

TOWN OF WARRENTON, VIRGINIA

Request for Proposal – Sanitary Sewer Inflow and Infiltration Remediation

RFP Number: #17-001

Closing Date: August 25, 2016 at 4:00 PM

ALL PROPOSALS MUST BE RECEIVED BY THE CLOSING DATE AND TIME TO BE CONSIDERED

One (1) original and six (6) copies of the proposal, including any attachments, shall be mailed or delivered to:

Town of Warrenton
18 Court Street
P.O. Drawer 341
Warrenton, Virginia 20188

All inquiries for information regarding procurement procedures, selection criteria, proposal submission requirements, or other fiscal/administrative concerns shall be directed to:

Purchasing Agent
P.O. Drawer 341
18 Court Street
Warrenton, VA 20188

Phone: 540-347-1102
Fax: 540-349-2414
E-mail: staff@warrentonva.gov

For technical information relating to this RFP, please contact:

Edward B. Tucker, PE
Director of Public Works & Utilities
18 Court Street
P.O. Drawer 341
Warrenton, VA 20188

Phone: 540-347-1858
Fax: 540-349-2414
E-mail: etucker@warrentonva.gov

In compliance with this Request for Proposal and all the conditions imposed herein, the undersigned offers and agrees to furnish the services in accordance with the signed proposal or as mutually agreed upon by subsequent negotiations.

Name	_____	Date	_____
	PRINT OR TYPE COMPANY NAME		
Address	_____	Fax #	_____

Submitted by	_____	Phone #	_____
	PRINT OR TYPE INDIVIDUAL'S NAME		
Signature	_____	FEIN/SSN	_____

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I. PURPOSE

The purpose of this Request for Proposal (RFP) is to solicit sealed proposals from qualified firms (with specialization in sanitary sewer inflow and infiltration identification and remediation) to establish a contract for an initial period of one (1) year with an option for four (4) additional one year extensions, through competitive negotiation in an effort to provide assistance to the Town in the evaluation, identification of appropriate methods of, and the remediation of Inflow and Infiltration (I&I) of unwanted surface/ground water into the sanitary sewer system. The objective is to determine sewer lines and appurtenances that contribute to I&I and rehabilitate as appropriate.

II. BACKGROUND

In 2015 the Town of Warrenton conducted a system wide study of the sanitary sewer system and identified an average of 800,000 - 1,000,000 gallons per day (gpd) I&I during high ground water and wet weather conditions. Although the problem is suspected to be system wide, the most significant contributors are the two basins that flow directly to the wastewater treatment plant (WWTP). During heavy rainfall events, flows to the WWTP spike almost immediately. A preliminary study of the basins was conducted in 2015 by the town with the report attached.

III. OBJECTIVE

Based on the results of the study mentioned above, the objective is to eliminate a minimum of 200,000 gpd or more extraneous I&I into the system.

IV. TOWN'S RIGHT TO ISSUE RFPs AND PROJECT ORDERS

The Town of Warrenton reserves the right, at its sole discretion, to issue RFPs for similar work and other projects as the need may occur, and to issue project orders to town open-end contractors, based on the firm's qualifications, expertise, capabilities, performance record, current workload, location or distance to the project, and other factors as may be pertinent to sewer rehabilitation.

V. SCOPE OF SERVICES

The project will be performed in phases over the next three years based on funding available, which is currently programmed at \$2,400,000 over three years. The initial phase will focus on the two (2) primary sewer drainage basins (Plant North and Plant South) that gravity directly to the WWTP. Additional phases will involve the six (6) other basins. Summary of the Town's eight (8) sanitary sewer basins are as follows:

Name of Basin	Acreage	Sewer Mains (ft)	# of Manholes
Plant South	574	53,834	185
Plant North	750	43,563	193
Oliver City	113	6,740	26
Stuyvesant	84	10,725	39
Rady	434	10,134	40
Cedar Run North	2,087	131,590	612
Cedar Run South	727	58,283	268
Taylor	542	31,642	150
Totals	5,311	346,511	1,513

VI. PROPOSAL REQUIREMENTS

Proposals shall be signed by an authorized representative of the firm.

Proposals should be prepared simply and economically, providing a straightforward and concise description of the firm's capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content.

One (1) original and six (6) copies of the proposal shall be submitted to the Town of Warrenton Purchasing Agent. Each copy of the proposal should be bound in a single volume. All documentation submitted with the proposal should be bound in that single volume. Elaborate brochures and other representations beyond that sufficient to present a complete and effective proposal are neither required nor desired.

Any information thought to be relevant, but not applicable to the enumerated scope of work, should be provided as an appendix to the proposal.

Each firm submitting a proposal shall provide an updated statement of qualifications. The minimum requirements for a complete proposal which will be considered are outlined below. This information should be submitted in the format outlined below with tabs, to include a table of contents:

- a. Certification Page and the return of this completed RFP and any addendums, acknowledgments, signed and filled out as required.
- b. Expertise and experience of the firm relative to the scope of services contained in this RFP.
 - i. This section should include recent project information of similar type completed along with the name and telephone number of the contact for each project.
 - ii. Identification and statement of qualifications of all project team members who will be assigned to the project, including those responsible for "hands on" work, as well as those assigned for supervision and oversight responsibilities.

- iii. Identification and statement of qualifications of any and all additional associate professionals and sub contractors, if any, to be used, with a description of their role(s) on the project team.
- c. Financial responsibility of the firm. The firm shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the engineer, its agents, representatives, employees or subcontractors.

The Firm shall agree to provide a certificate of insurance naming the Town of Warrenton as additional insured and, if requested, a certified copy of said policy or endorsement(s) before commencement of the contract. All insurance shall be placed with an insurer licensed to do business in the Commonwealth of Virginia. The underwriter shall be subject to the approval of the Town of Warrenton.

The Firm shall maintain limits no less than:

- i. General Commercial Liability: \$1,000,000 (One million dollars) combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate limit shall apply separately to this project/location or the general aggregate shall be twice the required occurrence limit.
- ii. Automobile Liability: \$1,000,000 (One million dollars) combined single limit per accident for bodily injury and property damage.
- iii. Worker's Compensation and Employer's Liability: Worker's Compensation as required by the Code of the Commonwealth of Virginia and Employer's Liability with limits of \$1,000,000 (One million dollars) per accident.

The Town reserves the right to require higher limits on any contract. Prior to commencing work under a resulting contract, the successful offeror shall furnish the Town with a Certificate(s) of Insurance naming the Town, its offerors, employees, agents, as additional insured. A 95 day notice in writing of cancellation or non-renewal will be furnished by certified mail to the purchasing office at the address indicated on the solicitation. The contractor agrees to be responsible for, indemnify, defend and hold harmless the Town, its officers, agents and employees from the payment of all sums of money by reason of any claim against them arising out of any and all occurrences resulting in bodily or mental injury or property damage that may happen in connection with and during the performance of the contract including, but not limited to, claims under the Worker's Compensation Act.

The Contractor agrees that it will, at all times, after the completion of the work, be responsible for, indemnify, defend and hold harmless the Town, its officers, agents and employees from all liabilities resulting from bodily or mental injury or property damage directly or indirectly arising out of the performance or nonperformance of the contract.

- d. The number, type and value of all current relevant projects, along with the point of contact for each project.

- e. Past cost performance, scheduling performance, and general performance on past relevant projects for the past five (5) years, including the names of the point of contact for each project and innovative/award winning projects completed in the past five (5) years.
- h. Size of firm relative to the size of the project(s).
- i. Do not include any fee or pricing information.

VII. EVALUATION OF PROPOSALS

The following evaluation criteria will be used in the evaluation process and is listed in order of importance:

1. Experience and qualifications of the firm, including any subcontractors, with similar projects to provide the required services and deliverables, including ability, capacity, skill, financial strength, and the number of years experience.
2. Resumes of all key personnel, including managers, senior peer reviewers, field supervisors and technical staff, who will be involved in providing the required services, including tenure with firm, location of assigned office, applicable technical skills and staff availability.
3. Proposed plan to achieve the objective describing proposed approach, methodology and remediation techniques/processes to achieve desired results.
4. Past performance on projects of similar size and scope including, but not limited to, the ability of the firm to deliver projects within established schedules and budgets, based on reference checks.
5. Overall quality and completeness of proposal.

VIII. CONTRACT AWARD

The Town of Warrenton will engage in individual discussions and interviews with two or more offerors deemed fully qualified, responsible, suitable, and professionally competent to provide the required services, on the basis of initial responses to the RFP. Repetitive informal interviews are permitted. Offerors shall be encouraged to elaborate on their qualifications, performance data, and staff expertise. Proprietary information from competing offerors shall not be disclosed to the public or to competitors. At the conclusion of the informal interviews, on the basis of evaluation factors published in the RFP and all information developed in the selection process to this point, the Town shall rank, in order of preference, the interviewed offerors whose professional qualifications and proposed services are deemed most meritorious. Negotiations shall then be conducted with the offeror(s) ranked first. If a contract satisfactory and advantageous to the Town can be negotiated at a fee and unit price schedule considered fair and reasonable, the award shall be made to that offeror(s). Otherwise, negotiations with that offeror shall be formally terminated and negotiations conducted with the offeror ranked second, and so on, until such contract(s) can be negotiated at a fair and reasonable fee.

Additional phases of work will be negotiated as needed.

The Town of Warrenton does not intend, but reserves the right to award contracts to more than one firm as a result of this solicitation.

IX. ACCEPTABLE/UNACCEPTABLE PROPOSALS

Proposals which, after discussion and submission of additional clarification and/or supplementary information, are determined to meet the specifications of this Request for Proposal will be classified as "acceptable" and no further discussion concerning same will be conducted.

X. FEE DETERMINATION AND BILLING PROVISIONS:

Individual projects or requests for services will be issued in the form of "Project orders". Fee proposals by the firm will be negotiated and awarded on a "lump sum" or "fixed fee" amount for each project order. However, project orders may be used to secure services for investigations or similar work where an estimate of time cannot be determined. In such cases an exception is allowable to use the scheduled man-hour rates with a maximum amount as the basis for the "project order" fee.

The fee for the services on each "project order" shall be negotiated individually on a fixed fee or lump sum basis (maximum not to exceed basis) considering the Scope of Services required, the man-hours required for each level/discipline and the labor rates agreed upon during the initial negotiations.

The existence and amount of reimbursement for "extra" or "out of scope" services provided shall be identified in advance of project commencement and in no case shall an hourly billable rate for extras be greater than the standard contract hourly rate.

XI. CONTRACT TERMS

The term of the open-end contract, as relates to the issuance of new "Project Orders" shall be for one (1) year and option to renew for four (4) additional one-year periods from the date of the contract. The exercise of any optional period shall be at the sole discretion of the Town of Warrenton.

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GENERAL TERMS AND CONDITIONS

PROPRIETARY INFORMATION OR TRADE SECRETS

Offeror may invoke proprietary information or trade secret protection to or at submission of the data/material by: (1) identifying the data/material in a written description, (2) clearly marking the data/material as proprietary, and (3) providing a written statement detailing the reasons why protection is necessary. The Town reserves the right to ask for additional clarification prior to establishing protection.

PRECEDENCE OF TERMS

In the event there is a conflict between the General Terms and Conditions and any Special Terms and Conditions for use in a particular procurement, the Special Terms and Conditions shall apply.

CLARIFICATION OF TERMS

If any prospective bidder/offeror has questions about the specifications or other solicitation documents, the prospective bidder/offeror should contact the Purchasing Agent or the Department Head whose name appears on the face of the solicitation no later than five days before the opening date. Any revisions to the solicitation will be made only by addendum issued by the Purchasing Agent.

TESTING/INSPECTION

The Town reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications. The Town may require independent third party flow measurements to confirm project goals and objectives are being met.

PAYMENT TERMS

Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days. Presentation of invoices shall be accompanied by detailed statements describing work accomplished. The Town reserves the right to demand proof of work accomplished for the invoicing period. The Town reserves the right to withhold payment in the event the selected firm does not perform the required scope of services.

INVOICES

Invoices for items ordered, delivered and accepted shall be submitted by the bidder/offeror direct to the payment address shown on the purchase order/contract. All invoices shall show the Town's contract number and/or purchase order number.

DEFAULT

In case of failure to deliver goods or services in accordance with the contract terms and conditions, the Town, after due oral or written notice, may procure them from other sources and hold the bidder/offeror responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Town may have.

ASSIGNMENT OF CONTRACT

A contract shall not be assignable by the bidder/offeror in whole or in part without the written consent of the Town.

ANTITRUST

By entering into a contract, the bidder/offeror conveys, sells, assigns and transfers to the Town of Warrenton all rights, title and interest in and to all causes of the action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the Town of Warrenton under said contract.

ETHICS IN PUBLIC CONTRACTING

By submitting their bids/proposals, all bidders/offerors certify that their bids/proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidder/offeror, supplier, manufacturer, or subcontractor in connection with their bid/proposal, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything more than nominal value, present or promised unless consideration of substantially equal or greater value was exchanged.

ANTI-DISCRIMINATION

By submitting their bids/proposals, all bidders/offerors certify to the Town that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended. They must also conform to the American Disability Act of 1990 and Section 11-51 of the Virginia Public Procurement Act which provides:

In every contract over \$10,000, the provisions in A and B, below apply:

A. During the performance of this contract, the bidder/offeror agrees as follows:

The bidder/offeror will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonable and necessary to the normal operation of the bidder/offeror. The bidder/offeror agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

The bidder/offeror, in all solicitations or advertisements for employees placed by or on behalf of the bidder/offeror, will state that such bidder/offeror is an equal opportunity employer.

Notices, advertisements and solicitations placed in accordance with federal law, rule or

regulation shall be deemed sufficient for the purpose of meeting requirements of this section.

- B. The bidder/offeror will include the provisions of A. above in every subcontract or purchase order over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

INDEMNIFICATION

Bidder/offeror agrees to indemnify, defend, and hold harmless the Town of Warrenton, its officers, agents, and employees from any claims, damages and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of any materials, goods, services or equipment of any kind or nature furnished by the bidder/offeror, provided that such liability is not attributable to the sole negligence of the Town or to failure of the Town to use the materials, goods or equipment in the manner already and permanently described by the bidder/offeror on the materials, goods or equipment delivered.

DEBARMENT STATUS

By submitting their bids/proposals, all bidders/offerors certify that they are not currently debarred from submitting bids/proposals on contracts by the Town of Warrenton, nor are they an agent of any person or entity that is currently debarred from submitting bids/proposals on contracts by the Town of Warrenton.

APPLICABLE LAW AND COURTS

Any contract resulting from this solicitation shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The bidder/offeror shall comply with applicable federal, state and local laws and regulations.

QUALIFICATIONS OF OFFERORS

The Town may make such reasonable investigations as deemed proper and necessary to determine the ability of the bidder/offeror to perform the work/furnish the item(s) and the bidder/offeror shall furnish to the Town all such information and data for this purpose as may be requested. The Town reserves the right to inspect the bidder's/offeror's physical plant prior to award to satisfy questions regarding the bidder's/offeror's capabilities. The Town further reserves the right to reject any bid/proposal if the evidence submitted by, or investigations of, such bidder/offeror fails to satisfy the Town that such bidder/offeror is properly qualified to carry out the obligations of the contract and to complete the work/furnish the item(s) contemplated therein.

CONFLICT OF INTEREST

The offeror certifies that to the best of its knowledge no employee of the Town nor any member thereof, nor any public agency or official effected by the proposal, has a pecuniary interest in the business of the offeror, and that no person associated with the offeror has any interest that would conflict in any manner with the performance of the proposal.

TAXES

The Town of Warrenton is exempt from Federal excise tax, State taxes, and local taxes; such taxes shall not be included in contract prices. Tax exempt certificates will be furnished if requested by the offeror.

NON-APPROPRIATION

All funds for payments of items ordered under an agreement are subject to the availability of appropriation for this purpose. Payments during subsequent fiscal periods are dependent upon the same. In the event of non-appropriation of funds by the Town for the items under a contract, the Town will terminate the contract. Written notice will be provided to the contractor as soon as possible after Town action is completed.

OWNERSHIP OF MATERIALS

Ownership of all material and documentation originated and prepared pursuant to the RFP shall belong exclusively to the Town and is subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by an bidder, offeror or contractor in connection with a procurement transaction shall not be subject to disclosure under the Virginia Freedom of Information Act; however, the bidder, offeror or contractor must invoke the protections of this section prior to or upon submission of the data or other materials, and must identify the data or materials to be protected and state the reason why the protection is necessary.

PROPOSAL ACCEPTANCE PERIOD

Any proposal in response to this solicitation shall be valid for 120 days. At the end of the 120th day the proposal may be withdrawn at the written request of the offeror. If the proposal is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

CERTIFICATIONS

Offeror hereby certifies its compliance with the following:

- State and Local Government Conflict of Interest Act
- General Assembly Conflict of Interest Act
- Virginia Freedom of Information Act
- Virginia Fair Employment Contracting Act
- Virginia Government Frauds Act
- Virginia Public Procurement Act
- Federal Immigration Reform and Control Act of 1986

DELAYS AND SUSPENSIONS

Extensions: If the Contractor elects to stop work due to delay or failure to provide data or services on the part of the Town , the Contractor's time to perform the services shall be extended by the time reasonably necessary to compensate for such delay.

Suspensions: If any data or services are not supplied, or are not reasonably suited for the intended use, then the Contractor may give written notice to the Town Purchasing Agent; and, if such data in correct form is not then supplied within 20 days of the date such notice is received, the Contractor may suspend work on that phase of the project.

Payment: The Contractor shall be paid for all work done to such date of suspension plus all the Contractor's costs related to the delay.

KEY PERSONNEL

The personnel named in the technical proposal shall remain responsible throughout the period of this contract. No diversion or replacement may be made without submission of a resume of the proposed replacement with final approval being granted by the Town Purchasing Agent.

PERFORMANCE

Unacceptable Performance - The Town reserves the right to inspect all operations and to withhold payment for any work not performed or performed not in accordance with the specifications. These corrections shall be at not cost to the Town and in a timely manner.

PAYMENT TO SUBCONTRACTORS

A contractor awarded a contract under this solicitation is hereby obligated:

1. To pay the subcontractor(s) within seven (7) days of the Contractor's receipt of payment from the Town for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
2. To notify the Town and the subcontractor(s) in writing, of the contractor's intention to withhold payment and the reason.

The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the Town, except for amounts withheld as stated in b. above. The date of mailing of any payment by U.S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the Town .

The vendor agrees to protect the Town from claims involving infringement of patent or copyrights.

LAWS AND REGULATIONS

1. The Contractor shall give all notices and comply with all laws, ordinances, regulations and lawful orders of any public authority bearing on the performance of the work.
2. This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, Code of Virginia (1950), as amended, relating to labor unions and the "right to work", and all Contractors or Subcontractors, whether residents or nonresidents of the Town , who perform any work related to the project shall comply with all of the said provisions.

WITHDRAWAL OR MODIFICATION OF PROPOSALS PRIOR TO DUE DATES

Proposals may be withdrawn or modified by written or telegraphic notice received from Offerors prior to the time fixed for Proposal receipt.

RECEIPT AND OPENING OF PROPOSALS

1. It is the responsibility of the Offeror to assure that the Proposal is delivered to the place designated for receipt of proposals prior to the time set for receipt of proposals. No Proposal received after the time designated for receipt of proposals shall be considered.
2. Proposals received in response to this Request for Proposals will be opened at the time and place stated in the solicitation. The officer or agent of the Town, whose duty it is to open them, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a Proposal not properly addressed and identified.

SUBCONTRACTS

1. The Contractor shall, upon request of the Town, notify the Town in writing of the names of Subcontractors proposed for the principal parts of the work. The Contractor shall not employ any subcontractor that is not responsible or otherwise suitable. The Town shall not direct the Contractor to contract with any particular Subcontractor however, the Town may disapprove the use of any Subcontractor deemed unsuitable.
2. The Contractor agrees that he is as fully responsible to the Owner for the act and omissions of his Subcontractors and of persons either directly or indirectly employed by them, as he is for acts and omissions of persons directly employed by him.

SUPERINTENDENCE BY CONTRACTOR

1. The Contractor shall be responsible for all means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract except where otherwise specified in the Contract Documents.
2. The Contractor shall, at all times, enforce strict discipline and good order among the workers on the project, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him/her.

TOWN 'S RIGHT TO TERMINATE THE CONTRACT

1. If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Town may terminate the Contract. If the Contractor should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregards law, ordinances or the instructions of the Town or otherwise be in substantial violation of any provision of the contract, then the Town may terminate the contract.
2. Prior to termination of the contract, the Town shall give the Contractor fifteen (15) calendar days written notice. Upon termination of the contract, the Town shall take possession of all materials, tools and appliances thereon and finish the work by whatever method deemed expedient. In such case the Contractor shall not be entitled to receive any further payment. If the expense of finishing the work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the contract price, the Contractor shall pay the difference to the Town. The expense incurred by the Town as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Town .
3. Termination of the contract under this section is without prejudice to any other right or remedy of the Town.

CONTINGENT FEE WARRANTY

The Contractor warrants that he/it has not employed or retained any person or persons not generally associated with Contractor for the purpose of soliciting or securing this agreement. The Contractor further warrants that he/it has not paid or agreed to pay any company or person any fee, commission, percentage, brokerage fee, gift, or any other consideration contingent upon the award or making of this agreement. For breach of one or both of the foregoing warranties, the Town shall have the right to terminate this agreement without liability, or in its discretion, to deduct from the agreed fee, payment or consideration, or otherwise recover, the full amount of said prohibited fee, commission, percentage, brokerage fee, gift, or contingent fee.

FAILURE TO DELIVER

In the event the Contractor fails for any reason to deliver in a timely manner or according to contract terms the items set forth in the Schedule, the Town may, in its own discretion, give Contractor oral or written notice of such breach. Once notice by the Town is sent or given, the Town may immediately procure the items from another source. Once the Town has effected a purchase from an alternate source (in accordance with the Virginia Public

Procurement Act) the parties agree that the Town may back-charge the Contractor, in which case Contractor agrees to reimburse Town for any difference in cost between the original contract price and the Town's cost to obtain the item from the alternate source.

In no event shall the Town be held to pay the Contractor any costs incurred by Contractor including, but not limited to, ordering, marketing, manufacturing, or delivering the item(s) which are subject to the Town's notice of breach.

This remedy is in addition to, and not in lieu of, any other remedy the Town may have under this agreement and the laws of Virginia.

CONTRACT DOCUMENTS

Offerors are advised that the Town does not necessarily sign standard contract forms which may be used by the offeror. The Certification page in this RFP contains a signature line for the offeror which must be signed when submitting an RFP. The signature certifies the bidder is an agent or officer authorized to bind the firm/company to the terms and conditions of this proposal.

The contract documents shall consist of the Request for Proposals No.17-001, the completed proposal forms and all related literature and support documentation provided by the offeror as a submission to this RFP; addendums, if necessary; Authorization to Proceed and/or Purchase Order, Work Order, or Project Order.

In the event of a conflict in language, the provisions of the Town RFP shall govern. The offeror will be contractually bound to any and all promises made and to the requirements stated in the RFP.

IDENTIFICATION OF PROPOSAL ENVELOPE

All Proposals Must Be Signed And Sealed In Envelopes Plainly Marked On The Outside, "Sealed Proposal (RFP 17-001) Sanitary Sewer Inflow and Infiltration Remediation, due on August 25, 2016 at 4:00 PM" And Must Be Mailed Or Delivered To The Purchasing Agent.

The Town reserves the right to reject any and all proposals and waive all informalities. All contracts are awarded by the Town Manager. In the event the Town Manager rejects all proposals, the Town will re-advertise or make the purchase on the open market.

LATE PROPOSALS

Proposals received in the issuing office after the date and hour designated are automatically disqualified and will not be considered. The Town is not responsible for delays in the delivery of mail by the U.S. Postal Service, private couriers, or inter-Town mail system. It is the sole responsibility of the Offeror to insure that its proposal reaches the issuing office by the designated date and hour.

EXTENSION OF CONTRACT

The term of this contract shall be for one year, or until such time as the total contract fee has been expended and phase of work completed. The Town shall have the option to renew this contract for additional phases of work with four (4) additional one-year per

SAFETY

All contractors and subcontractors performing services for the Town of Warrenton are required and shall comply with all Occupational Safety and Health Administration (OSHA) and any other applicable rules and regulations. All contractors and subcontractors shall be

responsible for the safety of their employees and any unsafe acts or conditions that may cause injury or damage to any persons or property within and around the work site area under this contract.

NOTICE OF REQUIRED DISABILITY LEGISLATION COMPLIANCE

The Town of Warrenton is required to comply with state and federal disability legislation: The Rehabilitation Act of 1993 Section 504, The Americans with Disabilities Act (ADA) for 1990 Title II and the Virginians with Disability Act of 1990.

Specifically, the Town of Warrenton, may not, through its contractual and/or financial arrangements, directly or indirectly avoid compliance with Title II of the Americans with Disabilities Act, Public Law 101-336, which prohibits discrimination by public entities on the basis of disability. Subtitle A protects qualified individuals with disability from discrimination on the basis of disability in the services, programs, or activities of all State and local governments. It extends the prohibition of discrimination in federally assisted programs established by the Rehabilitation Act of 1973 Section 504 to all activities of State and local governments, including those that do not receive Federal financial assistance, and incorporates specific prohibitions of discrimination on the basis of disability in Titles I, III, and V of the Americans with Disabilities Act. The Virginians with Disabilities Act of 1990 follows the Rehabilitation Act of 1973 Section 504.

INSURANCE

Contractor must provide the Town with a certificate of insurance naming the Town of Warrenton as additional insured before work may begin. Insurance requirements are as follows:

- A. The contractor shall procure and maintain, for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the delivery of the product hereunder by the contractor, his agents, representatives, employees or subcontractors.
- B. The contractor shall provide a certificate of insurance naming the Town of Warrenton as additional insured and if requested a certified copy of said policy or endorsement(s) before commencement of contract. All insurance shall be placed with an insurer licensed to do business in the Commonwealth of Virginia. The underwriter shall be subject to the approval of the Town of Warrenton.

The contractor shall maintain limits no less than:

1. Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate limit shall apply separately to this project of the general aggregate shall be twice the required occurrence limit.

2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.
3. Workers' Compensation and Employers Liability: Workers' Compensation as required by the Code of the Commonwealth of Virginia and Employers Liability with limits of \$1,000,000 per accident.



MEMORANDUM

Date: October 9, 2015

To: Edward Tucker

From: Junaid Malik, P.E.

Subject: Warrenton Infiltration / Inflow Study Memo

CC: File

Work Order Number: 18527.000

Contract Number:

Project: Town of Warrenton I&I Study

PROJECT OBJECTIVE

The objective of this project is to assist the Town of Warrenton in its efforts to collect, organize and analyze sanitary sewer flow data in order to remediate excess inflow and infiltration (I&I) in the existing system. Inflow is defined as storm water directly entering the wastewater collection system from a basement/foundation and roof drains, missing/broken manhole covers and cross connection with the storm water collection system. Infiltration however is defined as the groundwater entering the wastewater collection system through defects in the service laterals, pipes and manholes. Beginning in 2013, the Town noticed a sudden increase in the flows at the Town's Wastewater Treatment Plant (WWTP), especially in the peak flows after significant rain events. Whitman, Requardt & Associates (WRA) was contacted by the Town to conduct a study and develop a program for the Town with the goal of reducing I&I.

PROJECT BACKGROUND

The Town has a total of (8) sanitary sewer sewersheds that flow into the WWTP. GIS mapping has been developed for these areas including gravity piping, force mains and pump stations. Older pipes, joint displacement, cracked manholes or collapsed portions of the infrastructure are typically the reason for infiltration and inflow in to the sewer and seven of the sewersheds include over a mile of clay pipe which was installed in the 50's and 60's. The Town is currently proceeding with a manhole inspection program. The attached **Exhibit 1** shows the names of the sewersheds, the service area and the extent of the infrastructure.

PROJECT APPROACH

The first phase of the project was limited to initial data collection from the Town, data review, and flow monitoring and data analysis. The first task included data collection to identify the existing sewersheds, GIS mapping for existing sewer lines, pump stations as-built drawings and historical data including WWTP flow data. The Town provided GIS data which was used to estimate the size, material and age of the sewer infrastructure. The flow data for both the pump stations and WWTP was reviewed to observe the flow peaks during the rain events. The data collected from the Town is included as **Appendix A**. The second task required WRA and Town to implement wastewater flow monitoring to collect flow data over an extended period of time. WRA utilized the services of HACH Company, as a sub consultant, to develop a flow monitoring plan in coordination with the Town. A meeting was held on July 2, 2014 to review the initial placement of the flow meters. Four temporary flow meters were furnished and installed in sanitary sewer manholes in addition to one rain gage at the roof of the Town Hall. Prior to installation, the installation manholes were water jetted and the Town provided coordination with the local businesses and traffic control. The flow data was collected for two consecutive months and meters were relocated, after discussions with the Town, to help pinpoint the sources of I&I. WRA and HACH Company conducted four iterations of data collection and meter relocations for approximately 8 months. **Exhibit 2** shows a flow meter location map.

The collected flow meter data was reviewed and categorized into dry weather and wet weather flow data. **Table 1** and **Table 2** show a tabulation of the flows observed at each of these meter sites on a dry or wet day. Rainfall data was also recorded along with plant rain and flow data. The complete data is included in **Appendix B**.

Table 1: Flow Monitoring Summary Jul 2014 to Nov 2014

DRY DAY											WET DAY																					
	SITE 1	SITE 2	SITE 3	SITE 4	BRUMFIELD	GARRETT	*GREEN	5TH STREET	CEMETERY	FIRE CO	CULPEPPER	MADISON	*SHIRLEY	WWTP FLOW		SITE 1	SITE 2	SITE 3	SITE 4	BRUMFIELD	GARRETT	*GREEN	5TH STREET	CEMETERY	FIRE CO	CULPEPPER	MADISON	*SHIRLEY	WWTP RAIN (in)	RAIN GAGE (in)	WWTP FLOW	
Iteration # 1 (JUL-SEPT)											Iteration # 1 (JUL-SEPT)																					
8/30/2014											8/31/2014																					
AVERAGE (GPM)	44	802	198	41										1042	AVERAGE (GPM)	39	865	439	77											3.9	3.6	1785
MAX (GPM)	133	1239	346	59										2292	MAX (GPM)	130	1415	1729	241												4166	
MIN (GPM)	13	329	43	26											MIN (GPM)	12	350	41	32													
9/10/2014																																
AVERAGE (GPM)	40	815	251	56										1146																		
MAX (GPM)	85	1169	417	68										2569																		
MIN (GPM)	13	350	69	44																												
Iteration # 2 (SEPT-NOV)											Iteration # 2 (SEPT-NOV)																					
9/23/2014											9/25/2014																					
AVERAGE (GPM)			211			41	18	98						1035	AVERAGE (GPM)			385		66	23	106							1	1.2	1382	
MAX (GPM)			353			66	42	256						2292	MAX (GPM)			799		125	34	264									2708	
MIN (GPM)			41			16	8	42							MIN (GPM)			75		21	9	53										
10/28/2014											10/3/2014																					
AVERAGE (GPM)			265			50	16	78						1153	AVERAGE (GPM)			269		45	16	108						0.8	1	1139		
MAX (GPM)			376			68	27	125						2153	MAX (GPM)			576		115	42	257									2083	
MIN (GPM)			48			23	8	43							MIN (GPM)			61		17	8	45										
11/3/2014											10/15/2014																					
AVERAGE (GPM)			258			49	13	78						1035	AVERAGE (GPM)			660		124	27	159						1.6	1.7	1785		
MAX (GPM)			404			73	22	114						2014	MAX (GPM)			1316		252	61	320									3125	
MIN (GPM)			63			22	7	46							MIN (GPM)			73		24	10	59										

Table 2: Flow Monitoring Summary Nov 2014 to Mar 2015

DRY DAY											WET DAY																				
	SITE 1	SITE 2	SITE 3	SITE 4	BRUMFIELD	GARRETT	*GREEN	5TH STREET	CEMETERY	FIRE CO	CULPEPPER	MADISON	*SHIRLEY	WWTP FLOW		SITE 1	SITE 2	SITE 3	SITE 4	BRUMFIELD	GARRETT	*GREEN	5TH STREET	CEMETERY	FIRE CO	CULPEPPER	MADISON	*SHIRLEY	WWTP RAIN (in)	RAIN GAGE (in)	WWTP FLOW
11/22/2014											11/26/2014																				
AVERAGE (GPM)			213					41	12	46				1042	AVERAGE (GPM)			558				90	30	65					1.5	0.8	1680
MAX (GPM)			360					66	19	63				2292	MAX (GPM)			865				160	50	94							2778
MIN (GPM)			48					20	3	29					MIN (GPM)			110				24	5	36							
12/21/2014											12/9/2014																				
AVERAGE (GPM)			275					46	5	53				1174	AVERAGE (GPM)			556				85	9	65					0.6	0.7	1771
MAX (GPM)			384					65	9	70				2292	MAX (GPM)			879				119	16	90							3055
MIN (GPM)			131					26	1	30					MIN (GPM)			263				53	4	34							
Iteration # 4 (JAN-MAR)											Iteration # 4 (JAN-MAR)																				
1/31/2015 *											1/24/2015																				
AVERAGE (GPM)			314								3	29	67	1278	AVERAGE (GPM)			685							4	33	97		0.3	0.5	2028
MAX (GPM)			467								14	43	115	2569	MAX (GPM)			818							11	42	141			2986	
MIN (GPM)			180								0	15	39		MIN (GPM)			410							0	24	59				
2/15/2015											1/26/2015																				
AVERAGE (GPM)			221								4	27	130	1153	AVERAGE (GPM)			478							2	28	89		0.3	0.3	1618
MAX (GPM)			354								11	37	363	1736	MAX (GPM)			737							5	42	143			3125	
MIN (GPM)			89								1	17	46		MIN (GPM)			221							0	15	47				
3/9/2015																															
AVERAGE (GPM)			557								9	37	348	1778																	
MAX (GPM)			740								15	51	535	2847																	
MIN (GPM)			315								2	24	190																		

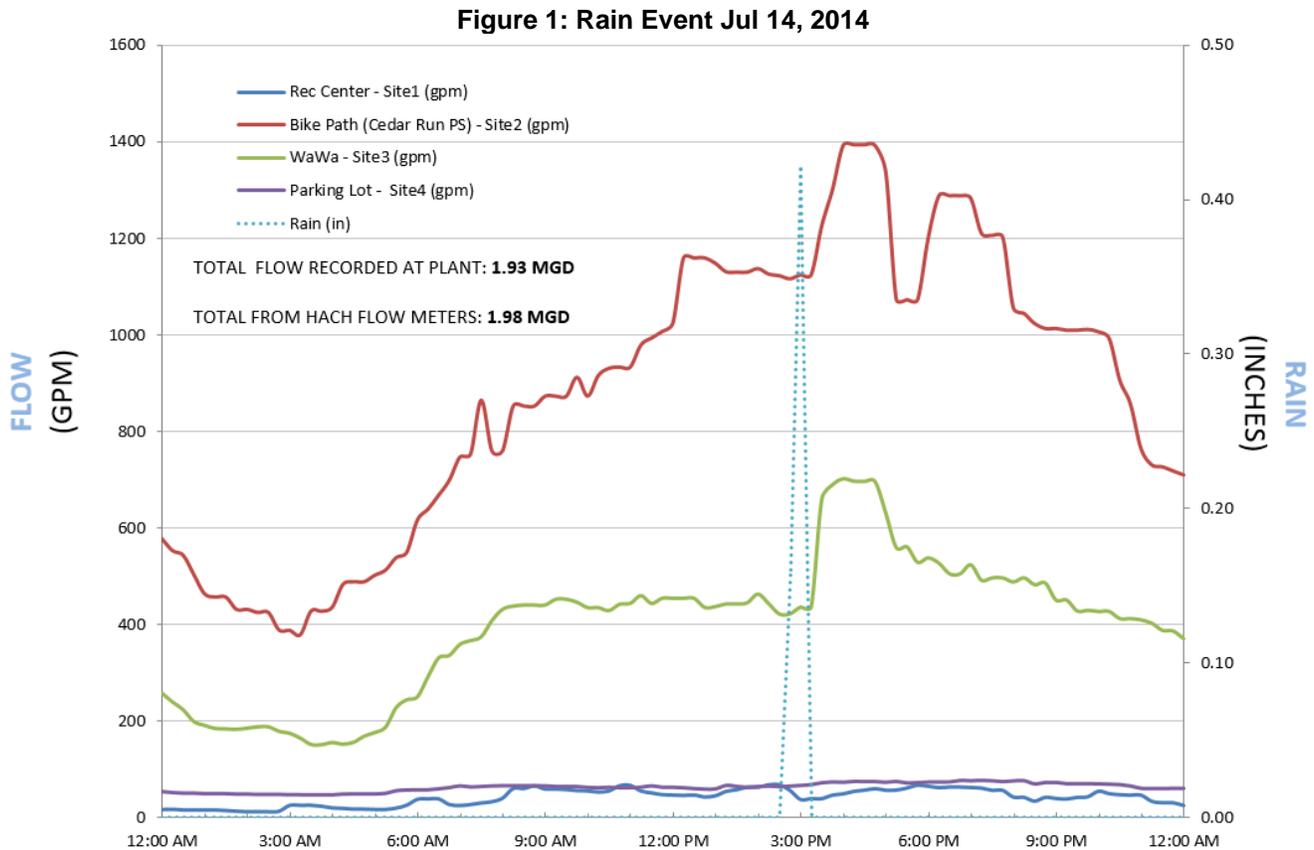
* indicates unreliable data



Hach Company utilizes FLO-DAR AV Sensor meters and the FL900 series wireless flow logger for flow measurements. The sensor is mounted above the flow in the manhole and senses the velocity of the flow combined with ultrasonic level sensing. The no-contact data collection device measures from above the flow and wirelessly transmits data to the data manager. The data collection device has back up pressure level sensor and optional electromagnetic surcharge velocity sensors in case the flow gets too high and submerges the ultrasonic sensor. More information for the flow monitoring system is included in **Appendix C**.

ANALYSIS OF FLOW DATA AND METER RELOCATIONS

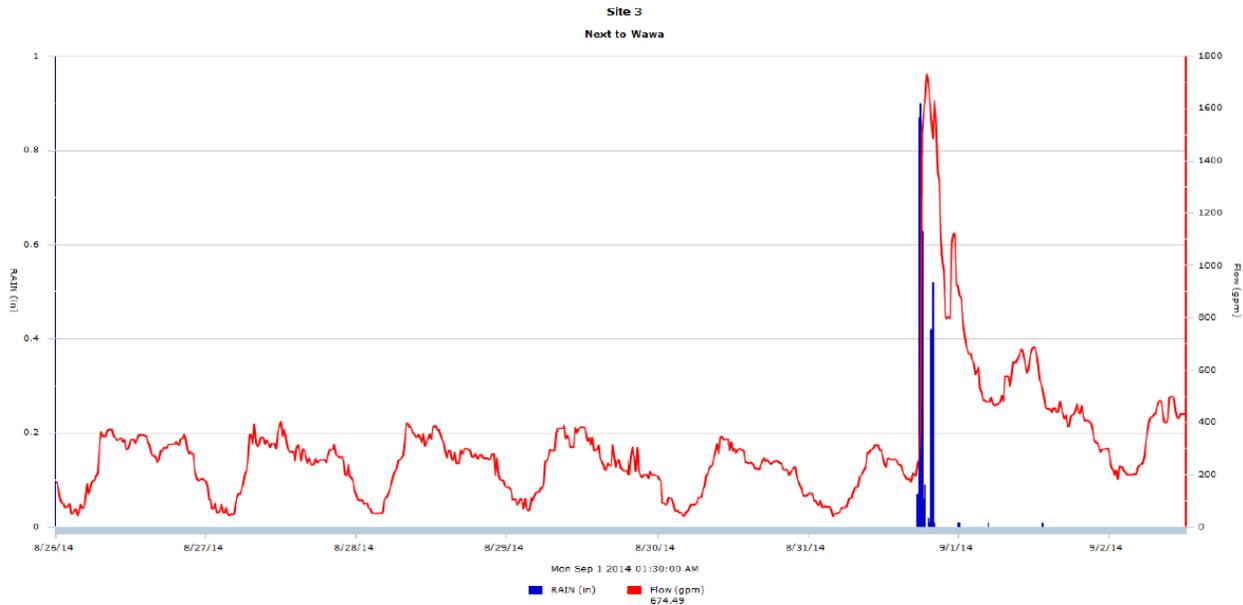
The methodology employed by WRA to analyze collected data differentiated between the dry and wet weather data. After the initial flow meter placement at the designated manholes, the flow data was regularly reviewed with the Town. The rain event of July 14, 2014 indicated a significant peak in the flows at Site 2 and Site 3 compared to Site 1 and Site 4, which led the team to focus on Cedar Run and Plant South/Taylor sewersheds (**See Exhibit 1**). **Figure 1** below shows the flow meter response to the rain event.



Another rain event of August 31, 2015 clearly identified Site 3 (Plant South/Taylor sewershed) as the prime contributor of I&I. The Town received a cumulative rainfall of 3.6 inches in a few hours causing a peaking factor of almost 800% at Site 3 with a flow of 1729 gpm compared to an average flow of 225 gpm. Site 1, 2 and 4 flows also peaked during this rain event but the maximum flows were insignificant compared to the flows observed at Site 3. **Figure 2** below shows the flow meter response to the rain event.

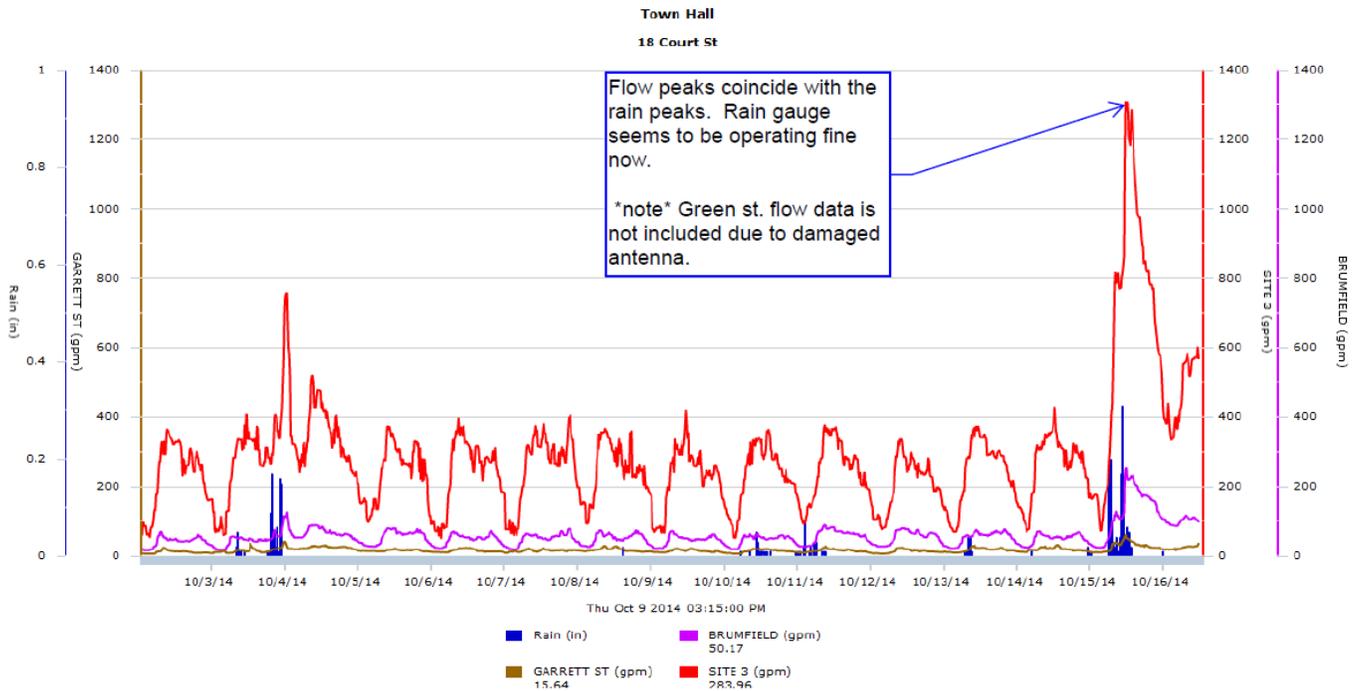


Figure 2: Rain Event August 31, 2014



The second meter placement iteration took place on Sept 12, 2015 and the flow meters were relocated from Site 1, 2 and 4 and placed at a mutually agreed upon location on Garrett Street, Green Street and Brumfield Elementary School Site. The rain event on Sept 25, 2014 and October 15, 2014 confirmed that Site 3 was still a significant contributor of I&I, however it was noted that Garrett Street meter did not report a significant contribution and the green street meter was reporting erratic data. Brumfield site reported significant flows therefore it was identified as a major contributor to the Site 3 meter. Figure 3 below shows flow meter response to the rain event.

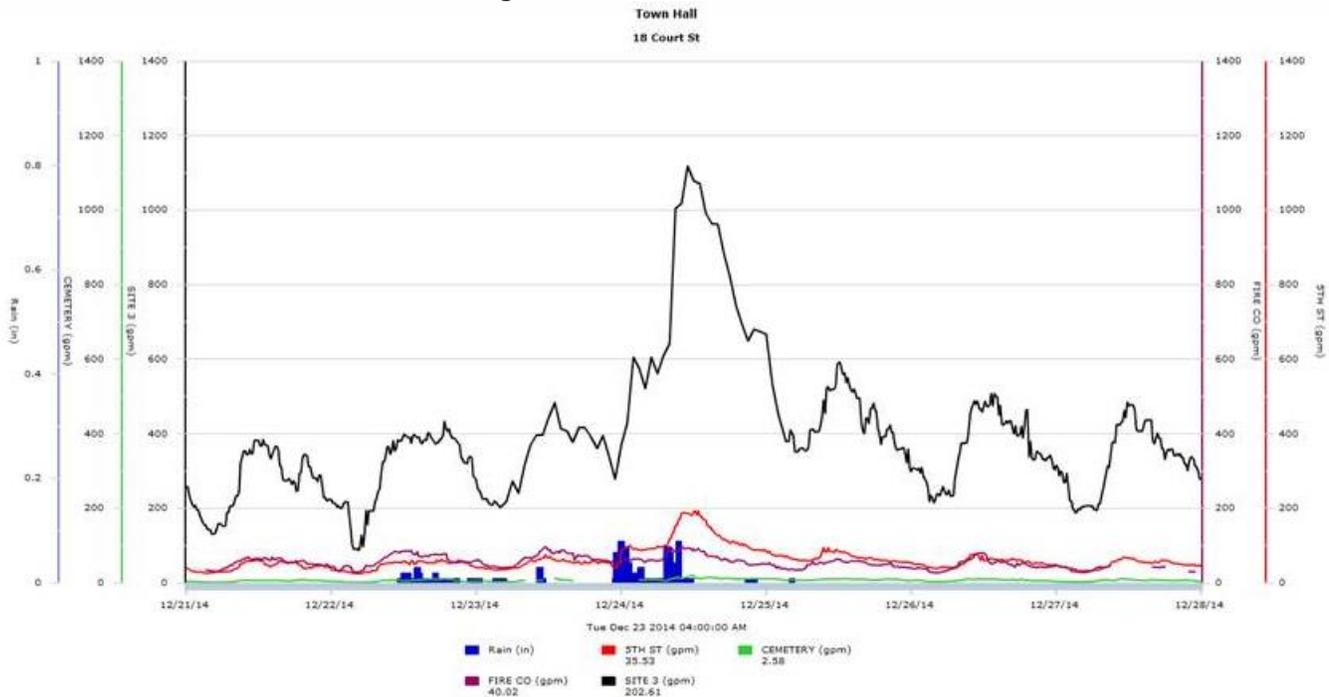
Figure 3: Rain Event October 15, 2014



Due to concerns about the data quality of the Green Street meter, a third iteration of flow metering was implemented. Since the original contract duration for monitoring was only valid for 4 months, an extension was requested to continue monitoring another month through Dec 10, 2014 but due to the issues with the Green Street meter an additional monitoring extension of one month for two meter sites was negotiated with Hach Company.

The third meter placement iteration took place on Nov 5, 2014. After discussion with the Town, the meter at Green Street was relocated further upstream to 5th street to capture the I&I in the older part of town. The Garrett Street and Brumfield meters were relocated to Keith Street, close to a local cemetery and manhole, close to Fire Co/Fauquier Hospital to capture flow data from the newer part of the Town and identify possible flow peaks. The flow meter data was fairly consistent for all these sites. The rain event of Dec 9, 2014 noted a marginal spike in the flows at the Keith Street/Cemetery, Fire Co meter and 5th Street meters. On Dec 16, 2014 a meeting was held with the Town to evaluate the data. After review of the data , it was determined that the major contribution of inflow was somewhere on the main trunk along Shirley Avenue between the Site 3 location and the force main outfall of Taylor Run PS. It was decided to leave the Site 3 meter at the current Wawa location and relocate the 5th Street meter to another manhole at intersection of Shirley Avenue close to Culpeper Street. The rain event of Dec 23, 2014 confirmed that the flow contributions of the Keith Street/Cemetery and Fire Co meters were insignificant. However 5th Street meter reported flow data that was consistent with infiltration.

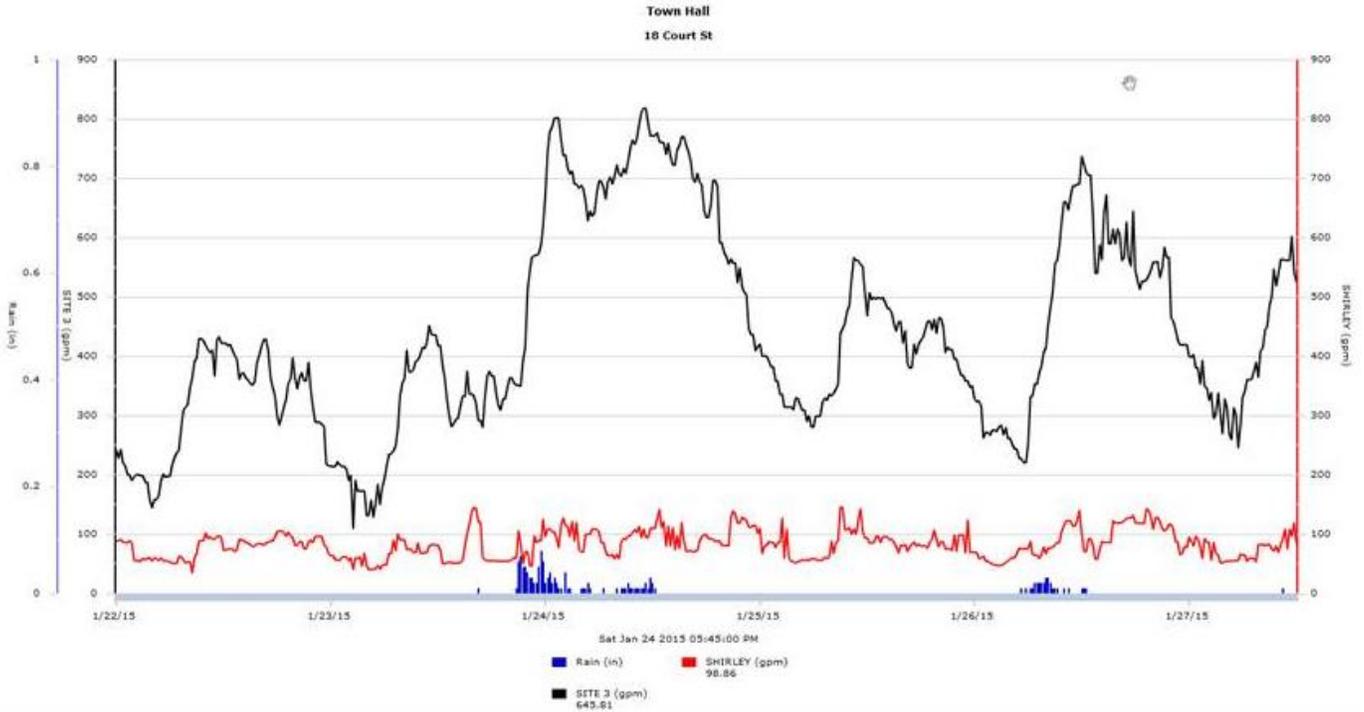
Figure 4: Rain Event Dec 24, 2014



The fourth flow metering iteration took place on January 20, 2015. With the exception of Site 3 meter, the other 3 meters were relocated to Shirley Avenue, Madison Street and Culpeper Street. The rain event of Jan 24, 2015 revealed a monitoring issue with the field setting of the Shirley Avenue meter which was promptly corrected, however the reliability of the data was in question because of the performance of the equipment in the extreme weather conditions. **Figure 5** below shows flow meter response to the January rain event.

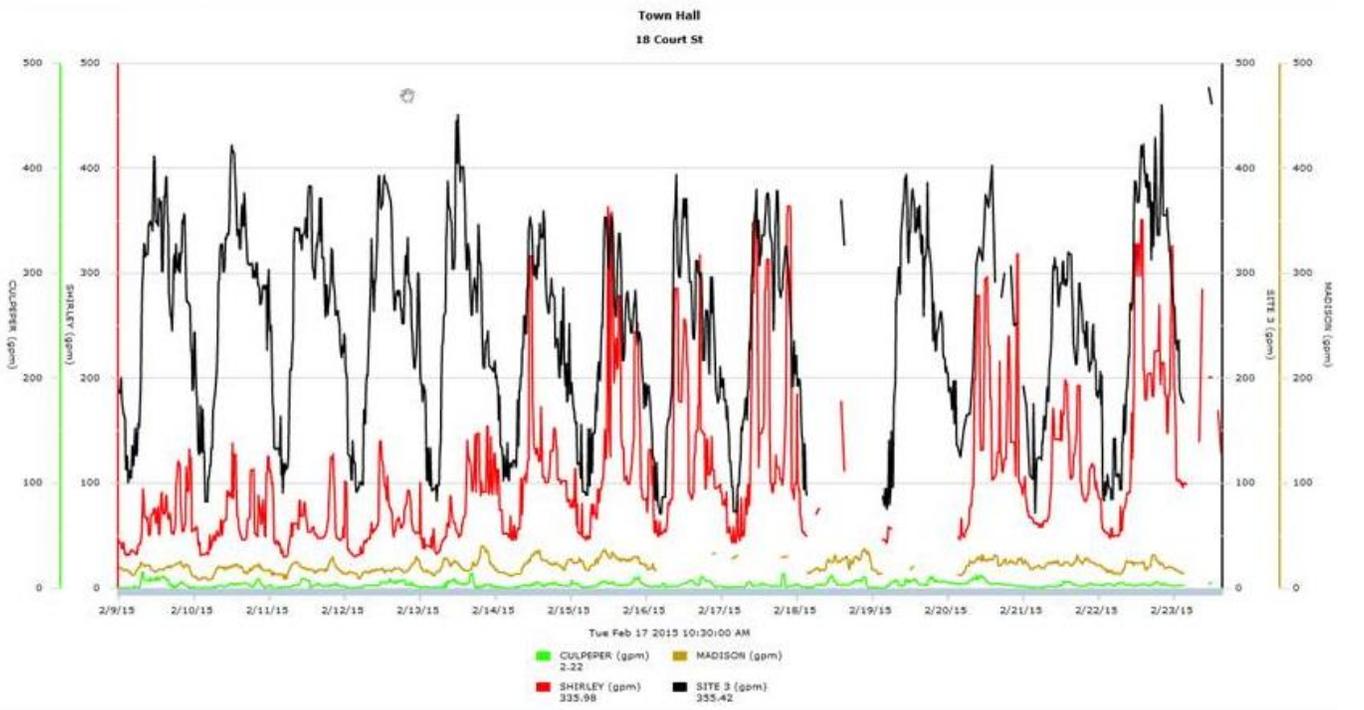


Figure 5: Rain Event Jan 24, 2015



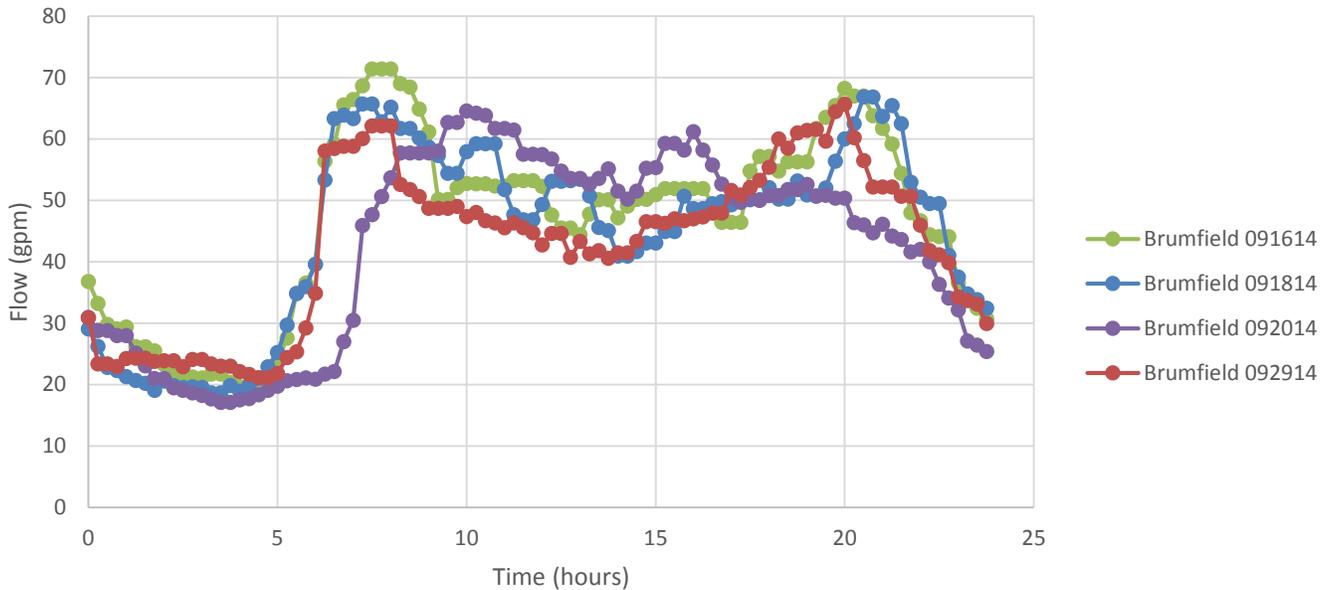
Even after the adjustment and relocation, the Shirley Avenue meter continued to have technical issues (Figure 6). The Madison Street and Culpeper Street meters reported insignificant flows. The flow monitoring was discontinued in the beginning of March 2015.

Figure 6: Rain Event Jan 24, 2015



In order to establish a solid baseline, WRA observed the dry day flows for all the monitored locations. A typical dry day was selected by analyzing the data and selecting the days just before a rain event in a given month or monitoring period. The data from multiple days was superimposed on a common to establish a true baseline “average dry day” for a particular meter site. The Brumfield meter data is shown as in **Figure 7** below.

Figure 7: Rain Event Jan 24, 2015



After establishing dry weather baseline, wet weather analysis was conducted by comparing “average dry day” data with the data from the flow meter after a rain event. Brumfield, 5th Street and Shirley Avenue show substantial difference in wet vs. dry flows to suggest significant inflow and infiltration at these locations. **Figure 8** and **Figure 9** below show the extent of Infiltration and Inflow at the Brumfield and 5th Street sites but not enough data was available to complete the analysis for the Shirley Avenue Site.

Figure 8: Brumfield - Dry vs. Wet

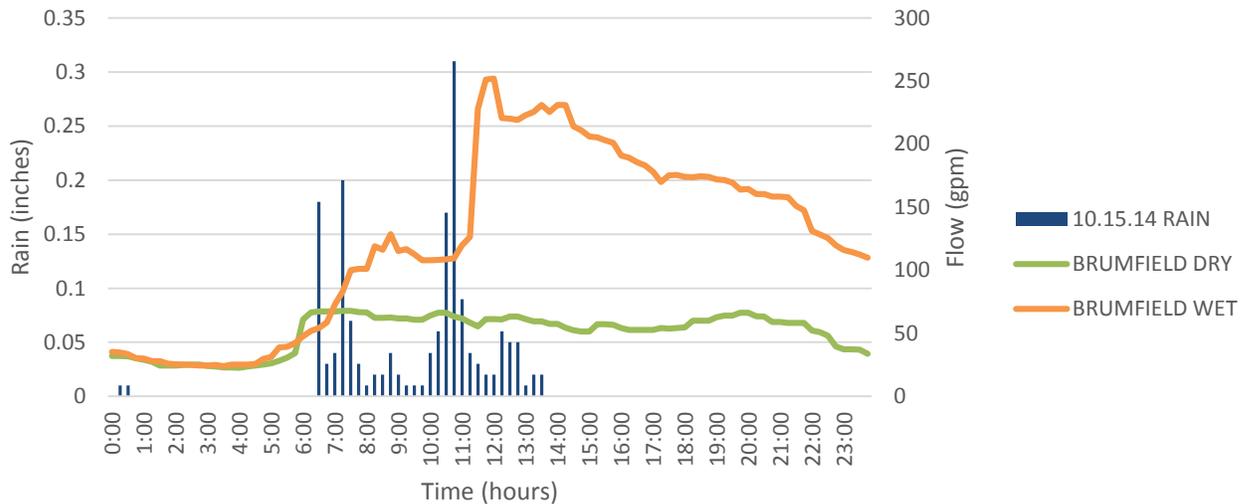
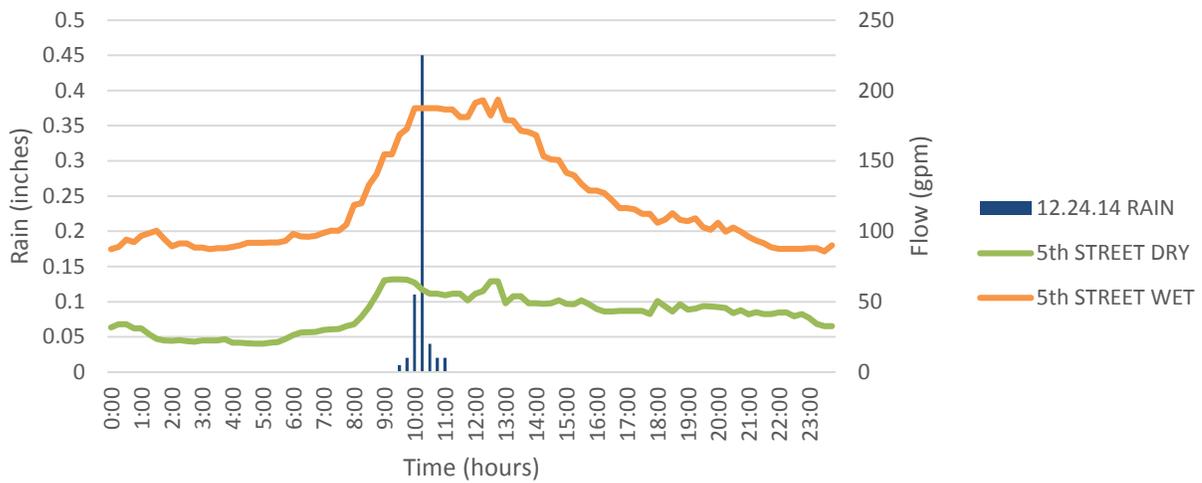


Figure 9: 5th Street - Dry vs. Wet



RECOMMENDATIONS & CONCLUSION

The data collections and analysis suggests that only a few areas contributing to the Infiltration and Inflow to the collection system have been identified. The root cause of the sudden peak observed at Site 3 (i.e. Plant South/Taylor sewershed) and WWTP during the observed rain events has not been confirmed yet, therefore additional investigations are required to arrive at a conclusion. A variety of field methods and techniques can be utilized to determine the quantity and location of additional flow. WRA recommends the following field investigation methods in order of preference.

Manhole Inspections: A very effective technique in identifying inflow is visual inspection of the manholes to check for defects. Inspection should be conducted in critical areas (i.e. curb/swales) to document the structural condition of all components of the manhole. Such observations are very important in low lying areas where direct inflow from storm water can occur during a significant rain event. If manhole inspections are conducted after a rain events, additional information can be gathered. Supplementing nighttime inspections can identify “clear” groundwater flows in the collection system when the sanitary flows are low.

Flow Isolation, Additional Rainfall and Flow Monitoring:

Flow isolation is one of techniques that can be cost effective and simple to locate infiltration particularly due to high groundwater. Flow isolation is usually conducted at nighttime when sanitary flows are low. This work should be performed after a saturating rain event. The operation to take measurements can be challenging if the manholes are submerged. It is also recommended that rainfall and flow monitoring be continued using portable devices at key locations along Shirley Avenue. This is to verify the baseline established by the original flow monitoring effort. The rainfall and flow data at the WWTP should be collected and compared to the flow monitoring results.

CCTV Inspections:

Closed Circuit television (CCTV) inspections is another effective technique to locate the sources of infiltration and inflow in a collection system. The CCTV camera can identify leaky/dislocated joints, cracks and other sources of I&I. To maximize the benefit to such inspections, it is recommended that the pipe be thoroughly cleaned to remove any debris that that may impact the operation of the CCTV equipment. In the first phase of inspections, CCTV scope should be limited to the larger mains.

Smoke Testing:

Smoke testing is a very efficient and cost effective method to detect collection system defects. It involves introduction of smoke to the collections system (with a blower and smoke generating material). Smoke typically exits from the cracks or openings in the collection system but also through the vents of homes, therefore notices to inform public



about the testing is very critical to the operation. Smoke testing is most beneficial when water tables are low and non-windy dry days.

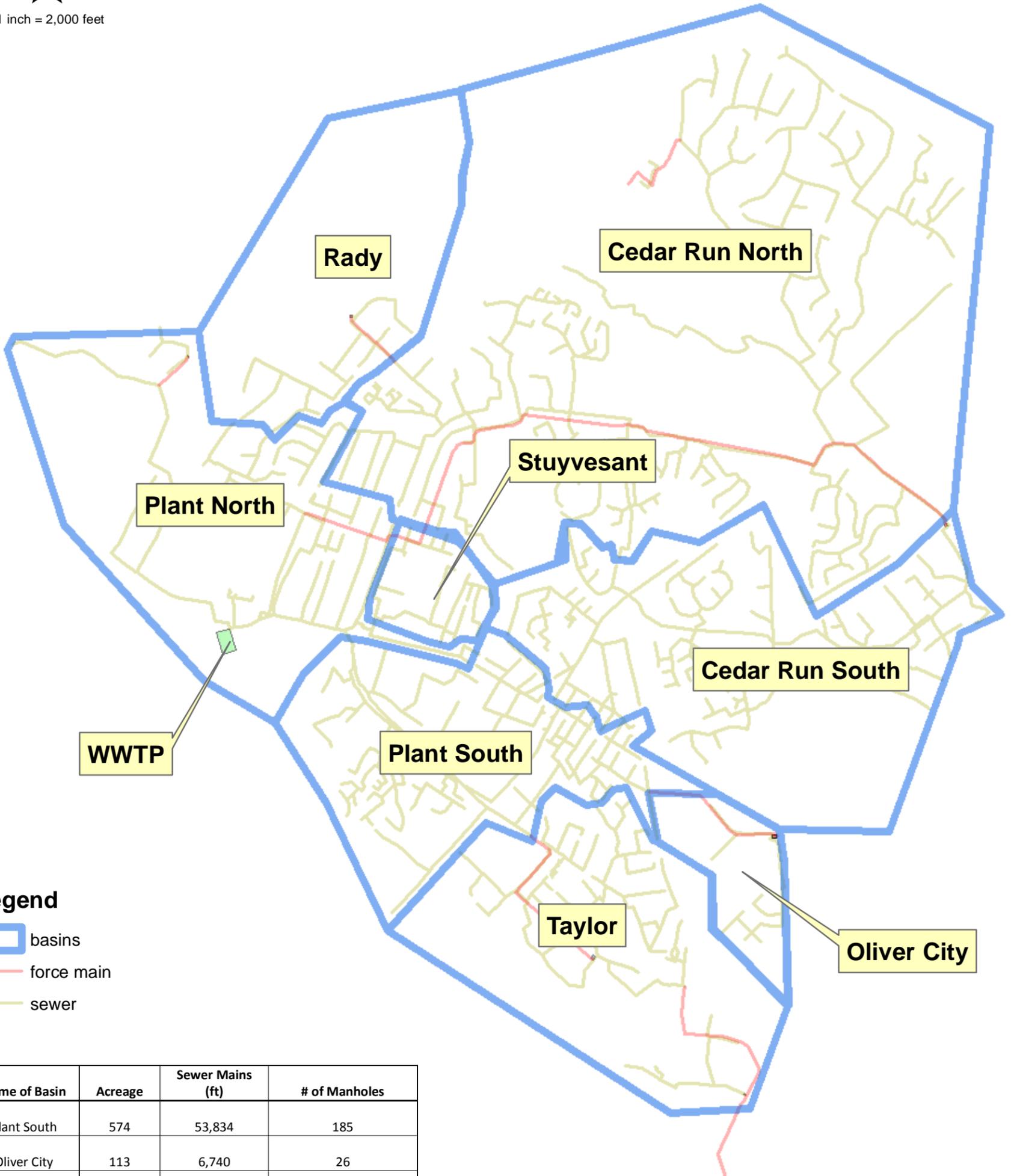
Junaid Malik, P.E.



Exhibit 1: Town of Warrenton I&I Study - Sanitary Sewer Basins



1 inch = 2,000 feet



Legend

- basins
- force main
- sewer

Name of Basin	Acreage	Sewer Mains (ft)	# of Manholes
Plant South	574	53,834	185
Oliver City	113	6,740	26
Stuyvesant	84	10,725	39
Plant North	750	43,563	193
Rady	434	10,134	40
Cedar Run North	2,087	131,590	612
Cedar Run South	727	58,283	268
Taylor	542	31,642	150
System Totals	5311	346,511	1,513



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Exhibit 2: Town of Warrenton I&I Study - Flow Meter Locations

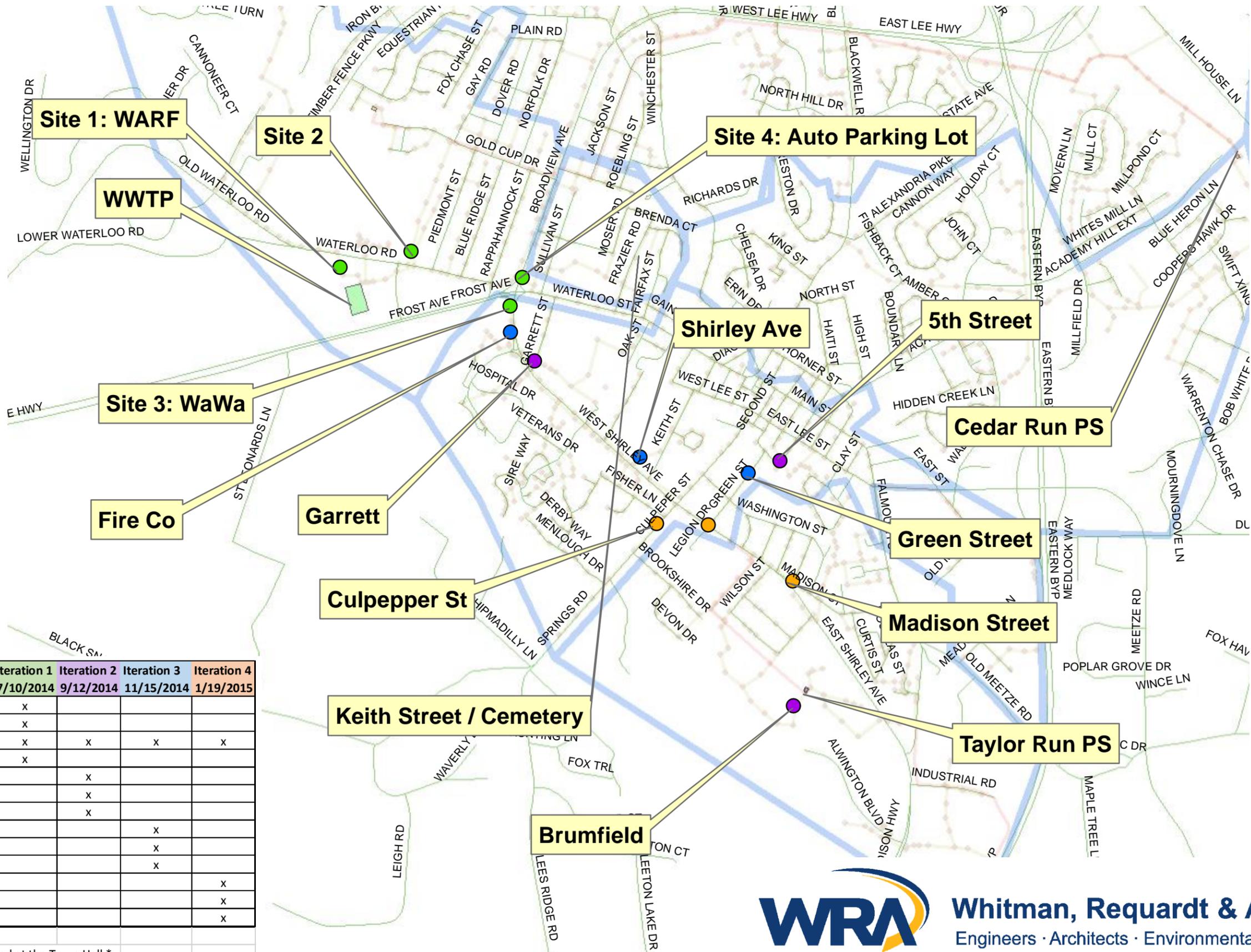


1 inch = 1,500 feet

Legend

Inst_Date

- Jan 2015
- July 2014
- Nov 2014
- Sept 2014
- basins
- manholes
- force main
- sewer



FLOW METER LOCATIONS	Iteration 1 7/10/2014	Iteration 2 9/12/2014	Iteration 3 11/15/2014	Iteration 4 1/19/2015
SITE 1 - Across from WARF	x			
SITE 2 - Along path High School	x			
SITE 3 - WaWa in road	x	x	x	x
SITE 4 - Tire & Auto Parking lot	x			
BRUMFILED ELEMENTARY		x		
GARRETT ST		x		
GREEN ST		x		
5TH STREET			x	
CEMETERY (Kieth St.)			x	
FIRE Co.			x	
CULPEPPER ST				x
MADISON ST				x
SHIRLEY ST				x

* (1) Rain gage permanently installed at the Town Hall *



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