

Laredo

TEXAS

FY25-054 Addendum 2

Natural Systems Utilities

Supplier Response

Event Information

Number: FY25-054 Addendum 2
Title: FY25-054 Feasibility Study for Community Water & Energy Resource
Center –Utilities Department
Type: Request For Qualifications
Issue Date: 3/26/2025
Deadline: 4/17/2025 05:00 PM (CT)
Notes:

******Bid Opening date has changed. Refer to
Revised Notice to Bidders Attachment. Opening
Date has been changed from April 18, 2025 10:00
AM to April 22, 2025 9:00 AM******

*****If the bidder submits both an electronic proposal and a properly
completed manual proposal, the Purchasing Division will use the
electronic proposal. If the bidder submits an electronic proposal and a
manual proposal that is not complete, the Purchasing Division will use
the electronic proposal.*****

Proposals forms can be downloaded and printed through Cit-E-Bid.
*****Mailed Proposals (i.e. USPS, FedEx, UPS), telegraphic, or
facsimile proposals will not be considered.*****

Contact Information

Contact: Enrique Aldape III
Address: Purchasing Division
Public Works Service Center
5512 Thomas Avenue
Laredo, TX 78041
Phone: 956 (794) 1733
Fax: 956 (790) 1805
Email: ealdape@ci.laredo.tx.us

Natural Systems Utilities Information

Address: 170 Township Line Road
Building C
Hillsborough, NJ 08844
Phone: (908) 359-5501
Web Address: www.nsuwater.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Richard V Petrosino Jr

Signature

Submitted at 4/17/2025 01:22:09 PM (CT)

rpetrosino@nsuwater.com

Email

Response Attachments

FY25-054 RFQ Response_NSU.pdf

RFQ Response

Conflict of Interest Questionnaire-Revised 1-1-2021 - NSU.pdf

Conflict of Interest Form

FY25-054 Form_1295.pdf

Form - 1295

Non-Collusive Affidavit.pdf

Non-Collusive Affidavit

Bid Attributes

1 Questionnaire Description

"The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this bid the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document. That I, individually and on behalf of the business named in this Business Questionnaire, do by my signature below, certify that the information provided in the questionnaire is true and correct".

2 Name of Offeror (Business) and Name & Phone Number of Authorized Person to sign bid

Applied Water Management, Inc. d/b/a Natural Systems Utilities

3 State how long under has the business been in its present business name

40 Years

4 If applicable, list all other names under which the Business identified above operated in the last five years

n/a

5 State if the Company is a certified minority business enterprise

The below information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company.

6 Questions Part 1

1) Is any litigation pending against the Business? 2) Has the Business ever been declared "not responsive" for the purpose of any governmental agency contract award? 3) Has the Business been debarred, suspended, proposed for debarment, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or other wise disqualified from bidding, proposing or contracting? 4) Are there any proceedings, pending relating to the Business responsibility, debarment, suspension, voluntary exclusion, or qualification to receive a public contract? 5) Has the government or other public entity requested or required enforcement of any of its rights under a surety agreement on the basis of default or in lieu of declaring the Business at default?

1 - No 2 - No 3 - No 4 - No

7 Questions Part 2

1) Is the Business in arrears in any contract or debt? 2) Has the Business been a defaulter, as a principal, surety, or otherwise? 3) Have liquidated damages or penalty provisions been assessed against the Business for failure to complete work on time or any other reason?

1 - No 2 - No 3 - No

8 State if the Company is a certified minority business enterprise

This company is not a certified minority business

9 Conflict of Interest Disclosure

A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature. Companies and individuals who contract, or seek to contract, with the City of Laredo and its agents may be required to file with the City Secretary's Office, 1110 Houston Street, Laredo, Texas 78040, a Conflict of Interest Questionnaire that describes affiliations or business relationships with the City of Laredo officers, or certain family members or business relationships of the City of Laredo officer, with which such persons do business, or any gifts in an amount of \$250.00 or more to the listed City of Laredo officer (s) or certain family members. The new requirements are in addition to any other disclosures required by law. The dates for filing disclosure statements begin on January 1, 2006. A violation of the filing requirements is a Class C misdemeanor. The Conflict of Interest Questionnaire (Form CIQ) may be downloaded from [http://www.ethics.state.tx.us/whatsnew/conflict forms.htm](http://www.ethics.state.tx.us/whatsnew/conflict%20forms.htm). The City of Laredo officials who come within Chapter 176 of the Local Government Code relating to filing of Conflicts of Interest Questionnaire (Form CIQ) include: 1. Mayor 2. Council Members 3. City Manager 4. Members of the Fire Fighters and Police Officers Civil Service Commission. 5. Members of the Planning and Zoning Commission. 6. Members of the Board of Adjustments 7. Members of the Building Standards Board 8. Parks & Leisure Advisory Committee Member. 9. Historic District Land Board Member. 10. Ethics Commission Board Member. 11. The Board of Commissioners of the Laredo Housing Authority 12. The Executive Director of the Laredo Housing Authority 13. Any other City of Laredo decision making board member If additional information is needed please contact Enrique Aldape III, Interim Purchasing Agent at 956-794-1733.

10 Conflict of Interest Questionnaire Form CIQ

For vendor or other person doing business with local governmental entity. This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session. This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code. A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

11 Conflict of Interest Questionnaire

Vendor is required to submit Conflict of Interest Form for bid to be considered complete. Have you submitted your completed Conflict of Interest Form with your response?

Yes

1 2	Disclosure Form For details on use of this form, see Section 4.01 of the City's Ethics Code.
1 3	Question 1. Name of person submitting this disclosure form Please include First Name, Middle Initial, Last Name and Suffix (if applicable) <div style="border: 1px solid black; padding: 2px;">Richard V. Petrosino Jr.</div>
1 4	Question 2. Contract Information Please include the following: a)Contract or Project Name b)Originating Department <div style="border: 1px solid black; padding: 2px;">FY25-054 Utilities Department</div>
1 5	Question 3. Name of individual(s) or entity(ies) seeking a contract with the city (i.e. parties to the contract) <div style="border: 1px solid black; padding: 2px;">Natural Systems Utilities</div>
1 6	Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3. <div style="border: 1px solid black; padding: 2px;">It applies to my business</div>
1 7	Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3 If you selected Not Applicable on Question 4, skip this section. If it applies to you, please list the name of partner, parent, or subsidiary business entity(ies) in this section. <div style="border: 1px solid black; padding: 2px;">Parent Companies - Nijhuis Saur Industries & Saur</div>
1 8	Question 5. List any individuals or entities that will be subcontractors on this contract <div style="border: 1px solid black; padding: 2px;">It applies to my business</div>
1 9	Question 5. List any individuals or entities that will be subcontractors on this contract If you selected Not Applicable on Question 5, please skip this section. If it applies to you, please list subcontractors in this section. <div style="border: 1px solid black; padding: 2px;">Adaptive Water</div>
2 0	Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract <div style="border: 1px solid black; padding: 2px;">Not Applicable</div>
2 1	Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract If selected Not Applicable on question 6, please skip this section. If it applies to you, please list attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract. <div style="border: 1px solid black; padding: 2px;">No response</div>

2 2	Question 7. Disclosure of political contributions List any campaign or officeholder contributions made by the following individuals in the past 24 months totaling more than \$100 to any current member of City Council, former member of City Council, any candidate for City Council, or to any political action committee that contributes to City Council elections. a) Any individual seeking contract with the city (Question 3) b) Any owner or officer of entity seeking contract with the city (Question 3) c) Any individual or owner or officer of any entity listed above as partner, parent, or subsidiary business (Question 4) d) Any subcontractor or owner/office of subcontracting entity for the contract (Question 5) e) The spouse of any individual listed in response to (a) through (d) above f) Any attorney, lobbyist, or consultant retained to assist in seeking contract (Question 6) <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">Not Applicable</div>
2 3	Question 7. Disclosure of political contributions If you selected Not Applicable on question 7, please skip this section. If it applies to you, please list all contributors in this section. <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">No response</div>
2 4	Updates on contributions required Information regarding contributions must be updated by submission of a revised form from the date of the submission of this form, up through the time City Council takes action on the contracts identified in response to Question 2 and continuing for 30 calendar days after the contract has been awarded.
2 5	Question 8. Disclosure of Conflict of Interest Are you aware of any fact(s) with regard to this contract that would raise a "conflict of interest" issue under Section 2.01 of the Ethics Code for any City Council member or board/commission member that has not or will not be raised by these city officials? <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">I am not aware of any conflict of interest</div>
2 6	8. Disclosure of Conflict of Interest If you selected I am aware of conflict of interest is question 8, please list them in this section. <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">No response</div>
2 7	Question 9. Updates Required I understand that this form must be updated by submission of a revised form if there is any change in the information before the discretionary contract is the subject of action by the City Council, and no later than five (5) business days after any changes has occurred, whichever comes first. This include information about political contributions made after the initial submission and up until thirty (30) calendar days after the contract has been awarded. <input checked="" type="checkbox"/> I have read and understand this section
2 8	Question 10. No Contact with City Officials or Staff during Contract Evaluation I understand that a person or entity who seeks or applies for city contract or any other person acting on behalf of that person or entity is prohibited from contacting city officials and employees regarding the contract after a Request for Proposal (RFP), Request for Qualifications (RFQ), or other solicitation has been released. This no-contact provision shall conclude when the contract is posted as a City of Laredo Council agenda item. If contact is required with city officials or employees, the contact shall take place in accordance with procedures incorporated into the solicitation documents. Violation of this prohibited contacts provision set out in Section 2.09 of the Ethics Code by respondents or their agents may lead to disqualification of their offer from consideration. <input checked="" type="checkbox"/> I have read and understand this section
2 9	Question 11. Conflict of Interest Questionnaire (CIQ) Chapter 176 of the Local Government Code requires contractor and vendors to submit a Conflict of Interest Form (CIQ) to the Office the of City Secretary. <input checked="" type="checkbox"/> I have acknowledge that I have been advised

**3
0** **Question 11. Oath**

Please complete in this section the required information for your company: 1) Name 2) Title 3) Company or DBA 4) Date

Rick Petrosino Vice President Natural Systems Utilities 04/17/2025

**3
1** **Question 12. Oath**

I swear or affirm that the statements contained in this Discretionary Contracts Disclosure Form, including any attachments, to the best of my knowledge and belief are true, correct, and complete.

☒ I swear or affirm information is correct

**3
2** **Company Information Questionnaire**

☒ I have completed this section

**3
3** **Conflict of Interest Questionnaire**

☒ I have completed this section

**3
4** **Non-Collusive Affidavit**

☒ I have completed and included this form

**3
5** **Discretionary Contracts Disclosure**

☒ I have completed this section

**3
6** **Certificate of Interested Parties (Form 1295)**

In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the State of Texas website, please use this link provided, <https://www.ethics.state.tx.us/tec/1295-Info.htm>. Implementation of House Bill 1295 Certificate of Interested Parties (Form 1295): In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. The Texas Ethics Commission was required to adopt rules necessary to implement that law, prescribe the disclosure of interested parties form, and post a copy of the form on the commission's website. The commission adopted the Certificate of Interested Parties form (Form 1295) on October 5, 2015. The commission also adopted new rules (Chapter 46) on November 30, 2015, to implement the law. The commission does not have any additional authority to enforce or interpret House Bill 1295. Filing Process: Starting on January 1, 2016, the commission will make available on its website a new filing application that must be used to file Form 1295. A business entity must use the application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number. An authorized agent of the business entity must sign the printed copy of the form and have the form notarized. The completed Form 1295 with the certification of filing must be filed with the governmental body or state agency with which the business entity is entering into the contract. The governmental entity or state agency must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The commission will post the completed Form 1295 to its website within seven business days after receiving notice from the governmental entity or state agency. Information regarding how to use the filing application will be available on this site starting on January 1, 2016. Additional Information: HB 1295 Certificate of Interested Parties (Form 1295) New Chapter 46. Ethics Commission Rules: 46.1. Application 46.3. Definitions 46.5. Disclosure of Interested Parties Form In order to comply with state law the Certificate of Interested Parties (Form 1295) must be submitted to the Texas Ethics Commission within 10 days upon receiving notice of award of contract. This form must be submitted within the allotted time otherwise this may result in the cancellation of the contract.

☒ I will comply with this form

Terms and Conditions for Request for Qualifications**• GENERAL TERMS AND CONDITIONS FOR STATEMENT OF QUALIFICATIONS**

1. GENERAL CONDITIONS Interested firms (Respondents) are required to submit statements upon the following expressed conditions: A. Respondents shall thoroughly examine the specifications, schedule instructions and other contract documents. Once the award has been made, failure to read all specifications, instructions, and the contract documents, of the City shall not be cause to alter the original contract or for a Respondent to request additional compensation. B. Respondents shall make all investigations necessary to thoroughly inform themselves regarding the services being requested. No pleas of ignorance by the Respondent of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the Respondent to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation to the Respondent. C. Respondents are advised that City contracts are subject to all legal requirements provided for in the City Charter and/or applicable City Ordinances, State and Federal Statutes.

2. PREPARATION OF SUBMITTALS Submittals shall be prepared in accordance with the following: A. For hand delivered submittals only, all information required by the RFQ form shall be furnished. The Respondent shall print or type the business name and manually sign the schedule. For Electronic submittals, this information shall be submitted electronically on Cit-E-Bid system. If vendor submits both manual and electronic bids, the electronic bid will replaced the manual bid and shall be considered the only valid bid. B. Alternate Proposals will not be considered unless authorized by the invitation for proposals or any applicable addendum.

3. DESCRIPTION OF SUPPLIES Not applicable for this request.

4. SUBMISSION OF HAND DELIVERED STATEMENTS A. Statement of qualifications and changes thereto shall be enclosed in sealed envelopes, properly addressed and to include the date and hour of the opening. B. Unless otherwise noted on the Notice to Respondents cover sheet, all hand delivered statements of qualifications must be submitted to the Office of the City Secretary, City Hall, 1110 Houston Street, Laredo, Texas 78040. C. SOQ forms can be downloaded and printed through Cit-E-Bid. **Mailed Bids (i.e. USPS, FedEx, UPS), telegraphic, emails or facsimile bids will not be considered.** D. The City shall pay no costs or other amounts incurred by any entity in responding to this RFQ, or as a result of issuance of this RFQ.

5. REJECTION OF STATEMENT OF QUALIFICATIONS. The City may reject an SOQ if: A. Respondent misstates or conceals any material fact in the SOQ. B. SOQ does not strictly conform to the law or the requirements of the SOQ. C. Respondent is in arrears on existing contracts or taxes with the City of Laredo. D. In the event that a Respondent is delinquent in the payment of City of Laredo taxes on the day the SOQ is opened, including state and local taxes, such fact may constitute grounds for rejection of the SOQ or cancellation of the contract. A Respondent is considered delinquent, regardless of any contract or agreed judgments to pay such delinquent taxes E. No SOQ submitted herein shall be considered unless the Respondent warrants that, upon execution of a contract with the City of Laredo, Respondent will not engage in employment practices such as discriminating against employees because of race, color, sex, creed, or national origin. Respondent will submit such reports as the City may therefore require assuring compliance with said practices. F. The City may reject all SOQs or any part of an SOQ whenever it is deemed necessary.

6. WITHDRAWAL OF STAMENT OF QUALIFICATIONS SOQs may not be withdrawn after they have been publicly opened, unless approved by the City Council.

7. LATE PROPOSALS OR MODIFICATIONS SOQs and modifications received after the time set for the proposal receiving deadline will not be considered. Late proposals will be returned to the Respondent unopened.

8. CLARIFICATIONS OR OBJECTION TO STATEMENT OF QUALIFICATIONS If any person contemplating submitting an SOQ for this contract is in doubt as to the true meaning of the specifications, or other SOQ documents or any part thereof, they may submit to the City Purchasing Agent. All requests for information shall be made in writing through email or Question & Response section on Cit-E-Bid system no later than seven (7) days prior to the scheduled date for opening to : **CITY OF LAREDO PURCHASING AGENT Jaime Zapata** 5512 Thomas Avenue Laredo, TX 78041; email: jezapata@ci.laredo.tx.us Any vendor submitting questions shall make reference to a specific RFQ number, section, page and item of this solicitation. Questions untimely submitted may not elicit a response. It is the bidder's responsibility to follow up and make certain that the request was received. In case there are changes, additions, and/or edits to the original scope, an addendum will be issued by the Purchasing Agent to all vendors through Cit-E-Bid system under Questions and Responses section to clarify any inquiries. The City will not be responsible for any other interpretations of the SOQ during the RFQ process, bidder, or any persons acting on their behalf, shall

not contact any City official or employee staff except those specifically designated in this or another subsequent solicitation document. The following sequence of activities must take place in filing a protest: To be performed by protesting Respondent: Within ten (10) calendar days prior to the time that the City Council considers the recommendation of the City's Purchasing Officer, the protesting Respondent must provide written protest to the City Purchasing Officer. Such protest must include specific reasons for the protest. To be performed by City's Purchasing Officer: Shall review the records of procurement and determine legitimacy and procedural correctness. With five (5) working days, the City Purchasing Officer shall provide written response to the protesting Respondent of the decision. If the protesting Respondent is not satisfied with the decision of the City Purchasing Officer, such protesting Respondent may appeal to the City Manager of the City of Laredo. If the protesting Respondent cannot resolve the issue with the City Manager, he shall be entitled to address his concerns when the City Council of the City of Laredo considers the awarding of the contract. Such appeal may be made only after exhausting all administrative procedures through the City Manager. All protests must be duly submitted via Certified Mail to: City of Laredo - Purchasing Agent 5512 Thomas Ave. Laredo, Texas 78041.

9. RESPONDENT DISCOUNTS Not applicable for this contract.

- **10. AWARD OF CONTRACT** The selection and award shall be based on the basis of demonstrated competence and qualifications to perform the services; and for a fair and reasonable price. The firm selected will be the firm which, in the opinion of the City, is the best qualified. The professional fees under the contract may not exceed any maximum established by law. The Respondent shall bear the burden of proof of compliance with the City of Laredo specifications. A duly authorize purchase order number shall reference item/services description, item number, quantity and price. Invoices shall reference the assign purchase order number to avoid any duplication (2 CFR 200.318 (d)). Contract terms are the responsibility of the awarded vendor(s) and the respective City user department(s).

- **11. ENTIRE AGREEMENT**

(a) All covenants, conditions and agreement contained in the solicitation, are hereby made part of the Agreement to the same extent and with the force as is fully set forth herein. If and to the extent of this Agreement and the terms of this solicitation and supplier response conflict Terms & Conditions of this solicitation shall control.

12.. PAYMENTS & INVOICING All invoices to the City of Laredo have a 30-day term from receipt of completion of services. All invoices must show the purchase order number and invoices shall be legible. Invoices shall be mailed to the Accounts Payable Office, City Hall, P.O. Box 210, Laredo, Texas 78042. Electronic Funds Transfer (EFT) payments are also available: if electronic payments are preferred, an Electronic Funds Transfer (EFT) Authorization form needs to be completed and returned via e-mail to: jolly@ci.laredo.tx.us. For more information, please contact Mr. Jorge Jolly, Accounts Payable Manager at (956) 791-7328.

13. PROHIBITED CONTACTS DURING CONTRACT SOLICITATION PERIOD A person or entity who seeks or applies for a city contract or any other person acting on behalf of such person entity is prohibited from contacting city officials and employees regarding such a contract after a Request for Proposal (RFP), Request for Qualification (RFQ) or other solicitation has been released. This no-contact provision shall conclude when the contract is awarded. If contact is required, such contact will be done in accordance with procedures incorporated into the solicitation document. Violation of this provision by respondents or their agents may lead to disqualification of their offer from consideration.

14. TITLE VI ASSURANCE The City of Laredo along with the Texas Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S. C. ss 2000d to 2000d-4) and the Regulations, hereby notifies all providers that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit Statements of Qualifications in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

15. In accordance to State of Texas, the City of Laredo follows State practices when awarding any and all competitive solicitations:

TEXAS ENGINEERING AND LAND SURVEYING PRACTICE ACTS AND RULES CONCERNING PRACTICE AND LICENSURE

OCCUPATIONS CODE TITLE 6. REGULATION OF ENGINEERING, ARCHITECTURE, LAND SURVEYING, AND RELATED PRACTICES SUBTITLE A. REGULATION OF ENGINEERING AND RELATED PRACTICES

CHAPTER 1001. TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS

CHAPTER 137. COMPLIANCE AND PROFESSIONALISM

SUBCHAPTER C: PROFESSIONAL CONDUCT AND ETHICS

§137.53 ENGINEER STANDARDS OF COMPLIANCE WITH PROFESSIONAL SERVICES PROCUREMENT ACT

(a) A licensed engineer shall not submit or request, orally or in writing, a competitive bid to perform

professional engineering services for a governmental entity unless specifically authorized by state law and shall report to the board any requests from governmental entities and/or their representatives that request a bid or cost and/or pricing information or any other information from which pricing or cost can be derived prior to selection based on demonstrated competence and qualifications to perform the services. (b) For the purposes of this section, competitive bidding to perform engineering services includes, but is not limited to, the submission of any monetary cost information in the initial step of selecting qualified engineers. Cost information or other information from which cost can be derived must not be submitted until the second step of negotiating a contract at a fair and reasonable cost. (c) This section does not prohibit competitive bidding in the private sector. Source Note: The provisions of this §137.53 adopted to be effective May 20, 2004, 29 TexReg 4878; amended to be effective June 4, 2007, 32 TexReg 2996.

☒ I Agree to the Terms and Conditions

Insurance Terms and Conditions

INSURANCE REQUIREMENTS If and when applicable or required by the contract, the successful bidder(s) shall furnish the City with original copies of valid insurance policies herein required upon execution of the contract and shall maintain said policies in full force and effect at all times throughout the term of this contract.

(a) Commercial General Liability insurance at minimum combined single limits of \$1,000,000 per-occurrence and \$2,000,000 general aggregate for bodily injury and property damage, which coverage shall include products/completed operations (\$1,000,000 products/completed operations aggregate) and XCU (Explosion, Collapse, Underground) hazards. Coverage must be written on an occurrence form. Contractual Liability must be maintained covering the Contractors obligations contained in the contract. The general aggregate limit must be at least two (2) times the each occurrence limit.

(b) Workers Compensation insurance at statutory limits, including Employers Liability coverage a minimum limits of \$1,000,000 each-occurrence each accident/\$1,000,000 by disease each-occurrence/\$1,000,000 by disease aggregate.

(c) Commercial Automobile Liability insurance at minimum combined single limits of \$1,000,000 per-occurrence for bodily injury and property damage, including owned, non-owned, and hired car coverage.

(d) Professional Liability, Errors & Omissions coverage, with minimum limits of \$1,000,000 per claim/ \$2,000,000 annual aggregate. This coverage must be maintained for at least two years after the project is completed. If coverage is written on a claims-made basis, a policy retroactive date equivalent to the inception date of the contract (or earlier) must be maintained during the full term of the contract.

(e) Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required of the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The City of Laredo accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

(f) A Comprehensive General Liability insurance form may be used in lieu of a Commercial General Liability insurance form. In this event, coverage must be written on an occurrence basis, at limits of \$1,000,000 each-occurrence, combined single limit, and coverage must include a broad form Comprehensive General Liability Endorsement, products/completed operations, XCU hazards, and contractual liability.

(g) With reference to the foregoing insurance requirement, Contractor shall specifically endorse applicable insurance policies as follows:

1. The City of Laredo shall be named as an additional insured with respect to General Liability and Automobile Liability.

2. All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.

3. A waiver of subrogation in favor of the City of Laredo shall be contained in the Workers compensation, and all liability policies.

4. All insurance policies shall be endorsed to require the insurer to immediately notify The City of Laredo of any material change in the insurance coverage.

5. All insurance policies shall be endorsed to the effect that The City of Laredo will receive at least sixty- (60) days' notice prior to cancellation or non-renewal of the insurance.

6. All insurance policies, which name The City of Laredo as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.

7. Required limits may be satisfied by any combination of primary and umbrella liability insurances.

8. Contractor may maintain reasonable and customary deductibles, subject to approval by The City of Laredo.

9. Insurance must be purchased from insurers that are financially acceptable to the City of Laredo. Insurer must be rated A- or greater by AM Best Rating with an admitted carrier licensed by the Texas Department of Insurance.

(h) All insurance must be written on forms filed with and approved by the Texas Department of Insurance.

Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent and shall contain provisions representing and warranting the following:

1. Sets forth all endorsements and insurance coverage's according to requirements and instructions contained herein.

2. Shall specifically set forth the notice-of-cancellation or termination provisions to The City of Laredo.

(i) Upon request, Contractor shall furnish The City of Laredo with certified copies of all insurance policies.

(j) Certificates of insurance are always subject to review and approval from the City of Laredo Risk Management.

(k) Specialty certificates and licenses must be inspected and verified for accuracy and validity before award of contract.

(l) Awarded vendor is required to maintain current and active all: certifications, licenses, permits and/or insurance coverages, required to perform work, throughout the duration of this project/contract.

☒ I agree my insurance meets minimum requirements

Disqualification & Debarment Certification

DISQUALIFICATION & DEBARMENT CERTIFICATION By submitting this request for bids, proposal or statement of qualifications, the firm certifies that it is not currently debarred or eligible for debarment from the City of Laredo pursuant to **Ordinance No. 2017-O-098**, and that it is not an agent of a person or entity that is currently debarred from receiving contracts from any political subdivision or agency of the State of Texas. The City will further verify debarment status through use of the federal website SAM.gov. The contract parties are further prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension."

By executing this agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this contract shall require any party to a subcontract or purchase order awarded under this contract to certify its eligibility to receive Federal funds and, when requested by the City, to furnish a copy of the certification. Additionally, in accordance with Chapter 2270, Texas Government Code, a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.

The signatory executing this contract on behalf of company verifies that the company does not boycott Israel and will not boycott Israel during the term of this contract. S.B. 252 (V. Taylor/S. Davis) is a bill relating to government contracts with terrorists. The bill provides that: (1) a governmental entity, including a city, may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the comptroller and that does business with Iran, Sudan, or a foreign terrorist organization; and (2) a company that the United States government affirmatively declares to be excluded from its federal sanctions regime relating to Sudan, its federal sanctions regime relating to Iran, or any federal sanctions regime relating to a foreign terrorist organization is not subject to the contract prohibition under the bill.

☒ I certify to the terms and conditions

Contract Requirements

1.CODE OF ETHICS ORDINANCE Vendors doing business with the City of Laredo shall comply with all provisions of the City of Laredo's Code of Ethics (Ordinance, as amended). Vendors may be required to participate in Code of Ethics trainings.

1.2 PROHIBITED CONTACTS DURING CONTRACT SOLICITATION PERIOD A person or entity who seeks or applies for a city contract or any other person acting on behalf of such person or entity, is prohibited from contacting city officials and employees regarding such a contract after a Formal Bid, Request for Proposal (RFP), Request for Qualification (RFQ) or other solicitation has been released. This no-contact provision shall conclude when the contract is awarded. The City of Laredo reserves the right to contact respondents and may require such contact as part of the evaluation process (for presentation, clarification) of bids and/or negotiation of RFP submittal(s) prior to the award of contract. If contact is required, such contact will be done in accordance with provisions of Chapter 252 and 271 of the Texas Local Government Code and procedures incorporated into the solicitation document. Violation of this provision by respondents or their agents may lead to disqualification of their offer from consideration.

1.3 NON-COLLUSIVE AFFIDAVIT (Form can be downloaded and submitted through Cit-E-Bid system) The City may require that vendors submit a Non-Collusive Affidavit. The vendor will be required to state that the party submitting a proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

1.4 CONTRACT DISCLOSURE FORMS (This is submitted through Cit-E-Bid system) The City of Laredo requires the following forms to be completed as a part of this bid for consideration: 1. Company Information Questionnaire, 2. Signed Price Schedule, 3. Conflict of Interest Questionnaire, 4. Non-Collusive Affidavit 5. Discretionary Contracts Disclosure 6. Certificate of Interested Parties (Form 1295) ****Upon Award of RFP Only****

1.5 CONFLICT OF INTEREST FORMS (This is submitted through Cit-E-Bid system) Conflict of Interest Disclosure: A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature.

1.6 TEXAS ETHICS COMMISSION (Form 1295, Form can be downloaded and submitted through Cit-E-Bid system) Certificate of Interested Parties (Form 1295) Implementation of House Bill 1295: In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the state of Texas website, please use this link provided.

<https://www.ethics.state.tx.us/tec/1295-info.htm> In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. In order to comply with state law the Certificate of Interested Parties (Form 1295) must be submitted to the Texas Ethics Commission within 10 days upon receiving notice of award of contract. This form must be submitted within the allotted time otherwise this may result in the cancellation of the contract.

Changes to Form 1295:

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

☒ I have read and understand this section

4 1	<p>Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)</p> <p>Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.</p> <p><input checked="" type="checkbox"/> I have read and understand this section</p>
4 2	<p>Ordinance 2018-O-175</p> <p>The City of Laredo has established a local vendor preference ordinance 2018-O-175. All informal and formal Requests for bids for contracts will be evaluated with a 5% preference for local vendors.</p> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">No response</div>
4 3	<p>Section I: Company Profile</p> <p>Section I: Company Profile. (20 Points) Overview of your firm, including relevant experience and qualifications. Examples of similar projects completed, including client references. Provide firm's name, address, website URL and telephone number. Include name, title and e-mail address of the individual who will serve as firm's primary contact. Include a brief description and history of your firm.</p> <p>***Documentation shall uploaded onto Cit-E-Bid****</p> <p><input checked="" type="checkbox"/> Yes</p>
4 4	<p>Section II: Technical Approach</p> <p>Section II: Technical Approach. (40 Points) Detailed description of your proposed methodology for conducting the feasibility study. Explanation of tools, technologies, and frameworks to be used.</p> <p>***Documentation shall uploaded onto Cit-E-Bid****</p> <p><input checked="" type="checkbox"/> Yes</p>
4 5	<p>Section III: Experience & References</p> <p>Section III: Experience & References. (30 Points) Proposals should include a list of 3 references for similar projects that your firm has completed.</p> <p>At least 5 projects in the last 5 years involving the following: Membrane bioreactors for wastewater treatment. Thermal heat pumps for capturing and reusing thermal energy. Anaerobic digesters for biogas production. Combined heat and power (CHP) systems for renewable energy generation. Nutrient recovery and composting facilities for fertilizer production.</p> <p>***Documentation shall uploaded onto Cit-E-Bid****</p> <p><input checked="" type="checkbox"/> Yes</p>

4 **Section IV: Proposal Schedule**

6

Section IV: Proposal Schedule. (10 Points)

Proposals should include the proposed work schedule, timeline and deliverables resulting from the feasibility study. The contract is expected to begin between April 30 2025 and May 31, 2025 and should ideally be completed by December 31, 2025.

*****Documentation shall uploaded onto Cit-E-Bid*****

☒ Yes

4 **Addendum I**

7

Addendum I Requires Acknowledgement.

Due to City Holidays being held on Friday April 18, 2025 and Monday April 21, 2025, this proposal will be opened and acknowledged on Tuesday April 22, 2025 at 9:00 A.M.

☒ Acknowledge

natural systems utilities



Response to RFQ for Laredo, TX

**Feasibility Study for Community Water & Energy Resource Center
Utilities Department (FY25-054)**

Rick Petrosino

Vice President

Natural System Utilities

Date Submitted: April 17th, 2025

#missionwater



natural systems utilities



Date: April 17, 2025
To: City of Laredo - City Secretary
City Hall - Third Floor
1100 Houston Street
Laredo, TX 78040
Attn: Mario I. Maldonado Jr.
Re: Laredo, TX CWERC RFQ Response (FY25-054)

Dear City Secretary,

Natural Systems Utilities (NSU) is pleased to submit our response to the City of Laredo's Request for Qualifications for a feasibility study of the proposed Community Water and Energy Resource Center (CWERC). With over four decades of experience in decentralized water infrastructure including the design, construction, and long-term operation of innovative water reuse systems, NSU brings unparalleled expertise in the development and implementation of community-scale water and energy recovery facilities.

We understand that the CWERC aims to transform Laredo's wastewater treatment strategy by creating a neighborhood-scale resource recovery facility that not only reclaims water to state reuse standards, but also generates renewable energy and compost, ultimately lowering utility costs and advancing climate resilience for the community. NSU fully supports this visionary initiative and is confident in our ability to guide the City through a thorough technical, economic, and environmental feasibility study aligned with the goals outlined in the Laredo Resilience Project and supported by NADBank. We also believe we can help Laredo more fully tap into the value of its water rights on the Rio Grande by achieving resilience through reuse.

Our qualifications include:

1. National Leadership in Decentralized Wastewater Systems:

NSU manages the design, construction, and continuous operations of the largest portfolio of onsite decentralized wastewater treatment and reuse systems in the United States—currently operating over 400 facilities. We specialize in community-scale systems, which are directly aligned with the CWERC's scale and objectives.

2. Proven Experience with Advanced Water Reuse Technologies:

From early innovations like the first U.S. membrane bioreactor (MBR) system to today's most energy-efficient treatment solutions, NSU has consistently delivered projects that integrate wastewater treatment with energy and nutrient recovery. We are highly experienced with membrane bioreactors, anaerobic digestion, CHP systems, and nutrient recycling technologies—key components of the CWERC vision.

3. Turnkey Delivery & Long-Term Operations:

#missionwater

Tel: (908) 359-5501 | FAX: (908) 359-8286 | info@nsuwater.com | nsuwater.com



natural systems utilities



NSU's approach encompasses not just feasibility and design, but also construction and ongoing operation of systems. Our DBO (Design-Build-Operate) model ensures continuity and accountability from concept through execution and beyond. This holistic view is critical to accurately assessing operational feasibility, system reliability, and long-term value generation.

4. **Deep Regulatory and Permitting Knowledge:**

We have successfully navigated complex permitting processes with state and federal agencies including the EPA, TCEQ-equivalent agencies, and public health departments in multiple jurisdictions. Our direct involvement in developing water reuse regulations in New York City and receiving groundbreaking discharge permits, positions us to provide strong guidance on the CWERC's regulatory strategy. Furthermore, we have partnered with Adaptive Water, a Texas based firm with strong Texas relationships, to enhance our project team.

5. **Commitment to Resilient Infrastructure and Social Equity:**

NSU recognizes the CWERC's broader role in supporting climate resilience, equitable water access, and local economic opportunities. Our team has delivered similar projects that include aquaponics, green infrastructure, and community engagement as part of system design and benefit-sharing.

Enclosed in this submission are our qualifications and technical approach, demonstrating our ability to deliver a rigorous, forward-thinking feasibility study that supports the City of Laredo's goals. We would be honored to collaborate with the City, NADBank, and the Laredo Utilities Department in shaping this transformative infrastructure.

Thank you for the opportunity to submit this RFQ. We look forward to the possibility of working together to build a more sustainable and resilient water future for Laredo.

Kind Regards,

A handwritten signature in blue ink, appearing to read "Rick Petrosino".

Rick Petrosino (Primary Contact)
Vice President
Natural Systems Utilities, LLC
848.333.8050
rpetrosino@nsuwater.com

#missionwater

Tel: (908) 359-5501 | FAX: (908) 359-8286 | info@nsuwater.com | nsuwater.com



natural systems utilities



Required Information

Approach:

See Section II (Technical Approach)

Lead Firm:

Name: Natural Systems Utilities
Address: 170 Township Line Road, Building C
Hillsborough, NJ 08844
Telephone: 908.359.5501
Officers: Zachary Gallagher, Deborah Burke, Jen Cohn

Sub Consultant:

Name: Adaptive Water
Address: 1709 Kinney Ave, Unit B
Austin, TX 78704
Telephone: 301.452.1900
Officers: Sharlene Leurig, Kira Dell

Organization Chart:

See Section III.II (Organization Chart)

#missionwater

Tel: (908) 359-5501 | FAX: (908) 359-8286 | info@nsuwater.com | nsuwater.com



Contents

I: Company Profile	7
Operations and Maintenance Services	8
Design-Build Services	9
Water/Energy Challenges & Approach	9
Subconsultant:	13
II: Technical Approach	14
Project Understanding	14
Methodological Framework	14
Workstream Details	14
Final Report and Deliverables	16
Project Management and Timeline	16
Optional Community Engagement (Recommended)	16
III: Experience & References	17
III.I: Project Experience	17
Domino Redevelopment (Brooklyn, NY)	18
Environmental Disposal Corporation (Bedminster, NJ)	20
Gillette Stadium (Foxborough, MA)	22
Microsoft Campus (Silicon Valley, CA)	24
Philipsburg MUA (Philipsburg, NJ)	26
Battery Park City (New York City, NY)	28
Water Reuse Planning & Implementation: Austin Water Forward Plan	30
Options Analysis for Alternative Supply Sources to Restore Jacob's Well	30
Environmental Flow Restoration Strategic Planning: Pecos River	30
Business Model Development for Disadvantaged Texans: Vida Water PBC	31
Corporate Water Replenishment Project: Galveston Bay Inflow	31
III.II: Personnel Experience	32
Zach Gallagher (CEO)	33
Nancy Choi (Vice President of Engineering)	36
Adam Stern (Vice President of Business Development)	41
Vincent Gruffat (Managing Engineer)	44
Jens Riedel (Managing Engineer)	47
Prantik Chakraborty (Project Engineer)	50
Sharlene Leurig (CEO Adaptive Water)	51
Kira Dell (COO Adaptive Water)	54
Organization Chart	55
III.III: References	56



III.IV: Project List57

IV: Proposed Schedule66

I: Company Profile

Natural Systems Utilities, LLC (NSU) is an innovative infrastructure development and investment company integrating an efficient turn-key design, build, own, and operate (DBOO) approach to sustainable water infrastructure. NSU has nearly 40 years' experience and innovative leadership in water resource management with the long-term asset management perspective and capital resources of a utility company. NSU has a proud history of providing turnkey DBO solutions to a range of municipal, commercial, residential, institutional, and industrial customers across the United States. NSU has undertaken over 200 wastewater DBO projects – believed to be more than any other firm in the U.S. NSU leadership has led the development of the largest DB, DBO, DBOO turnkey projects in North America.

NSU has ongoing projects in the Northeast, New England, Midwest, and the West Coast. With offices in New Jersey, Massachusetts, Minnesota, and California, providing these services is a staff of over 140 employees, including licensed professional engineers, construction professionals and certified water and wastewater treatment facility operators. Additional information may be found on the NSU website at: (www.nsuwater.com).

NSU's legal entity is Natural Systems Utilities, LLC. Natural Systems Utilities, LLC consists of various subsidiaries, the oldest of which was founded in 1984. Natural Systems Utilities, LLC was founded to invest in and promote sustainable water and wastewater infrastructure projects. NSU has become a premier provider of water and wastewater design, build, operation, and maintenance services. NSU is a rapidly growing company focused on bringing together a world-class group of water and wastewater professionals.

Most recently NSU was acquired by Nijhuis Saur Industries (Nijhuis) which is part of Saur, a leading service provider in the global water and wastewater sector. Founded in 1904, Nijhuis this year celebrates 120 years of providing solid and adaptive solutions for sustainable and resilient water use, energy, and resource recovery. Since the inception of Saur's Industrial Water platform more than a dozen companies, led by Nijhuis, have been successfully acquired and integrated into one global operating company supporting clients in over 150 countries with engineering and consultancy services, EPC / DBOF project execution, mobile water solutions and O&M site services.

With an extensive portfolio of innovative technologies and game-changing solutions, Nijhuis is now delivering local, scalable, and circular water-on-demand solutions to more than 6,000 references around the world and contributing to a more sustainable and resilient future with over 12,000 employees.



Our purpose is to be an advocate for water, ensuring everyone gives water the value it deserves. With our unique Customer for Life approach, we protect water resources, contribute to the water, energy, and food transition, and help to restore and close the water loop and give water the value it deserves. We call it **#MissionWater**.

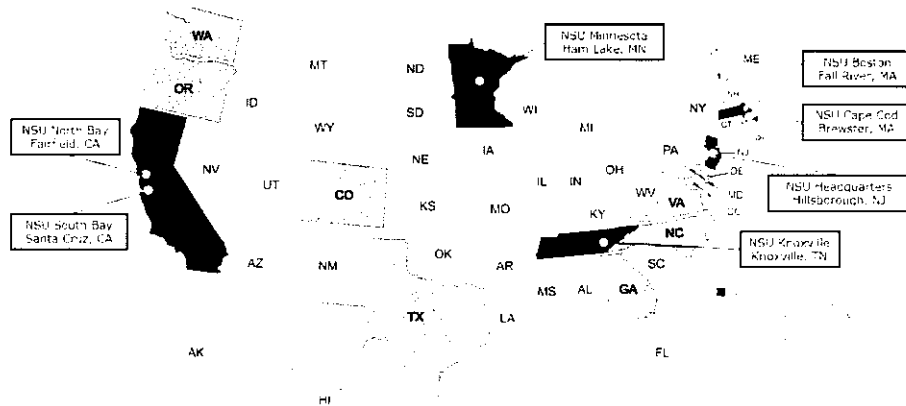
NSU offers a broad range of contract operations services to public and private sector treatment plants, including management, operation, repair, and maintenance, plus specialized, supportive services, including energy efficiency programs, computerized maintenance management systems, information systems, quality control programs, budget forecasting, administration and public relations, and community involvement programs.



NSU has an excellent record of maintaining regulatory compliance. Today's standards of operating modern water-supply or wastewater treatment facilities require a state-certified individual who has knowledge of chemistry and biology and possesses additional electrical and mechanical skills.

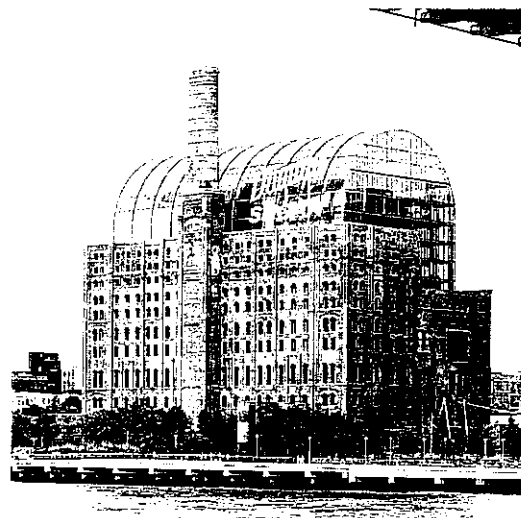
NSU maintains a staff of professional operators for contract operation services, providing full- and part-time operators for many clients. In addition, management has particular expertise in recruiting and training local employees.

In managing clients' operation and maintenance projects, NSU benefits include reducing overall project cost and ensuring the application of best-in-class techniques. As an owner of water and wastewater facilities, NSU fully understands the difficulties and responsibilities necessary to successfully operate and maintain water and wastewater facilities for its clients.



NSU combines the roles of designer, constructor and operator of water and wastewater infrastructure components in providing seamless multi-discipline Design-Build-Operate (DBO) and Design-Build-Own-Operate (DBOO) services to our customers. Beyond the significant reduction in capital costs these alternative procurement techniques have demonstrated, there are other important benefits to clients over the more traditional design-bid-build approach:

- A fully integrated, single source for planning, permitting, design, construction, operation and ownership of water/wastewater systems streamlines a client's need to arrange for, and integrate the efforts of a variety of vendors.
- Our highly qualified engineering and design group receives real world input from our construction and operations staff during the design process, insuring that efficient and economical considerations are factored into both construction and long-term operation.
- Our construction division has full access to the process engineering team, allowing a critical give-and-take relationship during design and construction phase, shortening the overall project schedule, one of the chief benefits of design-build projects.
- Our operators have hands-on experience in a broad range of water, wastewater, and residuals technologies. In particular, NSU has been especially recognized for work with an assortment of membrane bioreactor (MBR) treatment facilities.



Although considerable attention is drawn to the 1 percent of the world's available water supply that is used for drinking, the vast majority of our water is used for agriculture, commercial and industrial purposes. Experts around the world agree that our water use habits are rapidly depleting this finite resource. Municipalities, businesses, schools, and urban areas, particularly in the more arid regions, demand systems that not only fulfill day-to-day water needs, but also must simultaneously conserve water in a cost-effective manner. This is indeed a challenge, particularly given our aged and inefficient infrastructure and our increasingly strained water supplies.

natural systems utilities



NSU manages the design, construction, and operations of several water reuse systems that are helping to lead a transformation of water infrastructure within the United States. Some of our systems recycle 100% of the wastewater treated. Direct non-potable water reuse is a beneficial and innovative approach where wastewater and storm water are treated and reused for multiple non-potable purposes such as toilet flushing, cooling tower make-up, laundry and landscape or rooftop irrigation, greatly reducing demands on fresh water supplies. All the water reuse projects designed by NSU incorporate blackwater (typically water from toilets and urinals), greywater (wash water) and stormwater treatment systems. Overall, NSU specializes in taking an integrated water management approach when developing the solution and seeks to optimize water and energy usage at each and every project site.



NSU's non-potable direct water reuse systems are of varying capacities and sizes depending on the particular community being served. Technologies range from constructed wetlands to membrane bioreactors.

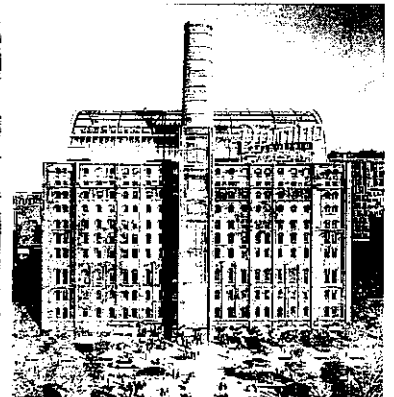
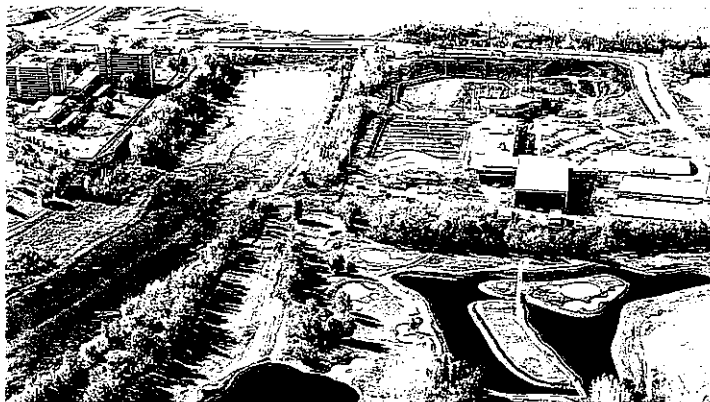
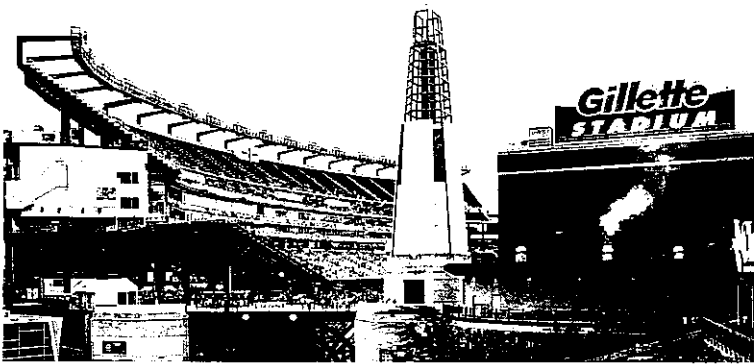
NSU was one of the first companies in the United States to utilize membrane filtration technology for wastewater treatment facilities and has used it in a number of projects, including those that incorporate water reuse into their design. Most, if not all the NSU projects, are designed specifically for stringent nutrient removal. In addition, NSU has experience with designing advanced water treatment systems for arsenic, phosphorus, iron, and manganese removal.

As owners and operators of these advanced treatment systems, NSU is always seeking new ways to lower power and chemical costs at wastewater treatment/reuse facilities. Recent research projects yielded savings of over 30% on two existing MBRs that NSU designed, built, and operates. As a result of this applied knowledge, NSU continuously helps clients select the right process and equipment to handle specific infrastructure needs.

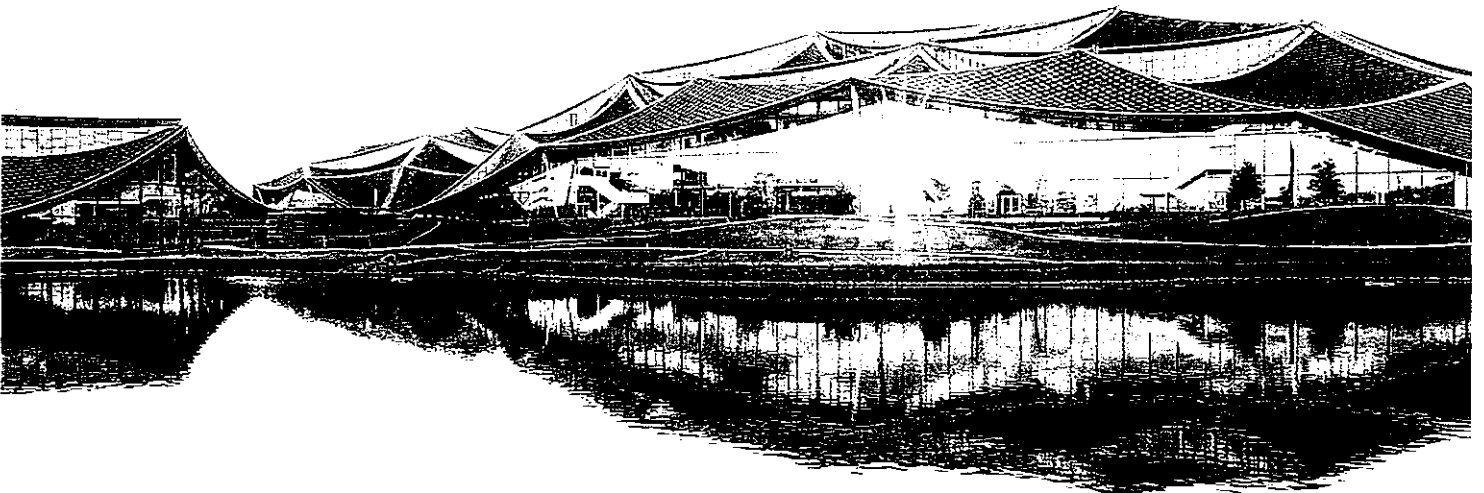
natural systems utilities



Leading the World in Onsite Water Reuse Solutions



Design Build Operations Maintenance Finance Ownership Solutions



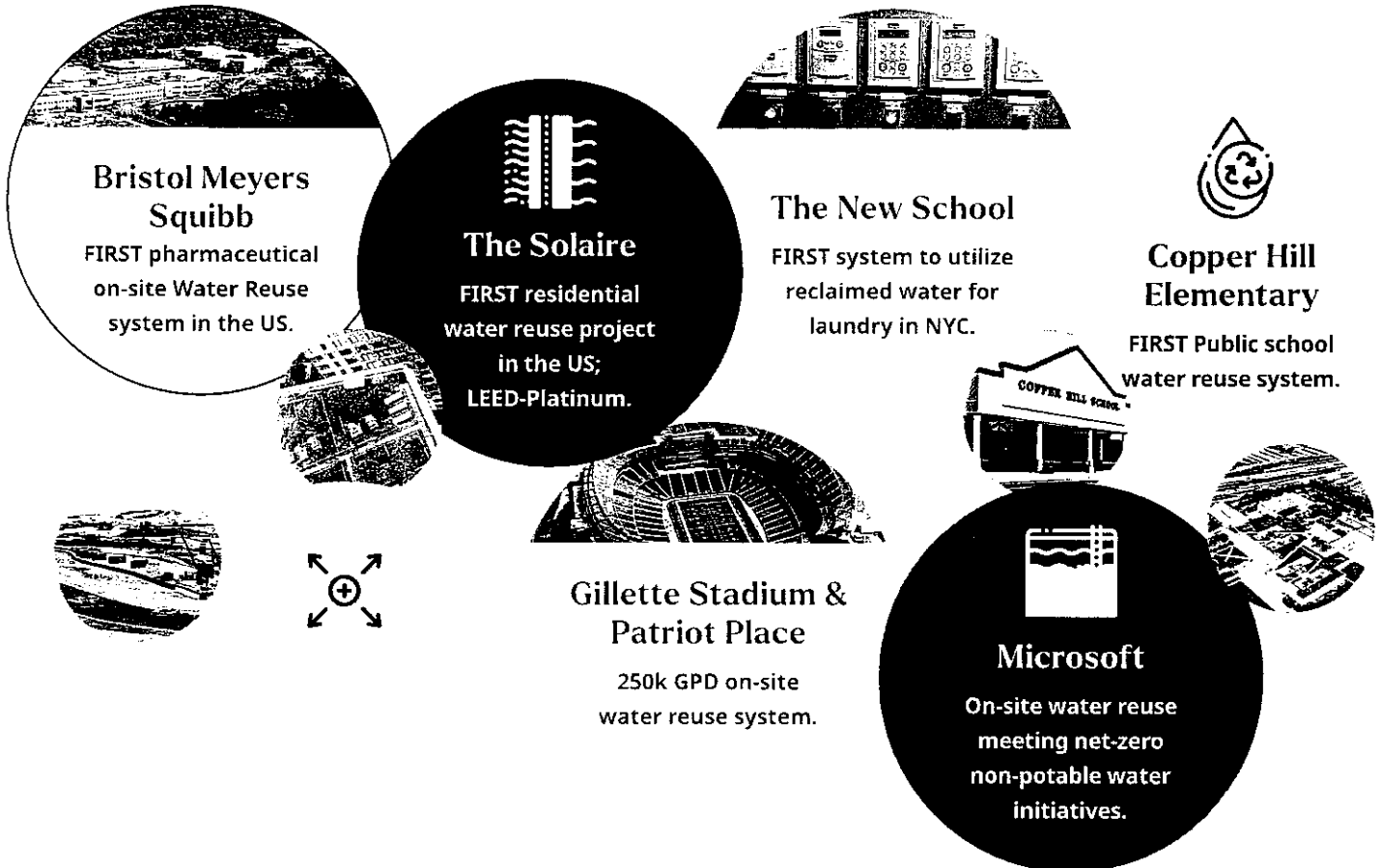
NSUWATER.COM

natural systems utilities



Mission

"We seek to reimagine water by providing innovative solutions that safeguard the world's water resources."



Why?

Water Reuse is a Better Wayto address:

- Escalating water and sewer costs
- Pollution and lack of centralized sewer services
- Aging infrastructure
- Growing demand for increased resiliency
- Green building initiatives
- Regulatory trends and requirements

How?

NSU'S Water Solutions & Services Include:

- Water Supply
- Wastewater Treatment
- Indirect Reuse (Groundwater Recharge)
- Direct Reuse (Alternate Water Supply)
- Design-Build
- Operations & Maintenance
- Ownership/Asset Management (Water Purchase Agreements)

Who?

NSU provides Turn-Key Services for:

- Residential & Commercial Developers
- Eco-Districts
- Education/ Universities
- Industrial
- Hospitality
- Healthcare
- Municipal/ Government
- Public Private Partnerships
- You, Your Industry & Community

Adaptive Water

Website: www.adaptivewater.com

Phone: (301) 452-1900

Address: 1709 Kinney Ave, Unit B, Austin, TX 78704

Primary Contact:

Sharlene Leurig, Chief Executive Officer

sharlene@adaptivewater.com

Company Description & History:

Water is the rate-limiting factor to Texas' growth. For communities experiencing economic losses due to water shortages, water reuse offers a sustainable, reliable, and cost-effective path to a secure water future. Adaptive Water was formed in January of 2025 by co-founders, Sharlene Leurig and Kira Dell, to enable this future across Texas. We are a vertically integrated water solutions company, providing Design-Build-Operate-Finance services for large-scale water users, including commercial campuses, light industrial facilities, and planned communities. By offering turnkey solutions, Adaptive enables customers to focus on their core business, with confidence that their water needs are met.

Founder Bios:

Sharlene Leurig, Chief Executive Officer

Sharlene is a nationally recognized social entrepreneur with 15 years' experience in water infrastructure finance, utility business model adaptation and water markets. Prior to forming Adaptive, Sharlene served as founding CEO of Texas Water Trade, leading a team that catalyzed market-based water solutions for people and nature. During her tenure at TWT, she served as founding Board Chair and Interim CEO of Vida Water, a Public Benefit Corporation providing in-home water treatment services for Texans living in water poverty. Sharlene has been a Draper Richards Kaplan Foundation Entrepreneur and an MIT-USGS Science Impact Collaborative Fellow. She holds a BA in Physics and English from Washington University in St. Louis and a Master's in City Planning from the Massachusetts Institute of Technology.

Kira Dell, Chief Operating Officer

Kira brings a track record in business process optimization and data-driven decision-making to Adaptive's founding team. As a business consultant at Endeavor.org, she advised growth-stage companies (\$10-20MM revenue) focused on logistics, mobility, IoT, advanced manufacturing, and ag-tech. There, she spearheaded a business intelligence initiative analyzing 1,200+ portfolio companies, providing insights on fundraising, talent acquisition, market entry, and other challenges. As a product manager at findhelp.org, Kira led software engineering teams from design to delivery and was responsible for product vision, roadmap, and strategy. She is an experienced facilitator of Scrum, a team collaboration framework designed to enable rapid, iterative product development. Kira is committed to disrupting the water industry in order to combat biodiversity losses driven by freshwater depletion.

II: Technical Approach

The City of Laredo seeks to evaluate the feasibility of developing a Community Water and Energy Resource Center (CWERC) — a decentralized, neighborhood-scale facility that transforms wastewater into valuable resources such as reclaimed water, renewable energy, and compost. The feasibility study will assess the technical, economic, and environmental viability of this innovative concept and provide the City with a clear implementation roadmap. Our team understands the CWERC as a transformative infrastructure project that aligns with Laredo’s climate resilience goals, supports equitable water access, and advances circular resource use.

Our approach integrates four core workstreams: **(1) Engineering and Environmental Analysis**, **(2) Economic and Financial Feasibility**, **(3) Regulatory and Permitting Assessment**, and **(4) Final Reporting and Recommendations**. Each stream is executed in close collaboration with City stakeholders to ensure alignment with local priorities and conditions.

Engineering and Environmental Analysis

Site Screening and Suitability Assessment

- Utilize GIS mapping tools and spatial datasets to identify candidate locations.
- Evaluate each site based on proximity to interceptors, land availability, floodplain risk, hydrological restoration potential, and existing infrastructure.

Infrastructure and Technology Assessment

- Determine spatial requirements for membrane bioreactors, anaerobic digesters, thermal recovery systems, and composting units.
- Develop conceptual infrastructure layout(s) to illustrate treatment trains, energy loops, and material flow.

Environmental Enhancement & Impact Review

- Perform a preliminary environmental impact assessment.
- Model emissions (air, odor), effluent quality, and potential habitat impact.
- Identify opportunities to enhance natural hydrology through ground and/or surface water restoration using reclaimed water.

Economic and Financial Feasibility

Cost and Revenue Modeling

- Estimate capital and operational costs, including purple pipe infrastructure and waste hauling logistics.
- Evaluate income potential from reclaimed water, biogas, compost, and thermal energy sales.
- Adjust and validate cost assumptions from prior studies to reflect current conditions and inflation.
- Quantify cost per acre-foot of reclaimed water and compare to trading value of Rio Grande surface rights (currently trading at roughly \$3,800/AF)

Financial Feasibility Analysis

- Develop dynamic financial models including NPV, IRR, and payback periods.
- Include sensitivity analysis based on energy prices, water demand shifts, and regulatory changes.
- Account for reduced potable water revenue and deferred water right acquisition cost in financial scenarios.
- Identify programs to support financing of CWERC construction.

Comparative Analysis

- Benchmark decentralized treatment against centralized alternatives.
- Include qualitative and quantitative assessment of lifecycle costs, system resilience, and scalability.

Market Demand and End-Use Analysis

- Identify potential off-takers for reclaimed water, compost, and energy.
- Assess viability of a localized resource distribution network to nearby parks, farms, or industrial users.

Regulatory and Permitting Assessment

Regulatory Review

- Identify all applicable federal, state (TCEQ), and local regulations related to water reuse, waste-to-energy, and composting.
- Confirm that all alternative end uses of reclaimed water are consistent with Laredo's water rights and recommend preferred alternative as appropriate

Permitting Strategy

- Outline required permits, approvals, and environmental studies.
- Provide estimated permitting timeline and regulatory touchpoints for each development phase.

Aquaponics Feasibility

Site and Water Suitability

- Assess reclaimed water suitability for aquaponics, including nutrient and contaminant levels.
- Identify spatial requirements and potential species (e.g., tilapia, leafy greens).

Market and Operational Analysis

- Evaluate economic viability of aquaponics at CWEREC scale.
- Consider regulatory requirements for water reuse in agriculture and aquaculture.

Feasibility Study Report

- Deliver a comprehensive report including all findings, analyses, and modeling outputs.
- Include GIS maps, infrastructure layouts, and financial model appendices.

Recommendations and Implementation Roadmap

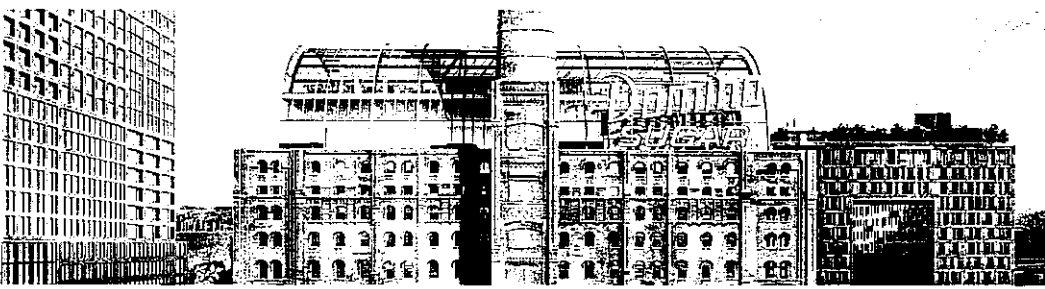
- Provide clear recommendations for site selection, technology configuration, and phasing.
- Include implementation strategies for funding, permitting, community engagement, and construction planning.
- **Project Duration:** 8 months (Start May 1, 2025; Completion by December 2025).
- **Project Oversight:** A dedicated project manager will ensure coordination with City departments, NADBank, and regulatory stakeholders.
- **Project Cadence:** We propose a monthly cadence call (1 hour) to bring together the relevant project managers from the City and our team to report on progress and coordinate on deliverables.
- **Quality Assurance:** All technical outputs will undergo internal QA/QC processes and iterative review by subject matter experts.

While not explicitly required, our team recommends a limited engagement strategy to foster early buy-in. This may include:

- Community listening sessions or design charrettes.
- Stakeholder presentations with utilities, parks, and local businesses.
- Coordination with resilience-focused NGOs or academic partners involved in the Laredo Resilience Project.

III: Experience & References

natural systems utilities



Domino Sugar Factory Redevelopment



The Domino District Non-Potable Water Reuse Project located in Brooklyn, NY, this project includes the installation of a district-scale non-potable water reuse system that treats over 400,000 gallons per day (gpd) of wastewater. The initiative reduces demand on NYC's potable water supply by up to 200,000 gallons daily and minimizes combined sewer overflows (CSOs) by sending highly treated excess water to the East River.

Challenge

The New York City Department of Environmental Protection (DEP) faces growing challenges due to population increases, climate change, and aging infrastructure. Key issues include maintaining a resilient potable water supply, mitigating the impacts of CSOs, and balancing competing water use needs such as recreation, fisheries, and flood mitigation. Combined sewer systems, which serve 60% of NYC, exacerbate waterway pollution during wet weather events.

☒ POTABLE WATER CONSTRAINTS

☒ COMBINED SEWER OVERFLOW (CSO)

Highlights

- Wastewater will be treated and reused for toilet flushing, cooling towers, and irrigation.
- Excess treated water will be sent to the East River to reduce CSOs.
- 99% of wastewater will be diverted from the combined sewer system.
- Membrane bioreactors and ultraviolet disinfection will ensure high-quality treated water.
- The system will optimize sewer capacity, save potable water, and reduce emissions.

The Solution

The Domino District Non-Potable Water Reuse Project incorporates innovative technology to address potable water constraints and reduce CSOs.

Water Treatment:

Wastewater is collected across the 11-acre site and treated with membrane bioreactors, ultraviolet disinfection, and ozone purification to meet high-quality reuse standards.

Non-Potable Applications:

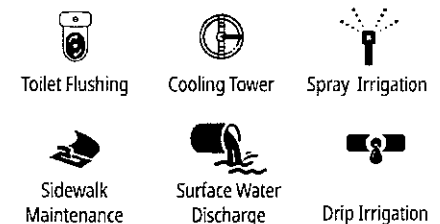
Treated water is reused for toilet flushing, cooling towers, and irrigation, significantly reducing potable water demand.

Stormwater and Excess Water Management:

The project utilizes the existing stormwater outfall to put highly treated water into the East River for streamflow improvement when this water is not directly reused within the project site. All wastewater is diverted from the stormwater system for CSO mitigation.

Regulatory Support:

The DEP supports the project with financial incentives, including grants and rate discounts, making it both environmentally and economically viable.



5
Buildings Served



400,000
GPD Treated



200,000
GPD Reused



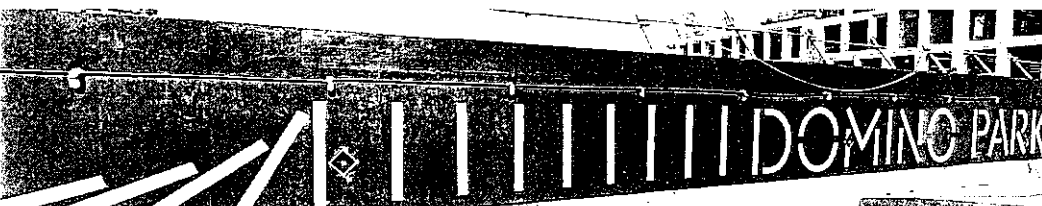
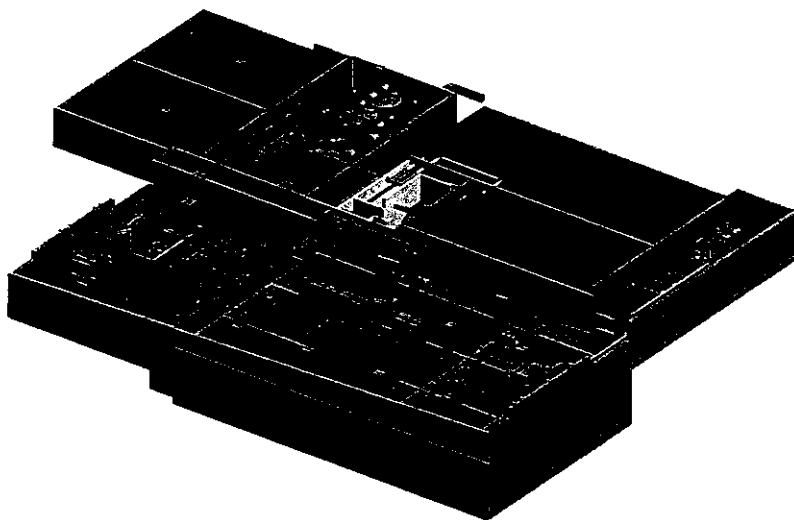
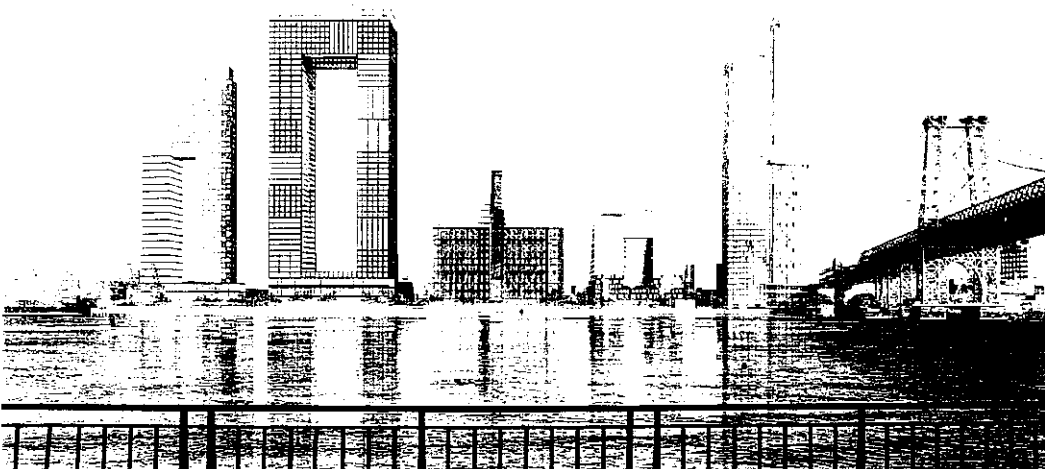
99% REDUCTION
Wastewater Discharge to Combined Sewers

Domino Sugar Factory Redevelopment

natural systems utilities



BACK TO ZERO | DESIGN | BUILD | OPERATE



Achievements

Significant Potable Water Savings:

Reduces potable water demand by up to 200,000 gallons per day, alleviating pressure on NYC's drinking water supply.

Optimized Sewer Infrastructure:

Decreases combined sewer overflows (CSOs) during wet weather events, improving waterway quality.

Compact Design: Utilizes less than 10,000 square feet of below-ground space to house the treatment facility and associated tankage, maximizing land use efficiency.

Regulatory Milestone: Set a precedent as the first district-scale on-site water reuse system to receive both city and state approvals for direct reuse within the buildings and a SPDES permit for excess supply to the river.



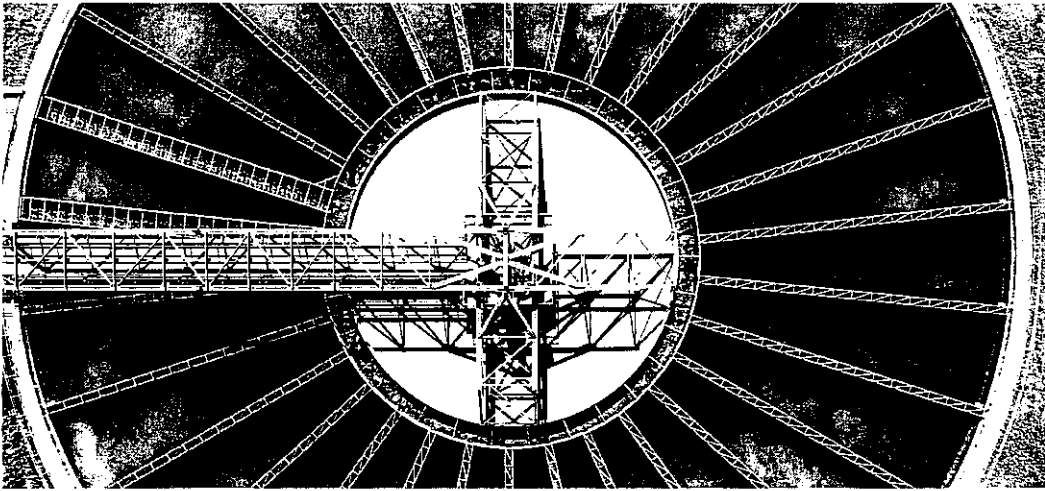
scan for more

“Innovative thinking, collaboration, and perseverance between the developer and various levels of government have been critical to making projects like Domino a reality.”

#missionwater

www.nsuwater.com

natural systems utilities



Environmental Disposal Corporation



Environmental Disposal Corporation (EDC); a public utility located in Bedminster, providing sewage collection, treatment, and disposal services for the town. NSU was contracted to perform design/build services for the system's expansion. In addition, NSU has continually operated the system during and after the construction process.

Challenge

EDC was in need of a customized solution for an expansion to better serve the growing population of 30,000 residents, plus municipal and commercial properties. The site had physical space limitations and needed a customized solution. The facility needed to stay operational during the expansion and upgrade.

☒ REGULATORY MANDATES

☒ SEWAGE TREATMENT CONSTRAINTS

Highlights

- Facility capacity increased 40%.
- Removed biological phosphorus and nitrogen.
- No service interruption during construction.

The Solution

NSU's customized approach allowed the facility to grow 40% from a capacity of 1.5 million gallons of wastewater treatment per day to 2.1 million gallons per day. Our methodology included the development of innovative design components to fit within the site's physical space limitations.

As customers needed to utilize their services while the expansion was underway, NSU developed procedures that allowed the existing facility to remain operational through construction completion.

Accordingly, service was never interrupted. In addition to the treatment facility, NSU manages its collection system which delivers 100% of the flow to the EDC treatment plant.

This system consists of 9 pumping stations and 30+ miles of gravity sewer mains.

NSU has maintained the operational contract since construction was completed 20+ years ago.



Surface Water Discharge



2.1 Million
Gallons Per Day Produced



30,000
Residents Served



9
Pump Stations



30 MILES
of Gravity Sewer Mains

Achievements

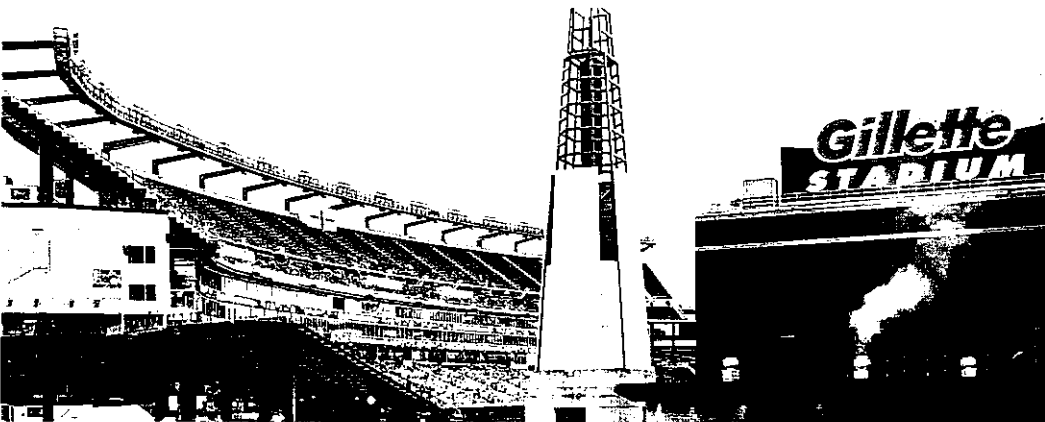
The facility utilizes industry leading, highly advanced treatment technology for nitrogen removal which meets the State's direct reuse standards.

The system also removes both biological phosphorus and nitrogen using the Bardenpho process, a multistage advanced biological treatment system.



scan for more

natural systems utilities



Gillette Stadium & Patriot Place



NSU worked closely with the town of Foxborough, the New England Patriots, and partners to ensure that the facility exceeded the Town's requirements and was constructed within budget and on schedule. The municipality and the client cooperated in the construction of a water reuse system that resolved both problems. The system includes almost 1,000,000 gallons of tank volume to capture the wastewater flows generated by fans: a 250,000 gallons per day membrane bioreactor (MBR) treatment plant that generates water suitable for reuse; and a 500,000 gallon elevated storage tank for reclaimed water use.

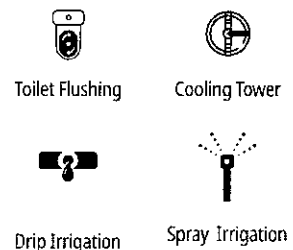
Challenge

During the construction phase of the new stadium, it was discovered that the volume of water required during game day/concert usage exceeded the capabilities of the Town of Foxborough. Also, the municipal wastewater treatment facility in place would not be able to handle the excess wastewater flow. As the town and team went through the process it was clear they needed a partner to assist with managing the water reuse system, repair and maintenance, customer service, and capital planning.

The Solution

NSU designed, built, and currently operates the water reuse system for Gillette Stadium and Patriot Place; home of the New England Patriots Football Team. The goal was to create a sustainable and environmentally-friendly system to produce high-quality reuse water for the stadium's 68,000 fans during peak halftime flush periods without creating additional demands on the community's existing systems.

The implemented system returns high-quality treated wastewater both to the stadium and the adjacent Patriot Place. The recycled water is used for toilets, facilities cooling as well as other purposes. The system currently has the capacity to treat an average of 250,000 gallons of wastewater per day, with the potential for future expansion.



☒ POTABLE WATER CONSTRAINTS

☒ SEWAGE TREATMENT CONSTRAINTS

☒ REGULATORY MANDATES

☒ COMBINED SEWER OVERFLOW (CSO)


20,000
Sq. Ft.


50%
Potable Water Reduction


100%
Reduction in Wastewater Discharge

Gillette Stadium & Patriot Place

BLACK | GREY | DESIGN | BUILD | OPERATE

natural systems utilities



Highlights

- Combined Sewer Overflow Mitigation
- All buildings receive comprehensive water reuse program rates from NYCDEP
- Membrane Bioreactors
- Ultraviolet and Ozone Disinfection

Achievements

Working with an amazing team, NSU was able to fulfill all local, client, and regulatory mandates.

The stadium has been operational for two decades and not put a water strain on the local community.

The system has become a sustainable icon for the region as it has generated a 50% reduction in potable water usage and a 50% reduction in wastewater discharge.

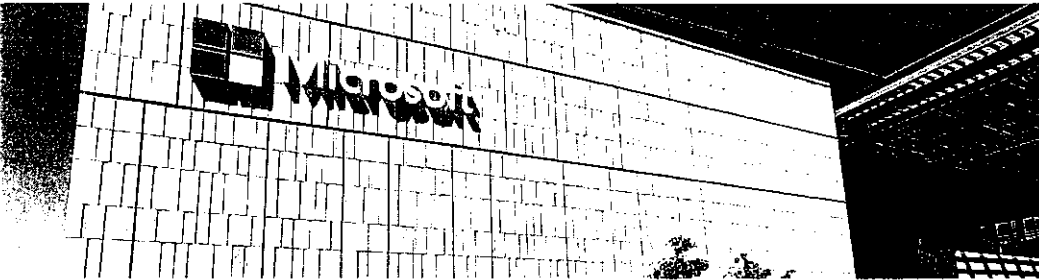


scan for more

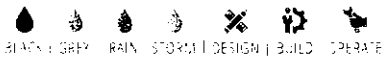
#missionwater

www.nsuwater.com

natural systems utilities



Microsoft Campus



Working with best-in-class partners we were able to fulfill Microsoft's desires to create its smartest and greenest office yet by developing a world class water management system for their Silicon Valley campus. Through innovation, collaboration and expertise we were able to create a one of a kind solution to fit their vision.

Challenge

As an environmentally concerned organization, Microsoft was seeking a strategic partner to help them create a world-class water system and surpass anything seen before in Silicon Valley. With Silicon Valley's innovation spirit in mind, they had the goal of becoming the first tech campus to achieve net zero water certification. The challenge was to create a sustainable solution for the 2000+ employees, 15 acre campus and 643,000 square feet of office space.

☒ POTABLE WATER CONSTRAINTS

☒ SEWAGE TREATMENT CONSTRAINTS

☒ REGULATORY MANDATES

☒ COMBINED SEWER OVERFLOW (CSO)

Highlights

- Water will be collected, filtered and stored for reuse throughout the year.
- Rainwater will be harvested and used for campus landscape.
- Treated wastewater from campus kitchens and bathrooms will be reused for irrigation and toilets on campus.
- Stormwater will be retained on the living roof and collected from paved areas.

The Solution

To achieve Microsoft's ambitious goals, Natural Systems Utilities design team had to think outside the box and create a custom solution that fulfilled the clients water needs and met its sustainability desires.

Working with partners we were able to reimagine water and implemented a water reuse system (hybrid wetland/ membrane bioreactor) that integrated with the rain water and stormwater systems seamlessly.

The system is capable treating 50,000 gallons per day to serve Microsoft, Xbox, PowerPoint, Outlook.com and other campus employees.



Toilet Flushing



Cooling Tower



Spray Irrigation



15
Acre Campus



2023
Status Achieved



100%
100% of the buildings' non-drinking water will come from rainfall or on-site recycled water.

Microsoft Campus

natural systems utilities



BLACK | GREY | RAIN | STORM | DESIGN | BUILD | OPERATE



Achievements

Beyond drinking fountains and sinks, not a drop of water for more than 2,000 employees, 15 acres of landscape, and 643,000 square feet of built space will come from municipal sources.



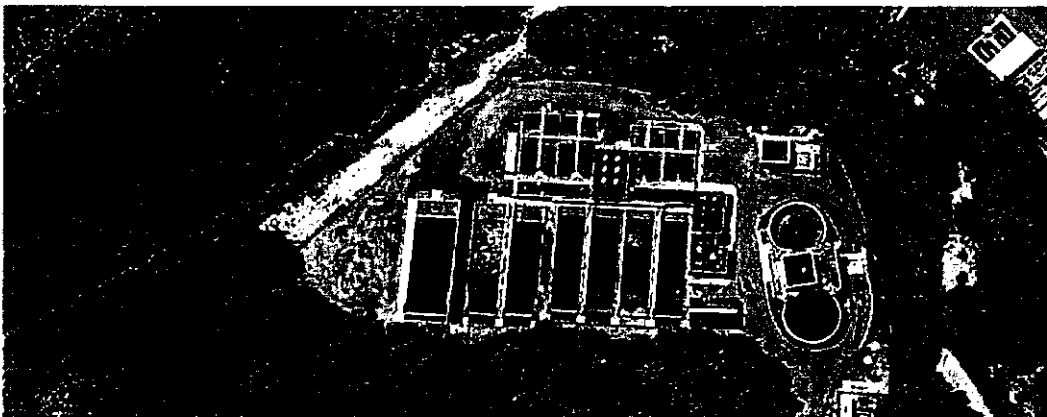
scan for more

“Many buildings start with a design concept and work backwards to mitigate harm to the local ecosystem and natural resources. Our design started with a different goal in mind – could we design a building that was actually beneficial and restorative to the local ecosystem? We think we’ve achieved just that.”

#missionwater

www.nsuwater.com

natural systems utilities



Town of Philipsburg



NSU was awarded the long-term operational contract for the Town of Philipsburg and its 28,000 residents. The partnership with the Town was to operate the existing 3.5 Million Gallons Per Day (MGD) system, consult and operate the expansion to a 4.3 (MGD) system. NSU is responsible for the overall operations of all the facilities which include: management support services, maintenance and repairs, sludge management and disposal, and wastewater analysis required by the Authority's NJDEP permits.

Challenge

The Town of Phillipsburg saw the challenge of serving its approximately 28,000 residents in the Town of Phillipsburg, the Borough of Bloomsbury, and the Townships of Alpha, Greenwich, Lopatcong, and Pohatcong today and anticipating the needs going forward. They needed to find a partner that could operate the existing systems, consult on improvements and operate the systems as they scaled to fit community needs.

☒ REGULATORY MANDATES

Highlights

- Long Term Operations Contract
- Adapted existing staff into the operations plan
- Expanded from 3.5 MGD to 4.3 MGD

Highlights

NSU was able to provide a team of experienced operators to meet the clients, community, and regulatory needs. NSU has executed with a focus on providing unparalleled system reliability and reducing operational costs.

With our experience, we have been able to seamlessly take over operations of all systems the town utilizes including an Intermittent Cycle Extended Aeration System (ICEAS) modified sequencing batch reactor (SBR) system, which operates as somewhat of a hybrid SBR and extended aeration plant.

One of the unique features is that the system does not require control of the influent flow and therefore does not require separate fill cycles.



4.3

Million Gallons Per Day



28,000

Residents Served



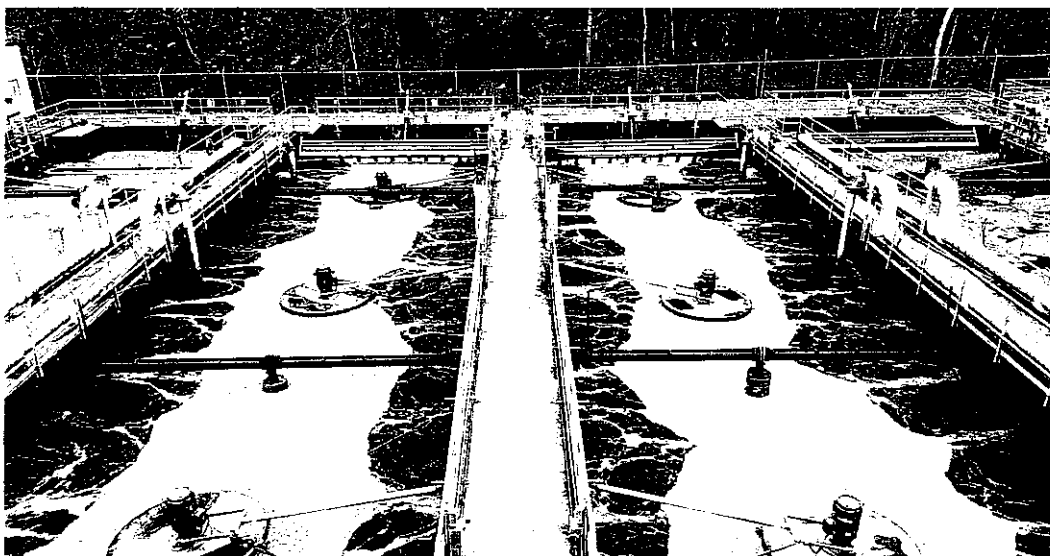
\$200,000/yr
in Operational Savings

Town of Philipsburg

natural systems utilities



BLACK + OPERATE



Achievements

Working with the Town, NSU provided recommendations for capital improvements with a goal to optimize operations and reduce cost while providing safe reliable operations. In the end, NSU was able to retain existing staff and bring on additional labor from within the community.

NSU has achieved approximately \$200,000/yr in operations savings since taking over as the lead operator.



scan for more

#missionwater

www.nsuwater.com

natural systems utilities



**1ST IN-BUILDING
RESIDENTIAL
HIGH-RISE WATER
REUSE SYSTEM IN US**

The Solution

NSU and BPCA worked together to develop six residential water reuse systems in Battery Park City which service eight buildings: The Solaire, Tribeca Green, Millennium Tower, The Visionaire, Riverhouse, Liberty Luxe, Liberty View, and The Verdesian.

Systems include treatment with hollow fiber micro-filtration membranes, ultraviolet light disinfection, and biological nitrogen removal to comply with New York City Department of Buildings' direct water reuse standards. The total design flow for these systems is 165,000 gallons per day.

The first project in NYC to incorporate wastewater reuse was the Solaire Building, which began operation in 2003. The treated water is reused for flushing toilets in the 293-unit apartment building, cooling tower make-up, and green roof irrigation.



Toilet Flushing



Laundry



Cooling Tower



Spray Irrigation



Drip Irrigation



Sidewalk
Maintenance

BLACK | GREY | RAIN | STORM | DESIGN | BUILD | OPERATE | OWN

Battery Park

Natural Systems Utilities (NSU) designed, built, and currently operates the wastewater and rainwater recycling systems within six Battery Park City Buildings. These systems have consistently achieved greater than 50% water consumption reduction and a greater than 60% reduction in wastewater discharge (compared to similar residential buildings in NYC). These water and wastewater savings are the direct result of wastewater reuse and water conservation. Battery Park City has been developed as a model for scaling water conservation and reuse projects in urban redevelopment and campus-scale settings.

Challenge

Battery Park City (New York) is a 92-acre redevelopment under the Battery Park City Authority (BPCA) of New York City. To achieve sustainability goals, they required innovative water system solutions. BPCA's mission included advanced water reuse objectives, exceeding LEED requirements. Together, we sought creative solutions, updated regulations, and met groundbreaking environmental impact goals.

☒ POTABLE WATER CONSTRAINTS

☒ REGULATORY MANDATES

☒ SEWAGE TREATMENT CONSTRAINTS

☒ COMBINED SEWER OVERFLOW (CSO)



55%

Potable Water Reduction



65%

Reduction in Wastewater Discharge



165,000

Gallons Per Day Produced

Battery Park

natural systems utilities



Highlights

- Combined Sewer Overflow Mitigation
- All buildings receive comprehensive water reuse program rates from NYCDEP
- Membrane Bioreactors
- Ultraviolet and Ozone Disinfection

Achievements

These systems have consistently achieved greater than 55% water consumption reduction and a greater than 65% reduction in wastewater discharge (compared to similar base residential buildings in NYC).

These water and wastewater savings are the direct result of wastewater reuse and water conservation. Battery Park City has been developed as a model for scaling water conservation and reuse projects in urban redevelopment and campus-scale settings.



scan for more

“This was a very important partnership for us. They not only implemented the plant for us but they maintained it, they monitored the water and made sure it was ran efficiently.”

#missionwater

www.nsuwater.com

Adaptive Water

Chaired the task force guiding development of Austin's 100-year water plan, which includes Aquifer Storage and Recovery, Indirect Potable Reuse and Non-potable Direct Reuse through centralized purple pipe and decentralized onsite water reclamation systems. Worked closely with Austin's City Council Offices and City Manager's Office to incorporate onsite blackwater reuse into a Design-Build contract for the city's Permitting and Development Center, which ultimately became **OSCAR and CLARA**, the building's condensate, rainwater and blackwater reuse facilities. This was the first blackwater reuse facility permitted by Austin Water. Supported the Mayor's Office and Austin Water staff in developing a suite of programs that became "**Go Purple**," which leverages ratepayer charges and development fees to support accelerated expansion of Austin's purple pipe network. Coordinated closely with nonprofit organizations and City Council offices to enable ordinances requiring onsite non-potable reuse for most new developments over 250,000 sq-ft starting in 2023.

Collaborated with a local engineering team to develop cost and yield analyses for a suite of supply alternatives to replace utility groundwater wells critically impairing Jacob's Well, a spring of cultural, environmental and economic significance in Wimberley, Texas. Guided selection of utility water supply alternatives to evaluate through engagement with a local nonprofit and elected officials from the county and affected townships and cities. Involved seeking consensus with hydrogeologists, groundwater managers and elected officials to select alternative water supply solutions and evaluate specific locations for infrastructure to achieve ecological restoration goals at a cost that could be supported by local utility ratepayers. Facilitated the county's application for funding from the State Revolving Fund for appurtenant infrastructure.

Advised corporate and non-governmental stakeholders on potential to restore flow on a highly degraded segment of the Pecos River using treated produced water, a form of wastewater associated with oil and gas wells that requires high levels of treatment to remove manmade and natural constituents of concern as well as high concentrations of salt. This project required engagement with diverse stakeholders to understand technical limits and capabilities to achieve water quality parameters suitable for direct discharge into an aquatic environment and the permitting tools that could ensure proper custody of water from treatment train to discharge to downstream offtake. Stakeholders engaged in the process included state regulators, oil and gas operators, midstream water companies, irrigation districts, private landowners and environmental nonprofits.

Stood up a service company to deliver Point of Use (POU) water services to low-income households in border communities. Raised seed financing to launch the company in a colonia in Eastern El Paso County, where it still operates. Prior to launch, oversaw service design, pricing and the development of operating procedures for the company. As a result of the capacity we helped **Vida Water** to develop in-house, its expertise on delivering and maintaining POU technology to underserved households has been sought after by Technical Assistance providers supporting small and rural community water systems across Texas, including the High Plains and the Big Bend. This work includes supporting teams to navigate permitting compliance discussions with the Texas Commission on Environmental Quality for POU to achieve drinking water regulatory limits for constituents such as arsenic, lead and radionuclides.

Oversaw the development and implementation of a 10-year Water Replenishment Agreement with PepsiCo to meet 100% of their water offsets in East Texas through the purchase and delivery of water for bay and estuary inflows into Galveston Bay. Had responsibility for securing firm water from a local wholesale supplier and brokering offtake agreements with private and public landowners to deliver that water for environmental flows to support aquatic and avian species of conservation priority. Was responsible for attaining PepsiCo's annual water replenishment goal of 2,000 acre-feet per year through permissible uses as governed by the Texas Water Code and the wholesale supplier's surface water permits. In cooperation with Galveston Bay Foundation, delivered the full apportionment of water in each year of the contract, **enhancing habitat health for over 2,500 acres of managed wetlands in the East Galveston Bay watershed**, to the benefit of the many migratory species that make the area a world-famous birding destination.



natural systems utilities



Zach F. Gallagher, P.E., LEED AP

As CEO for Natural Systems Utilities (NSU) Mr. Gallagher focuses on complete, integrated infrastructure approaches that combine water and energy with a concentration on handling the systems integration aspects and overall functionality. He is tasked with the day-to-day management of business operations as well as client & project management; business development, technology development & design; and staff management & supervision.

With over 20 years of experience in the industry, Mr. Gallagher is seen as an expert in the field. He has had numerous articles/papers published and serves as a Guest Lecturer at Rutgers, Columbia, Cornell, and other major universities. He was the Principal Investigator for a two-year NYSDERDA grant focused on the energy consumption and overall optimization for ONWS and directed the MacDonald Island ONWS project in Alberta, Canada including system training for the local operations staff.

Technical Expertise

- Design, Construction & Operations of onsite (decentralized) water treatment and reuse systems
- Water/Energy nexus & integrated infrastructure approaches
- Water resource management
- Wastewater management planning
- Sustainability initiatives
- Public speaking, Guest Lecturing & Training

Education

- MS, Civil and Environmental Engineering, Rutgers University, New Brunswick, NJ, 2006
- BS, Bioresource Engineering, Rutgers University, New Brunswick, NJ, 2003

Professional Affiliations

- US Green Building Council (NJ Chapter Board of Directors, Past Vice Chair)
- Board of Directors, Past Vice Chair
- Speakers Bureau
- WaterReuse Association
- Association for the Advancement of Sustainability in Higher Education (AASHE)

Licenses/Registrations

- Professional Engineer (NJ & NY)
- LEEDTM Accredited Professional Operations & Maintenance
- BPI Certified Professional

Years of Experience

- With Natural Systems Utilities: 21
- Industry: 24

Representative Projects

MacDonald Island

Alberta Canada Project Manager



As Project Director for this integrated energy and water recovery project, Mr. Gallagher managed the design and construction of an onsite water reuse and heat recovery system which reduced water consumption on the island by 30%, reduced wastewater flow to centralized facilities by nearly 100% and reduced capital expenses by \$3 million while recovering 240kW of energy from the reclaimed water.

Town of Phillipsburg

New Jersey Project Executive



This facility serves approximately 28,000 residents in the Town of Phillipsburg, the Borough of Bloomsbury, and the Townships of Alpha, Greenwich, Lopatcong, and Pohatcong. In providing the facility's operations, NSU was challenged with adapting the facility's existing staff into the operations plan. Mr. Gallagher provided oversight to the project that has resulted in \$200k annual savings for the town.

Environmental Disposal Corporation

Bedminster, New Jersey Project Executive

This public utility located in Bedminster, providing sewage collection, treatment, and disposal services for the town needed a customized solution for an expansion to better serve the growing population of 30,000 residents, plus municipal and commercial properties.

Gillette Stadium & Patriot Place

Foxborough, Massachusetts Project Executive

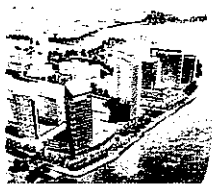


The largest water reuse facility in Massachusetts was established to meet water usage demands from the NFL Stadium and address limited local capacity. Mr. Gallagher, as the Project Executive, oversaw the final design and construction

of the project. The system implemented returns high-quality treated wastewater to both the stadium and the adjacent Patriot Place. This recycled water serves various purposes, including toilets, facility cooling, and more.

Hallets Point

New York, New York Project Lead



22 story mixed-use residential building that contains 400 residential units with a 25,000 square foot commercial space. Mr. Gallagher was the Project Executive for this contract that called for NSU to design, procure, furnish, manage construction, and

operate a complete 50,000 gallon per day water treatment and reuse system.

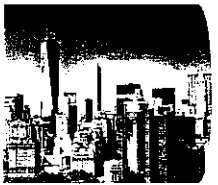
Sonoma Raceway

California Project Executive

Built in 1968, Sonoma Raceway is a self-contained facility with its own water production, water treatment, water storage, water booster pumps, and a water distribution pipeline system. Mr. Gallagher led this project focused on process optimization, operational improvements, system performance improvements.

Battery Park City

New York, New York Project Lead



A series of green residential high-rise buildings located in Lower Manhattan's designated green zone. Gallagher managed this project which received a grant from NYSERDA to conduct research on the energy consumption and overall

optimization of the onsite water reuse system.

Related Companies

New York, New York Project Lead

Managed water audits on over 40 high-rise residential apartment buildings in New York City for Related Management to identify opportunities for water/ wastewater savings that will translate into financial savings. Initial opportunities identified resulted in a ROI of less than a few months.

Carvel Property Development

Pine Plains, New York Sustainability Team Leader

Worked with the Durst Organization to implement measures that reduce the environmental impacts of existing site operations and enhance the ecological characteristics of the proposed second-home, golf-course community, which will serve as the base for the project's long-term sustainability vision.

MBR Treatment Systems Design & Start-Up

New York & Massachusetts Project Manager

Design, permitting, submittal review and start-up for various membrane bioreactor (MBR) treatment systems (30,000 – 250,000 gallon per day systems) including the Solaire in Battery Park City, NY and upgrades to the New England Patriot's Gillette Stadium MBR treatment and recycling system in Foxboro, MA.

Wastewater Management Planning

Mansfield Township, New Jersey Primary Author

Lead the preparation of the first adopted comprehensive Wastewater Management Plan (WMP) under the NJ Highlands rules and managed various other WMP amendments and revisions.

Papers

(2021)

Systems and Methods for Recovering Energy from Wastewater
Patent # No US9719704B2

Author Project Executive for NSU

(2021)

Online Biological Monitoring in Decentralized Non-potable Water Systems

Author Inventor Project Executive

Presentations

(2011-Present)

Water Reuse Systems & Integrated Water Resource Management
Columbia University, Rutgers, University, Cornell, NJIT & Other Major US Institutions

Annual Guest Lecturer

(2017)

Water Resource Management: Moving Toward Net Zero Energy Onsite Water Reuse & Decentralized Water Reuse Focused on the Water-Energy Nexus

Smart & Sustainable Campuses, AASHE, American Water Summit, Sustainable Silicon Valley & Other Conferences

Technical Speaker

(2016)

Disruptive Tech: Beyond Net Zero Energy Onsite Water Reuse
WaterReuse Association Annual Symposium, AASHE & Other
Conferences

Technical Speaker

(2014)

**Integrated Water Resource Management in the Mid-Atlantic
and North East**
CWEA and CSAWWA Water Reuse Seminar, Edgewater MD

Technical Speaker

(2013)

Water Management 2: The Outside Drip
Somerset County Business Partnership: Green Tourism &
Hospitality Conference, Somerset NJ, Session 3B,

Technical Speaker

(2013)

**In-Building Decentralized Water Reuse & Cooling
System Integration**
WaterReuse Association, On-Site Water Reuse Webinar

Technical Speaker Attendee

(2011-2015)

**Water Reuse Systems and Integrated Water Resource
Management**
USGBC Course ID 0090007414 - Multiple courses provided

Technical Speaker

(2012)

**Water Reuse & Energy Optimization:
A LEED Interactive Session**
Greenbuild 2012, San Francisco

Technical Speaker

(2012)

**Central Corridor EcoDistrict: Integrated Water Resource
Management**
San Francisco Planning/PUC, San Francisco

Guest Speaker

(2011)

**Bridging Design, Implementation & Ownership:
Blackwater Treatment at The Helena**
AIA/ASHRAE Integration Series

Technical Speaker Panelist

(2010)

Sustainability & Water: The Global & Local Picture
New Jersey Environment Federation 24th Annual Conference

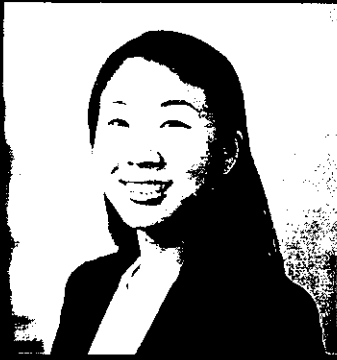
Technical Speaker

Publications

(2017)

**Design, Build, Operate: The Value of Being the 'All-In-One'
Company.**

Forbes publication



natural systems utilities



Nancy Choi, PE, LEED AP

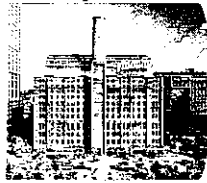
Nancy Choi is Vice President of Engineering with Natural Systems Utilities (NSU) where she plans, directs, coordinates, and oversees all engineering department activities. She ensures the development and implementation of efficient operations and cost-effective systems. She is a licensed Professional Engineer and a LEED Accredited Professional holding BS and Meng degrees from the Massachusetts Institute of Technology in Environmental Engineering.

Prior to joining NSU, Nancy worked on numerous multidisciplinary projects worldwide, focused on a holistic approach to integrating all aspects of the urban water cycle. Nancy's commitment to a project's success includes strong communication and coordination skills both internally and externally to find the best solutions.

Representative Projects

Domino District

Brooklyn, New York **Project Director**



Project Director for the first district water reuse plant in New York City. Nancy is managing the design and construction of a water reuse and heat recovery system with a design capacity of 410,000gpd that will collect wastewater from multiple buildings and provide non-potable water for flushing, cooling tower make up and irrigation.

Bay View Blackwater System

Mountain View, California **Project Director**

Project Director for the construction of an onsite wastewater treatment plant with a capacity of 85,000gpd to meet State standards for non-potable reuse. Wastewater will be treated through a moving bed bioreactor (MBBR) process followed by polishing through a horizontal flow subsurface treatment wetland.

Commercial Property

Green Earth Village

Ontario, Canada **Lead Wastewater Technical Advisor**

Lead wastewater technical advisor to support the development Green Earth Village Secondary Plan. Nancy was responsible for a waste water treatment technology solutions analysis for the proposed Lake Simcoe Water Reclamation Centre which is projected to treat up to 40 MLD. The Reclamation Centre is proposed to be sited close to residential areas and as such a best practice guide on design factors for proximity to residential areas was developed for the client.

South Water Front

Portland, Oregon **Lead Wastewater Engineer**

Lead wastewater engineer to develop concept sewerage and recycled water strategies for a feasibility assessment of the development, ownership and operation of district infrastructure systems. Included treatment plant technology assessment and water demand estimations incorporating various conservation, efficiency and reuse strategies.

Technical Expertise

- Engineering
- Project Management
- Water Reuse
- Design/Build/Construction Management

Education

- BS, Environmental Engineering, Massachusetts Institute of Technology, 2002
- MEng, Environmental Engineering, Massachusetts Institute of Technology, 2003

Professional Affiliations

- New York Water Environment Association, Asset Management Technical Committee Member
- Water Environment Federation
- Institute of Sustainable Infrastructure, Technical Committee Liaison Subcommittee Chair, 2013-2014

Licenses / Registrations

- PE, State of New York
- LEED Accredited Professional

Years of Experience

- Natural Systems Utilities: 4
- Industry: 22

St. Elizabeth's Campus East

Washington, DC Wastewater Engineering Consultant

Wastewater Engineering Consultant for a technical and financial feasibility study to determine the viability of options for stormwater management, water reuse and centralized district energy for the proposed St Elizabeths East Campus development. Determined the viability of reducing municipal water demand through rainwater harvesting, blackwater reuse and graywater reuse.

BMX Masterplan

São Paulo, Brazil Technical Review Consultant

Technical Review Consultant for Odebrecht on a 20-acre mixed-use redevelopment project of a former BMX industrial site adjacent to the Rio Pinheiros. The project aims to set the standard for sustainable developments in both Sao Paulo and Brazil. Nancy provided review of conceptual strategies for water supply and wastewater treatment.

Langfang IDP Master Plan

Langfang, China Project Engineer

Project Engineer supporting Kohn Pederson Fox (KPF) Associates in the development of Langfang IDP (International Intelligent Industry Demonstration Park) master plan which will serve as the business district and home to 325,000 people in the emerging metropolis situated between Beijing and Tianjin in the West Changsha Pioneer Zone in Hunan Province. Responsibilities included developing a responsible water management plan in a region undergoing both severe drought and unprecedented population growth. Strategies include selection of applicable water reuse strategies, stormwater infiltration basins and deep well injection to replenish the depleting aquifer.

Yongsan International Business

District Masterplan

Seoul, Korea Project Engineer

Project Engineer for a 180-acre masterplan in the heart of Seoul teamed with Studio Daniel Libeskind. Responsibilities included analyzing three different strategies of wastewater treatment and reclaimed water: building systems, block-level systems and a central plant for the IBD.

Xochimilco Ecological Park

Mexico City, Mexico Design Engineer

Design engineer for a sustainable masterplan for an aquarium and park in the Xochimilco UNESCO World Heritage site. The project includes ecological restoration of a 300-acre functional floodplain of the Rio San Buenaventura as well as treatment of municipal wastewater and stormwater using a lagoon and wetland system integrated into the 100 year floodplain. Nancy assisted in the layout and design of the constructed wetlands system for waste water treatment.

Education

Vietnam German University

Binh Duong, Vietnam Lead Civil Engineer

Design of a new university campus in Vietnam covering a total land area of 505,000m². The development consists of administration building, alumni centre, student dormitories, staff accommodation, library, food courts, science and exhibition park, laboratories, engineering, biotechnology, natural sciences, academic village, academic buildings and sports facilities. Nancy was the lead civil engineer in charge of schematic design of grading, earthworks, storm drainage, sanitary sewers, potable and non-potable water distribution, water storage and wastewater treatment. We included the use of multiple sustainable drainage systems including ponds, swales and storm water recycling.

University of Texas at Brownsville Master Plan

Brownsville, Texas Lead Civil Engineer

Design in the development of a master plan for a new campus expansion for 20,000 students in Brownsville, TX. The university aspires to be an environmental laboratory for the local region. Nancy was responsible for developing a water management strategy that strives to achieve Net-Zero water or water neutrality which responds to the water scarcity issues the city may encounter in the future.

Lawrence Berkeley National Laboratories

Future Scientific Facility

Berkeley, California Lead Civil Engineer

Lead civil engineer for a pre-concept feasibility study of the Future Scientific Facility (FSF) for LBNL. Developed strategies for storm drainage, foundation and drainage design, earthworks, and required surveys and ground investigations. The FSF includes an underground structure to house scientific equipment, industrial support buildings, an experimental hall, and laboratory/office space.

Cornell University, New Physics Laboratory and Cryogenic Plant Feasibility Study

Ithaca, New York Project Engineer

Project Engineer of a project definition design study for a new proposed extension to the Wilson Physics Laboratory. Proposal seeks NSF Grant funding for new buildings and tunnel to be built for the new linear accelerator and for high level electron physics research work. Arup services include structural, MEP, civil engineering, acoustics & vibration, construction cost estimation, as well as sub consultants for geotechnics and architecture. Responsibilities include project management duties and design team management.

Government

Union Point Master Plan

Weymouth, Massachusetts Lead Water Engineer

Responsible for the development of an integrated water management plan which proposed conservation measures, efficient technologies and alternative supplies to reduce the potable water demand of the future development.

Developed a performance specification for an onsite wastewater treatment and reuse plant and led the selection of a Design-Build-Operator provider for the plant.

New York Rising Community

Reconstruction Program

Island, New York Lead Water Engineer

Nancy's responsibilities included discussing potential solutions with the Seaford-Wantagh Planning Committee, facilitating meetings with the Seaford-Wantagh community, collating, reporting and presenting technical analyses.

Nancy also oversaw the analysis of the potential infrastructure solutions for all five communities.

King Abdullah City of Science and Technology

(KACST) Grand Technology Park

Taif, Saudi Arabia Lead Water Engineer

The new technology city in Taif that encompasses a study area of 100 km² (including 10 km² for the KACST Technology Park), a new international airport, rail station and dryport. The city is the first of 11 new technology parks as part of the KSA national science and technology program to adapt and shift their domestic economy.

Responsible for the design of water and wastewater infrastructure and oversaw the hydrology and flood risk assessment of wadi channels and flows through six catchments with a combined area of 5,300km².

NYS 2100 Commission

New York Project Manager

Project Manager for the Land Use Sub-committee portion of the report where Arup received a grant from Rockefeller Foundation to assist them in supporting the work of the NYS 2100 Commission. The Commission report was produced in about one month from the input of 30 Commissioners, organized into five sub-committees.

The Commission was focused on providing long-term solutions to the State's infrastructure problems and used a decision-making framework that prioritized building resilience in all systems.

US Embassy

London, England, UK Project Engineer

Project Engineer for the design of the new US Embassy at Nine Elms in West London adjacent to the Thames River with Kieran Timberlake and Olin.

The design includes onsite reclamation, treatment and reuse of building wastewater. As part of the high performance sustainability objectives of the project, the system was designed to treat all wastewater generated in the building and reuse for toilet flushing and cooling.

New York City Department of Environmental Protection

New York, New York Project Engineer

Engineer for the update to the NYC Demand Study. Developed preliminary estimates of total solid loadings for the City of New York based on new population projections and water demands.

Framework and Neighborhood Planning

Cedar Rapids, Iowa Engineer

In June 2008, the Cedar River overflowed beyond the 500- year flood plain and damaged or destroyed more than 7,000 homes, hundreds of businesses, community facilities and infrastructure over 10-square-miles (14% of the city). A

rup developed a baseline of the City's sustainability performance pre-flood and implementation plan of practical, actionable strategies to guide integration of sustainability goals and target reinvestment and recovery effort in flood affected areas and city-wide. Nancy developed the baseline as related to water and stormwater

Residential

NYCHA Red Hook Houses

Brooklyn, New York Project Engineer

Project Engineer for the civil/site design supporting Kohn Pederson Fox (KPF) Associates for the redevelopment of 33 public housing buildings in Red Hook, NY, which were severely impacted by Hurricane Sandy. Civil/site design includes evaluating multiple options for green infrastructure, assessing different types of flood protection strategies to be integrated with the site landscape and buildings, and developing a 3D model of existing and proposed on-site utilities to accommodate distribution from two new district energy plants.

New Stapleton Waterfront Phase 2 and 3

Staten Island, New York Prime Consultant

As Prime Consultant, is responsible to design supporting infrastructure such as roadways, water and sewer (trunk) mains and utility relocations, and resilient waterfront improvements along the Stapleton waterfront, including public space. Initial Phase 1 efforts are underway (by others) and Arup is responsible for the Phase 2 and 3 improvements. This is key to support affordable housing development in the area. Nancy is a Project Engineer for the water and sewer design in the roadways and the waterfront park.

Confidential Residential Resilience Project

Greenwich, Connecticut Project Manager

Project Manager supporting the design and construction of various resilience measures for a private residence. Implementation measures include reconstruction of sea wall, installation of demountable flood logs and panels, construction of berm, foundation waterproofing, and conduit sealing.

Hunter's Point South Phase 2

Long Island, New York Lead Civil Engineer

15-acre residential development and waterfront park at Hunters Point in Queens, NY. Nancy is the Lead Civil Engineer for the design of a 5-acre waterfront park as well as a technical reviewer of the design of the water and sewer infrastructure for the new development. Nancy is also providing technical support during the construction phase with submittal and shop drawing reviews.

BSD City Master Plan

Jakarta, Indonesia Project Engineer

Project Engineer supporting Kohn Pederson Fox (KPF) Associates in the development of a 2,100ha mixed-use sustainable development, Bumi Serpong Damai (BSD) West. BSD City is Jakarta's largest exurban development – a total of 6,000 hectares. Responsibilities include developing a water and wastewater management plan for several districts within BSD West.

Resources And Waste

Rialto Water Public Private Partnership

Due Diligence

Rialto, California Lead Wastewater Technical Advisor

Lead wastewater technical advisor on due diligence of the water and wastewater system for the City of Rialto, which services approximately 100,000 people in San Bernardino County. The City issued a competitive RFP for the right to finance/ implement facility upgrades and operate the system for 30 years, representing the first water business public private partnership in California. Table Rock Capital won the concession and provided fully integrated technical, commercial and financial support to provide critical information to bond investors. Nancy performed the technical analysis of the wastewater treatment system.

Oysters for Treating Wastewater and Stormwater Study

Lead Researcher

Lead researcher of an internal project to develop the concept of using oyster reefs to treat wastewater and combined sewer overflows.

Baltimore Herring Run Sewer Rehabilitation

Baltimore, Maryland Engineer

Engineer for a sewer rehabilitation project for Baltimore's Herring Run Sewer District. Verified field inspections for over 10,000ft of sewer mains in need of rehabilitation in Baltimore's Herring Run sewer shed. Provided quality control of database and made rehabilitation/replacement recommendations by specific prioritizations.

St. Louis MSD Disinfection Study

St. Louis, Missouri Project Engineer

Project Engineer for a disinfection pilot study for St. Louis Metropolitan Sewer District. Performed collimated beam tests on effluents from both the Lemay WWTP and the Bissell Point WWTP. Set up and maintained a bench scale batch reactor for Bissell Point. Prepared disinfection models and analyzed test data and disinfection alternatives to provide a design recommendation report for the Lemay WWTP and the Bissell WWTP.

St. Joseph WPCP Disinfection Study

St. Joseph, Missouri Project Engineer

Project Engineer for a disinfection pilot study for St. Joseph Water Pollution Control Plant. Performed fouling test on full scale UV disinfection pilot. Also performed collimated beam tests on primary and secondary effluent. Prepared disinfection models and analyzed test data to provide a design recommendation report.

Mamaroneck WWTP Pilot Study

Westchester County, New York Project Manager

Operated pilot study of MBBR technology at the Mamaroneck WWTP. Maintained and controlled process conditions based on observations in daily lab analyses. Managed, organized, and synthesized raw data and wrote final report. Study was presented at numerous conferences and included in trade journals.

Mamaroneck WWTP Conceptual Design

Westchester County, New York Engineer

Engineer for the conceptual design of the Mamaroneck WWTP upgrade. Developed conceptual design of upgrades necessary for implementation of IFAS treatment process.

Determined anticipated flows and loads and developed design criteria for facilities relevant to the first phase of the upgrade (fine screens, grit removal facilities, chemical feed systems, and aeration tanks). Prepared process flow diagrams, preliminary design drawings, and a conceptual design report.

Tuxedo Northridge Pump Station and Force Main

Tuxedo, New York Engineer

Engineer for the design of a pump station and forcemain for Tuxedo. Designed wastewater pump station and force main. Determined design criteria for pump station components and force main. Prepared specifications and design drawings.

Retail

Confidential Shopping Mall

São Paulo, Brazil Project Engineer

Project Engineer for retail mall in Sao Paulo, Brazil. Total construction area of 77,000m², including 37,000m² above ground in five to six levels, and 40,000m² of underground parking in four to six levels. Responsibilities included technical oversight of water budget, design of wastewater reclamation system and integration of ecological wastewater treatment system

Presentations

(2011)

Developing a Green Infrastructure Framework for NY Rising Communities on Long Island

N. Choi, V. Lee., 2014 Tri-Association Conference, Ocean City, MD

(2014)

Water Sensitive Urban Design for an Uncertain Future

N. Choi, V. Lee., Yale School of Architecture Coastal Adaptation Symposium, New Haven, CT

(2012)

Graywater and Rainwater Reuse for a Shopping Mall in Sao Paulo, Brazil"

N. Choi, E. Lohan., 27th Annual WaterReuse Symposium, Hollywood, Florida

Presentations

(2007)

Pilot Testing of MBBR and IFAS Treatment Processes

for Nitrification and Denitrification at the Mamaroneck WWTP
80th Annual Water Environment Federation Technical Exhibition and Conference, San Diego Convention Center, San Diego, CA

(2006)

Benefits and Experiences of a Pilot Study

Black & Veatch Chief Engineers Council's 2006 Technology Conference, Black & Veatch Headquarters, Kansas City, MO

(2005)

Actors and Strategies for Development: Digital Technology to fight Poverty

Infopoverty World Conference, United Nations Headquarters, NY, NY

Workshops

(2015)

Rain, Rain Go Away!

N. Choi, Women's Innovation Symposium in Engineering, Poly Prep Country Day School

Papers/Publications

(2007)

A Pilot-Scale Comparison of IFAS and MBBR to Achieve Very Low Total Nitrogen Concentrations

N. Choi, T. Johnson, A. Shaw, H. Phillips, T. Lauro, R. Butler, L. Radko, Water Practice, Vol 1.1-No. 5

Co-author

(2007)

IFAS/MBBR Testing at Mamaroneck for Long Island Sound Nitrogen Limits

N. Choi, H. Phillips, T. Johnson, R. Butler, T. Lauro., Clearwaters, Vol 1.37, No. 3

co-author



natural systems utilities



Adam G. Stern, P.E.

During Mr. Stern's 25+ year tenure with NSU, he has managed a growing team of engineers, construction managers, and environmental specialists. His responsibilities include team and project management for water resource engineering and Design-Build-Operate projects with budgets up to \$35M. In addition, he is responsible for managing the business units' comprehensive planning studies, feasibility studies, hydraulic and process modeling, engineering design, construction projects, compliance management, emergency event control, and provides professional testimony.

Under his direction, Mr. Stern's team has supported over 1,000 projects and procured permits and approvals for planning projects, wetlands and stream encroachments, water supply and production facilities, wastewater treatment facilities, water reuse and heat recovery facilities, main extensions, pump stations, and various other water resource infrastructure projects.

Representative Projects

Four Seasons at Chester Public Water System New Jersey VP of Engineering

Design, permitting, and construction of public water system including production wells, iron and manganese removal, VOC removal, disinfection, storage, distribution system, fire pumping system, and utility management consulting.

Comprehensive Planning Studies (CPSs) California VP of Engineering

Development and delivery of CPSs for various public water systems addressing demand projections, supply and treatment analyses, storage and distribution assessments, and capital program recommendations.

Delaware Township Mua New Jersey VP of Engineering

Permitting, engineering, construction, utility management, routine and emergency operations of water and wastewater systems.

Wantage Public Community Water System New Jersey VP of Engineering

Design and permitting of public water system including, firm capacity analyzing, production well pumps, disinfection, distributed storage systems, and distribution network.

Morris Chase Water Public Water System New Jersey VP of Engineering

Development, design, permitting, and construction of water treatment facility and supply improvements including firm capacity evaluations, production wells and pumping systems, iron and manganese removal, radon removal, disinfection, plus distribution and storage systems.

Technical Expertise

- Business development and client relations management
- Business performance and operations management
- Water, Wastewater, and Stormwater treatment and infrastructure design
- Hydraulic and water quality modeling
- Design, Design/Bid/Build, Design/Build, Design/Build/Operate project delivery
- Water resource project development, execution, and management

Education

- M.S. Civil & Environmental Engineering, Rutgers University, New Brunswick, NJ, 1993
- B.S. Bio-Resource Engineering (High Honors), Rutgers University, New Brunswick, NJ, 1994
- B.S. Bio-Environmental Engineering (High Honors), Rutgers University, New Brunswick, NJ, 1994

Licenses / Registrations

- Professional Engineer in 14 states (AZ, CT, DE, IN, IL, KY, MA, MS, NJ, PA, NY, TN, TX, VA)

Years of Experience

- With Natural Systems Utilities: 25
- Industry: 25

Jefferson Township Water Systems

New Jersey VP of Engineering

Design, permitting, and construction of corrosion control systems at four water separate public water systems.

Groundwater Resource Management Planning

Massachusetts VP of Engineering

Developed standard protocols to quickly map and assess hydraulic groundwater recharge capacity, as well as contamination risks. GIS based product considered hydrogeological conditions, land uses, land covers, etc.

Crossroads At Oldwick Public Water System

New Jersey VP of Engineering

Development, design, permitting, and construction of water treatment facility and supply improvements including firm capacity evaluations, production wells, domestic and fire suppression pumping systems, radon removal, disinfection, plus distribution and storage systems.

Far Hills Borough

New Jersey VP of Engineering

General utility management for community sanitary collection system including management of new and modified connections, I/I management, and routine and emergency maintenance and repairs.

Chester Shopping Center Wastewater

Treatment Facility

New Jersey VP of Engineering

Permitting, design, and construction of membrane bioreactor facility for commercial establishment. Incorporated equalization, anoxic and aerobic process, ultra-filtration, and UV disinfection.

Holland And Anthem Mills Wastewater

Treatment Facility

Delaware VP of Engineering

Design and permitting of wastewater treatment facility with direct recharge to groundwater. Facility included headworks, flow equalization, membrane bioreactor, UV disinfection, and recharge to groundwater via rapid infiltration basin discharge system.

Hydraulic Modeling For United States Military Installations (8)

CA, KS, LA, MO, NJ, OK, TX, VA VP of Engineering

Development of distribution and collection system models including flow studies, review of SCADA records and other operational data, coarse and fine calibration.

Typical distribution system model included multiple pipe materials, diameters, ages, pressure gradients, storage systems, interconnections, fire hydrants and fire pumping systems, booster stations, control valves, etc., suitable for flow, pressure, supply, and demand prediction, as well as capital planning, water age analyses, scenario analyses, etc.

Homestead Water Reclamation

New Jersey VP of Engineering

Design, permitting, and construction of innovative direct residential water reuse system. Reduced water stress on potable system, conserved water resources, and earned the 2006 Governor's Award for Clean and Plentiful Water.

Jefferson Water Systems

New Jersey VP of Engineering

Design, permitting, and construction of corrosion control systems at four separate public water systems to bring finished water quality into compliance with regulatory limits.

Fairfield Wastewater Treatment Facility

New York VP of Engineering

Design, permitting, and construction of replacement wastewater treatment facility with direct recharge to groundwater. Facility included headworks, flow equalization, dual train membrane bioreactor, chemical feed systems, UV disinfection, and recharge to groundwater via existing leaching pool network.

Dorade Wastewater Treatment Facility

New York VP of Engineering

Design, permitting, and construction of replacement wastewater treatment facility with direct recharge to groundwater. Facility included headworks, flow equalization, three train membrane bioreactor, chemical feed systems, UV disinfection, and recharge to groundwater via existing rapid infiltration basins.

Papers/Publications/Presentations

(2003)

**Feasibility Assessment of Alternative Select Fill Material
For Groundwater Recharge Beds**
Hillsborough, New Jersey - Funded in part by Thames Water,
Research and Technology

(2002)

Stormwater: From Nuisance to Resource
Princeton, New Jersey - Presented at Thames Water Americas
Watershed Management Conference

(2001)

**Stormwater Recharge and Aquifer Protection:
A Demonstration Project, Franklin, MA**
Albuquerque, New Mexico - Presented at American Water
Resources Association Annual Conference

(1999)

**Hydrologic Study of NJ Department of Transportation's
Proposed Millstone Bypass**
Hopewell, New Jersey - Volunteered expertise for Stony Brook-
Millstone Watershed Association

Awards

(2019)

Real Leaders Award
NSU Recognized as one of the Top 100 Impact Companies in
North America

(2018)

B Corp Award
NSU Recognized by B Labs / B Corp as a "Best For the World"
Company

(2017)

Safety Awards
NSU Recognized for tenth consecutive year by the New Jersey
Department of Labor and State Industrial Safety Committee,
earning the Commissioner's Continued Excellence Award

(2014)

Project of the Year
NSU's Ridgewood Green renewable energy project awarded
"PROJECT OF THE YEAR" by the American Biogas Council for
Innovation, Technology, Collaboration, and Complexity.

(2006)

NJ Governor's Environmental Excellence Award
Burlington County, New Jersey



natural systems utilities



Vincent Gruffat

Vincent has over 15 years of worldwide experience in the water/wastewater industry. Over the years, he has worked in various areas of the industry: from design & build to operation & maintenance, through business development and team leadership.

Technical Expertise

- Design, Building & Operation of Potable Water, Wastewater & Industrial/Process Water
- R&D/Innovation
- Product Management
- 365/CAD/Salesforce

Education

- Master Of Engineering, École Nationale Du Génie De L'eau Et De L'environnement De Strasbourg, Strasbourg, France, 2012
- BS, Institut Universitaire De Technologie D'orsay, Université Paris Xi, Orsay, France, 2009

Licenses/Registrations •

Inventium Customer-Driven Innovation Program, 2019

- Futures Thinking Specialization, IFTF/Coursera, 2020

Years of Experience

- With Natural Systems Utilities: 2
- Industry: 15+

Representative Projects

Meadowood

Wastewater Treatment Operator



Google Bay View

Wastewater Treatment Operator

Newhall, RO

Assistant Project Manager

Relevant Experience

Davey Water Products

Melbourne, Australia Technical Development Manager ANZ

Led the engineering team alongside managing the existing and future water treatment technologies portfolio.

Achievements/Responsibilities: Lead for Commercial Water Treatment Product Development, Management and Technical Support Lead for Commercial Water Treatment, Research and Development in the provision of alternatives to bring to market, Lead in emerging markets research and advisory of future opportunities, Develop and foster key strategic relationships with suppliers and customers, Technical authority on review and sign-off on engineering proposals, Strategic leadership.

Davey Water Products

Melbourne, Australia Australia BU Manager

Established the BU focused on water treatment solutions for Australia.

Responsibilities / Achievements: Leadership of commercial water treatment growth, develop commercial leads and target business for Davey project specification, Project management and business technical support, Continuous process improvement to increase business performance, Accountability for the BU's profit and reporting to the GM NZ & CEO.

Davey Water Products

Auckland, New Zealand Water Treatment Engineer

Part of the water treatment business development team, responsible for growing that market sector at Residential, Commercial, Industrial & Municipal level.

Responsibilities/Achievements: Sales support & project management, Continuous improvement - Business development, New products launch, Development of design spreadsheets for sizing up equipment, Process design & commissioning.

Watercare Services Limited

Auckland, New Zealand Process Engineer

Part of the Process Engineering Team responsible for technical and operational support to water supply plants across Auckland region. Process Engineer looking after the Waikato treatment plant (40MGD) using membrane technology.

Responsibilities/Achievements: Troubleshooting process issues and improving performance, Out of hours on call duty - Process optimization: control, system, clarification, sludge, chemical dosing, Management of small projects including Control, System Upgrade (DeltaV), Compressed Air Upgrade, Instrumentation Upgrade and involvement in the overall, Plant Upgrade to 46MGD, Chemical Handling design standard development.

Veolia Water Technologies

Kilkenny, Ireland Process Engineer

Member of the Engineering D&B team responsible for tenders as well as monitoring of contracts, plants and clients from tender to commissioning.

Responsibilities/Achievements: Design/optimization, costing and commissioning of Municipal and Industrial Water/Wastewater Plants. Tendering - Projects up to 2MEuros.

SUEZ

Shanghai, China Wastewater & Industrial Services Engineer

Internal transfer for a 6-month contract as part of the local Wastewater & Industrial Services team.

Responsibilities/Achievements: Operational support to plants and commercial development, Technical document writing, Creation and implementation of a performance monitoring system (KPI's definition and calculation), Internal reporting.

SUEZ

Paris, France Operations & Maintenance Support Engineer

Member of the Operational & Maintenance Support Team gathering the technical expertise in all the industrial water treatment plant operation related fields and supporting all operations across France.

Responsibilities/Achievements: Operational support to plants and crisis management, Audits and troubleshooting, Development of operation helping tools: environmental compliance monitoring, costing, Commercial development, Performance improvement (resulting in up to 100,000 eur/y savings): plant operation, choice of chemicals, energy consumption, Reporting.

SUEZ

Troyes, France Plant Operator

Responsibilities/Achievements: Operation, maintenance and optimization of an Industrial Wastewater Treatment Plant (different types of wastewater containing oil, chromium, metals) and Process Water Supply (water softener and reverse osmosis), Implementation of a sludge cake washing system on the press filter to remove the TOC, Implementation of a sludge cake drying system on the press filter to increase the dryness, Reporting to the Client.

EDF

Vitry, France Lab Technician

Member of the team in charge of the supply and quality monitoring of the process water as well as the environmental reporting.

Responsibilities/Achievements: Water analysis for a power plant, Environmental compliance and pollution reporting, Creation of a tool to estimate inlets (coal, petrol, water, chemicals)/outlets (energy, pollution) of the power plant.

Representative Projects

Saint John of God

Geelong, Australia Hospital

Design, build, commissioning and servicing of a skid mounted ultrapure water plant for use in reprocessing of medical devices.

Treating town mains using activated carbon, softening, RO, demineralization, endotoxin filtration, UV and heat sanitization.

Duty/standby 400gph capacity

Southern Banks

Torrumbarry, Australia Piggery

Design, build and commissioning of containerized stock water plant for a pig farm.

Treating dam water using coagulation, flocculation, sedimentation, sediment & carbon filtration, UV and chlorination.

45,000 gpd capacity with cloud based remote control and monitoring.

Radisson Blu

Denarau, Fiji International Resort

Design & build of a containerized drinking water plant for a luxury resort.

Treating town mains using sediment filtration, activated carbon, absolute cartridges, UV and chlorination.

66,000 gpd capacity with cloud based remote control and monitoring.

Bostock

Hastings, New Zealand Squash Packing Factory

Design & build of a wastewater treatment plant for a squash washing and packing plant.

Treating wastewater using sediment filtration and UV. 17,000 gph capacity with cloud based remote control and monitoring.

Waikato WTP

Ireland Municipal drinking water plant

Operations & maintenance of a drinking water treatment plant.

Treating river water using coagulation, sedimentation, ultrafiltration, activated carbon and chlorination. 40 MGD capacity.

Carrickmacross WTP

Ireland Municipal drinking water plant

Commissioning of a drinking water treatment plant.

Treating bore water using coagulation, flocculation, sedimentation, filtration, UV and chlorination. 42,000 gph capacity.

PepsiCo Carrigaline

Cork, Ireland Beverages factory

Troubleshooting & optimization of an industrial wastewater treatment plant.

Treating soda effluent using activated sludge, MBR and chemical dosing. 52,000 gpd capacity.

Monart

Enniscorthy, Ireland Spa

Troubleshooting & optimization of a packaged wastewater treatment plant using coagulation, flocculation, sedimentation, activated sludge, drum filtration and chlorination.

Baileys

Dublin, Ireland Alcoholic Drink Factory

Troubleshooting & optimization of a wastewater treatment plant using DAF.

PepsiCo Carrigaline

Cork, Ireland Beverages Factory

Troubleshooting & optimization of an industrial wastewater treatment plant.

Treating soda effluent using DAF and activated sludge.

Changshu

China Industrial Park Wastewater Treatment Plant

Commissioning of Fenton advanced oxidation process at industrial wastewater treatment plant.

Mefro

Troyes, France Wheel Factory Wastewater Treatment Plant

Operations & maintenance of an industrial wastewater treatment plant.

Treating wastewater using coagulation, flocculation, sedimentation, chromium reduction, mineral oil dewatering and biofiltration.

EDF Power Plant,

Vitry, France Demineralised Water Plant

Operations & maintenance of a demineralized water treatment plant.

Treating river water using coagulation, flocculation, sedimentation, filtration and ion exchange.

natural systems utilities

Jens Riedel, PE, CFM

Mr. Riedel has 26 years of engineering experience in the water industry. As an NSU Managing Engineer, he is responsible for the management of teams to complete project design, permitting, and other tasks and overall project management including client relations, budgeting and scheduling.

His experience includes water and wastewater system design and permitting, beneficial reuse of soils and water and wastewater treatment plant residuals, and development of water and wastewater studies, reports, modeling, and specifications as well as field engineering, inspections, and construction and project management. Additionally, he is a member of the Health and Safety Committee and the Environmental Compliance team at NSU.

Representative Projects

Borough of Chester, Chester, NJ Wastewater Engineer

Oversight of the wastewater system for a town of 1,700 residents. Recent and future projects include permitting and design of a new wastewater treatment facility and expanded collection system. And implementation of an Infiltration and Inflow (I&I) study to reduce extraneous flows in the collection system. Monitoring of flows. Review of new connection applications. General collection system and treatment facility troubleshooting and consulting.

Borough of Far Hills Far Hills, NJ Wastewater Engineer

Oversight of the wastewater system for a town serving approximately 320 connections. Upcoming projects include implementation of an Infiltration and Inflow (I&I) study to reduce extraneous flows in the collection system. Monitoring of flows. Review of new connection applications. Review of connection fees and sewer charges. General collection system troubleshooting and consulting. Past work included investigation of I&I into the sanitary sewer utilizing sewer televising technology and flow metering with subsequent sewer rehabilitation of problem areas.

Delaware Township MUA Delaware Township, NJ Project Manager

Oversaw water and wastewater systems for a municipal utility authority serving approximately 170 connections. Managed multiple projects, including the design and construction of a UV disinfection system with a building addition, standpipe painting and improvements, emergency generator installation, stream bank restoration to protect the wastewater facility, and the evaluation and repair of existing water system valves and hydrants.

Hurstmont Harding Township, NJ Project Manager

Full permitting for a 45,000 gpd treatment and groundwater recharge facility serving an assisted living development. Work included a water quality management plan amendment, discharge to groundwater permit, and treatment works approval including permit level design of treatment and groundwater recharge system. Final design and construction are in progress.

Technical Expertise

- Water/Wastewater System Design and Permitting
- Beneficial Reuse of Water and Wastewater Residuals
- Development of Specifications, Studies, Reports, and Permit Applications
- Field Engineering, Inspections, Construction, and Project Management

Education

- Rutgers University, B.S., Bioresource Engineering, 1996
- Rutgers University, Graduate Coursework, Bio-Resource Engineering, Natural Waste Management Systems, Composting

Professional Affiliations

- Water Environment Federation
- NJ Water Environment Association
- American Society of Civil Engineers
- American Water Works Association
- American Water Resources Association
- Association of State Floodplain Managers

Licenses / Registrations

- Professional Engineer, NJ
- Certified Floodplain Manager
- OSHA Confined Space Entry

Years of Experience

- With Natural Systems Utilities: 26
- Industry: 26

Errico Acres

Far Hills, NJ Project Manager

Managed full permitting for a 130-unit residential development, including a water quality management plan amendment, discharge to groundwater permit, and treatment works approval. Led the permit-level design of the treatment and groundwater recharge system.

Hillandale

Mendham, NJ Project Manager

Redesigned and managed permitting for a 15,000 gpd treatment and groundwater recharge facility serving a residential development. Oversaw compliance with regulatory requirements and ensured project feasibility within environmental constraints.

Ash Lane Farms

Alloway Township, NJ Project Manager

Managed NJDEP permit compliance and preparation of monthly, quarterly, and annual reports for a farm utilizing wastewater treatment plant residuals for land application.

Mansfield Warehousing

Mansfield, NJ Project Manager

Connecting a new warehouse development to an existing wastewater collection and treatment system and water supply system required the design and permitting of new infrastructure (water mains, pump stations, and force mains) as well as upgrades to the existing collection and treatment systems. Lead team to complete design and permitting and secure final construction.

New Jersey American Water

Bridgewater & Colts Neck, NJ Project Manager

Managed the beneficial reuse of water treatment residuals and evaluated other materials for potential reuse. Oversaw a topsoil blending operation utilizing water treatment residuals and other materials.

Far Hills Country Day School

Far Hills, NJ Project Manager

Designed a water treatment system for a school expansion and planned upgrades to the existing wastewater treatment facilities.

Sylvester Manor

Shelter Island, NY Project Manager

Designed an innovative natural wetland wastewater treatment system.

Hillsborough Municipal Landfill

Hillsborough, NJ Project Manager

Prepared a closure plan for the capping of a 10-acre landfill and evaluated alternative capping materials.

Country Arch Care Center

Pittstown, NJ Project Manager

Led the design and construction management for the replacement of three failing septic systems at a site with limited space and numerous environmental constraints.

GACSD Warehouse

New Bern, PA Project Manager

Designed and permitted a warehouse water system.

California American Water

Sacramento, CA Lead & Field Engineer

Prepared Comprehensive Planning Studies for three large water systems to assess current and future potable water supply, treatment, storage, and conveyance needs. Evaluated existing assets, equipment, and future growth projections. Required a 3+ month relocation system.

Terrabon

Laredo, TX Field Engineer

Provided design and construction oversight for the integration of an innovative pilot desalination process at an existing water treatment plant.

Corporation of St. George

Bermuda Chief Inspector

Conducted a sanitary sewer system assessment, including flow metering, data analysis, and evaluation of piping conditions.

Fallone Group

Union Township, NJ Engineer

Redesigned the wastewater treatment and groundwater recharge system for a residential development.

Monmouth County Reclamation Center

Tinton Falls, NJ Engineer

Provided engineering design assistance for a 165,000 GPD leachate pre-treatment facility under a design-build-operate contract.

Town Center at Wantage

Wantage, NJ Engineer

Designed, permitted, and inspected the expansion of a water system serving four apartment buildings.

Morris Chase

Mount Olive, NJ Engineer

Designed a water treatment facility for radionuclide removal and operated a pilot treatment unit to evaluate system efficacy.

Peconic Green Growth **Suffolk County, NY Engineer**

Prepared multiple feasibility reports for replacing individual septic systems with decentralized treatment systems in communities facing nitrogen loading issues.

Johanna Foods **Flemington, NJ Engineer**

Managed permit renewal and preliminary design for a wastewater treatment plant upgrade at a yogurt and juice production facility.

Ringwood Township **Ringwood, NJ Engineer**

Conducted feasibility reports for township-wide wastewater management and treatment facility upgrades.

Picatinny Arsenal **Wharton, NJ Engineer**

Performed water system modeling to support facility expansion.

Green Pond Mews **Rockaway, NJ Engineer**

Designed a water supply and treatment system for a small residential development.

Plumsted WWTP **New Egypt, NJ Engineer**

Designed influent screens and other components for a municipal wastewater treatment facility.

Four Seasons at Cranbury **Cranbury, NJ Engineer**

Designed upgrades for a wastewater pump station serving a residential community.

Cranbury Golf Course **Cranbury, NJ Engineer**

Investigated and permitted existing septic systems serving the golf course.

Visionaire and Solaire Buildings **Battery Park City, NY Engineer**

Prepared annual wastewater treatment and reuse reports for high-efficiency residential buildings.

Estate of Eleanor Wagner **Raritan Township, NJ Engineer**

Conducted site evaluation and oversaw the removal of contaminated fill at a residential property.

Relevant Experience

Rutgers University, Bioresource Engineering, 1995-1999 Research Topic, Rotating-Drum Composter **Graduate Research Assistant**

Operated a prototype rotating-drum composting system including preparation and mixing of organic feed material, development of "recipes" for different feeds, monitoring of process characteristics (temperature, moisture, ammonia production, evaluation of final product, operation of loading equipment and system repairs.



natural systems utilities



Prantik Chakraborty

Prantik Chakraborty is a dedicated Project Engineer with over 3.5 years of experience in the water and wastewater industry. He specializes in engineering oversight, water reuse, and infrastructure development. With a strong academic foundation, Prantik holds a B.Tech in Civil Engineering from SRM University, India, and a Master's in Environmental Engineering from the University of New Haven, Connecticut.

As a LEED Green Associate, Prantik is committed to sustainable solutions in wastewater treatment and infrastructure projects. His expertise spans pump station design, sewer system assessments, infiltration and inflow studies, and treatment facility improvements. He has played a key role in multiple projects across New Jersey and New York, ensuring efficient and environmentally responsible water management systems.

At Natural Systems Utilities, Prantik continues to contribute to innovative water solutions, applying his technical knowledge to improve wastewater treatment processes and optimize system performance.

Representative Projects

North Hunterdon High School New Jersey Project Engineer

Engineering oversight for the construction of a pump station to support increased wastewater production due to expanding infrastructure.

Borough of Far Hills

New Jersey Project Engineer

Assisted in monthly sewer report preparation, annual sewer maintenance, and the collection and monitoring of sewer data.

Borough of Chester

New Jersey Project Engineer

Oversight and report preparation for quarterly composite testing of sewer systems for nine significant users. Conducted infiltration and inflow (I&I) investigations for the collection system.

Dorade Whispering Pines

New York Project Engineer

Designed a vertical bar screen system with a conveyor to improve treatment capability.

Hurstmont Wastewater Treatment Facility

New Jersey Project Engineer

Assisted in the design of a 45,000 GPD wastewater treatment system for a residential community.

Technical Expertise

- Engineering
- Water Reuse

Education

- SRM University, B.Tech, Civil Engineering, 2015
- University of New Haven, MS, Environmental Engineering, 2021

Licenses / Registrations

- LEED Green Associate

Years of Experience

- With Natural Systems Utilities: 3.5
- Industry: 3.5

SHARLENE LEURIG

sharlene@adaptivewater.com 301.452.1900

SUMMARY A builder with experience in long-range planning, infrastructure finance and water transactions. Passionate about markets and technology to achieve universal water & sanitation access. Committed to building water utilities ready for the 22nd Century.

EXPERIENCE CO-FOUNDER & CEO ADAPTIVE WATER LLC

2014 - Present

Water as a Service (WaaS) solutions provider working to scale water reuse across Texas. We help customers onboard water reuse without tying up the capital they need to build their dreams.

INTERIM CEO VIDA WATER PBC

2014 - 2016

Led midstream reboot at for-profit startup designed to provide subscription drinking water services for underserved Texans. Oversaw pilot market launch in El Paso serving low-income colonia.

FOUNDER & CHIEF EXECUTIVE OFFICER TEXAS WATER TRADE

2012 - 2014

Founded nonprofit to catalyze water transactions in Texas. Leveraged initial funder commitment by 40X, interweaving federal, state, corporate and philanthropic funds. Led development of in-house programming to collaborate with water users from agriculture, industry, municipal and energy sectors. Drove team that purchased 9 billion gallons of water for Texas ecosystems, launched fee-for-service engineering offerings and incorporated for-profit subsidiary, Vida Water PBC.

Awards & Recognition: Texas American Water Works Association Diversity Award. Hunt Institute for Engineering & Humanity Impact Enterprise Award, Lone Star Prize Big Bet, Draper Richards Kaplan Foundation Entrepreneur.

FOUNDING BOARD CHAIR VIDA WATER

2014 - Present

Led multi-partner initiative that won seed capital from Dallas-based philanthropist. Directed development of winning business plan, incorporated for-profit subsidiary, and recruited inaugural CEO and Board of Directors.

PROJECT DIRECTOR TEXAS ENVIRONMENTAL FLOWS INITIATIVE

Managed five-partner consortium pursuing water purchases to benefit bays and estuaries in the Gulf of Mexico. Coordinated scientific work, strategies for water acquisition, fundraising and budget development.

The project, funded in part by a \$4.5 million commitment by the National Fish and Wildlife Foundation, was a collaborative of The Nature Conservancy, Ducks Unlimited, National Wildlife Federation, Meadows Center for Water and the Environment at Texas State University and Harte Research Institute at Texas A&M Corpus Christi.

MUNICIPAL DEAL ORIGATION STRATEGY CONSULTANT LIQUID ASSETS PROJECT

Retained to originate municipal water infrastructure investment deals for the Liquid Assets Project, a collaboration designed to jump-start investment in sustainable water management solutions across the American West. Identified prospective deals and supported development of financial models for investment structures.

DIRECTOR, SUSTAINABLE WATER INFRASTRUCTURE PROGRAM CERES

Launched the Sustainable Water Infrastructure Program in 2010, establishing Ceres as a leading voice in water infrastructure transformation by focusing on the water utility business model, un-priced risks and innovative financing structures. Coordinated with asset managers, bond insurers, credit rating agencies and others in the financial ecosystem to develop frameworks to understand emerging risks.

PATENT EXAMINER UNITED STATES PATENT AND TRADEMARK OFFICE

Determined patentability of inventions related to semiconductors and nanotechnology.

EDUCATION MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Focused on environmental policy and planning, funded by United States Geological Survey to research outcomes of stakeholder-driven science for natural resource decision-making.

WASHINGTON UNIVERSITY IN ST. LOUIS

MEDIA Cited as expert source on water and climate change in *Los Angeles Times*, *The New York Times*, *Texas Monthly*, *Texas Tribune*, *Wall Street Journal*, *Yale Forum on Climate Change & The Media*, *Deseret News*, *High Country Times*, *Dallas Business Journal*, among others. Media appearances include Current TV, CNN, Reuters Insider, NPR's *On Point* and *Marketplace*, KERA's *Think* and the *Texas Standard*.

VOLUNTEER ENGAGEMENTS Chair, Austin Integrated Water Resource Planning Community Task Force

May 2015 – February 2021
Guided development of the City of Austin's 100-year water supply plan, from definition of goals to consultant procurement to portfolio selection. The plan, adopted in 2018, is the first of its kind in the United States to include onsite water as a major supply wedge.

Chair, Austin Drought Response Task Force

April 2014 – July 2014
Appointed to emergency task force created in response to historically low levels in Austin's primary water supply source. Chaired four-month process which led to emergency supply development recommendations and formation of long-range supply plan task force.

WRITING SELECT PUBLICATIONS

"Net Zero Water Toolkit." *Texas Water Trade*, April 10, 2024.

"Rapidly Scaling Water Reuse Across Texas Using Property Assessed Clean Energy (PACE) Financing," *Texas Water Trade*, September 29, 2021.

"Can Fort Stockton reclaim its title as the Spring City of Texas?" *Fort Stockton Pioneer*, Oct. 29, 2019

"Building a water-resilient future for all Texans." *Austin American-Statesman*, Sep. 16, 2019

"Austin's Water Forward is a bold step into the future," *Austin American-Statesman*, Jan. 21, 2019

"Economic Perspectives on Texas Water Resources," *Essentials of Texas Water Resources* 4 ed., February 2016

"Should Water Service Providers Hedge Weather Risk?" *Journal of the American Water Works Association*, January 2015

"Why Water Is Not the New Oil," *Texas Tribune TribTalk*, December 2014

"Is Climate the Mother of Innovation?" *National Geographic Water Currents*, November 2014

"Bond Financing Distributed Water Systems," Ceres, September 2014

"Measuring and Mitigating Water Revenue Variability," Ceres and University of North Carolina, July 2014

"Four Things You Need to Know About Proposition 6," Texas Monthly, November 2013

"Investment Risks for Water Projects," Texas Wesleyan Journal of Real Property Law, October 2013

"Assessing Water System Revenue Risk: Recommendations for Analysts," Ceres and the University of North Carolina, August 2013

"How Dry We Are," Texas Monthly, June 2013

"Financing Sustainable Water Infrastructure," Johnson Foundation, January 2012

"The Ripple Effect: Water Risk in the Municipal Bond Market," Ceres, October 2010

Kira Dell

Contact

LinkedIn
(512) 656-2225
kira@adaptivewater.com

Education

2015
B.A. International Studies
Vassar College

Current Board Positions

Texas Water Trade
Communications Committee
Chair

Great Springs Project
Director

TreeFolks
Vice Chair

Skills

Data analysis
Business strategy
Automation
Business process optimization
Financial modeling
Agile/Scrum methodologies
SQL

Research Interests

Natural resource preservation
Wildlife habitat restoration
and management
Botany

Languages

English (native speaker)
Spanish (fluent)
Brazilian Portuguese (fluent)

Professional Experience

January 2025 - Present

Co-Founder & Chief Operating Officer *Adaptive Water, Austin, TX*

- Lead cross-functional teams in designing, building, and operating wastewater recovery and treatment systems for commercial campuses, industrial facilities, and planned communities.
- Analyze the financial, technical, and operational feasibility of wastewater-to-resource projects to deliver safe, reliable recycled water supplies at the lowest possible lifetime cost.
- Model project development and operational costs, including procurement and installation of treatment technologies, purple pipe distribution build-out, and ongoing expenses such as energy, logistics, maintenance, and staffing.
- Secure project financing and commercial off-take agreements for reclaimed water resources.
- Optimize system designs to achieve attractive payback periods through revenue from reclaimed water and energy sales, and by reducing customers' operating expenses.
- Ensure compliance with all federal, state, and local permitting requirements, industry standards, and best practices.
- Design and implement scalable workflows—including data management, standard operating procedures, and task management frameworks—to drive team efficiency and project success.
- Develop and track performance metrics (KPIs) to monitor progress toward strategic objectives, and provide regular updates to employees, customers, vendors, and investors.
- Recruit, onboard, and manage a high-performing, collaborative team; foster a culture of accountability, professional growth, and shared purpose.

January 2020 - October 2021

Technical Product Manager *findhelp.org, Austin, TX*

- Led two software development teams (Data and Integrations), each with 5+ engineers.
- Directed the Data team in building tools and integrations to maintain the nation's most accurate directory of free and reduced-cost social assistance programs, leveraging automation for data input and validation.
- Oversaw the Integrations team in connecting findhelp's core services with hospital, university, and other partner software systems, enabling seamless referrals for people in need.
- Served as Product Manager and Scrum Master for both teams: defined product vision, roadmap, and strategy with input from diverse stakeholders; gathered technical requirements; collaborated with engineers on software architecture and delivery timelines; and managed feature delivery from design to release.
- Led transition to Scrum, accelerating feature delivery, improving timeline accuracy, and empowering engineers with greater autonomy and accountability.

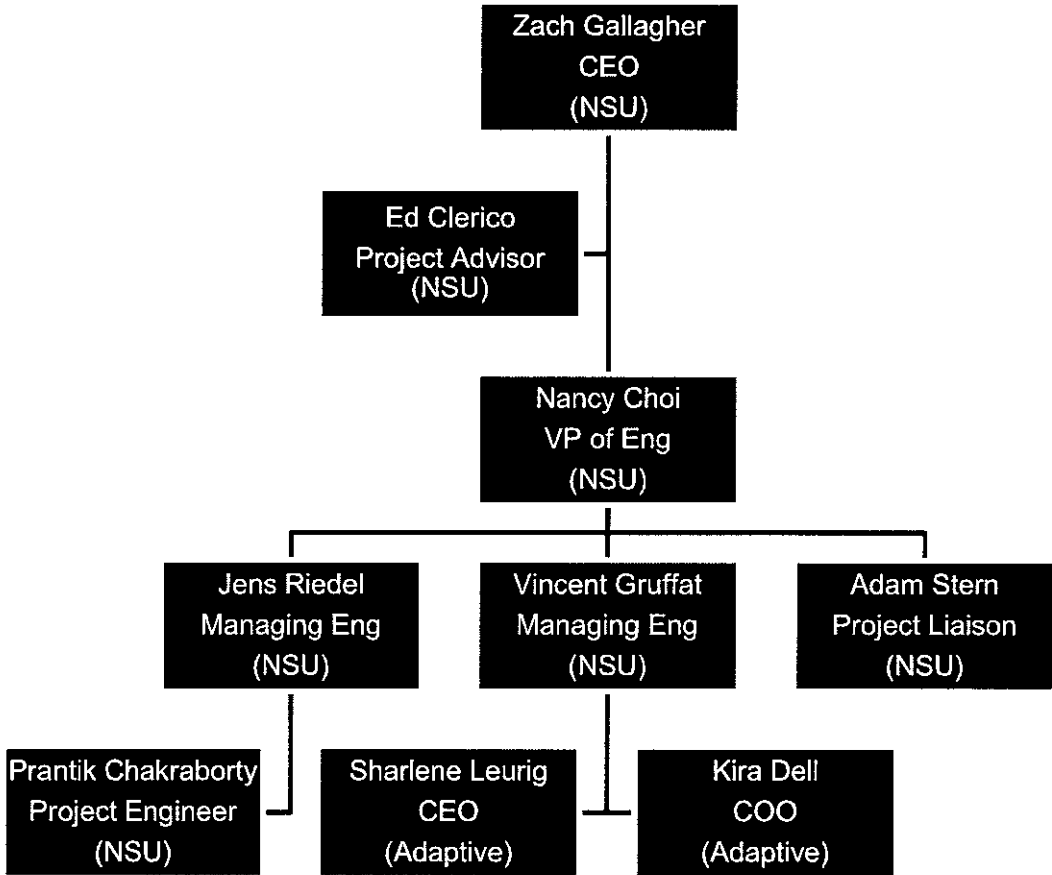
September 2017 - November 2019

Entrepreneur Selection & Growth Manager *Endeavor, New York, NY*

- Advised 25 high-impact startups (typical revenues \$10-20M) to advance Endeavor's mission of catalyzing sustainable and widely beneficial economic growth in 30+ emerging markets.
 - Collected and analyzed performance metrics from 1,200+ portfolio companies to deliver actionable insights to entrepreneurs and the Endeavor staff who serve them.
 - Led selection of top climate tech and agriculture companies by educating 500+ staff across 50+ international offices on industry trends and benchmarks.
 - Collaborated with company founders to craft concise pitches and business overview documents to support their conversations with potential investors and partners (40+ companies served).
 - Cultivated a global network of executives, investors, and corporate partners to help entrepreneurs tackle challenges such as fundraising, talent acquisition, and market expansion.
-

Personal Interests

I live on a parcel of conserved land where I put my knowledge of ecology and regenerative agriculture into practice. On a portion of the land, I grow food for a local nonprofit which provides healthy meals to food-insecure families in Austin. On the remaining portion of the land, I cultivate native plants to support biodiversity, with a focus on endemic, threatened, and endangered species. I supply these plants to others implementing habitat restoration projects throughout my ecoregion in partnership with organizations like TreeFolks and Central Texas Seed Savers.



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
Abbot Mills	MA	MBR		✓
Andover	NJ	MBR		✓
Aramis	NJ	MBR		✓
Arrow Mills Plaza	NJ	SBR		✓
Aspenwood	MN	CS		✓
Auberge	CA	AWTP		✓
Avalon	NJ	CMAS		✓
Baldwin Cove	MN	PF		✓
Bay Front	DE	MBR		✓
Beacon Hill Upper Freehold	NJ	SBR		✓
Blomkest Svea Sanitary District	MN	SP		✓
Brass Castle	NJ	MBR		✓
Brix	CA	AWTP		✓
Bronco	CA	AWTP		✓
Cable Vision	NJ	MBR		✓
Cambridge Isanti Middle School	MN	CW		✓
Carnegie Abbey	RI	MBR	✓	✓
Carriage Station	MN	VFW		✓
Cherry Valley (Design)	NJ	CMAS		✓
City of Prinsburg	MN	CW		✓
City of Seaforth	MN	AT		✓
City of Tamarack	MN	CW		✓
Clearwater Forest	MN	CW		✓
Clinton Crossing Premium Outlets	CT	MBR	✓	✓
Clinton Township Sewerage Authority	NJ	Collection		✓
Clos Du Val	CA	AWTP		✓
Computer Associates	NJ	SBR	✓	✓
Copper Hill School	NJ	MBR	✓	✓
Country Meadows	MN	RSF		✓
Country Oaks	NJ	MBR (WW)		✓
Coyote Springs	NV	Water		✓
Crossroads at Oldwick	NJ	CMAS		✓
Deep Run	NJ	SBR		✓
Delaware Township MUA + Engineering	NJ	CMAS		✓
Diamond Lake Woods	MN	VFW		✓

#missionwater



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
Domino Redevelopment	NY	MBR	✓	✓
Dorade Whispering Pines	NY	CAS		✓
Dry Creek	CA	AWTP		✓
Duckhorn	CA	AWTP		✓
Edgewater Apartments	MA	MBR	✓	✓
Edgewater Apartments	MA	MBR		✓
El Cerrito	TX	MBR		
Environmental Disposal Corp.	NJ	BardenPho	✓	✓
Estee Lauder	NJ			
Farms of Lake Elmo	MN	FAST		✓
Fawn Run	NJ	SBR		✓
Fiddlers Elbow CC	NJ	SBR		✓
Fields of St. Croix Phase I	MN	CW		✓
Fields of St. Croix Phase II	MN	VFW		✓
Forest Lake School District	MN	SPSF		✓
Forest Lake School District - Scandia	MN	SPSF		✓
Four Seasons @ Chester	NJ	MBR (WW)		✓
Franklin Mutual Insurance	NJ	MBR		✓
Franklin Twp Board of Ed	NJ	Septic		✓
Gillette Stadium	MA	MBR	✓	✓
Google Bayview	CA	MBR	✓	✓
Hamlet on Sunfish Lake	MN	CW		✓
Hart's Landing	DE	MBR		✓
Hawthorn Ct	NY	MBR		✓
Hearth at Southbury	CT	MBR		✓
Hearth at Tuxis Pond	CT	MBR		✓
Heritage at Lutsen	MN	VFW		✓
Hess Collection	CA	AWTP		✓
Highland Farms	MN	AT		✓
Hillsborough Chase	NJ	CMAS		✓
Homestead at Mansfield	NJ	Lagoon	✓	✓
Horizon Franklin Lakes	NJ	MBR		✓
Hunterdon Commons	NJ	MBR		✓
Jackson Meadow North	MN	CW		✓
Jackson Meadow South	MN	CW		✓

#missionwater



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
Jefferson Peaks	NJ	MBR		✓
Jefferson Village Square	NJ	MBR	✓	✓
Kendall West Utilities	TX	MBR		✓
Kensington Court	MA	MBR		✓
Knowlton Township	NJ	MBR		✓
Lake Grove	NY	SBR		✓
Lake Shore Resort	NJ	MBR		✓
Lansing Residence	MN	FAST		✓
LBRID OM&M	CA	AWTP		✓
Lebaron Hills	MA	Amphidrome		✓
Liberty Ponds - Phase I	MN	VFW		✓
Linwood Elementary School	MN	SPSF		✓
Lodge	CA			✓
Lookout Point	NJ	CMAS		✓
Lutsen East Flank	MN	CW		✓
Lutsen Employee Housing	MN	VFW		✓
Lutsen Resort	MN	VFW		✓
Lutsen Sea Villas	MN	CW		✓
Mapleton	NJ	MBR		✓
Marshall	CA	Advantex		✓
Maslavi	NJ	MBR		✓
McKinley Elementary School	MN	SPSF		✓
Meadowood	CA	CMAS		✓
Meadows at Mansfield	NJ	MBR		✓
Meadowwoods Village	MN	CW		✓
Microsoft	CA	MBR	✓	✓
Millennium Battery Park	NY	MBR	✓	✓
Moneta WWTP (Design Review)	VA	Bio-Wheel		✓
Monmouth County	NJ	MBR		
Monterey Heights	MN	RSF		✓
Morris Chase	NJ	MBR (WW)		✓
Morton Farm Preserve	MN	CW		✓
Napa Valley CC	CA	AWTP		✓
Napa Valley Reserve	CA			✓
Nashoba High School	MA	CMAS		✓

#missionwater



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
NBRID O & M & M	CA	MBR		✓
Oakwood Village	NJ	MBR		✓
Old Lyme School	CT	MBR		✓
Orchards at Holliston	MA	MBR		✓
Outdoor World (Sturbridge)	MA	MBR		✓
Paradise	CA	AWTP		✓
Phillipsburg	NJ	ICEAS/SBR	✓	✓
Pine Point	MN	CS		✓
Pleasure Cove	CA	AWTP		✓
Plumsted	NJ	MBR		✓
Ponaganset School	RI	Bioclere		✓
Port Sonoma	CA	AWTP		✓
Pottersville	NJ	CMAS		✓
Prescott Point	RI	MBR		✓
Preserve at Birch Lake	MN	VFW		✓
Princeton Montessori Academy	NJ	MBR	✓	✓
Queset Commons	MA	MBR		✓
Ramapo River Reserve	NJ	SBR	✓	✓
Resorts USA (Sturbridge)	MA	MBR		✓
Ridges at Rice Lake	MN	PF		✓
River Crest Farms	MN	CS		✓
River Crossing	TX	MBR		
River House	NY	MBR	✓	✓
Rock Point Church	MN	VFW		✓
Rosegill Development	VA	MBR		✓
Round Hill	CA	AWTP		✓
Rum River Elementary School	MN	SPSF		✓
Salado Center	TX	MBR		
Salisbury School	CT	MBR		✓
Sanctuary	MN	VFW		✓
Sand Hill	MN	CS		✓
Savannah Meadows	MN	CS		✓
Scrumsberg	CA			✓
Serenbe	GA			✓
Shadowwoods	MN	AT		✓

#missionwater



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
Shark River (Design)	NJ	MBR	✓	✓
Silver Maple Bay Estates	MN	AT		✓
Skylands Park	NJ	MBR	✓	✓
Solaire – Battery Park	NY	MBR	✓	✓
Sonoma Raceway	CA	AWTP		✓
Sonoma West	CA	AWTP		✓
South Passage	MN	RSF		✓
Spruce Hills Condo	NJ	SBR		✓
Station Rd WWTP, WTP	NJ	CAS		✓
Stonebridge Estates	MN	AT		✓
Stratford Greens (Devonshire)	NY	MBR		✓
Sunrise Trails	MN	VFW		✓
Super America - Wyoming, MN	MN	CW		✓
Super America - Ham Lake, MN	MN	CW		✓
SVEN	NY	MBR	✓	✓
Tamarack Farm Estates	MN	CW		✓
Territory 1C (#8)	MN	AT		✓
Territory Phase IA	MN	AT		✓
Territory Phase IB	MN	AT		✓
The New School University	NY	MBR	✓	✓
The New York Institute of Technology	NY	CAS		✓
The Point	MA	MBR		✓
The Retreat	DE	SBR		✓
Thumper Ponds	MN	VFW		✓
Tomales	CA	AWTP		✓
Traprock	NJ	MBR		✓
Tribeca Green	NY	MBR	✓	✓
Trump National	NJ	MBR		✓
Trump National Colts Neck	NJ	MBR		✓
Tucker Acres	CA			✓
Turtle Run South Phase I	MN	VFW		
Turtle Run South Phase II	MN	VFW		
Twin Creeks	CA	CMAS		✓
Village at Hawk Pointe	NJ	MBR		✓
Village of Opole	MN	CW		✓

#missionwater



natural systems utilities

Project	State	Plant Type	WW Reuse	
			Direct	Indirect
Village Square	NJ	MBR	✓	✓
Vinters Inn	CA	AWTP		✓
Visionaire	NY	MBR	✓	✓
Voss Middle School	TX	MBR		
Warren Township	NJ	CMAS		✓
Westbrook Factory Stores	CT	MBR	✓	✓
Whispering Ridge Phase I	MN	AT		✓
Whispering Ridge Phase II	MN	AT		✓
Whistling Valley Phase I	MN	VFW		✓
Whistling Valley Phase II	MN	VFW		✓
Whitby School	CT	MBR		✓
Wildflower Shores	MN	CW		✓
Windsor Oaks	MN	CS		✓
Windsor Park III	MN	RSF		✓
Woods at Eagle Lake	MN	VFW		✓
Wrentham Outlet Mall	MA	MBR	✓	✓
Wyldeewood Acres	MN	CW		✓
Yale Medical Ctr	CT	MBR		✓

#missionwater



IV: Proposed Schedule

NSU proposes to complete the first 3 tasks (1) Engineering & Environmental Analysis (2) Economic Analysis (3) Regulatory and Permitting Assessment concurrently during the first 6 months of the contract. Assuming May 1, 2025, authorization to proceed allowing 2 months for the final task (4) Final Report and Recommendations. The expected delivery date is December 31, 2025.

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

Applied Water Management, Inc. d/b/a Natural Systems Utilities, LLC

2 ☐ Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

n/a

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes

☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes

☐ No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

04/17/2025

Date

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

...

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;

or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

- (a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

**CITY OF LAREDO
PURCHASING DIVISION**

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filling form, and the city, state and country of the business entity's place of business.

Applied Water Management, Inc. d/b/a Natural Systems Utilities, LLC

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Laredo, TX

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.

FY25-054

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party.



6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day
of _____, 20_____, to certify which, witness my hand and seal of office.

Signature of officer administering oath

Printed name of officer administering oath

Title of officer administering oath

ADD ADDITIONAL PAGES AS NECESSARY

*******Form does not need to be notarized*******

CITY OF LAREDO
PURCHASING DIVISION

AFFIDAVIT

Project:

Form of Non-Collusive Affidavit

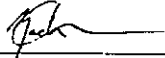
AFFIDAVIT

STATE OF TEXAS {}
COUNTY OF WEBB {}

Being first duly sworn, deposes and says:

That he/she is Zach Gallagher an officer of Natural Systems Utilities
(a Partner or officer of the firm of, etc.)

The party making the foregoing SOQ or bid, that such SOQ or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived or agreed directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed Contract; and that all statements in said SOQ or bid are true.



President & CEO
Signature of:
Bidder, if the Bidder is an individual
Partner, if the Bidder is a Partnership
Officer, if the Bidder is a Corporation

Subscribed and sworn before me this 17th day of April 2025.



Notary Public

My commission expires:

07/18/2027

