewater projects.

Education

ME, Environmental Engineering,
University of Florida, 1990

BS, Environmental Engineering,
University of Florida, 1989

Certification/License

Professional Engineer: FL, NY

Areas of Expertise

- Wastewater Treatment
- Wastewater Collection and Transmission
- Reuse
- Hydraulic Modeling
- Permitting
- Ocean Outfalls
- Monitoring and Remediation Studies

Experience

- 36 total years
- 35 years with Hazen

Professional Activities

American Society of Civil Engineers
Florida Engineering Society
Water Environment Federation
American Water Works Association
Construction Management
Association of America

VALUE TO POMPANO BEACH

- Serves as an expert on wastewater effluent management issues
- Served as Project Manager for the Hollywood Southern Regional WWTP Effluent Recharge Treatment Pilot Study
- Led the conceptual and preliminary design of the first irrigation reuse system for Broward's southern region

North Regional Wastewater Treatment Plant (NRWWTP) Reuse Feasibility Study, Broward County Water and Wastewater Services (WWS), FL

Engineer-of-Record. Based on previous reuse experience in southeast Florida, Mr. Cooke identified alternatives, developed conceptual designs, assessed environmental impacts, evaluated capital and operations and maintenance costs, assisted in defining necessary user charges and fees, and evaluated the technical feasibility of each reuse alternative for the NRWWTP expansion to 95 mgd.

Southern Regional Wastewater Treatment Plant (SRWWTP) Effluent Recharge Treatment Pilot Study, City of Hollywood, FL

Project Manager. As a result of 2008 legislative changes for utilities utilizing outfalls for effluent disposal, the implementation of required reuse facilities was estimated to cost SRWWTP customers \$400 million-\$1 billion. This project evaluated an innovative treatment process conceived, constructed, and operated by Hazen scientists and engineers, to cost-effectively treat saline effluents to a quality sufficient for recharging the Floridan aquifer in Broward County. The savings associated with using this process is estimated at approximately \$300 million over 20 years.

J. Philip Cooke, PE

Wastewater Reclamation Facility Reuse Expansion to 7.5 mgd, City of Miramar, FL

Project Manager. The reuse facilities were expanded from 4 mgd to 7.5 mgd. Hazen also assisted the City in obtaining a paper upgrading of existing facilities from 4 mgd to 5 mgd. New facilities included two filter feed pumps, sand filters, expansion to the existing sodium hypochlorite system, a ground storage tank, and high service pumps. Hazen provided design, permitting, bidding assistance, engineering services during construction including inspection services.

Hollywood Southern Regional Wastewater Treatment Plant Effluent Reuse Upgrade (Contract 4), Various Utilities, FL

Design Engineer. Upon completion and acceptance of the Reuse Filter Pilot Study, Mr. Cooke served as Design Engineer on the 8-mgd reclaimed water system for the SRWWTP. Due to the salinity of various contributing municipalities, the project included continuous backwash filters, filter feed pumping, chlorine contact tankage, reuse water storage, and filtered effluent pumping for both saline and low saline effluents.

Hollywood Southern Regional Wastewater Treatment Plant Effluent Blending Reuse Pilot Study, Various Utilities, FL

Project Manager. Mr. Cooke managed an effluent blending pilot study to determine the feasibility of expanding the existing SRWWTP reclaimed water system given its historic high saline effluent. Results of the study indicated that blending appeared to be a viable option to meet peak reclaimed water demands when insufficient quantities of high-quality effluent were available.

Southern Regional WWTP Reuse Water System Expansion, Phase 2, City of Hollywood, FL

Project Manager. Hazen provided detailed design, permitting, hydraulic modeling, bidding, and limited construction management services for the Phase 2 Reuse Water System Expansion at SRWWTP. Detailed design included replacement of three existing horizontal

split case pumps with new 150 horsepower pumps, variable frequency drives, and a new air conditioning system for the electrical room.

SRWWTP Reuse Master Plan, Various Utilities, FL

Project Manager. Mr. Cooke managed a comprehensive reuse planning effort for the SRWWTP wastewater facility permit renewal to identify alternatives for expansion of the existing reuse system and to determine the feasibility of implementing the most practical options.

Miramar Capacity Analysis and Up-Rating Report, City of Miramar, FL

Project included the capacity analysis, evaluation, and re-rating of the City's WWRF (Wastewater Reclamation Facility). This facility is currently rated at 12.7 mgd on an annual average day flow basis. This study was performed to determine the capacity required at the WWRF through the planning year 2045. The project included validation of population projections, hydraulic and Bio-Win™ process modeling, a capacity analysis of the WWRF and a renewal and replacement evaluation of existing infrastructure and major equipment at the WWRF. The renewal and replacement evaluation review included the following unit processes: pretreatment, aeration system, clarifiers, solids handling system (including digesters), reuse treatment, and effluent disposal.

Southern Regional WWTP Reuse Feasibility Study, Various Utilities, FL

Project Engineer. Mr. Cooke contributed on one of the first reuse projects in Broward County. As part of a plant expansion to 42 mgd, this feasibility study for an 8-mgd reuse system included a phased implementation approach where the treatment works and transmission lines would be installed to serve 4 mgd of contract customers in the first phase and extensions to an additional 4 mgd of residential customers would be implemented in the future.



William Becker, PhD, PE, BCEE

Technical Advisory Committee

Dr. Becker is a nationally respected water supply and treatment expert. Over the past 44 years, he has worked on some of the largest disinfection projects in the country and has published and presented significantly on a wide range of drinking water topics.

Education

PhD, Environmental Engineering,
Johns Hopkins University, 1995

MS, Environmental Engineering,
Clarkson University, 1981

BS, Civil and Environmental
Engineering, Clarkson University, 1979

Certification/License

Professional Engineer: NY

Board Certified Environmental Engineer
(BCEE)

Areas of Expertise

- Water Process Technology
- Physical/Chemical Processes
- Effect of Watershed Activities on Raw Water Quality and Treatment

Experience

- 44 total years
- 24 years with Hazen

Professional Activities

- American Chemical Society
- American Society of Civil Engineers
- American Water Works Association
- International Ozone Association
- International Water Association
- EPA Science Advisory Board
- Drinking Water Committee

VALUE TO POMPANO BEACH

- One of the country's foremost experts in disinfection and disinfection byproducts (DBPs).
- Has helped more than 100 utilities of all sizes evaluate, test, select, and design disinfection systems including gaseous chlorine, sodium hypochlorite, chlorine dioxide, ozone, and UV.
- Solid project experience in the State of Florida.

Indirect Potable Reuse, City of Hollywood, FL

Technical Expert. Dr. Becker provided technical expertise for this innovative project that tested several advanced treatment processes for treatment of wastewater effluent to drinking water standards. Processes included ion exchange, ozone, UV/advanced oxidation, and ozone/biofiltration.

Fiveash Water Treatment Plant, City of Fort Lauderdale, FL

Technical Expert. Hazen evaluated the condition of the 70-mgd Fiveash Water Treatment Plant, which included the raw water supply, wellfield and raw water transmission system improvements, control system, lime solids disposal alternatives for the existing lime softening facilities, and additional improvements to maintain the reliability of the existing lime softening facilities. Hazen then designed and provided assistance during construction of upgrades at the Fiveash WTP. The upgrades consisted of a number of project elements that are critical to maintaining the reliability of the existing lime softening process. Dr. Becker provided technical review of conceptual designs.

Long-Term Master Water Plan Feasibility Program and Master Plan Update, Tampa Bay Water, FL

Technical Expert. Tampa Bay Water is the largest wholesale water provider in Florida, providing water to six utilities serving more than 2 million people with an average demand of 250 mgd. This demand is met with several water sources including groundwater from numerous wellfields, surface water from three source waters, and the largest desalination facility in North America. The Hazen team-developed framework for decision making was

William Becker, PhD, PE, BCEE

used as part of the detailed analysis of the various alternatives and ultimate selection of the recommended water supply alternative. Evaluation criteria included both cost and non-cost factors developed with input from key staff members. The framework incorporated the required LOS requirements, associated risk assessment, and business case evaluation.

Indian Brook Water Treatment Plant Design,

Village of Ossining, NY

Technical Process Expert. The project involved design of a 7-mgd conventional DAF WTP for the Village of Ossining. The planning phase of the project included a process evaluation to select the appropriate process train. The project is in the final design phase and the process train will include pre-oxidation, coagulation, flocculation, intermediate chlorination, clarification by dissolved air flotation (DAF), gravity filtration (sand and anthracite), and disinfection.

Jonathan Rogers Water Treatment Plant, El Paso

Water, El Paso, TX

Technical Expert and QA/QC Reviewer. Dr. Becker oversaw the development of process design criteria for upgrading/expanding an existing ozone system to replace an aging, air fed system at the 60 mgd (expanded to 80 mgd) WTP. The project involved design and construction phase services for a new ozone generation system with all related appurtenances and support facilities, including but not limited to: liquid oxygen (LOX) feed system, LOX vaporizers, ozone generators/power supply units, nitrogen boost, ozone destruct units, cooling water system, and new diffusers within the existing contactors. The project also involved process evaluations to optimize ozone dose for coagulation enhancement, disinfection, taste and odor, and THM mitigation.

Croton Water Filtration Plant Pilot Studies, New

York City Department of Environmental Protection, Bronx, NY

Technical Expert and Water Quality Lead. Hazen, working in joint venture, conducted preliminary bench-scale screening of candidate processes and designed and constructed several different pilot plants for comparison and to develop the basis of design. Processes

tested included DAF, conventional treatment and Ozone-BAC- Diatomaceous Earth, and included raw and intermediate ozone testing. Membranes were also tested to determine the feasibility for treating filter backwash water. Hazen completed the pilot testing and developed the basis of design for a 350-mgd DAF plant to treat Croton Aqueduct Water; the DAF system is the world's largest for treating municipal drinking water.

Springwells Water Treatment Plant Assessment,

City of Detroit, MI

Technical Expert. The project involved a needs assessment/capital improvement plan for the 540-mgd conventional WTP, including filter rehabilitation and auxiliary facility improvements (e.g., pretreatment). Dr. Becker provided expertise for a 1-year pilot plant evaluation designed to examine process alternatives and develop design input for the City's 540-mgd Springwells WTP.

Water System Assessment/Evaluation,

City of Corpus Christi, TX

Technical Advisor. Dr. Becker evaluated design and operational changes needed to reduce the occurrence of nitrification events and boil water orders for a 167-mgd system. A master plan that encompasses source-to-tap evaluations was prepared. The focus was on ensuring that proper chemical dosing and operational protocols are employed in the plant and distribution system to ensure the production of high quality water and to minimize nitrification. In addition, conceptual design of alternative DBP control processes were developed to evaluate the feasibility of switching from chloramine to free chlorine in the distribution system. The nitrification action plan was also updated.

Comprehensive Water Quality Master Plan,

Monroe County Water Authority, Rochester, NY

Technical Expert. Dr. Becker directed development of a master plan for a 150-mgd filtration plant's water-quality-driven capital needs. He evaluated previous studies and plant data, performed a regulatory impact analysis, and developed and managed a pilot-testing program. He also directed a workshop and developed a DBP compliance plan.



Additional Project Team Resumes

(Alphabetical Order)





Elie Andary, PhD, PE

Construction Management

With over 23 years of experience in construction management, Mr. Andary serves as Hazen's Southeast Region Lead for Construction Management Services. He has a proven track record managing complex projects and maintaining quality control.

Education

PhD, Civil Engineering, Florida International University, 2019

ME, Civil Engineering, Florida International University, 2017

MS, Construction Engineering and Management, University of Florida, 2003

BE, Civil Engineering, Lebanese American University, 2000

Certification/License

Professional Engineer: FL

Construction Safety and Health License (30 Hours), OSHA License #20-600609001

Areas of Expertise

- Construction Management
- Program Management
- Project Quality Control
- Structural Engineering
- Wastewater Collection and Treatment
- Plant Commissioning and Equipment Startup

Experience

- 23 total years
- 22 years with Hazen

Professional Activities

American Society of Civil Engineers

Construction Management Association of America

American Water Works Association

VALUE TO POMPANO BEACH

- Proven track record managing complex projects, resolving conflicts/issues, defining project requirements, coordinating life cycles, and maintaining quality control.
- His experience managing the construction of large projects helps ensure on-time and on-budget execution of complex initiatives.

South District WWTP Upgrades, Miami-Dade Water and Sewer Department, FL

Construction Manager. Dr. Andary served as Construction Manager for the expansion of the Miami-Dade Water and Sewer Department's South District WWTP in Florida. The secondary wastewater treatment plant was undergoing expansion from 225 mgd to 285 mgd, and meeting high level disinfection criteria and primary drinking water standards. The HLD upgrades consisted of 14 separate contracts, each responsible for the construction of a portion of the overall system. The total amount of all contracts was \$600 million.

Springtree and Sawgrass WWTPs, City of Sunrise, FL

Construction Manager. Dr. Andary served as Construction Manager for construction of two dewatering facilities including centrifuges, polymer and odor control systems at the Springtree and Sawgrass WWTPs. He conducted progress meetings and meetings with utilities, prepared and issued meeting minutes, performed project quality control, issued RFPs and negotiated cost proposals, and coordinated startup and performance testing for all equipment.

Plantation Regional Wastewater Treatment Plant, City of Plantation, FL

Construction Manager. Dr. Andary served as Construction Manager for the construction of Laboratory Building and fine bubble diffused aeration system. The work included the installation of an aeration system, comprising four multi-stage centrifugal blowers, FRP suction piping, stainless steel process air piping and valves, fine bubble diffused aeration system, laboratory building,

Elie Andary, PhD, PE

demolition and reconfiguration of existing administration building office space, and various instrumentation and control systems. He conducted construction phase meetings, including pre-construction meetings, progress meetings, and meetings with utilities; prepared and issued meeting minutes; supervised field tests; scheduled specialized inspections; and defined project scope to meet the client's expectations and ensure any project deliverables conformed to the established quality standards. Dr. Andary also coordinated all testing and placing into operation all equipment, including temporary facilities as required, in conformance with the Contract Documents.

Seminole Tribe of Florida (STOF) Hollywood Wastewater Treatment Plant, Hollywood, FL

Project Quality Manager. Dr. Andary served as Project Quality Manager for construction of a new wastewater treatment plant, which will provide wastewater treatment services to the Reservation including the Hollywood Hard Rock Hotel and Casino as well as other STOF-operated casinos in the future.

Miami Blue House Phase 2, Atlantic Sapphire, Miami-Dade County, FL

Construction Manager. Dr. Andary serves as Construction Manager for construction of the fish farm facility located in Homestead that is being built under a CMAR-type delivery method. The work consists of a wastewater treatment plant, chiller plant, electrical distribution building (including but not limited to back-up power), and oxygen storage and interconnection with Phase 1 for fish movement and grading, fish harvesting, personnel movement, wastewater conveyance, processing, finished water from the water treatment systems. He is responsible for the following: identifying all key project team members and defining roles and responsibilities to create project organization structures and develop communications plans; collaborating with internal teams; providing mentorship to teams; facilitating effective training programs, supervising staff, and fostering a teamwork environment; improving team performance by

building team cohesiveness; implementing a quality management plan to ensure work was performed according to quality standards; and identifying and documenting high level project risks, assumptions, and constraints.

North Regional Wastewater Treatment Plant (NRWWTP) Expansion, Broward County Water and Wastewater Services, Pompano Beach, FL

Resident Assistant Project Engineer. Served as Resident Assistant Project Engineer for the expansion of the NRWWTP. The secondary wastewater treatment plant was upgraded from 80 to 95 mgd, providing services to approximately 600,000 people in northern Broward County.

Water Treatment Plant, City of Hallandale Beach, FL

Project Manager. Dr. Andary prepared design documents to complete stucco repair and painting of the existing water treatment plant facilities. Work included development of specifications and site drawings and preparation of bid forms. He provided additional assistance during the bidding and construction phases. The scope of work included 1) stucco repairs; 2) coating exterior surfaces of concrete and masonry structures; 3) coating exterior surfaces of metal tanks, walkways and handrails, and 4) coating all above ground exterior piping, valves, fittings and supports.

S-140 Pump Station Improvements Project, South Florida Water Management District, FL

Project Engineer. Dr. Andary oversaw Hazen's field representatives for the S-140 Pump Station Improvements project. Hazen provided construction management services for the pump station improvements including construction of new access bridge, replacing pump backflow gates, replace spillway gates, installing new automated Hydro Components trash removal system, replacing existing fuel tanks and piping, abandoning existing groundwater monitoring wells, constructing generator/storage building and all associated equipment, including new generators and emergency fuel supply.



Paul Biscardi, PhD, PE

Membrane Operations Optimization

Dr. Biscardi specializes in water treatment design and optimization. He has experience with the design and operations of both membrane, sand filter, greensand filter, and ozone pilot studies.

Education

PhD, Environmental Engineering,
University of Central Florida, 2016

MS, Environmental Engineering,
University of Central Florida, 2013

BS, Environmental Engineering,
University of Central Florida, 2011

Certification/License

Professional Engineer: FL

Areas of Expertise

- Membrane Processes
- Potable Reuse
- Water Quality and Treatment
- Disinfection By-Products (DBPs)

Experience

- 14 total years
- 9 years with Hazen

Professional Activities

American Water Works
Association

American Membrane Technology
Association

Southeast Desalting Association

VALUE TO POMPANO BEACH

- Nanofiltration process design expert with expertise in piloting, design, start-up, and operations.
- Expertise in various filtration methods and treatment technologies.
- Develops and assesses treatment processes, ensuring high-quality water supply; plays crucial roles in evaluating and recommending improvements.

Brighton Water Treatment Plant, Seminole Tribe of Florida (STOF), Brighton, FL

Project Engineer. To improve water treatment operations and overall water quality, STOF decided to transition to Upper Floridan Aquifer wells as a new water supply. Dr. Biscardi assisted with the detailed design of new treatment facilities and reconfiguration of the existing process to treat the new brackish groundwater supply. He was responsible for process design related to the RO membranes.

Water Treatment Plant Refurbishment, City of Dunedin, FL

Project Engineer (Pilot Testing). To replace aging infrastructure, the City initiated a design-build project to include a comprehensive pilot testing, design, and construction of new pre-treatment and RO treatment systems. Hazen served as a sub to Black & Veatch on this design-build project. Dr. Biscardi led design of the refurbished pretreatment greensand filters used to remove iron and manganese.

160-Acre Site Alternative Water Supply Project, Toho Water Authority, FL

Lead Process Engineer. The project includes planning, preliminary design, construction, and start-up of a new 8-mgd alternative water supply project. The project will include a new aquifer recharge and groundwater treatment facility. The project is in the preliminary engineering phase with ozone, GAC, and membrane technologies being evaluated as potential treatment options.

Prospect Lake Clean Water Center, City of Fort Lauderdale, FL

Technical Expert – Membranes. Dr. Biscardi has assisted with evaluation of a hybrid membrane approach and mitigating scaling through careful membrane selection. Hazen provides Owner's Representative services for design and construction of the new, state-of-the-art 50-mgd (finished water capacity) Prospect

Paul Biscardi, PhD, PE

Lake Clean Water Center WTP. The City's existing Fiveash WTP was constructed in the 1950s and is at the end of its useful life. That study recommended replacement of the Fiveash WTP with a WTP using a combination of nanofiltration and ion-exchange treatment technology. The Fiveash WTP's treatment facilities will be decommissioned and used only for finished water storage and pumping. The City is procuring this project through a Public-Private-Partnership agreement. Hazen's services include review of the design and construction oversight of the \$700 million WTP, review of permit application and design packages, and coordination with permitting agencies and City departments. Hazen also provides technical review of process design including optimization of corrosion control and maintains a risk register. Hazen will provide multiple inspectors and Resident Project Representatives during construction of the WTP and support facilities, as well as process specialists during the startup phase.

Sunbridge Water Treatment Plant, Toho Water Authority, Osceola County, FL

Lead Process Engineer. Dr. Biscardi is responsible for the design, permitting, and bidding for expansion of an existing 1-mgd ozone water treatment facility to a 3.6-mgd nanofiltration facility. A pilot program evaluated multiple technologies and nanofiltration was selected for TOC removal because of the excellent removal of high levels of organics in the raw water. The expansion project adds a 3-mgd Upper Floridan supply well and well pump, a new nanofiltration system and building, ozone generation, side stream injection of ozone, an ozone dissipation/contact chamber, chemical storage and feed facilities, hydrofluorosilicic acid and corrosion inhibitor, a 1-MG ground storage tank, a high service pumping station and an engine generator. The nanofiltration process will include a 3-stage hybrid membrane configuration operating at 90% recovery.

Verna Water Treatment Plant, City of Sarasota, FL

Project Engineer. Hazen has been working with the City to identify and design treatment system improvements that would increase production, improve finished water quality, and provide a non-corrosive drinking water compliant with the Lead and Copper Rule and position the City for the future. This analysis led to the selection of a nanofiltration process, which is currently undergoing pilot

testing. Dr. Biscardi has been responsible for leading the drinking water process evaluation and is currently planning the pilot testing component of the project. This work has included detailed evaluation of nanofiltration membrane processes and aeration to provide treatment of sulfide, sulfate, hardness, strontium, and overall TDS.

Desalination Expansion Feasibility Evaluation, Tampa Bay Water, Tampa Bay, FL

Project Engineer (Pilot Testing). Tampa Bay Water identified the optimization and expansion of the existing Seawater Desalination Plant (Desal Plant) as one of three short-listed alternatives for addressing long-term water supply capacity needs. The pretreatment processes at the Desal Plant were the primary focus of the treatment process improvement options considered as part of this study. Dr. Biscardi led an operations team through a 12-month pilot testing program that included clarification of seawater followed by membrane filtration and media filtration. Conceptual design concepts were developed for the expansion that compared both polymeric and ceramic membrane filtration.

Buenaventura Lakes Water Treatment Plant Upgrade and Improvements Project, Toho Water Authority, FL

Lead Water Process Expert/Engineer. The project involves engineering design, permitting and construction services to improve reliability and quality of the water for the Buenaventura Lakes and Sunbridge WTPs, which serve high growth areas and have raw water quality that requires advanced treatment to remove hydrogen sulfide, remove organics, and maintain disinfection by-product (DBP) compliance. The scope of work includes pilot testing of treatment technologies, design services, including site improvements to improve operations.

Water Quality Master Plan, Peace River Manasota Regional Water Supply Authority, Lakewood Ranch, FL

Project Engineer. The Authority requested that Hazen prepare a Water Quality Master Plan with a 20-year planning horizon. Dr. Biscardi's role has been focused on assessing the cost effectiveness and benefits of removing additional TOC from the surface water supply. The purpose of the plan is to assess current and future provision of high-quality water, develop recommendations for improvements, explore the implications of regional water quality standards, and provide a review of the regulatory outlook for the Authority and its customers especially as it relates to lead and copper.

Hazen and Sawyer



George Brown, PE

Water Process Mechanical

Mr. Brown has 30 years of experience managing and participating in numerous designs related to water supply, water treatment, pipelines, pumping stations, and reclaimed water projects.

Education

BS, Environmental Engineering,
University of Florida, 1996

Certification/License

Professional Engineer: FL

Areas of Expertise

- Water Treatment Process and Mechanical Design
- Water Pumping, Storage, and Pipeline Design
- Water Supply Wells Design
- Chemical Feed Design

Experience

- 30 total years
- 29 years with Hazen

Professional Activities

American Water Works Association

- Florida Section Risk Management/
Safety Committee

American Society of Civil Engineers

VALUE TO POMPANO BEACH

- Nearly 30 years of experience managing and participating in numerous designs related to water supply, water treatment, pumping stations, storage tanks, and reclaimed water projects.
- Has designed 95,000 feet of pipe, and master planned over 400 miles of transmission systems.
- Master planned \$2.5 billion of water infrastructure improvements.

Hallandale Beach Membrane Softening Facility, City of Hallandale Beach, FL

Project Engineer. Hazen provided pilot testing, design, bidding, permitting and construction management services for a new 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at its water treatment plant. Total buildout capacity of the new membrane facility is 10-mgd, which includes 6-mgd of nanofiltration that is currently in operation plus the capability to easily add up to 4-mgd of brackish water reverse osmosis treatment capacity.

Fiveash Water Treatment Plant Upgrades Phase 1, City of Fort Lauderdale, FL

Project Manager and Civil and Mechanical Engineer-of-Record. The Fiveash WTP is a 70-mgd lime softening plant originally constructed in the 1950s. This project included: 1) new aqueous ammonia storage tanks, feed pumps and controls within a new 1,600 square foot building; 2) new coagulant polymer dry-feed solution make-up system with polymer storage tank and five feed-pumps within a new 400 square-foot polymer feed room; 3) replacement of four lime slakers with new slakers (combined feed capacity of 10,000 pounds per hour); 4) addition of a clearwell interconnect chamber and piping to improve plant hydraulics; 5) replacement of two horizontal split-case high service pumps with vertical turbine pumps each sized for 7 mgd at 231 feet of head; 6) new sludge holding tank with mixer and pump station that included three screw-centrifugal dry-pit submersible pumps

George Brown, PE

with a capacity of 1,000 gpm each at 68 feet TDH; 7) automation of four sludge blowdown valve assemblies; 8) replacement of all filter valves and valve operators to automatically control the operation and backwash of 22 filters; 9) addition of new magnetic flow meters throughout the plant; and 10) new SCADA system with operator work stations to automate upgrades.

High-Service Pump Replacement, City of Hallandale Beach, FL

Project Manager and Engineer-of-Record. The City of Hallandale Beach's five high service pumps and electrical equipment, originally constructed in 1967, were at the end of their useful life. The City retained Hazen to provide design, permitting, bidding and services during construction for replacement of the high service pumps in 2017. Design included four new horizontal split-case pumps designed for 4,500 gpm at 175 feet total dynamic head equipped with variable frequency drives. Maintaining high service pumping during construction required design of a 4,500 gpm temporary high service pump station, electrical feed and control system to by-pass the existing high service pumps. Mr. Brown served as Project Manager and the Engineer-of-Record for the general, civil and mechanical disciplines.

Western Wellfield Expansion, City of Pompano Beach, FL

Project Manager and Pipeline Design Engineer. The project included the design and permitting of five water supply wells and approximately 2,200 feet of ductile iron pipeline to convey the water from the wells to the treatment plant. The design also included equipping of the wells with vertical turbine line shaft pumps, electrical power supply, instrumentation and controls, along with remote monitoring and control from the water treatment plant.

Dixie Wellfield Improvements, City of Fort Lauderdale, FL

Project Manager and Design Engineer. The project involved planning, design, permitting, and engineering services during construction of the Dixie Wellfield to supply water to the City's Peele-Dixie WTP. The project included eight new water supply wells, equipping the wells with submersible turbine pumps, 11,000 feet of

raw water piping that ranged from 16 to 30 inches in diameter, remote telemetry unity panel for remote monitoring and control of wells and generator via the City's SCADA system, and a 3,300-square-foot generator building. The pipe ranged from 16- to 30-inch diameter.

Prospect Wellfield Expansion, City of Fort Lauderdale, FL

Project Manager and Civil and Mechanical Design Engineer. Mr. Brown served as Project Manager and Civil and Mechanical Design Engineer during the design, permitting and construction phases of the City of Fort Lauderdale's Prospect Wellfield expansion. This project included design and permitting of five water supply wells (PW-50 to PW-54) and equipping the wells with vertical turbine line shaft pumps (1,750 gpm at 150 feet TDH), and approximately 2,800 feet of pipeline to convey the water from the wells to a connection with the existing raw water transmission system. The design also included radio telemetry design for remote monitoring and control from the water treatment plant.

Water Treatment Plant Renewal and Replacement Planning, City of Hallandale Beach, FL

Lead Engineer. Hazen provided the City of Hallandale Beach a team of senior mechanical, electrical, controls and water treatment process engineers to assess the condition of the above ground assets at its lime softening/membrane water treatment plant. Mr. Brown's expertise in lime softening treatment facilities allowed the team to rapidly assess the remaining useful life of the WTP's major lime softening assets and develop a 20-year plan of capital improvements to sustain the capacity of the existing infrastructure.

Production Well PW-9, City of Hallandale Beach, FL

Project Manager/Project Engineer. Mr. Brown served as Project Manager and Project Engineer for the design and permitting of Production Well PW-9 for the City of Hallandale Beach. Design included one Biscayne Aquifer water supply well along with equipping the wells with pumps, piping, valves, electrical and controls. The well will be completely automated and controlled from the water treatment plant through radio telemetry.



Gerrit Bulman, PG

Wells/Hydrogeology

Mr. Bulman has extensive well planning, design, bidding, water use permitting, and construction management and testing of industrial and municipal deep injection wells, ASR wells, membrane supply wells, Biscayne Aquifer wells, and monitoring wells experience.

Education

MS, Geological Sciences, University of Alabama, 2005

BS, Geological Sciences, Brown University, 2000

Certification/License

Professional Geologist: FL

Areas of Expertise

- Injection Well System Design, Permitting and Operation
- Injection and Monitoring Well Planning
- Injection Well Testing and Rehabilitation
- Aquifer Protection Program/UIC Exemptions and Variances
- Floridan Aquifer Supply and ASR Well Design, Permitting and Construction
- Florida Hydrogeology
- Wellfield Rehabilitation
- EPA WIFIA and SRF Funding

Experience

- 23 total years
- 4 years with Hazen

Professional Activities

American Water Works Association

VALUE TO POMPANO BEACH

- Has managed permitting, bidding, construction, and testing of industrial and municipal deep injection wells, ASR wells, reverse osmosis supply wells, shallow and deep monitoring wells, and stormwater drainage wells.
- Extensive knowledge of FDEP, SFWMD, and other state/local regulatory agencies in Florida.
- Has presented at state and national conferences on the implications of PFAS regulations on UIC programs.

Injection Well Program Management – Ocean Outfall Legislation

Program, Miami-Dade Water and Sewer Department, Miami-Dade County, FL

Management and Technical Lead. Mr. Bulman serves as Management and Technical Lead for unprecedented-scale injection well implementation project planning and program management. Over the past decade, the program has involved installation of 19 new large-diameter (24-inch) injection wells to depths of approximately 3,000 feet to accommodate over 1 billion gallons of treated wastewater per day. A component of this project involved preparing and submitting FAA aeronautical studies to obtain determinations of no-hazard for injection well rigs and cranes.

Regional Wastewater Treatment Plant Injection Well Permit Renewal,

City of Plantation, FL

QC Reviewer. As Hazen's overall Quality Control Reviewer for all injection wells, monitor wells, and raw water well services, Mr. Bulman provides quality control for the Plantation Regional WWTP injection well permit renewal.

New WTP Feasibility Analysis and Test/Production Well, City of West

Melbourne, FL

Geologist. Hazen was selected to conduct piloting, preliminary design, final design, and bidding services for a new 5-mgd drinking water plant utilizing membrane treatment. With the design of the WTP completed, Hazen was also tasked with an expedited design of the four water supply wells to serve the plant. The project included feasibility analysis to determine the feasibility of developing a new WTP and related infrastructure in lieu of obtaining potable water from an outside entity. Hazen designed and

Gerrit Bulman, PG

implemented a detailed testing plan to identify aquifer characteristics; and detailed testing to assess production capacity with depth, as well as consumptive use permitting. Status: Recommendations for additional production wells include 30 feet of surficial casing, additional casing near sewer lines, a final casing depth of 320 feet, and a 24-inch diameter for maximum surface area with an estimated completion date of 2026.

Deep Injection Well System Monitoring Well, Coral Springs Improvement District, City of Coral Springs, FL

Hydrogeologist and Project Manager. Mr. Bulman designed a 2,100-foot deep dual-zone monitoring well. He applied for and received a construction permit from the FDEP UIC. He also managed the new well bidding, construction, borehole geophysical testing, and aquifer testing, as well as the plugging and abandonment of an existing tri-zone monitor well.

Surficial Aquifer Groundwater Flow Model, Coral Springs and North Springs Improvement Districts, City of Coral Springs, FL

Modeler. Mr. Bulman developed a calibrated MODFLOW numerical groundwater flow model for three utilities in north central Broward County in support of SFWMD water use permit applications.

Water Use Permit, Royal Utility, City of Coral Springs, FL

Hydrogeologist. Mr. Bulman modeled groundwater withdrawal to assess the impact of pumping from the Biscayne Aquifer.

PFAS Management Plan, Miami-Dade Water and Sewer Department (WASD), Miami-Dade County, FL

Hydrogeologist. WASD has been proactively performing water quality sampling at wells serving three regional systems since 2019. The results of this sampling have indicated the presence of per- and polyfluoroalkyl substances (PFAS) in the wellfield supply water. Hazen assisted WASD in proactively developing an understanding of PFAS occurrence patterns, wellfield management, and treatment options available for reducing levels of PFAS in the finished drinking water. Mr. Bulman prepared a hydrogeologic review memo of WASD's Interim Correction Plan PFAS Groundwater Modeling.

Sawgrass Water Treatment Plant Raw Water Aquifer Storage and Recovery (ASR) Well System Revisions, City of Sunrise, FL

Technical QA/QC Reviewer. In preparation for an Underground Injection Control (UIC) permit modification to convert a 1,200-foot Upper Floridan Aquifer production well to an ASR well, Hazen: 1) Evaluated the need for an overlying monitoring well; 2) Evaluated both overlying and in-zone monitoring well construction details, and; 3) Reviewed and proposed revisions to the City's ASR cycle testing plan to optimize system performance.

Deep Injection Well System Rehabilitation and Rerating, City of Deerfield Beach, FL

Hydrogeologist. The City owns and operates a Class I Industrial injection well system for disposal of membrane concentrate at the West WTP. Hazen is providing professional oversight of the investigation, rehabilitation, and testing activities for the injection well. Additionally, Hazen is providing professional services to assist the City in rerating the Florida DEP UIC-permitted capacity for Injection Well IW-1 following completion of the rehabilitation.

Sunbridge Water Treatment Plant Upper Floridan Aquifer Supply Well No. 3, Toho Water Authority, Kissimmee, FL

Geologist-of-Record. The project involved the design, bidding, construction, testing, and reporting of the third Floridan aquifer supply well at the Sunbridge WTP. Design included criteria for well drilling, geophysical logging, water quality testing, development, pumping testing, and disinfection.

Isle of Capri Casinos Water Use Permits, City of Pompano Beach, FL

Hydrogeologist. Mr. Bulman prepared irrigation and industrial water use permits for the South Florida Water Management District, and responded to requests for additional information from the District to complete the permitting process. *

**Experience prior to Hazen.*



John Burke, PE

Electrical

For over 59 years, Mr. Burke has provided complete electrical, control, and instrumentation interface design and construction management for new water and wastewater treatment plants, as well as electrical design for modifications to existing plants.

Education

BS, Electrical Engineering, University of Florida, 1966

Certification/License

Professional Engineer: FL

Areas of Expertise

- Power, Control, and Instrumentation Systems
- Design and Construction Management
- Water and Wastewater Treatment Plants

Experience

- 59 total years
- 21 years with Hazen

Professional Activities

National Society of Professional Engineers

Florida Engineering Society

Institute of Electrical and Electronic Engineers

VALUE TO POMPANO BEACH

- Extensive experience in Broward County; provided electrical design quality assurance/quality control review for the award-winning Water Treatment Plant 3C Potable Water Ground Storage Tank and Pump Station project.
- Capabilities range from concept through final design, and extend to construction management and power systems analysis.
- Designed elements as small as motor control circuits and as large as high-voltage transmission lines and substations.

Hallandale Beach Membrane Softening Facility, City of Hallandale Beach, FL

QA/QC. Mr. Burke provided design, bidding, permitting, and construction management services for the new 6-mgd membrane facility to achieve the required higher level of treatment for the Piccolo Wellfield supply.

Pembroke Pines Water Treatment Plant, City of Pembroke Pines, FL

Project Manager/Engineer. Mr. Burke acted as Project Manager/Engineer for the 12-mgd expansion of the Pembroke Pines water treatment facilities. Managed planning and design of power, control, and instrumentation associated with the treatment process. The plant's power distribution facility included both normal and emergency power sources. The emergency power source was comprised of two 900-kW diesel engine generator sets operating in parallel.

North Regional Wastewater Treatment Plant (NRWWTP) Facility Improvements Electrical Master Plan, Broward County, FL

Project Manager. Mr. Burke recently completed the Electrical Master Plan for the NRWWTP. The Plan addressed planning for interim and long-term additions that may occur as specific requirements of the Ocean Outfall Rule are fully developed and implemented. The Plan also included recommended improvements to existing electrical facilities that have reached their useful life.

John Burke, PE

Falkenburg AWTP Expansion from 9 to 12 mgd,
Hillsborough County, FL

QA/QC. Hazen was the prime consultant for the design and construction of the 3-mgd expansion for Hillsborough County's Falkenburg Advanced Wastewater Treatment Plant to increase plant capacity from 9 to 12 mgd. In addition to the expansion, the plant disinfection system was converted from chlorine to UV disinfection in this project. This expansion also included additional storage facilities for reject water. The reclaimed water discharge permit for the plant was modified to handle the increased flows from the expanded plant.

Pineda Causeway Booster Pump Station,
City of Melbourne, FL

Electrical Engineer. The project involved design, permitting, bidding and construction of a new station including three new 60-hp vertical turbine pumps with variable frequency drive controls, a new 250-kW diesel-powered generator in a sound attenuating enclosure with an integral fuel tank, a new electrical and controls building, a electric actuated fill valve, and a 2 MG pre-stressed concrete ground storage tank.

High Service Pump Replacement,
City of Hallandale Beach, FL

Electrical Engineer-of-Record. The project involved relocation of pump station electrical equipment to an unutilized FPL room, which significantly reduced the complexity of construction sequencing and resulted in a \$200,000 cost-savings.

13 Lift Stations Rehabilitation, Repair, and Replacement Project, City of St. Augustine, FL

Electrical Engineer-of-Record. Mr. Burke served as Electrical Engineer-of Record for the City's project, administered via CMAR and partially funded by FEMA, that involved rehabilitation or replacement of 13 lift stations which were damaged during Hurricane Matthew. Lift station capacities ranged between 100 to 900 gallons per minute and are located in areas subject to storm surge and sea-level rise. The force main included 4,000 linear feet of 8-inch force main installed via horizontal directional drilling (HDD), which involved challenging alignments.

Pine Island Road Pumping Station, Cooper City, FL

Electrical Engineer-of-Record. Mr. Burke served as Electrical Engineer-of-Record for design and permitting. This \$1.8 million project included design of a new pumping station to convey water from an existing 2-MG water storage tank into the City's transmission system at a pressure of 60 psi. The pump station design included three horizontal split case pumps equipped with variable frequency drives. Pump 1 was a lower flow (700 gpm at 152 feet TDH) "jockey" pump. Pumps 2 and 3 were higher flow pumps (1,400 gpm at 160 feet TDH). Electrical design included new primary power, variable frequency drives, and a diesel engine emergency generator.

Pollard Road Water Treatment Plant, Polk County, FL

QA/QC. Polk County retained Hazen to design, permit, and oversee construction of a new 5.6-mgd maximum day water treatment plant along Pollard Road. Unit processes included cascade aeration and disinfection. In addition, the proposed plant will have a vertical turbine pump, raw water supply well, a 2-MG above-ground storage tank, an emergency generator, and a high-service pump station.

Water Treatment Plant No. 8 Ozone System Expansion/Addition, Palm Beach County, FL

Project Manager. Mr. Burke directed the electrical design and construction services for the addition of an ozone system. A new 2,500-amp, 480V electric service was installed to accommodate the new equipment. Part of the project included the installation and programming of a large programmable logic controller with computer interface. Managed the design which included power, control, instrumentation, lighting, and communication systems, installation plans, and specifications preparation. Construction services included shop drawing review and field observation.

Tamarac Water Treatment Plant, City of Tamarac, FL

Electrical Engineer-of-Record. Mr. Burke served as Electrical Engineer-of-Record for design, construction and start-up for a municipal water treatment plant replacement, main switchgear, motor control centers, standby generator, control panels and plant wiring were replaced while maintaining operation of the facility.

1021-761

EDUCATION

Master of Architecture
Tulane University
School of Architecture
New Orleans, LA
1988

Cardinal Gibbons High School
Alumnus
Ft. Lauderdale, FL

**PROFESSIONAL
MEMBERSHIPS**

- Florida Trust for Historic Preservation
- US Green Building Council
- American Institute of Architects
- LEED Accredited

CONTACT

- acapi@dk-group.com
- www.dk-architects.net
- 954.941.3329

André Capi

PRESIDENT – OWNER DK ARCHITECTS

André received his Master of Architecture degree from Tulane University, New Orleans. With more than 35 years of experience and excellent communication skills, André leads and coordinates planning, design, and design-build projects. He provides complete project services, overseeing all aspects of the architecture firm from evaluation through design, quality control, and construction of commercial, industrial, historical, and residential projects. Permitting is facilitated by his extensive knowledge of building codes, planning and zoning ordinances, and approval processes nationwide. In addition to being LEED Certified and leading the company's environmental and sustainable initiatives, Mr. Capi is a member of the Florida Trust Historical Preservation and leads the company's restoration, renovation, and adaptive re-use efforts.

QUALIFICATIONS

- LEED AP Certified
- Extensive knowledge of building codes, Planning and Zoning ordinances and permit processes nationwide
- Experienced in site evaluation, due diligence reports, site feasibility studies for ground-up construction, remodels and alterations, site planning
- Business acumen and management skills consist of contract administration, billing, scheduling, and time tracking

RELEVANT EXPERIENCE

- Briny Ave. Streetscaping & Undergrounding | Pompano Beach
- Ali Cultural Center & Black Box Theater | Pompano Beach, FL
- Skolnick Community Center | Pompano Beach, FL

André Capi

PRESIDENT-OWNER DK ARCHITECTS

PROFESSIONAL EXPERIENCE

1990 - Present

Design Kollaborative Architects Planners, Inc.

Pompano Beach, FL

Director

- Various streetscaping, master planning, feasibility studies, design, historic renovations, and construction administration for municipal projects.

PHILANTHROPIC AFFILIATIONS

PACE Broward Pace Setter, Junior Achievement – Construction Committee

Proud contributor to: A Child Is Missing

American Cancer Society

American Heart Association

Boys and Girls Club of Broward and Palm Beach Counties

Broward Outreach Center

Children's Diagnostic and Treatment Center

Cystic Fibrosis Foundation

Humane Society of Broward County

National Multiple Sclerosis Society

Jessica June Cancer Foundation

Kids in Distress

Leukemia and Lymphoma Society

Red Cross

Riverwalk Trust

Young Professionals for Covenant House



Patricia Carney, PE, BCEE, DBIA

Reuse Water; Capital Improvement Planning

Ms. Carney has more than 34 years of experience in the analysis, planning, design, permitting, and construction management of water, wastewater, and stormwater conveyance and treatment systems throughout Florida.

Education

ME, Environmental Engineering,
Manhattan College, 1991

BS, Civil Engineering, Manhattan
College, 1990

Certification/License

Professional Engineer: FL, NY

Board Certified Environmental Engineer
(BCEE)

Designated Design-Build Professional
(DBIA)

Areas of Expertise

- Water and Wastewater Treatment
- Quality Control and Assurance
- Stormwater Management
- Project and Construction Management
- Trenchless Technologies

Experience

- 35 total years
- 18 years with Hazen

Professional Activities

Florida Water Environment Association
DBIA South Florida Chapter

- Steering Committee Co-Chair

American Academy of Environmental
Engineers

American Water Works Association

Water Environment Federation

American Society of Civil Engineers

VALUE TO POMPANO BEACH

- Oversaw the design of the upgrade/rehabilitation of the City of North Miami's Winson WTP.
- Designed and/or managed design of stormwater systems throughout Broward County and assisted clients with determining and prioritizing vulnerabilities.
- Won multiple DBIA awards for her design achievements, including the 2014 Water/Wastewater Honor Award for the Government Cut Utility Relocation Project and the 2014 Project of the Year and Infrastructure Honor Award for Bear Cut Bridge and West Bridges Emergency Water Main Relocation project.

Broward County NRWTP Reclaimed Water Facility Expansion, Pompano Beach, FL

Project Manager. Hazen's responsibilities include design of 16 mgd of up-flow filters, chlorine contact chamber, and a new electrical distribution building. Hazen is part of the team selected to provide planning, design, and construction services related to the County's Reclaimed Water Expansion, increasing the reclaimed capacity to a total of 26 mgd, upon completion in 2020. The Reclaimed Water Expansion project consists of several phases that involve retrofitting existing facilities and providing the necessary support, across all disciplines, for the site to sustain this increase in capacity. The work effort includes modifications to the filter feed and distribution pump stations, filtration and chlorination basins, chemical and air compression facilities, as well as a 14,000-square-foot electrical distribution building, ensuring the necessary electrical capacity for the plant's projected growth.

Winson Water Treatment Plant Upgrade, City of North Miami, FL

Project Director. Ms. Carney oversaw the design of the upgrade/rehabilitation of the existing Winson WTP. The project included rehabilitation of the 40-year-old lime softening plant, including the plant filter system rehabilitation, major pump system replacement, various structural and mechanical repairs, electrical and instrumentations upgrades, miscellaneous process improvements, wellfield and storage improvements, and operations building improvements.

Patricia Carney, PE, BCEE, DBIA

MDWASD South District Water Reclamation Plant Reject Streams and Constructability and Schedule Evaluations, Miami Dade, FL

Served as Task Manager for the development of plans for accommodating Reject Streams for the entire plant and for analysis of the overall project schedule in order to comply with consent order deadlines. Hazen, in partnership with another national firm, is currently designing the largest wastewater reclamation plant of its kind in the State of Florida for the Miami-Dade Water and Sewer Department. The 21-mgd South District Water Reclamation Plant (SDWRP) includes an advanced wastewater treatment approach, which will provide indirect potable reuse water to replenish the Biscayne Aquifer via rapid infiltration.

20-mgd South Miami Heights Water Treatment Plant, Water and Sewer Department, Miami-Dade County, FL

Project Manager and Engineer-of-Record. The project included the planning and design of a groundwater treatment facility that utilizes reverse osmosis and ultra-filtration membrane systems. Hazen's responsibility included pre- and post- membrane process facilities, including chemical feed systems, degasification and vertical turbine transfer pump station.

Water Supply Improvements at the Fort Pierce Service Plaza, Florida Department of Transportation, Fort Pierce, FL

Project Manager. Ms. Carney led improvements to the existing water distribution system that provides the water volume and pressure required for fire protection, along with reduction of the maintenance burden associated with the restaurant/concessions building fire suppression system and appurtenances. These improvements were considered urgent, due to the deteriorated condition of portions of the interior and exterior fire suppression systems, and included various modifications to the onsite looped distribution system, the municipal water connection to the City of Port St. Lucie, and the connection of the existing fire pump to the renovated onsite distribution system.

Pump Station 6, City of Hialeah, FL

Project Engineer. The City of Hialeah owns and operates Pump Station No. 6 (PS6). The station is one of the largest in the City and has been in service for nearly 40 years.

Hazen and Sawyer

Many of the components within the station have reached their operational life. A basis of design report has been prepared for the facility and preparation of bid documents have commenced. Improvements to the facility include the conversion of the station from a wet/dry well facility to a submersible type, the installation of four 90-Hp submersible pumps with design point capacity of 2,600 gpm at 83-foot TDH, jib cranes for equipment ingress/egress, valve vault, flow meter, storage facility and generator with 200-gallon fuel storage tank.

General Consulting Services, City of North Miami Beach, FL

Project Engineer. Since 1989, Hazen has provided general consulting services for the City with projects ranging from infiltration and inflow reduction, pump station evaluations and upgrades, peak flow analysis modeling, and water system supply, to treatment and distribution modeling, stormwater improvements, and financial planning. Hazen has also evaluated over 20 pump stations within the City and prepared subsequent BODRs for approximately 10 stations. Hazen has also been involved with assisting the City in improving its water system—from supply and plant improvements to distribution system modeling—and assisted the City with stormwater improvements.

Florida Keys Water Quality Improvements Program, U.S. Army Corps of Engineers, FL

Technical Manager. The project involved a \$100-million Program intended to provide technical and financial assistance for the planning, engineering, and construction of wastewater and stormwater treatment improvement projects within the area of the Florida Keys National Marine Sanctuary.

Assessment of Sea Level Rise Impacts on Existing Infrastructure and Adaptation Plan, City of Coral Gables, FL

Quality Control Reviewer. Ms. Carney performed quality assurance/quality control and assisted with project coordination for this project, which included evaluating the potential impacts of sea level rise on existing City infrastructure; critical infrastructure was identified and a risk assessment was conducted under various scenarios. Adaptation strategies consisting of physical improvements, policy changes, and emergency response, were also developed.



Richard Crawford, P.S.M.

Surveying

Mr. Crawford has over forty years of experience in the surveying industry. During this time, his experience has grown to include all types of surveys. Richard is well-trained and proficient in the processing of survey data collection from a variety of data collection devices, such as GPS, Digital Leveling, and Conventional Total Stations.

Relevant Experience

George T. Lohmeyer Wastewater Treatment Plant - Effluent Redundant Force Main Design Criteria Package | Fort Lauderdale, Florida - Surveyor. As a subconsultant to Hazen and Sawyer, CTA was responsible for providing a DCP that met the requirements of Florida Statute 287.055 and included the topographic survey and utility location services.

George T. Lohmeyer Wastewater Treatment Plant - Redundant Effluent Force Main, Phase 1A & 1B, Eisenhower Blvd. | Fort Lauderdale, Florida | Surveyor. As a subconsultant to Ric-Man Construction, CTA was responsible for 5 Control Surveys and located the centering target on the back of the drill rig to determine the current alignment using the Trimble Total Station.

North County Reuse Waterlines, UAZ 206-211 | Pompano Beach, Florida | Surveyor - As a Subconsultant to Thompson & Associates for Broward County, CTA was responsible for surveying existing conditions and horizontal Control Plans, which included 184,400 linear feet of right-of-way, as well as property located at NW 48th Street in Pompano Beach.

North Lauderdale Water Treatment Plant | North Lauderdale, Florida | Principal Surveyor - As a subconsultant to Hazen and Sawyer, CTA performed a topographic survey of a portion of the North Lauderdale Water Treatment Facility lying along the west side of Rock Island Road, north of Kimberly Boulevard.

Professional Registrations

- State of Florida Professional Surveyor and Mapper No. LS5371
- FAA Remote Pilot with a UAS Rating Certificate No. 3911523 (2016)

Education

- Associate of Science in Land Surveying, Palm Beach Community College (1994)
- Associate of Arts in Architecture, Broward College (1986)

Years of Experience

- Total: 40; With Firm: 4

Affiliations

- Florida Society of Professional Surveyors and Mappers

NW 44th Street Sunrise Reuse Waterline | Sunrise, Florida | Surveyor. As a subconsultant to Stantec, CTA prepared boundary and topographic surveys of portions of the multiple roadways in the City of Sunrise. The Survey included locations within the full right-of-way of NW 44th Street from 50 feet east of Pine Island Road, then westerly 50 feet west of Nob Hill, and all above-ground improvements.

Cooper City WTP Water Storage Tank Replacement Survey | Cooper City, Florida | Surveyor - CTA performed a topographic survey of an area of the City of Cooper City Water Treatment Plant. The Survey met all the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050-.052, Florida Administrative Code.

Five New Staff Gauges | West Palm Beach, Florida | Principal Surveyor

Craven Thompson & Associates was contracted to establish and build five (5) new staff gauges for the City of West Palm Beach Public Utilities at their Water Treatment Plant and the surrounding areas. Set the gauges to National Geodetic Vertical Datum of 1929 (NGVD29) and establish a benchmark near the gauge for future verification of the Datum.

Potable Water System GIS, & Surveying | Fort Lauderdale | Surveyor/G.I.S. - Craven Thompson is the prime consultant for the Water Consent Order Mapping project, City Project No. 12729. The project consists of accurately remapping the City's Water System and correcting the City's GIS. The Project includes 750+ miles of water mains 4" and larger, 19,000+ valves, 6,200 fire hydrants, 250 air release valves, and 62,600 meters.



Evan Curtis, PE

Instrumentation/SCADA

Mr. Curtis has 31 years of experience designing and commissioning various water and wastewater utility projects. As the firm's I&C expert, he is responsible for developing technical standards and resources that are shared across the firm.

Education

BS, Civil Engineering, Carnegie Mellon University, 1994

Certification/License

Professional Engineer: FL, NY

Areas of Expertise

- Instrumentation and Controls (I&C) Design
- SCADA System Design
- PLC and HMI Programming
- Radio Communication Studies
- Construction Phase Services
- Design-Build Services

Experience

- 31 total years
- 24 years with Hazen

Professional Activities

Instrumentation, Systems and Automation Society

American Water Works Association

- Florida Section, Automation Committee Past Chair

VALUE TO POMPANO BEACH

- Serves as Hazen's Corporate and Southeast Region I&C Discipline Group Leader.
- Designed over 5,000 pump station control system input/output signals and completed over 100 pump station I&C designs.

Peele-Dixie Wellfield and Membrane WTP with Concentrate Disposal, Fort Lauderdale, FL

I&C Engineer. Hazen provided engineering services for conversion of the Peele-Dixie lime softening plant to a membrane facility. This included testing, predesign, design, and construction oversight services for a 15-mgd raw water wellfield, a 12-mgd finished water membrane plant, and a 5.8-mgd deep injection well for concentrate disposal. Hazen provided membrane start-up specialists, process experts, and key instrumentation personnel to facilitate the contractor's startup of the plant. Hazen also prepared operator training sessions, process guidance, normalized data review, year one instrumentation and controls assistance, and corrosion control testing and analyses.

Hallandale Beach Membrane Softening Plant, Hallandale Beach, FL

I&C Engineer. Mr. Curtis was responsible for the design of instrumentation and controls related to the expansion of an existing injection well pumping system and replacement of the control systems. The control system design features fully automated wet well level and pump controls including 3 wet wells, 7 constant speed pumps, 5 variable speed pumps, and two discharge headers. The control system design integrates a new GE PLC and local touchscreen HMI into the existing plant control system via fiber optic interface to the plant control room.

East Water Treatment Plant (EWTP) 12-mgd Membrane Softening Plant Expansion and Remembraning, Plantation, FL

I&C Engineer. Hazen provided design, permitting, bid and award services, and construction management services for expansion of the City of Plantation's existing 6 mgd membrane softening facility to 12 mgd, and a

Evan Curtis, PE

new clearwell, new transfer, and high-service pumping facilities sized to meet the higher flow rates provided during this expansion. Services included detailed design, permitting, bid and award services for the addition of three 2-mgd nanofiltration skids (hybrid arrays), a nanofiltration booster pump, and a permeate flushing system within the existing membrane building.

Master Pump Station 310, Broward County, FL

I&C Engineer. Hazen provided professional consulting services to Broward County for the design and construction management of a new inline wastewater booster pump station including primary pumps, jockey pumps, seal water system, and on-site lift station. The control system features PLC-based automated controls for the variable speed booster pumps and pump discharge throttling valves.

South District Wastewater Treatment Plant Electrical Distribution System, Miami-Dade Water and Sewer Department (WASD), FL

I&C Engineer. Mr. Curtis was responsible for design of instrumentation and controls related to the primary and backup power systems serving the high-level disinfection improvements throughout the wastewater treatment plant. Plant improvements include the addition of Electrical Distribution Building (EDB) 2, the addition of electrical loads in excess of 15,000 hp including transfer pumps, filter backwashing systems, on-site sodium hypochlorite generation systems, and effluent pumps. The electrical distribution system includes redundant 13.2-KV electrical distribution wiring throughout the plant, seven 2.8-MW medium-voltage backup power generators, transformers, motor controls, 200,000 gallons of diesel fuel storage, and an automated I&C system.

East Central Regional Water Reclamation Facility (ECRWRF) Biosolids Improvements, City of West Palm Beach, FL

I&C Engineer. Mr. Curtis was responsible for I&C design and construction inspection of improvements to the solids handling systems for the ECRWRF. The project included design and full automation of waste-activated

sludge storage equalization tanks, gravity belt thickeners, temperature phased anaerobic digesters, ferric chloride feed system, septage receiving and treatment system, fat/oil/grease receiving system and associated equalization and pumping system, dewatering facility centrate equalization and pumping system, conversion of an existing aerobic digester to a fine bubble diffused aeration basin, and electrical power distribution and monitoring systems. The control system design was based on Allen-Bradley PLCs, integration of existing Siemens S7 PLCs, and Trihedral VTScada HMI software.

ECRWRF Aeration Basin 5 and Blower Building Upgrades, City of West Palm Beach FL

I&C Engineer. I&C Engineer responsible for design of improvements to Aeration Basin 5 and Blower Buildings at the 70-mgd East Central Regional Water Reclamation Facility. The design included instrumentation and controls related to the addition of fine bubble diffusers, process air piping and valves, anaerobic zone and swing zone vertical mixers, automatic dissolved oxygen (DO) control, and automatic ammonia based control to optimize DO set points. The project also included the design of new/rehabilitated blowers and integration into the existing plant control system.

Lake Washington Surface Water Treatment Plant Improvements, City of Melbourne, FL

I&C Engineer. Mr. Curtis was responsible for construction inspection, HMI programming, and startup of instrumentation and controls related to the following plant improvements: raw water pump station improvements, a new filter backwash waste pump station, a new liquid oxygen storage system, a new ozone generation and feed system, a new hydrogen peroxide feed system, a new carbon dioxide feed system, and a new blended water mixer and pH monitoring system. Digital control system improvements included expansion of existing plant PLC and HMI systems and integration of vendor furnished control systems.



ENGINEERING & TESTING, INC.

Phone: (866) 781-6889 • Fax: (866) 784-8550
 www.floridaengineeringandtesting.com
 250 S.W. 13th Avenue
 Pompano Beach, FL 33069

Reza Javidan, P.E.
Principal Engineer



PROFESSIONAL QUALIFICATIONS

Bachelor of Science in
 Civil Engineering (BSCE)
 University of Detroit,
 Detroit, MI
 (August 1986)

Master of Science in
 Geotechnical Engineering
 (MSCE)
 University of Detroit,
 Detroit, MI, (August 1988)

CONTACT

PHONE:
 561-900-8496
 Cell: 561-460-3473

EMAIL:
 javidanr@yahoo.com

Senior Geotechnical Engineer (December 2020 to Present)

Florida Engineering & Testing, Inc., Pompano Beach, FL

- Analysis and design of all types of shallow and deep foundation systems such as drill shaft, augercast pile, and driven pile for high-rises up to 40 stories
- Design of deep foundation systems using helical piles and pin piles for small structures with limited access
- Analysis and design of all types of pavements, retaining walls and sheet piles for excavations over 20 feet deep
- Site preparation and site improvements with suitable techniques such as vitro-flotation, vibro-replacement, Deep Dynamic Compaction (DDC), dry soil mixing, vibro concrete columns, slurry pressure grouting, compaction grouting, chemical grouting, surcharging and other suitable approaches on difficult soils such as lake reclaimed, landfill, and others
- Performing pile load-tests with report preparations
- Reviewing, signing and sealing of material testing and inspection reports

Senior Geotechnical Engineer (August 2015 to December 2020)

Quest Engineering & Testing, Inc., Pompano Beach, FL

- Analysis and design of all types shallow and deep foundations
- Commercial and residential structural inspections

Senior Geotechnical Engineer (May 2009 to August 2015)

Florida Engineering & Testing, Inc., Pompano Beach, FL

- Analysis and design of all types of shallow and deep foundation systems
- Analysis and design of all types of pavements and retaining walls

Senior Geotechnical and Project Engineer (October 2008 to November 2008)

Dutch Foundation Inc., Dubai, UAE

- Analysis of retaining walls and deep foundations

Senior Geotechnical and Project Engineer (October 2004 to October 2008)

Nutting Engineers of Florida, Inc., Boynton Beach, FL

- Analysis and design of all types of shallow and deep foundations
- Commercial and residential structural inspections
- Site preparation and site improvements
- Performing pile load-tests with report preparations
- Reviewing, signing, and sealing of material testing and inspection reports

**ENGINEERING & TESTING, INC.**

Phone: (866) 781-6889 • Fax: (866) 784-8550
www.floridaengineeringandtesting.com
250 S.W. 13th Avenue
Pompano Beach, FL 33069

Senior Geotechnical and Project Engineer (August 2000 to September 2004)

ATC Associates Inc., Miami, FL

- Analysis and design of shallow and deep foundation systems and site preparation
- Analysis and design of retaining walls and pavement designs
- Monitoring and performing pile load-test and preparing reports
- Monitoring production pile and drill shaft installations

Senior Geotechnical and Project Engineer (April 1993 – June 2000)

Tooss-Ab Consulting Engineers Co., Mashad, Iran

- Investigation and analysis of problematic soils such as liquefying, dispersive

Geotechnical Engineer (October 1991 – December 1992)

Weston Inc., Portland, OR Feasibility Study/Remedial Investigation of contaminated area.

- Design of landfill (including slope stability analysis)
- Civil engineering tasks (including design of drainage)

Geotechnical Engineer (November 1989 - March 1991)

Bowser – Morner Associates Inc., Toledo, OH

- Analysis and design of all types of shallow and deep foundations
- Analysis and design of retaining walls and pavement designs
- Performing pile load-tests with report preparations
- Landfill design



Grace Johns, PhD

Economic Analysis/Finance

Dr. Johns is responsible for economic and financial studies for Hazen. These studies involve economic and financial feasibility evaluations related to water, wastewater, and stormwater capital projects and regulations affecting water, stormwater, agriculture, and land use.

Education

PhD, Agricultural and Natural Resource Economics, University of California, Berkley, 1986

BS, Food and Resource Economics, University of Florida, 1981

Areas of Expertise

- Water Resource Economics and Benefits Valuation
- Survey Research
- Statistics/Econometrics
- Agricultural Economics
- Full-Cost Accounting/ Benefit-Cost Analysis
- Market and Non-Market Valuation
- Economic Impact Studies
- Recreation/Instream Uses
- Water Utility Financial Modeling and Rate Setting
- Economic and Financial Feasibility Studies
- Benefit-Cost Analysis/ Triple-Bottom-Line Analysis

Experience

- 44 total years
- 35 years with Hazen

Professional Activities

Water Research Foundation - Technical Advisory Committee

American Water Works Association

VALUE TO POMPANO BEACH

- Has completed dozens of economic impact analyses and economic contribution studies for Florida's water management districts, as well as governmental clients.
- Responsible for economic and financial studies for Hazen, including the monetization of benefits that reflect stakeholder willingness-to-pay for projects.

County-wide Risk Assessment and Resilience Plan, Broward County Resilient Environment Department, FL

Economist. Dr. Johns is the managing economist for this study to evaluate the expected future impacts of sea level rise (SLR) on county residents and visitors and the development and justification of flood adaptation strategies to protect the County's economy and quality of life. Her role is to lead the development of economic benefit estimation methods, identify economic metrics to inspire resident willingness-to-pay for the strategies, supervise a team of economists, and provide quality control of the results. She is also responsible for estimating the economic benefits of the adaptation strategies on the County's recreation and natural ecosystems.

Financial Feasibility of the Grove Land Reservoir and Stormwater Treatment Area (STA), Evans Properties, Northern Okeechobee and Southern Indian River Counties, FL

Project Lead. In 2014 and 2021, Dr. Johns led this study for Hazen in association with Federico, Lamb and Associates, and AMEC as they evaluated the technical, economic, and financial feasibility of the Grove Land Reservoir and STA that would be sited in northern Okeechobee and southern Indian River counties, Florida, on privately-owned land in a potential public-private partnership. The project captures water that currently flows to the St. Lucie Estuary and the Indian River Lagoon. Project benefits include increased water supply, lower nutrient concentrations and loads to surface water bodies, improved flood control, and reduced stormwater discharges to coastal estuaries. This conceptual feasibility study found that the project

Grace Johns, PhD

has the potential to be technically, financially, and economically feasible to numerous water utilities and government agencies.

Cost-Effectiveness Values, Water Availability, and Potential Water Savings for Alternative Water Sources and Conservation Programs, [Broward County, FL](#)

Project Manager and Principal Investigator. This study compiled and summarized existing published information regarding the cost-effectiveness of alternative water supply sources and conservation programs for use in planning level analysis and decision-making. Estimates of alternative water source availability and potential savings from conservation programs were also provided.

Biscayne Bay Economic Study, [South Florida Water Management District, FL](#)

Project Manager. This study collected over 1,400 completed surveys of residents and visitors in Miami-Dade County, Florida. These surveys and other information were used to quantify the current and historic uses and economic contribution of the Bay and the Miami River to the local, regional, and state economies. The total annual economic value of Biscayne Bay in 2005 was estimated to be \$6.3 billion. Dr. Johns presented the results of this study on five occasions to the U.S. Army Corps of Engineers, the Florida Inland Navigation District, the City of Miami Waterfront Advisory Board, the Marine Council, and the Miami River Commission.

Conceptual Evaluation of a Stormwater Fee, [New York City Department of Environmental Protection, NY](#)

Principal Investigator. Dr. Johns assisted in evaluating the opportunities and challenges of implementing a revenue-neutral stormwater fee to recover costs for stormwater management-related investments and services provided by DEP. She evaluated the financial, affordability, and policy implications, and the impact of a stormwater fee on the customer's total utility bill, as the stormwater fee would have a differential impact on the combined sewer and stormwater bills. She found that the bill impact would depend on the water use and impervious area of the individual customer.

Statement of Estimated Regulatory Costs Associated with the Proposed Water Quantity ERP Rule, [South Florida Water Management District, FL](#)

Project Manager. Dr. Johns managed the preparation of an SERC that evaluated the costs to Environmental Resource Permit (ERP) applicants associated with a proposed amendment to the ERP rules of the Southwest Florida Water Management District. The proposed rule amendment, which was adopted in July 2009, requires, among other changes, that ERP applicants model storm events of different frequency or duration if actual flood elevations are higher than the level yielded by a modeled 25-year or 100-year, 24-hour event. This modeling would be required to provide reasonable assurance of compliance with the conditions of ERP permit issuance.

Full Cost Accounting of Planning Area Alternatives for Preparation of the Lake Okeechobee Watershed Project, [South Florida Water Management District, FL](#)

Economist. Dr. Johns used the Full Cost Accounting Model she developed during a study for the District to estimate the benefits and costs, including the present value change in regional income, associated with alternative designs of reservoir-assisted stormwater treatment areas with and without tributary sediment removal in the Lake Okeechobee Watershed.

Review and Critique of Sea Level Rise Impacts on Current Property Values, [City of Miami Beach, FL](#)

Principal Investigator. Dr. Johns led a team of three economists in summarizing and critiquing the data, methods and results described in the article titled, "Estimating Recent Local Impacts of Sea-Level Rise on Current Real-Estate Losses: A Housing Market Case Study in Miami-Dade, Florida," by Steven A. McAlpine and Jeremy R. Porter, published in *Population Research and Policy Review* (2018), volume 37, pages 871 to 895. She produced a memorandum that provides the combined explanations and comments of the team members regarding the information provided in the article and as articulated during the 90-minute teleconference with the authors. The memorandum provides a critique of the article's methods and results and the relevancy of the information provided on the websites of the First Street Foundation and [floodiq.com](#), with respect to their use of the research results in public outreach.



Alexandra Kelly, PE, ENV SP

Asset Management

Ms. Kelly has 10 years of experience in the water and wastewater industries, with a focus on condition assessment and asset management. Her experience also includes inflow and infiltration rehabilitation, construction management, and project management.

Education

MS, Environmental Engineering
University of Florida, 2017

BS, Environmental Engineering/
Ecosystem Science & Policy,
University of Miami, 2016

Certification/License

Professional Engineer: FL

Envision Sustainability Professional
(ENV SP)

NASSCO's Pipeline, Lateral, and
Manhole Assessment Certification
Programs (PAOP, MAOP, LAOP)

Areas of Expertise

- Conveyance
- Asset Management
- Infiltration/Inflow (I/I)
- Condition Assessment

Experience

- 10 total years
- 10 years with Hazen

Professional Activities

Florida Water Environment
Association

American Water Works Association

Water Environment Federation

American Society of Civil Engineers

VALUE TO POMPANO BEACH

- Has a proven history of delivering projects on budget and on schedule, as demonstrated on numerous projects.
- Experienced in assessment and planning for small, medium, and large wastewater pump stations.
- Serves as Hazen's Southeast Regional Asset Management Lead.

Hialeah and Preston WTPs Asset Maintenance Optimization, Miami-Dade Water and Sewer Department (MDWASD), Miami-Dade County, FL

Project Manager/Project Engineer. Ms. Kelly is assisting MDWASD implement a maintenance and reliability program with an asset maintenance optimization at two of their WTPs and a lime plant (Hialeah WTP, Hialeah lime plant, and Preston WTP). As part of this task, she extracted data from MDWASD's existing CMMS (Infor) and completed an asset registry validation for nearly 4,000 assets at the WTPs and lime plant. Ms. Kelly also assisted with establishing asset-level COF parameters and assigning COF. Based on the COF results, she will perform an Asset Maintenance Optimization using one or more analyses: Failure Mode and Effects Analysis (FMEA), Preventative/Predictive Maintenance Optimization (PMO), and Reliability Centered Maintenance (RCM). This task also includes review of the current maintenance organization, including a 10-week on-site implementation of the Maintenance Management Operating Process (MMOP).

Owner's Representative Services for the Design-Build Construction of a New Water Treatment Plant, City of Delray Beach, FL

Project Manager/Project Engineer. The City is pursuing the construction of a new membrane WTP, six Surficial Aquifer System (SAS) production wells, deep injection well with associated monitor well, and rehabilitation of portions of the existing SAS wells using a Progressive Design Bid Build delivery approach. Ms. Kelly is assisting the City with the selection of a computerized maintenance management system (CMMS) for the new WTP assets. The task includes establishing an asset hierarchy, recommending preventative and corrective maintenance templates, establishing CMMS requirements, developing requirements for submittals, and assessing mul-

Alexandra Kelly, PE, ENV SP

multiple CMMS vendors and how they meet the needs of the City.

Asset Management and Capacity, Management, Operations, and Maintenance (AM-CMOM) Program, City of Fort Lauderdale, FL

Deputy Project Manager. As part of the City of Fort Lauderdale's Consent Order Number 16-1487, the City is required to submit an AM-CMOM Program. AM-CMOM was implemented over a three-phase process, which included development of an initial Program Plan (Phase I), preparation of the Program guide including development of 45 Action Items in line with best practices (Phase II), and implementation assistance over a three-year period (Phase III). Ms. Kelly assisted with all three phases of AM-CMOM and assisted with the implementation of all 45 Action Items, while coordinating with various personnel across City departments. This Program also included development of a risk assessment for the City's gravity mains and pump stations and a valuation of the collection system assets based on information in the City's GIS and Cityworks CMMS, along with documenting and providing recommendations on day-to-day operation and maintenance procedures. Ms. Kelly also provided training and support to the City's new AM-CMOM Champion at the end of initial implementation, at which point the City assumed management of the AM-CMOM Program.

West Palm Beach WTP Condition Assessment, City of West Palm Beach, FL

Technical Advisor. Hazen assisted the City in a condition assessment and risk scoring of approximately 1,800 assets at their surface WTP, in order to inform the City's Master Plan. The WTP uses multiple treatment processes to treat the raw water supply including powder activated carbon (PAC), enhanced lime softening, filtration, ultraviolet (UV) disinfection and chemical disinfection. Ms. Kelly's role was to set up the field collection forms, train and advise the field crew, propose the condition assessment and risk scoring methodology, and present the methodologies to the client. One key task when preparing for the work was extracting and organizing data from their existing CMMS, HiperWeb.

Wastewater Pump Station Asset Inventory, Condition Assessment, and Asset Management Plan, City of Fort Lauderdale, FL

Deputy Project Manager and Condition Assessment Field Crew Lead. As part of the City's wastewater Asset Management and Capacity, Management, Maintenance, and Operations Program (AM-CMOM Program), Hazen assisted in developing an asset inventory and condition assessment for all of the City's 185 wastewater pump stations, with the smallest facility containing two 2-HP pumps, and the largest facility containing four 450-HP pumps. Ms. Kelly served as the Deputy Project Manager and served as the Condition Assessment Lead for a team of four engineers. Following the data collection in-field, Ms. Kelly is assisting with the next steps in this project to develop a Wastewater Pump Station Asset Management Plan (WWPSAMP), which will include the determination of risks, identification of remaining useful life and urgent needs, projection of R&R costs, and the building of an asset management dashboard for the City. Hazen coordinated with the City to prepare this data in a format that is easily integrated with the City's existing GIS geodatabase and CMMS (Cityworks).

Lift Station Condition Assessment Program, Aurora Water, Aurora, CO

Condition Assessment Field Crew Lead. Hazen was tasked with assisting Aurora Water with several field condition assessment projects to inform their asset management program. This project included a field condition assessment for eight of Aurora Water's wastewater lift stations and one stormwater lift station, the largest of the facilities containing eight 2,250 gpm pumps. Ms. Kelly served as the lead of the lift station condition assessment, heading the field crew of nine engineers of various disciplines. The field assessment work will result in the development of an asset register, business risk exposure analysis, optimized operations and maintenance plan, and a prioritized 10-year capital improvement plan based on the outcome of the risk analysis.



CORPORATE PROJECT SERVICES, INC.

Esther Leanora Lambert, PhD, PMP8451 SW 27th Street, Miramar, FL 33025

Phone: (954) 701-2454

Email: elambert@corproserv.com

Education:**A. Postgraduate**

2019 Certificate, Change Management
Cornell University

B. Graduate

2015 PhD, Organizational Management with Project Management
Capella University

2004-2006 Masters of International Business Administration
Nova Southeastern University

C. Undergraduate

1999-2003 B.S., (Cum Laude), International Business
Everest University (formerly Florida Metropolitan University)

1981-1984 Teacher Education Diploma, College of Agriculture, Science and
Education, Jamaica, WI

Honors and Awards:

Undergraduate: National Dean's List – American Colleges and Universities; President's List – Everest University; Dean's List – Everest University

Professional: Received Managing Director's Award of Excellence for corporate training at CIBC Jamaica Limited. Received commendation from client (Broward County Wastewater Services) and engineering consultant (Hazen and Sawyer) on a construction management project for excellence in project administrative services, which was crucial in absolving them in a \$15 million litigation against them by a general contractor. This was pivotal in the startup of my consulting business. Then Deputy Director of Miami-Dade Water and Sewer Department requested my addition to a \$750 million budgeted capital improvement program after my representation of the program management consulting firm in a few meetings. Successfully chaired NABWIC's Water Industry Day virtual event, which involved participation of water utilities departments across the United States.

Professional Experience:

2006-Present

Corporate Project Services, Inc.; President

- Provided procurement consulting services, facilitate meetings with City of Miramar and vendors; made recommendations on program management information system (PMIS) to City
- Provided procurement and contract administration services for the American Rescue Plan Act (ARPA) to City of Lauderdale Lakes
- Provide project controls support, including document management, review of contractor payment application and recommend approval, training, capital improvement construction projects to clients including Palm Beach County Water Utilities Department, City of West Palm Beach ECR, Broward County Water and Wastewater Services and Miami-Dade Water and Sewer Department
- Provided project management consulting services for Miami-Dade Water and Sewer Department High Level Disinfection Program valued at \$550 million; advised client and vendor in planning, procurement, modification, and implementation of program management information system (PMIS)
- Developed processes for, and led document management services
- Planned, developed, trained staff, and established tasks and priorities for department on the program
- Participated in meetings with cross functional project leaders and other key stakeholders on projects' status and issues
- Provided analysis and reports to executives on budget, communication, PMIS and other program issues and their resolutions

2012-2013

EAC Consulting, Inc., Program Controls Manager

- Managed and directed work activities of program controls staff, established work assignments and priorities for a billion-dollar capital program of multiple projects for Miami-Dade Express Expressway Authority
- Planned and led program controls processes including budget preparation, analysis, and cost and document management
- Led procurement, modification, and implementation of program management information system (PMIS)
- Collaborated with other program leaders for annual program planning
- Collaborated with project managers, general contractors, and subcontractors to include appropriate resources work plans
- Developed and updated program reports and presented them to clients and other program executives

2000-2006

North Star Engineering Support Services, Project Controls Coordinator

- Provided coordination services for Hazen and Sawyer on Broward County Water and Wastewater Services Update projects
- Liaised with multiple project stakeholders to mitigate and/or resolve project issues.
- Completed monthly invoicing to clients, monitored and updated project's monthly, quarterly and annual budgets
- Created process for, and reviewed monthly contractors and subconsultants monthly payment applications
- Prepared reports for distribution to stakeholders across projects

1984-1999

CIBC First Caribbean International Bank, Multiple Positions:
Senior Client Services Officer, Project Implementation Training Officer, Internal Auditor and Customer Service Representative

Publications

Complex Factors Related to Capital Construction Project Success - A Case Study

Professional Licensure and Credentialing:

Project Management Professional License Number - 1658802

Other Professional Activities

Member, Project Management Institute

Former Vice President, National Association of Black Women in Construction (NABWIC)

Member, National Association of Black Women in Construction (NABWIC)

Member, National Forum of Black Public Administrators (NFBPA)

Member, Broward Black Chamber of Commerce

Panelist, City of Miramar – Finding My Voice, A Panel Discussion for Women's History Month

Panelist, City of Miramar BID Community Think Tank

Community Volunteerism

Board Member, Master Board – Murano Homeowners Association, 2017-2019

Board President, Murano Sub 4 Condominium Homeowners Association, 2015-Present

Board Member, Artserve Fort Lauderdale, 2018-2019

Tutor, Metropolitan Baptist Church, 2016-2017

Committee Member, Mustard Seed Communities, Gift of Hope, 2018-Present

President, Board of Directors – Leanora Lambert Education Foundation



CORPORATE PROJECT SERVICES, INC.

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Board Member, Artserve Fort Lauderdale, 2018-2019

Tutor, Metropolitan Baptist Church, 2016-2017

Committee Member, Mustard Seed Communities, Gift of Hope, 2018-Present

President, Board of Directors – Leanora Lambert Education Foundation

EDUCATION

Bachelor of Science in Architecture
 Master of Architecture
 University of Texas
 Arlington, TX
 2005

**LICENSES &
CERTIFICATIONS**

- Registered Architect – FL, TX, GA

KNOWLEDGE

- Revit | BIM
- AutoCAD
- Adobe Creative Suite
- ProCore
- BlueBeam

CONTACT

- bmcginley@dk-group.com
- www.dk-architects.net
- 954.941.3329

Blaise McGinley

ARCHITECT | AR95527

Blaise McGinley is a licensed architect with a wholistic approach to real estate development and architecture. Blaise's strength is to generate concepts that speak to conflicting needs, and he possesses the solid experience to efficiently coordinate all professionals required to make those concepts a reality.

PROFESSIONAL EXPERIENCE (NOT ALL EXPERIENCE LISTED)**2016 - 2019****Stiles Architectural Group**

Fort Lauderdale, FL

President – Architecture Division

- Managed 11-person, full service architecture firm within a larger development company
- Project types/uses included retail, automotive, industrial, and tenant improvement
- Direct oversight of staffing, business development, quality control, production, and billing
- \$2.5M in project revenues in 2019
- Over 1M square feet designed in 2019
- 15% projected revenue increase 2019

2012-2016**DK Architects**

Pompano Beach, FL

Senior Architect

- Qualifier & production quality control of 4-person team with \$1M in revenue. Uses included restaurants, municipal continuing service contracts, and multi-family
- Developed prototype drawings for 5,000 sf. restaurant resulting in improved quality and profit margin
- Acquired new clients for firm: Mayors Jewelers, La Quinta Hotels, and multiple tenant improvements
- Managed multiple municipal projects and built relationships for future city work

Blaise McGinley

ARCHITECT

PROFESSIONAL EXPERIENCE (NOT ALL EXPERIENCE LISTED)

2009-2012

Califco Inc.

Irving, TX

Regional Director of Development

- Redevelopment strategy and administration of over 1M sf of real estate. Oversaw design, drawing production and construction with a yearly budget of over \$1M across multiple projects. Uses included retail and multi-family
- Negotiated public/private development incentive packages with multiple municipalities resulting in an average of 20% development costs covered by municipal grants
- Aligned the goals of the development company with the City of Dallas Masterplan resulting in expedited grants and permit approvals

2006-2009

JC Godwin Homes

Eagle, CO

Director of Design and Construction

- Directed design and construction of luxury homes in the Vail Valley
- Oversaw design, drawing production, and construction activities on multiple 7,000 sf. custom homes--sold for \$1.5M each
- Leverage geographic subcontractor demand to save 15% on primary trades by bidding projects regionally



Jennifer McMahon, PE

Water Process Mechanical

With over 27 years in the water industry, Ms. McMahon has key expertise in water treatment systems, as well as transmission, collection, and reuse systems and potable water treatment and distribution systems.

Education

MS, Environmental Engineering, Georgia Institute of Technology, 1997

BS, Civil Engineering, Georgia Institute of Technology, 1995

Certification/License

Professional Engineer: FL

Areas of Expertise

- Water Treatment and Distribution
- Detailed Process and Mechanical Design
- Pumping Systems
- Pipeline Design
- Project Management
- Quality Control

Experience

- 27 total years
- 20 years with Hazen

Professional Activities

American Society of Civil Engineers

VALUE TO POMPANO BEACH

- Membrane design expert who has led planning, design, permitting, and construction-related services for numerous membrane systems on the Biscayne Aquifer in South Florida.
- Led innovative membrane skids design for the Town of Jupiter
- Nanofiltration Plant that saves the Town 30% in electrical costs annually, by splitting the feed to the skids.
- Designed, permitted, and placed into operation numerous chemical dosing systems throughout the Tri-County area.

Nanofiltration Plant, Town of Jupiter, FL

Mechanical and Process Design Engineer. Ms. McMahon's responsibilities included development of detailed design drawings and technical specifications as well as multidisciplinary design coordination. New facilities included nanofiltration membrane skids, membrane feed pumps, cartridge filters, degasifiers, chemical feed systems, odor control, chemical blend chamber, high-service pumps, and new fuel storage tanks for the existing emergency generator. This 14.5-mgd facility also incorporates pretreatment pressure filters and associated booster pumps, air scour system, and filter flushing system. Four new horizontal split-case booster pumps sized at 4,800 gpm and 200 hp each were housed within a pump station building that included an electrical room and a small room for a polymer feed system.

Reverse Osmosis Skid Addition, City of Hallandale Beach, FL

Project Manager, Lead Design Engineer. This project involved a 2-mgd reverse osmosis skid addition at the City of Hallandale Beach Water Treatment Plant. The project also included a 350-Hp membrane feed pump, reverse osmosis membrane softening skid, chemical metering pumps, and other ancillary improvements. Project responsibilities included development of detailed design drawings, development of technical specifications, and multidisciplinary design coordination.

Jennifer McMahon, PE

Dixie Wellfield Raw Water Main, City of Fort Lauderdale, FL

Project Manager, Lead Design Engineer, and Construction Manager. Served as Project Manager, Lead Design Engineer, and Construction Manager of a 30-inch diameter raw water main from the Dixie wellfield to the Peele-Dixie Water Treatment Plant. This multi-jurisdictional project included installation of pipeline within the City of Plantation and a congested corridor of State Road 7 (DOT (Department of Transportation) jurisdiction).

High Service Pump Replacement, City of Hallandale Beach, FL

Mechanical and Process Design Engineer. The City's five high-service pumps and electrical equipment, originally constructed in 1967, were at the end of their useful life. Ms. McMahon provided design, permitting, bidding and services during construction for replacement of the high-service pumps in 2017. Design included four new horizontal split-case pumps designed for 4,500 gpm at 175 feet total dynamic head equipped with variable frequency drives. Maintaining high service pumping during construction required design of a 4,500 gpm temporary high-service pump station, electrical feed, and control system to bypass the existing high-service pumps.

Wastewater Reclamation Facility Reuse Expansion to 7.5 mgd, City of Miramar, FL

Ms. McMahon served as Lead Design Engineer and is currently serving as Construction Manager for the Miramar Wastewater Reclamation Facility Reuse Expansion. The reuse facilities are being expanded from 4 mgd to 7.5 mgd. Hazen also assisted the city in obtaining a paper uprating of existing facilities from 4 mgd to 5 mgd. New facilities included two filter feed pumps, sand filters, expansion to the existing sodium hypochlorite system, a ground storage tank, and high service pumps. Ms. McMahon also served as Project Manager for the City of Miramar's Wastewater Reclamation Facility Reuse Expansion to 4 MGD.

West Water Treatment Plant, City of Miramar, FL

Project Engineer. Served as Project Engineer for the City of Miramar's West Water Treatment Plant Phase I

Expansion. Project responsibilities included design of the sodium hypo-chlorite disinfection system, preparation of technical specifications and detailed design drawings, permitting, and multi-disciplinary design coordination.

Districts 1A and 2A Hypochlorite System Projects, Broward County, FL

Project Manager, Lead Design Engineer, and Construction Administrator. The project involved the replacement of existing gas chlorine disinfection systems with a bulk purchased sodium hypochlorite system sized for the 40-mgd District 2A and 16-mgd District 1A Water Treatment Plants. The project also included a liquid carbon dioxide chemical feed system for pH control.

Master Pump Station 440 Modifications, Broward County, FL

Project Manager and Lead Design Engineer. The project involved an upgrade of the Master Pump Station 440 in-line booster wastewater pumping station. Upgrades included replacement of three primary pumps (250 hp each), emergency generator, seal water system, and other miscellaneous improvements. In addition, a jockey pump (60 hp) was added to accommodate low flow conditions. Bypass pumping was also included as part of this project. Project responsibilities included management, preparation of updated basis of design report, preparation of detailed design documents, multidisciplinary design coordination, permitting, bid services, and construction administration.

Fiveash Water Treatment Plant Reliability Upgrades, City of Fort Lauderdale, FL

Project Engineer. The Fiveash WTP is a 70-mgd lime softening plant originally constructed in the 1950s with many of the plant processes were at the end of their useful lives. The project included design of improvements to numerous plant processes and structures, including: a new backup power generation building (with two 1,250-kW generators), renovation of the primary control room, automation of plant processes and storm hardening of key facilities.



Lucia Medina, PE

Climate Resilience/ Stormwater

Ms. Medina's experience includes hydrologic and hydraulic modeling, process and civil design, database management, project management, and permitting assistance. Her projects focus predominantly on stormwater and sea-level rise.

Education

ME, Civil Engineering and Project Management, Vanderbilt University, 2013

BE, Civil Engineering, Vanderbilt University, 2012

Certification/License

Professional Engineer: FL

Areas of Expertise

- Stormwater Management
- Hydrologic and Hydraulic Modeling
- Wastewater Process Design
- Civil Modeling and Design (Civil 3D)
- Database Management (GIS)
- Project Management
- Permitting

Experience

- 11 total years
- 10 years with Hazen

Professional Activities

Bill and Melinda Gates Millennium Scholar Alumni

VALUE TO POMPANO BEACH

- Serves as key modeler for the modeling task for the City of Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services project, where she led the development of the hydraulic, hydrologic, and groundwater models to showcase both existing and future scenarios with variable time horizons.
- Extensive experience using hydraulic, hydrologic, and groundwater modeling to assess stormwater vulnerabilities.

Stormwater Master Plan Modeling and Design Implementation Services, City of Fort Lauderdale, FL

Project Supervisor. The project consisted of delivery of a new stormwater master plan and design implementations to address chronic flooding and other stormwater management issues in the City; the City covers approximately 23,000 acres of highly urbanized neighborhoods with much of its coastal land area lying within the floodplain. As Project Supervisor for the modeling task, Ms. Medina coordinated with the modeling team to develop the hydraulic, hydrologic, and groundwater modeling used to inform the design teams. She has hands-on experience with ICPR4, the modeling software selected by the City, as well as various ArcGIS applications used to dovetail raw data into modeling inputs and parameters. Ms. Medina's role in this project included collecting and organizing supporting data from agencies, developing detailed modeling workflows to streamline coordination and consistency amongst project partners, and giving modeling support for the design teams by providing models that showcase both existing and future scenarios with variable time horizons. Ms. Medina also assisted in the conceptual and construction permitting of the proposed stormwater improvements of initial neighborhoods and City-owned seawall replacement projects. Ms. Medina also serves as Project Manager for the Osceola Creek Restoration project.

Stormwater Master Plan Modeling and Design Implementation, Village of North Palm Beach, FL

Project Manager. As Project Manager, Ms. Medina is leading a team to gather data pertaining to the City's stormwater management system, and developing a hydrologic and hydraulic model to inform and vet capital

Lucia Medina, PE

improvement recommendations that include detailed cost and duration estimates, as well as implementation considerations. Part of this effort includes development of the Villages' 20-year needs analysis required by the State of Florida's House Bill No. 53.

Stormwater Master Plan, City of Margate, FL

Project Supervisor. Ms. Medina served as project supervisor for development of the Stormwater Master Plan. Ms. Medina led a team to refine the existing Broward County MIKE SHE/ MIKE HYDRO model used for the County's Flood Protection Level of Service analysis to better simulate the City's stormwater assets and hydrologic characteristics. The project is divided into two phases, spanning two years of effort to gather data pertaining to the City's stormwater management system, develop a hydrologic and hydraulic model to identify vulnerabilities, inform and vet capital improvement recommendations that include detailed cost and duration estimates as well as implementation considerations. Part of this effort included the development of the City's 20-year needs analysis required by House Bill No. 53.

North Regional Wastewater Treatment Plant Reclaimed Water Expansion, Broward County, FL

Project Engineer. Ms. Medina assisted in the design development phase of the Reclaimed Water Expansion in Broward County, a project that will increase the reclaimed capacity to a total of 26 mgd. She was involved in every element of the design process regarding the proposed continuous backwash sand filters, chlorine contract basins, chemical dosing, air compressor facility, and filter feed control valves. She coordinated and worked with the team, subconsultants, and suppliers to produce a final set of drawings and specifications that met the client's needs and were in compliance with all corresponding regulatory agencies. Ms. Medina is currently assisting in the construction phase of the Reclaimed Water Expansion.

Stormwater Master Plan Update and Flood Vulnerability Assessment, City of Oakland Park, FL

Modeling/Project Manager. Ms. Medina is managing the development of a stormwater master plan and a city-wide flood vulnerability assessment for the City of Oakland Park. The analysis is based on both a hydrologic

& hydraulic model and a geospatial model. The models utilize various data sources and provide a comprehensive stormwater flooding assessment for both current and future projected climatological conditions. Ms. Medina is coordinating with the City to understand the City's composition and known vulnerabilities, and to identify critical and important assets. Modeling results have facilitated the identification and prioritization of specific vulnerabilities throughout the City, which directed recommendations for adaptation strategies and effective solutions to increase resiliency to climate change. Ms. Medina is currently finalizing the stormwater master plan portion of this project due to inform the City in the development of future capital improvement projects.

Seminole Basin Improvements Phase I, Town of Jupiter, FL

Modeling. Hazen assisted the Town of Jupiter in improving the Seminole Basin drainage system by evaluating the benefit of a second pump station and outfall located towards the south portion of the basin near the intersection of Juno Street and Old Dixie Highway. Ms. Medina evaluated the existing ICPR model of the Seminole Avenue Basin to include the proposed pump station located at Juno Street and for proposed connections into the existing drainage system from Old Dixie Highway north of Center Street. Modifications to existing components of the conveyance system were also evaluated to ensure the most effective use of the proposed pump station.

Assessment of Sea-Level Rise Impacts on Existing Infrastructure and Adaptation Plan, City of Coral Gables, FL

Project Engineer. Ms. Medina assisted the team in the evaluation of the potential impacts of sea-level rise on existing City infrastructure. Critical infrastructure was identified, and a risk assessment was conducted under various scenarios. Adaptation strategies consisting of physical improvements, policy changes, and emergency response were developed. Her role included development of the ICPR4 model used to gauge the effects of storm surge and king tide on critical infrastructure within the City. She used data provided by various agencies and sources to carve out a hydraulic and hydrologic model that would inform the City of its stormwater vulnerabilities.



Education

Master of Science, Florida International University, Department of Geology, Concentration in Hydrogeology

Bachelor of Science, University of Miami, Geological Sciences major, Mathematics minor

Certification/License

Professional Geologist, Florida, License PG-2251

Professional Activities

Florida Section of the American Water Resources Association

Adjunct faculty member of Palm Beach State College

Steven J. Memberg, PG

Water Supply/Consumptive Use Permit Renewal

Over 25 years of water resource investigations and regulatory experience across statewide and regional agencies.

GMAwater, LLC

Principal Hydrogeologist

Utilize expertise in water resources to support clients in complex water issues throughout Florida. Advise clients on technical and policy matters based upon knowledge of regulations within Florida Statutes, Florida Administrative Code, and Applicant's Handbooks across water management districts. Clients include municipalities, agricultural interests, and government entities seeking advocacy on water supply initiatives involving legislation, rulemaking, water supply planning, and consumptive use. In 2020, modified and renewed the City of Pompano Beach's consumptive use permit for public water supply, inclusive of population and water supply projections through the year 2065 necessary to justify delivery of offset water from the City's portion of Phase 1 of the C-51 Reservoir. Currently, GMAwater is working on modifying the City's consumptive use permit to account for the additional raw water supply needed for its upgraded water treatment process by leveraging the City's distribution of reclaimed water and its historic use.

South Florida Water Management District

Chief Scientist

Balance external stakeholders with local, statewide, and federal regulatory agencies to develop and implement consumptive use permitting criteria. Act as a key participant on high-profile projects such as statewide consumptive use permitting consistency (CUPcon), the Central Florida Water Initiative (CFWI), regional water supply plans, minimum flows and levels, and water reservations including regular representation of the District at public and inter-agency meetings. Provide legislative analysis, draft and review rule revisions, and consultation on technical matters affecting water supply policy and consumptive use. Provided technical assistance on water resource

matters, contaminated site assessment and cleanup, and groundwater modeling.

Broward County Department of Planning and Environmental Protection

Hydrogeologist II

Perform hydrogeologic analyses of contaminated sites throughout Broward County. Review contamination reports, field investigations, and assess actual or proposed remedial actions through implementation of County, State and Federal law. Lead reviewer of groundwater modeling submitted to the County in support of proposed construction dewatering.

IT Corporation

Associate Geologist

Perform all aspects of environmental project work including proposal preparation, report writing, site visits, drill site supervision, and groundwater sampling. Utilize skills including aquifer test analysis, surveying, file reviews, and graphics presentation.

United States Geological Survey

Physical Scientist

Responsible for performing and analyzing aquifer tests, drill site supervision, borehole geophysical logging, production of maps and figures, and supervision of project students. Investigations include "Hydrogeologic Reconnaissance of the Gray Limestone Aquifer, South Florida," and "Delineation and Extent of Saltwater Intrusion in the Biscayne Aquifer, Eastern Dade County, Florida, 1995."

Publications

Reese, R.S., and Memberg, S.J. 2000. Hydrogeology and the distribution of salinity in the Floridan aquifer system, Palm Beach County, Florida: U.S. Geological Survey WRIR 99-4061

Renken, R.A., Dixon, J., Koehmstedt, J., Lietz, A.C., Marella, R.L., Telis, P., Rodgers, J., and Memberg, S.J. 2005. Impact of Anthropogenic Development on Coastal Groundwater Hydrology in Southeastern Florida, 1900-2000: U.S. Geological Survey Circular 1275.



CORPORATE PROJECT SERVICES, INC.

Recardo Nicholson
Construction Management/Inspections

8451 SW 27th Street, Miramar, FL 33025

Phone: (954) 701-2454

Email: rnicholson@corproserv.com

Education:

High School Diploma, West Hill High School, Stamford, CT
 OSHA 30-Hour Training for Construction

Professional Experience:

Mr. Nicholson's 10 years of experience in the industry includes providing inspection services on construction projects for a variety of water and wastewater facilities in Florida, such as the City of West Melbourne Utilities, South-Central Regional Wastewater Treatment and Disposal Board, and Seacoast Utility Authority.

2022-Present	Corporate Project Services, Inc., Construction Manager
2016-2022	Home Inspection and Maintenance Technician, Stamford, CT
2014-2016	Mutual Housing Association of SWCT, Stamford, CT

Recent Projects:

(2024) City of West Melbourne Wellfield Project, West Melbourne, FL: Mr. Nicholson's responsibilities include providing inspection and monitoring services. He provides resident observation for oversight of construction and testing activities for the injection well at the City of West Melbourne wellfield project and generates daily reports. The project consists of construction of Monitoring Well No. 2. *Specific Role:* Resident Project Representative.

(2023) South-Central Regional Wastewater Treatment & Disposal Board, US 1 South Water and Sewer Force Main Replacement – Phase 2, Palm Beach County, FL: Mr. Nicholson's responsibilities include providing inspection and monitoring services. He provides resident observation for oversight of construction and testing activities for the injection well at the SCRWTDB WWTP and generates daily reports. The project consists of construction of Injection Well No. 2. *Specific Role:* Resident Project Representative.

(2023) Seacoast Utility Authority, US-1 South Water and Sewer Force Main Replacement – Phase 2 Project, Palm Beach County, FL: Mr. Nicholson's responsibilities include providing Construction Resident Project Representative (RPR) services to observe construction and resolve construction conflicts/issues during the duration of the construction. He oversees construction activities such as trench excavations with roadway lane closures, as well as backfill/compaction and asphalt installation and generates daily reports. *Specific Role:* Resident Project Representative.



Jayson Page, PE

Membrane Operations Optimization

Mr. Page's technical expertise includes water process design, advanced water/wastewater technologies, operations assistance, PFAS management, and pilot testing for clients throughout South Florida.

Education

MS, Environmental Engineering
Manhattan College, 1997

BS, Environmental Science, State
University of New York, Purchase
College, 1995

Certification/License

Professional Engineer: FL, TX, ID, NY

Areas of Expertise

- Pilot- and Full-Scale Treatability Studies
- Climate Change and Resiliency
- Master Planning
- Water Treatment
- Potable Reuse Treatment
- Water Chemistry

Experience

- 27 total years
- 22 years with Hazen

Professional Activities

American Water
Works Association

Southeast Desalting Association
Society of Sigma XI

VALUE TO POMPANO BEACH

- Led the design of membrane treatment facilities, including the Hallandale Beach 6-mgd Nanofiltration Plant, the rehabilitation of the Miramar East WTP, and improvements for the Seminole Tribe of Florida Hollywood Reservation 3-mgd membrane softening facility.
- As Project Director, developed a comprehensive water management strategy to address PFAS occurrence, wellfield management, and treatment options for Miami-Dade WASH.
- Conducted bench-scale and pilot testing for the Miccosukee Tribe of Indians of Florida's WTP to optimize water quality.

Water Treatment Plant Pilot Testing,

City of Pompano Beach, FL

Lead Engineer. Mr. Page participated in bench and full-scale pilot testing of the existing water treatment plant to evaluate enhanced lime softening, and simultaneous coagulation and softening options using Accelator treatment units. His responsibilities included correlation of bench scale and full-scale plant operations; establishment of optimum treatment strategies and water quality simulation of the distribution system. Mr. Page participated in the City's Information Collection Rule membrane pilot program as manager of day-to-day operations as well as on-site analysis. He also provided construction phase services for the 10-mgd nanofiltration membrane water treatment plant.

Seminole Tribe of Florida Hollywood Reservation WTP, Hollywood, FL

Project Manager. Mr. Page oversaw design of miscellaneous improvements for a 3-mgd membrane softening facility. The project included replacement of the sulfuric acid storage, feed and injection facilities, mechanical and instrumentation improvements to two raw water wells, installation of a new engine-driven high service pump, and associated fuel storage and feed system.

Nanofiltration Plant, City of Hallandale Beach, FL

Project Manager. Mr. Page managed engineering services for the City's 6-mgd nanofiltration plant. Services involved design of the new membrane

Jayson Page, PE

facility, including pretreatment, membrane treatment, post-treatment, and blending with lime softened water, and planning for future potential reverse osmosis facilities.

East Water Treatment Plant, City of Miramar, FL

Project Manager. Mr. Page provided engineering services for the rehabilitation of the East WTP. This included the evaluation of the existing plant and the addition of two new membrane nanofiltration units to replace the current lime softening capacity. Hazen is presently developing the design-build approach for this work to be constructed.

PFAS Management Plan, MDWASD, Miami-Dade County, FL

Project Director. Miami-Dade has been proactively performing water quality sampling at the wells serving the three regional systems since 2019. The results of this sampling have indicated the presence of per- and polyfluoroalkyl substances (PFAS) in the wellfield supply water. Hazen assisted Miami-Dade in proactively developing an understanding of PFAS occurrence patterns, wellfield management, and treatment options available for reducing levels of PFAS in the finished drinking water.

Lime Softening Treatment – Pellet Softening,

Miccosukee Tribe of Indians of Florida, Fortymile Bend, FL

Project Manager. Hazen completed bench-scale and pilot study testing for the Miccosukee Tribe of Indians of Florida at the Tribe's WTP to determine treatment required to optimize water quality. The water was unstable for calcium and precipitation was clogging distribution system piping, residential fixtures and appliances. Because of the environmentally sensitive location in the Everglades, lime softening and ion exchange were not good candidates for softening to remove the calcium. The team found that the pellet softening process using caustic soda can provide excellent calcium removal, with 90-95% dry calcium carbonate as the only byproduct. The pellet softening system final design includes aeration, pellet softening, recarbonation, dual media filtration, and GAC contactors with free chlorine for disinfection.

Assessment of Sea-Level Rise Impacts on Existing Infrastructure and Adaptation Plan, City of Coral Gables, FL

Project Director. Mr. Page was responsible for oversight of the team that evaluated the potential impacts of sea level rise on existing City Infrastructure; critical infrastructure was identified and a risk assessment conducted under various scenarios. Adaptation strategies, consisting of physical improvements, policy changes, and emergency response, were then developed.

Citywide Vulnerability Assessment and Adaptation Plan, City of Hollywood, FL

Deputy Project Manager. Hazen was selected to conduct a Citywide climate change vulnerability assessment, prioritizing vulnerabilities, developing adaptation strategies, creating an adaptation plan, informing the public about risks and adaptation opportunities, and building the capacity of the City to include climate change data in decision making.

City of Plantation's Nanofiltration East Water Treatment Plant Expansion, City of Plantation, FL

Mr. Page provided engineering reviews for design of the City of Plantation's East Water Treatment Plant nanofiltration facility expansion from 6 mgd to a 12 mgd. Mr. Page provided process reviews and mechanical engineering reviews of hydraulics, pumps, skid arrangements, and controls.

John E. Preston Water Treatment Plant Bench-Scale Testing, Miami-Dade County, FL

Project Manager. Hazen developed, designed, constructed, and operated state-of-the-art lime softening, bench scale, pilot plant and full-scale systems to test a treatment train that was intended to produce drinking water of a quality that could meet current and proposed regulations for the Biscayne Aquifer, an underground source of drinking water. The treatment train included high-pH lime/caustic soda treatment with ferric sulfate and polymer addition. The unit processes selection were proposed to meet the very low TOC, DBP and color regulatory limits.



Scott Peavler, P.L.A.

Landscape Architect

Vice President, Planning and Landscape Architecture

Mr. Peavler's responsibilities include site planning, landscape and hardscape design, tree removal and relocation plans in AutoCAD and presentation graphics, utilizing knowledge of local and state regulations involved in land development on a range of projects. Coordinating with Clients, City officials, and other consultants to obtain project input and approvals.

Professional Registrations

- Professional Landscape Architect, State of Florida No. LA66669976 (2008)

Education + Training:

- Bachelors of Landscape Architecture, Kansas State University (2005)

Years of Experience

- Total: 19; With Firm: 15

Relevant Experience

Winson Water Treatment Plant Upgrade | North Miami, Florida

Landscape Architect - Craven Thompson as a subconsultant to Hazen and Sawyer provided surveying and landscape architecture services for the upgrade of the Winson WTP in North Miami, Florida. The landscape architectural services involved tree disposition (relocation) plans as well as landscape and hardscape plans.

Sawgrass Wastewater Treatment Plant Irrigation | Sunrise, Florida

Landscape Architect - Craven Thompson as a subconsultant to Hazen and Sawyer provided landscape irrigation plans for the WWTP. Mr. Peavler prepared 90% and 100% Irrigation Plans and specification for the WWTP. This included required coordination meetings for irrigation plan development and approval. Also included the preparation of the phasing plans.

West Palm Beach WTP Diesel Tank Landscaping | West Palm Beach, Florida

Landscape Architect - Craven Thompson as a subconsultant to MWH provided landscape architecture services for the for the screening of the new diesel tank at the plant. The design included a screening buffer for the tank consisting of native Florida plantings.

Pump Station 310 | Broward County, Florida | Landscape Architect

Provided site plans and landscape plans for pump station. Landscaping was laid out to provide screening for the pump station, as well as meet county codes. All existing trees were preserved and relocated if required.

Nano Filtration Water Treatment Plant Landscape Design | Dania Beach, Florida | Landscape Architect

Provided a landscape design for the 2.8-acre site. The limits of the site kept the landscaping to the perimeter of the site, which helped screen the site from the surrounding residential areas. Existing trees were preserved on site and relocated if needed. 100% native plants were used on the site to reduce the use of irrigation on the site, allowing for LEED credits

The Township Buffer | Coconut Creek, Florida | Project Manager

The Township Buffer Restoration project is a 5-year multi-phase project to reestablish and improve the Township's buffers along the main arterial roadways in the city, as well as the major internal neighborhood roads within The Township. Along with the prepared construction documents, the design project included a comprehensive set of guidelines to provide direction for the buffer restoration, which was developed through coordination with City Staff and The Township.

Landscape Peer Plan Review | Coconut Creek, Florida - Review Landscape Architect

Mr. Peavler serves as reviewer of all DRC submittals on behalf of the city which include landscape and hardscape elements.



Rama Rani, PG, GISP, CC-P

Permitting/Regulatory Compliance

With 25 years of expertise, Ms. Rani has extensive hands-on experience in surface and groundwater modeling across regional, sub-regional, and local-scale projects, coupled with a strong background in project management.

Education

MS, Environmental Sciences, Ohio University, 1996

BA, Architecture, Regional Engineering College, Trichy, India, 1990

Certification/License

Professional Geologist: FL

GIS Professional (GISP)

Climate Change Professional Certification (CC-P)

Areas of Expertise

- Resiliency Analysis/Design
- Hydraulic and Hydrologic Modeling and Studies
- Flood Protection Level of Service
- GIS
- Water Supply Planning
- Water Resources Modeling
- Riverine and Coastal Flood Hazard Analysis
- Watershed Planning and Management Plans
- Climate Change Impacts on H&H Modeling
- Groundwater Modeling
- Saltwater Intrusion Modeling

Experience

- 26 total years
- 4 years with Hazen

Professional Activities

American Water Resources Association

VALUE TO POMPANO BEACH

- Water resources expertise includes modeling for resiliency, flood protection, water supply, riverine and coastal flood hazard analysis, land development and transportation, as well as municipal, county, and state-wide watershed planning and management plans.
- Able to successfully and efficiently address permitting requirements.

Flood Protection Level of Service Assessment for Current and Future Sea-Level Rise Conditions, SFWMD, Miami-Dade County, FL

Project Manager and Modeling Lead. Conducted a H&H modeling of stormwater infrastructure to determine the flood protection level of service under current and future conditions with sea level rise. The 550-square-mile MIKE model calibrated for this study will be used to make recommendations for flood mitigation projects. The model domain in Miami-Dade County covers C-4 basin on north, C-111 on south, L-31N canal on the west and Biscayne Bay on the East.

Modeling in Support of Consumptive Use, City of Daytona Beach, FL

Lead Modeler. The City is interested in identifying potential water supply options and potential pathways for the elimination, minimization or maintenance of existing surface water discharges in alignment with Senate Bill 64 requirements. During Phase 1, Hazen will develop and evaluate integrated solutions that address the City's water supply and consolidate information required for the CUP application process. During Phase 2, we will finalize information initially developed in Phase 1 that is required for the St. Johns River Water Management District (SJRWMD) CUP application. Ms. Rani developed an integrated MIKE SHE/MIKE 11 (MIKE) model and submitted it to SJRWMD as part of the permit package associated with Bennet Swamp in 2015. This MIKE model will be used to develop water balance for the model, and for subareas of the model domain. The MIKE model will be reviewed for reasonableness of the water balance, and scenarios run to determine plausible ranges and benefits of recharge to the Floridan Aquifer and assess capacity constraints. This will be presented to the City to

Rama Rani, PG, GISP, CC-P

determine if further work needs to further assess aquifer recharge from Bennett Swamp.

USACE C-44 Stormwater Treatment Area

Dewatering, Martin County, FL

Modeling and Calculations. The purpose of this application was to modify and renew the Water Use Permit for dewatering activities associated with the repair and construction of dewatering activities needed for repairs and the construction of 6,300-acre Stormwater Treatment Area (STA) cells, associated internal canals, and 56 water control structures (i.e., gates, weirs, culverts, and spillways). The C-44 Stormwater Treatment Area Dewatering (Project) is located north of the C-44 Canal. The Project is part of the Indian River Lagoon South Restoration Project and includes the construction of a 9,400-acre water retention area. Due to the size and scope of the Project, this was a master dewatering permit. Water resource impact evaluation work performed by Ms. Rani included analyses of water resource availability, existing legal uses, offsite land uses and wetlands impacts.

Upper Kissimmee Basin Flood Protection Level of Service Assessment for Current and Future Conditions, South Florida Water Management District (SFWMD), Orange, Osceola, and Polk Counties, FL

Project Manager and Modeler. This project involves development, calibration, and application of H&H modeling for 26 watersheds in UKB to evaluate the flood protection level of service offered by SFWMD's primary conveyance system under current and future conditions. Recommendations will be made on mitigation and adaptation projects for the central Florida area for SFWMD to consider in the 1500-square miles study area.

Big Cypress Basin Model (BCB) Update, Collier and Lee Counties, FL

Project Manager and Modeler. This project involves long-term and storm event H&H modeling to evaluate the FPLOS offered by SFWMD system under current and future conditions with SLR; the design storm simulation includes 5-, 10-, 25- and 100-year events. Groundwater model inputs extracted from SEAWAT BCB model. The model will help answer questions on many issues including flood risk driven by complex interactions

between the natural and built environments, surface and groundwater, infrastructure system inadequacies (if any), increased development, and climate change impacts; recommendations will be made on mitigation and adaptation projects for SFWMD to combat climate change and sea level rise impacts

H&H Modeling and Field Work, SFWMD, West Palm Beach, FL

Section Leader. Ms. Rani supervised a group providing different types of modeling and field work to support modeling activity and other H&H projects. She was responsible for leading the Emergency Modeling Team (EMT) to effectively respond to emergency requests and situations (4 seasons); as well as responses to missions included modeling, scientific data analysis and field visits. She developed and obtained funding for a proposal to develop a real-time surface water forecasting and operating tool and was responsible for calibration and development of base conditions surface and ground water integrated models for Kissimmee Basin. Ms. Rani also served as Lead Modeler for MIKE model applications in the Kissimmee Basin (MIKE SHE/MIKE 11, MIKE FLOOD), Big Cypress Basin, Caloosahatchee Basin, and other basins in the SFWMD jurisdictional area. She served as Technical Lead for modeling of seepage management in South Dade, Florida. She was a contributing member for update of Local Mitigation Strategy, Palm Beach County, Florida. Ms. Rani also managed contracts for various projects, including deep level learning for forecasting of inflows using artificial intelligence. She also provided litigation support, when needed, for any cases that involve hydrologic modeling and/or data analysis.

Comprehensive Everglades Restoration Plan Modeling Management, Interagency Modeling Center (IMC), SFWMD, West Palm Beach, FL

Program Manager. Ms. Rani served as Project Manager for the IMC, which is the interagency body of SFWMD and the United States Army Corps of Engineers that oversees all Comprehensive Everglades Restoration Plan (CERP) modeling, regional and sub-regional. The IMC provided guidance to PDTs and RECOVER (Restoration Coordination and Verification) based on thorough technical analyses with best available data and modeling tools.



Guillermo Regalado, PE

Hydraulic Modeling

Mr. Guillermo has over 37 years of experience in a wide range of fluvial and water resource engineering topics, including the application of hydraulic, hydrologic, and water quality engineering models to both large- and small-scale projects.

Education

MSc, Irrigation Engineering, Catholic University of Leuven, Belgium, 1992

BSc, Civil Engineering, Pontificia Universidad Javeriana, Colombia, 1988

Certification/License

Professional Engineer: FL, NY, Puerto Rico, Colombia

Areas of Expertise

- Hydrologic and Hydraulic Analysis and Modeling
- Engineering Design
- Project Management
- Integrated Groundwater-Surface Water Systems
- Reservoir Operations
- Natural Resource Restoration
- Water Distribution
- Wastewater Collection

Experience

- 37 total years
- 8 years with Hazen

Professional Activities

American Water Works Association

American Water Resources Association

South Florida Hydrologic Society

American Association of Columbian Engineers

VALUE TO POMPANO BEACH

- Technical responsibilities have included hydrologic and hydraulic analysis and modeling of canals, control structures, and flood control systems.
- Vast experience in Florida, including hydraulic models for Broward County and the Cities of Sunrise, Miami Beach, and Fort Lauderdale.

Water Master Plan, City of Plantation, FL

Modeling Technical Lead. The project included development of a Water Master Plan to define both short-term and long-range planning goals through the year 2040 including goals that serve to optimize operation and management of the City's entire water system. A key task for this project included development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. The model was used to identify capacity issues within the distribution network to evaluate recommended improvements and address possible water quality concerns. Mr. Regalado led the modeling team in the development of the InfoWater model.

Countywide Risk Assessment and Resilience Plan, Broward County, FL

Deputy Project Manager. Hazen was selected by Broward County to develop an actionable, resilience plan inclusive of infrastructure improvements and redevelopment strategies consisting of a visualization platform to aid regional planning and project tracking; and to provide the foundation for collective mitigation of future flooding, inclusive of water management infrastructure, transportation systems, critical infrastructure, green infrastructure, land use, basin-scale redevelopment, and land use planning based on a comprehensive countywide risk assessment. The plan served as the basis for a multi-decade, coordinated and phased infrastructure improvement plan with ample detail to support refined outreach, design, and financing needed for implementation. Mr. Regalado served as Deputy Project Manager, developing and executing the technical approach, including hydrologic and hydraulic modeling, exposure, vulnerability and risk assessments; and also developing the components of the resilience plan. He directed the model (MIKE SHE/MIKE HYDRO) model refinement phase and the evaluation of flooding hazards under the current or no-action conditions.

Guillermo Regalado, PE

Reclaimed Water Transmission System Model

Update, Broward County, FL

QA/QC. The project included the update of the previous Reclaimed Water Transmission System Model. The InfoWater model was updated and utilized to identify and evaluate the performance of the system which may be encountered over time. Key considerations in the analysis included the specific requirements and constraints contained within each large user agreement. Mr. Regalado performed the Quality Assurance and Quality Control review of the model update and application.

Stormwater Master Plan Modeling and Design

Implementation Services, City of Fort Lauderdale, FL

Lead Modeler. The project included the development of a 1D and 2D integrated groundwater – surface water model (ICPR4) for the study area. ICPR4 relies heavily on GIS information during the model development phase. The project includes the development of several models for each watershed within the City. Models were prepared to simulate the existing and proposed conditions under a variety of scenarios including multiple sea level rise conditions. Proposed conditions included pump stations and detention storage (ponds).

2020 Water and Wastewater Master Plan Update,

City of Sunrise, FL

Technical Lead. The project included development of updated Water and Sewer Master Plans that will reflect and evaluate the current land use development, water demands, asset conditions, treatment plant capacities, and wastewater flows. The project involved update and calibration of the WaterGEMS Hydraulic Model to analyze the existing water distribution. The project also included the application of the City's water hydraulic model for general network performance evaluation, fire flow availability assessment, water age mapping, finished water stor-age availability evaluation, and definition of methods to reduce water age. The project also included update and calibration of the sewer force main model to include flows and boundary conditions imposed by the connection with an adjacent municipality.

Water Hydraulic Model, City of Miami Beach, FL

Technical Lead. The project involved development and calibration of a GIS-based Water Distribution System

Hydraulic Model in InfoWater for the City of Miami Beach (estimated population of 92,000) and the InfoWorks Force Main transmission model. The City receives treated water from Miami-Dade Water and Sewer Department through 5 points of entrance that were used as boundary conditions in the model. Additionally, the model includes 180 miles of piping, six booster pump stations, four water storage tanks, and approximately 1,400 hydrants. Due to the commercial and touristic nature of the City, variation in water demand patterns imposes operational challenges to the system. Model development activities included extensive use of SCADA information to accurately represent operational strategy in the InfoWater model. The model was used to define the hydraulic capacity of the existing water distribution system and its components under different fire flow and operational scenarios, and to evaluate the impact of proposed developments in the service area.

Citywide Vulnerability Assessment and Adaptation

Plan, City of Hollywood, FL

Lead QA/QC and Technical Engineer. The project included an evaluation that consisted of analysis of projected flood caused by sea level rise (SLR) and/or by the storm surge caused by a hurricane. It considered City-owned and other critical infrastructure and assets within the City that may be vulnerable to climate change conditions, including select assets not owned by the City. The project identified affected systems using GIS and LiDAR data for assessing SLR and storm surge inundation to calculate vulnerability scores for the City's critical infrastructure. Vulnerability and criticality were used to prioritize risks and begin development of a systematic plan of action to be taken in the future

Sewer System Capacity Evaluation, Sewer

Design and Implementation Program, City of Fort Lauderdale, FL

Project Manager, Lead Modeler, and Hydraulic

Engineer. The project included evaluation of the capacity of the collection system, including all existing force mains, gravity mains, and pump stations as mandated by the Consent Order with FDEP. Mr. Regalado led the modeling activities, which included development and calibration of the InfoWater force main and pump stations model and InfoSWMM gravity collection system model.



Jean Paul Silva, PE, FRSE

Structural

Mr. Silva serves as the Southeast Regional Manager for structural engineering work in Florida. His experience has encompassed projects of a diverse background related to water, wastewater, stormwater, water distribution, and water storage.

Education

MS, Civil/Structural Engineering, City University of New York, 2000

BS, Civil Engineering, Universidad del Valle, Republic of Colombia, 1996

Certification/License

Professional Engineer: FL

Areas of Expertise

- Structural Analysis and Design
- Steel Design and Detailing
- Concrete Design
- Shop Drawing Review
- CAD Drafting
- Specialty Inspection

Experience

- 30 total years
- 23 years with Hazen

Professional Activities

American Society of Civil Engineers

American Concrete Institute

American Institute of Steel Construction

American Water Works Association

VALUE TO POMPANO BEACH

- Extensive structural engineering experience throughout South Florida, including multiple clients in Broward County.
- Experience with design of new facilities, as well as structural condition assessments, rehabilitation and upgrade of existing facilities, and construction administration with a focus on structural and special inspections.

Dixie Wellfield Improvements, City of Fort Lauderdale, FL

Structural Engineer. This project involved a reverse osmosis water treatment system. The City replaced their existing lime softening facilities at the Peele-Dixie WTP with a 12-mgd finished water capacity nanofiltration water treatment plant. The City retained the services of Hazen to evaluate, permit, and design wellfield improvements for the Dixie Wellfield.

14.5-mgd Nanofiltration Plant, Town of Jupiter, FL

Structural Engineer-of-Record. Mr. Silva played a major role in the structural design and coordination of architectural components of the \$38 million Nanofiltration Plant. Design consisted of a two-level reinforced concrete/masonry building to house cartridge filters and membrane feed systems, nanofiltration skids, chemical storage, degasifiers and odor control systems, clearwell and transfer pumps.

12-mgd Reverse Osmosis Water Treatment Plant Expansion,

Collier County, FL

Structural Engineer. A reverse osmosis water treatment plant expansion, including six reverse osmosis treatment systems; four degasification towers; two chemical scrubbers (odor control); a 32-mgd high service pump station; electrical reliability upgrades and related SCADA upgrades.

Jean Paul Silva, PE, FRSE

Ion Exchange Water Treatment Plant, City of Arcadia, FL

Structural Engineer. Mr. Silva served as Structural Engineer for this 1.5-mgd ion exchange water treatment plant. The project included treatment process selection followed by pilot testing, a new production well, new cation and anion treatment process, disinfection and pH adjustment, a new operations center, a new warehouse, and an assortment of improvements to the City's water infrastructure.

Winson Water Treatment Plant Rehabilitation and Upgrades, City of North Miami, FL

Structural Engineer. Mr. Silva served as the Structural Engineer for the design of upgrades and rehabilitation of an existing 9.3-mgd lime softening WTP originally constructed in the early 1960s. The project included replacement of water storage tanks, new high service pump, backwash and transfer pump station, new chemical storage and feed facility, replacement of lime contactor mechanism, and a new two-story administration building that will also function as an emergency operating center and meets LEED requirements for Silver classification.

Hollywood Reservation WTP, Seminole Tribe of Florida, Hollywood, FL

Quality Control and Structural Engineer-of-Record. Mr. Silva provided quality control for design of miscellaneous improvements for a 3-mgd membrane softening facility. The project included the replacement of the sulfuric acid storage, feed and injection facilities, mechanical and instrumentation improvements to two raw water wells and the installation of a new engine-driven high service pump and associated fuel storage and feed system. He also served as Structural Engineer-of-Record for the Hollywood reservation's electrical reliability upgrades in addition to reviewing shop drawings.

Loxahatchee Deep Bed Filters, Loxahatchee River District, Jupiter, FL

Structural Engineer-of-Record. The \$8.5 million project involved design, permitting, and construction services for the addition of deep bed filters at the District's wastewater treatment plant. It included: new

deep bed filters, a new electrical building, a new parshall flume structure, rehabilitation of a filter pump station, demolition of existing traveling bridge filters, along with the associated improvements to drainage, electrical, and existing buildings. The project enhances operational efficiency, improves the treatment process, replaces aging infrastructure, and improves the overall safety and security of the treatment plant.

Three Oaks Raw Water Augmentation Project, Lee County, FL

Structural Engineer. Mr. Silva served as Structural Engineer for this unique project that refurbished several ground water wells to provide a source of water to augment reclaimed water supply during high demand periods. The project included new supply wells, retrofitted supply wells, raw water piping conveyance, storage tank, high service pumping, and treated water conveyance to the distribution system through residential neighborhoods.

Miramar Wastewater Reclamation Facility Expansion to 4 mgd, City of Miramar, FL

Structural Engineer. Mr. Silva provided structural engineering services through design and construction for the first Miramar Wastewater Reclamation Facility Reuse Expansion project. The reuse facilities were expanded from 2 mgd to 4 mgd. New facilities included two filter feed pumps, sand filters, expansion to the existing sodium hypochlorite system, an emergency generator, a ground storage tank, and high service pumps.

City of Sunrise Southwest Wastewater Treatment Plant Repair and Replacement Upgrade and High Level Disinfection/Reuse Facilities, Sunrise, FL

Engineer-of-Record. Mr. Silva was the Engineer of Record for the structural design of the proposed facilities which include new headworks facility, new deep bed filters, new chlorine contact basins, new sodium hypochlorite storage facility, new lift station and new electrical buildings. Project also includes repairs and upgrades to existing aeration basins and clarifiers. Mr. Silva provided CMS services with shop drawing review and specialty structural inspections.



Sharon Simington

Grants/Funding

As Hazen's Southeast Regional Funding Program Leader, Ms. Simington focuses on water, wastewater, and stormwater utilities projects and provides the planning, application, and administration for capital improvement projects.

Education

BSAS, University of South Florida
(expected 2027)
AA, University of South Florida, 2002

Areas of Expertise

- Funding Management
- Program Management
- Project Management

Experience

- 21 total years
- 3 years with Hazen

VALUE TO POMPANO BEACH

- Extensive experience working with local governments to fund infrastructure projects that better communities.
- Leads efforts to secure alternative funding, acting as the liaison between agency and community, providing a smooth funding experience and cohesive working environment.
- Existing relationships with many funding agencies, community members and leaders, and consulting engineers.

Glendale WRF and the Northside WRF, City of Lakeland, FL

Funding Lead. Provided the planning, application and administration for State Revolving Fund loan program. The scope of work includes loan application, agreement coordination, procurement coordination and approval, Davis Bacon compliance, AIS compliance, Fiscal Sustainability Plan, Disbursement Requests, financial reporting, loan budgeting, and closeout. The project includes a new effluent PS and chlorine contact chamber at the Glendale WRF.

NW Reclaimed Water Ground Storage Tank and Pump Station Grant Management, City of DeLand, FL

Senior Program Administrator. Ms. Simington provided grant application, assistance, and program coordination. A 2.0 million-gallon (MG) GST located near the intersection of Stone St. and Lake Gertie Rd. is proposed. The GST provides the needed increase to pressures in the surrounding area. Approximately 14,000 LF of 16 inch is proposed to upsize the 12 inch along US 92 from Jacobs Rd. to N. Spring Garden Avenue.

Downtown Community Redevelopment Agency Water and Wastewater Improvements, City of Tavares, FL

Senior Program Administrator. This project includes approximately 8-inch, 10-inch, 12-inch and 15-inch-diameter PVC and ductile iron gravity collection mains, relining of 8-inch, 10-inch and 12-inch diameter VCP gravity collection mains, rehabilitation and coating of 145 manholes, removal and replacement of 40 manholes, of 4-inch and 6-inch diameter PVC force main pipe, installation of 4-inch, 6-inch, 8-inch, 10-inch, 12-inch and

Sharon Simington

16-inch diameter of PVC and ductile iron potable water distribution main within the City, County, Florida Department of Transportation (FDOT) rights-of-way. The installation methods included open cut and jack and bore. The project work also included as-built survey, utility locates, maintenance of traffic, shop drawing and manufacturer operational and maintenance submittals, erosion control, start-up, testing and all necessary ancillary activities to complete the work.

Funding Analysis, Recommendation and Funding Management Hull Road Water System, DeSoto County, FL

Senior Program Administrator. Ms. Simington provided funding strategy, grant application, grant agreement coordination, grant administration, project closeout. The 8-inch water main, dead-ended on West Hull Avenue will be extended on West Hull Avenue down to SW Prairie Avenue and then through SW Collins Street, where it will tie into the existing 16-inch main located on the west side of Highway-17 at the 128th Street intersection. A new flow control valve will be installed on the 16-inch main at this connection to divert a portion of the water coming from the Peace River Water Supplier through the Hull portion of the Digital Control Unit (DCU) system.

Funding Analysis and Strategic Plan, Manatee County, FL

Southeast Regional Funding Program Lead. Manatee County utilizes a 5-year Capital Improvement Plan (CIP) for planned project organization and budgeting purposes. As part of the CIP planning process and project inclusion, a budget element is included that delineates where project funding will be assessed. The purpose of the Funding Analysis and Strategic Plan was to provide the County with an analysis of funding options that will assist in the decision-making process with respect to funding sources. The plan provided programmatic background details of available programs, requirements, deadlines, project eligibility, and funding capacity.

East Central Regional Water Reclamation Facility Funding Assistance, City of West Palm Beach, FL

Financial Lead. Ms. Simington led the development of a funding plan to assist the East Central facility

Operations Board in the implementation of a 10-year, \$150 million capital improvements program. She developed a dynamic dashboard funding model to evaluate total program costs for various financing alternatives.

Funding Evaluation for the Howard F. Curren Advanced Wastewater Treatment Plant Biogas Use and Digestion System Improvements (Amendment No. 2), City of Tampa, FL

Southeast Regional Funding Program Lead. Ms. Simington provided a funding report regarding opportunities available to the City for this project. This portion of a larger scope of work included the review of available funding sources and identification of potential funding opportunities for the construction of the projects designed under Amendment 2. An evaluation of key contingencies associated with each funding source, such as impacts on direct project costs regarding funding procurement and meeting funding requirements (e.g., Davis Bacon Wages, Buy American) were included. General timeframes and implications regarding the project schedule were also identified. Results of the review and evaluation were summarized in a report and presented at a meeting with the City.

Lori Laine Trunkline Replacement Clean Water State Revolving Fund Assistance, Brevard County, Satellite Beach, FL

Funding Lead. Ms. Simington provided the planning, facility plan, and Clean Water State Revolving Fund loan application. The project consists of piping and earthwork to reroute stormwater conveyance to biosorption activated media-filled trenches for nutrient removal.

Sanitary Sewer Collection and Treatment System Funding Assistance, Town of Pierson, FL

Funding Lead. Ms. Simington provided design loan Request for Inclusion, loan agreement assistance, disbursement request, and funding coordination for the project. The project included the construction of approximately 21,200 LF of a new collection system, along with the construction of a 100K GPD wastewater facility.



Enrique Vadiveloo, PE, ENV SP

Sustainability

Mr. Vadiveloo has over 19 years of experience in environmental engineering in the areas of wastewater treatment, water treatment, reuse, and resilience projects, including process design, detailed design, facility planning, pilot testing, and regulatory review.

Education

ME, Environmental Engineering,
University of Florida, 2005

BS, Environmental Engineering,
University of Florida, 2004

Certification/License

Professional Engineer: FL

Areas of Expertise

- Water reuse
- Wastewater process
- Sustainability
- Master planning

Experience

- 20 total years
- 19 years with Hazen

Professional Activities

Water Environment Federation

American Water Works Association

Water Reuse Association

U.S. Water Alliance One Water Council

Florida Water Environment Association

Florida Engineering Society

American Society of Civil Engineers

SPIICE National Science Foundation
Fellowship (2004-2005)

VALUE TO POMPANO BEACH

- Serves as Hazen's Southeast Region Water Reuse Practice Leader.
- Has participated in a variety of water reuse, wastewater treatment, master planning, piloting, and design projects.
- Served as Deputy Project Manager for the Broward County Regional Reuse Master Plan.

Effluent Recharge Treatment Pilot Study, City of Hollywood, FL

Project Engineer. Mr. Vadiveloo served as Project Engineer for the first Florida Aquifer Recharge pilot study in the State of Florida for the potential 21-mgd full scale facility. The goal of the study was to demonstrate acceptable emerging contaminant oxidation using treatment technologies alternative to MF/RO/UV-AOP that are more cost effective and have a smaller carbon footprint. Treatment technologies piloted included, ion exchange, ultrafiltration, ozone, UV-AOP, biologically activated carbon filters, electrocoagulation, and ferrate treatment.

Regional Reuse Master Plan, Broward County Water and Wastewater Services, Broward County, FL

Deputy Project Manager. Mr. Vadiveloo served as Deputy Project Manager for this regional reuse master plan which builds upon current municipal and County efforts and coordinates a regional approach to reuse planning, maximizing cost-effective reuse development for 24 utilities in Broward County. This project developed a state-of-the-art tool for future water reuse planning using a Google Earth platform which enables multiple decision makers to easily analyze the issues and spatially determine cost effective water reuse opportunities. Water reuse projects evaluated include Biscayne Aquifer recharge, Florida Aquifer recharge, large user spray irrigation, dual distribution and industrial reuse. This project also evaluated the impacts of climate change on water resources in Broward County.

Enrique Vadiveloo, PE, ENV SP

South District Water Reclamation Plant, Miami-Dade County, FL

Project Engineer. Mr. Vadiveloo served as Project Engineer for this indirect potable reuse project that was envisioned to provide advanced membrane treatment for 30 mgd of wastewater. The treatment process was envisioned to include microfiltration, reverse osmosis, and advanced oxidation utilizing high level ultraviolet light and hydrogen peroxide for the destruction of emerging contaminants such as pharmaceuticals and endocrine disrupting compounds. This project is the cornerstone of Miami-Dade County's alternative water supply program and will recharge the County's southernmost drinking water wellfield. The scope includes planning, pilot testing, design, and construction management. This project also evaluated innovative ways to remove ammonia using ion exchange.

Advanced Wastewater Treatment Pilot Project, City of Plantation, FL

Project Manager. Mr. Vadiveloo served as Project Manager for this dual membrane reuse pilot project. The goal of the project was to assess technologies suitable for indirect potable reuse applications. Treatment systems evaluated include MBR, reverse osmosis, and ultraviolet light disinfection. This project demonstrated compliance with some of the most stringent nutrient requirements in the country (Total Nitrogen < 1.5 mg/l and Total Phosphorous <.02 mg/l), as well as microconstituent removal.

Wastewater Treatment Plant Effluent Disposal/Reuse Upgrade Evaluation, City of Sunrise, FL

Project Engineer. Mr. Vadiveloo served as Project Engineer for this effluent disposal and water reuse evaluation which investigated short and long-term concepts for upgrading the effluent disposal capacity at the Southwest Wastewater Treatment Plant. The goal was to identify concepts to increase effluent capacity to avoid derating of the plant.

Effluent Disposal and Reclaimed Water Master Plan, Broward County Water and Wastewater Services, Broward County, FL

Project Engineer. Mr. Vadiveloo served as Project Engineer for this effluent disposal and water reuse master plan which will provide Broward County with over 22 mgd of reuse including indirect potable reuse. This project evaluated alternatives to comply with the new open ocean outfall rule. The alternatives evaluated included Biscayne and Floridan Aquifer recharge using dual membrane technology and UV advanced oxidation processes.

Miami-Dade Ocean Outfall Legislation (OOL) Program Process and Hydraulic Modeling of Wastewater Treatment Plants, Miami-Dade Water and Sewer Department (MDWASD), City of Miami, FL

Project Manager. Mr. Vadiveloo served as the Project Manager for the calibration of MDWASD's hydraulic and process models for all three of their 100+ MGD High purity oxygen WWTP's. Mr. Vadiveloo was part of the field team that conducted a significant sampling effort alongside MDWASD staff necessary for hydraulic and process model calibration. These calibrated models served as the basis for capacity analysis of MDWASD's wastewater treatment system under MDWASD's \$2.2 billion Ocean Outfall Legislation Program.

South District High Level Disinfection Facility, MDWASD, City of Miami, FL

Project Engineer. Mr. Vadiveloo served as Project Engineer for this landmark project, which will provide 285-mgd of high-level disinfection quality wastewater. The project entails planning, design, and construction of a \$618-million wastewater filtration and disinfection system. For this project, Mr. Vadiveloo was the Engineer of Record for the On-Site Hypochlorite Generation System design which will be the largest in the U.S., with a capacity of 21,000 lbs of chlorine per day, at project completion. This project was completed under budget and one year ahead of schedule.



David Witte, PE, CEM

HVAC/Plumbing

Mr. Witte's design experience includes planning and design for HVAC and plumbing systems, life-cycle cost analyses, calculating heating and cooling loads for spaces, pressure drop calculations for air and hydronic systems, sizing and selecting equipment, developing bid documents, and construction cost estimating.

Education

ME, Civil Engineering, Cooper Union, 2010

BS, Mechanical Engineering, University of Massachusetts Amherst, 2003

Certification/License

Professional Engineer: FL, NY, MA, NH, NM, UT

Certified Energy Manager (CEM)

Areas of Expertise

- Heating, Ventilation And Air Conditioning (HVAC) Systems
- Pumping Systems
- Life Cycle Cost Analyses, Including Energy And Emissions Estimates

Experience

- 17 total years
- 8 years with Hazen

Professional Activities

American Society of Mechanical Engineers

Association of Energy Engineers

VALUE TO POMPANO BEACH

- Has provided design services during construction for HVAC systems including review of shop drawing submittals, RFI responses, and writing change orders.
- Experience includes mechanical system design and analysis for water/wastewater facilities as well as serving as owner's representative for capital project design and construction.

Sunbridge New Nanofiltration Water Treatment Plant Improvements and Expansion Project, Toho Water Authority, Kissimmee, FL

HVAC/Plumbing Engineer-of-Record. Mr. Witte oversaw staff in development of HVAC and Plumbing construction documents for a new nanofiltration facility. The scope includes ventilation and plumbing for nanofiltration room, ventilation and air conditioning for control room, and air conditioning for electrical room. Scope includes HVAC and plumbing for an administrative building, ventilation for water treatment process areas, and air conditioning for process building electrical room.

Water Treatment Plant Water Quality Improvements - Phase 2A, City of Sarasota, FL

Project Engineer. Mr. Witte managed the development of plumbing and HVAC construction documents for minor interior renovation of operations building, including updated restrooms and locker rooms.

Pump Station 28 and Force Main Improvements, City of Miami Beach, FL

HVAC/Plumbing Engineer of Record. Mr. Witte oversaw staff in development of HVAC and plumbing construction documents for renovation of an existing wastewater pump station and a new generator building. Scope includes ventilation and cooling for wastewater pump station drywell per NFPA 820, ventilation and cooling for generator room, plumbing for a new restroom, and air conditioning for electrical room.

David Witte, PE, CEM

West Parish Water Treatment Facility, Springfield
Water and Sewer Commission, Springfield, MA

Lead Project Design Engineer. Mr. Witte led design effort for HVAC, plumbing and fire protection systems at a 65-mgd treatment plant. He developed a life-cycle cost analysis and technical memo for evaluation of implementing heat pumps for facility heating, as an alternative to propane boilers. The study included greenhouse gas emissions estimate as well as incentives available for sustainable design features. Design included VRF heat pumps for heating and cooling for administrative spaces, air-source heat pumps for heating process areas, and a free-cooling hydronic system that utilizes water from the treatment process as a heat sink for process cooling loads.

Owls Head CSO Facility, New York City Department of
Environmental Protection (NYCDEP), Brooklyn, NY

Project Design Engineer. Mr. Witte developed a life-cycle cost analysis and technical memo for evaluation of implementing heat pumps for facility heating, as an alternative to natural gas boilers. He supported the project team in progressing HVAC, plumbing, and odor control system design for the CSO facility that provides sewer system storage capacity to handle flow surges during large rainfall events.

**Wachusett Reservoir Lower Gate House Boiler
Replacement**, Massachusetts Water Resources
Authority, Clinton, MA

Project Design Engineer. Mr. Witte developed a life-cycle cost analysis and technical memo for evaluation of implementing heat pumps for facility heating, as an alternative to propane boilers. The study included greenhouse gas emissions estimate as well as incentives available for sustainable design features.

Croton Water Filtration Plant, NYCDEP, Bronx, NY

Project Design Engineer. The project involved design calculations, inspections, submittal approvals, RFI resolution, witness shop testing, change order cost and scoping, and interdisciplinary coordination. Mr. Witte

performed extensive hydraulic and thermal analysis on heating and cooling hydronic systems to validate sizing of pumps, heat exchangers, and flow control systems. He attended witness shop testing for UV disinfection reactors and facility smoke control fans, and worked closely with installing contractor on pipe flexibility analyses and support design. The Croton drinking water filtration plant has 290-mgd treatment capacity.

Shandaken Tunnel Intake Chamber Improvements,
NYCDEP, Gilboa, NY

Project Design Engineer. The project involved development of hydraulic analysis and preliminary design for replacement of eight roller-slucice gates for control of flow of reservoir water into a vertical shaft. Mr. Witte performed extensive hydraulic analysis of flow through gates, varying number of gates open, gate opening percentage, and reservoir water levels to support specification of new gates for providing improved flow control at lower flow rates. The project also included evaluation of air venting design approaches to mitigate cavitation experienced with existing gates, during high-flow conditions where the downstream side of the gates are submerged. Provision of a bypass with energy dissipating valve routed through a gate opening was required to provide partial flow capacity during project execution; final gate configuration to provide flow control capacity range of 20 mgd to 600 mgd.

Pump Station Sewage Renovation, Monroe
Township, NJ

Lead Project Engineer. The project involved replacement of explosion proof ventilation and odor control system for an existing sewage pump station. Mr. Witte was responsible for design calculations, specification and drawing development, bid support, inspections, submittal approvals, and RFI resolution.



10. Office Locations

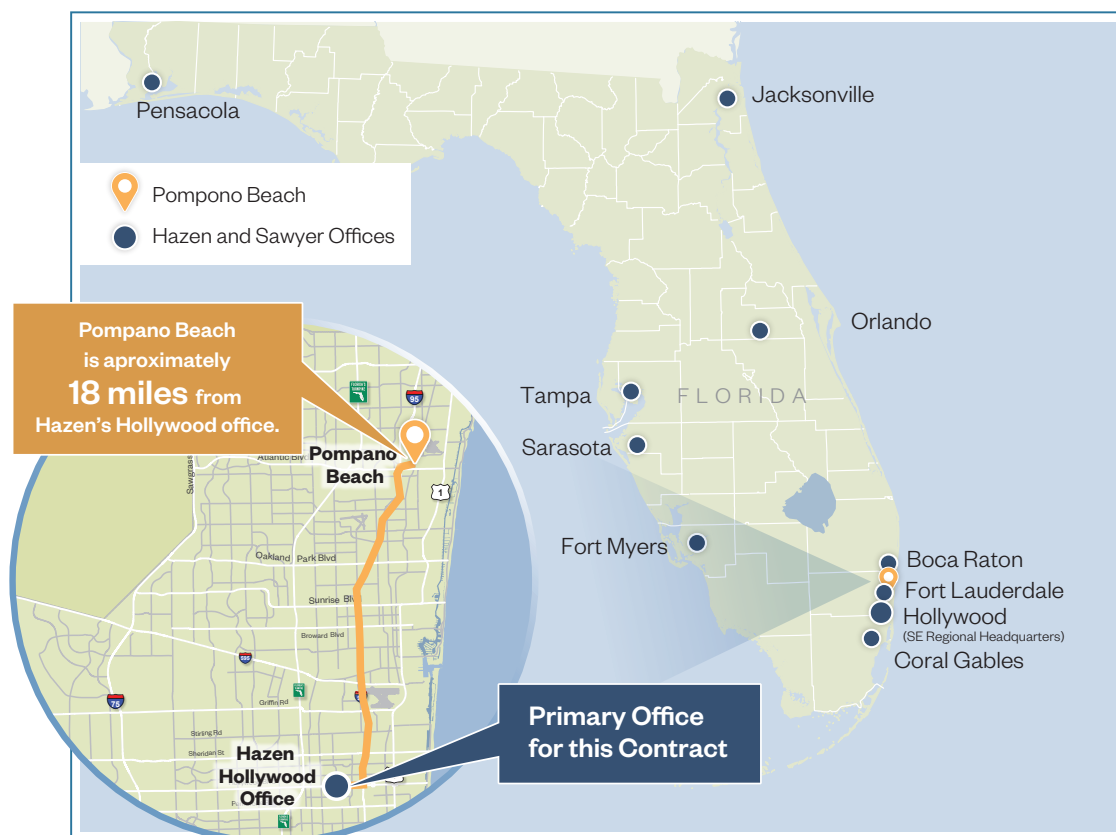
10 Office Locations

Hazen's Southeast Regional Headquarters located in Hollywood, Florida, will be the responsible office for this contract. Many of our proposed team members are located in this office, enabling our team to provide timely and responsive service.

Hazen has served municipal and government clients from its Southeast regional headquarters in Hollywood, Florida since 1968. Most of our proposed team is based in this office, located approximately 18 miles from Pompano Beach City Hall.

Our Boca Raton office, just 12 miles from City Hall, will also support this contract. In our Hollywood, Fort Lauderdale, Boca Raton, and Coral Gables offices, we have over 130 technical and support staff. **This includes 75 Hazen staff members in Hollywood and 28 in Boca Raton.**

Hazen has approximately **120 licensed engineers in Florida.**



Hazen's ten Florida offices (250+ employees) are strategically located to deliver comprehensive engineering services to our clients.

Additionally, we have included five local subconsultants to provide expertise in support disciplines. These firms were carefully selected for their strong performance history and experience collaborating with municipal and governmental clients throughout South Florida.

As requested, the table below includes the primary office location for our proposed project team, along with the number of professional and administrative staff at the prime office location.

Firm	Address	Number of Professional and Administrative Staff at the Prime Office Location
Hazen and Sawyer Role: Prime Firm	4000 Hollywood Blvd., Suite 750 North Hollywood, FL 33021 Primary office location where services will be rendered.	68 Professional Staff 7 Administrative Staff 75 Total Staff
Hazen and Sawyer Role: Prime Firm	2101 N.W. Corporate Boulevard Boca Corporate Center, Suite 301 Boca Raton, FL 33431	26 Professional Staff 2 Administrative Staff 28 Total Staff
Craven Thompson & Associates, Inc. Role: Survey and Landscape Architecture	3563 NW 53rd Street Fort Lauderdale, FL 33309	54 Professional Staff 8 Administrative Staff 62 Total Staff
Corporate Project Services, Inc. Role: Construction Management	8451 SW 27th Street Miramar, FL 33025	4 Professional Staff 4 Total Staff
GMAwater, LLC Role: Permitting/Regulatory Compliance	125 S. State Road 7, Suite 104-260 Wellington, FL 33414	2 Professional Staff 1 Administrative Staff 3 Total Staff
Design Kollaborative (DK) Architects/ Planners, Inc. (DK Architects) Role: As-needed architectural and site planning services	200 N.E. 1st Avenue, Suite 115 Pompano Beach, FL 33060	3 Professional Staff 1 Administrative Staff 4 Total Staff
Florida Engineering & Testing, Inc. Role: Testing services, geotechnical and construction materials testing, inspection services	250 SW 13th Avenue Pompano Beach, FL 33069	2 Professional Staff 3 Administrative Staff 5 Total Staff



11. Litigation

11 Litigation

In the last ten years, the Southeast Region of Hazen as been responsible for approximately \$8 billion worth of public works construction. **Our litigation record (or lack of) is excellent.**

We also want to emphasize that Hazen is not wholly or partly self-insured, hence, our insurer bears the risk and not the client. As requested, the table below provides a summary of litigation filed against Hazen within the past five years. The summary includes the nature of the litigation/claim, a brief description of the case, court or agency before which the action was instituted, the applicable case or file number, the status or disposition for such reported action, and the outcome or projected outcome. Please note that none of the listed cases will affect the performance of services to be rendered.

Case Name, Description	Dates, Status	Identification Number, Court
<p>Gregory Bowman against City of New York, Skanska-Picone, J.V. and Hazen and Sawyer.</p> <p>Gregory Bowman an employee of Ward Electric alleges he was struck by a cabinet unit at the 26th Ward WWTP.</p>	11/13/19-Open	Index no: 159692/2019 Supreme Court of the State of New York, County of New York
<p>Close Construction, LLC v. City of Riviera Beach Utility Special District, C Solutions, Mark Drummond vs Hazen and Sawyer</p> <p>C Solutions, engineer for the City of Riviera Beach seeks indemnity from Hazen as its subcontractor.</p>	11/9/20-09/20/21 Settled	Case No. 16 CA 013117 MB-AF In the Circuit Court of the Fifteenth Judicial Circuit in and for Palm Beach County, Florida
<p>Darline S. Spenser v. McCormick, Time, et al</p> <p>Hazen was named in a lawsuit filed by Ms. Spencer. The lawsuit did not contain any claims against the Firm. The court dismissed the lawsuit with prejudice.</p>	12/18/23-07/26/24 Dismissed	Case No.23-62214-CIV-DAMIAN/Valle United States District Court, Southern District of Florida
<p>Vincent Calcagno Jr., v. Capry Group, Inc., Delphi Plumbing & Heating, Inc., Hazen and Sawyer, D.P.C., and the City of New York</p> <p>Vincent Calcagno, an employee of the City of New York alleges he was caused to trip and fall at the Rockaway Water Treatment Control Plant.</p>	12/31/24-Open	Index No.: 723420/2024 Supreme Court of the State of New York, County of Queens

Case Name, Description	Dates, Status	Identification Number, Court
<p>Lisa & Robert Hoyt, et al., Plaintiffs, individually and on behalf of all other persons similarly situated versus Hazen and Sawyer, P.C., Craven, Thompson & Associates, Inc., and Ric-Man Construction Florida, Inc., Defendants</p> <p>Plaintiff is seeking relief for damages that occurred during an April 2023 flooding event.</p>	3/28/25-Open	<p>Case Number: CACE-25-004479</p> <p>In the Circuit Court of the Seventeenth Judicial Circuit in and for Broward County, Florida</p>
<p>Jodie Berman, et al., versus Hazen and Sawyer, P.C., and David Mancini & Sons, Inc.</p> <p>Plaintiff is seeking relief for damages that occurred during an April 2023 flooding event.</p>	3/28/25-Open	<p>Case Number: CACE-25-004480</p> <p>In the Circuit Court of the Seventeenth Judicial Circuit in and for Broward County, Florida</p>
<p>Douglas S. Parker and wife, Charlene S. Parker vs. Union County, Garbey Companies, Inc. d/b/a Garney Construction, Hazen and Sawyer, P.C., State Utility Contractors, Inc., HDR Engineering, Inc. of the Carolinas, and cDM Smith, Inc.</p> <p>Plaintiff alleges property damage resulting from the construction of a new water line.</p>	6/19/25-Open	<p>25CV002955-890</p> <p>In The General Court of Justice, Superior Court Division, State of North Carolina, Union County</p>
<p>Steven Gibbs versus Clayton Property Group d/b/a Mungo Homes Coastal Division Properties, LLC, Mungo Homes, Inc., Hungo Homes Coastal Division Properties, LLC., MH Coastal, Charleston County, John Doe Construction Company, Hazen and Sawyer, P.C. d/b/a Hazen and Sawyer Engineering, Edisto Engineers & Surveyors, Inc. d/b/a Edisto Engineering and Surveying, and John Does 1-50.</p> <p>Plaintiff alleges property damage resulting from the construction of a new housing development</p>	7/7/25-9/12/25 Dismissed	<p>Case No.: 2025-OP-10-03697</p> <p>In the Court of Common Pleas, Ninth Judicial Circuit, State of South Carolina</p>



12. City Forms

(Also uploaded to the Response Attachments tab in the eBid System as a separate file.)

Hazen Licenses

State of Florida Department of State

I certify from the records of this office that HAZEN AND SAWYER, P.C. is a New York corporation authorized to transact business in the State of Florida, qualified on October 18, 1978.


The document number of this corporation is 841657.

I further certify that said corporation has paid all fees due this office through December 31, 2025, that its most recent annual report/uniform business report was filed on January 13, 2025, 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 Thirteenth day of January,
2025*




Secretary of State

Tracking Number: 4346259733CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

Firm Registry Licenses

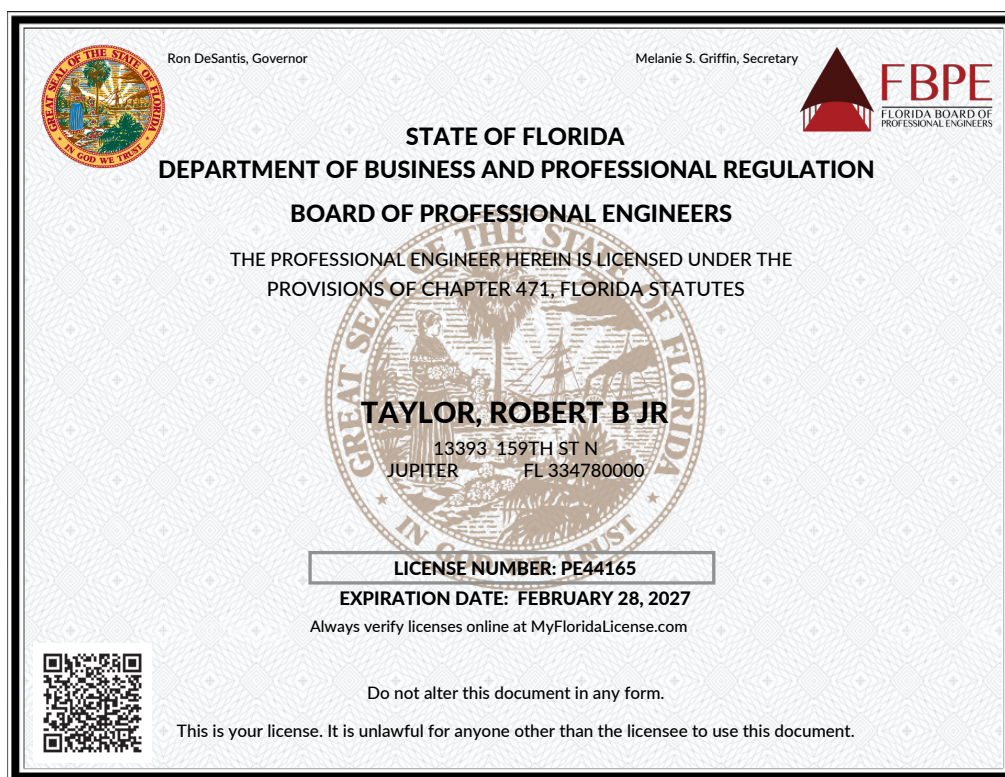
Print


Licensee

Name: **HAZEN AND SAWYER, P.C.** License Number: **2771**
 Rank: **Registry** License Expiration Date:
 Primary Status: **Current** Original License Date: **11/08/1978**

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
44165	Current, Active	TAYLOR, ROBERT B JR	Registry	04/27/2017	Professional Engineer	02/28/2027





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ONLINE SERVICES

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[Continuing Education Course Search](#)

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[Unlicensed Activity Search](#)

[AB&T Delinquent Invoice & Activity List Search](#)

Licensee

Name:	HAZEN AND SAWYER, PC	License Number:	
Rank:	Geology Business Information	License Expiration Date:	
Primary Status:	Current	Original License Date:	06/16/2021

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
PG2697	Current, Active	BULMAN, GERRIT RIJK	Professional Geologist	05/20/2021	Professional Geologist	07/31/2026

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[Return to License Details](#)



Ron DeSantis, Governor

Melanie S. Griffin, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL GEOLOGISTS

THE PROFESSIONAL GEOLOGIST HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 492, FLORIDA STATUTES



BULMAN, GERRIT RIJK
 4000 HOLLYWOOD BOULEVARD
 SUITE 750 NORTH TOWER
 HOLLYWOOD FL 33021

LICENSE NUMBER: PG2697

EXPIRATION DATE: JULY 31, 2026


Always verify licenses online at MyFloridaLicense.com


ISSUED: 05/03/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.







2025/2026 LOCAL BUSINESS TAX RECEIPT

Business Name: **HAZEN AND SAWYER, PC** Account Registration #: **B9020195-2026**

DBA: Expiration Date: **9/30/2026**

Business Location: **4000 HOLLYWOOD BLVD, #750N** Tax Rate: **\$700.00**

Business Category: **SERVICE/LICENSED BUSINESS**

Classification: **Engineer/Consulting**

Tax Basis: **OVER 50 WORKERS**

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-357-4829

VALID OCTOBER 1, 2025 THROUGH SEPTEMBER 30, 2026

Business Name: HAZEN & SAWYER PC **Receipt #:** 315-58

Business Type: ENGINEER (PROF ENGINEER-GROUP)

Owner Name: HAZEN & SAWYER PC **Business Opened:** 07/16/1993

Business Location: 4000 HOLLYWOOD BLVD 750N **State/County/Cert/Reg:**

HOLLYWOOD

Business Phone: 987-0066 **Exemption Code:**

Rooms	Seats	Employees	Machines	Professionals
		11		

For Vending Business Only						
Number of Machines:		Vending Type:				
Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
45.00	0.00	0.00	0.00	0.00	0.00	45.00

Receipt Fee 45.00
 Packing/Processing/Canning Employees 0.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT

WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

HAZEN & SAWYER PC
 4000 HOLLYWOOD BLVD #750
 HOLLYWOOD, FL 33021

Receipt # 02B-24-00005089
Paid 07/21/2025 45.00

2025 - 2026

1021-761

City of Pompano Beach

RLI25-072 WATER AND REUSE TREATMENT PLANT PROJECTS - CONTINUING CONTRACTS (CCNA)

Position Classification & Maximum Hourly Labor Rate Schedule

Prime /Firm Name	Hazen and Sawyer
Position / Classification	Maximum Hourly Rate (\$)
Administrator	\$113.04
Assistant Engineer I	\$158.22
Assistant Engineer II	\$170.40
Assistant Scientist	\$156.34
Associate	\$294.48
Associate Vice President	\$375.00
CAD/BIM Designer	\$149.01
Cost Estimator	\$277.68
Engineer	\$183.53
GIS Analyst	\$145.25
Marketing/Event Coordinator	\$172.91
Operations Specialist	\$195.91
Principal Architect	\$165.39
Principal Building Technologist	\$182.35
Principal CAD/BIM Designer	\$209.86
Principal Engineer	\$245.36
Principal GIS Analyst	\$225.30
Principal Landscape Architect	\$194.97

City of Pompano Beach

RLI25-072 WATER AND REUSE TREATMENT PLANT PROJECTS - CONTINUING CONTRACTS (CCNA)

Position Classification & Maximum Hourly Labor Rate Schedule

Prime /Firm Name	Hazen and Sawyer
------------------	------------------

Position / Classification	Maximum Hourly Rate (\$)
Principal Operations Specialist	\$247.90
Principal Proposal Coordinator	\$196.30
Principal Scientist	\$192.34
Scientist	\$175.77
Senior Associate	\$375.00
Senior CAD/BIM Designer	\$184.62
Senior GIS Analyst	\$182.70
Senior Principal Administrator	\$188.74
Senior Principal Architect	\$273.53
Senior Principal CAD/BIM Designer	\$252.68
Senior Principal Economist	\$263.73
Senior Principal Engineer	\$265.81
Senior Principal Funding Specialist	\$250.33
Senior Principal Scientist	\$275.02
Senior Vice President	\$390.00
Technician	\$94.04
Vice President	\$390.00

Notes:

1. Rates are fully loaded and are shown as the maximum rate per employee title through 6/30/2031.

City of Pompano Beach

RLI25-072 WATER AND REUSE TREATMENT PLANT PROJECTS - CONTINUING CONTRACTS (CCNA)

Position Classification & Maximum Hourly Labor Rate Schedule

Sub /Firm Name	Craven, Thompson & Associates, Inc.
Position / Classification	Maximum Hourly Rate (\$)
Principal Engineer	\$355.00
Senior Supervising Engineer	\$310.00
Senior Engineer	\$225.00
Project Engineer	\$195.00
Engineering Senior CADD Technician	\$145.00
Engineering Technician	\$100.00
Principal Surveyor	\$285.00
Professional Land Surveyor	\$225.00
Project Surveyor	\$190.00
Survey CADD / GIS Tech	\$145.00
Survey Field Crew (1 Man Crew)	\$150.00
Survey Field Crew (2 Man Crew)	\$215.00
Survey Field Crew (3 Man Crew)	\$290.00
Survey Crew with Laser Scan	\$395.00
Principal Landscape Architect / Principal Planner	\$285.00
Senior Supervising Landscape Architect	\$260.00
Senior Landscape Architect	\$215.00
Senior Planner	\$200.00
Landscape Architect	\$200.00

Exhibit C – Cover Page

1. Insurance Requirements

2. Approved Insurance

CONSULTANT shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the CITY's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to CITY staff responsible for oversight of the subject project/contract.

CONSULTANT is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONSULTANT, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONSULTANT under this Agreement.

Throughout the term of this Agreement, CONSULTANT and all subcontractors or other agents hereunder shall, at their sole expense, maintain in full force and effect the following insurance coverages and limits described herein, including endorsements.

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONSULTANT further agrees to be responsible for the employment, control, and conduct of its employees and for any injury sustained by such employees in the course of their employment. If the firm has **no employees** or (only principals/owners), they may file a statutory exemption or sign the City's Workers' Compensation (WC) waiver if the firm has fewer than four employees.

2. Liability Insurance.

(a) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONSULTANT's negligent acts or omissions in connection with CONSULTANT's performance under this Agreement.

(b) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

Type of Insurance	Limits of Liability
GENERAL LIABILITY: Minimum \$1,000,000 Per Occurrence and \$2,000,000 Per Aggregate	
* Policy to be written on a claims incurred basis	

XX comprehensive form	bodily injury and property damage
XX premises - operations explosion & collapse hazard underground hazard	bodily injury and property damage
XX products/completed operations hazard	bodily injury and property damage combined
XX contractual insurance	bodily injury and property damage combined
XX broad form property damage	bodily injury and property damage combined
XX independent contractors	personal injury
XX personal injury	Minimum \$1,000,000 Per Occurrence and Aggregate
sexual abuse/molestation	
liquor legal liability	Minimum \$1,000,000 Per Occurrence and Aggregate

*The city must be listed as Additional Insured and coverage must be Primary & Non-Contributory.

Coverages must include premises/operations, independent contractors, contractual liability, products/completed operations, and broad form property damage.

AUTOMOBILE LIABILITY: Minimum \$1,000,000 Per Occurrence and Aggregate.

Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.

XX comprehensive form
XX owned
XX hired
XX non-owned

REAL & PERSONAL PROPERTY

___ comprehensive form Agent must show proof they have this coverage.

EXCESS LIABILITY Per Occurrence Aggregate

___ other than umbrella bodily injury and \$1,000,000 \$1,000,000 property damage combined

PROFESSIONAL LIABILITY	Per Occurrence	Aggregate
XX * Policy to be written on a claims made basis	\$1,000,000	\$2,000,000

*The vendor must maintain coverage with a minimum of \$1,000,000 per claim and \$2,000,000 aggregate for contracts under \$7.5M in construction value. The policy must cover negligent acts, errors, or omissions arising from professional services and the vendor must maintained coverage for the duration of the contract and at least 4 years after project completion.

(c) If Professional Liability insurance is required, CONSULTANT agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

CYBER LIABILITY	Per	Occurrence
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Aggregate

___ * Policy to be written on a claims-made basis \$ 1,000,000 \$1,000,000

___ Network Security / Privacy Liability

___ Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)

___ Technology Products E&O - \$1,000,000 (only applicable for vendors supplying technology related services and or products)

___ Coverage shall be maintained in effect during the period of the Agreement and for not less than four (4) years after termination/ completion of the Agreement.

3. Employer's Liability. If required by law, CONSULTANT and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

4. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONSULTANT, the CONSULTANT shall promptly provide the following:

- (a) Certificates of Insurance evidencing the required coverage;
- (b) Names and addresses of companies providing coverage;
- (c) Effective and expiration dates of policies; and
- (d) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

6. Waiver of Subrogation. CONSULTANT hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONSULTANT shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.



ADDITIONAL REMARKS SCHEDULE

AGENCY Ames & Gough		NAMED INSURED Hazen and Sawyer 498 Seventh Avenue New York, NY 10018	
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:
conditions.

Pollution Liability coverage is provided and included within the Professional Liability policy noted above. It shares the limits of the Professional Liability policy.