

THE UNIVERSITY OF RHODE ISLAND

Solicitation Information 9/18/2023

RFP# 101303

TITLE: A/E - Bridging Documents Design for Water Treatment Facility

Submission Deadline: 10/16/2023 1:00 PM (Eastern Time)

PRE-BID/ PROPOSAL CONFERENCE: YES

MANDATORY: NO

If YES, any Vendor who intends to submit a bid proposal in response to this solicitation must have its designated representative attend the mandatory Pre-Bid/ Proposal Conference. The representative must register at the Pre-Bid/ Proposal Conference and disclose the identity of the vendor whom he/she represents.

DATE: 9/25/2023 11:30 AM EST

LOCATION: Office of Capital Projects - Sherman Building, 60 Tootell Road, Kingston, RI 02881

Questions concerning this solicitation must be received by the URI Purchasing Department at URIPurchasing@uri.edu no later than **9/29/2023 12:00 PM (EST)**. Questions should be submitted in a *Microsoft Word attachment*. Please reference the RFP# on all correspondence. Questions received, if any, will be posted on the Division of Purchases' website as an addendum to this solicitation. It is the responsibility of all interested parties to download this information.

BID SURETY BOND REQUIRED: NO

PAYMENT AND PERFORMANCE BOND REQUIRED: NO

Andrea Turano, Assistant University Purchasing Agent - Construction

Note to Applicants:

- Applicants should register on-line at the URI Controller's Website at <https://web.uri.edu/controller/accounts-payable/suppliers/>
- Proposals received without a completed URI Bidder Certification Form may result in disqualification.

Respondent Information:

Company Name _____

Address _____

Contact Name _____

Contact Email _____ :

Contact Phone _____

University of Rhode Island Bidder Certification Form
State of Rhode Island Procurement Regulations

ALL OFFERS ARE SUBJECT TO THE REQUIREMENTS, PROVISIONS AND PROCEDURES CONTAINED IN THIS CERTIFICATION FORM. Offerors are expected to read, sign and comply with all requirements. Failure to do so may be grounds for disqualification of the offer contained herein.

Rules for Submitting Offers

This Certification Form must be attached in its entirety to the front of the offer and shall be considered an integral part of each offer made by a vendor to enter into a contract with the University of Rhode Island. As such, submittal of the entire Bidder Certification Form, signed by a duly authorized representative of the offeror attesting that he/she (1) has read and agrees to comply with the requirements set forth herein and (2) to the accuracy of the information provided and the offer extended, is a mandatory part of any contract award.

To assure that offers are considered on time, each offer must be submitted with the specific Bid/RFP/LOI number, date and time of opening marked in the upper left hand corner of the envelope. Each bid/offer must be submitted in separate sealed envelopes.

A complete signed (in ink) offer package must be delivered to the University of Rhode Island Purchasing Office by the time and date specified for the opening of responses in a sealed envelope.

Bid responses must be submitted on the URI bid solicitation forms provided, indicating brand and part numbers of items offered, as appropriate. Bidders must submit detailed cuts and specs on items offered as equivalent to brands requested WITH THE OFFER. Bidders must be able to submit samples if requested.

Documents misdirected to other State or University locations or which are not present in the University of Rhode Island Purchasing Office at the time of opening for whatever cause will be deemed to be late and will not be considered. For the purposes of this requirement, the official time and date shall be that of the time clock in the reception area of the University of Rhode Island Purchasing Office. Postmarks shall not be considered proof of timely submission.

RIVIP SOLICITATIONS. To assure maximum access opportunities for users, public bid solicitations shall be posted on the RIVIP for a minimum of seven days and no amendments shall be made within the last five days before the date an offer is due. Except when access to the Web Site has been severely curtailed and it is determined by the Purchasing Agent that special circumstances preclude extending a solicitation due date, requests to mail or fax hard copies of solicitations will not be honored.

PRICING. Offers are irrevocable for sixty (60) days from the opening date (or such other extended period set forth in the solicitation), and may not be withdrawn, except with the express permission of the University Purchasing Agent. All pricing will be considered to be firm and fixed unless otherwise indicated. The University of Rhode Island is exempt from Federal excise taxes and State Sales and Use Taxes. Such taxes shall not be included in the bid price.

ALL PRICES QUOTED ARE FOB DESTINATION.

DELIVERY and PRODUCT QUALITY. All offers must define delivery dates for all items; if no delivery date is specified, it is assumed that immediate delivery from stock will be made. The contractor will be responsible for delivery of materials in first class condition. Rejected materials will be at the vendor's expense.

PREVAILING WAGE, OSHA SAFETY TRAINING and APPRENTICESHIP REQUIREMENTS. Bidders must comply with the provisions of the Rhode Island labor laws, including R.I. Gen. Laws §§ 37-13-1 et seq. and occupational safety laws, including R.I. Gen. Laws §§ 28-20-1 et seq. These laws mandate for public works construction projects the payment of prevailing wage rates, the implementation and maintenance of occupational safety standards, and for projects with a minimum value of \$1 Million, the employment of apprentices. The successful Bidder must submit certifications of compliance with these laws from each of its subcontractors prior to their commencement of any work. Prevailing wage rates, apprenticeship requirements, and other workforce and safety regulations are accessible at www.dlt.ri.gov.

PUBLIC RECORDS. Offerors are advised that all materials submitted to the University for consideration in response to this solicitation will be considered without exception to be Public Records pursuant to Title 38 Chapter 2 of the Rhode Island General Laws, and will be released for inspection immediately upon request once an award has been made. Offerors are encouraged to attend public bid/RFP openings to obtain information; however, bid/RFP response summaries may be reviewed after award(s) have been made by visiting the Rhode Island Vendor Information Program (RIVIP) at www.purchasing.ri.gov > Solicitation Opportunities > Other Solicitation Opportunities. Telephone requests for results will not be honored. Written requests for results will only be honored if the information is not available on the RIVIP.

Award will be made to the responsive and responsible offeror quoting the lowest net price in accordance with specifications, for any individual item(s), for major groupings of items, or for all items listed, at the University's sole option.

BID SURETY. Where bid surety is required, bidder must furnish a bid bond or certified check for 5% of the bid total with the bid, or for such other amount as may be specified. Bids submitted without a required bid surety will not be considered.

SPECIFICATIONS. Unless specified “no substitute”, product offerings equivalent in quality and performance will be considered (at the sole option of the University) on the condition that the offer is accompanied by detailed product specifications. Offers which fail to include alternate specifications may be deemed nonresponsive.

VENDOR AUTHORIZATION TO PROCEED. When a purchase order, change order, contract/agreement or contract/agreement amendment is issued by the University of Rhode Island, no claim for payment for services rendered or goods delivered contrary to or in excess of the contract terms and scope shall be considered valid unless the vendor has obtained a written change order or contract amendment issued by the University of Rhode Island Purchasing Office PRIOR to delivery.

Any offer, whether in response to a solicitation for proposals or bids, or made without a solicitation, which is accepted in the form of an order OR pricing agreement made in writing by the University of Rhode Island Purchasing Office, shall be considered a binding contract.

REGULATIONS, GENERAL TERMS AND CONDITIONS GOVERNING STATE AND THE UNIVERSITY OF RHODE ISLAND CONTRACTS. This solicitation and any contract or purchase order arising from it are issued in accordance with the specific requirements described herein, and the State’s [Purchasing Laws](#) and the [RI Division of Purchases Procurement Regulations and General Conditions of Purchase](#).

EQUAL EMPLOYMENT OPPORTUNITY. Compliance certificate and agreement procedures will apply to all awards for supplies or services valued at \$10,000 or more. Minority Business Enterprise policies and procedures, including subcontracting opportunities as described in Title 37 Chapter 14.1 of the Rhode Island General Laws also apply.

PERFORMANCE BONDS. Where indicated, successful bidder must furnish a 100% performance bond and labor and payment bond for contracts subject to Title 37 Chapters 12 and 13 of the Rhode Island General Laws. All bonds must be furnished by a surety company authorized to conduct business in the State of Rhode Island. Performance bonds must be submitted within 21 calendar days of the issuance of a tentative notice of award.

DEFAULT and NON-COMPLIANCE Default and/or non-compliance with the requirements and any other aspects of the award may result in withholding of payment(s), contract termination, debarment, suspension, or any other remedy necessary that is in the best interest of the state/University of Rhode Island.

COMPLIANCE Vendor must comply with all applicable federal, state and local laws, regulations and ordinances.

SPRINKLER IMPAIRMENT AND HOT WORK. The Contractor agrees to comply with the practices of the State’s Insurance carrier for sprinkler impairment and hot work. Prior to performing any work, the Contractor shall obtain the necessary information for compliance from the Risk Management Office at the Department of Administration or the Risk Management Office at the University of Rhode Island.

Each bid proposal for a *public works project* must include a “public copy” to be available for public inspection upon the opening of bids. **Bid Proposals that do not include a copy for public inspection will be deemed nonresponsive.**

For further information on how to comply with this statutory requirement, see [R.I. Gen. Laws §§ 37-2-18\(b\) and \(j\)](#). Also see State of Rhode Island Procurement Regulation 5.11 at : <https://ridop.ri.gov/about-us/procurement-statutes-and-regulations>

SECTION 2 – DISCLOSURES

ALL CONTRACT AWARDS ARE SUBJECT TO THE FOLLOWING DISCLOSURES & CERTIFICATIONS

Offerors must respond to every disclosure statement. A person authorized to enter into contracts must sign the offer and attest to the accuracy of all statements.

Indicate Yes (Y) or No (N):

____1 State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been subject to suspension or debarment by any federal, state, or municipal government agency, or the subject of criminal prosecution, or convicted of a criminal offense with the previous five (5) years. If Yes, then provide details below.

____2 State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has had any contracts with a federal, state or municipal government agency terminated for any reason within the previous five (5) years. If Yes, then provide details below.

____3 State whether your company or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been fined more than \$5000 for violation(s) of Rhode Island environmental laws by the Rhode Island Department of Environmental Management within the previous five (5) years. If Yes, then provide details below.

____4 State whether any officer, director, manager, stockholder, member, partner, or other owner or principal of the Bidder is serving or has served within the past two calendar years as either an appointed or elected official of any state governmental authority or quasi-public corporation, including without limitation, any entity created as a legislative body or public or state agency by the general assembly or constitution of this state. If Yes, then provide details below.

IF YOU HAVE ANSWERED “YES” TO QUESTIONS #1 – 4 PROVIDE DETAILS/EXPLANATION IN AN ATTACHED STATEMENT. INCOMPLETE CERTIFICATION FORMS SHALL BE GROUNDS FOR DISQUALIFICATION OF OFFER.

SECTION 3 - OWNERSHIP DISCLOSURE

Vendors must provide all relevant information. Bid proposals submitted without a complete response may be deemed nonresponsive.

If the vendor is privately held, the vendor shall provide ownership information below.

List each officer, director, manager, stockholder, member, partner, or other owner or principle of the Bidder, and each intermediate parent company and the ultimate parent company of the Bidder. For each individual, provide his or her name, business address, principal occupation, position with the Vendor, and the percentage of ownership, if any, he or she holds in the Vendor, and each intermediate parent company and the ultimate parent company of the Vendor.

If the company is publicly held, the vendor may provide owner information about only those stockholders, members, partners, or other owners that hold at least 10% of the record or beneficial equity interests of the vendor; otherwise, complete ownership disclosure is required.

SECTION 4 - CERTIFICATIONS

Bidders must respond to every statement. Bid proposals submitted without a complete response may be deemed nonresponsive.

Indicate "Y" (Yes) or "N" (No), and if "No," provide details below.

THE VENDOR CERTIFIES THAT:

___1 I/we certify that I/we will immediately disclose, in writing, to the University Purchasing Agent any potential conflict of interest which may occur during the course of the engagement authorized pursuant to this contract.

___2 I/we acknowledge that, in accordance with (1) Chapter §37-2-54(c) of the Rhode Island General Laws "no purchase or contract shall be binding on the state or any agency thereof unless approved by the Department [of Administration] or made under general regulations which the Chief Purchasing Officer may prescribe," and (2) RIGL section §37-2-7(16) which identifies the URI Board of Trustees as a public agency and gives binding contractual authority to the University Purchasing Agent, including change orders and other types of contracts and under State Purchasing Regulation 8.2.B any alleged oral agreement or arrangements made by a bidder or contractor with any agency or an employee of the University of Rhode Island may be disregarded and shall not be binding on the University of Rhode Island.

___3 I/we certify that I or my/our firm possesses all licenses required by Federal and State laws and regulations as they pertain to the requirements of the solicitation and offer made herein and shall maintain such required license(s) during the entire course of the contract resulting from the offer contained herein and, should my/our license lapse or be suspended, I/we shall immediately inform the University of Rhode Island Purchasing Agent in writing of such circumstance.

___4 I/we certify that I/we will maintain required insurance during the entire course of the contract resulting from the offer contained herein and, should my/our insurance lapse or be suspended, I/we shall immediately inform the University of Rhode Island Purchasing Agent in writing of such circumstance.

___5 I/we certify that I/we understand that falsification of any information herein or failure to notify the University of Rhode Island Purchasing Agent as certified herein may be grounds for suspension, debarment and/or prosecution for fraud.

___6 I/we acknowledge that the provisions and procedures set forth in this form apply to any contract arising from this offer.

___7 I/we acknowledge that I/we understand the State's Purchasing Laws (§37-2 of the General Laws of Rhode Island) and the [RI Division of Purchases Regulations](#) apply as the governing conditions for any contract or purchase order I/we may receive from the University of Rhode Island, including the offer contained herein.

___8 I/we certify that the bidder: (i) is not identified on the General Treasurer's list, created pursuant to R.I. Gen. Laws § 37-2.5-3, as a person or entity engaging in investment activities in Iran described in § 37-2.5-2(b); and (ii) is not engaging in any such investment activities in Iran.

___9 If the product is subject to Department of Commerce Export Administration Regulations (EAR) or International Traffic in Arms Regulations (ITAR), please provide the Export Control Classification Number (ECCN) or the US Munitions List (USML) Category: _____

___10 I/we certify that the above information is correct and complete.

IF YOU ARE UNABLE TO CERTIFY YES TO QUESTIONS #1 – 8 and 10 OF THE FOREGOING, PROVIDE DETAILS/EXPLANATION IN AN ATTACHED STATEMENT. INCOMPLETE CERTIFICATION FORMS SHALL BE GROUNDS FOR DISQUALIFICATION OF OFFER.

Signature below commits vendor to the attached offer and certifies (1) that the offer has taken into account all solicitation amendments where applicable, (2) that the above statements and information are accurate and that vendor understands and has complied with the requirements set forth herein.

Vendor/Company Name; _____

Vendor's Signature: _____ Bid Number: _____ Date: _____
(Person Authorized to enter into contracts; signature must be in ink) (if applicable)

Print Name and Title of Company official signing offer

SECTION 1: INTRODUCTION

The URI Board of Trustees/University of Rhode Island is soliciting proposals for a design firm to provide 10% design and bridging documents for use in the future bidding of a new Water Treatment Facility on the URI Kingston Campus. It is the University's intent to construct a new water treatment facility at the 30 Acre Pond Road site to reduce PFAS to non-detect levels. The bridging documents created as a result of this award will be used to solicit for a design- build or design-build-operate project. This RFP is seeking proposals from qualified OFFERORS to provide 10% design and bridging documents in accordance with the terms of this Request for Proposal ("RFP") and the General Terms and Conditions of Purchase indicated in the attached URI Bidder Certification Form.

The initial contract period will begin approximately December 1, 2023, for 1 year. Contracts may be renewed for up to 1 additional 12-month period based on vendor performance and the availability of funds.

This is a Request for Proposals, not a Request for Quotes. Responses will be evaluated on the basis of the relative merits of the proposal, in addition to cost; there will be no public opening and reading of responses received by the University of Rhode Island Purchasing Department pursuant to this solicitation, other than to name those offerors who have submitted proposals.

Instructions and Notifications to Offerors

1. Potential offerors are advised to review all sections of this RFP carefully and to follow instructions completely, as failure to make a complete submission as described elsewhere herein may result in rejection of the proposal.
2. Alternative approaches and/or methodologies to accomplish the desired or intended results of this RFP are solicited. However, proposals which depart from or materially alter the terms, requirements, or scope of work defined by this RFP may be rejected as being non-responsive.
3. All costs associated with developing or submitting a proposal in response to this RFP or for providing oral or written clarification of its content shall be borne by the vendor. The University assumes no responsibility for these costs even if the RFP is cancelled or continued.
4. Proposals are considered to be irrevocable for a period of not less than 180 days following the opening date, and may not be withdrawn, except with the express written permission of the University of Rhode Island Purchasing Agent.
5. All pricing submitted will be considered to be firm and fixed unless otherwise indicated in the proposal.
6. It is intended that an award pursuant to this RFP will be made to a prime vendor, or prime vendors in the various categories, who will assume responsibility for all aspects of the work. Subcontracts are permitted, provided that their use is clearly indicated in the vendor's proposal, and the subcontractor(s) to be used is identified in the proposal.

7. The purchase of goods and/or services under an award made pursuant to this RFP will be contingent on the availability of appropriated funds.
8. Vendors are advised that all materials submitted to the University of Rhode Island Purchasing Department for consideration in response to this RFP may be considered to be public records, as defined in R. I. Gen. Laws § 38-2-1, *et seq.*, and may be released for inspection upon request, once an award has been made.

Any information submitted in response to this RFP that a vendor believes are trade secrets or commercial or financial information which is of a privileged or confidential nature should be clearly marked as such. The vendor should provide a brief explanation as to why each portion of information that is marked should be withheld from public disclosure. Vendors are advised that the University of Rhode Island Purchasing Department may release records marked confidential by a vendor upon a public records request if the University determines the marked information does not fall within the category of trade secrets or commercial or financial information which is of a privileged or confidential nature. Vendors are also advised that responses marked confidential in their entirety may be deemed non-responsive. **Inclusion of a “confidentiality header/footer” on entire pages of submissions (or all pages) is NOT considered an acceptable way to flag confidential information (flags must be very specific and a specific justification explaining how the information meets the APRA exception must be provided with it) and will not be recognized by URI.**

9. Interested parties are instructed to peruse the Division of Purchases website on a regular basis, as additional information relating to this solicitation may be released in the form of an addendum to this RFP.
10. By submission of proposals in response to this RFP vendors agree to comply with R. I. General Laws § 28-5.1-10 which mandates that contractors/subcontractors doing business with the State of Rhode Island exercise the same commitment to equal opportunity as prevails under Federal contracts controlled by Federal Executive Orders 11246, 11625 and 11375.

Vendors are required to ensure that they, and any subcontractors awarded a subcontract under this RFP, undertake or continue programs to ensure that minority group members, women, and persons with disabilities are afforded equal employment opportunities without discrimination on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age, national origin, or disability.

Vendors and subcontractors who do more than \$10,000 in government business in one year are prohibited from engaging in employment discrimination on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age, national origin, or disability, and are required to submit an “Affirmative Action Policy Statement.”

Vendors with 50 or more employees and \$50,000 or more in government contracts must prepare a written “Affirmative Action Plan” prior to issuance of a purchase order.

- a. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation.
- b. Vendors further agree, where applicable, to complete the “Contract Compliance Report” (as well as the “Certificate of Compliance”) <https://dedi.ri.gov/divisions-units/equal-opportunity-office/contract-compliance-related-forms> and submit both documents, along with their Affirmative Action Plan or an Affirmative Action Policy Statement, prior to issuance of a purchase order. For public works projects vendors and all subcontractors must submit a “Monthly Utilization Report” to the ODEO/State Equal Opportunity Office, which identifies the workforce actually utilized on the project.

For further information, contact the Rhode Island Equal Employment Opportunity Office, at 222-3090 or via e-mail at <https://dedi.ri.gov/divisions-units/equal-opportunity-office> .

11. In accordance with R. I. Gen. Laws § 7-1.2-1401 no foreign corporation has the right to transact business in Rhode Island until it has procured a certificate of authority so to do from the Secretary of State. This is a requirement only of the successful vendor(s). For further information, contact the Secretary of State at (401-222-3040).
12. In accordance with R. I. Gen. Laws §§ 37-14.1-1 and 37-2.2-1 it is the policy of the State to support the fullest possible participation of firms owned and controlled by minorities (MBEs) and women (WBEs) and to support the fullest possible participation of small disadvantaged businesses owned and controlled by persons with disabilities (Disability Business Enterprises a/k/a “DisBE”)(collectively, MBEs, WBEs, and DisBEs are referred to herein as ISBEs) in the performance of State procurements and projects. As part of the evaluation process, vendors will be scored and receive points based upon their proposed ISBE utilization rate in accordance with 150-RICR-90-10-1, “Regulations Governing Participation by Small Business Enterprises in State Purchases of Goods and Services and Public Works Projects”. As a condition of contract award vendors shall agree to meet or exceed their proposed ISBE utilization rate and that the rate shall apply to the total contract price, inclusive of all modifications and amendments. Vendors shall submit their ISBE participation rate on the enclosed form entitled “MBE, WBE and/or DisBE Plan Form”, which shall be submitted in a separate, sealed envelope as part of the proposal. ISBE participation credit will only be granted for ISBEs that are duly certified as MBEs or WBEs by the State of Rhode Island, Department of Administration, Office of Diversity, Equity and Opportunity or firms certified as DisBEs by the Governor’s Commission on Disabilities. The current directory of firms certified as MBEs or WBEs may be accessed at <https://dedi.ri.gov/divisions-units/minority-business-enterprise-compliance-office> . Information regarding DisBEs may be accessed at www.gcd.ri.gov.

For further information, visit the Office of Equity, Diversity and Inclusion’s website, at <https://dedi.ri.gov/> and see R.I. Gen. Laws Ch. 37-14.1, R.I. Gen. Laws Ch. 37-2.2, and 150-RICR-90-10-1.

13. N/A

14. N/A

15. Architectural and Engineering Services:

- a. Persons or firms practicing Architectural and/or Engineering Services in the State of Rhode Island must possess a proper registration and Certificate of Authorization in accordance with Rhode Island General Laws.
- b. A copy of the current RI Certificate of Authorization for the firm and current Rhode Island registrations(s) for the individual(s) who would perform the work must be included behind the front page of each copy of the proposal.
- c. The Board of Design Professionals can be contacted as follows:
Division of Design Professionals
1511 Pontiac Avenue
Cranston RI 02857
Phone: (401) 462-9530
Fax: (401) 462-9532
<http://www.bdp.state.ri.us/>
- d. The respondent's Proposal may be disqualified and removed from consideration if the proposal fails to include the required current Rhode Island Certificate of Authorization for the firm and current Rhode Island registration(s).

16. N/A

17. N/A

18. N/A

19. N/A

Restrictions on Communications – No Bidder-initiated contact, other than normal business activities not associated with this procurement, will be allowed after the issuance of this RFP between Bidders and University employees or their agents regarding this solicitation, except with express permission of the University Purchasing Department. Any such other contact may be considered improper and may disqualify a Bidder from further consideration. The appropriate channel to direct any communications, concerns or questions regarding the RFP is through the email address provided herein.

If a Bidder fails to notify the University of Rhode Island Purchasing Department contact person of an error in this RFP which was known or reasonably should have been known to the Bidder, the Bidder shall submit a response at the Bidder's own risk. If awarded the contract, the Bidder shall not be entitled to additional compensation or performance time by reason of the error or its later correction.

SECTION 2: BACKGROUND

Project Vision and Approach

The University of Rhode Island (URI) will ultimately seek to engage qualified vendors to design, build, operate and maintain a new potable water treatment facility to service its campus in Kingston, Rhode Island. The awarded vendor from this RFP will work closely with the University to establish the bridging documents to further the programming, design and construction of the permanent water treatment facility. The current URI water system is supplied by three gravel pack wells located in the

Chipuxet Aquifer. These wells were installed between 1949 and 1974 and have seen various upgrades over the years to ensure reliability. Current total pump capacity is 2.5 million gallons per day (MGD) or 2,300 gallons per minute (GPM) with well capacity capable of 28.1 MGD.

During the last few years, the Environmental Protection Agency (EPA) and the Rhode Island Department of Health (RIDOH) published guidance of per- and polyfluoroalkyl (PFAS) compounds in drinking water systems. URI has responded by assessing our drinking water supply and have identified PFAS source areas on our Kingston campus. In July 2022, the Rhode Island General Assembly passed legislation regarding the removal of PFAS from drinking water supplies, and URI has continued to assess short term and permanent solutions to achieve new compliance limits within the newly established legislative timelines. Current State Law requires compliance by July 1, 2023.

URI envisions the design, construction, and operation & maintenance of a new water treatment facility (WTF) as a significant expansion of its current water supply operations. The vendor will also manage the operation and maintenance of the supply wells. URI expects to retain management of its distribution and storage systems with its existing staff and other professional, technical, and financial resources. URI envisions a minimum of three full time plant operating staff that will also have duties within the water distribution system and URI Utilities department. While URI expects to retain ownership of this new WTF, URI is open to discussions of a Public-Private Partnership (P3) or similar mechanisms to finance the design, permitting, construction and ongoing maintenance of this project. URI is seeking funding through the Rhode Island Infrastructure Bank to fund our capital costs.

Existing URI Water Supply System Characteristics

Sources

The water system is supplied by three gravel pack wells located in the Chipuxet Aquifer. These wells were installed between 1949 and 1974 and have seen various upgrades over the years to ensure reliability. Current total pump capacity is 2.5 million gallons per day, or 2300 gallons per minute.

Treatment

In June 2000 URI began treatment for corrosion control and pH adjustment by adding hydrated lime to its water system. In 2010 URI voluntarily installed hypo-chlorination. A supervisory control and data acquisition (SCADA) system continuously monitors water quality and control of system operation.

Distribution and Storage

The distribution system is composed of approximately 15 miles of pipe. Ninety percent of the pipe is less than 50 years old and constructed of lined ductile iron pipe. Water is stored in a 1-million- gallon elevated storage tank. This tank is undergoing an interim coating in the fall of 2022 and is expected to be fully restored within the next several years. URI also has contemplated designing and building a new water tower on campus to address resiliency of our water supply system. The design of that project is expected to commence in early 2023.

Interconnections

URI maintains three interconnections with Kingston Water District for emergency supply.

Population and Projections

The boundaries of the service area include approximately 1,200 acres of area. The current water system serves a population of 19,354 during the academic school year. In the five-year planning horizon we project construction of a new 500 bed dormitory and adding approximately 270,000 square feet. This equates to an increase in our annual demand of 17.5 million gallons per year. Beyond this construction the twenty-year planning horizon sees numerous renovations of existing buildings that do not substantially add square footage, so any increase in demand is negligible.

Water Use

URI provides service for all water needs including, residential, academic, research, irrigation, and operations. On average the URI supplies approximately 0.377 MGD. This average has decreased from a peak of 0.491 MGD over the past 15 years while the URI has added substantially to the student body and building square footage.

Peak daily demand can reach 0.669 MGD, typically in September. URI is the only customer, and our largest user is our steam boiler plant. The boiler plant can consume up to twenty percent of daily production, but average annual consumption is about eight percent. The URI service area is limited to the Kingston campus and surrounding area owned by URI and used for support and other facilities of URI. The boundaries of the service area include approximately 1,200 acres of area.

URI has a comprehensive campus wide conservation program where cost savings are used to fund additional improvements. This program has made vast improvements to URI's steam distribution system that has reduced make-up water demand. URI regularly performs leak surveys, estimates un-accounted for water, and conducts leak surveys if un-accounted for water exceeds 10%. Water use has decreased nearly 10% over the past ten years while at the same time the campus has added 500 beds and 425,000 square feet of academic space.

Metering

Each production well is equipped with a venturi style water meter. These meters are continuously monitored, and operators log daily measurements as well. URI supplies water only to itself. As the campus grew and buildings were added, water meters were not installed. Starting in 2004 most new buildings included water meters in the design. As part of the URI's Demand Management Strategy that was approved by the Water Resource Board staff in 2014, URI reads existing meters quarterly and uses these figures to estimate water use in non-metered buildings. URI then calculates non-accounted water. URI requires water meters in all new construction and significant building renovations.

Demand Management

URI has been active in utilizing various elements of demand management to encourage efficient use of water. Our 2015 average per capita usage was 20 gallons/person/day. URI reviews quarterly meter readings and investigate buildings with abnormal use. URI is implementing the following actions to improve the efficient use of water:

- Assess the end use fixtures in all buildings.
- Identify improvement actions for fixture replacement/upgrading.
- Reduce/eliminate once through water use fixtures for air- conditioning, food preparation, etc.
- Improve boiler plant condensate return efficiency,
- Irrigation control using sensors and/or timers and
- Public education program to educate freshmen on conservation.

URI monitors daily, monthly, and annual water production and calculates water use for each building quarterly in accordance with the approved Demand Management Strategy. This information is then used to calculate unaccounted for water.

URI performs triennial leak detection surveys to ensure water efficiency. Furthermore, if annual unaccounted water is greater than 10% a leak survey will be conducted in accordance with AWWA Manual 36.

Supply and Demand Management

URI has taken active measures to protect its water supply wells and monitor and mitigate future contaminants of concern. Improvements to infrastructure and conservation measures has reduced annual demand below 1968 levels when the campus population was half what it is today. Current per capita usage is 20 gallons per day per person.

Available Water and Alternative Supplies

The existing three wells that serve the URI can pump 2.5 MGD or 912 MG per year. At the present time, URI considers its current sources to be sufficient to meet future demands for the next twenty years. However, URI recognizes that its current wells are located down gradient of campus, and that there is moderate risk to groundwater contamination from campus activities. As a result, URI is seeking an alternate well site from the Rhode Island Water Resource Board located on Wolf Rock Road in Exeter, RI. This site draws from the Chipuxet aquifer but up stream of URI.

Kingston Water District draws from the Chipuxet aquifer from three shallow wells located downstream from URI. URI maintains three interconnections with KWD. KWD notes that they could provide water to URI on a long-term basis, but upgrades to their treatment systems would be necessary.

Anticipated Future Demands

Current annual demand is 137 MG. Based upon information from Campus Planning and Design, URI expects water annual demand to increase to 156 MG by 2023 and 161 MG by 2034 or an increase of existing demand of approximately 64,109 gallons/day. Much of this added demand will occur in the next five years with the addition of a new 500 bed residence hall and expansion of existing buildings. URI will continue to make infrastructure improvements and conservation efforts to ensure system resiliency and efficiency.

Supply Augmentation Studies

URI has been actively pursuing improvement to its existing supply wells including well rehabilitation, well redevelopment, new pumps and motors, new well stations, treatment system improvements, and installation of well field piping to allow blending and treatment of all sources. URI maintains a library of reports and publications on the Chipuxet Aquifer that are used to support design and operation of the supply wells.

The URI is seeking alternate remote well fields that could supply the URI in the event the existing well field is contaminated. Lastly, URI maintains three interconnections with Kingston Water District that can supply water to meet the demands of URI. Kingston Water District is pursuing interconnection with Veolia of Wakefield that is interconnected with utilities that are supplied from outside the Chipuxet Aquifer.

- URI has already received a Pilot Test Report completed by Woodard & Curran and will be shared after selecting a vendor.

Water Quality Protection

URI has developed a comprehensive Wellhead Protection Program to protect and maintain water quality. This plan targets and tracks emerging contaminants, develops construction standards and development restrictions within the wellhead protection area, develops road salt and fertilizer management programs, targets land for purchase or protection and coordinates with URI Planning and the Town of South Kingstown Planning Department. URI has also developed a Groundwater Protection Policy that is currently being incorporated into the Campus Master Plan.

System Management

Water is critical to URI achieving its educational mission. As a result, the URI provides the necessary resources to ensure the water system is resilient, compliant with state and federal requirements and is effectively operated and maintained. URI performs proactive planning, maintenance, and operational programs to ensure interruption-free service to the system users. URI maintains an inventory of replacement parts and contracts for emergency service to make any necessary repairs.

Emergency Management

URI maintains an Emergency Response Plan that identifies and provides critical system personnel and emergency contacts, critical system information, damage assessment and response procedures and various forms for logging information during an emergency. This plan is prepared to be an operational guide during an emergency and is updated annually.

Drought Management

URI, because of the academic calendar, requires 30% less water during the summer periods of a year when drought conditions would be most severe. Nevertheless, URI monitors drought conditions and has established triggers that implement drought management strategies. Management strategies include adjustments to well pumping rates and cycles, issuing drought advisories and restrictions, restricting water use, restricting irrigation and vehicle washing.

Financial Management

URI's water system operates as an organizational element of the Department of Facilities Services of the URI of Rhode Island. All operations of URI are financed from the operational budget of the University of Rhode Island. No specific charges or user fees are levied to users of the water system. The budget for the water system is prepared to incorporate all the costs of operations and maintenance.

Governance

The University is governed by a 17 member [Board of Trustees](#). The Board is a public body that appoints the president and is responsible for establishing performance goals for the University, its buildings, employees, property, and approving the budget.

Coordination

URI's Facilities Group is involved in the planning for URI's growth. URI has updated its wellhead protection plan and working to incorporate this plan in the URI Master Plans. Implementation of this plan involves URI, Town of South Kingstown, Town of Exeter, the Water Resource Board and local organizations and land holders. URI works with these entities as needed to ensure the protection and viability of the Chipuxet Aquifer.

A. PFAS Source Assessment

The University of Rhode Island retained Woodard & Curran to assess potential PFAS source areas building on the developed conceptual site model, and to evaluate alternatives to support the University in selecting an approach to meet PFAS interim drinking water quality standards and USEPA Health Advisories. Investigative activities included the collection of 68 soil and sediment samples for laboratory analysis from 31 sample locations, the collection of groundwater samples from 22 monitoring wells, and the collection of one surface water sample.

Laboratory analytical results for soil samples collected during this investigation indicated that PFAS compounds were detected at 26 out of 31 sample locations, and in two out of four composite catch basin samples at concentrations above the laboratory method reporting limit. Data was evaluated for comparison purposes only against the MassDEP MCP S-1/GW-1 standards, which are conservatively designed to be protective of potential leaching to underlying groundwater that is in a Current or Potential Drinking Water Source Area. Concentrations of PFAS above the established S-1/GW-1 standards are indicative of the potential for PFAS to leach from soil to groundwater. Sitewide, there were 43 instances of PFAS compounds detected above these S-1/GW-1 standards, present at 15 sample locations and including five of the six PFAS compounds to be included under the proposed Rhode Island regulations.

Laboratory analytical results for surface water and groundwater samples collected during the PFAS Source Area investigation indicated that PFAS compounds were detected at twenty-one of twenty-two sample locations. Data was compared to the proposed State of Rhode Island interim PFAS drinking water standard of 20 ppt. At sixteen locations, the reported concentrations were above this level.

The results of the groundwater samples collected from monitoring wells MW-21 and MW-22 represent one of the highest and the highest, respectively, of concentrations of PFAS compounds reported in groundwater samples collected from the Site. Further their signatures, as presented in the radar diagrams are representative of AFFF and are consistent with what has been observed in

monitoring wells located further downgradient. The results of the groundwater samples collected from monitoring wells continue to support that AFFF remains as the predominant source of PFAS impacts at the Site.

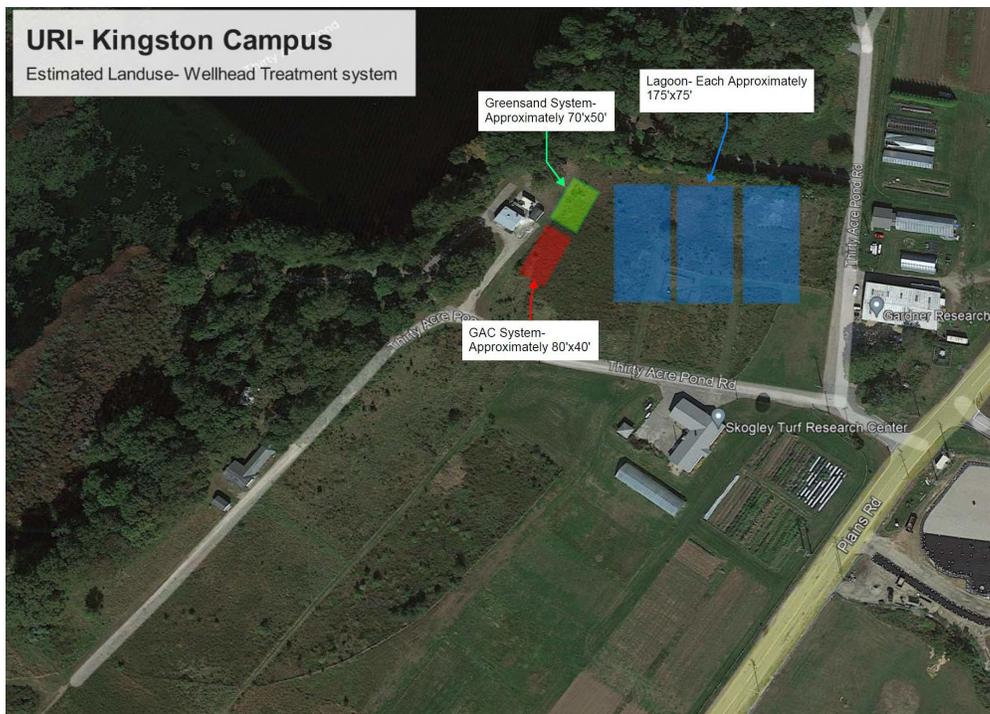
The makeup of the individual PFAS compounds (again limited to the six PFAS compounds that Rhode Island has identified as PFAS Contaminants) within the groundwater analytical results from studies conducted throughout the well field study area, were compared to the makeup of the individual PFAS compounds within the soil data from samples collected during the investigations described herein. This approach utilized the development of radar diagrams that incorporates fourteen PFAS compounds indicative of sources including AFFF, manufacturing and landfill scenarios. The development and review of these diagrams not only allows for a forensic evaluation but also for an evaluation of commonalities.

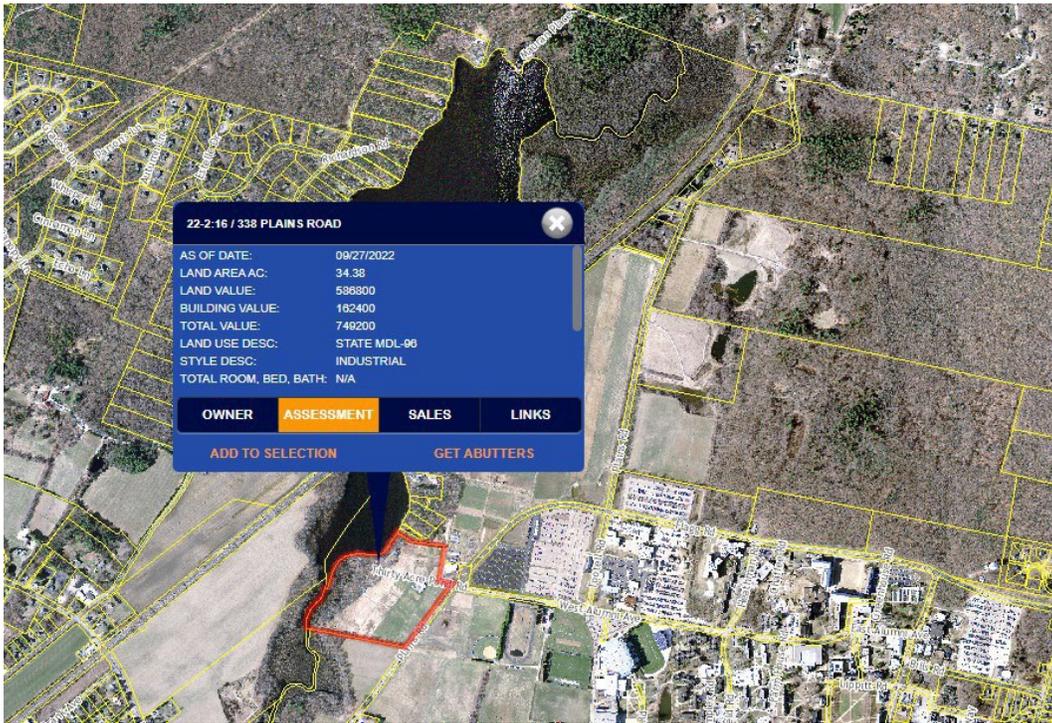
B. Current Status for PFAS compliance

The University is in the process of finalizing a design-build contract with Woodard & Curran to implement a new interim water treatment system. The intent of this contract is to remove PFAS from our drinking water supply as quickly as possible (by no later than July 2024) for our Kingston campus customers. To supplement this effort, the University is considering other point-of-service dispensing options and a communication plan to emphasize our collective efforts for short term and long-term compliance. The University is in regular communication with regulators at both RI Department of Health and Department of Environmental Management to ensure our critical paths for permitting are well understood and adhered to.

Conceptual Overview

The conceptual location of the new water treatment facility is on the eastern shore of Thirty Acre Pond on the west end of the Kingston campus. This is the area where the existing supply wells are located. The images below identify the conceptual site and parcel information.





Conceptual Water Treatment Facility Layout, adjacent to URI's existing three wells.

SECTION 3: SCOPE OF WORK AND REQUIREMENTS

General Scope of Work

This RFP is targeted to vendors that are experts in the public drinking water supply industry. Vendors that have experience and resources for the design, construction, operation, and maintenance of municipal-style public water supply treatment plants with PFAS treatment experience are preferred. Individual vendors that provide expertise in the design, construction, maintenance, and repair of public water supply treatment plants are encouraged to form strategic partnerships to assist the URI in attaining its goal of a high-quality potable water treatment plant at the lowest reasonable initial capital cost and ongoing operation and maintenance costs.

The Bridging Documents that are required through this RFP must include the following deliverables:

- **Planning/Programming:** Affirm the planning projections for water production, raw water quality, water demand, and interoperability with adjacent water suppliers (Kingston Water District and Suez Water South Kingstown). Affirm optimal location of permanent water treatment facility given the interim water treatment system that is currently under negotiation.
- **Basis of Design (BOD):** The design agent must develop the BOD through narrative and graphical content and adequately describe the rationales and methodologies used in prior developed feasibility studies and reports that establish a permanent water treatment facility that removes PFAS and other constituents of concerns to a non-detect level. The BOD must be organized to address each discipline and must have a description of the significant products used in the design. The University anticipates that use of Granulated Activated Carbon (GAC) is the leading technology that will be in place for our interim water treatment system, and the BOD should leverage that technology for the

permanent water treatment facility.

- **Drawings, Specifications, and performance metrics:** Drawings and specifications for all critical systems must be developed that demonstrate the technical approaches for meeting the University's design intent, mitigating identified risks, and providing a constructable, commissionable, operable, and maintainable model for the final design to be executed by a subsequent DB or DBO vendor. Performance metrics should include, but not be limited to the initial capital costs for various assemblies and system and the regular operations & maintenance costs for said assemblies and systems.
- **Calculations to support Bridging Document Design:** The selected vendor must develop calculations and related documents that describe the capacities, limitations, and assumptions that the University requires through this RFP.
- **Prepare constructability analysis and estimating:** This work must include validation of availability and cost of systems (with consideration given to lead times, reasonable alternative systems, and other related labor requirements for this specific assignment.

SECTION 4: PROPOSAL

A. Technical Proposal

Narrative and format: The proposal should address specifically each of the following elements:

1. **Staff Qualifications** – Provide staff resumes/CV and describe qualifications and experience of key staff who will be involved in this project.
2. **Capability, Capacity, and Qualifications of the Offeror** - Please provide a detailed description of the Vendor's experience. A list of relevant client references must be provided, to include client names, addresses, phone numbers, dates of service and type(s) of service(s) provided.
3. **Work Plan** – The work plan description shall include a detailed proposed project schedule (by task and subtask), a list of tasks, activities, and/or milestones that will be employed to administer the project, the assignment of staff members and concentration of effort for each, and the attributable deliverables for each and will identify and describe what type of tutor training methodology will be utilized in the program.
4. **Approach/Methodology** - This section shall describe the offeror's understanding of the University's requirements, including the result(s) intended and desired, the approach and/or methodology to be employed and a work plan for accomplishing the results proposed. The description of the approach shall discuss and justify the approach proposed to be taken for each task, and the technical issues that will or maybe confronted at each stage on the project.

B. Cost Proposal

Provide a cost proposal as defined in Attachment F.

C. ISBE Proposal

See Appendix A for information and the MBE, WBE, and/or Disability Business Enterprise Participation Plan form(s). Bidders are required to complete, sign and submit these forms with their overall proposal in a sealed envelope. Please complete separate forms for each MBE, WBE and/or Disability Business Enterprise subcontractor/supplier to be utilized on the solicitation.

SECTION 5: EVALUATION AND SELECTION

Proposals will be reviewed by a Technical Review Committee (“TRC”) comprised of staff from URI/State Agencies. The TRC first shall consider technical proposals.

Technical proposals must receive a minimum of 60 (85.7%) out of a maximum of 70 points to advance to the cost evaluation phase. Any technical proposals scoring less than 60 points shall not have the accompanying cost or ISBE participation proposals opened and evaluated. The proposal will be dropped from further consideration.

Technical proposals scoring 70 points or higher will have the cost proposals evaluated and assigned up to a maximum of 30 points in cost category bringing the total potential evaluation score to 100 points. After total possible evaluation points are determined ISBE proposals shall be evaluated and assigned up to 6 bonus points for ISBE participation.

The University of Rhode Island reserves the right to select the vendor(s) or firm(s) (“vendor”) that it deems to be most qualified to provide the goods and/or services as specified herein; and, conversely, reserves the right to cancel the solicitation in its entirety in its sole discretion.

The University of Rhode Island reserves the right to request vendor(s) or firm(s) (“vendor”) to clarify technical proposals.

Proposals shall be reviewed and scored based upon the following criteria:

Criteria	Possible Points
Staff Qualifications	15 Points
Capability, Capacity, and Qualifications	20 Points
Work Plan	15 Points
Approach / Methodology	20 Points
Total Possible Technical Points	70 Points
Cost proposal*	30 Points
Total Possible Evaluation Points	100 Points
ISBE Participation**	6 Bonus Points
Total Possible Points	106 Points

* Cost Proposal Evaluation:

The vendor with the lowest cost proposal shall receive one hundred percent (100%) of the available points for cost. All other vendors shall be awarded cost points based upon the following formula:

$$(\text{lowest cost proposal} / \text{vendor's cost proposal}) \times \text{available points}$$

For example: If the vendor with the lowest cost proposal (Vendor A) bids \$65,000 and Vendor B bids \$100,000 for monthly costs and service fees and the total points available are thirty (30), Vendor B's cost points are calculated as follows:

$$\$65,000 / \$100,000 \times 30 = 19.5$$

****ISBE Participation Evaluation:**

A. Calculation of ISBE Participation Rate

1. ISBE Participation Rate for Non-ISBE Vendors. The ISBE participation rate for non-ISBE vendors shall be expressed as a percentage and shall be calculated by dividing the amount of non-ISBE vendor's total contract price that will be subcontracted to ISBEs by the non-ISBE vendor's total contract price. For example, if the non-ISBE's total contract price is \$100,000.00 and it subcontracts a total of \$12,000.00 to ISBEs, the non-ISBE's ISBE participation rate would be 12%.
2. ISBE Participation Rate for ISBE Vendors. The ISBE participation rate for ISBE vendors shall be expressed as a percentage and shall be calculated by dividing the amount of the ISBE vendor's total contract price that will be subcontracted to ISBEs and the amount that will be self-performed by the ISBE vendor by the ISBE vendor's total contract price. For example, if the ISBE vendor's total contract price is \$100,000.00 and it subcontracts a total of \$12,000.00 to ISBEs and will perform a total of \$8,000.00 of the work itself, the ISBE vendor's ISBE participation rate would be 20%.

B. Points for ISBE Participation Rate:

The vendor with the highest ISBE participation rate shall receive the maximum ISBE participation points. All other vendors shall receive ISBE participation points by applying the following formula:

$$(\text{Vendor's ISBE participation rate} \div \text{Highest ISBE participation rate}) \\ \times \text{Maximum ISBE participation points)}$$

For example, assuming the weight given by the RFP to ISBE participation is 6 points, if Vendor A has the highest ISBE participation rate at 20% and Vendor B's ISBE participation rate is 12%, Vendor A will receive the maximum 6 points and Vendor B will receive $(12\% \div 20\%) \times 6$ which equals 3.6 points.

General Evaluation:

Points shall be assigned based on the vendor's clear demonstration of the ability to provide the requested goods and/or services. Vendors may be required to submit additional written information or be asked to make an oral presentation before the Technical Review Committee to clarify statements made in the proposal.

SECTION 6: QUESTIONS

Questions concerning this solicitation may be e-mailed to the University of Rhode Island Purchasing Department at URIPurchasing@uri.edu no later than the time and date indicated on page 1 of this solicitation. Please reference the reference RFP Number # **indicated on the cover sheet** on all correspondence. Questions should be submitted in a Microsoft Word attachment in a narrative format with no tables. Answers to questions received, if any, shall be posted on the Division of Purchases' website as an addendum to this solicitation. It is the responsibility of all interested parties to monitor the Division of Purchases website for any procurement related postings such as addenda. If technical assistance is required, call the Help Desk at (401) 574-8100.

SECTION 7: PROPOSAL CONTENTS

A. Proposals shall include the following:

1. One completed and signed **URI Bidder Certification Cover Form** (include in the Technical Proposal Original copy only). *Do not include in the Technical Proposal copies or Cost proposals.*
2.  **Technical Proposal** - describing the qualifications and background of the applicant and experience with and for similar projects, and all information described earlier in this solicitation. The technical proposal should be limited to six (6) pages (this excludes any appendices and as appropriate, resumes of key staff that will provide services covered by this request).
 - a. One (1) Electronic copy on a CD-R or USB, marked "Technical Proposal - Original".
 - b. One (1) printed paper copy, marked "Technical Proposal -Original" and signed.
3.  **Cost Proposal** - A *separate*, signed and sealed cost proposal reflecting the hourly rate, or other fee structure, proposed to complete all of the requirements of this project per the above template.
 - a. One (1) Electronic copy on a CD-R or USB, marked "Cost Proposal - Original".
 - b. One (1) printed paper copy, marked "Cost Proposal -Original" and signed.

4.  **ISBE Proposal** – A *separate*, signed and sealed Appendix A MBE, WBE, and/or Disability Business Enterprise Participation Plan. Please complete separate forms for each MBE/WBE or Disability Business Enterprise subcontractor/supplier to be utilized on the solicitation. ***Do not include any copies in the Technical proposals.***

5. N/A

B. Formatting of proposal response contents should consist of the following:

1. Formatting of CD-Rs or USB – Separate CD-Rs or USBs are required for the technical proposal and cost proposal. All CD-Rs and USBs submitted must be labeled with:
 - a. Vendor’s name
 - b. RFP #
 - c. RFP Title
 - d. Proposal type (e.g., technical proposal or cost proposal)
 - e. If file sizes require more than one CD-R or USB, multiple CD-Rs or USBs are acceptable. Each CD-R or USB must include the above labeling and additional labeling of how many CD-Rs or USBs should be accounted for (e.g., 3 CD-Rs are submitted for a technical proposal and each CD-R should have additional label of ‘1 of 3’ on first CD-R, ‘2 of 3’ on second CD-R, ‘3 of 3’ etc.).

Vendors are responsible for testing their CD-Rs or USB before submission as the URI Purchasing Department’s inability to open or read a CD-R or USB may be grounds for rejection of a Vendor’s proposal. All files should be readable and readily accessible on the CD-Rs or USBs submitted with no instructions to download files from any external resource(s). If a file is partial, corrupt or unreadable, the URI Purchasing Department may consider it “non-responsive”. Please note that CD-Rs and USBs submitted, shall not be returned.

2. Formatting of written documents and printed copies:

- a. For clarity, the technical proposal shall be typed. These documents shall be single-spaced with 1” margins on white 8.5”x 11” paper using a 12 point font.
- b. All pages on the technical proposal are to be sequentially numbered in the footer, starting with number 1 on the first page of the narrative (this does not include the cover page or table of contents) through to the end, including all forms and attachments. The Vendor’s name should appear on every page, including attachments. Each attachment should be referenced appropriately within the proposal section and the attachment title should reference the proposal section it is applicable to.
- c. The cost proposal shall be typed using the formatting provided on the provided template.

- d. Printed copies are to be only bound with removable binder clips.

SECTION 8: PROPOSAL SUBMISSION

Interested vendors must submit proposals to provide the goods and/or services covered by this RFP on or before the date and time listed on the cover page of this solicitation. Responses received after this date and time, as registered by the official time clock in the reception area of the University of Rhode Island Purchasing Department, shall not be accepted.

Responses should be mailed or hand-delivered in a sealed envelope marked "RFP # (number as indicated on the cover sheet)

to

MAIL TO:

UNIVERSITY OF RHODE ISLAND
PO BOX 1773
PURCHASING DEPARTMENT
KINGSTON, RI 02881

COURIER:

UNIVERSITY OF RHODE ISLAND
PURCHASING DEPARTMENT
10 TOOTELL RD.
KINGSTON, RI 02881-2010

NOTE: Proposals received after the above-referenced due date and time will not be considered. Proposals misdirected to other University locations or which are otherwise not presented in the URI Purchasing Department by the scheduled due date and time will be determined to be late and will not be considered. Proposals faxed, or emailed, to the URI Purchasing Department will not be considered. The "official" time clock is located in the reception area of the URI Purchasing Department. **(Please be advised that FedEx/UPS do not always arrive by 10:30 am, you would be smart to send your submission to arrive at least one day early)**

SECTION 9: CONCLUDING STATEMENTS

Notwithstanding the above, the University of Rhode Island reserves the right to award on the basis of cost alone, to accept or reject any or all proposals, and to award it in its best interest.

Proposals found to be technically or substantially non-responsive at any point in the evaluation process will be rejected and not considered further.

The University may, at its sole option, elect to require presentation(s) by offerors clearly in consideration for award.

If a Vendor is selected for an award, no work is to commence until a purchase order is issued by the University of Rhode Island Purchasing Department.

APPENDIX A. PROPOSER ISBE RESPONSIBILITIES AND MBE, WBE, AND/OR DISABILITY BUSINESS ENTERPRISE PARTICIPATION FORM

A. Proposer's ISBE Responsibilities (from 150-RICR-90-10-1.7.E)

1. Proposal of ISBE Participation Rate. Unless otherwise indicated in the RFP, a Proposer must submit its proposed ISBE Participation Rate in a sealed envelope or via sealed electronic submission at the time it submits its proposed total contract price. The Proposer shall be responsible for completing and submitting all standard forms adopted pursuant to 105-RICR-90-10-1.9 and submitting all substantiating documentation as reasonably requested by either the Using Agency's MBE/WBE Coordinator, Division, ODEO, or Governor's Commission on Disabilities including but not limited to the names and contact information of all proposed subcontractors and the dollar amounts that correspond with each proposed subcontract.
2. Failure to Submit ISBE Participation Rate. Any Proposer that fails to submit a proposed ISBE Participation Rate or any requested substantiating documentation in a timely manner shall receive zero (0) ISBE participation points.
3. Execution of Proposed ISBE Participation Rate. Proposers shall be evaluated and scored based on the amounts and rates submitted in their proposals. If awarded the contract, Proposers shall be required to achieve their proposed ISBE Participation Rates. During the life of the contract, the Proposer shall be responsible for submitting all substantiating documentation as reasonably requested by the Using Agency's MBE/WBE Coordinator, Division, ODEO, or Governor's Commission on Disabilities including but not limited to copies of purchase orders, subcontracts, and cancelled checks.
4. Change Orders. If during the life of the contract, a change order is issued by the Division, the Proposer shall notify the ODEO of the change as soon as reasonably possible. Proposers are required to achieve their proposed ISBE Participation Rates on any change order amounts.
5. Notice of Change to Proposed ISBE Participation Rate. If during the life of the contract, the Proposer becomes aware that it will be unable to achieve its proposed ISBE Participation Rate, it must notify the Division and ODEO as soon as reasonably possible. The Division, in consultation with ODEO and Governor's Commission on Disabilities, and the Proposer may agree to a modified ISBE Participation Rate provided that the change in circumstances was beyond the control of the Proposer or the direct result of an unanticipated reduction in the overall total project cost.

B. MBE, WBE, AND/OR Disability Business Enterprise Participation Plan Form:

Attached is the MBE, WBE, and/or Disability Business Enterprise Participation Plan form. Bidders are required to complete, sign and submit with their overall proposal in a sealed envelope. Please complete separate forms for each MBE, WBE and/or Disability Business Enterprise subcontractor/supplier to be utilized on the solicitation.



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS DEPARTMENT
OF ADMINISTRATION
ONE CAPITOL HILL PROVIDENCE, RHODE ISLAND 02908**

MBE, WBE, and/or DISABILITY BUSINESS ENTERPRISE PARTICIPATION PLAN				
Bidder's Name:				
Bidder's Address:				
Point of Contact:				
Telephone:				
Email:				
Solicitation No.:				
Project Name:				
<p>This form is intended to capture commitments between the prime contractor/vendor and MBE/WBE and/or Disability Business Enterprise subcontractors and suppliers, including a description of the work to be performed and the percentage of the work as submitted to the prime contractor/vendor. Please note that all MBE/WBE subcontractors/suppliers must be certified by the Office of Diversity, Equity and Opportunity MBE Compliance Office and all Disability Business Enterprises must be certified by the Governor's Commission on Disabilities at time of bid, and that MBE/WBE and Disability Business Enterprise subcontractors must self-perform 100% of the work or subcontract to another RI certified MBE in order to receive participation credit. Vendors may count 60% of expenditures for materials and supplies obtained from an MBE certified as a regular dealer/supplier, and 100% of such expenditures obtained from an MBE certified as a manufacturer. This form must be completed in its entirety and submitted at time of bid. Please complete <u>separate forms</u> for each MBE/WBE or Disability Business Enterprise subcontractor/supplier to be utilized on the solicitation.</p>				
Name of Subcontractor/Supplier:				
Type of RI Certification:	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Disability Business Enterprise			
Address:				
Point of Contact:				
Telephone:				
Email:				
Detailed Description of Work To Be Performed by Subcontractor or Materials to be Supplied by Supplier:				
Total Contract Value (\$):		Subcontract Value (\$):		ISBE Participation Rate (%):
Anticipated Date of Performance:				
I certify under penalty of perjury that the forgoing statements are true and correct.				
Prime Contractor/Vendor Signature		Title		Date
Subcontractor/Supplier Signature		Title		Date

Attachment A

Woodard & Curran PFAS Source Area Evaluation Executive Summary

EXECUTIVE SUMMARY

Woodard & Curran was tasked with evaluating Areas of Concern (AOCs) identified during the completion of groundwater investigations, and the collection of information relative to activities conducted at the University. This information was used to build a conceptual model for the site and design an investigation program to assess regions of the University of Rhode Island campus where soils acting as a continuing source of per- and polyfluoroalkyl (PFAS) compounds to the underlying groundwater may be present and expand our understanding of groundwater conditions. In addition, using the information we were further tasked with assessing and providing recommendations on options for the University to meet the State of Rhode Island's proposed interim drinking water standard of 20 parts per trillion (ppt), either individually or as a total of PFAS contaminants, where PFAS contaminants means perfluorooctanoic acid (PFOA), perfluoro octane sulfonic acid (PFOS), perfluoro hexane sulfonic acid (PFHxS), perfluoro nonanoic acid (PFNA), perfluoro heptanoic acid (PFHpA), and perfluoro decanoic acid (PFDA), and the United States Environmental Protection Agency's (USEPA) interim and final health advisories for PFOA, PFOS, PFBS and "GenX" compounds.

The investigations included the collection of 68 soil and sediment samples from a total of 31 locations, the installation of 4 permanent groundwater monitoring wells, the collection of groundwater samples, the collection of one surface water sample, and the analysis of the collected samples for the presence of PFAS compounds. Although the results of these investigations did indicate the presence of certain PFAS compounds within soils and/or sediment samples, a review of this data along with the results of groundwater investigations do not initially support that there are impacts within the soil/sediment environment that at this time warrant an initiation of active remedial efforts. However, as we further advance our knowledge on the site, localized PFAS mitigation may be considered. Further the evaluation of the data collected as part of these investigations does continue to build on and support the understanding that the predominant source of the PFAS compounds detected on the site are associated with the past known use of AFFF at multiple locations on the University of Rhode Island campus.

An integral part of our work was further associated with assisting the University in addressing their need to meet certain drinking water requirements. In this work we evaluated multiple options looking at the feasibility of the option to meet the requirements and meet them in a timely manner, the feasibility of installing and operating the option, and the cost of the option. During this evaluation process the regulatory environment around PFAS, both from a state and federal level, was in state of flux, and ultimately placed the time of achieving the regulatory requirements as one of the top priorities, with the selection process recommending the implementation of a well head treatment system utilizing granular activated carbon. In addition, other recommendations included the use of water supplied by the Kingston Water Department to provide a temporary source during the period of design and installation of the well head treatment option, as well as considering the implementation of an in-situ colloidal activated carbon, permeable reactive barrier to sequester the PFAS compounds, and inhibit them from reaching the well field area.

Attachment B

URI Water Supply System Management Plan Executive Summary



WATER SUPPLY SYSTEM MANAGEMENT PLAN EXECUTIVE SUMMARY

KINGSTON CAMPUS

Revised 2018

Prepared By

Bob Bozikowski
Utilities Department
Facilities Services
University of Rhode Island

Executive Summary

Introduction

This planning document was prepared to comply with the requirements of the Water Supply System Management Planning Act and the Rules and Regulations for the Water Supply System Management Planning, October 2002 as promulgated by the Rhode Island Water Resource Board. This plan serves as a guide in the decision making process for the long term planning of the water supply utility serving the University.

Background

The University of Rhode Island's primary goal is to operate an educational institution of higher learning. The University operates a water system for the benefit of and to meet the legitimate needs of the students, faculty, and staff of the University. The water system was installed around 1900, shortly after the start of the University, and has expanded over the years to meet the demands of the University.

General System Description

Sources

The water system is supplied by three gravel pack wells located in the Chipuxet Aquifer. These wells were installed between 1949 and 1974 and have seen various upgrades over the years to ensure reliability. Current total pump capacity is 2.5 MGD or 2300 gpm with well capacity capable of 28.1 MGD.

Treatment

In June, 2000 the University began treatment for corrosion control and ph adjustment by adding hydrated lime to its water system. In 2010 the University voluntarily installed hypo-chlorination. A supervisory control and data acquisition (SCADA) system continuously monitors water quality and control of system operation.

Distribution and Storage

The distribution system is composed of approximately 15 miles of pipe. Ninety percent of the pipe is less than 50 years old and constructed of lined ductile iron pipe. Water is stored in a 1 million gallon elevated storage tank. This tank is scheduled for painting in 2018.

Interconnections

The University maintains three interconnections with Kingston Water District for emergency supply. Details of these connections are in the main report.

Population and Projections

The boundaries of the service area include approximately 1,200 acres of area. The current water system serves a population of 19,354 during the academic school year. In the five year planning horizon we project construction of a new 500 bed dormitory and adding approximately 270,000 square feet. This equates to an increase in our annual demand of 17.5 million gallons per year. Beyond this construction the twenty year planning horizon sees numerous renovations of existing buildings that do not substantially add square footage, so any increase in demand is negligible.

Water Use

URIKC-Water provides service to the university for all water needs including, residential, academic, research, irrigation and operations. On average the university supplies approximately 0.377 MGD. This average has decreased from a peak of 0.491 MGD over the past 15 years while the university has added substantially to the student body and building square footage.

Peak daily demand can reach 0.669 MGD, typically in September. The university is the only customer and the largest user is the boiler plant. The boiler plant can consume up to twenty percent of daily production, but average annual consumption is about eight percent. The URIKC-Water service area is limited to the Kingston campus of the university and surrounding area owned by the university and used for support and other facilities of the university. The boundaries of the service area include approximately 1,200 acres of area.

URI has a comprehensive campus wide conservation program where cost savings are used to fund additional improvements. This program has made vast improvements to URI's steam distribution system that has reduced make-up water demand. URIKC-Water regularly performs leak surveys, estimates un-accounted for water and conducts leak surveys if un-accounted for water exceeds 10%. Water use has decreased nearly 10% over the past ten years while at the same time the campus has added 500 beds and 425,000 square feet of academic space.

Metering

Each production well is equipped with a venturi style water meter. These meters are continuously monitored and operators log daily measurements as well. The University supplies water only to itself. As the campus grew and buildings were

added, water meters were not installed. Starting in 2004 most new buildings included water meters in the design. As part of the University's Demand Management Strategy that was approved by the Water Resource Board staff in 2014, the University reads existing meters quarterly and uses these figures to estimate water use in non-metered buildings. The university then calculates non-accounted water. URI requires water meters in all new construction and significant building renovations.

Non-Account Water

Non-accounted water is estimated from reading meters in existing buildings and calculating water use per bed or per square foot. These factors are then applied to non-metered buildings and water use is estimated by totaling water use for various user classes. Total estimated customer consumption is then compared to well production to determine non-accounted water.

Demand Management

URIKC-Water has been active in utilizing various elements of demand management to encourage efficient use of water. Our 2015 average per capita usage was 20 gallons/person/day. We review quarterly meter readings and investigate buildings with abnormal use. URIKC is implementing the following actions to improve the efficient use of water:

- Assess the end use fixtures in all buildings
- Identify improvement actions for fixture replacement/upgrading
- Reduce/eliminate once through water use fixtures/equipment for air-conditioning, food preparation, etc.
- Improve boiler plant condensate return efficiency,
- Irrigation control using sensors and/or timers and
- Public education program to educate freshmen on conservation.

URIKC-Water monitors daily, monthly and annual water production and calculates water use for each building quarterly in accordance to the approved Demand Management Strategy. This information is then used to calculate unaccounted for water.

URIKC-Water performs triennial leak detection surveys to ensure water efficiency. Furthermore, if annual unaccounted water is greater than 10% a leak survey will be conducted in accordance with AWWA Manual 36.

Supply and Demand Management

URI has taken active measures to protect its water supply wells and monitor and mitigate future contaminants of concern. Improvements to infrastructure and conservation measures has reduced annual demand below 1968 levels when the campus population was half what it is today. Current per capita usage is 20

gallons per day per person.

Available Water and Alternative Supplies

The existing three wells that serve the university can pump 2.5 MGD or 912 MG per year. At the present time, URIKC-Water considers its current sources to be sufficient to meet future demands for the planning periods noted above. However, URIKC-Water recognizes that its current wells are located down gradient of campus, and that there is moderate risk to groundwater contamination from campus activities. As a result, URIKC-Water is seeking an alternate well site from the Rhode Island Water Resource Board located on Wolf Rock Road in Exeter, RI. This site draws from the Chipuxet aquifer but up stream of the university.

Kingston Water District draws from the Chipuxet aquifer from three shallow wells located downstream from the university. The university maintains three interconnections with KWD. KWD notes that they could provide water to the university on a long term basis, but upgrades to their treatment systems would be necessary.

Anticipated Future Demands

Current annual demand is 137 MG. Based upon information from Campus Planning and Design, URIKC-Water expects water annual demand to increase to 156 MG by 2023 and 161 MG by 2034 or an increase of existing demand of approximately 64,109 gallons/day. Much of this added demand will occur in the next five years with the addition of a new 500 bed dormitory and expansion of existing buildings. URI will continue to make infrastructure improvements and conservation efforts to ensure system resiliency and efficiency.

Supply Augmentation Studies

The university has been actively pursuing improvement to its existing supply wells including well rehabilitation, well redevelopment, new pumps and motors, new well stations, treatment system improvements, and installation of well field piping to allow blending and treatment of all sources. URIKC-Water maintains a library of reports and publications on the Chipuxet Aquifer that are used to support design and operation of the supply wells.

The university is seeking alternate remote well fields that could supply the university in the event the existing well field is contaminated. Lastly, URIKC-Water maintains three interconnections with Kingston Water District that can supply water to meet the demands of the university. Kingston Water District is pursuing interconnection with Suez of Wakefield that is interconnected with utilities that are supplied from outside the Chipuxet Aquifer.

Water Quality Protection

URIKC-Water has developed a comprehensive Wellhead Protection Program to protect and maintain water quality. This plan targets and tracks emerging contaminants, develops construction standards and development restrictions within the wellhead protection area, develops road salt and fertilizer management programs, targets land for purchase or protection and coordinates with URI Planning and the Town of South Kingstown Planning Department. URIKC-Water has also developed a Groundwater Protection Policy that is currently being incorporated into the Campus Master Plan.

System Management

Water is critical to the university achieving its educational mission. As a result the university provides the necessary resources to ensure the water system is resilient, compliant with state and federal requirements and is effectively operated and maintained. URIKC-Water performs proactive planning, maintenance and operational programs to ensure interruption-free service to the system users. URIKC-Water maintains an inventory of replacement parts and contracts for emergency service to make any necessary repairs.

Emergency Management

URIKC-Water maintains an Emergency Response Plan that identifies and provides critical system personnel and emergency contacts, critical system information, damage assessment and response procedures and various forms for logging information during an emergency. This plan is prepared to be an operational guide during an emergency and is updated annually.

Drought Management

The University, because of the academic calendar, requires 30% less water during the summer periods of a year when drought conditions would be most severe. Nevertheless, URIKC-Water monitors drought conditions and has established triggers that implement drought management strategies. Management strategies include adjustments to well pumping rates and cycles, issuing drought advisories and restrictions, restricting water use, RESTRICTING irrigation and vehicle washing.

Financial Management

URIKC-Water operates as an organizational element of the Department of Business Services of the University of Rhode Island. All operations of URIKC-Water are financed from the operational budget of the University of Rhode Island. No specific charges or user fees are levied to users of the water system. The

budget for the water system is prepared to incorporate all the costs of operations and maintenance.

Coordination

Facilities Services is involved in the planning for the University's growth. URIKC-Water has updated its wellhead protection plan and working to incorporate this plan in the University Master Plan. Implementation of this plan involves the University, Town of South Kingstown, Town of Exeter, the Water Resource Board and local organizations and land holders. The University works with these entities as needed to ensure the protection and viability of the Chipuxet Aquifer.

Attachment C

URI Wellhead Protection Program

University of Rhode Island
Kingston Campus Water Supply
Wellhead Protection Program

August 2018

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Appendix A – URI Draft Groundwater Protection Policy and Town of South Kinston Groundwater Protection Overlay District

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1.0 Introduction

The University of Rhode Island's Kingston Campus obtains all of the water for its needs from the Chipuxet groundwater aquifer. This is the only source of supply available in a five mile radius. The University's public water system is interconnected with Kingston Water District but this system also draws from the same aquifer. United Water of Wakefield draws from the Chipuxet Aquifer and serves Wakefield and also provides water to Town of Narragansett and the Town of South Kingstown.

According to the Rhode Island Water Resource Board the Chipuxet aquifer is currently overdrawn. In the event that URI's wells can no longer be used it would be difficult or impossible for these neighboring systems to serve URI on a long term basis. North Kingstown Water Department is located approximately 5 miles away but also currently draws from the Hunt, Annaquatucket, and Pettaquamscutt (HAP) aquifer, another overstressed aquifer.

1.1 Purpose

The Chipuxet aquifer and the area that contributes to URI's existing supply wells is paramount in maintaining a safe water supply with adequate capacity to serve the future needs of the University. This plan describes a methodical approach to protecting land within the Wellhead Protection Area that the University owns and privately owned land.

1.2 Vision

This plan provides a comprehensive long term plan for the protection of URI's water supply. This planning document is the first step in achieving this comprehensive program. According to the State of Rhode Island Division of Planning, southern Rhode Island is rapidly developing. Development pressure, increasing groundwater withdrawal, has never before been as apparent. Furthermore, water quality standards and our understanding of health effects from contaminants in water are constantly progressing. Lastly customers are increasingly expecting and demanding the best quality. These issues necessitate the need for this plan.

This program is fully supported by University. This plan considers the impact of current and future actions and activities have on groundwater quality from campus events to major new construction. URI employs the best available science in monitoring current water quality conditions, future contaminants and how groundwater moves toward its production wells. This understanding will lead to establishing a Wellhead Protection Area. A uniform campus policy and a Town of South Kingstown ordinance will be developed for protection of the Wellhead Protection Area.

1.3 Program Development Research

URI's Facilities Services met with Providence Water to learn about the practices and methods they use to protect their watershed. We consulted with the Rhode Island Water Resource Board, Kent County Water Authority, the South Kingstown Land Trust and the Town of South Kingstown Planning Department regarding the development of this plan. Lastly, we reviewed the new G300 Source Water Protection Standard from American Water Works Association. This wellhead protection plan incorporates the latest and best science and research that is relevant to our unique system.

2.0 Source Water Characterization

2.1 Chipuxet Aquifer

The University of Rhode Island's Kingston Campus obtains all of the water for its needs from the Chipuxet groundwater aquifer. This is the only source of supply available in a five mile radius. Kingston Water District, United Water of Wakefield that also provide water to Narragansett and the Town of South Kingstown also draw from this same aquifer. Turf farms including Albert Turf Farm, New England Turf, Sodco and Tibbits Farm Inc., also draw from the Chipuxet aquifer. Reports from the RI Water Resource Board estimate that during peak water usage 60% of the Chipuxet water supply is used for potable water needs and the remaining 40% is used for agriculture.

2.2 Summary of URI Wells

URI has three water supply wells located on the eastern shore of Thirty Acer Pond. The table below summarizes these wells.

Table 1 – URI Water Supply Wells

Well	Max Yield (MGD)	Current Rate (GPM)	Diameter (in)	Depth (FT)	Year Installed	Last Rehab
Well 2	3.0	500	10	130	1947	2011
Well 3	1.44	500	12	130	1958	2017
Well 4	1.44	775	18	97	1974	2013

MGD = million gallons per day

2.3 Water Quality Data

As part of the 1996 amendments to the Safe Drinking Water Act, the US Environmental Protection Agency (EPA) issues once every five years a new list of no more than 30 contaminants to be monitored by public water systems. This requirement is called the Unregulated Contaminant Monitoring Rule and the results of this testing are used to develop new regulatory limits. URI is one of the testing sites under this rule and receives

test results of these contaminants so that it can monitor and prepare for emerging regulatory standards.

URI is a public water supply and regulated by the Safe Drinking Water Act that requires routine raw water testing for industrial solvents, heavy metals, pesticides and herbicides, radionuclides and bacteria. This testing ensures compliance with regulatory standards.

The US Geological Survey performs groundwater testing every ten years on a select few wells in New England to trend groundwater data. URI’s primary production Well 4 has been part of this testing for decades and we plan to continue this service to monitor and trend known contaminants.

URI has tabularized all this data and monitors the trends of these contaminants. The current primary contaminants that this plan will address to minimize impact to water quality are presented below.

Table 2 – Contaminants of Concern

Contaminant	Limit	Well 2	Well 3	Well 4	Trend
Nitrate	10 ppm	1.4	4	2.1	Stable
Sodium	20 ppm**	7.68	11.4	30.0	Increasing
1, 4 Dioxane	0.35 ppb*	0.19	0.59	0.77	Stable
Perchlorate	2.0 ppb*	0.49	3.0	1.5	Stable

* Advisory levels...standards under development.

**EPA Guidance Level

2.4 Wellhead Protection Area

The Rhode Island Department of Environmental Management Groundwater Quality Rules identifies the existing URI Wellhead Protection Area as shown below. DEM has classified the groundwater within this area as GAA, meaning it is suitable for public drinking water use without treatment. These regulations prohibit discharge of any pollutant to groundwater, prohibits new solid waste landfills and prohibits new hazardous waste storage facilities. Road salt storage facilities and underground storage tanks must meet strict criteria.

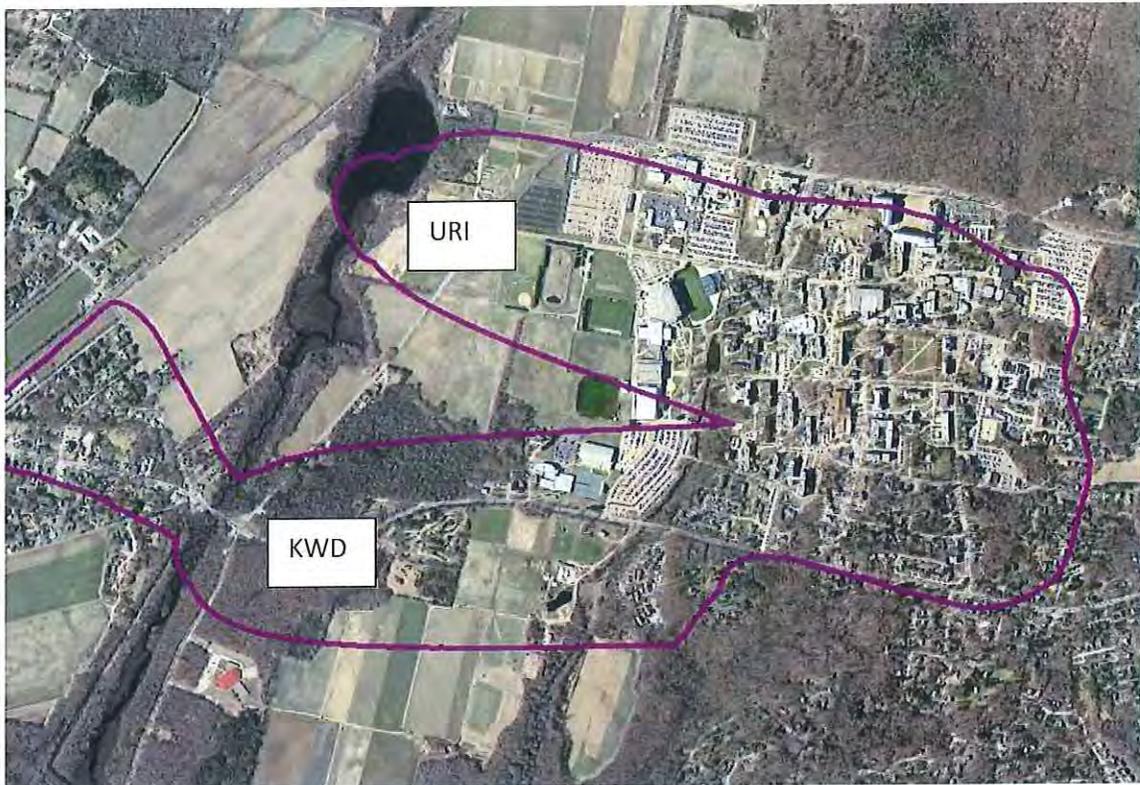
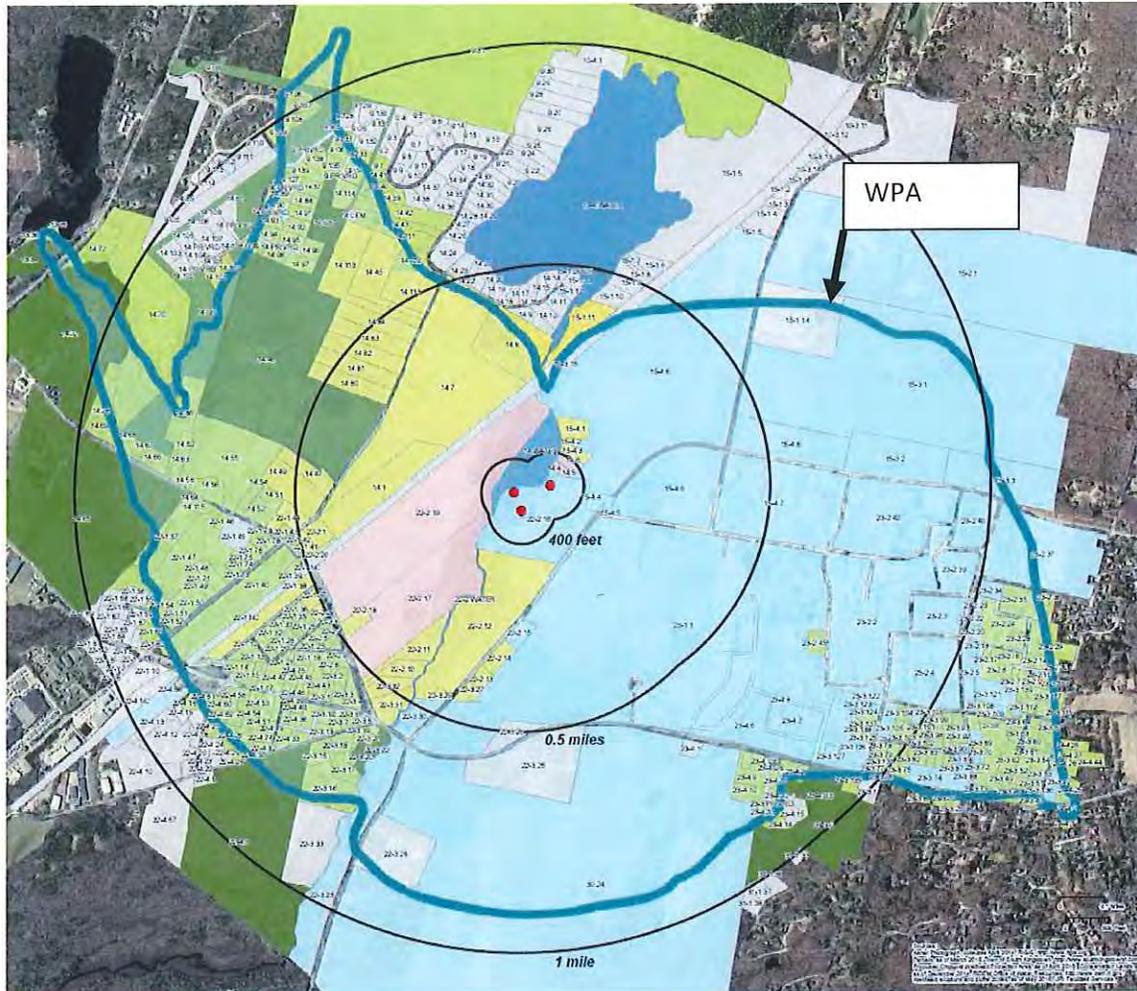


Figure 1 – Current RIDEM Wellhead Protection Area

In 2014 the US Geological Survey produced a report titled “Areas Contributing Recharge to Production Wells and Effects of Climate Change in the Groundwater System in the Chipuxet River and Chickasheen Brook Basins, Rhode Island.” The report builds upon previous area studies and presents the results of a computerized hydraulic model of the Chipuxet aquifer near the supply wells of URI and KWD. The report presents the area of groundwater influence of the URI and KWD supply wells as shown below in Figure 2. The report also predicts that groundwater recharge will diminish during fall months due to climate change by between 13 and 24 percent.

The Rhode Island Department of Environmental Management has used this image above to propose a draft Wellhead Protection Area for URI and KWD wells. URI Facilities Services (FS) has taken these images and overlain parcel information from the Town of South Kingstown to develop a list of parcels that overlay the Draft Wellhead Protection Area.



- High Priority Candidate Parcel
- Medium Priority Candidate Parcel
- Low priority Candidate Parcel

- Owned by the University of Rhode Island, Rhode Island Council on Postsecondary Education, or State of Rhode Island.
- Open Space and/or Conservation Land
- Non-Candidate Parcels. Examples include parcels owned by the Town of South Kingstown, Old and New Fernwood Cemeteries, and/or are located outside the proposed Chipuxet Wellhead Protection Area.
- Water

Figure 3 – Draft RIDEM Wellhead Protection Area for URI and KWD

In 2016 URI installed monitoring wells around the well field. These wells are used to measure the elevation of the water table under various pumping conditions. This data will be entered into a hydraulic groundwater model prepared by an environmental consultant retained by URI to further refine the zone of influence of our production wells.

2.5 Contaminant Sources and Land Use

According to the USGS groundwater model, URI’s supply wells draw groundwater from approximately a one mile radius from the supply wells. The closer to the supply wells the shorter the travel time to the wells. Below is a list of area land use and proximity to the well field.

Table 3 – Land Use and Contaminants

Land Use	Potential Contaminants	Distance to Wellfield
URI Turf and Agricultural Research	Fertilizers, pesticides, herbicides	400 ft
URI Roads and Parking	Sodium, petroleum	400 ft
Private homes with septic systems	Fertilizers, fecal bacteria, solvents, pesticides	150 ft
Turf farms	Fertilizers, pesticides, herbicides	350 ft

3.0 Source Water Protection Action Plan

URI is seeking the best available science to understand how the existing supply wells influence the groundwater aquifer. This information is used to identify how groundwater flows towards the drinking water wells and the land area that overlay this groundwater zone that needs protection. As part of this plan, URI is developing a groundwater protection policy and working with the Town of South Kingstown to adopt a new groundwater protection ordinance to restrict development that would have an adverse impact on groundwater quality. Finally, this plan identifies properties to purchase groundwater easements or land that it currently does not own so that the groundwater supply that serves the drinking water needs of the University can be protected.

We have identified five key areas in the protection of URI's water supply: 1) Planning and Zoning, 2) Groundwater monitoring, 3) Land Protection, 4) Land Management and 5) Education. Each of these areas are described in detail below.

3.1 Planning and Zoning

3.1.1 Town of South Kingstown

The Town of South Kingstown Planning Department restricts development in its Groundwater Protection Overlay Districts. URI's Facilities Services has shared this Draft Wellhead Protection Area with the Town and determined that the area west of the well field is included in the existing town overlay district. The Town's Groundwater Protection Overlay District zoning ordinance is attached in Appendix A.

URI will monitor zoning board meeting agendas and attend meetings regarding parcel development or land alteration for parcels within the Groundwater Protection Overlay District. Attending these meetings is important to understanding and commenting on these activities for the protection of URI's supply wells. As part of this plan URI will maintain communication with the Zoning Board and staff.

3.1.2 URI Groundwater Protection

URI has made considerable effort to protect groundwater over the years. These efforts completed to date are listed below.

- Elimination of all URI activities within the 400 foot radius of the supply wells
- Removing oil tanks in the vicinity of the wells or installing aboveground double wall tanks
- Performing monthly inspections of oil storage tanks and electrical transformers
- Requiring secondary containment for storage of fertilizers and pesticides
- Performing annual self-assessments of pesticide and fertilizer storage
- Development of a road salt management plan
- Monitoring and trending road salt use and sodium levels in drinking water

- Installation of groundwater monitoring wells and testing for emerging contaminants
- Modeling groundwater flow to the supply wells
- Development of this Wellhead Protection Program

Future efforts will include:

Through this plan, URI Facilities Services has developed a draft Groundwater Protection Policy that is under review by the University's Master Planning Review Team (See Appendix A). The Master Planning Review Team has the authority to establish a wellhead protection area and associated restrictions. Using available groundwater models from USGS, other models from consulting engineers and water level gauging data, URI is determining the area needing protection.

The wellhead protection area would also establish best management practices and construction standards for existing development within the Wellhead Protection Area and also restrict future commercial, institutional and industrial activities including but not limited to automotive and engine repair, automotive junk yards, farm and lawn mowing equipment, fuel filling stations, welding, machine and metal plating shops, dry cleaning, beautician and photographic shops, land disposal of sewage sludge, dumpster restrictions, floor drains and parking lots without oil/water separators. A report on the current status of these efforts is provided in Appendix B.

3.2 Contaminant Management

URI Utilities has an ongoing groundwater monitoring program. This program regularly reviews campus activities and modifies the testing scope to match the hazards present from current activities in an effort to assess risk. URI conducted a groundwater investigation (2016-present) as to the source and extent of the emerging contaminants of concern detected in the water supply wells. It is believed that the source of the 1, 4 dioxane has been eliminated and levels in area monitoring wells is decreasing slightly. Perchlorate appears to be from nearly thirty years of fireworks displays located at various locations east of the well field. URI has prepared a draft policy on eliminating these displays within the wellhead protection area and this is expected to be finalized in early 2018.

URI has convened a stakeholder group to manage and report annual fertilizer and pesticide applications, institute best management practices and report groundwater data. The group is cooperating and awareness and communication is key to reducing nitrate levels in groundwater. Over time, data and management practices will help determine annual allotments of fertilizer use. Information on this program is provided in Appendix G.

A similar effort has begun to manage road salt. The stakeholders involved include Lands and Grounds, Custodial, subcontracted snow plowing of parking lots and Ryan Center grounds subcontractors. URI is developing a best management practice guide to applying salt to communicate the issues and provide awareness. Training to Lands and

Grounds and Custodial staff was performed in October 2018. The BMP is provided in Appendix G.

Contaminants of Concern

Contaminant	Limit	Well 2	Well 3	Well 4	Trend
Nitrate	10 ppm	1.4	4	2.1	Stable
Sodium	20 ppm**	7.68	11.4	30.0	Increasing
1, 4 Dioxane	0.35 ppb*	0.19	0.59	0.77	Decreasing
Perchlorate	2.0 ppb*	0.49	3.0	1.5	Stable

* Advisory levels...standards under development.

**EPA Guidance Level

Groundwater Testing

URI Utilities has established a quarterly groundwater monitoring program. An existing array of groundwater monitoring wells are sampled and tested quarterly to evaluate the impact of campus activities and assess the risk to the drinking water supply. This program regularly reviews campus activities and chemical use and then tailors the testing to monitor existing threats and evaluate potential new concerns.

Testing for suspected contaminants under EPA's Unregulated Contaminant Monitoring Rule will identify new chemicals of concern in advance of regulatory standards. Testing and monitoring groundwater in the wellhead protection area will provide an understanding of how these contaminants are moving in the groundwater aquifer and if they will impact the well field. Once a contaminant of concern is identified in a supply well then quarterly sampling of monitoring wells will be performed until the extent and level is reliably understood. Annual testing should be conducted thereafter to monitor any change to conditions.

The US Geological Survey performs groundwater testing every ten years on a select few wells in New England to trend groundwater data. URI's primary production well Well 4 has been part of this testing for decades and we plan to continue this service to monitor and trend known contaminants.

URI has tabularized all this data and monitors the trends of these contaminants. The primary contaminants of concern are presented in Table 2 above. URI has also undertaken a groundwater investigation to determine the source of Nitrate, Perchlorate and 1,4 dioxane. This work and recent results are provided in Appendix H.

We have determined that the source of 1, 4 dioxane is likely from washing field paint equipment using latex paint. The paint product has been changed and washing operations are now directed to the sewer. The source of perchlorate is from fireworks which have been banned since July 2018. Nitrate is from application of fertilizer on athletic fields. URI is currently reviewing how this practice can be modified to reduce the impact to groundwater. Sodium and chloride levels are increasing and road salt application practices have been revised. Training for staff applying road salt is needed.

3.3 Land Protection

3.3.1 Introduction

URI Staff met with Providence Water Supply Board to learn about how they protect lands within their watershed. Much of the information within this section is based upon the methodical approach used by Providence Water.

Protection of land for the purpose of restricting adverse types of development has been used for centuries as a management technique to protect drinking water quality. Providence Water stressed that this type of program needs to take a long term view. Protection actions and efforts viewed in the short term may not be easily understood by some but these actions will lead to the long term goal of a safe supply of drinking water. For example, purchase of a small parcel some distance from the wells may seem insignificant but would provide access to a significant large parcel. As shown below in Figure 4, the 2014 USGS report estimates groundwater travel times to URI supply wells. Generally, groundwater within .25 mi of the supply wells takes up to one year to reach the wells and groundwater within .5 mi takes up to four years. Adverse activities on land closer to the water supply wells will have more immediate and greater impact on water quality due to its location and less time for dilution.

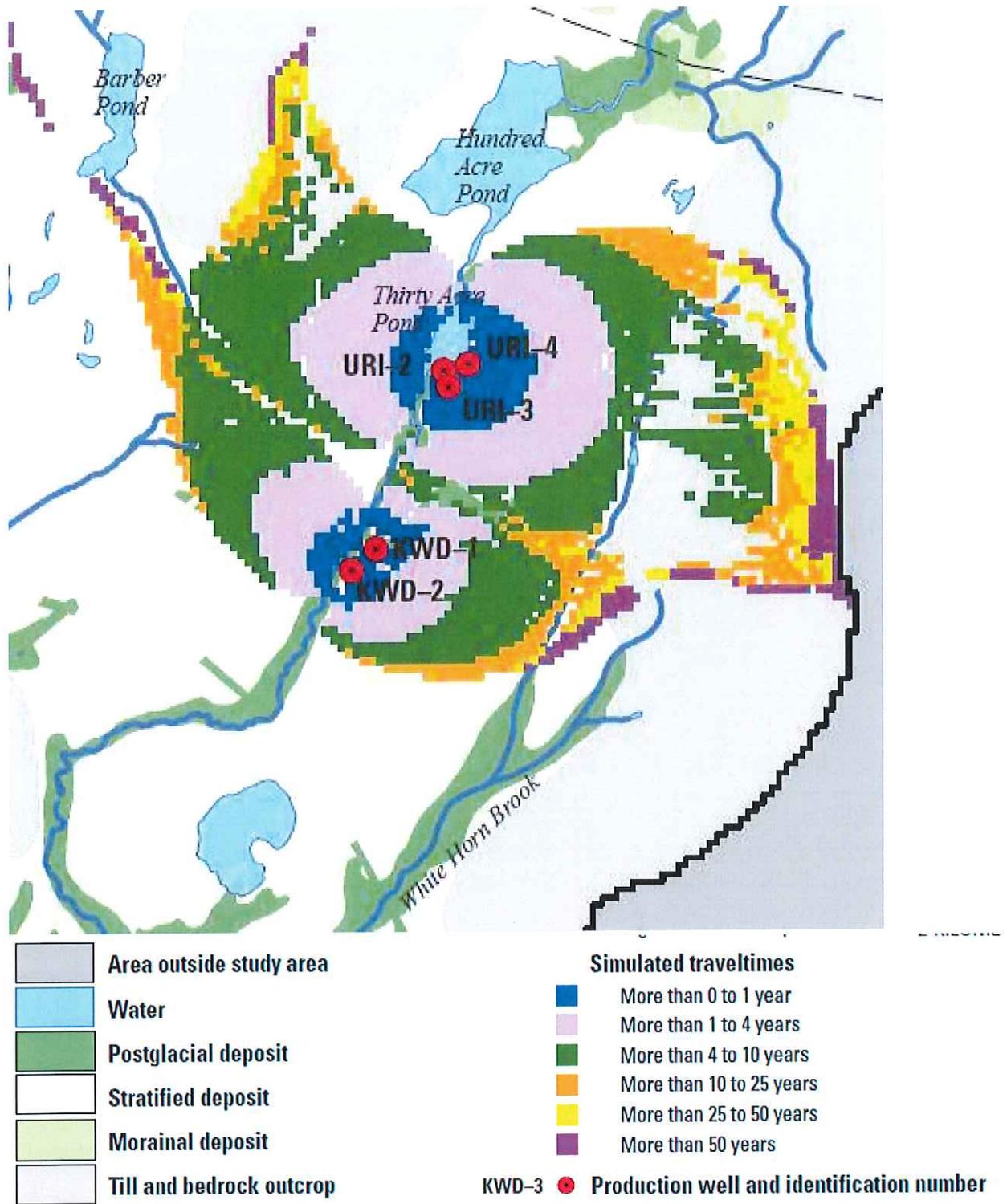


Figure 4 - USGS simulated groundwater travel times to production wells at their maximum pumping rates

3.3.2 Parcels of Interest

Using the USGS-derived wellhead protection area and South Kingstown parcel data, URI developed a map and list of parcels for wellhead protection. We ranked parcels within and partly within the draft wellhead protection area based upon their proximity to URI's wellheads, the parcel size and its current use. We used three radius limits to sort parcels: 1) within 400 feet of the well field, 2) 400 ft to one-half mile of the well field and 3) one-half mile to one mile. These parcels and colors are noted below in Figure 3. A list of the ranked parcels is included in Appendix C. An abbreviated list of parcels of top interest is provided below in Table 4. URI will pursue actions for protection of these parcels in the immediate term.

We also developed a Land Acquisition Ranking Sheet, provided in Appendix D, to provide an objective view of the relative importance of a parcel. This ranking sheet score, along with other pertinent information, is used to further prioritize the list of parcels. Larger parcels close to the wells with activities that could be detrimental to groundwater would have a higher ranking. Furthermore, parcels that already have some type of conservation easement would rank lower.

Another parcel, located approximately a half mile from the URI water system in Exeter is a location identified as a favorable well site and owned by the Water Resource Board. A test well at this site was reported to produce 700 gallons per minute. This site is located in a rural residential area up-gradient of the University. The Water Resource Board would transfer ownership to URI at little or no cost.

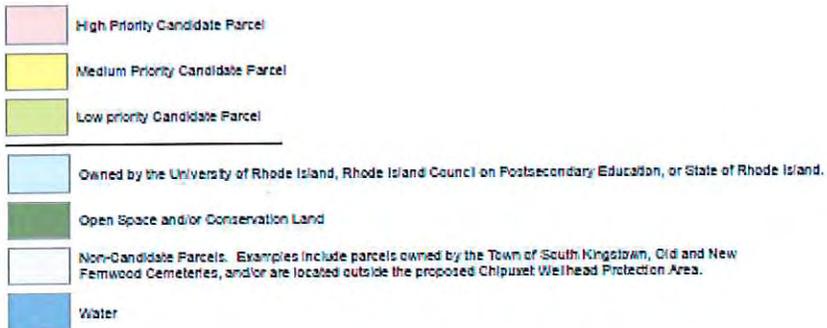


Figure 3 Parcels of Interest for Wellhead Protection

Table 4 - Land Parcels of Top Interest

Plat	Lot	Distance to Wells	Currently For Sale	Value	Acres	Address
14	6	245 ft	Yes	\$139,500	1.1	11C THIRTY ACRE POND ROAD
15-4	3	410 ft	Yes	\$139,000	1	11D THIRTY ACRE POND ROAD
80-2	9	2400 ft	Yes	\$115,200	14.29	EXETER SUPPLY WELL SITE
22-2	19	300 ft	No	\$270,300	51.7	WAITES CORNER ROAD
14	5	200 ft	No	\$244,100	0.2	11B THIRTY ACRE POND ROAD
14	4	150 ft	No	\$103,700	0.3	11A THIRTY ACRE POND ROAD
22-2	17	350 ft	No	\$196,100	30.5	WAITES CORNER ROAD

3.3.3 Land Protection Methods

Land protection methods we identified include conservation easements and purchasing the land. Providence Water Supply Board noted that the maintaining contact with town planning and zoning departments and various land trust and conservation groups is the best way to learn of property owners that may be interested in selling or protecting land.

Conservation easements can be placed on land to restrict adverse development and activities. A land owner will typically be compensated 30-40% of the property value for the easement. This agreement also typically sets a portion of the property aside for the property owner to live on without restriction. This method has less maintenance cost and typically involves an annual informal walk of the property with the owner to ensure compliance with the agreement. An example purchase agreement and easement for conservation is provided in Appendix E and F, respectively.

URI prefers easements over purchase of parcels. Purchase requires appraisals, title search, survey and closing costs. Purchase may also require an agreement with the town regarding payments in lieu of taxes. Furthermore, there is more effort in policing the property, dumping, removing debris, maintaining signage and fencing.

Another method would be to partner with organizations such as land trusts. In this approach, a land trust could purchase and maintain the property and URI would seek a wellhead protection easement. A land trust can benefit in this scenario from state grant funds available for wellhead protection.

In the event URI considers easements or parcel purchase for wellhead protection, URI will use a ranking score sheet similar to the one provided in Appendix D to evaluate a parcel. Should a favorable ranking support protection, URI will then evaluate the most suitable method above to move forward.

3.3.4 Funding Sources

The Rhode Island Water Resource board (WRB) has funding for land purchases to protect groundwater quality at public water systems. These 1980s issued bonds are now mature. The nearly two million dollars remaining in the fund are at the discretion of the Governor. These funds also allow for demolition of any structures and removal of debris to provide a clean site for wellhead protection.

In the past these funds have been used to purchase land for new well sites, purchase land to protect existing wells and land purchased by land trust organizations that includes a groundwater protection easement held by the public water supply. One example involves United Water of Wakefield (now Suez) who applied to the WRB for funds to purchase a parcel on behalf of the South Kingstown Land Trust. The parcel is now owned by the SKLT who manages to property and United Water maintains an easement on the property for wellhead protection.

URI also has access to Asset Protection funds. These state-provided funds are used for repair, replacement and upgrade of the University. Use of these funds must go through an internal request process based upon need and criticality.

Table 5 - Land Protection Methods for Parcels of Top Interest

Plat	Lot	LAR Score	Acres	Desired Protection Method
14	6	82	1.1	Purchase with WRB Funds
15-4	3	72	1	Purchase with WRB Funds
80-2	9	NA	14.29	Well site - Transfer ownership from WRB to URI
22-2	19	75	51.7	Conservation easement with WRB Funds
14	5	65	0.2	Purchase with WRB Funds
14	4	65	0.3	Purchase with WRB Funds
22-2	17	75	30.5	Conservation easement with WRB Funds

Parcels in red are currently for sale or available

LAR Score = Land Acquisition Ranking Sheet Score

3.4 Land Management

URI-owned vacant land set aside for wellhead protection can be a magnet for vandalism, dumping and loitering. As a result, parcels must be routinely patrolled and inspected. These patrols will be at least quarterly and more often if evidence is found. Assistance from the URI police will be requested. Signage posted to restrict access also must be posted and maintained. Any dumping of materials will be removed and properly disposed.

There is typically less vandalism, dumping or loitering on property with a land owner present. As a result, groundwater protection easements will require only annual inspections to ensure compliance with the easement agreement. Records of inspections will be maintained and any issues documented in writing. Any issues that land owners refuse to correct will be addressed with legal action.

3.5 Education

Education efforts should include informing the general population and URI staff of the wellhead protection area and policies and ordinances that protect groundwater quality. These efforts should include posting signs to restrict road salt application, restrict dumping and identify the wellhead protection area. These efforts should include working with the South Kingstown Planning Board to adopt the new wellhead protection area and developing maps for dissemination to URI and South Kingstown.

The URI Water System Manager will coordinate with the Master Plan Review Team, Campus Planning and South Kingstown Planning Board regarding implementation of this plan. This involvement will allow URI to comment on proposed development within the wellhead protection area. Participation will also help in identifying land owners considering sale, development or easements of their property.

Working with land trusts is good way to identify property owners considering sale or easements of their property. The Water System Manager will hold semi-annual meetings with area land trusts to discuss existing easements and future protection actions.

4.0 Evaluation and Revision

This plan should be reviewed and updated annually as new information and data is identified. As this program evolves this plan should be updated to reflect these changes. Additional actions or sections may be identified in the future and should be incorporated into this plan so that it remains a current reflection of the wellhead protection program.

Appendix A

University of Rhode Island
Groundwater Protection Policy
October 2018

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Appendix

A – RODOH List of Potential sources of Groundwater Contamination

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Executive Summary

This policy establishes a Groundwater Protection Area for the protection of the groundwater aquifer supplying water to the drinking water supply wells that serve the university. The Chipuxet Aquifer is part of the EPA-designated Pawcatuck River Sole Source Aquifer, and the only locally available supply of water.

This policy allows for appropriate land use restrictions in addition to those currently imposed by state and federal regulations. It is intended that public education and cooperation will compliment this effort. This policy shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Applicable activities/uses that fall within the Groundwater Protection Area must also comply with this policy.

The Kingston Campus of the University of Rhode Island lies over the Groundwater Protection Area and up-gradient of the university's well field. As a result, university staff must conduct regular assessment of campus activities, evaluate the products and processes used on campus and tailor routine groundwater monitoring to evaluate the risk posed to groundwater and the university water supply as detailed in the URI Wellhead Protection Program Manual. Furthermore, the university shall continue to secure property near the well field for wellhead protection and work with the Town of South Kingstown and other groups to improve wellhead protection.

This policy sets a general approach to groundwater protection including land protection, elimination of hazards, preventing discharge to groundwater and spill prevention and response. In addition, this policy identifies prohibited activities and details design standards for new construction and reconstruction for protection of the groundwater aquifer.

1.0 Establishment of Policy

Under the authority of the University's Vice President of Administration and Finance, it is recognized that the groundwater under the university's Kingston campus flows west from the upper portions of the Chipuxet watershed towards the university's water supply wells downgradient near the Chipuxet River. Hydraulic modeling of the aquifer by the United States Geologic Survey (USGS) indicates that the supply wells draw groundwater from over one mile away and from under the campus (see Figure 1). As the Chipuxet Aquifer is part of the EPA-designated Pawcatuck River Sole Source Aquifer, and the only locally available supply of water, there is hereby established a Groundwater Protection Area (GPA) which shall be the area defined as the Rhode Island Department of Management (DEM) Wellhead Protection Area (WPA) (See Figure 2). This policy shall guide and direct the type and intensity of current and future development between White Horn Brook and the Chipuxet River and set groundwater protections for the rest of the GPA. This Policy also shall protect and restore groundwater within the entire GPA by setting restrictions and design standards for existing and future development on property owned by and leased to URI. In the event of a conflict or inconsistency between the policy imposed by the GPA and those imposed by other university policies, the GPA Policy shall govern.

2.0 Purpose

Water supply wells are typically located in undeveloped areas to protect groundwater quality. The heavily urban area of the university lies up gradient of the water supply wells for the university. Furthermore, continued development and more intensive use of land westward toward the Chipuxet River threatens the water quality supplied to the campus.

The purpose of this policy is to protect public health, general welfare and to preserve, maintain and restore the quality and supply of the groundwater reservoirs supplying water to the university. The US Environmental Protection Agency has identified the Pawcatuck Aquifer Basin as a Sole Source Aquifer. This designation means that there are no reasonably available alternative drinking water sources should the aquifer become contaminated. The Chipuxet Aquifer is a sub-basin of the Pawcatuck and this aquifer provides water to the university. Furthermore, neighboring public water systems draw from the same stressed Chipuxet Aquifer (Kingston Water District and Suez of Wakefield) so supplying the university would be on a limited or restricted basis.

This policy allows for appropriate land use restrictions in addition to those currently imposed by state and federal regulations. It is intended that public education and cooperation will compliment this effort. This policy shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Applicable activities/uses that fall within the Groundwater Protection Area must additionally comply with this policy.

3.0 Existing Regulations Protecting Groundwater

This section presents a summary of applicable laws and regulations protecting groundwater supplies in Rhode Island.

Rhode Island Groundwater Protection Act of 1985, Legislative Findings and section 46-13.1-2 of the General Laws of Rhode Island, 1956, as amended. These findings note that water is vital to life and commerce and all efforts shall be made to maintain and protect this resource.

RIDEM Groundwater Quality Rules classify the groundwater underlying the Kingston campus of the University as GAA. This classification is for groundwaters that are suitable for drinking without treatment and within a wellhead protection area of a community water supply. These rules stipulate that no person shall discharge any pollutant without approval of the RIDEM Director. These rules also prohibit solid waste landfills and treatment, storage or disposal facilities within a GAA wellhead protection area. Lastly, these rules set design standards for protection of groundwater from road salt storage.

RIDEM Groundwater Discharge Rules permit and regulate discharges to groundwater through underground injection wells including catch basins that discharge to groundwater.

RIPDES General Permit Stormwater Discharge Associated with Construction Activity (Construction General Permit / CGP). Development projects involving earthwork/soil disturbances activities over an area of one (1) acre or greater are required to seek authorization from RIDEM under the current CGP. Application is made to the RIDEM Office of Water Resources (often in conjunction with Freshwater Wetlands or Groundwater Discharge submittals) and requires the preparation of a project-specific Soil Erosion and Sediment Control (SESC) Plan to protect water resources from potential construction impacts.

RIPDES General Permit for Stormwater Discharge from Small Municipal Separate Storm Sewer Systems (MS4s). The University of Rhode Island is a Small MS4 operator regulated by the RIDEM Office of Water Resources (RIDEM/OWR) under the RIPDES Phase II Storm Water Program. To comply with the conditions of its authorization under the RIPDES General Permit for the discharge of stormwater from Kingston Campus drainage systems, the University has developed (and maintains) a Storm Water Management Program Plan (SWMPP) for the operation of its facilities that addresses the permit's six (6) minimum control measures, including construction site runoff control, post-construction runoff control, and pollution prevention / good housekeeping.

The Town of South Kingstown Groundwater Protection Overlay District, although not binding to state property, encompasses the University's Kingston campus. The Groundwater Protection Overlay District (GPOD) restricts specific development and activities that can potentially impact groundwater. See Appendix B.

RIDOH Rules and Regulations Pertaining to Public Drinking Water notes that “generally, the land within four hundred (400) feet of such wells shall be reserved for protection of the water quality of the well...”. Furthermore, “Land reserved for the protection of the well as (indicated on the plan) approved by the Director of Health must remain under the direct control of the water supplier by either continued ownership or recorded easement unless written permission to modify this area is granted by the Director of Health. It is the responsibility of the water supplier to maintain the protective well area free from potential sources of contamination”. Appendix 4 of the RIDOH Regulations includes a list of potential sources of groundwater contamination. It is the responsibility of the water supplier to maintain the protective well area free from potential sources of contamination as listed in Appendix 4 and provided in Appendix A of this policy.

RI Water Resource Board requires Public Water Supplies serving more than fifty million gallons per year to prepare a Water Supply System Management Plan (WSSMP) and update the plan every five years. The plan requires water system provide information relating to source protection, ability of its supply sources to meet existing and future demands, a review of infrastructure, interconnections with other systems, system programs, management, finance and more. Part of the plan approval process is also a review by the Town of South Kingstown Planning Department.

RIDEM Rules Establishing Minimum Standards Relating to Location, Design, Construction and Maintenance of Onsite Wastewater Treatment Systems Table 22.4 states the minimum setback distances from drinking water wells to on-site wastewater treatment system (OWTS) components. RIDEM requires a minimum setback of 400 feet from OWTS system components to gravel packed public drinking water wells.

RIDEM Rules and Regulations for Hazardous Waste Management ensures hazardous materials, hazardous waste, and universal waste are properly stored and disposed of at facilities licensed to accept the waste. Generators of hazardous and universal waste must be permitted and use a manifest to track hazardous waste disposal.

RIDEM Rules and Regulations For Underground Storage Facilities Used For Petroleum Products and Hazardous Materials requires facility registration, proper operation and maintenance, repair requirements, leak and spill response and system testing.

EPA Spill Prevention and Control Preparedness regulations require facilities to develop a Spill Prevention, Control and Countermeasure (SPCC) plan for facilities that have an aboveground aggregate oil storage capacity greater than 1,320 gallons or an underground aggregate oil storage greater than 42,000 gallons, SPCC plans include a facilities operating procedures to prevent spills, installed control measures to prevent oil spills from entering navigable waters and adjoining shorelines, and countermeasures designed to contain, cleanup, and mitigate the effects of an oil spill on navigable waters and adjoining shorelines. SPCC plans include periodic monitoring of storage containers, response training, and regulatory reporting requirements.

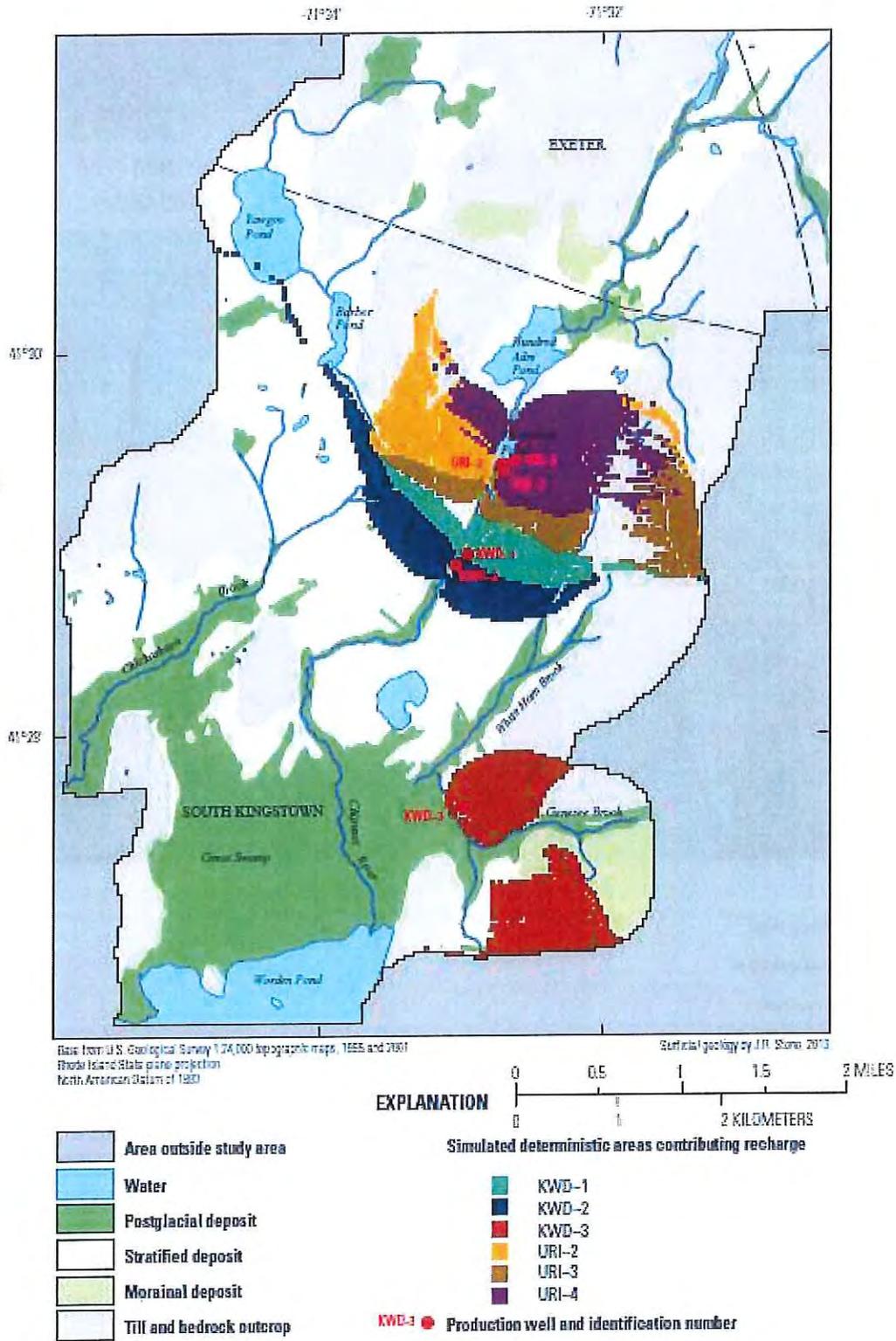


Figure 1 – USGS Simulation of contributing recharge to the productions wells at maximum pumping rates.

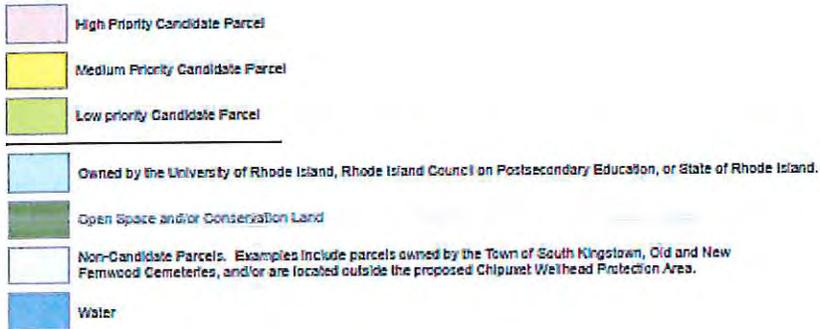
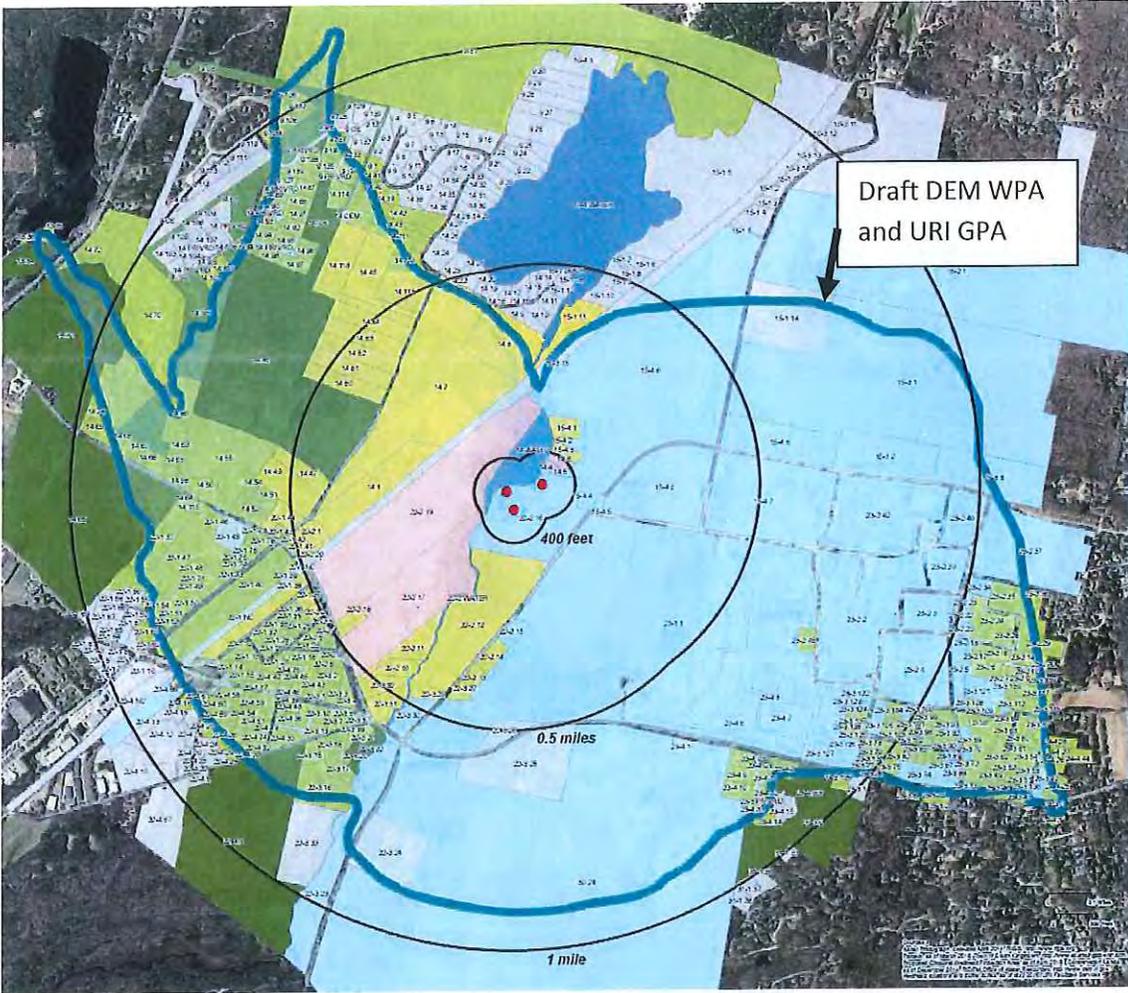


Figure 2 – Draft RIDEM Wellhead Protection Area for URI and KWD

4.0 URI Approach to Groundwater Protection

4.1 General Guidelines

It is understood that the university was established before this policy was conceived and that the university and the water supply wells cannot be moved. As a result they must co-exist and serve each other. For this policy to be effective at protecting the water supply it must be supported by top management of the university. Department managers must be tasked with carrying out various actions to protect groundwater and the campus community must be aware so that they can report spills or events.

It is important to note that chemical product formulations advance faster than health science. As a result, disposal of “safe” chemicals to groundwater may become regulated drinking water contaminants in the future. This policy should be protective of such future concerns. Furthermore, URI shall conduct regular assessment of campus activities within the GPA, groundwater monitoring and testing to evaluate potential impact these activities have on groundwater so that control actions can be implemented if needed.

Where applicable, this policy references state, federal and industry standards for design that are protective of groundwater. It is in the best interest of the university to monitor, review and improve on these standards to ensure the best means of protection is utilized to safe guard our water supply. Furthermore, the University Utilities Department has developed and maintains a Wellhead Protection Program and Manual to implement, monitor and track many of the efforts mentioned in this policy.

4.2 Land Protection

The Groundwater Protection Area noted in Figure 2 spans areas under the jurisdiction of the Town of South Kingstown mainly to the west of the URI well field and URI jurisdiction to the east. The Town of South Kingstown’s Groundwater Protection Overlay District (GPOD) , provided in Appendix B, specifies protective measures to protect groundwater resources. URI shall request the Town apply added protection measures to equal this policy in the event that properties within the GPA covered by the Town’s GPOD are found to be less restrictive.

Protecting land from private and commercial development is a common method utilized for water supply protection. URI shall continue to monitor and pursue the protection of properties within the wellhead protection area either through partnerships, conservation easements or purchase.

4.3 Eliminate Hazards

Eliminate hazardous activities or products where possible. This should consider sub-contracting services off site that threaten groundwater, switching to a low hazardous process or material or eliminating the process/material. For example, the use of aboveground and underground storage

tanks to store heating/fuel oil should be eliminated or consolidated where propane or natural gas can be used.

4.4 Prevent Discharge To Groundwater

The university shall prevent discharge of all materials other than clean storm water to groundwater including wastes, wastewater and chemicals applied to land surfaces. For example to prevent the discharge of pollutants to groundwater, the university shall connect all wastewater facilities to the public sanitary sewer system. Holding tanks shall be used in all areas that cannot be connected to sewer. All existing septic leaching fields or cesspools serving university facilities within the GPA shall be replaced by either connecting to the public sanitary sewer system or installing holding tanks. New septic leach fields shall not be allowed within the GPA.

The university will also assess retrofitting existing stormwater catch basins and sumps to ensure that they are properly designed and maintained to allow for clean discharge of stormwater into the aquifer

Furthermore, all areas where hazardous materials and wastes are stored, transferred and used shall be over impervious surfaces and in accordance with all applicable State, Federal laws regulations and best management practices associated with their use. All chemicals regularly applied to the ground (paint, fertilizer, salt, pesticides) shall be in strict adherence to the established URI protocols and evaluated for impact to groundwater. See Utilities Department Wellhead Protection Program Manual for more information.

4.5 Control, Contain and Clean up Spills

All areas where hazardous materials or wastes are stored or used shall allow for the control, containment and clean up of spills. For example, loading docks and heavy-use parking areas shall be paved so that spills can be detected and cleaned up. Direct storm water to catch basins with oil water separators equipped with petroleum detection alarms or absorbent booms prior to discharge to retention basins or outfalls.

Spill prevention, control, and countermeasure (SPCC) plans shall be prepared for all facilities located within in the GPA that store and/or use petroleum products and chemicals. University personnel active in those facilities shall be trained in their implementation.

5.0 Prohibited Activities

Prohibited activities within the Groundwater Protection Area include:

1. Fireworks displays; (See Appendix C for more details)
2. Discharge of liquids to septic systems with leach fields or cesspools;
3. Interior floor drains designed to permit fluid from any interior space to be discharged into or onto the ground;

4. Application of fertilizers, insecticides, pesticides, etc for the maintenance of crops, parks, ball fields and greenways unless applied in coordination with URI Utilities and in accordance with URI Protocols found in the URI Wellhead Protection Program Manual;
5. General automotive service and repair, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment shall be prohibited unless conducted in facilities that meet the design standards below
6. Storage of equipment, materials for service and repair of gasoline or fuel oil, automotive body repair, lawn and garden care, welding, sheet metal or machine shop work shall be prohibited unless conducted in facilities that meet the design standards below;
7. Underground storage tanks for petroleum, hazardous materials or hazardous waste;
8. Aboveground storage tanks for petroleum should be limited and must meet the design standards below;
9. Automobile junk yards, junk and salvage yards of any type. Temporary storage areas, awaiting disposal outside of the GPA, is permitted provided that all fluids are drained and vehicles or equipment are stored on impervious surfaces;
10. Fuel stations or dispensing facilities that do not meet the site design standards below;
11. Metal plating, finishing and polishing, jewelry manufacturing, dry cleaning, wood preserving, furniture painting or refinishing, motor freight terminals, textile mill product manufacturing and fish hatcheries;
12. Beautician, barber or cosmetologist, except if serviced by public sewers with hazard material storage that complies with Section 6.0;
13. Photographic processing or printing facilities, except if serviced by public sewers with hazard material storage that complies with Section 6.0;
14. Incinerators, sanitary landfill sites, solid waste disposal facilities, RIDEM-permitted hazardous waste treatment, storage and disposal facilities (TSDF), injection wells or dry wells;
15. Recycling facilities, solid waste transfer stations, hazardous waste storage facility unless meeting the design standards below;
16. Storage of manure unless in accordance with design standards below;
17. Land disposal of septage, sewage sludge, composted wastewater sludge, and industrial sludge.
18. The use, storage or generation of hazardous or toxic waste or materials or other toxic pollutants unless in facilities that meet the design standards below. Provided, however, that minor or insignificant quantities of such materials may be stored on the premises for any lawful use, if, in the opinion of the Water System Manager, the presence of such substance does not constitute a potential for degradation of surface or groundwater resources in the GPA and such substance is contained in a suitable storage area. In making a determination of the presence of significant quantities of such materials, the Water System Manager shall obtain the written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials, the Rhode Island DEM Division of Agriculture, the Rhode Island Pesticide Coordinator or experts in toxicology, contaminant migration or chemical risk assessments as applicable.
19. Storage of road salt and deicing materials unless in facilities meeting the design standards below;

20. The parking of vehicles for the storage or delivery of fuel oil or other hazardous or toxic materials for a period exceeding two hours in any 24-hour period. This shall not prohibit the use of vehicles for application of fertilizers, pesticides, or herbicides to any use permitted by this policy;
21. Vehicle washing unless in facilities that meets the design standards below.
22. Development or operation of snow dumps.

6.0 GPA Design Standards

The following site design and construction standards shall be required for all new and substantially reconstructed uses within the Groundwater Protection Area established after the effective date of this policy. "Substantial reconstruction" shall mean the improvement, alteration or replacement of more than 30 percent of the floor area or land area of the existing use, or a substantial change in use of an existing facility. Protecting the groundwater aquifer is in the best long term interest of the university.

The Master Plan Review Committee shall ensure major projects within the GPA comply with this policy. Department directors shall also ensure smaller department projects within the GPA comply with this policy.

1. Maintain and restore groundwater recharge to the Chipuxet Aquifer through new and re-development projects throughout the GPA to avoid increasing runoff to White Horn Brook and to address low flow issues in the Chipuxet River.
2. In projects where RIDEM stormwater recharge goals cannot be met on-site, off-site storm water improvements or other restoration projects that promote aquifer improvement shall be considered.
3. Development shall reduce the impact on the Chipuxet Aquifer, particularly West of White Horn Brook and maintain and restore the groundwater recharge characteristics of this area. New development and redevelopment projects undertaken within the GPA shall include stormwater management measures meeting the minimum standards set forth in the *Rhode Island Stormwater Design and Installation Standards Manual*, including those for water quality/quantity control, groundwater recharge, pollution prevention, and operation/maintenance. To the maximum extent practicable, stormwater infiltration practices (Section 5.3 of the manual) shall be employed for the treatment and recharge of stormwater runoff. While runoff from certain land uses with higher potential pollutant loads (LUHPPLs) can be discharged to the ground provided additional treatment is provided prior to release, runoff from auto fueling facilities may not be infiltrated per RIDEM policy. For such facilities, non-infiltrating stormwater best management practices (BMPs, such as lined/subdrained filters systems) must be used.
4. All buildings and facilities that require wastewater disposal shall be connected to public sanitary sewer. Any facility that cannot be connected to sewer will be equipped with a holding tank and level alarm. No cesspool or leach fields are allowed in the GPA.
5. Storage of hazardous or toxic waste or materials, where permitted, shall be stored in accordance with state, federal regulations, URI's Spill Prevention, Control, and Countermeasure (SPCC) Plan and industry best management practices. Proper storage

containers, cabinets and/or secondary containment areas shall be provided and utilized. Storage areas shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Buildings shall be secured to prevent vandalism. The facility shall be designed to contain hazardous materials or wastes in the event of a flood, fire or other natural catastrophe. Spill kits shall be provided, regularly stocked and inspected. Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.

6. Road salt and deicing chemicals where permitted, shall be stored in accordance with state, federal regulations, URI's SPCC plan and industry best management practices. Storage and loading areas shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Infiltration systems shall be prohibited for all stormwater management systems installed at a road salt and deicing chemical storage facility.
7. Road salt storage piles shall be placed on impervious surfaces and be covered with an impermeable cover. Storage containers for liquid deicing chemicals shall have secondary containment. Secondary containment shall be required in areas where these chemicals are transferred. Containment measures that prevent the infiltration of stormwater runoff from road salt storage and handling areas shall be used.
8. Transfer areas of hazardous or toxic waste or materials including fuel oil, lubricants, degreasers, fertilizers, pesticides and road salt must have level solid impervious floors with positive limiting barriers to prevent leakage of such materials into or onto the ground. Spill kits shall be provided, regularly stocked and inspected. Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.
9. Above ground storage tanks for petroleum products or hazardous or toxic materials shall be eliminated whenever possible. Buildings located west of White Horn Brook shall be converted to propane or natural gas fuel heating systems where applicable to eliminate fuel oil storage. When present they must be designed in accordance with current industry design standards (see Appendix D) and comply with URI's SPCC plan. AST and UST systems must be equipped to contain spills from tanks, piping, transfer and dispensing equipment and operations. Secondary containment shall be designed to contain a minimum of 110 percent of total tank capacity. Double wall tanks are preferred and to be securely mounted on a concrete pad. Such base and dikes shall be constructed of material which is both impermeable and compatible with the material being contained. Dike containment structures shall be covered to protect the tanks and prevent accumulation of precipitation within the dike. Where roofing is not practical, the containment structure shall be designed with an additional capacity sufficient to contain precipitation from a 25-year 24-hour rainfall event. Runoff from the containment shall be controlled by means of pumps, siphons or piping designed to eliminate discharge of contaminated water into the environment in the event of a spill, or have a drain valve which will allow clear storm water to be manually released as needed. The containment area shall provide crash protection to prevent damage to the area, tanks piping and dispensing equipment. Tanks shall be included in the University's SPCC Plan and inspection logs shall be maintained and reviewed monthly. Spill kits shall be provided, stocked and regularly inspected.

- University personnel active in those areas where AST and UST systems are located shall be trained in SPCC plan implementation.
10. Petroleum powered emergency generators for life safety shall be consolidated to minimize the number of fuel storage tanks and locations. Fuel storage shall comply with the AST and UST fuel storage requirements included in this document. Stand-by generators shall be powered by natural gas whenever possible.
 11. Stationary equipment containing oil such as transformers, electrical switches, hydraulic lifts and elevators, etc shall be constructed to detect, control and allow for the cleanup of leaks or spills. Equipment shall be inventoried and inspected in accordance with URIs SPCC plan.
 12. Portable oil containing equipment, both university and privately owned, such as backhoes, excavators, generators, etc shall be free from leaks and inspected by the operator daily. Use of this equipment shall be terminated if leaks are observed. The source of the leak shall be repaired before the equipment is brought back into operation. All spills shall be properly cleaned up in accordance with RIDEM.
 13. Solid waste transfer stations, recycling stations and resource recovery facilities shall comply with state and federal permitting requirements. Facilities shall be constructed to prevent discharge of contaminants to groundwater including control of storm water and containment of storm water. Stormwater infiltration shall not be allowed at these facilities. Facilities shall be staffed by trained and authorized personnel knowledgeable in acceptable waste for disposal, site management and security. Quarterly collection and testing of groundwater at the facility shall be performed.
 14. Dumpsters and roll-off containers which are used to store solid wastes and recycling materials shall be covered to prevent storm water from washing out waste. No washing or rinsing of dumpsters on-site shall occur.
 15. Manure storage shall be in accordance with USDA Natural Resource Conservation Service Standard 313. Groundwater monitoring wells and regular sampling shall be part of the facility operation.
 16. Composting facilities shall be designed to protect groundwater and prevent groundwater contamination from said operation. The facilities shall evaluate the potential hazards associated with the raw materials being composted and determine if engineering controls such as an impermeable base, storm water control, building, etc. are required. Groundwater monitoring wells and regular sampling shall be part of the facility operation.
 17. Application of fertilizers and pesticides shall be in accordance with URI Application Protocol. Records on product, sprayer inspection, application rates, dates of application and locations shall be maintained in a log. Farming crops, campus landscaping and field turf varieties that require less fertilizer, pesticides and irrigation should be favored.
 18. General automotive service and repair, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Buildings shall be secured to prevent vandalism. The facility shall be designed to contain hazardous materials or wastes in the event of a flood, fire or other natural catastrophe. Spill kits shall be provided, regularly stocked and inspected.

Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.

19. Application of deicing salt shall be applied in accordance with URI Deicing Salt Protocol in the URI Wellhead Protection Program Manual. All personnel involved with application of deicing salt shall be trained in proper application.
20. Vehicle and equipment washing shall be on impervious services to prevent discharge to groundwater. Wash water shall be discharged to a sump to settle solids and then to the public sanitary sewer collection system or to a storage container and transported for off-site disposal.
21. Rainwater collected upon permanent roofing over 1,500 square feet in total area per lot shall be directed into dry wells, injection wells, or underground leaching galleys or otherwise diverted to a permeable ground surface, so as to encourage recharge of the ground water. However, such rainwater shall not be mixed with stormwater runoff from any parking area, roadway, or area subject to contamination from any hazardous or toxic waste or material or petroleum product prior to discharge into or onto the ground.
22. Parking lots for 50 or more vehicles shall be constructed to allow for the detection, containment and cleanup of hazardous spills and contaminated storm run off. Parking lots holding less than 50 vehicles shall meet these conditions whenever possible.
23. Stormwater runoff from paved parking lots located west of White Horn Brook shall be
 - a) Collected and diverted through an oil/water separator with petroleum chemical detection alarms and absorbents that are regularly maintained. Effluent is then discharged in accordance to item 24.
24. Public and private streets, loading areas, and other impervious surfaces subject to contamination from road deicing materials or petroleum products unless otherwise specified in this section, shall be diverted to water quality BMPs meeting the standards and requirements set forth in the *Rhode Island Stormwater Design and Installation Standards Manual*.

The procedure for review of stormwater runoff controls shall include the submittal of the design to the Water System Manager for review and advisory opinion beginning with the initial design phase. Facilities Services shall have the authority to approve the design of all such stormwater runoff controls required under this section.

25. Commercial earth removal shall be subject to the following restrictions in the GPA:
 - a) A minimum separation distance of three feet between the bottom of the excavation and the seasonal high water table, as verified by a RIDEM licensed soil evaluator or a professional engineer or other licensed professional with training and expertise in evaluating seasonal high groundwater elevations, shall be maintained;
 - b) The installation and regular maintenance of permanent soil erosion and sediment control measures, as outlined in the Rhode Island Stormwater Design and Installation Manual, 2015, as revised, shall be required, including permanent re-vegetation of the land surface upon cessation of earth removal operations; and

- c) The provisions of items 1. and 2. of this subsection as set forth above shall also be deemed to apply to earth removal activities conducted as part of an approved URI construction project.

7.0 Maintenance of Facilities

All facilities constructed in accordance with the Design Standards noted above shall be maintained by the University so as to assure their ability to function as designed. The Water System Manager shall notify the Director of Facilities of deficiencies so that they can be assigned to appropriate staff for correction.

8.0 Inspections and Reviews

The Master Planning Review Team shall review designs for proposed major construction on campus to ensure compliance with this Policy. The Water System Manager shall meet with project managers beginning at the initial design phase to review construction plans for work proposed within the Wellhead Protection Area to ensure plans comply with this policy. The Water System Manager shall notify the design team of issues that do not comply with this policy so that the team can resolve the issue.

The Water System Manager shall send out annual self assessment checklists to the Crop Research and Athletics Grounds Manager. The Water System Manager shall conduct tri-annual inspections of Lands and Grounds, Automotive, Crop Research, Athletics Grounds and other facilities to ensure compliance with this policy. The Water System Manager shall notify the appropriate facility manager and the Director of Facilities of the needed correction to comply with this Policy.

This Policy shall be reviewed regularly as conditions may arise that threaten groundwater quality and have not been foreseen in development of this Policy. When such conditions warrant amendment of this Policy, proposed changes shall be drafted and forwarded to the Master Plan Review Team for review and approval.

9.0 References

Conservation Practice Standard, Waste Storage Facility, Code 313, 313-CPS-1, United States Department of Agriculture, Natural Resources Conservation Service, May 2016

Evaluation of Perchlorate Contamination at a Fireworks Display, MADEP, August 2007

Groundwater Protection Overlay District regulations, Town of South Kingston, RI, Sec 602, January 31, 2017

Handbook of Urban Runoff Pollution Prevention and Control Planning, USEPA, EPA625/r-93/004, September 1993

Memorandum, Best Management Practices for Fireworks to Minimize Perchlorate Releases, Office of the Under Secretary of Defense, May 21, 2009

New Hampshire Model Groundwater Protection Ordinance, Pierce Rigrod , September 2015,
<https://www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-06-41.pdf>

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Source Protection Program Summaries, New England and New York State, New England Interstate Water Pollution Control Commission, February 2001

Technical Fact Sheet – Perchlorate, USEPA, EPA 505-F-14-003, January 2014

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Appendix A

RIDOH Rules and Regulations Pertaining to Public Drinking Water R46-13-DWQ, APPENDIX 4

List of Potential Sources of Groundwater Contamination

- Agricultural related activities (pesticide and fertilizer storage and application, machinery maintenance and fueling)
- Airports-commercial (maintenance and repair, fuel storage)
- Animal care and holding areas (stables, kennels, pet shops)
- Asphalt, coal, tar and concrete companies
- Automotive repair shops
- Automotive body shops
- Auto parts stores
- Beauty salons
- Boat builders and refinishers
- Bus and truck terminals
- Chemical manufacturers
- Construction sites
- Dredge disposal sites
- Dry cleaners
- Food processors (meat packers, dairies, bakeries)
- Fuel oil distributors (product storage, equipment maintenance and storage)
- Funeral homes and cemeteries
- Furniture strippers, refinishers
- Golf courses
- Hotels and motels
- Industrial manufacturers
- Junkyard and salvage yards
- Land application of sewage sludge
- Landfills and dumps
- Laundromats
- Machine shops
- Medical facilities (hospitals, clinics, laboratories)
- Metal and drum cleaning/reconditioning
- Military facilities (past and present)
- Nurseries
- Nursing homes
- Paint shops
- Photographic processors
- Pipelines (oil and sewer)

List of Potential Sources of Groundwater Contamination (continued)

- Printers and blueprint shops
- Prisons
- Railroad yards
- Repair shops (engines, appliances, etc.)
- Research laboratories
- Residential development (lawn care, septic systems)
- Restaurants and taverns
- Retail shopping centers, malls
- Road salt storage
- Rust proofers
- Sand and gravel mining operations
- Sawmills
- Schools, colleges and trade centers
- Service stations (gas stations)
- Storm water management facilities (leaching systems)
- Transmission line rights of way
- Transportation corridors (road deicing, materials transport)
- Utility substations/transformers
- Waste storage, treatment and recycling (hazardous and non-hazardous)
- Water transfer stations
- Wastewater treatment plants (past or present sludge disposal)
- Wood preservers

DWQ_Final_Sept2012.doc Friday, 14 September 2012

Appendix B

Town of South Kingstown Groundwater Protection Overlay District (GPOD)

Sec. 602. - Groundwater Protection Overlay District.

602.1. *Establishment of district.* There is hereby established a Groundwater Protection Overlay District (GPOD) which shall be the area defined as lots of record which are indicated as the GPOD on the Official Zoning Map of the Town of South Kingstown. The GPOD is superimposed over any other zoning district established by this Ordinance. The regulations imposed by the GPOD shall apply in addition to the regulations of the underlying zoning district. In the event of a conflict or inconsistency between the regulations imposed by the GPOD and those imposed by the underlying zoning district, the regulations imposed by the GPOD shall govern.

602.2. *Purposes.* The purposes of this section are to protect, preserve and maintain the quality and supply of certain groundwater reservoirs in the Town of South Kingstown through regulation of land use and certain activities in the areas over the groundwater reservoirs and critical portions of their groundwater recharge area. It is further the intent of this section to permit the use of land within the GPOD for agricultural purposes, and to encourage the use of farmland in a manner which is consistent with protection of surface and groundwater resources.

602.3. *Delineation of districts.* The Groundwater Protection Overlay District is intended to regulate uses within the following areas:

- A. Groundwater reservoirs are the highest yielding portions of the state's stratified drift aquifers (saturated thickness greater than 40 feet and transmissivity greater than 4,000 feet squared per day) that are capable of serving as a significant source of public supply; and
- B. Critical portions of the recharge areas to the above groundwater reservoirs, as defined by the Rhode Island Department of Environmental Management (RIDEM) as groundwater classified as GAA; and that portion of the Beaver-Pasquisset recharge area within South Kingstown; and
- C. Area adjacent to Factory Pond defined by RIDEM as the area of contribution to existing public water supplies.

602.4. *References.* Identification of areas within the GPOD have been made by reference to maps and studies prepared by the following:

- A. Ground-Water Resources of the Kingston Quadrangle, Rhode Island, by the Rhode Island Development Council, Geological Bulletin No. 9, 1956.
- B. Availability of Ground Water, Upper Pawcatuck River Basin, Rhode Island, Geological Survey Water-Supply Paper 1821, prepared in cooperation with the Rhode Island Development Council and the Rhode Island Water Resources Coordinating Board, 1966.
- C. Groundwater Quality Regulations, materials used in the development of the Rhode Island DEM groundwater regulations, pursuant to Chapters 46-12, 46-13.1, 42-17.1 and 42-35 of the General Laws of Rhode Island, as amended.
- D. Hydrology, Water Quality, and Groundwater Development Alternatives in the Chipuxet Groundwater Reservoir, R.I., U.S.G.S. Water Resources Investigation Report 84-4254. by Herbert E. Johnston and David C. Dickerman, 1985.

602.5. *Permitted and prohibited uses.*

- A. All uses indicated in Section 301 as permitted uses (Y) and special permit uses (S) in the underlying zoning district are permitted or conditionally permitted in the Groundwater Protection Overlay District, with the exception of prohibited uses and activities as further provided in subsection B., below. Also permitted are uses or structures accessory to any permitted use.
- B. The following principal uses and activities are prohibited in the GPOD:

1. *Any use prohibited (N) in the underlying zoning districts;*
2. *General automotive service and repair shops, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment. Included among these uses are establishments which sell, store, lease or rent such equipment and which include service and repair as accessory activities. Noncommercial repair work, or repair work incidental to a permitted use, is not prohibited.*
3. *Gasoline service stations (minor repairs only);*
4. *Automobile body shops;*
5. *Lawn and garden supply stores;*
6. *Welding shops, sheet metal shops, machine shops;*
7. *Automobile junk yards, junk and salvage yards of any type;*
8. *Fuel dealers, oil and bottled gas sales and service, and open lot storage of such fuels;*
9. *Metal plating, finishing and polishing, including jewelry manufacturing;*
10. *Dry cleaning plant (not including pick-up);*
11. *Beautician, barber or cosmetologist, except if serviced by public sewers;*
12. *Commercial wood preserving and furniture painting or refinishing;*
13. *On site photographic processing or printing;*
14. *Incinerators, sanitary landfill sites, solid waste disposal facilities, solid waste transfer stations, resource recovery or recycling facilities, injection wells, and hazardous waste management facilities;*
15. *Land disposal of septage or sewage sludge, including composted industrial sludge. Not prohibited is the application of wastewater treatment facility composted sludge, applied according to the Rhode Island Department of Environmental Management "Rules and Regulations Pertaining to the Treatment, Disposal, Utilization, and Transportation of Wastewater Treatment Facility Sludge," 1991.*
16. *All uses which involve the use, storage or generation of hazardous or toxic waste or materials or other toxic pollutants as defined herein. Provided, however, that minor or insignificant quantities of such materials may be stored on the premises of any lawful use, if, in the opinion of the Building Official, the presence of such substance does not constitute a potential for degradation of surface or groundwater resources in the area and such substance is contained in a suitable storage area. In making a determination of the presence of significant quantities of such materials, the Building Official shall obtain the written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials, the Rhode Island DEM Division of Agriculture, or the Rhode Island Pesticide Coordinator, as applicable. Insignificant quantities of hazardous materials may be construed as that which is necessary for the operation of a farm, residence, office, or business including the operation of equipment, vehicles or other mechanical systems necessary for the operation of a permitted use;*
17. *Underground storage tanks as defined in Article 12 are prohibited. However, storage tanks used for storing home heating oil (No. 2 fuel oil) and serving a one- or two-household dwelling are permitted if the following conditions are met:*
 - a. *The tank capacity does not exceed 300 gallons (per dwelling unit); and*
 - b. *The tank is located in a basement or cellar, and is above the surface of the basement floor and the basement floor is constructed of concrete or contains a membrane liner*

capable of containing spills; or the tank is located above ground or in a basement having a dirt floor provided the following criteria are met:

- i. Provision is made to protect the tank from the elements;*
- ii. Rust-proofing is applied to all tank surfaces;*
- iii. The tank shall be securely anchored; and*
- iv. The tank shall be placed onto a concrete foundation capable of supporting the tank, which foundation must be larger than the size of the tank in length and width to prevent leaks onto pervious surfaces.*

All storage tanks of 300 gallons capacity or greater and which are located above ground shall be governed by the provisions of subsection 602.6.B. Above ground storage tanks which exceed 10,000 gallons per lot are permitted only by the granting of a special use permit by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the design and construction of storage tanks and containment devices, and shall consider the potential impact on groundwater in the event of leaks, spills, fires, maintenance, deliveries and other such activities and events;

- 18. Storage of road salt and deicing materials which are not covered by a roof and located on an impermeable base;*
- 19. The parking of vehicles for the storage or delivery of fuel oil or other hazardous or toxic materials for a period exceeding two hours in any 24-hour period. This shall not prohibit the use of vehicles for delivery of fuels or for application of fertilizers, pesticides, or herbicides to any use permitted by this Ordinance;*
- 20. Vehicle washing shop (including automatic);*
- 21. Motor freight terminal;*
- 22. Fish hatcheries;*
- 23. Textile Mill Products Manufacturing, Use Code 72, except assembly of finished textile products.*

602.6. Site design standards. The following site design and construction standards shall be required for all new and substantially reconstructed uses, other than one or two-household residential uses within the GPOD, established after the effective date of this article. "Substantial reconstruction" shall mean the improvement, alteration or replacement of more than 30 percent of the floor area or land area of the existing use. Site design and construction standards shall follow, where applicable, the recommendations and guidelines as provided in the following documents: the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as amended; the Rhode Island Department of Environmental Management's Recommendations of the Stormwater Management and Erosion Control Committee Regarding the Development and Implementation of Technical Guidelines for Stormwater Management, 1988, as amended; and Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s, by the Metropolitan Washington Council of Governments, 1987, as amended.

- A.** Storage of hazardous or toxic waste or materials, where permitted, shall be located within a building having roofing, walls, and floor(s) constructed of such materials as to render said building weather tight, so as to prevent leakage of such products or materials into or onto the ground.
- B.** Storage tanks for petroleum products or hazardous or toxic materials excluding portable fuel tanks for farm uses may be located outdoors provided they are located within a containment structure that has an impermeable base and surrounding dike. Such base and dikes shall be constructed of material which is both impermeable and compatible with the material being

contained. At minimum, the structure shall be designed to contain 110 percent of total tank capacity. Such containment structures shall be covered to protect the tanks and prevent accumulation of precipitation within the dike. Where roofing is not practical, the containment structure shall be designed with an additional capacity sufficient to contain precipitation from a 25-year 24-hour rainfall event. Runoff from the containment shall be controlled by means of pumps, siphons or piping designed to eliminate discharge of contaminated water into the environment in the event of a spill, or have a drain valve which will allow clear stormwater to be manually released as needed.

- C. Interior floor drains designed to permit fluid from any interior space to be discharged into or onto the ground shall be prohibited. Provided, however, that such interior floor drains may be permitted if designed to empty into an aboveground storage tank, capable of completely containing anticipated flows. Such tanks, if provided, shall also be subject to containment provisions specified in subsection 602.5.B.17., above.
- D. Dumpsters which are used to store solid wastes shall be covered or located within a roofed area and have drain plugs intact. No washing or rinsing of dumpsters on-site shall occur.
- E. Rainwater collected upon permanent roofing over 1,500 square feet in total area per lot shall be directed into dry wells, injection wells, or underground leaching galleys or otherwise diverted to a permeable ground surface, so as to encourage recharge of the ground water. Provided, however, that such rainwater shall not be mixed with stormwater runoff from any parking area, roadway, or area subject to contamination from any hazardous or toxic waste or material or petroleum product prior to discharge into or onto the ground.
- F. Stormwater runoff from paved parking lots, public and private streets, loading areas, storage and operating areas, and other impervious surfaces subject to contamination from road deicing materials or petroleum products, shall be:
 - 1. Collected and diverted through an oil/water separator prior to discharge to the environment; and/or
 - 2. Collected and discharged into "wet" stormwater detention basins capable of achieving water quality enhancement of the runoff; and/or
 - 3. Collected and discharged into extended detention dry basins; and/or
 - 4. Diverted toward vegetated filter strips, swales, or riprap lined channels; and/or
 - 5. Diverted into sand bed filters; and/or
 - 6. Discharged or diverted to other stormwater management facility(s) designed to attenuate runoff and provide pollutant removal capabilities.

The procedure for review of stormwater runoff controls shall be as specified in subsection 505.1 of this Ordinance; provided, however, that said site plans shall also be submitted to the Conservation Commission for their site review and advisory opinion. The Planning Board shall have the authority to approve the design of all such stormwater runoff controls required under this section.

The above stormwater management requirements shall incorporate best management practices, as that term is used in "Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s", by the Metropolitan Washington Council of Governments, 1987, as amended, and be designed to be effective in pollutant removal sufficient to minimize harmful impacts to groundwater and surface water resources. They shall be commensurate with the size and nature of the proposed use; provided, however, that the following shall not be required to provide said stormwater management facilities:

- a. Single- or two-household residential uses on a single lot; and

- b. Streets serving a residential compound or minor subdivision approved by the Planning Board.
 - G. Garbage disposal systems (in sinks) shall be prohibited in areas not serviced by public sewers.
 - H. At least 20 percent of the area of each lot shall be covered with existing or introduced vegetation.
 - I. Commercial earth removal, as defined in Section 506 of this Ordinance, excluding construction necessary for new farm ponds, new drainage structures, and new farm roads, shall be subject to the following restrictions in the GPOD:
 - 1. A minimum separation distance of three feet between the bottom of the excavation and the seasonal high water table, as verified by RIDEM, shall be maintained;
 - 2. The installation and regular maintenance of permanent soil erosion and sediment control measures, as outlined in the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as revised, shall be required, including permanent revegetation of the land surface upon cessation of earth removal operations; and
 - 3. The provisions of items 1. and 2. of this subsection as set forth above shall also be deemed to apply to earth removal activities conducted as part of an approved subdivision.
 - J. Any use which would utilize an individual sewage disposal system, or multiple systems, serving the same use, or combination of uses on a lot for which the total maximum daily design sewage flow exceeds 2,000 gallons per day shall be permitted, only upon the granting of a special use permit for such ISDS by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the present water quality conditions and the potential impact to ground and surface waters from the proposed use, including the cumulative impacts of sewage discharge over an extended period of time.
- 602.7. *Maintenance of facilities.* All facilities constructed in accordance with subsection 602.6 shall be maintained by the owner so as to assure their ability to function as designed. Failure to properly maintain said facilities shall constitute a violation of this Ordinance, and is subject to enforcement action by the Town as provided in Article 9. As a condition of granting a building permit for any such facility, the Building Official is empowered to enter onto the premises in order to inspect said facilities for the purpose of determining their functionality.

University of Rhode Island Policy on Fireworks Displays 2017

1.0 Purpose

URI has established a Groundwater Protection Area (GPA) to protect the well field recharge area of the campus's only supply of drinking water. Fireworks displays have occurred for nearly three decades on lower campus, west of the football practice field and the Sherman Building. This area is within the GPA and located approximately 3000 feet directly upgradient of URI's supply well field.

Levels of perchlorate have been detected in URI's water supply wells and in monitoring wells located in the groundwater aquifer in the fireworks launch areas. Perchlorate is a chemical in fireworks, highly soluble in water and can travel significant distances in groundwater.

Perchlorate is known to affect the function of the thyroid gland, which regulates the body's metabolism. EPA is currently developing a drinking water standard for perchlorate and MADEP has an enforceable standard of 2 ppb.

2.0 Firework Display Guidelines

The following requirements must be implemented when conducting fireworks displays on URI property.

1. Fireworks displays are not permitted within URI's Groundwater Protection Area as identified in Figure 1 below. Studies have shown that fireworks displays have a direct effect on the perchlorate levels in groundwater in the vicinity of the launch area.
2. Where fireworks are used, request low (or no) perchlorate-containing fireworks. This may require making inquiries of suppliers and/or manufacturers.
3. Institute rigorous "housekeeping" practices as part of the permit requirements. It appears that the deposition of unburned aerial shell fragments and other pyrotechnic debris may be the primary mechanism by which groundwater becomes contaminated by perchlorate. Fireworks companies or display sponsors should remove all visible shell debris encountered during the search at first light.
4. Dispose or manage "duds" and "misfires" appropriately; all "duds" or "misfires" must be removed from the site and disposed of in accordance with applicable codes and manufacturers instructions. Contain and/or promptly address runoff in cases where water is used to douse duds or misfired materials.

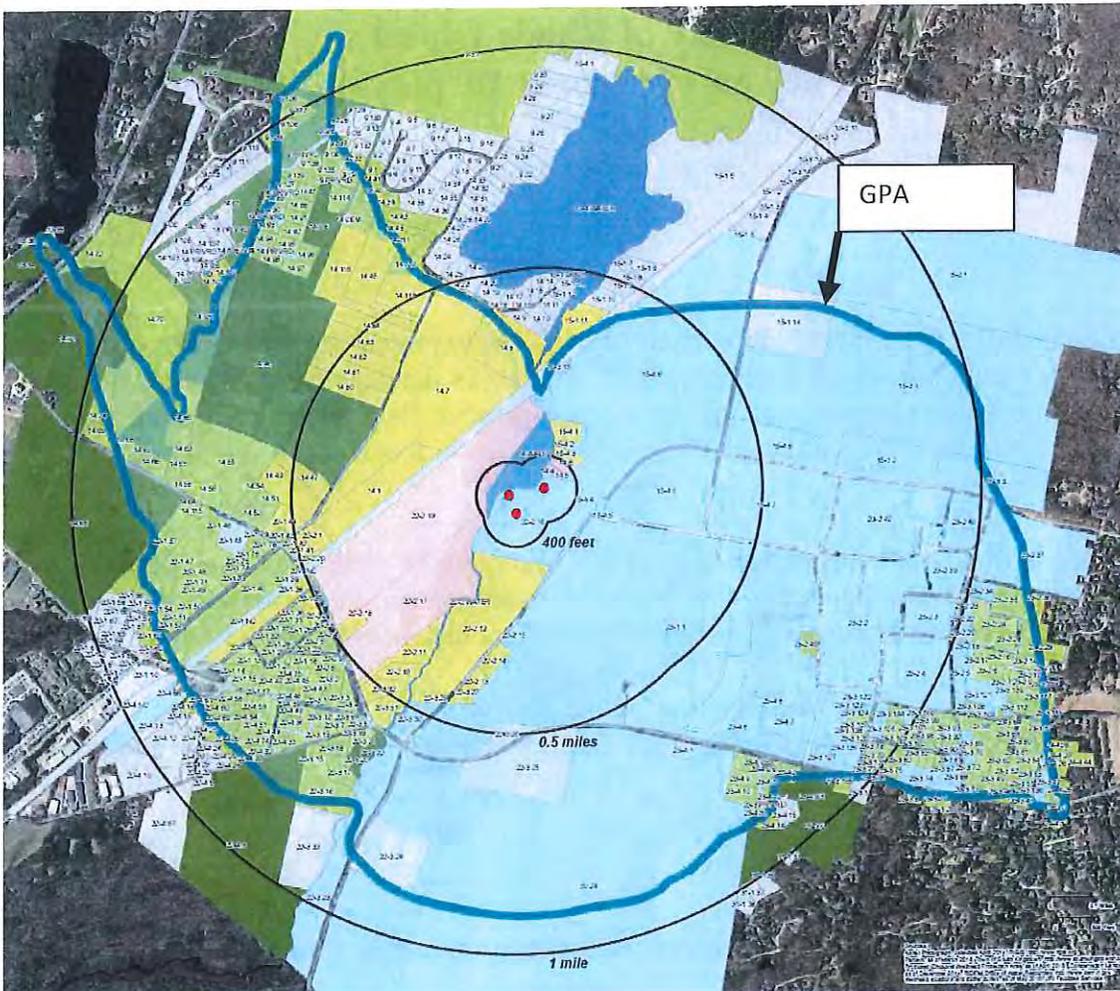


Figure 1 – Draft RIDEM Wellhead Protection Area for URI and KWD

3.0 References

Massachusetts Department of Environmental Protection, August 2007, Evaluation of Perchlorate Contamination at a Fireworks Display: Dartmouth, MA. Retrieved from <http://www.mass.gov/eea/agencies/massdep/cleanup/sites/evaluation-of-perchlorate-contamination-in-dartmouth.html>

Department of the Interior, U. S. Geological Survey, May 2, 2016, Fireworks Likely Caused Water Contamination at Mount Rushmore. <https://www.usgs.gov/news/fireworks-likely-caused-water-contamination-mount-rushmore>

Michael Bernstein, “Green” Fireworks may brighten eco-friendly Fourth of July displays in the future, American Chemical Society, June 22, 2009

U. S. Environmental Protection Agency, Technical Fact Sheet – Perchlorate, EPA 505-F-14-003, January 2014.

Memorandum

To: Abigail Rider, Vern Wyman

From: Jerry Sidio

Date: July 11, 2018

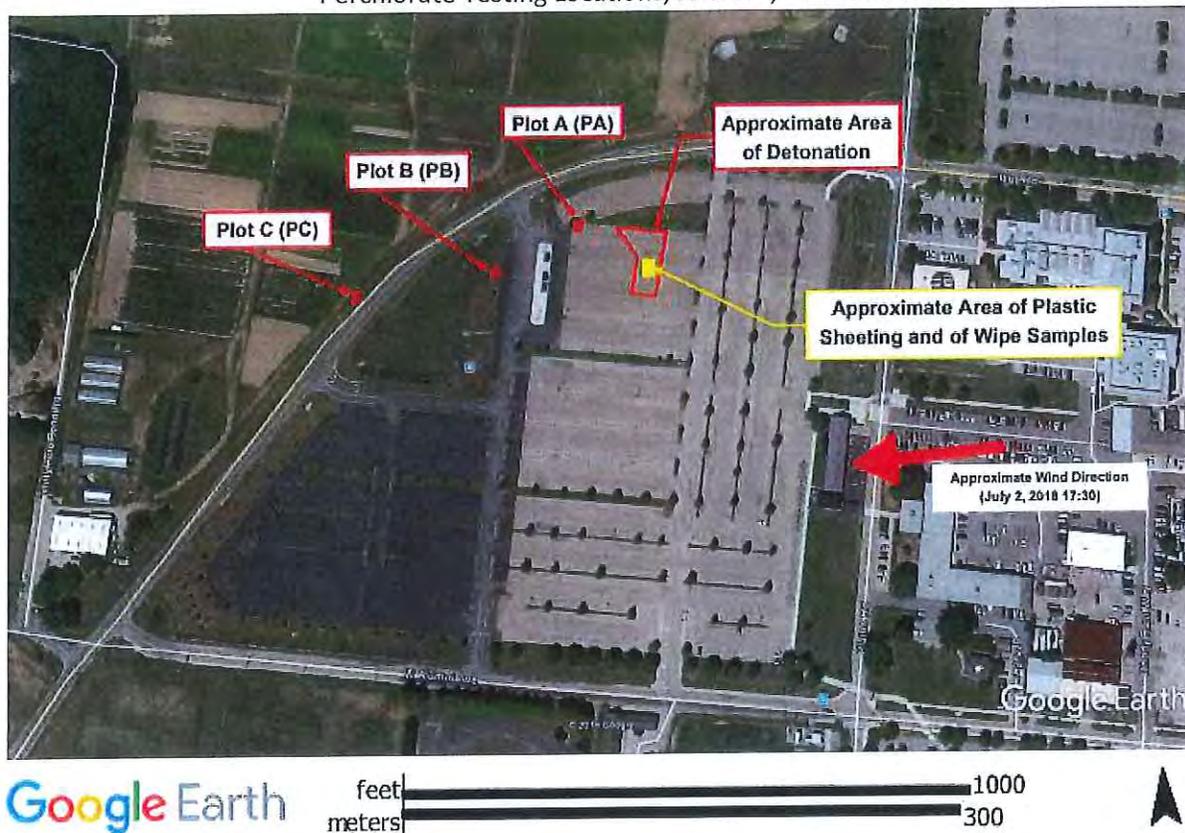
Re: Reasons to Suspend Fireworks at URI

The following points make a good case to suspend fireworks at URI to protect our groundwater aquifer that supplies drinking water to the campus.

- 1) EPA has recognized that fireworks are a leading cause of perchlorate contamination in drinking water. EPA has determined that perchlorate disrupts the function of the thyroid gland. EPA is developing a drinking water regulatory standard. The Rhode Island Department of Health has noted that a final regulatory standard is expected in about one year. URI has been performing quarterly testing since October 2015.
- 2) The US Department of Defense has issued a memorandum dated May 21, 2009 to Secretary's of each branch of the military regarding perchlorate in fireworks. They recognize the health effects of perchlorate and fireworks as a source. They also have developed best management practices to minimize the environmental impact from fireworks. BMP5 states that "The location of fireworks must be made to minimize the risk to drinking water".
- 3) Massachusetts DEP has issued a drinking water standard of 2 ppb.
- 4) The Rhode Island Department of Health has required that URI develop an Action Plan to limit perchlorate in drinking water to 2 ppb. We submitted our Action Plan to DOH on August 27th, 2015 and sent our last status report on October 24th, 2017.
- 5) Perchlorate levels in URI's drinking water supply wells have ranged from 0.64 to 3.5 ppb.
- 6) Fireworks displays over URIs drinking water aquifer have been occurring for nearly three decades. The location of the launch areas has been west of the athletic complex and has moved north over time. Current launch areas have been west of the URI Emergency Management Service.
- 7) URI has conducted a groundwater investigation and has determined that perchlorate is most predominate in groundwater located west of White Horn Brook and north of West Alumni Ave. These levels extend west to URI's well field. Attached is a map of monitoring wells and perchlorate levels from the ongoing investigation.
- 8) URI has researched the composition of fireworks displays to attempt to reduce perchlorate levels. The June 2nd, 2018 show should have been very low in perchlorate according to the pyrotechnic vendor.
- 9) URI's environmental consultant conducted sampling before and after the June 2nd, 2018 round of fireworks. Wipe samples (URI-WP1) were collected from plastic sheeting at the launch site.

Furthermore three soil samples were collected downwind of the launch area at varying distances as noted in the diagram and table below.

Perchlorate Testing Locations, June 2nd, 2018 Fireworks



Perchlorate Testing Before and After June 2nd, 2018 Fireworks
Results in ppb

Sample:	URI-WP1	URI-PA	URI-PB	URI-PC
Location:	At Lunch Site	120 ft	250 ft	525 ft
Pre	31	110	0.18	0.55
Post	14,000 A 960 B	1.4	4.8	1,800

10) Results show significant levels of perchlorate after the display in all but one sample; URI-PA. The pre wipe sample was 31 ppb and post wipe results were 14,000 and 960 ppb. The pre sample at URI-PA was 110 ppb and the post was 1.4 ppb. This could be due to the fact that pre and post

sample sites were located adjacent to each other, it could be residual from previous events and the URI-PA location was slightly cross wind from the launch site. The pre sample at URI-PB was 0.18 ppb and the post was 4.8 ppb. The pre sample at URI-PC was 0.55 and the post sample was 1,800 ppb. This represents a 10,000 fold increase. Fallout from the fireworks drifts and spreads over the land. MADEP found similar results at this distance from the launch area in other investigation sites in Massachusetts.

List of Frequently Utilized Storage Tank Standards and Practices

Below is a list of frequently used storage tank standards and practices from organizations that are referenced in 25 PA Code, Chapter 245. There may be other applicable standards. The current (or most recent) edition/revision of a publication should be used.

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American Petroleum Institute

Number (ID) Title &/or Description

Construction Standards:

API Spec 12D Specifications for Field Welded Tanks for Storage of Production Liquids
API Spec 12F Shop Welded Tanks for Storage of Production Liquids
API Spec 12P Specifications for Fiberglass Reinforced Plastic Tanks
API Std 620 Design and Construction of Large, Welded, Low Pressure Storage Tanks
API Std 650 Welded Steel Tanks for Oil Storage (Replaced several API 12 series Spec's)
API Std 2000 Venting Atmospheric and Low-pressure Storage Tanks
API Std 2610 Design, Construction, Operation, Maintenance, and Inspection of Terminal & Tank Facilities

Inspection Standards: (Includes Construction Alteration, and Reconstruction Standards)

API Std 510 Pressure Vessel Inspection Code (Maintenance Inspection, Rating, Repair and Alteration)
API Std 570 Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems
API Std 653 Tank Inspection, Repair, Alteration, and Reconstruction
API Std 2015 Requirements for Safe Entry & Cleaning of Petroleum Storage Tanks

Recommended Practices:

API RP 12H Installation of New Bottoms in Old Storage Tanks
API RP 12R Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service
API RP 574 Inspection Practices for Piping System Components
API RP 575 Inspection of Atmospheric and Low Pressure Storage Tanks
API RP 580 Risk Based Inspection
API RP 651 Cathodic Protection of Aboveground Petroleum Storage Tanks
API RP 652 Lining of Aboveground Petroleum Storage Tank Bottoms
API RP 1107 Pipeline Maintenance Welding Practices
API RP 1110 Pressure Testing of Liquid Petroleum Pipelines
API RP 1604 Closure of Underground Petroleum Storage Tanks
API RP 1615 Installation of Underground Petroleum Storage Systems
API RP 1626 Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations
API RP 1627 Storing and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations
API RP 1631 Interior Lining and Periodic Inspection of Underground Storage Tanks
API RP 1632 Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems
API RP 1637 Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Gasoline Dispensing Facilities and Distribution

Terminals

API RP 2003 Protection Against Ignitions Arising Out of Static, Lightning and Stray Currents

API RP 2016 Guidelines for Entering and Cleaning Petroleum Storage Tanks

American Petroleum Institute

Number (ID) Title &/or Description

API RP 2027 Ignition Hazards Involved in Abrasive Blasting of Atmospheric Storage Tanks in Hydrocarbon Service

API RP 2350 Overfill Protection for Storage Tanks in Petroleum Facilities

Other Publications:

API – 334 A Guide to Leak Detection for Aboveground Storage Tanks

API Pub 2009 Safe Welding, Cutting and Hot Work Practices in the Petroleum and Petrochemical Industries

API Pub 2200 Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines

API – 2207 Preparing Tank Bottoms for Hot Work

API Pub 2217A Guidelines for Work in Inert Confined Spaces in the Petroleum Industry

Petroleum Equipment Institute

Number (ID) Title &/or Description

Recommended Practices:

PEI RP 100 Recommended Practices for Installation of Underground Liquid Storage Systems

PEI RP 200 Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling

National Leak Prevention Association

Number (ID) Title &/or Description

Recommended Practices:

NLPA Std 631 Entry, Cleaning, Interior Inspection, Repair and Lining of Underground Storage Tanks

NACE International – The Corrosion Society

Number (ID) Title &/or Description

Inspection Standards:

NACE TM 01-01 Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems

NACE TM 04-97 Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems

Recommended Practices:

NACE 1/SSPCSP5

Steel Structures Painting Council: "White Metal Blast Cleaning"

NACE 2/SSPCSP10

Steel Structures Painting Council: "Near White Metal Blast Cleaning"

NACE 3/SSPCSP6

Steel Structures Painting Council: "Commercial Blast Cleaning"

NACE 4/SSPCSP7

Steel Structures Painting Council: "Brush Off Cleaning"

NACE 10/SSPCPA6

Steel Structures Painting Council: "Fiberglass-Reinforced Plastic (FRP) Linings Applied to Bottoms of Carbon Steel Aboveground Storage Tanks"

NACE RP 0169 Control of External Corrosion on Underground or Submerged Metallic Piping Systems

NACE International – The Corrosion Society

Number (ID) Title &/or Description

NACE RP 0172 Surface Preparation of Steel and Other Hard Materials by Water Blasting Prior to Coating or Recoating

NACE SP 0177 Mitigation of Alternating Current and Lightning Effects on Metallic Structures and

Corrosion Control Systems

NACE RP 0178 Design, Fabrication, and Surface Finish of Metal Tanks and Vessels to be Lined for Chemical Immersion Service

NACE RP 0184 Repair of Lining Systems

NACE RP 0187 Design Considerations for Corrosion Control of Reinforcing Steel in Concrete

NACE SP 0188 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

NACE RP 0193 External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms

NACE RP 0275 Application of Organic Coatings to the External Surface of Steel Pipe for Underground Service

NACE RP 0285 Corrosion Control of Underground Storage Tank Systems by Cathodic Protection

National Fire Protection Association

see also 37 PA Code Chapters 11 and 13, Flammable & Combustible Liquids Handbook

Number (ID) Title &/or Description

Construction Standards:

NFPA 70 (NEC) National Electric Code®

NFPA 30 Flammable and Combustible Liquids Code

NFPA 30A Motor Fuel Dispensing Facilities and Repair Garages

NFPA 303 Marinas and Boatyards

Recommended Practices:

NFPA 77 Static Electricity

NFPA 326 Safeguarding Tanks and Containers for Entry, Cleaning or Repair

Underwriters Laboratories

Number (ID) Title &/or Description

Construction Standards:

UL Std 58 Standards for Steel Underground Tanks for Flammable and Combustible Liquids

UL Std 142 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids

UL Std 567 Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas

UL Std 842 Standard for Valves for Flammable Fluids

UL Std 860 Standard for Pipe Unions for Flammable and Combustible Fluids and Fire Protection Service

UL Std 971 Standard for Nonmetallic Underground Piping for Flammable Liquids

UL Std 1316 Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohol and Alcohol-Gasoline Mixtures

UL Std 1746 Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks

UL Std 2085 Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids

UL Std 2245 Standard for Below-grade Vaults for Flammable Liquid Storage Tanks

American National Standards Institute

Number (ID) Title &/or Description

Construction Standards:

ASME B31.3 American Society of Mechanical Engineers: "Process Piping"

ASME B31.4 American Society of Mechanical Engineers: "Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols"

Recommended Practices:

ASSE Z117.1 American Society of Safety Engineers: "Safety Requirements for Confined Spaces"

American Society for Testing and Materials

Number (ID) Title &/or Description

Construction Standards:

ASTM

A182/A182M

Standard Specification for Forged or Rolled Alloy Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

ASTM D2996 Standard Specification for Filament-Wound Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ASTM D4097 Standard Specification for Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Corrosion Resistant Tanks

ASTM D5685 Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings

Recommended Practices:

ASTM E797 Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method

ASTM D2794 Standard Test Method for Resistance of Organic Coatings on the Effects of Rapid Deformation (Impact)

Steel Tank Institute

Number (ID) Title &/or Description

Construction Standards:

STI P3 Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks

STI F841 Standard for Dual Wall Underground Steel Storage Tanks

STI F894 Act-100® Specification For External Corrosion Protection of FRP Composite

STI F894 Act-100® Specification For External Corrosion Protection of FRP Composite Steel USTs (See also Association of Composite Tanks)

STI F921® F921® Standard for Aboveground Tanks with Integral Secondary Containment

STI F922 Specification for Permatank®

STI F941 Standards for Fireguard® Thermally Insulated Aboveground Storage Tanks

STI R951 Specification for Tanks Using Low Levels of Pressure in the Tanks Interstice

STI F961 ACT-100U Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks

Inspection Standards:

STI SP001 Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids

Recommended Practices:

STI SP031 Standard for Repair of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible & Flammable Liquids

Steel Tank Institute

Number (ID) Title &/or Description

STI R821 sti-P3 Installation Instructions

STI R891 RP for Hold Down Strap Isolation
STI R892 RP for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems
STI R912 Installation Instructions for Shop Fabricated Aboveground Storage Tanks for Flammable, Combustible Liquids
STI R913 Act-100® Installation Instructions
STI R923 Permatank® Installation Instructions
STI R931 F921® Installation Instructions
STI R942 Fireguard® Installation & Testing Instructions for Thermally Insulated, Lightweight, Double Wall Fireguard Aboveground Storage Tanks
STI R971 ACT-100-U® Installation Instructions
STI R972 RP for the Addition of Supplemental Anodes to sti-P3® USTs

Steel Structures Painting Council

see also NACE International
Number (ID) Title &/or Description

Recommended Practices:

SSPC Painting Manual volume I
SSPC Painting Manual volume II

Association of Composite Tanks

Number (ID) Title &/or Description

Construction Standards:

ACT 100 Specification for the Fabrication of FRP Clad Underground Storage Tanks

Fiberglass Petroleum Tank and Pipe Institute

Number (ID) Title &/or Description

Recommended Practices:

FFTP 1 Fiberglass Piping Systems Installation Check List for Underground Petroleum Pipe
FTPI RP T-95-02 Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks

American Concrete Institute

Number (ID) Title &/or Description

Recommended Practices:

ACI 350 Environmental Engineering Concrete Structures

Town of South Kingstown Groundwater Protection Overlay District

Sec. 602. - Groundwater Protection Overlay District.

602.1.

Establishment of district. There is hereby established a Groundwater Protection Overlay District (GPOD) which shall be the area defined as lots of record which are indicated as the GPOD on the Official Zoning Map of the Town of South Kingstown. The GPOD is superimposed over any other zoning district established by this Ordinance. The regulations imposed by the GPOD shall apply in addition to the regulations of the underlying zoning district. In the event of a conflict or inconsistency between the regulations imposed by the GPOD and those imposed by the underlying zoning district, the regulations imposed by the GPOD shall govern.

602.2.

Purposes. The purposes of this section are to protect, preserve and maintain the quality and supply of certain groundwater reservoirs in the Town of South Kingstown through regulation of land use and certain activities in the areas over the groundwater reservoirs and critical portions of their groundwater recharge area. It is further the intent of this section to permit the use of land within the GPOD for agricultural purposes, and to encourage the use of farmland in a manner which is consistent with protection of surface and groundwater resources.

602.3.

Delineation of districts. The Groundwater Protection Overlay District is intended to regulate uses within the following areas:

A. Groundwater reservoirs are the highest yielding portions of the state's stratified drift aquifers (saturated thickness greater than 40 feet and transmissivity greater than 4,000 feet squared per day) that are capable of serving as a significant source of public supply; and

B. Critical portions of the recharge areas to the above groundwater reservoirs, as defined by the Rhode Island Department of Environmental Management (RIDEM) as groundwater classified as GAA; and that portion of the Beaver-Pasquiset recharge area within South Kingstown; and

C. Area adjacent to Factory Pond defined by RIDEM as the area of contribution to existing public water supplies.

602.4.

References. Identification of areas within the GPOD have been made by reference to maps and studies prepared by the following:

A. Ground-Water Resources of the Kingston Quadrangle, Rhode Island, by the Rhode Island Development Council, Geological Bulletin No. 9, 1956.

B. Availability of Ground Water, Upper Pawcatuck River Basin, Rhode Island, Geological Survey Water-Supply Paper 1821, prepared in cooperation with the Rhode Island Development Council and the Rhode Island Water Resources Coordinating Board, 1966.

C. Groundwater Quality Regulations, materials used in the development of the Rhode Island DEM groundwater regulations, pursuant to Chapters 46-12, 46-13.1, 42-17.1 and 42-35 of the General Laws of Rhode Island, as amended.

D. Hydrology, Water Quality, and Groundwater Development Alternatives in the Chipuxet Groundwater Reservoir, R.I., U.S.G.S. Water Resources Investigation Report 84-4254. by Herbert E. Johnston and David C. Dickerman, 1985.

602.5.

Permitted and prohibited uses.

A. All uses indicated in [Section 301](#) as permitted uses (Y) and special permit uses (S) in the underlying zoning district are permitted or conditionally permitted in the Groundwater Protection Overlay District, with the exception of prohibited uses and activities as further provided in subsection B., below. Also permitted are uses or structures accessory to any permitted use.

B. The following principal uses and activities are prohibited in the GPOD:

1. Any use prohibited (N) in the underlying zoning districts;

2. General automotive service and repair shops, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment. Included among these uses are establishments which sell, store, lease or rent such equipment and which include service and repair as accessory activities. Noncommercial repair work, or repair work incidental to a permitted use, is not prohibited.

3. Gasoline service stations (minor repairs only);

4. Automobile body shops;

5. Lawn and garden supply stores;

6. Welding shops, sheet metal shops, machine shops;

7. Automobile junk yards, junk and salvage yards of any type;
8. Fuel dealers, oil and bottled gas sales and service, and open lot storage of such fuels;
9. Metal plating, finishing and polishing, including jewelry manufacturing;
10. Dry cleaning plant (not including pick-up);
11. Beautician, barber or cosmetologist, except if serviced by public sewers;
12. Commercial wood preserving and furniture painting or refinishing;
13. On site photographic processing or printing;
14. Incinerators, sanitary landfill sites, solid waste disposal facilities, solid waste transfer stations, resource recovery or recycling facilities, injection wells, and hazardous waste management facilities;
15. Land disposal of septage or sewage sludge, including composted industrial sludge. Not prohibited is the application of wastewater treatment facility composted sludge, applied according to the Rhode Island Department of Environmental Management "Rules and Regulations Pertaining to the Treatment, Disposal, Utilization, and Transportation of Wastewater Treatment Facility Sludge," 1991.
16. All uses which involve the use, storage or generation of hazardous or toxic waste or materials or other toxic pollutants as defined herein. Provided, however, that minor or insignificant quantities of such materials may be stored on the premises of any lawful use, if, in the opinion of the Building Official, the presence of such substance does not constitute a potential for degradation of surface or groundwater resources in the area and such substance is contained in a suitable storage area. In making a determination of the presence of significant quantities of such materials, the Building Official shall obtain the written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials, the Rhode Island DEM Division of Agriculture, or the Rhode Island Pesticide Coordinator, as applicable. Insignificant quantities of hazardous materials may be construed as that which is necessary for the operation of a farm, residence, office, or business including the operation of equipment, vehicles or other mechanical systems necessary for the operation of a permitted use;
17. Underground storage tanks as defined in [Article 12](#) are prohibited. However, storage tanks used for storing home heating oil (No. 2 fuel oil) and serving a one- or two-household dwelling are permitted if the following conditions are met:
 - a. The tank capacity does not exceed 300 gallons (per dwelling unit); and
 - b. The tank is located in a basement or cellar, and is above the surface of the basement floor and the basement floor is constructed of concrete or contains a membrane liner

capable of containing spills; or the tank is located above ground or in a basement having a dirt floor provided the following criteria are met:

- i. Provision is made to protect the tank from the elements;
- ii. Rust-proofing is applied to all tank surfaces;
- iii. The tank shall be securely anchored; and
- iv. The tank shall be placed onto a concrete foundation capable of supporting the tank, which foundation must be larger than the size of the tank in length and width to prevent leaks onto pervious surfaces.

All storage tanks of 300 gallons capacity or greater and which are located above ground shall be governed by the provisions of subsection 602.6.B. Above ground storage tanks which exceed 10,000 gallons per lot are permitted only by the granting of a special use permit by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the design and construction of storage tanks and containment devices, and shall consider the potential impact on groundwater in the event of leaks, spills, fires, maintenance, deliveries and other such activities and events;

18. Storage of road salt and deicing materials which are not covered by a roof and located on an impermeable base;

19. The parking of vehicles for the storage or delivery of fuel oil or other hazardous or toxic materials for a period exceeding two hours in any 24-hour period. This shall not prohibit the use of vehicles for delivery of fuels or for application of fertilizers, pesticides, or herbicides to any use permitted by this Ordinance;

20. Vehicle washing shop (including automatic);

21. Motor freight terminal;

22. Fish hatcheries;

23. Textile Mill Products Manufacturing, Use Code 72, except assembly of finished textile products.

602.6.

Site design standards. The following site design and construction standards shall be required for all new and substantially reconstructed uses, other than one or two-household residential uses within the GPOD, established after the effective date of this article. "Substantial reconstruction" shall mean the improvement, alteration or

replacement of more than 30 percent of the floor area or land area of the existing use. Site design and construction standards shall follow, where applicable, the recommendations and guidelines as provided in the following documents: the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as amended; the Rhode Island Department of Environmental Management's Recommendations of the Stormwater Management and Erosion Control Committee Regarding the Development and Implementation of Technical Guidelines for Stormwater Management, 1988, as amended; and Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s, by the Metropolitan Washington Council of Governments, 1987, as amended.

A. Storage of hazardous or toxic waste or materials, where permitted, shall be located within a building having roofing, walls, and floor(s) constructed of such materials as to render said building weather tight, so as to prevent leakage of such products or materials into or onto the ground.

B. Storage tanks for petroleum products or hazardous or toxic materials excluding portable fuel tanks for farm uses may be located outdoors provided they are located within a containment structure that has an impermeable base and surrounding dike. Such base and dikes shall be constructed of material which is both impermeable and compatible with the material being contained. At minimum, the structure shall be designed to contain 110 percent of total tank capacity. Such containment structures shall be covered to protect the tanks and prevent accumulation of precipitation within the dike. Where roofing is not practical, the containment structure shall be designed with an additional capacity sufficient to contain precipitation from a 25-year 24-hour rainfall event. Runoff from the containment shall be controlled by means of pumps, siphons or piping designed to eliminate discharge of contaminated water into the environment in the event of a spill, or have a drain valve which will allow clear stormwater to be manually released as needed.

C. Interior floor drains designed to permit fluid from any interior space to be discharged into or onto the ground shall be prohibited. Provided, however, that such interior floor drains may be permitted if designed to empty into an aboveground storage tank, capable of completely containing anticipated flows. Such tanks, if provided, shall also be subject to containment provisions specified in subsection 602.5.B.17., above.

D. Dumpsters which are used to store solid wastes shall be covered or located within a roofed area and have drain plugs intact. No washing or rinsing of dumpsters on-site shall occur.

E. Rainwater collected upon permanent roofing over 1,500 square feet in total area per lot shall be directed into dry wells, injection wells, or underground leaching galleys or otherwise diverted to a permeable ground surface, so as to encourage recharge of the ground water. Provided, however, that such rainwater shall not be mixed with stormwater runoff from any parking area, roadway, or area subject to contamination from any hazardous or toxic waste or material or petroleum product prior to discharge into or onto the ground.

F. Stormwater runoff from paved parking lots, public and private streets, loading areas, storage and operating areas, and other impervious surfaces subject to contamination from road deicing materials or petroleum products, shall be:

1. Collected and diverted through an oil/water separator prior to discharge to the environment; and/or
2. Collected and discharged into "wet" stormwater detention basins capable of achieving water quality enhancement of the runoff; and/or
3. Collected and discharged into extended detention dry basins; and/or
4. Diverted toward vegetated filter strips, swales, or riprap lined channels; and/or
5. Diverted into sand bed filters; and/or
6. Discharged or diverted to other stormwater management facility(s) designed to attenuate runoff and provide pollutant removal capabilities.

The procedure for review of stormwater runoff controls shall be as specified in subsection 505.1 of this Ordinance; provided, however, that said site plans shall also be submitted to the Conservation Commission for their site review and advisory opinion. The Planning Board shall have the authority to approve the design of all such stormwater runoff controls required under this section.

The above stormwater management requirements shall incorporate best management practices, as that term is used in "Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s", by the Metropolitan Washington Council of Governments, 1987, as amended, and be designed to be effective in pollutant removal sufficient to minimize harmful impacts to groundwater and surface water resources. They shall be commensurate with the size and nature of the proposed use; provided, however, that the following shall not be required to provide said stormwater management facilities:

- a. Single- or two-household residential uses on a single lot; and
- b. Streets serving a residential compound or minor subdivision approved by the Planning Board.

G. Garbage disposal systems (in sinks) shall be prohibited in areas not serviced by public sewers.

H. At least 20 percent of the area of each lot shall be covered with existing or introduced vegetation.

I. Commercial earth removal, as defined in [Section 506](#) of this Ordinance, excluding construction necessary for new farm ponds, new drainage structures, and new farm roads, shall be subject to the following restrictions in the GPOD:

1. A minimum separation distance of three feet between the bottom of the excavation and the seasonal high water table, as verified by RIDEM, shall be maintained;
2. The installation and regular maintenance of permanent soil erosion and sediment control measures, as outlined in the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as revised, shall be required, including permanent revegetation of the land surface upon cessation of earth removal operations; and
3. The provisions of items 1. and 2. of this subsection as set forth above shall also be deemed to apply to earth removal activities conducted as part of an approved subdivision.

J. Any use which would utilize an individual sewage disposal system, or multiple systems, serving the same use, or combination of uses on a lot for which the total maximum daily design sewage flow exceeds 2,000 gallons per day shall be permitted, only upon the granting of a special use permit for such ISDS by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the present water quality conditions and the potential impact to ground and surface waters from the proposed use, including the cumulative impacts of sewage discharge over an extended period of time.

602.7.

Maintenance of facilities. All facilities constructed in accordance with subsection 602.6 shall be maintained by the owner so as to assure their ability to function as designed. Failure to properly maintain said facilities shall constitute a violation of this Ordinance, and is subject to enforcement action by the Town as provided in [Article 9](#). As a condition of granting a building permit for any such facility, the Building Official is empowered to enter onto the premises in order to inspect said facilities for the purpose of determining their functionality.

Appendix B

Status Report on URI Groundwater Protection Efforts

Date: 10/2016

Protection Effort	Completed	To Do
Protect 400 ft Radius around wells	<ul style="list-style-type: none"> • Removed area from URI Agronomy use • Restrict road salt application 	<ul style="list-style-type: none"> • Protect private land
Wellhead Planning	<ul style="list-style-type: none"> • Install and testing of monitoring wells • Meet with SK Planning Dept. • Meet with SK Land Trust 	<ul style="list-style-type: none"> • Gauge monitoring wells under pumping conditions • Model groundwater flow • Provide this plan to Commissioner of ED and Master Plan Review Team • Develop BMPs for construction in WPA
Fuel storage	<ul style="list-style-type: none"> • Require double wall tanks • Install new double wall fuel storage tank at new Agronomy headhouse • Repair Well 4 generator containment • Repair fuel containment area for Athletics maintenance building • Update SPCC Plan • Monthly inspections of tanks and transformers 	<ul style="list-style-type: none"> • Inspect containment annually
Pesticide/Herbicide use and storage	<ul style="list-style-type: none"> • Require secondary containment • Proper storage at Agronomy • Triple rise containers and equipment • Spill kits installed • Annual self assessments 	<ul style="list-style-type: none"> • Provide proper containment for Lands and Grounds • Provide transfer pad at agronomy
Fertilizer use and storage	<ul style="list-style-type: none"> • Temporary secondary containment at Athletic Maintenance Garage • Indoor storage at Agronomy • Spill kits installed • Annual self assessments 	<ul style="list-style-type: none"> • Install permanent secondary containment and transfer area at Athletic Maintenance Garage
Road Salt	<ul style="list-style-type: none"> • Discuss methods to control and reduce salt use • Trend sodium levels and salt tonnage 	<ul style="list-style-type: none"> • Calibrate spreaders • Pilot magnesium chloride • Pilot brine application • Train plow staff

Appendix C

List of URI Parcels of Interest

Targeted Parcels for URI Wellhead Protection

PLAT	LOT	URI buffer category	TOTVAL	TAX ACRES	LOCATION	OWNER_NAME	OWNER_ADDR	OWNER_CSZ
22-2	19	400ft	\$270,300	51.7	WAITES CORNER ROAD	PARTYKA, JOHN L JR & MYRA	97 HEATON ORCHARD RD	WEST KINGSTON, RI 02892
14	6	400ft	\$139,500	1.1	11C THIRTY ACRE POND ROAD	THIRTY ACRE POND LIVING TRUST	46 SWEET FERN RD	WARWICK, RI 02888
14	5	400ft	\$244,100	0.2	11B THIRTY ACRE POND ROAD	TARASEVICH, JOHN E & CHRISTINE	11B THIRTY ACRE POND RD	W KINGSTON, RI 02892
14	4	400ft	\$103,700	0.3	11A THIRTY ACRE POND ROAD	PACKER, DONALD J (LL) &	43 CHERRY RD	KINGSTON, RI 02881
22-2	17	400ft	\$196,100	30.5	WAITES CORNER ROAD	PARTYKA, JOHN L JR & MYRA	97 HEATON ORCHARD RD	WEST KINGSTON, RI 02892
15-4	3	0.5mi	139000	1	PLAINS ROAD	MARSHALL, JEFFREY BECKER &	13 PLYMOUTH DRIVE	BARRINGTON, RI 02806
80-2	9	0.5mi	115200	14	WOLF ROCK ROAD	STATE OF RHODE ISLAND	ONE CAPITOL HILL	PROVIDENCE, RI
14	110	0.5mi	\$172,000	8.9	30D HUNDRED ACRE POND ROAD	ARNOLD, ARTHUR P JR & BETTY	PO BOX 986	WEST KINGSTON, RI 02892-0986
14	45	0.5mi	\$662,900	7.9	812 FAIRGROUNDS ROAD	CARRET, JEAN-MARIE &	PO BOX 986	WEST KINGSTON, RI 02892
14	113	0.5mi	\$160,600	6.3	FAIRGROUNDS ROAD	ARNOLD IRREVOCABLE REALTY TRST	155 SOUTH MAIN ST #300	PROVIDENCE, RI 02903
14	7	0.5mi	\$333,200	48.3	681 FAIRGROUNDS ROAD	BOUCHARD, DARRELL H & BARBARA	3738 S COUNTY TR	W KINGSTON, RI 02892-1800
14	84	0.5mi	\$299,800	4.6	780 FAIRGROUNDS ROAD	YUAN YONGHONG	119 POCASSET AVE	TIVERTON, RI 02878
15-1	11	0.5mi	\$522,100	4.7	77B HUNDRED ACRE POND ROAD	COONEY, JAMES K ETUX MARILYN K	77B HUNDRED ACRE POND RD E	WEST KINGSTON, RI 02892
14	8	0.5mi	\$159,800	11.9	HUNDRED ACRE POND ROAD	ARNOLD, ARTHUR P JR ETALS	P O BOX 986	WEST KINGSTON, RI 02892
14	83	0.5mi	\$400,100	4.6	760 FAIRGROUNDS ROAD	SUPROCK, SUSANNE M	760 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
14	82	0.5mi	\$300,500	4.6	740 FAIRGROUNDS ROAD	MELE, ROBERT D ETUX DONNA M	740 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
14	81	0.5mi	\$305,100	4.6	720 FAIRGROUNDS ROAD	GRENIER, CHRISTOPHER W	720 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
14	80	0.5mi	\$295,400	4.6	700 FAIRGROUNDS ROAD	CLARK, LAWRENCE C ETUX CYNTHIA	700 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
15-4	1	0.5mi	\$617,700	2.0	11E THIRTY ACRE POND ROAD	SAMMARTINO, EMILIA A &	11E THIRTY ACRE POND RD	WEST KINGSTON, RI 02892
15-4	2	0.5mi	\$242,400	0.3	11D THIRTY ACRE POND ROAD	PETRARCA, THOMAS	11D THIRTY ACRE POND RD	WEST KINGSTON, RI 02892
14	1	0.5mi	\$170,200	12.3	FAIRGROUNDS ROAD	BOUCHARD, DARRELL H & BARBARA	3738 S COUNTY TR	W KINGSTON, RI 02892-1800
14	47	0.5mi	\$228,600	3.1	564 FAIRGROUNDS ROAD	STANLEY, HARLAN A JR	564 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
14	49	0.5mi	\$372,600	6.0	532 FAIRGROUNDS ROAD	LERCH, FREDERICK & SUSAN B	532 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	44	0.5mi	\$884,100	2.3	506 FAIRGROUNDS ROAD	ARNOLD LUMBER CO INC	PO BOX 217	W KINGSTON, RI 02892
22-2	1	0.5mi	\$194,900	1.6	520 FAIRGROUNDS ROAD	BRIGGS, ANDREW ETUX JEANIE	521 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	42	0.5mi	\$272,200	0.6	215 WAITES CORNER ROAD	SHEA, WILLIAM D ETUX ANNAMARIE	215 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
22-1	41	0.5mi	\$244,600	0.8	203 WAITES CORNER ROAD	TUONI, CARL E	PO BOX 603	WEST KINGSTON, RI 02892
22-2	20	0.5mi	\$191,800	0.5	191 WAITES CORNER ROAD	ROBERTS, JAMES D ETUX LORI A	P O BOX 35	WEST KINGSTON, RI 02892
22-2	12	0.5mi	\$232,600	27.6	PLAINS ROAD	WAKEFIELD WATER CO	C/O JORDAN HARRINGTON	WEST KINGSTON, RI 02892
22-1	38	0.5mi	\$211,500	0.0	6 FRANK AVENUE	MARTONE, MICHAEL R	22 SEXTANT LANE	PHEONIX, AZ 85054
22-1	37	0.5mi	\$191,700	0.7	148 WAITES CORNER ROAD	TETREAULT, DAVID E	BOX 12	NARRAGANSETT, RI 02882
22-2	2	0.5mi	\$235,300	0.7	130 WAITES CORNER ROAD	HERNANDEZ, EILEEN F	130 WAITES CORNER PO BOX 1C	KINGSTON, RI 02881-0012
22-2	18	0.5mi	\$285,900	1.5	97 WAITES CORNER ROAD	TANNER, RICHARD A ETUX ALICE B	97 WAITES CORNER ROAD	WEST KINGSTON, RI 02892-0102
22-2	11	0.5mi	\$289,100	4.6	33 WAITES CORNER ROAD	ANACLETO, NOAH J	494 BROADWAY	NEWPORT, RI 02840
22-2	14	0.5mi	\$210,700	1.8	155 PLAINS ROAD	CHISHOLM, VAN E ETUX PATRICIA	155 PLAINS RD	WEST KINGSTON, RI 02892
22-2	10	0.5mi	\$194,700	2.4	27 WAITES CORNER ROAD	TAYLOR, JOAN F	PO BOX 633	WEST KINGSTON, RI 02892

Targeted Parcels for URI Wellhead Protection

22-2	13	0.5mi	\$188,600	1.1	107 PLAINS ROAD	BINNS, DAVID A ETUX CHERIE C	187 ROBINSON STREET	WAKEFIELD, RI 02879-3505
22-3	32	0.5mi	\$155,700	2.4	23 WAITES CORNER ROAD	BARNETT, ONEITA P (EST)	23 WAITES CORNER RD	W KINGSTON, RI 02892
22-3	27	0.5mi	\$228,200	1.2	91 PLAINS ROAD	MAJOR STEPHEN	91 PLAINS ROAD	WEST KINGSTON, RI 02892
22-3	31	0.5mi	\$314,600	3.0	3 WAITES CORNER ROAD	MANIA, PHILIP R	50 WILDERNESS TRL	WAKEFIELD, RI 02879-4534
22-3	29	0.5mi	\$156,900	0.5	68 PLAINS ROAD	CRUMP, PAMELA E & BRIAN	68 PLAINS RD	WEST KINGSTON, RI 02892
9	31	1mi	#####	169.8	1 MAURAN PLACE	WOLF ROCK CO LTD	P.O. BOX 36	KINGSTON, RI 02881
9	106	none	\$408,600	0.9	149 SIR MICHAEL CIRCLE	BARTKIEWICZ, PETER JR	149 SIR MICHAEL CIRCLE	WEST KINGSTON, RI 02892
9	107	1mi	\$338,300	1.5	143 SIR MICHAEL CIRCLE	DIAS, KENNETH P & KIMBERLEY A	143 SIR MICHAEL CIRCLE	WEST KINGSTON, RI 02892
9	108	1mi	\$397,300	1.2	135 SIR MICHAEL CIRCLE	CLANCY, PAUL E & LISA	135 SIR MICHAEL CIRCLE	WEST KINGSTON, RI 02892
9	109	1mi	\$378,000	0.9	125 SIR MICHAEL CIRCLE	DRIGGERS GREGORY C &	125 SIR MICHAEL CIRCLE	WEST KINGSTON, RI 02892
9	137	1mi	\$414,200	0.9	95 PARSONS LANE	MCGRADY, MARK L & MARGARET J	95 PARSONS LN	WEST KINGSTON, RI 02892
9	136	1mi	\$388,500	0.9	25 AUTUMN LANE	FISH, BLAIR E & CHRISTIE L	25 AUTUMN LN	WEST KINGSTON, RI 02892
9	138	1mi	\$431,300	1.5	31 PARSONS LANE	RUSSELL, STEPHEN E & ELLEN P	31 PARSONS LANE	WEST KINGSTON, RI 02892
9	133	1mi	\$429,200	0.9	20 AUTUMN LANE	VESTERHOLM, ANDERS M &	20 AUTUMN LN	WEST KINGSTON, RI 02892
9	135	1mi	\$425,500	1.1	41 AUTUMN LANE	TUOTI, PAUL G & KAREN A	41 AUTUMN LN	WEST KINGSTON, RI 02892
9	1	1mi	\$364,500	0.9	172 ESTELLE DRIVE	BURKE JEAN E LIVING TRUST &	172 ESTELLE DRIVE	WEST KINGSTON, RI 02892
9	139	1mi	\$429,100	1.3	15 PARSONS LANE	KELLEY, PAUL R & ANGELA R	15 PARSONS LN	WEST KINGSTON, RI 02892-1660
9	134	1mi	\$410,500	1.1	40 AUTUMN LANE	PASYANOS, STEPHEN M &	40 AUTUMN LN	WEST KINGSTON, RI 02892
14	41	1mi	\$256,400	1.0	158 ESTELLE DRIVE	VALENTINO FAMILY TRUST	158 ESTELLE DRIVE	WEST KINGSTON, RI 02892
9	127	1mi	\$376,600	0.9	16 WHISPER LANE	LIU, FENG	16 WHISPER LN	WEST KINGSTON, RI 02892
14	87	1mi	\$392,000	1.1	28 WHISPER LANE	HUTCHISON MARC L &	28 WHISPER LANE	WEST KINGSTON, RI 02892
14	114	1mi	\$503,400	1.8	54 AUTUMN LANE	DOLAN, WILLIAM C & LESLIE J	54 AUTUMN LN	WEST KINGSTON, RI 02892
14	40	1mi	\$263,100	1.0	150 ESTELLE DRIVE	PETRONE, FRANCO S & LYNNE I	150 ESTELLE DR	W KINGSTON, RI 02892
14	89	1mi	\$428,000	0.9	11 WHISPER LANE	BOYNTON, MICHAEL	11 WHISPER LANE	WEST KINGSTON, RI 02892
14	39	1mi	\$254,900	1.0	138 ESTELLE DRIVE	KILLIAN, JASON M & PASQUAZZI,	138 ESTELLE DRIVE	WEST KINGSTON, RI 02892
14	88	1mi	\$383,000	1.0	25 WHISPER LANE	CONLON, PAUL J & KATHLEEN M	25 WHISPER LN	WEST KINGSTON, RI 02892
14	42	1mi	\$266,900	4.9	62 HUNDRED ACRE POND RO	CHRISTENSEN MARSHA A	62 HUNDRED ACRE POND ROAD	WEST KINGSTON, RI 02892
14	90	1mi	\$371,600	1.0	20 CINNAMON LANE	WALSH, KEVIN S & KERRIE M	20 CINNAMON LN	WEST KINGSTON, RI 02892
14	91	1mi	\$397,500	1.0	32 CINNAMON LANE	DAWE, GEORGE BRYAN & DAWE,	32 CINNAMON LN	WEST KINGSTON, RI 02892
14	70	1mi	\$384,900	34.0	381C WAITES CORNER ROAD	CINDRICH, FREDERICK D	381C WAITES CORNER RD	WEST KINGSTON, RI 02892
14	43	1mi	\$233,100	2.6	60 HUNDRED ACRE POND RO	CARTIER MICHAEL G &	60 HUNDRED ACRE POND RD	WEST KINGSTON, RI 02892
14	93	1mi	\$391,200	0.9	15 CINNAMON LANE	WEI, TAO & CAI, QING	15 CINNAMON LANE	WEST KINGSTON, RI 02892
14	111	1mi	\$143,700	3.3	FAIRGROUNDS ROAD	ARNOLD, ARTHUR P JR & BETTY	PO BOX 986	WEST KINGSTON, RI 02892-0986
14	92	1mi	\$417,500	1.3	33 CINNAMON LANE	ZHANG, ZONGQIN & CHEN, JIELING	33 CINNAMON LANE	WEST KINGSTON, RI 02892
13	35	none	\$326,900	1.0	134 BARBERS POND ROAD	MITCHELL, WILLIAM A &	134 BARBERS POND ROAD	WEST KINGSTON, RI 02892
14	72	none	\$367,200	4.0	2250 SOUTH COUNTY TRAIL	SATAS, AUDRONE M	2250 SOUTH COUNTY TRL	WEST KINGSTON, RI 02892-1636
14	94	1mi	\$401,400	1.1	20 ECHO LANE	MARSHALL, ROBERT A & HEATHER L	20 ECHO LN	WEST KINGSTON, RI 02892
13	36	none	\$233,000	0.5	120 BARBERS POND ROAD	GOLDSTEIN, MARSHA L	120 BARBERS POND RD	WEST KINGSTON, RI 02892
14	95	1mi	\$432,000	1.2	40 ECHO LANE	ASHING, KRISS T & MARIA LUIZA	40 ECHO LN	WEST KINGSTON, RI 02892
14	99	1mi	\$379,000	0.9	11 ECHO LANE	BRENNAN, PATRICK F &	11 ECHO LN	WEST KINGSTON, RI 02892
14	96	1mi	\$381,700	1.2	62 ECHO LANE	STORTI, DANNY J & DIANE M	PO BOX 621	WEST KINGSTON, RI 02892-0621

Targeted Parcels for URI Wellhead Protection

14	112	1mi	\$141,500	2.8	812 FAIRGROUNDS ROAD	ARNOLD, ARTHUR P JR & BETTY	PO BOX 986	WEST KINGSTON, RI 02892-0986
14	98	1mi	\$383,400	1.0	31 ECHO LANE	MAGRO, LINDA E & EDWARD A	31 ECHO LN	WEST KINGSTON, RI 02892
14	97	1mi	\$463,200	1.3	65 ECHO LANE	DANGELO, ROCCO JR & KIMBERLY C	65 ECHO LN	WEST KINGSTON, RI 02892
14	100	1mi	\$394,400	0.9	182 GRACES LANE	KAY, STEPHEN J ETUX KIM E	182 GRACES LN	WEST KINGSTON, RI 02892
14	101	1mi	\$390,000	1.1	200 GRACES LANE	HAYES, PATRICK C & DEIRDRA J	200 GRACES LN	WEST KINGSTON, RI 02892
14	78	1mi	\$331,200	3.4	495 WAITES CORNER ROAD	MONTEFORTE, VINCENT F SR &	495 WAITES CORNER RD	WEST KINGSTON, RI 02892
14	86	1mi	\$314,200	5.6	381B WAITES CORNER ROAD	CINDRICH, FREDERICK D	381C WAITES CORNER RD	WEST KINGSTON, RI 02892
14	55	1mi	\$879,600	16.5	299 WAITES CORNER ROAD	LANGDON, DOUGLAS R	299 WAITES CORNER DR	WEST KINGSTON, RI 02892
14	69	1mi	\$269,000	1.8	465 WAITES CORNER ROAD	MOONEY, WILLIAM E ETUX ANN C	PO BOX 689	WEST KINGSTON, RI 02892-0689
14	62	1mi	\$250,500	1.3	381A WAITES CORNER ROAD	MUCKENHOUP, BENJAMIN &	381A WAITES CORNER RD	WEST KINGSTON, RI 02892-1624
14	68	1mi	\$264,100	0.8	449 WAITES CORNER ROAD	BRIDGES, INC	PO BOX 263	JAMESTOWN, RI 02835
14	67	1mi	\$115,900	0.9	WAITES CORNER ROAD	DOOLEY-ELLIS, HELEN CHRISTINE	393 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
14	66	1mi	\$244,600	1.6	393 WAITES CORNER ROAD	ELLIS, JOHN TAYLOR ETUX	393 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
14	63	1mi	\$203,200	0.8	373 WAITES CORNER ROAD	COOGAN, MATTHEW	373 WAITES CORNER RD	WEST KINGSTON, RI 02892
14	58	1mi	\$229,500	0.6	361 WAITES CORNER ROAD	LEBRUN, ROGER A	361 WAITES CORNER RD	WEST KINGSTON, RI 02892
14	56	1mi	\$562,300	2.2	319 WAITES CORNER ROAD	TACEY, CAROL A (LL) ET ALS	319 WAITES CORNER RD	WAKEFIELD, RI 02892
14	54	1mi	\$234,700	1.1	287 WAITES CORNER ROAD	NEPSHINSKY, JANIS M	287 WAITES CORNER RD	WEST KINGSTON, RI 02892
14	51	1mi	#####	2.1	263 WAITES CORNER ROAD	W KINGSTON BAPTIST CHURCH INC	263 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
22-1	57	1mi	\$428,200	5.3	348 WAITES CORNER ROAD	RICHMOND, ROY B ETUX GAIL T	348 WAITES CORNER RD	WEST KINGSTON, RI 02892-1625
14	64	1mi	\$204,600	0.5	346 WAITES CORNER ROAD	RICHMOND, GEORGETTE (LL) &	346 WAITES CORNER RD	WEST KINGSTON, RI 02892
14	52	1mi	\$227,200	0.9	277 WAITES CORNER ROAD	WEST KINGSTON BAPTIST CHURCH	263 WAITES CORNER RD PO BOX 10	WEST KINGSTON, RI 02892
14	115	1mi	\$319,900	0.8	344 WAITES CORNER ROAD	RICHMOND, BRETT T	344 WAITES CORNER RD	WEST KINGSTON, RI 02892
22-1	47	1mi	\$140,300	14.6	408 FAIRGROUNDS ROAD	NEMZOW, JACQUELINE S (EST)	301 BLACKSTONE BLVD	PROVIDENCE, RI 02906-4802
22-1	46	1mi	\$179,200	0.5	296 WAITES CORNER ROAD	DYER, GARY S ETUX ELIZABETH G	2327 GLASGO RD	JEWETT CITY, CT 06351-9114
22-1	43	1mi	\$213,600	0.4	237 WAITES CORNER ROAD	TUONI, MARGARET K	PO BOX 374	WEST KINGSTON, RI 02892
22-1	79	1mi	\$254,900	0.5	260 WAITES CORNER ROAD	XAVIER, FRANK G & BLANCA I	260 WAITES CORNER RD	WEST KINGSTON, RI 02892
22-1	78	1mi	\$76,200	0.5	FAIRGROUNDS ROAD	NEMZOW, SIMON	301 BLACKSTONE BOULEVARD	PROVIDENCE, RI 02906
22-1	77	1mi	\$74,100	0.5	FAIRGROUNDS ROAD	NEMZOW, JACQUELINE B TRUST	301 BLACKSTONE BLVD	PROVIDENCE, RI 02906
22-1	76	1mi	\$213,700	0.5	450 FAIRGROUNDS ROAD	CLARKE, DAVID S & JENINE H	450 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	40	1mi	#####	13.8	FAIRGROUNDS ROAD	NEMZOW, JACQUELINE S (EST)	301 BLACKSTONE BLVD	PROVIDENCE, RI 02906-4802
22-1	75	1mi	\$226,500	0.5	438 FAIRGROUNDS ROAD	MOOK, LYLE L ETUX MARY E	438 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
22-1	74	1mi	\$250,000	0.5	426 FAIRGROUNDS ROAD	KNIGHT, CAROL E	426 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	48	1mi	\$375,800	1.5	390 FAIRGROUNDS ROAD	UNION FIRE DISTRICT	P O BOX 327	WAKEFIELD, RI 02880-0327
22-1	73	1mi	\$218,400	0.5	416 FAIRGROUNDS ROAD	WERTANEN, RICHARD R & LUPOLI,	416 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	39	1mi	\$279,000	0.5	192 WAITES CORNER ROAD	MOULTROP, DAVID K ETUX CAROLYI 4	PINECREST RD	CAROLINA, RI 02812
22-1	71	1mi	\$243,900	1.3	380 FAIRGROUNDS ROAD	CCOPACATTY, ROSALEE P & PERUKO 380	FAIRGROUNDS RD	W KINGSTON, RI 02892
22-1	49	1mi	\$201,400	1.0	368 FAIRGROUNDS ROAD	MITCHELL, CRAIG J & ANNMARIE	PO BOX 751	WEST KINGSTON, RI 02892
23-2	35	none	\$844,000	4.9	90 CHAPEL WAY	ROMAN CATHOLIC BISHOP OF PROV 1	CATHEDRAL SQUARE	PROVIDENCE, RI 02903
22-1	50	1mi	\$320,400	1.1	354 FAIRGROUNDS ROAD	KING, JOHN W ETUX	354 FAIRGROUNDS ROAD	WEST KINGSTON, RI 02892
22-1	54	1mi	\$196,200	0.7	35 BLACKBIRD ROAD	SNOW, RAYMOND A	P O BOX 134	WEST KINGSTON, RI 02892-0134
23-2	36	none	\$261,500	0.3	50 BILLS ROAD	JLTS PROPERTIES LLC	PO BOX 736	NARRAGANSETT, RI 02882

Targeted Parcels for URI Wellhead Protection

22-1	51	1mi	\$246,400	1.0	334 FAIRGROUNDS ROAD	MUELLER, MURIEL A REVOC TRST	334 FAIRGROUNDS RD	WEST KINGSTON, RI 02892
22-1	36	1mi	\$176,200	0.4	109 FRANK AVENUE	MACK, DONALD E	109 FRANK AVE	WEST KINGSTON, RI 02892
23-2	24	none	#####	4.4	99 FORTIN ROAD	MARLEY PROPERTIES KINGSTON LLC	204 SECOND AVE	WALTHAM, MA 02451
22-1	53	1mi	\$193,900	0.4	25 BLACKBIRD ROAD	ROCKWELL, BARBARA J	25 BLACKBIRD RD	WEST KINGSTON, RI 02892
22-1	35	1mi	\$181,500	0.4	99 FRANK AVENUE	MOWREY, RALPH E	99 FRANK AVE	WEST KINGSTON, RI 02892
22-1	34	1mi	\$166,200	0.4	91 FRANK AVENUE	GARDINER, JASON R	91 FRANK AV	WEST KINGSTON, RI 02892
22-1	24	1mi	\$207,200	0.4	21 TABER STREET	MCKEAG, MALCOLM ET UX	21 TABER ST	WEST KINGSTON, RI 02892-048
22-1	52	1mi	\$201,300	0.5	11 BLACKBIRD ROAD	INGLES, CHRISTOPHER J &	4671 NW SPRINGTREE CT	SILVERDALE, WA 98383-9284
22-1	60	1mi	\$167,100	0.3	24 BLACKBIRD ROAD	SCHIBENPFLUG, ERIC A & TINA A	800 GLEN ROCK RD	WEST KINGSTON, RI 02892
22-1	33	1mi	\$257,300	0.4	79 FRANK AVENUE	DENELLE SCOTT F & LISA D	25 DEER TRAIL	WAKEFIELD, RI 02879
22-1	25	1mi	\$167,000	0.4	31 TABER STREET	CANIGLIA, MARY ELLEN	31 TABER AVE	WEST KINGSTON, RI 02892
22-2	3	1mi	\$164,900	0.3	114 WAITES CORNER ROAD	CORBEIL JUSTIN & LAUREN	114 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
22-1	61	1mi	\$222,300	1.4	296 FAIRGROUNDS ROAD	SCHIBENPFLUG, ALFRED J ETUX	296 FAIRGROUNDS ROAD	W KINGSTON, RI 02892
22-1	32	1mi	\$172,100	0.7	63 FRANK AVENUE	STEFANO, YVONNE E	354 S PIER RD APT 210	NARRAGANSETT, RI 02882-3530
22-1	26	1mi	\$174,600	0.4	41 TABER STREET	DICAMILLO, GERALDINE M	P O BOX 126	WEST KINGSTON, RI 02892-0120
23-2	29	none	#####	4.4	180 OLD NORTH ROAD	CHRIST THE KING CHURCH CORP	180 OLD NORTH ROAD	KINGSTON, RI 02881-1209
22-2	4	1mi	\$184,200	0.3	106 WAITES CORNER ROAD	DUGGAN, PATRICK ETUX ELLEN	106 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
22-2	5	1mi	\$184,500	0.5	26 TABER STREET	LOGAN, STEPHEN W & CLAIRE M	26 TABER ST	WEST KINGSTON, RI 02892
22-1	27	1mi	\$179,100	0.4	51 TABER STREET	CORPUS, PAUL V & EVELYN M	51 TABER ST	W KINGSTON, RI 02892
22-1	31	1mi	\$247,400	0.4	49 FRANK AVENUE	WISDOM PROPERTIES LLC	136 WINDMILL ST	PROVIDENCE, RI 02904
23-2	45	1mi	#####	1.5	BUTTERFIELD ROAD	RI HEALTH & EDUCATIONAL	10 ABBOTT PARK PLACE	PROVIDENCE, RI 02903
22-2	6	1mi	\$231,400	0.7	90 WAITES CORNER ROAD	FERRARIS MICHAEL A &	90 WAITES CORNER ROAD	WEST KINGSTON, RI 02892
22-1	28	1mi	\$232,300	0.4	61 TABER STREET	FOSTER, DAVID A & OAKLEY,	61 TABER ST	WEST KINGSTON, RI 02892
22-1	23	1mi	\$191,400	0.5	40 TABER STREET	BANNISTER, MARY E	40 TABER ST	WEST KINGSTON, RI 02892
23-2	28	none	\$357,600	0.4	81 FORTIN ROAD	MORT, THOMAS A	87 HIGHLAND AVE	WAKEFIELD, RI 02879
22-1	29	1mi	\$166,600	0.4	73 TABER STREET	WIJESINGHE DAYANUALI D	73 TABER STREET	WEST KINGSTON, RI 02892
22-1	12	1mi	\$272,700	0.8	15 FRANK AVENUE	VUOCOLO, ANN MARIE	558 STRASBURG DR	PT CHARLOTTE, FL 33954-3368
22-1	30	1mi	\$217,000	0.4	83 TABER STREET	MYCROFT, ELIZABETH E &	PO BOX 76	WEST KINGSTON, RI 02892
22-1	13	1mi	\$82,000	0.7	TABER STREET	SOUTH COUNTY CENTER FOR	PO BOX 186	W KINGSTON, RI 02892
23-2	17	none	\$463,800	0.4	120 FORTIN ROAD	ROSARIOS PROPERTIES, LLC	40 CARRIAGE LN	KINGSTON, RI 02881
23-2	16	none	\$723,600	0.0	100 FORTIN ROAD	BAILEY SALES & TANNING, LLC	65 SIGOURNEY RD	PORTSMOUTH, RI 02871
22-1	21	1mi	\$134,200	0.3	72 TABER STREET	WALMSLEY ROBERT T (EST)	72 TABER STREET	WEST KINGSTON, RI 02892
22-1	20	1mi	\$157,000	0.2	72F WAITES CORNER ROAD	WALMSLEY, RICHARD D ETUX	BOX 314	WEST KINGSTON, RI 02892-0314
22-1	19	1mi	\$173,700	0.4	72E WAITES CORNER ROAD	RIBERDY, DAVID M & VICTORIA A	72E WAITES CORNER RD	WEST KINGSTON, RI 02892
22-1	18	1mi	\$176,200	0.4	72D WAITES CORNER ROAD	NEVILLE AMBER M DEC	PO BOX 528	WEST KINGSTON, RI 02892
22-2	7	1mi	\$157,800	0.7	72C WAITES CORNER ROAD	KENYON, RAYMOND G ETUX	PO BOX 98	WEST KINGSTON, RI 02892
22-2	8	1mi	\$166,500	0.3	72B WAITES CORNER ROAD	MAY, LINDA L (LL) ET ALS &	PO BOX 24	WEST KINGSTON, RI 02892
22-2	9	1mi	\$248,200	0.5	62 WAITES CORNER ROAD	BUTROS, BAHJ	62 WAITES CORNER RD	WEST KINGSTON, RI 02892
23-2	15	none	\$258,000	0.4	51 FORTIN ROAD	WANG YEQIAO & WEI WEI	1827 MINISTERIAL RD	WAKEFIELD, RI 02879
23-2	14	none	\$209,900	0.4	41 FORTIN ROAD	FRONTONE, J & R TRUST	920 LEISURE WORLD	AMESA, AZ 85206
23-2	13	none	\$244,100	0.4	31 FORTIN ROAD	FORTIN, LAURENT B ETUX JOAN	31 FORTIN ROAD	KINGSTON, RI 02881

Targeted Parcels for URI Wellhead Protection

22-1	14	1mi	\$200,500	0.9	3529 KINGSTOWN ROAD	HALAVIK, THOMAS A & BARBARA J	PO BOX 419	SAUNDERSTOWN, RI 02874
23-2	12	none	\$210,700	0.4	25 FORTIN ROAD	HOUSEKEY PROPERTIES, LLC	211 HOLLY RIDGE RD	WEST KINGSTON, RI 02892
22-1	15	1mi	\$181,700	0.7	3521 KINGSTOWN ROAD	SPEARMAN, JOSHUA A	PO BOX 602	WEST KINGSTON, RI 02892-0602
22-1	16	1mi	\$199,000	0.6	3509 KINGSTOWN ROAD	VITELLO, DAVID ETUX LAURETTE M	PO BOX 264	WEST KINGSTON, RI 02892
22-1	17	1mi	\$187,800	0.5	3501 KINGSTOWN ROAD	SOUTH COUNTY CENTER FOR	PO BOX 186	W KINGSTON, RI 02892
22-4	47	1mi	#####	1.9	3481 KINGSTOWN ROAD	SOUTH COUNTY CENTER FOR	PO BOX 186	W KINGSTON, RI 02892
23-2	6	none	#####	1.7	58A FORTIN ROAD	FORTIN PLACE, LLC	188 KINGSTOWN RD	NARRAGANSETT, RI 02882
22-4	46	1mi	\$337,100	1.0	3471 KINGSTOWN ROAD	J & D'S WEST KINGSTON SERVICE	3471 KINGSTOWN ROAD	WEST KINGSTON, RI 02892
22-4	45	1mi	\$179,000	0.6	3453 KINGSTOWN ROAD	ROCKWELL, ROBERT M (EST)	PO BOX 487	WEST KINGSTON, RI 02892-0487
22-4	44	1mi	\$172,100	0.7	3447 KINGSTOWN ROAD	EGAN, ANDREW	PO BOX 91	W KINGSTON, RI 02892-0091
22-4	43	1mi	\$183,100	0.9	3439 KINGSTOWN ROAD	NELSON MARK JOSEPH &	3439 KINGSTOWN ROAD	WEST KINGSTON, RI 02892
22-3	1	1mi	\$191,000	1.0	3429 KINGSTOWN ROAD	PEITZ, ROBERT M & ENES,	3429 KINGSTOWN RD	WEST KINGSTON, RI 02892
22-3	2	1mi	\$213,400	0.7	3421 KINGSTOWN ROAD	THOMPSON, CHRISTOPHER &	3421 KINGSTOWN RD	WEST KINGSTON, RI 02892
22-3	3	1mi	\$614,300	1.4	3411 KINGSTOWN ROAD	DRAKE PETROLEUM CO INC	15 NORTHEAST INDUSTRIAL RD	BRANFORD, CT 06405
22-3	4	1mi	\$322,300	1.3	22 WAITES CORNER ROAD	BRANDYBERRY, MARILYN E	22 WAITES CORNER RD	WEST KINGSTON, RI 02892-1418
23-2	7	none	\$285,600	0.3	56 FORTIN ROAD	CAMPO, STEVEN & LEE, DEBRA	6145 POST RD	NORTH KINGSTOWN, RI 02852
23-2	8	none	\$437,600	0.4	54 FORTIN ROAD	CHIN, WILLIAM Y	10 FUSARO AVE	WESTERLY, RI 02891
23-2	9	none	\$254,700	0.4	46 FORTIN ROAD	SCIONTI, LORI L &	46 FORTIN ROAD	KINGSTON, RI 02881-1410
23-2	10	none	\$340,200	0.4	36 FORTIN ROAD	FORTIN PLACE, LLC	188 KINGSTOWN ROAD	NARRAGANSETT, RI 02882
23-3	128	none	\$258,000	0.4	28 FORTIN ROAD	BIXLER, THOMAS S JR ETUX	5011 REED RD	OXFORD, MD 21654
23-3	119	none	\$376,800	0.3	18 FORTIN ROAD	MACROOM PROPERTIES LLC	PO BOX 736	NARRAGANSETT, RI 02882
22-4	59	1mi	\$267,100	0.3	3534 KINGSTOWN ROAD	CHURCH OF GOD	3534 KINGSTOWN RD	WEST KINGSTON, RI 02892
22-4	58	1mi	\$186,300	0.6	3526 KINGSTOWN ROAD	FAGAN, A THOMAS ET UX DEBORAH PO BOX 655	PO BOX 655	W KINGSTON, RI 02892-0655
22-4	57	1mi	\$585,100	1.5	3516 KINGSTOWN ROAD	LAMY REVOCABLE LIVING TRUST	3516 KINGSTOWN RD	WEST KINGSTON, RI 02892
23-3	112	none	\$209,700	0.6	39 BRIAR LANE	CUMMISKEY CHRISTOPHER D &	39 BRIAR LANE	KINGSTON, RI 02881
23-3	117	none	\$91,100	1.4	130 OLD NORTH ROAD	HABITAT FOR HUMANITY FOR RI	PO BOX 68	SHANNOCK, RI 02875
22-4	54	1mi	\$223,100	0.5	3506A KINGSTOWN ROAD	HOLLAND, DOUGLAS N ETUX	PO BOX 463	WEST KINGSTON, RI 02892-0463
22-4	16	1mi	\$228,900	1.1	18 RAILROAD AVENUE	HARBIN, NATHALIE	526 HILL FARM RD	COVENTRY, RI 02816
22-4	53	1mi	\$220,900	0.5	3498 KINGSTOWN ROAD	GARDNER, JOSEPH M & SARAH E	PO BOX 155	WEST KINGSTON, RI 02892
22-4	61	1mi	\$186,700	0.5	3560 KINGSTOWN ROAD	KENYON, RAYMOND G JR	PO BOX 499	W KINGSTON, RI 02892
22-4	50	1mi	\$314,200	1.1	3484 KINGSTOWN ROAD	DAMBRA, GLORIA L TRUST	66 SYCAMORE DR	WESTWOOD, MA 02090
22-4	60	1mi	\$311,400	1.3	3542 KINGSTOWN ROAD	TANNER, BYRON E JR & DEBRA J	3542 KINGSTOWN RD	WEST KINGSTON, RI 02892
22-4	48	1mi	\$180,000	0.5	3474 KINGSTOWN ROAD	BELL, MELANIE	3474 KINGSTOWN RD	WEST KINGSTON, RI 02892
22-4	38	1mi	\$167,200	0.5	3464 KINGSTOWN ROAD	EVANS, DALE F ETUX CAROL	PO BOX 132	WEST KINGSTON, RI 02892
22-4	39	1mi	\$175,600	0.2	3460 KINGSTOWN ROAD	WEINREICH, DOUGLAS M	1585 COUNTRY CLUB RD	PLAINFIELD, VT 05667
22-4	40	1mi	\$175,100	0.2	3454 KINGSTOWN ROAD	SMITH, ROBERT A & CELESTE A	74 GLENDALE DR	WEST WARWICK, RI 02893-1318
22-4	41	1mi	\$221,100	0.3	3448 KINGSTOWN ROAD	HAMEL, MATTHEW S & KARIN C	614 DEBORAH CT	SCHAUMBURG, IL 60193-3106
22-4	35	1mi	\$231,800	0.9	3436 KINGSTOWN ROAD	DEVOLVE, JAYE C	PO BOX 122	WEST KINGSTON, RI 02892
23-3	108	none	\$406,600	0.5	101 BRIAR LANE	HELCAR INC	PO BOX 701	GREENVILLE, RI 02828-0701
23-3	113	none	\$320,400	0.7	17 BRIAR LANE	GATES, WILLIAM M IV & SUPRANNE	17 BRIAR LN	KINGSTON, RI 02881
23-3	116	none	\$345,400	0.3	120 OLD NORTH ROAD	FENG, RIHUI	120 OLD NORTH ROAD	KINGSTON, RI 02881

Targeted Parcels for URI Wellhead Protection

22-3	10	1mi	\$195,400	0.8	3416 KINGSTOWN ROAD	BOISCLAIR, NORMAND A	P O BOX 53	WEST KINGSTON, RI 02892-0053
23-3	104	1mi	\$249,000	0.4	70 CAMPUS AVENUE	NEVOLA, ANN M IRREVOC GRNTR TR	30 BEECHWOOD DR	CRANSTON, RI 02921
23-3	106	1mi	\$310,000	0.4	60 CAMPUS AVENUE	60 CAMPUS AVENUE REALTY TRUST	PO BOX 178	KINGSTON, RI 02881
22-3	8	1mi	\$142,800	0.2	3408 KINGSTOWN ROAD	QURESHI NAEEM Y	PO BOX 329	WEST KINGSTON, RI 02892
22-3	7	1mi	\$186,800	0.4	3398 KINGSTOWN ROAD	BARNEY, SHIRLEY H (LL) ETAL	3398 KINGSTOWN RD	WEST KINGSTON, RI 02892
23-3	111	none	\$201,500	0.2	63 BRIAR LANE	KINGSTON PROPERTIES, LLC	40 CARRIAGE LN	KINGSTON, RI 02881
22-4	69	1mi	\$333,300	0.4	86 SHERMAN AVENUE	KIRK, APRIL L & FOSSA,	86 SHERMAN AVE	WEST KINGSTON, RI 02892
22-3	6	1mi	\$164,200	0.6	3388 KINGSTOWN ROAD	FRYE, HELEN K	P O BOX 784	WEST KINGSTON, RI 02892-0784
23-3	100	1mi	\$249,500	0.5	36 CAMPUS AVENUE	ARAKELIAN GREGORY E	36 CAMPUS AVENUE	KINGSTON, RI 02881
23-3	115	none	\$328,200	0.4	110 OLD NORTH ROAD	NORTHBY, SHARON L TRUST DATED	110 OLD NORTH RD	KINGSTON, RI 02881
23-3	124	1mi	\$445,900	0.6	30 LOWER COLLEGE ROAD	ZHU, ZONG DONG	30 LOWER COLLEGE RD	KINGSTON, RI 02881
22-4	36	1mi	\$278,400	0.5	35 WATSON ROAD	EBERLY, REX A ETUX ESTHER V	35 WATSON RD	WEST KINGSTON, RI 02892-1514
23-3	99	none	\$358,400	0.5	24 CAMPUS AVENUE	VACCARO, RICHARD J ETUX SARAH	24 CAMPUS AVENUE	KINGSTON, RI 02881-1315
22-4	51	1mi	\$274,800	0.9	20B WATSON ROAD	DIMOCK, CRANDALL W ETUX	P O BOX 183	WEST KINGSTON, RI 02892-0183
22-3	5	1mi	\$215,800	0.4	3362 KINGSTOWN ROAD	COLLEGIATE PROPERTIES, INC	122 NORTH RIVER DR	NARRAGANSETT, RI 02882
23-3	95	none	\$384,800	0.5	16 CAMPUS AVENUE	SHEPPARD, DAVID M & PATRICIA J	8 LINDSLEY DR	NARRAGANSETT, RI 02882
23-3	94	none	\$260,300	0.4	42 UPPER COLLEGE ROAD	MUNRO, MELISSA E	42 UPPER COLLEGE RD	KINGSTON, RI 02882
22-4	25	1mi	\$207,600	1.0	63 SHERMAN AVENUE	SHACKLETON, HOWARD R JR &	63 SHERMAN AVE	WEST KINGSTON, RI 02892
23-3	66	none	\$317,900	0.5	41 UPPER COLLEGE ROAD	BARKER, MARIANNE M TRUSTEE	41 UPPER COLLEGE ROAD	KINGSTON, RI 02881
23-3	65	none	\$477,700	5.4	2595 KINGSTOWN ROAD	RUSSELL, JOHN MOSBY ETAL	5029 ALLAN ROAD	BETHESDA, MD 20816
23-3	64	none	\$225,500	0.4	9 CEDAR CIRCLE	COYNE, FRANCIS J & SUSAN M	30 HOMESTEAD PLACE	MIDDLETOWN, RI 02842
22-4	49	1mi	\$263,400	0.5	28 WATSON ROAD	LAMBERT, MATTHEW C ET AL	28 WATSON RD	WEST KINGSTON, RI 02892
23-3	58	none	\$224,200	0.3	24 BRIAR LANE	THOMAS, MARGARET A TRUSTEE	24 BRIAR LN	KINGSTON, RI 02881
23-3	137	1mi	\$559,500	0.4	24 LOWER COLLEGE ROAD	LOWER COLLEGE ROAD	5 LOVEGREEN WAY	EAST GREENWICH, RI 02818
22-3	14	1mi	\$218,400	0.3	45 LIBERTY LANE	SPIEWAK, MICHAEL A; RICHARD T &	45 LIBERTY LANE	WEST KINGSTON, RI 02892
23-3	132	1mi	\$270,700	0.6	91 BAYBERRY ROAD	ZAKI, AHMED S ET UX	91 BAYBERRY RD	KINGSTON, RI 02881
22-3	13	1mi	\$235,000	0.8	65 LIBERTY LANE	TIBBITS, ELANOR G DECLARATION	PO BOX 266	WEST KINGSTON, RI 02892
23-3	129	none	\$311,600	0.3	18 BRIAR LANE	CUNNINGHAM, KIMBERLY ANNE	18 BRIAR LANE	KINGSTON, RI 02881
22-4	26	1mi	\$218,100	1.1	95 SHERMAN AVENUE	SMITH BENJAMIN T & PAMELA M	95 SHERMAN AVENUE	WEST KINGSTON, RI 02892
23-3	103	1mi	\$310,700	0.5	79 BAYBERRY ROAD	SHEN, SHI-JUN & MING-CHU HUANG	51 ENTERPRISE TERRACE	KINGSTON, RI 02881
23-3	57	none	\$277,600	0.4	94 OLD NORTH ROAD	PRASSL, JEREMY M & CAM T	94 OLD NORTH RD	KINGSTON, RI 02881
22-3	19	1mi	\$113,300	1.0	LIBERTY LANE	YANG, WENJIA	30 REVERE BEACH PKWY APT 21	MEDFORD , MA 02155-5145
23-3	101	1mi	\$419,100	0.5	20A FRENCH ROAD	DRUM, DAVID J & CANDYCE D	7602 WEST RIM DR	AUSTIN, TX 78731
22-4	73	1mi	\$387,500	0.8	149 LIBERTY LANE	KRAJEWSKI, JAMES J & SARAH J	149 LIBERTY LANE	WEST KINGSTON, RI 02892-1503
22-4	33	1mi	\$314,400	0.9	117 LIBERTY LANE	YOUNG, EDWARD J & EVE M	117 LIBERTY LN	WEST KINGSTON, RI 02892
23-3	125	1mi	\$498,600	0.5	16 LOWER COLLEGE ROAD	LOWER COLLEGE ROAD REALTY, LLC	249 WOODRUFF AVE	WAKEFIELD, RI 02879
23-3	93	none	\$215,000	0.3	40 UPPER COLLEGE ROAD	ROBERTS, ELIZABETH A/K/A	40 UPPER COLLEGE RD	KINGSTON, RI 02881-1310
23-3	63	none	\$291,300	0.6	23 CEDAR CIRCLE	MCALLISTER, ROBIN E	23 CEDAR CIR	KINGSTON, RI 02881
22-4	74	1mi	\$269,900	0.7	20A WATSON ROAD	SANDY BROOKE, LLC	14 PIKES HILL	STERLING, MA 01564
23-3	59	none	\$319,900	0.4	20 CEDAR CIRCLE	HARTE, DEBORAH A	20 CEDAR CIR	KINGSTON, RI 02881
22-4	34	1mi	\$221,600	0.7	97 LIBERTY LANE	TAPPERO, CHARLES J IV &	97 LIBERTY LN	WEST KINGSTON, RI 02892

Targeted Parcels for URI Wellhead Protection

23-3	98	none	\$327,400	0.4	19 FRENCH ROAD	KAEMMERLEN, SUSAN T REVOC	19 FRENCH RD	KINGSTON, RI 02881-1305
22-3	18	1mi	\$307,500	1.8	46 LIBERTY LANE	KEY PROGRAM INC	670 OLD CONNECTICUT PATH	FRAMINGHAM, MA 01701
22-3	21	1mi	\$81,200	0.1	4 LIBERTY LANE	NARRAGANSETT ELECTRIC CO	40 SYLVAN RD	WALTHAM, MA 02451-2286
23-3	96	none	\$227,600	0.5	27 BAYBERRY ROAD	DONNELLY, DOROTHY F TRUST	PO BOX 2423	PROVIDENCE, RI 02906
23-3	56	none	\$465,000	0.5	80 OLD NORTH ROAD	EARLS, ELIZABETH (EST)	71 MAIN ST	WAKEFIELD, RI 02879-3510
23-3	102	1mi	\$320,000	0.5	8 FRENCH ROAD	SHELDON, DEBRA ANN	8 FRENCH RD	KINGSTON, RI 02881
22-3	17	1mi	\$120,200	1.9	62 LIBERTY LANE	ALTERNATIVES FOR YOUTH	670 OLD CONNECTICUT PATH	FRAMINGHAM, MA 01701
22-3	16	1mi	\$149,300	6.4	LIBERTY LANE	BOISCLAIR SEAN & CHELSEA	70A LIBERTY LN	WEST KINGSTON, RI 02892
23-3	60	none	\$252,000	0.4	30 CEDAR CIRCLE	THIEM, LEON T ETUX DIANE L	30 CEDAR CIRCLE	KINGSTON, RI 02881-0220
23-3	97	none	\$114,800	0.4	BAYBERRY ROAD	DONNELLY, DOROTHY F TRUST	PO BOX 2423	PROVIDENCE, RI 02906
23-3	91	none	\$253,300	0.3	30 UPPER COLLEGE ROAD	TRAVER, SUSAN B	30 UPPER COLLEGE RD	KINGSTON, RI 02881
22-3	15	1mi	\$301,400	1.3	70 LIBERTY LANE	TIBBITS, VERNAL B DECLARATION	PO BOX 266	WEST KINGSTON, RI 02892
22-4	32	1mi	\$216,900	0.6	133 LIBERTY LANE	SENN, MASON M & JAMIE P	133 LIBERTY LN	WEST KINGSTON, RI 02892
24-4	28	none	\$393,800	1.0	81 OLD NORTH ROAD	HAGGERTY DENNIS M	81 OLD NORTH ROAD	KINGSTON, RI 02881
22-4	30	1mi	\$212,300	0.5	155 LIBERTY LANE	NASH, JESSICA M	155 LIBERTY LN	WEST KINGSTON, RI 02892
23-3	78	1mi	\$216,300	0.5	106 BAYBERRY ROAD	R I EPISCOPAL CONV CHURCH	106 BAYBERRY ROAD	KINGSTON, RI 02881-1316
23-3	62	none	\$316,500	1.6	41 CEDAR CIRCLE	BARRY FAMILY TRUST - 2013	41 CEDAR CIRCLE	KINGSTON, RI 02881
23-3	55	none	\$273,700	0.5	70 OLD NORTH ROAD	GARCIA, JORGE E ET UX	70 OLD NORTH RD	KINGSTON, RI 02881
23-3	80	1mi	\$311,600	0.9	88 BAYBERRY ROAD	BRAIS, GRACE A AND	7 DEER RUN	HOPE, RI 02831
23-3	69	none	\$279,300	0.3	27 UPPER COLLEGE ROAD	WOZNIAK, THOMAS G & BETSY A	27 UPPER COLLEGE RD	KINGSTON, RI 02881
23-3	90	none	\$364,300	0.4	28 UPPER COLLEGE ROAD	SCM, LLC	PO BOX 2711	PROVIDENCE, RI 02906
22-4	29	1mi	\$195,000	0.5	167 LIBERTY LANE	LEPAGE DIANNE S TRUST	PO BOX 34	WEST KINGSTON, RI 02892
23-3	81	1mi	\$237,300	0.4	78 BAYBERRY ROAD	RUSNOCK, ANDREW E & ALICE M	78 BAYBERRY RD	KINGSTON, RI 02881
23-3	82	none	\$284,300	0.4	66 BAYBERRY ROAD	KAUFMAN, CHARLES ETUX CAROL D	66 BAYBERRY RD	KINGSTON, RI 02881
23-3	79	1mi	\$569,300	0.5	15 LOWER COLLEGE ROAD	DIocese OF RI EPISCOPAL CONV	15 LOWER COLLEGE RD	KINGSTON, RI 02881
23-3	70	none	\$262,900	0.3	23 UPPER COLLEGE ROAD	GREGORY T REAL ESTATE, LLC	25 RHODE ISLAND AVE	PROVIDENCE, RI 02906
23-3	83	none	\$253,100	0.6	56 BAYBERRY ROAD	PRINCE, MARY-ANNE	1220 BOSTON NECK RD	SAUNDERSTOWN, RI 02874
23-3	61	none	\$268,000	0.4	40 CEDAR CIRCLE	YODER, JAMES A ETUX ELLEN W	34 DANIEL ST	FALMOUTH, MA 02540-2803
24-4	27	none	\$277,400	0.6	71 OLD NORTH ROAD	CHOU, NORMAN & TERESA	71 OLD NORTH RD	KINGSTON, RI 02881
23-4	9	1mi	\$434,300	1.8	39 SYLVAN WAY	FITZGERALD, JOSEPH B ETUX	39 SYLVAN WAY	KINGSTON, RI 02881
23-3	54	none	\$412,500	1.0	58 OLD NORTH ROAD	HENNING, ANDREW M	8114 GRAY WOLF DR	FORT DRUM, NY 13603-2503
23-3	85	none	\$255,200	0.4	44 BAYBERRY ROAD	HENDERSON LARRY M &	44 BAYBERRY ROAD	KINGSTON, RI 02881
23-4	4	1mi	\$207,500	0.3	2888 KINGSTOWN ROAD	CARLSON DAN	70 MOHAWK TRAIL	CHARLESTOWN, RI 02813
24-4	26	none	\$453,600	0.4	59 OLD NORTH ROAD	UTTER JOY C & HAYES H	49 OLD NORTH ROAD	KINGSTON, RI 02881
23-3	86	none	\$290,200	0.4	32 BAYBERRY ROAD	GREENE, SEAN M & REGAN M	32 BAYBERRY RD	KINGSTON, RI 02881
23-4	3	1mi	\$215,300	0.7	2868 KINGSTOWN ROAD	GREGORY T REAL ESTATE, LLC	25 RHODE ISLAND AVE	PROVIDENCE, RI 02906
23-3	87	none	\$280,200	0.5	24 BAYBERRY ROAD	TALLY, PHILIP J & KATHERINE M	24 BAYBERRY RD	KINGSTON, RI 02881
23-3	52	none	\$385,900	1.1	32 OLD NORTH ROAD	SPEREDELOZZI, ALFRED J JR &	32 OLD NORTH ROAD	KINGSTON, RI 02881
23-3	75	1mi	\$684,800	1.0	2697 KINGSTOWN ROAD	ROBINCO, LLC	60 BEAUCHAMP DR	SAUNDERSTOWN, RI 02874
23-4	2	1mi	\$265,500	1.6	2822 KINGSTOWN ROAD	BERMAN, MARK S & SUSAN F	2822 KINGSTOWN RD	KINGSTON, RI 02881
23-3	77	1mi	\$228,600	0.3	2733 KINGSTOWN ROAD	DRAPER, CAROLYN I	2733 KINGSTOWN RD	KINGTON, RI 02881

Targeted Parcels for URI Wellhead Protection

23-3	76	1mi	\$137,000	0.3	2721 KINGSTOWN ROAD	CLARK, GARY M & CORNWALL,	60 HELME RD	KINGSTON, RI 02881
23-3	131	1mi	\$157,100	0.2	2719 KINGSTOWN ROAD	GILBERT, JONATHAN A ETUX	151 POND ST	WAKEFIELD, RI 02879-4033
23-3	72	none	\$298,300	0.4	15 UPPER COLLEGE ROAD	COSTA, ARMENIO S	1016 WESTSIDE DR	IOWA CITY, IA 52246-4315
23-3	53	none	\$292,400	0.3	40 OLD NORTH ROAD	JOHNSON DAVID W & KATE C	40 OLD NORTH ROAD	KINGSTON, RI 02881
23-4	11	1mi	\$407,400	0.7	34 SYLVAN WAY	STERN, RONALD H & DARLENE	34 SYLVAN WAY	KINGSTON, RI 02881
23-3	49	none	\$275,200	0.5	2581 KINGSTOWN ROAD	MC MANUS, JAMES E	2581 KINGSTOWN RD	KINGSTON, RI 02881-1605
23-3	135	1mi	\$344,300	0.9	2752 KINGSTOWN ROAD	DERREZA HECTOR 2012	2752 KINGSTOWN ROAD	KINGSTON, RI 02881
23-3	51	none	\$340,800	0.8	26 OLD NORTH ROAD	BARBATO, JOHN R & SUSAN W	26 OLD NORTH RD	KINGSTON, RI 02881
24-4	25	none	\$419,000	1.5	2501 KINGSTOWN ROAD	GITLITZ, DAVID M TRST AGRMT &	2501 KINGSTOWN RD	KINGSTON, RI 02881
23-3	48	none	\$616,300	0.6	2579 KINGSTOWN ROAD	SOUTH COUNTY ART ASSOC	2587 KINGSTOWN RD	KINGSTON, RI 02881
23-4	10	1mi	\$429,200	2.0	41 SYLVAN WAY	LUCAS, JOHN E & BARBARA A	41 SYLVAN WAY	KINGSTON, RI 02881
23-3	47	none	\$401,500	0.4	2573 KINGSTOWN ROAD	ARNOLD, ROBERT R JR &	PO BOX 2001	NORTH KINGSTOWN, RI 02852
23-3	46	none	\$397,900	0.4	2563 KINGSTOWN ROAD	INDEGLIA, GILBERT V ETUX	2563 KINGSTOWN ROAD	KINGSTON, RI 02881
23-3	45	none	\$277,200	0.4	2557 KINGSTOWN ROAD	HARRINGTON, MATTHEW P & SUSAI	PO BOX 2043	KINGSTON, RI 02881-0495
23-3	44	none	\$197,700	0.1	2553 KINGSTOWN ROAD	MP LITTLE HOUSE LLC	180 SAMUEL GORTON AVE	WARWICK, RI 02889
23-3	136	none	\$73,000	0.4	OLD NORTH ROAD	SHARKEY STEPHEN T & ANGELA K	117 WESTWIND RD	WAKEFIELD, RI 02879
23-4	12	1mi	\$387,600	0.7	70 SYLVAN WAY	CHILSON, GREGORY F JR &	70 SYLVAN WAY	KINGSTON, RI 02881
23-3	8	none	\$255,700	0.7	2670 KINGSTOWN ROAD	WALDHEGER, GAVIN M & LISA B	2670 KINGSTOWN RD	KINGSTON, RI 02881
23-3	19	none	\$188,300	0.5	2650 KINGSTOWN ROAD	SIMPSON, PENELOPE (LL) &	2650 KINGSTOWN RD	KINGSTON, RI 02881
23-3	43	none	\$392,300	0.5	2545 KINGSTOWN ROAD	DANIS, ANN T & GAGNON,	2545 KINGSTOWN RD	KINGSTON, RI 02881
23-3	20	none	\$688,500	0.6	2636 KINGSTOWN ROAD	PETTAQUAMSCUTT HIS SCTY INC	2636 KINGSTOWN RD	KINGSTON, RI 02881
23-4	13	1mi	\$450,200	1.2	59 SYLVAN WAY	SMITH CLAUDIA	59 SYLVAN WAY	KINGSTON, RI 02881
23-4	14	1mi	\$445,200	0.9	69 SYLVAN WAY	AMARAL ALFRED &	69 SYLVAN WAY	KINGSTON, RI 02881
24-4	2	none	\$314,100	0.4	2492 KINGSTOWN ROAD	WAKEFIELD MILL BUILDING INC	375 COMMERCE PARK RD	N KINGSTOWN, RI 02852
24-4	1	none	\$298,200	0.6	2500 KINGSTOWN ROAD	WAKEFIELD MILL BUILDING INC	375 COMMERCE PARK RD	N KINGSTOWN, RI 02852
23-3	138	1mi	\$498,600	0.5	20 LOWER COLLEGE ROAD	LOWER COLLEGE ROAD REALTY, LLC	249 WOODRUFF AVE	WAKEFIELD, RI 02879
24-4	44	none	\$512,300	2.3	49 OLD NORTH ROAD	UTTER JOY C &	49 OLD NORTH RD	KINGSTON, RI 02881
23-3	139	none	\$134,200	0.8	37 BRIAR LANE	CUMMISKEY CHRISTOPHER D &	39 BRIAR LN	KINGSTON, RI 02881
22-4	75	1mi	\$0	0.0	KINGSTOWN ROAD	J & D'S WEST KINGSTON	3471 KINGSTOWN RD	WEST KINGSTON, RI 02892

Appendix D
URI Land Acquisition Ranking Sheet

Property Owner

Name _____

Address _____ City _____

St _____ Zip _____

Phone: _____ Email: _____

Property Address: _____

City _____

Plat: _____ Lot: _____

Distance to Well Field	Points
< 400 ft	30
<800 ft	20
<1200 ft	15
<.5 mi	10
<1.0 mi	5

Development Potential	Points
# of SK Lots	
1-5	10
6-12	15
12-19	20
20+	30

Parcel Status	Points
Land is for sale	15
Recently sold for development	13
Offered to URI	10
Currently on the market	10
Recently sold	5
Zoned incompatible for water protection	10

Professional Opinion	Points
Potential for contamination	5-30
Increase in vandalism	2
Increases trespass	2
Increases complaints	2
Fire potential	2

Ranking

60- 83 – Strong Reasons to Acquire

36-45 Few Reasons to Acquire

45-59- Moderate Reasons to Acquire

<35- Little interest

Appendix E

REAL ESTATE PURCHASE AND SALE AGREEMENT

[FOR DEVELOPMENT RIGHTS]

THIS AGREEMENT ENTERED into by and between Insert Name ("Seller"), and the City of Providence, Providence Water Supply Board, Rhode Island, a municipal corporation with a business address at 552 Academy Avenue, Providence, Rhode Island (hereinafter the "Buyer").

WITNESSETH:

1. Conveyance. Seller promises to sell and convey to Buyer, and Buyer promises to purchase from Seller, all right, title and interest of Seller in all development rights (the "Development Rights") with respect to that certain parcel or parcels of real estate comprising approximately forty-four (44) acres identified as Lot 27, Plat 45 and Lot 55, Plat 44 in the Town of Scituate, Rhode Island (hereinafter the "Premises").

Said conveyance is to be made subject to rights of way, agreements, easements and restrictions of record, if any, provisions of existing zoning and building laws, and taxes (as hereinafter defined) to the extent provided herein.

The conveyance shall include all fixtures now on the Development Rights annexed to the realty or built and fitted especially therefore and designed to be used and enjoyed in connection therewith, including, but not limited to, electric fixtures, oil burners, screens, screen doors, storm windows, window treatments and awnings, if any, and any other removable fixtures.

2. Conservation Easement. Seller promises to convey the Development Rights by the delivery to Buyer at the Closing of that certain Conservation Easement attached hereto as Exhibit A and by this reference incorporated fully herein. Said Conservation Easement shall convey good, clear and marketable title to the Development Rights, free from all encumbrances, except as hereinbefore stated, and except that taxes and assessments shall be paid or assumed in the manner hereinafter provided.

3. To enable Seller to make conveyance as herein provided, Seller may, and if necessary shall, at the time of delivery of the Conservation Easement, use the purchase money, or

any part thereof, to clear the title of any encumbrances or interests which are to be discharged, removed or eliminated by the terms hereof.

4. Title Affidavits. At the time of delivery of the Conservation Easement, Seller, if requested, shall execute and deliver an affidavit in the usual form, commercial or otherwise, to any title insurance company insuring title to the Development Rights to the Buyer setting forth, among other things, that there are no parties in possession of the Development Rights and no work has been performed on the Development Rights during the 200 days preceding the Closing Date.

5. Insurance. Risk of loss shall be on the Seller during the interval of time between the signing of this Agreement and the delivery of the Conservation Easement to the Premises. In the event of fire and/or other casualty Buyer shall have the option to elect in its sole and absolute discretion to: (i) proceed with the purchase of the Development Rights under this Agreement, however, the purchase price shall be equal to the fair market value of the Development Rights in its then existing condition as determined by a neutral appraiser appointed by the agreement of the parties, or in the absence of the same, by the presiding Justice of the Superior Court of the State of Rhode Island upon application thereto by either party upon five (5) days prior notice to the other; or (ii) cancel this Agreement by giving the Seller notice thereof on or before the 10th day subsequent to the date of the Buyer's receipt from Seller of notice of the fire and/or casualty. In the event Buyer elects to cancel this Agreement, the Deposit (including all interest earned thereon) shall be promptly returned by Seller to Buyer, and thereafter this Agreement shall be null and void and of no further force and effect and each party hereto shall have no further obligation to the other.

6. Deposit, Purchase Price and Payment Thereof. Except as provided in paragraph 5 above, Buyer agrees to purchase the Development Rights from Seller for the sum of

Two hundred seventeen thousand seven hundred fifty (\$217,750.00) DOLLARS ("Purchase Price"), of which ten thousand eight hundred eighty seven point fifty (\$10,887.50) DOLLARS has been paid this day to Seller as a deposit, the receipt of which is hereby acknowledged by Seller, and the remainder, two hundred six thousand eight hundred sixty two point fifty (\$206,862.50) DOLLARS is to be paid on the Closing Date (as hereinafter defined) by a certified or bank check or by wire transfer of immediately available funds. The Deposit shall be held by an escrow agent mutually agreed upon by the Buyer and the Seller; all interest earned thereon shall be paid to the Buyer at the time the Deposit is returned to the Buyer or applied to the Purchase Price at the Closing.

7. Seller's Warranties. Seller represents, warrants and agrees as follows:

(a) that there are no tenants or occupants of the Premises under lease except:

_____,
_____.

(b) Seller has no knowledge that the past or present use of the Premises does not comply in all material respects with all Environmental Protection Agency, Occupational Safety and Health Administration, and all other federal, state and local laws, administrative rules and regulations governing the soil, water, and air in and around the Premises. Seller represents that it has no knowledge of any contamination of the Premises by Hazardous Substances. For the purposes of this paragraph and this Agreement, the term "Hazardous Substances" are those substances defined as toxic or hazardous substances by Environmental Law and the following substances: gasoline, kerosene, other flammable or toxic petroleum products, toxic pesticides and herbicides, volatile solvents, materials containing asbestos or formaldehyde, and radioactive materials. As used herein, "Environmental Law" means federal laws and laws of the State of Rhode Island that relate to health, safety or environmental protection. This representation shall survive the Closing. Date;

(c) the Premises are not in violation of any zoning laws or regulations;

(d) In the event Seller is a corporation, Seller shall deliver to Buyer, at least ten (10) days prior to the Closing, certificates of good standing and/or legal existence (as applicable) issued by the Rhode Island Secretary of State and the Division of Taxation;

(e) That Seller is not a foreign person or foreign corporation as defined in the Foreign Investment in Real Property Tax Act ("FIRPTA") and, accordingly, that Buyer will not be required to comply with the withholding requirements of FIRPTA at the Closing.

(f) That Seller is a resident of the State of Rhode Island.

Except as otherwise expressly provided above, the Seller agrees that its representations and warranties stated herein shall be restated as of the Closing Date and be effective amongst Seller and Buyer as of such date.

8. Buyer's Contingencies. Buyer's obligations under this Agreement are subject to the satisfaction of the following conditions:

(a) Buyer's receipt of a satisfactory inspection report from a structural engineer selected by Buyer related to the structure and mechanical facilities of any buildings located on the Premises. This report shall be prepared by Buyer at its expense. If Buyer is not satisfied with the results of such inspection and such determination shall be made by Buyer in its sole and absolute discretion, Buyer may cancel this Agreement by giving the Seller notice thereof on or before the 60th day subsequent to the date of this Agreement (hereinafter, the "Notification Date"). In such event the Deposit (including all interest earned thereon) shall be promptly returned to Buyer and thereafter this Agreement shall be null and void and of no force and effect and each party hereto shall have no further obligation to the other.

(b) Buyer's receipt of an environmental site assessment report for the Premises prepared by a professional environmental engineer of the Buyer's choice, which report shall show no deficiencies. This report shall be obtained by Buyer at its expense. If Buyer is not satisfied with any such report and such determination shall be made by Buyer in its sole and absolute discretion, Buyer may cancel this Agreement by giving Seller notice thereof by the Notification Date. In such event the Deposit (including all interest earned thereon) shall be promptly returned to Buyer; and thereafter this Agreement shall be null and void and of no force and effect and each party hereto shall have no further obligation to the other.

(c) Buyer's receipt of a title search report for the Premises, which report shall be satisfactory to Buyer. This report shall be prepared by Buyer at its expense. If Buyer is not satisfied with the state of title to the Premises as evidenced by the report, Buyer may cancel this Agreement by giving Seller notice thereof by the Notification Date. In such event the Deposit (including all interest earned thereon) shall be promptly returned to Buyer and thereafter this Agreement shall be null and void and of no force and effect and each party hereto shall have no further obligation to the other.

(d) Buyer's receipt of a survey of the Premises from a registered land surveyor of Buyer's choice which survey shall show no encroachments upon the Premises or other matters affecting title that are unsatisfactory to Buyer, and Buyer's determination of satisfaction hereunder shall be made by Buyer in its sole and absolute discretion. If Buyer is not satisfied with the results of the survey report, Buyer may cancel this Agreement by giving Seller notice thereof by the Notification Date. In such event the Deposit (including all interest earned thereon) shall be promptly returned to Buyer, and thereafter this Agreement shall be null and void and of no force and effect and each party hereto shall have no further obligation to the other.

9. Closing. The Deed is to be delivered and the consideration paid not later than December 31, 2014 at the offices of Pannone, Lopes, Devereaux & West, 317 Iron Horse Way, Suite 301, Providence, RI 02908 or, at such other place and time as may be mutually agreed to by the parties (the "Closing Date").

10. Miscellaneous Adjustments. The payment of taxes, rents, fuel charges, water charges, sewer assessment charges and sewerage use charges and other municipal assessments or charges affecting the Premises, if any there be, shall be the responsibility of the Seller following the delivery of the Conservation Easement.

11. Inability to Convey. If Seller shall be unable to give title and to make conveyance as hereinbefore provided, all payments made by Buyer (including all interest earned thereon) under this Agreement shall be refunded, and all obligations of either party hereto shall cease; provided, however, that either party may extend the Closing Date for one period of 30 days to cure such defect, and provided, further, that Buyer, if Seller cannot cure said defect, may at its option waive any defect(s) and take such title as Seller is able to convey, without warranty as to those defect(s) and without reduction of the Purchase Price, and the acceptance of the Conservation Easement by Buyer for the Development Rights shall be deemed a full performance and discharge hereof.

12. Default by Buyer. Upon default by Buyer, Seller's sole remedy at law and in equity shall be the right to receive from the Buyer the sum of one thousand (\$1,000.00) DOLLARS as liquidated damages.

13. Default by Seller. Upon default by Seller, Buyer shall have the right to the return of the Deposit (including any interest earned thereon), such right to be without prejudice to the right of Buyer to seek specific performance of this Agreement, or to pursue any remedy, legal or equitable, which shall accrue by reason of such default.

14. Broker's Commission. Seller represents and warrants to Buyer that Seller has not dealt with any real estate agent or broker in connection with the transaction contemplated hereby except _____. Seller hereby agrees to indemnify, defend, and hold harmless Buyer from any claim or claims, action or actions, losses, payments, judgments, commission or commissions, paid or payable to any real estate agent or broker in connection with this transaction that was not called to the attention of Buyer as a result of any services or facilities of any real estate agent or broker. The provisions of this paragraph shall survive the Closing.

15. Seller hereby covenants and agrees to indemnify, defend and hold Buyer and all of its officers, members, employees, agents, successors and assigns harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities or losses (including the reasonable fees of counsel, consultants and experts) which arise in any way from the representation made by Seller in paragraph 8(b) above proving to be false or misleading in any respect. The indemnification and the hold harmless obligations of Seller herein shall survive the Closing Date and the delivery of the deed.

16. BOTH SELLER AND BUYER HEREBY CONSENT TO THE JURISDICTION OF THE COURTS OF THE STATE OF RHODE ISLAND AND THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF RHODE ISLAND, AS WELL AS TO THE JURISDICTION OF ALL COURTS FROM WHICH AN APPEAL MAY BE TAKEN FROM THE AFORESAID COURTS, FOR THE PURPOSE OF ANY SUIT, ACTION OR OTHER PROCEEDING ARISING OUT OF, UNDER OR WITH RESPECT TO THIS AGREEMENT, AND EXPRESSLY WAIVE ANY AND ALL OBJECTION EACH MAY OR HEREAFTER HAVE AS TO THE VENUE IN ANY OF SUCH COURTS.

17. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Rhode Island.

18. Additional Assurances. From time to time hereafter and without additional consideration, each party hereto shall perform such further acts and execute and deliver such further documents as the other party hereto may reasonably request for the purpose of effectively carrying out the transactions contemplated by this Agreement, including instruments necessary or desirable to complete the sale of the Premises to Buyer and the release of any and all liens, claims and encumbrances with respect thereto.

19. Notices. All notices or other communications required or permitted hereunder shall be in writing and may be delivered in person, by telegraphic or other electronic means, or by certified or registered mail, postage prepaid, or by overnight courier, freight prepaid, addressed as follows:

If to Buyer to:

Providence Water Supply Board

552 Academy Avenue

Providence, RI 0290

Attn: Ricky Caruolo, General Manager

With a copy to:

William E. O’Gara, Esq.

Pannone, Lopes, Devereaux & West

317 Iron Horse Way, Suite 301

Providence, RI 02908

If to Seller, to:

Insert name and address

With a copy to:

John T. Walsh Jr., Esq.

Walsh, Brule & Nault, P.C.

1334 Mendon Road

Cumberland, RI 02864

Each party, by written notice given to the other party in accordance with this Section 20, may change the address to which notices or other communications hereunder shall be deemed to have been duly given. Any notice given hereunder shall become effective on the earlier of (i) the date of actual delivery, (ii) three days after the date of mailing, or (iii) one day after delivery to the overnight courier except that notice of a change of address shall be effective only upon actual delivery.

20. Binding Effect; Assigns; Benefits. This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns. Seller may not assign its rights hereunder without the prior written consent of Buyer. Buyer may assign its rights hereunder to any agency or department of the City of Providence, Rhode Island.

21. Headings. The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

22. Entire Agreement; Amendments. This Agreement (including the documents and instruments referred to herein) sets forth the entire agreement and understanding of the parties with respect to the subject matter hereof and supersedes all previous agreements and understandings, written or oral, in respect thereof. This Agreement may not be modified or amended orally, and no waivers of the provisions hereof may be given, except by a written instrument or instruments signed by all of the parties hereto.

23. Counterparts. This Agreement may be executed by the parties hereto in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

24. Specific Performance. Except as otherwise provided herein, in the event of a breach by either party of any of its obligations set forth in this Agreement, the other party shall be entitled to pursue any and all remedies available to it, it being the intention and understanding of the parties that monetary damages alone are not necessarily an adequate remedy for a breach of the provisions of this Agreement by any party, and that, in addition to such monetary damages, its provisions may be specifically enforced by a party obtaining an injunction or other equitable relief issued by a court of competent jurisdiction.

25. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their duly authorized officers and/or representatives on this ____ day of _____, 2014.

Executed in the
presence of:

Buyer: CITY OF PROVIDENCE,
PROVIDENCE WATER SUPPLY BOARD

By: _____ Date:

Manager

Ricky Caruolo, General

Seller: Insert Name

_____ Date:

Seller: Insert Name

By: _____ Date:

Appendix F

CONSERVATION EASEMENT

THIS GRANT OF CONSERVATION EASEMENT is made this ____ day of November, 2014 by and between insert name and address, estate, etc., hereinafter referred to as "Grantor"), and the **C**, a municipal corporation organized and existing under the laws of the State of Rhode Island and maintaining a business address at, Rhode Island (hereinafter referred to as "Grantee").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of certain real property in the State of Rhode Island (hereinafter referred to as the "Premises") and;

WHEREAS, the Premises possess open, natural, scenic, agricultural, watershed, and ecological value; and

WHEREAS, Grantor and Grantee recognize the value and special character of the Premises and acknowledge a common purpose to conserve the values of the Premises, and to conserve and protect the water quality protection, soil conservation and flood prevention aspects of the Premises, and to prevent its use for development for any purpose or in any manner that would conflict with the maintenance of the Premises, in its current, natural, open, scenic and watershed condition, and;

WHEREAS, Grantor as owner of the Premises intends to convey to Grantee the right to preserve and protect the conservation values of the Premises in perpetuity;

NOW THEREFORE, in consideration of the above and the mutual covenants, terms, conditions and restrictions contained herein and other good and valuable consideration paid by

the Grantee to Grantor, the receipt and sufficiency of which is hereby acknowledged, and pursuant to the laws of the State of Rhode Island, and in particular Title 34, Chapter 39, Title 45, Chapter 36, Title 46, Chapters 15, 15.1 and 15.3 of the General laws of Rhode Island, as amended, Grantor hereby voluntarily grants and conveys unto Grantee a Conservation Easement in perpetuity over the Premises, of the nature and character, and to the extent hereinafter set forth.

1. Purpose. It is the purpose of this Conservation Easement to assure that the Premises will be retained forever in its open, natural, scenic, agricultural, watershed, and ecological condition and to prevent any use of the Premises that will significantly impair or interfere with the conservation and water quality protection values of the Premises. Grantor intends that this Conservation Easement will confine the use of the Premises to: 1. one single family residence (if applicable); 2. Protecting and maintaining the watershed features of the Premises, including water quality protection, soil conservation, flood prevention and the prevention of soil erosion; 3. Protecting and maintaining the rural scenic vista of the Premises from abutting roads and land; 4. Utilizing the open farm fields in agriculture to the extent permitted hereunder; and such other uses as are consistent with the purpose of this Conservation Easement.

2. Rights of Grantee. To accomplish the purpose of this Conservation Easement, the following rights are conveyed to Grantee by this Conservation Easement:

- a) To preserve and protect the conservation values of the Premises;
- b) To enter upon the Premises at all reasonable times and upon reasonable notice, if necessary, across other lands owned by Grantor adjacent to the Premises in order to:
 - (i) monitor and inspect Grantor's or his successors or assigns compliance with the covenants and purposes of this Conservation Easement, (ii) enforce the terms of this

Conservation Easement, (iii) take any and all actions as may be necessary or appropriate, with or without order of court, to remedy or abate violation hereof; and (iv) after prior notice to Grantor, his successors or assigns, to observe and study nature, make scientific and educational observations and studies in such manner as will not disturb the quiet enjoyment of the Premises by Grantor.

- c) To prevent any activity or use of the Premises that is inconsistent with the purpose of this Conservation Easement.
 - d) To require restoration of such areas or features of the Premises that may be damaged by any inconsistent activity or use, pursuant to section 5 hereof.
3. Prohibited Uses. Any activity on or use of the Premises inconsistent with the purpose of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited, other than as provided in section 4 hereof:
- a) The subdivision or development of the Premises or the disturbance or change in the natural habitat.
 - b) The placement or construction of any buildings, structures, or other improvements of any kind outside of the delineated building envelope of three (3) acres, and exclusive of fencing, permanent or temporary. No commercial or industrial activity of any kind shall be permitted on the Premises.
 - c) Any ditching, draining, diking, filling, excavating, dredging, mining or drilling, removal of topsoil, sand, gravel, rock, minerals or other materials, or any building of roads or change in the topography of the land in any manner.
 - d) The use of biocides except under extreme or unusual conditions and subject to the forestry best management requirements of paragraph 4c) below, and after consultation with the Grantee.
 - e) Large-scale animal confinement facilities.

- f) The dumping or storing of ashes, trash, garbage, wastes, refuse, debris, or other unsightly or offensive material, and the changing of the topography through the placing of soil or material or dredging spoils, nor shall any activities be conducted directly on the Premises, or on adjacent property which could cause erosion or siltation on the Premises.
 - g) The alteration of natural ponds, water courses, streams and brooks, lake shores, marshes or other water bodies, or activities which would be detrimental to water purity.
 - h) The operation of snowmobiles, dunebuggies, motorcycles, all-terrain vehicles, or any other types of motorized vehicles, except such motorized vehicles as are necessary for normal residential use and for the maintenance of the Premises.
4. Reserved Rights. Grantor reserves for himself, his heirs, successors and assigns, the following reserved rights provided, however, that the exercise of such rights will not interfere with or have an adverse impact on, the essential natural, open, scenic, agricultural and watershed quality of the Premises:
- a) To use the Premises for all purposes not inconsistent with this Conservation Easement.
 - b) To sell, give or otherwise convey the Premises or any portion of the Premises, provided such conveyance is subject to the terms of this Conservation Easement
 - c) To plant additional trees and vegetation and to harvest forest products, such products to be selected so as to preserve to the greatest degree possible the natural, scenic values and wildlife habitat of the Premises and provided that under all circumstances the Grantor shall utilize the "FORESTRY BEST MANAGEMENT PRACTICES FOR WATER QUALITY PROTECTION" in force in the State of Rhode Island, being specifically the guidelines established by the Department of Environmental Management of the State of Rhode Island (or any successor thereto).
 - d) To engage in silvicultural practices provided that the same are in conformance with the forestry best management requirements of paragraph 4c) above, including the right to permit others to selectively harvest timber and firewood, conduct maple sugaring and related or similar harvest product operations.

- e) To maintain existing trails and paths for the purposes of recreation and timber harvest operations.
- f) To manage existing agricultural land in accordance with published Best Management Practices administered through the RI Department of Environmental Management's Division of Agriculture.

5. Grantee's Remedies. If Grantee determines that Grantor is in violation of the terms of this Conservation Easement or that a violation is threatened, Grantee shall give written notice to Grantor of such violation and demand corrective action sufficient to cure the violation. If Grantor fails to cure the violation within thirty (30) days after receipt of notice thereof from Grantee, Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Conservation Easement, to enjoin the violation, ex parte as necessary, by temporary or permanent injunction, to recover any damages to which Grantee may be entitled for violation of the terms of this Conservation Easement or injury to any conservation values protected by this Conservation Easement, including damages for the loss of scenic, aesthetic, or environmental values, and to require the restoration of the Premises to the condition that existed prior to any such injury. Without limiting Grantor's liability therefore, Grantee, in its sole discretion, may apply any damages recovered to the cost of undertaking any corrective action to the Premises. If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the Premises, Grantee may pursue its remedies under this paragraph without prior notice to Grantor or without waiting for the period provided for cure to expire. Grantee's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this Conservation Easement, and Grantor agrees that Grantee's remedies at law for any

violation of the terms of this Conservation Easement are inadequate, that Grantee shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other relief to which Grantee may be entitled, including specific performance of the terms of this Conservation Easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Grantee's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity. Nothing contained in this Conservation Easement shall be construed to entitle Grantee to bring any action against Grantor for any injury to or change in the Premises resulting from any causes beyond Grantor's control, including, without limitation, fire, flood, storm or earth movement.

- 5.1 Costs of Enforcement. Any costs incurred by Grantee in enforcing the terms of this Conservation Easement against Grantor, including, without limitation, costs of suit and attorney's fees, and any costs of restoration necessitated by Grantor's violation of the terms of this Conservation Easement, shall be borne by Grantor.
- 5.2 Grantee's Discretion. Enforcement of the terms of this Conservation Easement shall be at the sole discretion of Grantee, and any forbearance or delay by Grantee to exercise its rights under this Conservation Easement, in the event of any breach of any term of this Conservation Easement by Grantor, shall not be deemed or construed to be a waiver by Grantee of such terms or of any subsequent breach of the same or any other term of this Conservation Easement or any of Grantee's rights under this Conservation Easement.
- 5.3 Waiver of Certain Defenses. Grantor hereby waives any defense of laches, estoppel, or prescription.

6. Costs and Liabilities. Grantor retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Premises, including the maintenance of adequate comprehensive general liability insurance coverage. As of this date, Grantor and Grantee agree that a general liability insurance policy with a minimum limit of One Million Dollars

(\$1,000,000) per occurrence and One Million Dollars (\$1,000,000) in aggregate obtained from an insurance company duly licensed in the State of Rhode Island and maintaining a rating of A+ from BEST'S rating service is adequate. Grantor shall keep the Premises free of any liens arising out of any work performed for, materials furnished to, or obligations incurred by Grantor.

6.1 Taxes. Grantor shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Premises by competent authority, and shall furnish Grantee with satisfactory evidence of payment upon request.

6.2 Hold Harmless. Grantor shall hold harmless, indemnify, and defend Grantee and its directors, officers, employees, agents, contractors and the heirs, personal representatives, successors, and assigns of each of them from and against all liabilities, penalties, costs, losses, damages, expenses, causes of action, claims, demands, or judgments, including, without limitation, reasonable attorney's fees, arising from or in any way connected with injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Premises, provided that such injury, death or physical damage was not caused by the negligent act or omission of the Grantee, its directors, officers, employees, agents, and/or contractors.

7. Assignment. This Conservation Easement is transferable, but Grantee may assign its rights and obligations under this Conservation Easement only to an organization authorized to acquire and hold conservation easements under R.I. General Laws 34-39-1 et .seq. (or any successor provision then applicable). As a condition of such transfer, Grantee shall require that the conservation purposes that this grant is intended to advance continue to be carried out.

8. Subsequent Transfers. Grantor agrees to incorporate the terms of this Conservation Easement in any deed or other legal instrument by which he divests himself of any interest in all or a portion of the Premises, including, without limitation, a leasehold interest. Grantor must obtain the written approval of Grantee of any such transfer, which approval will not be unreasonably withheld. Notwithstanding anything contained herein to the contrary, Grantor shall not convey any portion or all of the Premises without first giving Grantee a ninety (90) day right within which to purchase or otherwise acquire the Premises on the same terms and conditions on which the Grantor is willing to make a sale or disposition to any other party. Upon receipt from any other party of an offer for Grantor to sell or otherwise grant an interest in the Premises, Grantor shall promptly notify Grantee in writing by certified mail of said terms and conditions and submit in writing any bona fide offer acceptable to Grantor which Grantor may have received. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

9. Extinguishment.

a) Grantee's Receipt of Property Right: The Grantor(s) and the Grantee agree that the grant of this Conservation Easement gives rise for purposes of this paragraph to a real property right, immediately vested in the Grantee, with a fair market value that is at

least equal to the proportionate value that this Conservation Easement determined at the time of the grant bears to the value of the unrestricted Premises at that time.

- b) Value of Grantee's Property Right: Such proportionate value of the Grantee's property right shall remain constant.
- c) Right of Grantee to Recover proportional Value at Disposition: If any occurrence ever gives rise to extinguishment or other release of the Conservation Easement under applicable law, then the Grantee, on a subsequent sale, exchange or involuntary conversion of the Premises, shall be entitled to a portion of the proceeds equal to such proportionate value, subject, however, to any applicable law which expressly provides for a different disposition of proceeds.
- d) Grantor/Grantee Cooperation Regarding Public Action: Whenever all or any part of the Premises or any interest therein is taken by public authority under power of eminent domain or other act of public authority, then the Grantor(s) and the Grantee shall cooperate in recovering the full value of all direct and consequential damages resulting from such action.
- e) Allocation of Expenses upon Disposition: All related expenses incurred by the Grantor(s) and the Grantee shall first be paid out of any recovered proceeds, and the remaining proceeds shall be distributed between the Grantor(s) and Grantee in shares equal to such proportionate value.
- f) Continuing Trust of Grantee's Share of Proceeds of Conservation Easement Disposition: The Grantee shall use its share of the proceeds in a manner consistent with the conservation purposes of this grant.

10. General Provisions.

- a) Successors: The covenants, terms, conditions, and restrictions of this Conservation Easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Premises.
- b) Counterparts: The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of

any disparity between the counterparts produced, the recorded counterpart shall be controlling.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written.

WITNESS:

Grantor: Name

_____ Date: _____

Grantor: Name

By: _____ Date: _____
Name

Grantee:

By: _____ Date: _____

STATE OF RHODE ISLAND

COUNTY OF _____

In _____, in said County and State, on the _____ day of _____, 2014, before me personally appeared Insert Name, to me known and known by me to be the party executing the foregoing instrument and he acknowledged said instrument by him/her executed to be his/her free act and deed.

Notary Public

My Commission Expires: _____

STATE OF _____

COUNTY OF _____

In _____, in said County and State, on this _____ day of _____, 2014, before me personally appeared RICKY CARUOLO, the General Manager of the CITY OF PROVIDENCE, PROVIDENCE WATER SUPPLY BOARD, to me known and known by me to be the party executing the foregoing instrument for and on behalf of the CITY OF PROVIDENCE, PROVIDENCE WATER SUPPLY BOARD and he acknowledged said instrument by his executed to be his free act and deed in his capacity as aforesaid and the free act and deed of the CITY OF PROVIDENCE, PROVIDENCE WATER SUPPLY BOARD.

Notary Public

My Commission Expires: _____

Return original Conservation Easement to:

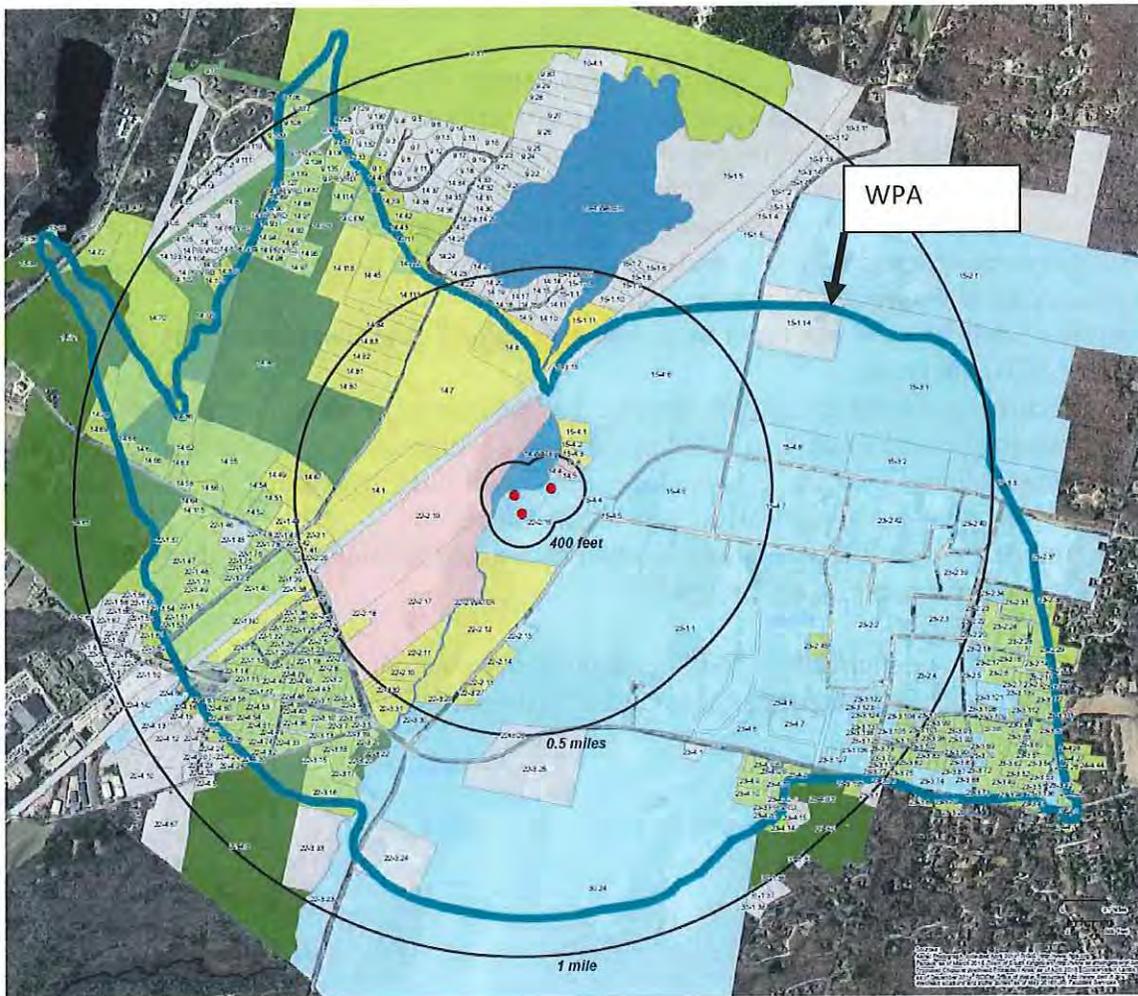
Appendix G – URI Protocols

URI Fertilizer and Pesticide Application Protocol

November 1, 2017

Purpose

The University of Rhode Island's Kingston Campus obtains all of the water for its needs from the Chipuxet groundwater aquifer. This is the only source of supply available in a five mile radius. The Chipuxet aquifer and the area that contributes to URI's existing supply wells is paramount in maintaining a safe water supply with adequate capacity to serve the future needs of the University. URI has established a Wellhead Protection Area Policy and protection area based upon aquifer studies and hydraulic modeling by the United States Geological Survey (USGS) to protect the University's water supply. This area noted below represents the recharge area of URI's supply wells.

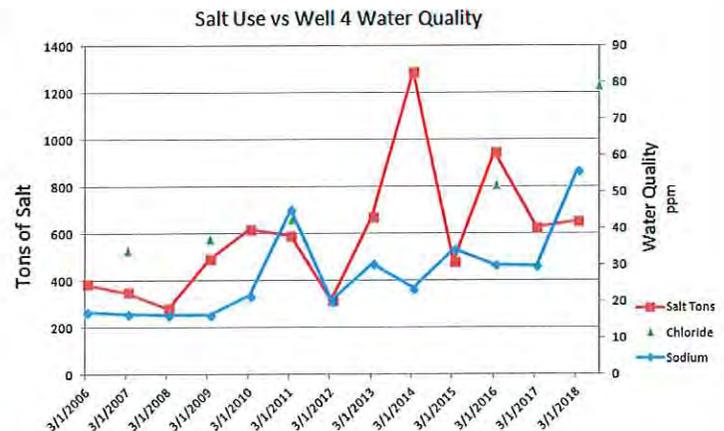
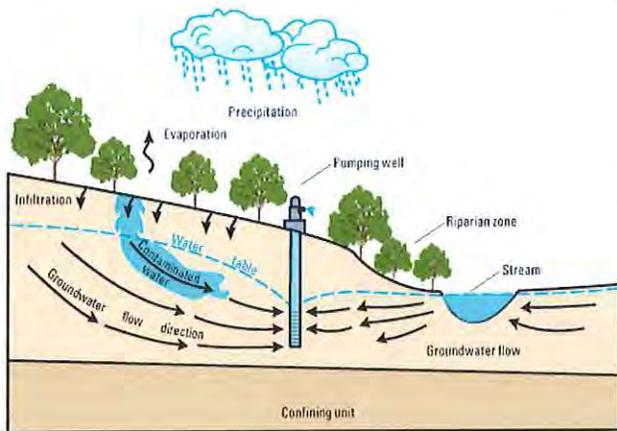


URI Protocol For Applying Deicing Salt

Salt use to control surface ice is an important component in a snow removal program. However, salt causes these problems:

- Contaminates our drinking water aquifer
- Damages grass, trees and shrubs
- Washes down storm drains and is toxic to aquatic animals
- Corrodes concrete walkways
- Tracks into buildings causing added cleaning effort

This document summarizes best management practices to be used at URI in application of salt to control winter ice.



Salt Application on Walkways

1. URI has standards for ice melt salts. Contact Dave Lamb at 874-7896 for more info.
2. Remove snow – do not use salt to melt snow that can be removed by plow, shovel or broom.
3. Salt does not melt ice if temperature is below 15° F.
4. Apply salt to icy areas – Use 1/4 to 1/2 cup per square yard. Spread salt evenly over icy areas. See salt application guide at right.
5. Sweep up excess salt – Excess salt should be swept up, reused later or bagged and disposed in normal trash. Excess salt not properly disposed will contaminate the groundwater aquifer, destroy sidewalks and result in additional cleaning efforts.



Road and Parking Lot Application

1. Train deicing staff on this BMP
2. Pretreat roads with brine when weather conditions support this method
3. Calibrate salt and brine spreaders so drivers can adjust loading rates to conditions
4. Follow storm loading rates from Storm Manager
5. Ensure drivers shut off spreaders when traveling on commonly traveled and previously treated roads
6. No salt application on Thirty Acre Pond Road
7. Clean up salt spills
8. Record truck loading and spreading on log
9. Consider level of service needed for each road

Salt Application Rate Guidelines

<i>Prewetted salt @ 12' wide lane (assume 2-hr route)</i>							
Surface Temperature (° Fahrenheit)		33-30	29-27	26-24	23-21	20-18	17-15
lbs of salt to be applied per lane mile	Heavy Frost, Light Snow	50	75	95	120	140	170
	Medium Snow 1/2" per hour	75	100	120	145	165	200
	Heavy Snow 1" per hour	100	140	182	250	300	350

University of Rhode Island
Groundwater Protection Policy
October 2018

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Appendix

A – RODOH List of Potential sources of Groundwater Contamination

B – Town of South Kingstown Groundwater Protection Overlay District (GPOD)

C - Fireworks Display Policy and Supporting Documentation

D – List of Frequently Utilized Storage Tank Standards and Practices

Executive Summary

This policy establishes a Groundwater Protection Area for the protection of the groundwater aquifer supplying water to the drinking water supply wells that serve the university. The Chipuxet Aquifer is part of the EPA-designated Pawcatuck River Sole Source Aquifer, and the only locally available supply of water.

This policy allows for appropriate land use restrictions in addition to those currently imposed by state and federal regulations. It is intended that public education and cooperation will compliment this effort. This policy shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Applicable activities/uses that fall within the Groundwater Protection Area must also comply with this policy.

The Kingston Campus of the University of Rhode Island lies over the Groundwater Protection Area and up-gradient of the university's well field. As a result, university staff must conduct regular assessment of campus activities, evaluate the products and processes used on campus and tailor routine groundwater monitoring to evaluate the risk posed to groundwater and the university water supply as detailed in the URI Wellhead Protection Program Manual. Furthermore, the university shall continue to secure property near the well field for wellhead protection and work with the Town of South Kingstown and other groups to improve wellhead protection.

This policy sets a general approach to groundwater protection including land protection, elimination of hazards, preventing discharge to groundwater and spill prevention and response. In addition, this policy identifies prohibited activities and details design standards for new construction and reconstruction for protection of the groundwater aquifer.

1.0 Establishment of Policy

Under the authority of the University's Vice President of Administration and Finance, it is recognized that the groundwater under the university's Kingston campus flows west from the upper portions of the Chipuxet watershed towards the university's water supply wells downgradient near the Chipuxet River. Hydraulic modeling of the aquifer by the United States Geologic Survey (USGS) indicates that the supply wells draw groundwater from over one mile away and from under the campus (see Figure 1). As the Chipuxet Aquifer is part of the EPA-designated Pawcatuck River Sole Source Aquifer, and the only locally available supply of water, there is hereby established a Groundwater Protection Area (GPA) which shall be the area defined as the Rhode Island Department of Management (DEM) Wellhead Protection Area (WPA) (See Figure 2). This policy shall guide and direct the type and intensity of current and future development between White Horn Brook and the Chipuxet River and set groundwater protections for the rest of the GPA. This Policy also shall protect and restore groundwater within the entire GPA by setting restrictions and design standards for existing and future development on property owned by and leased to URI. In the event of a conflict or inconsistency between the policy imposed by the GPA and those imposed by other university policies, the GPA Policy shall govern.

2.0 Purpose

Water supply wells are typically located in undeveloped areas to protect groundwater quality. The heavily urban area of the university lies up gradient of the water supply wells for the university. Furthermore, continued development and more intensive use of land westward toward the Chipuxet River threatens the water quality supplied to the campus.

The purpose of this policy is to protect public health, general welfare and to preserve, maintain and restore the quality and supply of the groundwater reservoirs supplying water to the university. The US Environmental Protection Agency has identified the Pawcatuck Aquifer Basin as a Sole Source Aquifer. This designation means that there are no reasonably available alternative drinking water sources should the aquifer become contaminated. The Chipuxet Aquifer is a sub-basin of the Pawcatuck and this aquifer provides water to the university. Furthermore, neighboring public water systems draw from the same stressed Chipuxet Aquifer (Kingston Water District and Suez of Wakefield) so supplying the university would be on a limited or restricted basis.

This policy allows for appropriate land use restrictions in addition to those currently imposed by state and federal regulations. It is intended that public education and cooperation will compliment this effort. This policy shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Applicable activities/uses that fall within the Groundwater Protection Area must additionally comply with this policy.

3.0 Existing Regulations Protecting Groundwater

This section presents a summary of applicable laws and regulations protecting groundwater supplies in Rhode Island.

Rhode Island Groundwater Protection Act of 1985, Legislative Findings and section 46-13.1-2 of the General Laws of Rhode Island, 1956, as amended. These findings note that water is vital to life and commerce and all efforts shall be made to maintain and protect this resource.

RIDEM Groundwater Quality Rules classify the groundwater underlying the Kingston campus of the University as GAA. This classification is for groundwaters that are suitable for drinking without treatment and within a wellhead protection area of a community water supply. These rules stipulate that no person shall discharge any pollutant without approval of the RIDEM Director. These rules also prohibit solid waste landfills and treatment, storage or disposal facilities within a GAA wellhead protection area. Lastly, these rules set design standards for protection of groundwater from road salt storage.

RIDEM Groundwater Discharge Rules permit and regulate discharges to groundwater through underground injection wells including catch basins that discharge to groundwater.

RIPDES General Permit Stormwater Discharge Associated with Construction Activity (Construction General Permit / CGP). Development projects involving earthwork/soil disturbances activities over an area of one (1) acre or greater are required to seek authorization from RIDEM under the current CGP. Application is made to the RIDEM Office of Water Resources (often in conjunction with Freshwater Wetlands or Groundwater Discharge submittals) and requires the preparation of a project-specific Soil Erosion and Sediment Control (SESC) Plan to protect water resources from potential construction impacts.

RIPDES General Permit for Stormwater Discharge from Small Municipal Separate Storm Sewer Systems (MS4s). The University of Rhode Island is a Small MS4 operator regulated by the RIDEM Office of Water Resources (RIDEM/OWR) under the RIPDES Phase II Storm Water Program. To comply with the conditions of its authorization under the RIPDES General Permit for the discharge of stormwater from Kingston Campus drainage systems, the University has developed (and maintains) a Storm Water Management Program Plan (SWMPP) for the operation of its facilities that addresses the permit's six (6) minimum control measures, including construction site runoff control, post-construction runoff control, and pollution prevention / good housekeeping.

The Town of South Kingstown Groundwater Protection Overlay District, although not binding to state property, encompasses the University's Kingston campus. The Groundwater Protection Overlay District (GPOD) restricts specific development and activities that can potentially impact groundwater. See Appendix B.

RIDOH Rules and Regulations Pertaining to Public Drinking Water notes that “generally, the land within four hundred (400) feet of such wells shall be reserved for protection of the water quality of the well...”. Furthermore, “Land reserved for the protection of the well as (indicated on the plan) approved by the Director of Health must remain under the direct control of the water supplier by either continued ownership or recorded easement unless written permission to modify this area is granted by the Director of Health. It is the responsibility of the water supplier to maintain the protective well area free from potential sources of contamination”. Appendix 4 of the RIDOH Regulations includes a list of potential sources of groundwater contamination. It is the responsibility of the water supplier to maintain the protective well area free from potential sources of contamination as listed in Appendix 4 and provided in Appendix A of this policy.

RI Water Resource Board requires Public Water Supplies serving more than fifty million gallons per year to prepare a Water Supply System Management Plan (WSSMP) and update the plan every five years. The plan requires water system provide information relating to source protection, ability of its supply sources to meet existing and future demands, a review of infrastructure, interconnections with other systems, system programs, management, finance and more. Part of the plan approval process is also a review by the Town of South Kingstown Planning Department.

RIDEM Rules Establishing Minimum Standards Relating to Location, Design, Construction and Maintenance of Onsite Wastewater Treatment Systems Table 22.4 states the minimum setback distances from drinking water wells to on-site wastewater treatment system (OWTS) components. RIDEM requires a minimum setback of 400 feet from OWTS system components to gravel packed public drinking water wells.

RIDEM Rules and Regulations for Hazardous Waste Management ensures hazardous materials, hazardous waste, and universal waste are properly stored and disposed of at facilities licensed to accept the waste. Generators of hazardous and universal waste must be permitted and use a manifest to track hazardous waste disposal.

RIDEM Rules and Regulations For Underground Storage Facilities Used For Petroleum Products and Hazardous Materials requires facility registration, proper operation and maintenance, repair requirements, leak and spill response and system testing.

EPA Spill Prevention and Control Preparedness regulations require facilities to develop a Spill Prevention, Control and Countermeasure (SPCC) plan for facilities that have an aboveground aggregate oil storage capacity greater than 1,320 gallons or an underground aggregate oil storage greater than 42,000 gallons, SPCC plans include a facilities operating procedures to prevent spills, installed control measures to prevent oil spills from entering navigable waters and adjoining shorelines, and countermeasures designed to contain, cleanup, and mitigate the effects of an oil spill on navigable waters and adjoining shorelines. SPCC plans include periodic monitoring of storage containers, response training, and regulatory reporting requirements.

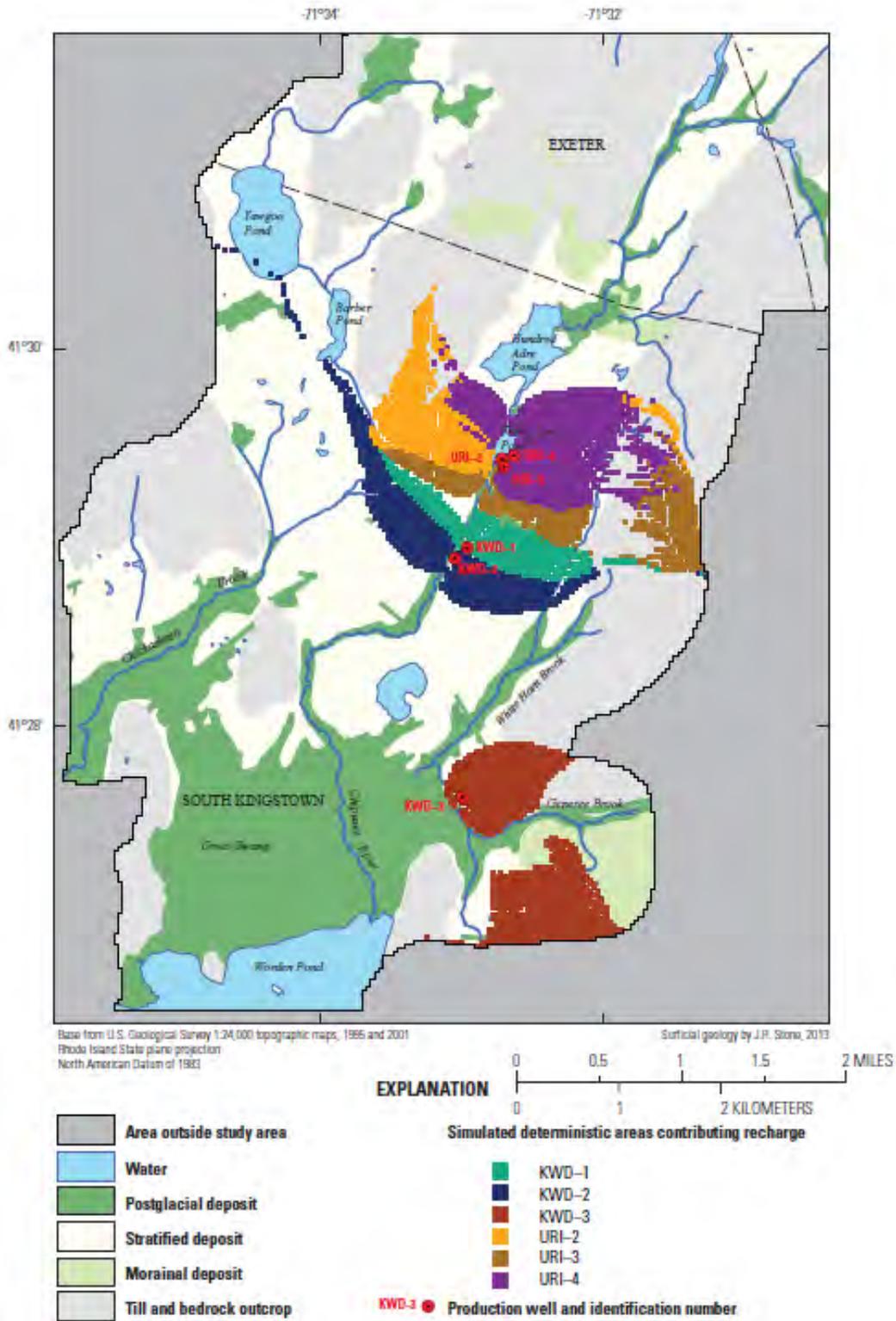
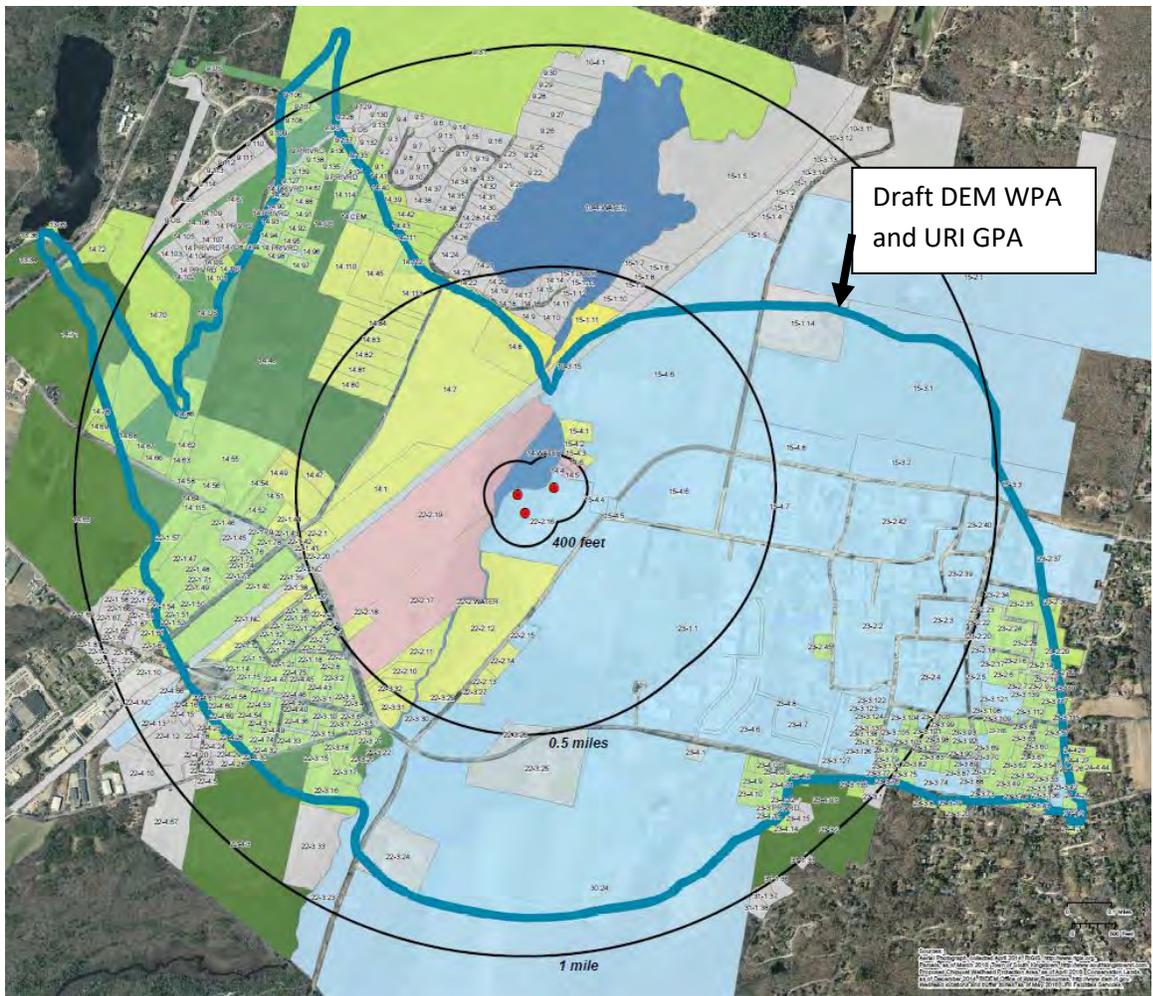


Figure 1 – USGS Simulation of contributing recharge to the productions wells at maximum pumping rates.



- High Priority Candidate Parcel
- Medium Priority Candidate Parcel
- Low priority Candidate Parcel

- Owned by the University of Rhode Island, Rhode Island Council on Postsecondary Education, or State of Rhode Island.
- Open Space and/or Conservation Land
- Non-Candidate Parcels. Examples include parcels owned by the Town of South Kingstown, Old and New Fernwood Cemeteries, and/or are located outside the proposed Chipuxet Wellhead Protection Area.
- Water

Figure 2 – Draft RIDEM Wellhead Protection Area for URI and KWD

4.0 URI Approach to Groundwater Protection

4.1 General Guidelines

It is understood that the university was established before this policy was conceived and that the university and the water supply wells cannot be moved. As a result they must co-exist and serve each other. For this policy to be effective at protecting the water supply it must be supported by top management of the university. Department managers must be tasked with carrying out various actions to protect groundwater and the campus community must be aware so that they can report spills or events.

It is important to note that chemical product formulations advance faster than health science. As a result, disposal of “safe” chemicals to groundwater may become regulated drinking water contaminants in the future. This policy should be protective of such future concerns. Furthermore, URI shall conduct regular assessment of campus activities within the GPA, groundwater monitoring and testing to evaluate potential impact these activities have on groundwater so that control actions can be implemented if needed.

Where applicable, this policy references state, federal and industry standards for design that are protective of groundwater. It is in the best interest of the university to monitor, review and improve on these standards to ensure the best means of protection is utilized to safe guard our water supply. Furthermore, the University Utilities Department has developed and maintains a Wellhead Protection Program and Manual to implement, monitor and track many of the efforts mentioned in this policy.

4.2 Land Protection

The Groundwater Protection Area noted in Figure 2 spans areas under the jurisdiction of the Town of South Kingstown mainly to the west of the URI well field and URI jurisdiction to the east. The Town of South Kingstown’s Groundwater Protection Overlay District (GPOD) , provided in Appendix B, specifies protective measures to protect groundwater resources. URI shall request the Town apply added protection measures to equal this policy in the event that properties within the GPA covered by the Town’s GPOD are found to be less restrictive.

Protecting land from private and commercial development is a common method utilized for water supply protection. URI shall continue to monitor and pursue the protection of properties within the wellhead protection area either through partnerships, conservation easements or purchase.

4.3 Eliminate Hazards

Eliminate hazardous activities or products where possible. This should consider sub-contracting services off site that threaten groundwater, switching to a low hazardous process or material or eliminating the process/material. For example, the use of aboveground and underground storage

tanks to store heating/fuel oil should be eliminated or consolidated where propane or natural gas can be used.

4.4 Prevent Discharge To Groundwater

The university shall prevent discharge of all materials other than clean storm water to groundwater including wastes, wastewater and chemicals applied to land surfaces. For example to prevent the discharge of pollutants to groundwater, the university shall connect all wastewater facilities to the public sanitary sewer system. Holding tanks shall be used in all areas that cannot be connected to sewer. All existing septic leaching fields or cesspools serving university facilities within the GPA shall be replaced by either connecting to the public sanitary sewer system or installing holding tanks. New septic leach fields shall not be allowed within the GPA.

The university will also assess retrofitting existing stormwater catch basins and sumps to ensure that they are properly designed and maintained to allow for clean discharge of stormwater into the aquifer

Furthermore, all areas where hazardous materials and wastes are stored, transferred and used shall be over impervious surfaces and in accordance with all applicable State, Federal laws regulations and best management practices associated with their use. All chemicals regularly applied to the ground (paint, fertilizer, salt, pesticides) shall be in strict adherence to the established URI protocols and evaluated for impact to groundwater. See Utilities Department Wellhead Protection Program Manual for more information.

4.5 Control, Contain and Clean up Spills

All areas where hazardous materials or wastes are stored or used shall allow for the control, containment and clean up of spills. For example, loading docks and heavy-use parking areas shall be paved so that spills can be detected and cleaned up. Direct storm water to catch basins with oil water separators equipped with petroleum detection alarms or absorbent booms prior to discharge to retention basins or outfalls.

Spill prevention, control, and countermeasure (SPCC) plans shall be prepared for all facilities located within in the GPA that store and/or use petroleum products and chemicals. University personnel active in those facilities shall be trained in their implementation.

5.0 Prohibited Activities

Prohibited activities within the Groundwater Protection Area include:

1. Fireworks displays; (See Appendix C for more details)
2. Discharge of liquids to septic systems with leach fields or cesspools;
3. Interior floor drains designed to permit fluid from any interior space to be discharged into or onto the ground;

4. Application of fertilizers, insecticides, pesticides, etc for the maintenance of crops, parks, ball fields and greenways unless applied in coordination with URI Utilities and in accordance with URI Protocols found in the URI Wellhead Protection Program Manual;
5. General automotive service and repair, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment shall be prohibited unless conducted in facilities that meet the design standards below
6. Storage of equipment, materials for service and repair of gasoline or fuel oil, automotive body repair, lawn and garden care, welding, sheet metal or machine shop work shall be prohibited unless conducted in facilities that meet the design standards below;
7. Underground storage tanks for petroleum, hazardous materials or hazardous waste;
8. Aboveground storage tanks for petroleum should be limited and must meet the design standards below;
9. Automobile junk yards, junk and salvage yards of any type. Temporary storage areas, awaiting disposal outside of the GPA, is permitted provided that all fluids are drained and vehicles or equipment are stored on impervious surfaces;
10. Fuel stations or dispensing facilities that do not meet the site design standards below;
11. Metal plating, finishing and polishing, jewelry manufacturing, dry cleaning, wood preserving, furniture painting or refinishing, motor freight terminals, textile mill product manufacturing and fish hatcheries;
12. Beautician, barber or cosmetologist, except if serviced by public sewers with hazard material storage that complies with Section 6.0;
13. Photographic processing or printing facilities, except if serviced by public sewers with hazard material storage that complies with Section 6.0;
14. Incinerators, sanitary landfill sites, solid waste disposal facilities, RIDEM-permitted hazardous waste treatment, storage and disposal facilities (TSDF), injection wells or dry wells;
15. Recycling facilities, solid waste transfer stations, hazardous waste storage facility unless meeting the design standards below;
16. Storage of manure unless in accordance with design standards below;
17. Land disposal of septage, sewage sludge, composted wastewater sludge, and industrial sludge.
18. The use, storage or generation of hazardous or toxic waste or materials or other toxic pollutants unless in facilities that meet the design standards below. Provided, however, that minor or insignificant quantities of such materials may be stored on the premises for any lawful use, if, in the opinion of the Water System Manager, the presence of such substance does not constitute a potential for degradation of surface or groundwater resources in the GPA and such substance is contained in a suitable storage area. In making a determination of the presence of significant quantities of such materials, the Water System Manager shall obtain the written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials, the Rhode Island DEM Division of Agriculture, the Rhode Island Pesticide Coordinator or experts in toxicology, contaminant migration or chemical risk assessments as applicable.
19. Storage of road salt and deicing materials unless in facilities meeting the design standards below;

20. The parking of vehicles for the storage or delivery of fuel oil or other hazardous or toxic materials for a period exceeding two hours in any 24-hour period. This shall not prohibit the use of vehicles for application of fertilizers, pesticides, or herbicides to any use permitted by this policy;
21. Vehicle washing unless in facilities that meets the design standards below.
22. Development or operation of snow dumps.

6.0 GPA Design Standards

The following site design and construction standards shall be required for all new and substantially reconstructed uses within the Groundwater Protection Area established after the effective date of this policy. "Substantial reconstruction" shall mean the improvement, alteration or replacement of more than 30 percent of the floor area or land area of the existing use, or a substantial change in use of an existing facility. Protecting the groundwater aquifer is in the best long term interest of the university.

The Master Plan Review Committee shall ensure major projects within the GPA comply with this policy. Department directors shall also ensure smaller department projects within the GPA comply with this policy.

1. Maintain and restore groundwater recharge to the Chipuxet Aquifer through new and redevelopment projects throughout the GPA to avoid increasing runoff to White Horn Brook and to address low flow issues in the Chipuxet River.
2. In projects where RIDEM stormwater recharge goals cannot be met on-site, off-site storm water improvements or other restoration projects that promote aquifer improvement shall be considered.
3. Development shall reduce the impact on the Chipuxet Aquifer, particularly West of White Horn Brook and maintain and restore the groundwater recharge characteristics of this area. New development and redevelopment projects undertaken within the GPA shall include stormwater management measures meeting the minimum standards set forth in the *Rhode Island Stormwater Design and Installation Standards Manual*, including those for water quality/quantity control, groundwater recharge, pollution prevention, and operation/maintenance. To the maximum extent practicable, stormwater infiltration practices (Section 5.3 of the manual) shall be employed for the treatment and recharge of stormwater runoff. While runoff from certain land uses with higher potential pollutant loads (LUHPPLs) can be discharged to the ground provided additional treatment is provided prior to release, runoff from auto fueling facilities may not be infiltrated per RIDEM policy. For such facilities, non-infiltrating stormwater best management practices (BMPs, such as lined/subdrained filters systems) must be used.
4. All buildings and facilities that require wastewater disposal shall be connected to public sanitary sewer. Any facility that cannot be connected to sewer will be equipped with a holding tank and level alarm. No cesspool or leach fields are allowed in the GPA.
5. Storage of hazardous or toxic waste or materials, where permitted, shall be stored in accordance with state, federal regulations, URI's Spill Prevention, Control, and Countermeasure (SPCC) Plan and industry best management practices. Proper storage

containers, cabinets and/or secondary containment areas shall be provided and utilized. Storage areas shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Buildings shall be secured to prevent vandalism. The facility shall be designed to contain hazardous materials or wastes in the event of a flood, fire or other natural catastrophe. Spill kits shall be provided, regularly stocked and inspected. Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.

6. Road salt and deicing chemicals where permitted, shall be stored in accordance with state, federal regulations, URI's SPCC plan and industry best management practices. Storage and loading areas shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Infiltration systems shall be prohibited for all stormwater management systems installed at a road salt and deicing chemical storage facility.
7. Road salt storage piles shall be placed on impervious surfaces and be covered with an impermeable cover. Storage containers for liquid deicing chemicals shall have secondary containment. Secondary containment shall be required in areas where these chemicals are transferred. Containment measures that prevent the infiltration of stormwater runoff from road salt storage and handling areas shall be used.
8. Transfer areas of hazardous or toxic waste or materials including fuel oil, lubricants, degreasers, fertilizers, pesticides and road salt must have level solid impervious floors with positive limiting barriers to prevent leakage of such materials into or onto the ground. Spill kits shall be provided, regularly stocked and inspected. Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.
9. Above ground storage tanks for petroleum products or hazardous or toxic materials shall be eliminated whenever possible. Buildings located west of White Horn Brook shall be converted to propane or natural gas fuel heating systems where applicable to eliminate fuel oil storage. When present they must be designed in accordance with current industry design standards (see Appendix D) and comply with URI's SPCC plan. AST and UST systems must be equipped to contain spills from tanks, piping, transfer and dispensing equipment and operations. Secondary containment shall be designed to contain a minimum of 110 percent of total tank capacity. Double wall tanks are preferred and to be securely mounted on a concrete pad. Such base and dikes shall be constructed of material which is both impermeable and compatible with the material being contained. Dike containment structures shall be covered to protect the tanks and prevent accumulation of precipitation within the dike. Where roofing is not practical, the containment structure shall be designed with an additional capacity sufficient to contain precipitation from a 25-year 24-hour rainfall event. Runoff from the containment shall be controlled by means of pumps, siphons or piping designed to eliminate discharge of contaminated water into the environment in the event of a spill, or have a drain valve which will allow clear storm water to be manually released as needed. The containment area shall provide crash protection to prevent damage to the area, tanks piping and dispensing equipment. Tanks shall be included in the University's SPCC Plan and inspection logs shall be maintained and reviewed monthly. Spill kits shall be provided, stocked and regularly inspected.

University personnel active in those areas where AST and UST systems are located shall be trained in SPCC plan implementation.

10. Petroleum powered emergency generators for life safety shall be consolidated to minimize the number of fuel storage tanks and locations. Fuel storage shall comply with the AST and UST fuel storage requirements included in this document. Stand-by generators shall be powered by natural gas whenever possible.
11. Stationary equipment containing oil such as transformers, electrical switches, hydraulic lifts and elevators, etc shall be constructed to detect, control and allow for the cleanup of leaks or spills. Equipment shall be inventoried and inspected in accordance with URIs SPCC plan.
12. Portable oil containing equipment, both university and privately owned, such as backhoes, excavators, generators, etc shall be free from leaks and inspected by the operator daily. Use of this equipment shall be terminated if leaks are observed. The source of the leak shall be repaired before the equipment is brought back into operation. All spills shall be properly cleaned up in accordance with RIDEM.
13. Solid waste transfer stations, recycling stations and resource recovery facilities shall comply with state and federal permitting requirements. Facilities shall be constructed to prevent discharge of contaminants to groundwater including control of storm water and containment of storm water. Stormwater infiltration shall not be allowed at these facilities. Facilities shall be staffed by trained and authorized personnel knowledgeable in acceptable waste for disposal, site management and security. Quarterly collection and testing of groundwater at the facility shall be performed.
14. Dumpsters and roll-off containers which are used to store solid wastes and recycling materials shall be covered to prevent storm water from washing out waste. No washing or rinsing of dumpsters on-site shall occur.
15. Manure storage shall be in accordance with USDA Natural Resource Conservation Service Standard 313. Groundwater monitoring wells and regular sampling shall be part of the facility operation.
16. Composting facilities shall be designed to protect groundwater and prevent groundwater contamination from said operation. The facilities shall evaluate the potential hazards associated with the raw materials being composted and determine if engineering controls such as an impermeable base, storm water control, building, etc. are required. Groundwater monitoring wells and regular sampling shall be part of the facility operation.
17. Application of fertilizers and pesticides shall be in accordance with URI Application Protocol. Records on product, sprayer inspection, application rates, dates of application and locations shall be maintained in a log. Farming crops, campus landscaping and field turf varieties that require less fertilizer, pesticides and irrigation should be favored.
18. General automotive service and repair, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment shall be located within a weather tight building having roofing, walls, and floor(s) constructed of such materials to prevent leakage of such products or materials into or onto the ground. Buildings shall be secured to prevent vandalism. The facility shall be designed to contain hazardous materials or wastes in the event of a flood, fire or other natural catastrophe. Spill kits shall be provided, regularly stocked and inspected.

Personnel shall be trained to use spill kits and on how to prepare facility in the event of a natural disaster.

19. Application of deicing salt shall be applied in accordance with URI Deicing Salt Protocol in the URI Wellhead Protection Program Manual. All personnel involved with application of deicing salt shall be trained in proper application.
20. Vehicle and equipment washing shall be on impervious services to prevent discharge to groundwater. Wash water shall be discharged to a sump to settle solids and then to the public sanitary sewer collection system or to a storage container and transported for off-site disposal.
21. Rainwater collected upon permanent roofing over 1,500 square feet in total area per lot shall be directed into dry wells, injection wells, or underground leaching galleys or otherwise diverted to a permeable ground surface, so as to encourage recharge of the ground water. However, such rainwater shall not be mixed with stormwater runoff from any parking area, roadway, or area subject to contamination from any hazardous or toxic waste or material or petroleum product prior to discharge into or onto the ground.
22. Parking lots for 50 or more vehicles shall be constructed to allow for the detection, containment and cleanup of hazardous spills and contaminated storm run off. Parking lots holding less than 50 vehicles shall meet these conditions whenever possible.
23. Stormwater runoff from paved parking lots located west of White Horn Brook shall be
 - a) Collected and diverted through an oil/water separator with petroleum chemical detection alarms and absorbents that are regularly maintained. Effluent is then discharged in accordance to item 24.
24. Public and private streets, loading areas, and other impervious surfaces subject to contamination from road deicing materials or petroleum products unless otherwise specified in this section, shall be diverted to water quality BMPs meeting the standards and requirements set forth in the *Rhode Island Stormwater Design and Installation Standards Manual*.

The procedure for review of stormwater runoff controls shall include the submittal of the design to the Water System Manager for review and advisory opinion beginning with the initial design phase. Facilities Services shall have the authority to approve the design of all such stormwater runoff controls required under this section.

25. Commercial earth removal shall be subject to the following restrictions in the GPA:
 - a) A minimum separation distance of three feet between the bottom of the excavation and the seasonal high water table, as verified by a RIDEM licensed soil evaluator or a professional engineer or other licensed professional with training and expertise in evaluating seasonal high groundwater elevations, shall be maintained;
 - b) The installation and regular maintenance of permanent soil erosion and sediment control measures, as outlined in the Rhode Island Stormwater Design and Installation Manual, 2015, as revised, shall be required, including permanent re-vegetation of the land surface upon cessation of earth removal operations; and

- c) The provisions of items 1. and 2. of this subsection as set forth above shall also be deemed to apply to earth removal activities conducted as part of an approved URI construction project.

7.0 Maintenance of Facilities

All facilities constructed in accordance with the Design Standards noted above shall be maintained by the University so as to assure their ability to function as designed. The Water System Manager shall notify the Director of Facilities of deficiencies so that they can be assigned to appropriate staff for correction.

8.0 Inspections and Reviews

The Master Planning Review Team shall review designs for proposed major construction on campus to ensure compliance with this Policy. The Water System Manager shall meet with project managers beginning at the initial design phase to review construction plans for work proposed within the Wellhead Protection Area to ensure plans comply with this policy. The Water System Manager shall notify the design team of issues that do not comply with this policy so that the team can resolve the issue.

The Water System Manager shall send out annual self assessment checklists to the Crop Research and Athletics Grounds Manager. The Water System Manager shall conduct tri-annual inspections of Lands and Grounds, Automotive, Crop Research, Athletics Grounds and other facilities to ensure compliance with this policy. The Water System Manager shall notify the appropriate facility manager and the Director of Facilities of the needed correction to comply with this Policy.

This Policy shall be reviewed regularly as conditions may arise that threaten groundwater quality and have not been foreseen in development of this Policy. When such conditions warrant amendment of this Policy, proposed changes shall be drafted and forwarded to the Master Plan Review Team for review and approval.

9.0 References

Conservation Practice Standard, Waste Storage Facility, Code 313, 313-CPS-1, United States Department of Agriculture, Natural Resources Conservation Service, May 2016

Evaluation of Perchlorate Contamination at a Fireworks Display, MADEP, August 2007

Groundwater Protection Overlay District regulations, Town of South Kingston, RI, Sec 602, January 31, 2017

Handbook of Urban Runoff Pollution Prevention and Control Planning, USEPA, EPA625/r-93/004, September 1993

Memorandum, Best Management Practices for Fireworks to Minimize Perchlorate Releases, Office of the Under Secretary of Defense, May 21, 2009

New Hampshire Model Groundwater Protection Ordinance, Pierre Rigrod , September 2015,
<https://www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-06-41.pdf>

Rhode Island Storm water Design and Installation Standards Manual, February 12, 2015.

Source Protection Program Summaries, New England and New York State, New England Interstate Water Pollution Control Commission, February 2001

Technical Fact Sheet – Perchlorate, USEPA, EPA 505-F-14-003, January 2014

Vermont Department of Environmental Conservation. Vermont Model Groundwater Protection Ordinance, May 2017
<http://dec.vermont.gov/sites/dec/files/dwgwp/sourceprot/pdf/gwprotectionmodelordinance.pdf>

Appendix A

RIDOH Rules and Regulations Pertaining to Public Drinking Water R46-13-DWQ, APPENDIX 4

List of Potential Sources of Groundwater Contamination

- Agricultural related activities (pesticide and fertilizer storage and application, machinery maintenance and fueling)
- Airports-commercial (maintenance and repair, fuel storage)
- Animal care and holding areas (stables, kennels, pet shops)
- Asphalt, coal, tar and concrete companies
- Automotive repair shops
- Automotive body shops
- Auto parts stores
- Beauty salons
- Boat builders and refinishers
- Bus and truck terminals
- Chemical manufacturers
- Construction sites
- Dredge disposal sites
- Dry cleaners
- Food processors (meat packers, dairies, bakeries)
- Fuel oil distributors (product storage, equipment maintenance and storage)
- Funeral homes and cemeteries
- Furniture strippers, refinishers
- Golf courses
- Hotels and motels
- Industrial manufacturers
- Junkyard and salvage yards
- Land application of sewage sludge
- Landfills and dumps
- Laundromats
- Machine shops
- Medical facilities (hospitals, clinics, laboratories)
- Metal and drum cleaning/reconditioning
- Military facilities (past and present)
- Nurseries
- Nursing homes
- Paint shops
- Photographic processors
- Pipelines (oil and sewer)

List of Potential Sources of Groundwater Contamination (continued)

- Printers and blueprint shops
- Prisons
- Railroad yards
- Repair shops (engines, appliances, etc.)
- Research laboratories
- Residential development (lawn care, septic systems)
- Restaurants and taverns
- Retail shopping centers, malls
- Road salt storage
- Rust proofers
- Sand and gravel mining operations
- Sawmills
- Schools, colleges and trade centers
- Service stations (gas stations)
- Storm water management facilities (leaching systems)
- Transmission line rights of way
- Transportation corridors (road deicing, materials transport)
- Utility substations/transformers
- Waste storage, treatment and recycling (hazardous and non-hazardous)
- Water transfer stations
- Wastewater treatment plants (past or present sludge disposal)
- Wood preservers

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Appendix B

Town of South Kingstown Groundwater Protection Overlay District (GPOD)

Sec. 602. - Groundwater Protection Overlay District.

602.1. *Establishment of district.* There is hereby established a Groundwater Protection Overlay District (GPOD) which shall be the area defined as lots of record which are indicated as the GPOD on the Official Zoning Map of the Town of South Kingstown. The GPOD is superimposed over any other zoning district established by this Ordinance. The regulations imposed by the GPOD shall apply in addition to the regulations of the underlying zoning district. In the event of a conflict or inconsistency between the regulations imposed by the GPOD and those imposed by the underlying zoning district, the regulations imposed by the GPOD shall govern.

602.2. *Purposes.* The purposes of this section are to protect, preserve and maintain the quality and supply of certain groundwater reservoirs in the Town of South Kingstown through regulation of land use and certain activities in the areas over the groundwater reservoirs and critical portions of their groundwater recharge area. It is further the intent of this section to permit the use of land within the GPOD for agricultural purposes, and to encourage the use of farmland in a manner which is consistent with protection of surface and groundwater resources.

602.3. *Delineation of districts.* The Groundwater Protection Overlay District is intended to regulate uses within the following areas:

- A. Groundwater reservoirs are the highest yielding portions of the state's stratified drift aquifers (saturated thickness greater than 40 feet and transmissivity greater than 4,000 feet squared per day) that are capable of serving as a significant source of public supply; and
- B. Critical portions of the recharge areas to the above groundwater reservoirs, as defined by the Rhode Island Department of Environmental Management (RIDEM) as groundwater classified as GAA; and that portion of the Beaver-Pasquiset recharge area within South Kingstown; and
- C. Area adjacent to Factory Pond defined by RIDEM as the area of contribution to existing public water supplies.

602.4. *References.* Identification of areas within the GPOD have been made by reference to maps and studies prepared by the following:

- A. Ground-Water Resources of the Kingston Quadrangle, Rhode Island, by the Rhode Island Development Council, Geological Bulletin No. 9, 1956.
- B. Availability of Ground Water, Upper Pawcatuck River Basin, Rhode Island, Geological Survey Water-Supply Paper 1821, prepared in cooperation with the Rhode Island Development Council and the Rhode Island Water Resources Coordinating Board, 1966.
- C. Groundwater Quality Regulations, materials used in the development of the Rhode Island DEM groundwater regulations, pursuant to Chapters 46-12, 46-13.1, 42-17.1 and 42-35 of the General Laws of Rhode Island, as amended.
- D. Hydrology, Water Quality, and Groundwater Development Alternatives in the Chipuxet Groundwater Reservoir, R.I., U.S.G.S. Water Resources Investigation Report 84-4254. by Herbert E. Johnston and David C. Dickerman, 1985.

602.5. *Permitted and prohibited uses.*

- A. *All uses indicated in Section 301 as permitted uses (Y) and special permit uses (S) in the underlying zoning district are permitted or conditionally permitted in the Groundwater Protection Overlay District, with the exception of prohibited uses and activities as further provided in subsection B., below. Also permitted are uses or structures accessory to any permitted use.*
- B. *The following principal uses and activities are prohibited in the GPOD:*

1. *Any use prohibited (N) in the underlying zoning districts;*
2. *General automotive service and repair shops, including repair to motorcycle, marine, aircraft, recreational vehicles, farm or lawn mowing equipment, or other similar vehicles and equipment. Included among these uses are establishments which sell, store, lease or rent such equipment and which include service and repair as accessory activities. Noncommercial repair work, or repair work incidental to a permitted use, is not prohibited.*
3. *Gasoline service stations (minor repairs only);*
4. *Automobile body shops;*
5. *Lawn and garden supply stores;*
6. *Welding shops, sheet metal shops, machine shops;*
7. *Automobile junk yards, junk and salvage yards of any type;*
8. *Fuel dealers, oil and bottled gas sales and service, and open lot storage of such fuels;*
9. *Metal plating, finishing and polishing, including jewelry manufacturing;*
10. *Dry cleaning plant (not including pick-up);*
11. *Beautician, barber or cosmetologist, except if serviced by public sewers;*
12. *Commercial wood preserving and furniture painting or refinishing;*
13. *On site photographic processing or printing;*
14. *Incinerators, sanitary landfill sites, solid waste disposal facilities, solid waste transfer stations, resource recovery or recycling facilities, injection wells, and hazardous waste management facilities;*
15. *Land disposal of septage or sewage sludge, including composted industrial sludge. Not prohibited is the application of wastewater treatment facility composted sludge, applied according to the Rhode Island Department of Environmental Management "Rules and Regulations Pertaining to the Treatment, Disposal, Utilization, and Transportation of Wastewater Treatment Facility Sludge," 1991.*
16. *All uses which involve the use, storage or generation of hazardous or toxic waste or materials or other toxic pollutants as defined herein. Provided, however, that minor or insignificant quantities of such materials may be stored on the premises of any lawful use, if, in the opinion of the Building Official, the presence of such substance does not constitute a potential for degradation of surface or groundwater resources in the area and such substance is contained in a suitable storage area. In making a determination of the presence of significant quantities of such materials, the Building Official shall obtain the written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials, the Rhode Island DEM Division of Agriculture, or the Rhode Island Pesticide Coordinator, as applicable. Insignificant quantities of hazardous materials may be construed as that which is necessary for the operation of a farm, residence, office, or business including the operation of equipment, vehicles or other mechanical systems necessary for the operation of a permitted use;*
17. *Underground storage tanks as defined in Article 12 are prohibited. However, storage tanks used for storing home heating oil (No. 2 fuel oil) and serving a one- or two-household dwelling are permitted if the following conditions are met:*
 - a. *The tank capacity does not exceed 300 gallons (per dwelling unit); and*
 - b. *The tank is located in a basement or cellar, and is above the surface of the basement floor and the basement floor is constructed of concrete or contains a membrane liner*

capable of containing spills; or the tank is located above ground or in a basement having a dirt floor provided the following criteria are met:

- i. Provision is made to protect the tank from the elements;*
- ii. Rust-proofing is applied to all tank surfaces;*
- iii. The tank shall be securely anchored; and*
- iv. The tank shall be placed onto a concrete foundation capable of supporting the tank, which foundation must be larger than the size of the tank in length and width to prevent leaks onto pervious surfaces.*

All storage tanks of 300 gallons capacity or greater and which are located above ground shall be governed by the provisions of subsection 602.6.B. Above ground storage tanks which exceed 10,000 gallons per lot are permitted only by the granting of a special use permit by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the design and construction of storage tanks and containment devices, and shall consider the potential impact on groundwater in the event of leaks, spills, fires, maintenance, deliveries and other such activities and events;

- 18. Storage of road salt and deicing materials which are not covered by a roof and located on an impermeable base;*
- 19. The parking of vehicles for the storage or delivery of fuel oil or other hazardous or toxic materials for a period exceeding two hours in any 24-hour period. This shall not prohibit the use of vehicles for delivery of fuels or for application of fertilizers, pesticides, or herbicides to any use permitted by this Ordinance;*
- 20. Vehicle washing shop (including automatic);*
- 21. Motor freight terminal;*
- 22. Fish hatcheries;*
- 23. Textile Mill Products Manufacturing, Use Code 72, except assembly of finished textile products.*

602.6. *Site design standards.* The following site design and construction standards shall be required for all new and substantially reconstructed uses, other than one or two-household residential uses within the GPOD, established after the effective date of this article. "Substantial reconstruction" shall mean the improvement, alteration or replacement of more than 30 percent of the floor area or land area of the existing use. Site design and construction standards shall follow, where applicable, the recommendations and guidelines as provided in the following documents: the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as amended; the Rhode Island Department of Environmental Management's Recommendations of the Stormwater Management and Erosion Control Committee Regarding the Development and Implementation of Technical Guidelines for Stormwater Management, 1988, as amended; and Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s, by the Metropolitan Washington Council of Governments, 1987, as amended.

- A. Storage of hazardous or toxic waste or materials, where permitted, shall be located within a building having roofing, walls, and floor(s) constructed of such materials as to render said building weather tight, so as to prevent leakage of such products or materials into or onto the ground.
- B. Storage tanks for petroleum products or hazardous or toxic materials excluding portable fuel tanks for farm uses may be located outdoors provided they are located within a containment structure that has an impermeable base and surrounding dike. Such base and dikes shall be constructed of material which is both impermeable and compatible with the material being

contained. At minimum, the structure shall be designed to contain 110 percent of total tank capacity. Such containment structures shall be covered to protect the tanks and prevent accumulation of precipitation within the dike. Where roofing is not practical, the containment structure shall be designed with an additional capacity sufficient to contain precipitation from a 25-year 24-hour rainfall event. Runoff from the containment shall be controlled by means of pumps, siphons or piping designed to eliminate discharge of contaminated water into the environment in the event of a spill, or have a drain valve which will allow clear stormwater to be manually released as needed.

- C. Interior floor drains designed to permit fluid from any interior space to be discharged into or onto the ground shall be prohibited. Provided, however, that such interior floor drains may be permitted if designed to empty into an aboveground storage tank, capable of completely containing anticipated flows. Such tanks, if provided, shall also be subject to containment provisions specified in subsection 602.5.B.17., above.
- D. Dumpsters which are used to store solid wastes shall be covered or located within a roofed area and have drain plugs intact. No washing or rinsing of dumpsters on-site shall occur.
- E. Rainwater collected upon permanent roofing over 1,500 square feet in total area per lot shall be directed into dry wells, injection wells, or underground leaching galleys or otherwise diverted to a permeable ground surface, so as to encourage recharge of the ground water. Provided, however, that such rainwater shall not be mixed with stormwater runoff from any parking area, roadway, or area subject to contamination from any hazardous or toxic waste or material or petroleum product prior to discharge into or onto the ground.
- F. Stormwater runoff from paved parking lots, public and private streets, loading areas, storage and operating areas, and other impervious surfaces subject to contamination from road deicing materials or petroleum products, shall be:
 - 1. Collected and diverted through an oil/water separator prior to discharge to the environment; and/or
 - 2. Collected and discharged into "wet" stormwater detention basins capable of achieving water quality enhancement of the runoff; and/or
 - 3. Collected and discharged into extended detention dry basins; and/or
 - 4. Diverted toward vegetated filter strips, swales, or riprap lined channels; and/or
 - 5. Diverted into sand bed filters; and/or
 - 6. Discharged or diverted to other stormwater management facility(s) designed to attenuate runoff and provide pollutant removal capabilities.

The procedure for review of stormwater runoff controls shall be as specified in subsection 505.1 of this Ordinance; provided, however, that said site plans shall also be submitted to the Conservation Commission for their site review and advisory opinion. The Planning Board shall have the authority to approve the design of all such stormwater runoff controls required under this section.

The above stormwater management requirements shall incorporate best management practices, as that term is used in "Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban B.M.P.s", by the Metropolitan Washington Council of Governments, 1987, as amended, and be designed to be effective in pollutant removal sufficient to minimize harmful impacts to groundwater and surface water resources. They shall be commensurate with the size and nature of the proposed use; provided, however, that the following shall not be required to provide said stormwater management facilities:

- a. Single- or two-household residential uses on a single lot; and

- b. Streets serving a residential compound or minor subdivision approved by the Planning Board.
 - G. Garbage disposal systems (in sinks) shall be prohibited in areas not serviced by public sewers.
 - H. At least 20 percent of the area of each lot shall be covered with existing or introduced vegetation.
 - I. Commercial earth removal, as defined in Section 506 of this Ordinance, excluding construction necessary for new farm ponds, new drainage structures, and new farm roads, shall be subject to the following restrictions in the GPOD:
 - 1. A minimum separation distance of three feet between the bottom of the excavation and the seasonal high water table, as verified by RIDEM, shall be maintained;
 - 2. The installation and regular maintenance of permanent soil erosion and sediment control measures, as outlined in the Rhode Island Soil Erosion and Sediment Control Handbook, 1989, as revised, shall be required, including permanent revegetation of the land surface upon cessation of earth removal operations; and
 - 3. The provisions of items 1. and 2. of this subsection as set forth above shall also be deemed to apply to earth removal activities conducted as part of an approved subdivision.
 - J. Any use which would utilize an individual sewage disposal system, or multiple systems, serving the same use, or combination of uses on a lot for which the total maximum daily design sewage flow exceeds 2,000 gallons per day shall be permitted, only upon the granting of a special use permit for such ISDS by the Zoning Board of Review. In reviewing said special use permit the Zoning Board shall require an applicant to submit a detailed report by a qualified specialist on the present water quality conditions and the potential impact to ground and surface waters from the proposed use, including the cumulative impacts of sewage discharge over an extended period of time.
- 602.7. *Maintenance of facilities.* All facilities constructed in accordance with subsection 602.6 shall be maintained by the owner so as to assure their ability to function as designed. Failure to properly maintain said facilities shall constitute a violation of this Ordinance, and is subject to enforcement action by the Town as provided in Article 9. As a condition of granting a building permit for any such facility, the Building Official is empowered to enter onto the premises in order to inspect said facilities for the purpose of determining their functionality.

University of Rhode Island Policy on Fireworks Displays 2017

1.0 Purpose

URI has established a Groundwater Protection Area (GPA) to protect the well field recharge area of the campus's only supply of drinking water. Fireworks displays have occurred for nearly three decades on lower campus, west of the football practice field and the Sherman Building. This area is within the GPA and located approximately 3000 feet directly upgradient of URI's supply well field.

Levels of perchlorate have been detected in URI's water supply wells and in monitoring wells located in the groundwater aquifer in the fireworks launch areas. Perchlorate is a chemical in fireworks, highly soluble in water and can travel significant distances in groundwater.

Perchlorate is known to affect the function of the thyroid gland, which regulates the body's metabolism. EPA is currently developing a drinking water standard for perchlorate and MADEP has an enforceable standard of 2 ppb.

2.0 Firework Display Guidelines

The following requirements must be implemented when conducting fireworks displays on URI property.

1. Fireworks displays are not permitted within URI's Groundwater Protection Area as identified in Figure 1 below. Studies have shown that fireworks displays have a direct effect on the perchlorate levels in groundwater in the vicinity of the launch area.
2. Where fireworks are used, request low (or no) perchlorate-containing fireworks. This may require making inquiries of suppliers and/or manufacturers.
3. Institute rigorous "housekeeping" practices as part of the permit requirements. It appears that the deposition of unburned aerial shell fragments and other pyrotechnic debris may be the primary mechanism by which groundwater becomes contaminated by perchlorate. Fireworks companies or display sponsors should remove all visible shell debris encountered during the search at first light.
4. Dispose or manage "duds" and "misfires" appropriately; all "duds" or "misfires" must be removed from the site and disposed of in accordance with applicable codes and manufacturers instructions. Contain and/or promptly address runoff in cases where water is used to douse duds or misfired materials.

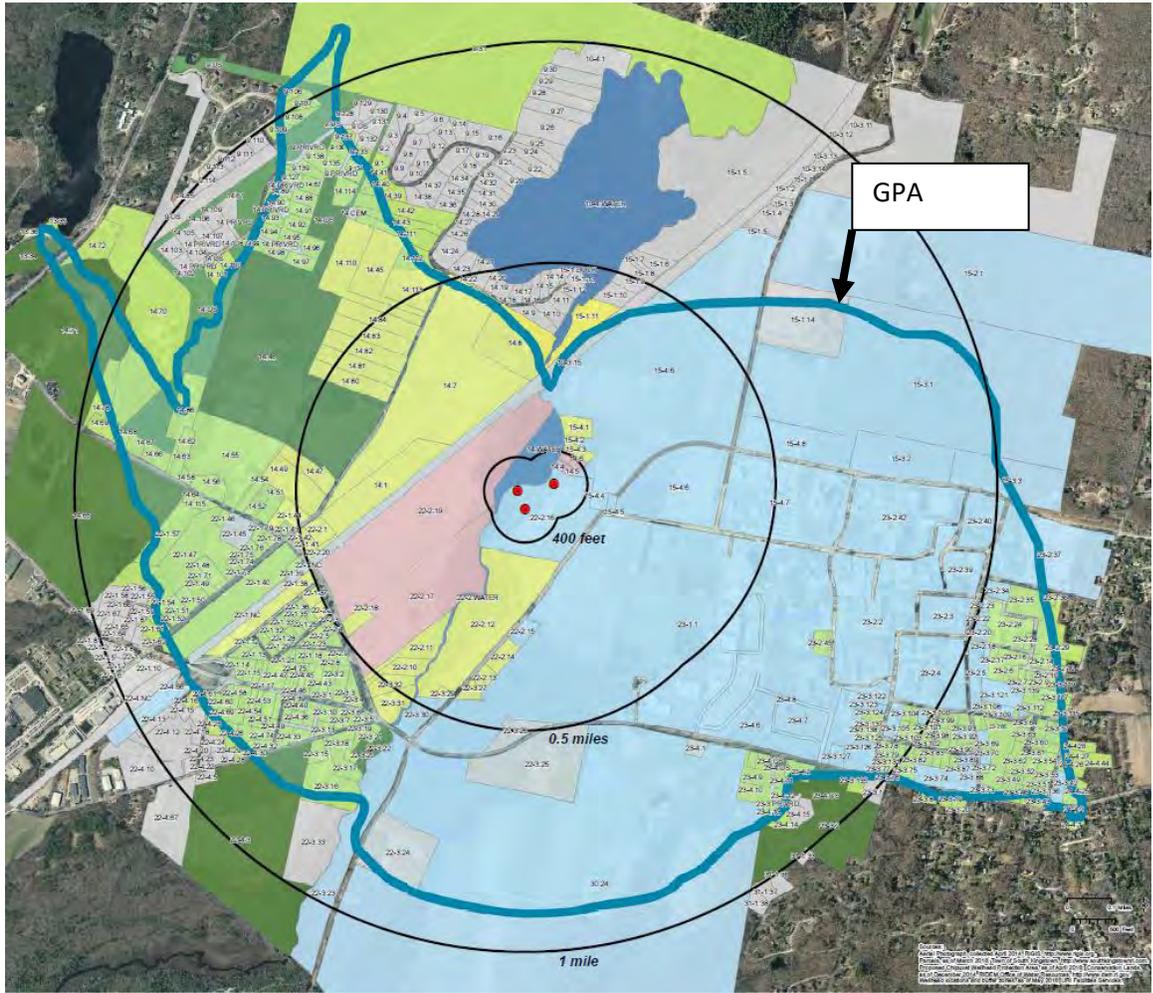


Figure 1 – Draft RIDEM Wellhead Protection Area for URI and KWD

3.0 References

Massachusetts Department of Environmental Protection, August 2007, Evaluation of Perchlorate Contamination at a Fireworks Display: Dartmouth, MA. Retrieved from <http://www.mass.gov/eea/agencies/massdep/cleanup/sites/evaluation-of-perchlorate-contamination-in-dartmouth.html>

Department of the Interior, U. S. Geological Survey, May 2, 2016, Fireworks Likely Caused Water Contamination at Mount Rushmore. <https://www.usgs.gov/news/fireworks-likely-caused-water-contamination-mount-rushmore>

Michael Bernstein, “Green” Fireworks may brighten eco-friendly Fourth of July displays in the future, American Chemical Society, June 22, 2009

U. S. Environmental Protection Agency, Technical Fact Sheet – Perchlorate, EPA 505-F-14-003, January 2014.

Memorandum

To: Abigail Rider, Vern Wyman

From: Jerry Sidio

Date: July 11, 2018

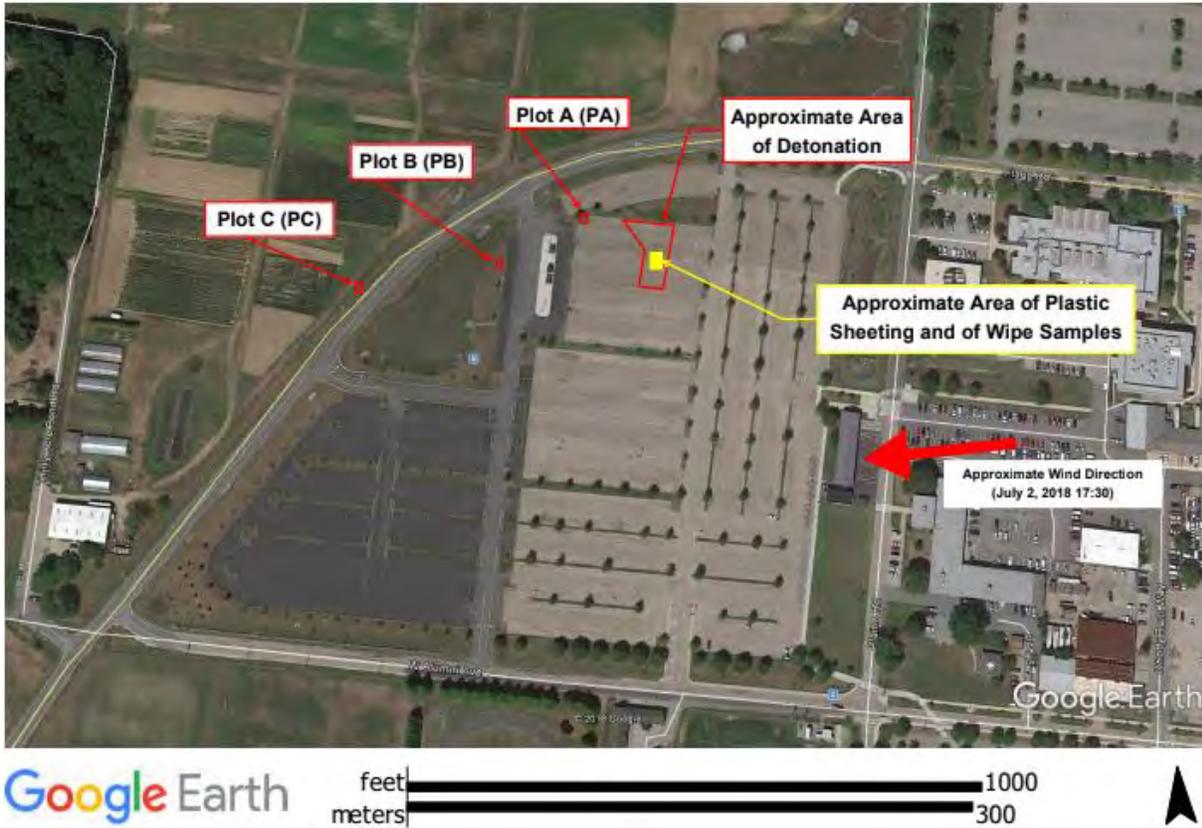
Re: Reasons to Suspend Fireworks at URI

The following points make a good case to suspend fireworks at URI to protect our groundwater aquifer that supplies drinking water to the campus.

- 1) EPA has recognized that fireworks are a leading cause of perchlorate contamination in drinking water. EPA has determined that perchlorate disrupts the function of the thyroid gland. EPA is developing a drinking water regulatory standard. The Rhode Island Department of Health has noted that a final regulatory standard is expected in about one year. URI has been performing quarterly testing since October 2015.
- 2) The US Department of Defense has issued a memorandum dated May 21, 2009 to Secretary's of each branch of the military regarding perchlorate in fireworks. They recognize the health effects of perchlorate and fireworks as a source. They also have developed best management practices to minimize the environmental impact from fireworks. BMP5 states that "The location of fireworks must be made to minimize the risk to drinking water".
- 3) Massachusetts DEP has issued a drinking water standard of 2 ppb.
- 4) The Rhode Island Department of Health has required that URI develop an Action Plan to limit perchlorate in drinking water to 2 ppb. We submitted our Action Plan to DOH on August 27th, 2015 and sent our last status report on October 24th, 2017.
- 5) Perchlorate levels in URI's drinking water supply wells have ranged from 0.64 to 3.5 ppb.
- 6) Fireworks displays over URIs drinking water aquifer have been occurring for nearly three decades. The location of the launch areas has been west of the athletic complex and has moved north over time. Current launch areas have been west of the URI Emergency Management Service.
- 7) URI has conducted a groundwater investigation and has determined that perchlorate is most predominate in groundwater located west of White Horn Brook and north of West Alumni Ave. These levels extend west to URI's well field. Attached is a map of monitoring wells and perchlorate levels from the ongoing investigation.
- 8) URI has researched the composition of fireworks displays to attempt to reduce perchlorate levels. The June 2nd, 2018 show should have been very low in perchlorate according to the pyrotechnic vendor.
- 9) URI's environmental consultant conducted sampling before and after the June 2nd, 2018 round of fireworks. Wipe samples (URI-WP1) were collected from plastic sheeting at the launch site.

Furthermore three soil samples were collected downwind of the launch area at varying distances as noted in the diagram and table below.

Perchlorate Testing Locations, June 2nd, 2018 Fireworks



Perchlorate Testing Before and After June 2nd, 2018 Fireworks
Results in ppb

Sample:	URI-WP1	URI-PA	URI-PB	URI-PC
Location:	At Lunch Site	120 ft	250 ft	525 ft
Pre	31	110	0.18	0.55
Post	14,000 A 960 B	1.4	4.8	1,800

10) Results show significant levels of perchlorate after the display in all but one sample; URI-PA. The pre wipe sample was 31 ppb and post wipe results were 14,000 and 960 ppb. The pre sample at URI-PA was 110 ppb and the post was 1.4 ppb. This could be due to the fact that pre and post

sample sites were located adjacent to each other, it could be residual from previous events and the URI-PA location was slightly cross wind from the launch site. The pre sample at URI-PB was 0.18 ppb and the post was 4.8 ppb. The pre sample at URI-PC was 0.55 and the post sample was 1,800 ppb. This represents a 10,000 fold increase. Fallout from the fireworks drifts and spreads over the land. MADEP found similar results at this distance from the launch area in other investigation sites in Massachusetts.

List of Frequently Utilized Storage Tank Standards and Practices

Below is a list of frequently used storage tank standards and practices from organizations that are referenced in 25 PA Code, Chapter 245. There may be other applicable standards. The current (or most recent) edition/revision of a publication should be used.

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American Petroleum Institute

Number (ID) Title &/or Description

Construction Standards:

API Spec 12D Specifications for Field Welded Tanks for Storage of Production Liquids

API Spec 12F Shop Welded Tanks for Storage of Production Liquids

API Spec 12P Specifications for Fiberglass Reinforced Plastic Tanks

API Std 620 Design and Construction of Large, Welded, Low Pressure Storage Tanks

API Std 650 Welded Steel Tanks for Oil Storage (Replaced several API 12 series Spec's)

API Std 2000 Venting Atmospheric and Low-pressure Storage Tanks

API Std 2610 Design, Construction, Operation, Maintenance, and Inspection of Terminal & Tank Facilities

Inspection Standards: (Includes Construction Alteration, and Reconstruction Standards)

API Std 510 Pressure Vessel Inspection Code (Maintenance Inspection, Rating, Repair and Alteration)

API Std 570 Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems

API Std 653 Tank Inspection, Repair, Alteration, and Reconstruction

API Std 2015 Requirements for Safe Entry & Cleaning of Petroleum Storage Tanks

Recommended Practices:

API RP 12H Installation of New Bottoms in Old Storage Tanks

API RP 12R Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service

API RP 574 Inspection Practices for Piping System Components

API RP 575 Inspection of Atmospheric and Low Pressure Storage Tanks

API RP 580 Risk Based Inspection

API RP 651 Cathodic Protection of Aboveground Petroleum Storage Tanks

API RP 652 Lining of Aboveground Petroleum Storage Tank Bottoms

API RP 1107 Pipeline Maintenance Welding Practices

API RP 1110 Pressure Testing of Liquid Petroleum Pipelines

API RP 1604 Closure of Underground Petroleum Storage Tanks

API RP 1615 Installation of Underground Petroleum Storage Systems

API RP 1626 Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations

API RP 1627 Storing and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations

API RP 1631 Interior Lining and Periodic Inspection of Underground Storage Tanks

API RP 1632 Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems

API RP 1637 Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Gasoline Dispensing Facilities and Distribution

Terminals

API RP 2003 Protection Against Ignitions Arising Out of Static, Lightning and Stray Currents

API RP 2016 Guidelines for Entering and Cleaning Petroleum Storage Tanks

American Petroleum Institute

Number (ID) Title &/or Description

API RP 2027 Ignition Hazards Involved in Abrasive Blasting of Atmospheric Storage Tanks in Hydrocarbon Service

API RP 2350 Overfill Protection for Storage Tanks in Petroleum Facilities

Other Publications:

API – 334 A Guide to Leak Detection for Aboveground Storage Tanks

API Pub 2009 Safe Welding, Cutting and Hot Work Practices in the Petroleum and Petrochemical Industries

API Pub 2200 Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines

API – 2207 Preparing Tank Bottoms for Hot Work

API Pub 2217A Guidelines for Work in Inert Confined Spaces in the Petroleum Industry

Petroleum Equipment Institute

Number (ID) Title &/or Description

Recommended Practices:

PEI RP 100 Recommended Practices for Installation of Underground Liquid Storage Systems

PEI RP 200 Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling

National Leak Prevention Association

Number (ID) Title &/or Description

Recommended Practices:

NLPA Std 631 Entry, Cleaning, Interior Inspection, Repair and Lining of Underground Storage Tanks

NACE International – The Corrosion Society

Number (ID) Title &/or Description

Inspection Standards:

NACE TM 01-01 Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems

NACE TM 04-97 Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems

Recommended Practices:

NACE 1/SSPCSP5

Steel Structures Painting Council: “White Metal Blast Cleaning”

NACE 2/SSPCSP10

Steel Structures Painting Council: “Near White Metal Blast Cleaning”

NACE 3/SSPCSP6

Steel Structures Painting Council: “Commercial Blast Cleaning”

NACE 4/SSPCSP7

Steel Structures Painting Council: “Brush Off Cleaning”

NACE 10/SSPCPA6

Steel Structures Painting Council: “Fiberglass-Reinforced Plastic (FRP) Linings Applied to Bottoms of Carbon Steel Aboveground Storage Tanks”

NACE RP 0169 Control of External Corrosion on Underground or Submerged Metallic Piping Systems

NACE International – The Corrosion Society

Number (ID) Title &/or Description

NACE RP 0172 Surface Preparation of Steel and Other Hard Materials by Water Blasting Prior to Coating or Recoating

NACE SP 0177 Mitigation of Alternating Current and Lightning Effects on Metallic Structures and

Corrosion Control Systems

NACE RP 0178 Design, Fabrication, and Surface Finish of Metal Tanks and Vessels to be Lined for Chemical Immersion Service

NACE RP 0184 Repair of Lining Systems

NACE RP 0187 Design Considerations for Corrosion Control of Reinforcing Steel in Concrete

NACE SP 0188 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

NACE RP 0193 External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms

NACE RP 0275 Application of Organic Coatings to the External Surface of Steel Pipe for Underground Service

NACE RP 0285 Corrosion Control of Underground Storage Tank Systems by Cathodic Protection

National Fire Protection Association

see also 37 PA Code Chapters 11 and 13, Flammable & Combustible Liquids Handbook

Number (ID) Title &/or Description

Construction Standards:

NFPA 70 (NEC) National Electric Code®

NFPA 30 Flammable and Combustible Liquids Code

NFPA 30A Motor Fuel Dispensing Facilities and Repair Garages

NFPA 303 Marinas and Boatyards

Recommended Practices:

NFPA 77 Static Electricity

NFPA 326 Safeguarding Tanks and Containers for Entry, Cleaning or Repair

Underwriters Laboratories

Number (ID) Title &/or Description

Construction Standards:

UL Std 58 Standards for Steel Underground Tanks for Flammable and Combustible Liquids

UL Std 142 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids

UL Std 567 Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas

UL Std 842 Standard for Valves for Flammable Fluids

UL Std 860 Standard for Pipe Unions for Flammable and Combustible Fluids and Fire Protection Service

UL Std 971 Standard for Nonmetallic Underground Piping for Flammable Liquids

UL Std 1316 Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohol and Alcohol-Gasoline Mixtures

UL Std 1746 Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks

UL Std 2085 Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids

UL Std 2245 Standard for Below-grade Vaults for Flammable Liquid Storage Tanks

American National Standards Institute

Number (ID) Title &/or Description

Construction Standards:

ASME B31.3 American Society of Mechanical Engineers: "Process Piping"

ASME B31.4 American Society of Mechanical Engineers: "Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols"

Recommended Practices:

ASSE Z117.1 American Society of Safety Engineers: "Safety Requirements for Confined Spaces"

American Society for Testing and Materials

Number (ID) Title &/or Description

Construction Standards:

ASTM

A182/A182M

Standard Specification for Forged or Rolled Alloy Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

ASTM D2996 Standard Specification for Filament-Wound Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ASTM D4097 Standard Specification for Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Corrosion Resistant Tanks

ASTM D5685 Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings

Recommended Practices:

ASTM E797 Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method

ASTM D2794 Standard Test Method for Resistance of Organic Coatings on the Effects of Rapid Deformation (Impact)

Steel Tank Institute

Number (ID) Title &/or Description

Construction Standards:

STI P3 Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks

STI F841 Standard for Dual Wall Underground Steel Storage Tanks

STI F894 Act-100® Specification For External Corrosion Protection of FRP Composite

STI F894 Act-100® Specification For External Corrosion Protection of FRP Composite Steel USTs (See also Association of Composite Tanks)

STI F921® F921® Standard for Aboveground Tanks with Integral Secondary Containment

STI F922 Specification for Permatank®

STI F941 Standards for Fireguard® Thermally Insulated Aboveground Storage Tanks

STI R951 Specification for Tanks Using Low Levels of Pressure in the Tanks Interstice

STI F961 ACT-100U Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks

Inspection Standards:

STI SP001 Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids

Recommended Practices:

STI SP031 Standard for Repair of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible & Flammable Liquids

Steel Tank Institute

Number (ID) Title &/or Description

STI R821 sti-P3 Installation Instructions

STI R891 RP for Hold Down Strap Isolation
STI R892 RP for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems
STI R912 Installation Instructions for Shop Fabricated Aboveground Storage Tanks for Flammable, Combustible Liquids
STI R913 Act-100® Installation Instructions
STI R923 Permatank® Installation Instructions
STI R931 F921® Installation Instructions
STI R942 Fireguard® Installation & Testing Instructions for Thermally Insulated, Lightweight, Double Wall Fireguard Aboveground Storage Tanks
STI R971 ACT-100-U® Installation Instructions
STI R972 RP for the Addition of Supplemental Anodes to sti-P3® USTs

Steel Structures Painting Council

see also NACE International
Number (ID) Title &/or Description

Recommended Practices:

SSPC Painting Manual volume I
SSPC Painting Manual volume II

Association of Composite Tanks

Number (ID) Title &/or Description

Construction Standards:

ACT 100 Specification for the Fabrication of FRP Clad Underground Storage Tanks

Fiberglass Petroleum Tank and Pipe Institute

Number (ID) Title &/or Description

Recommended Practices:

FPTP 1 Fiberglass Piping Systems Installation Check List for Underground Petroleum Pipe
FTPI RP T-95-02 Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks

American Concrete Institute

Number (ID) Title &/or Description

Recommended Practices:

ACI 350 Environmental Engineering Concrete Structures

Attachment D

URI Well Production Data

PFAS Water Treatment Design Services

Attachment D – URI Water Supply Production Information

Table 1 – Groundwater Supplies

DOH PWS ID# 1858422	Well #2	Well #3	Well #4
Location	End of access rd	South of access rd	North of access rd
Well Type	Gravel Packed	Gravel Packed	Gravel Packed
Well Depth	131 feet	138 feet	96 Feet
Well Diameter	10 inch	10 inch	18 inches
Well Capacity*	8.34 MGD	13.17 MGD	6.59 MGD
Type of Pump	Electric drive turbine	Electric drive turbine	Electric drive turbine
Age of Pump	Installed 2011	Installed 2018	Installed 2008
Actual Capacity of Pump	525 GPM	550 GPM	1300 GPM
Pump Size	525 GPM	600 GPM	1300 GPM
Pumping Rate	450 GPM	450 GPM	450 GPM
MGD (18 hr)	0.57	0.54	1.40
Column Size	6 inch	6 inch	8 inch
Head	300 Feet	300 Feet	320 Feet
Screen Length	20 feet	20 feet	20 Feet
Auxiliary Power on Well	Yes	Yes	Yes
Date Well Drilled	1949	1958	1974
Name of Well Driller	Chapman	Chapman	Chapman
Casing Material	Steel	Steel	Steel
Well Status	Good – Redundant well	Good – Redundant well	Good - Primary well
Last Date Redeveloped or Serviced	2011	2018	2022

***Well Capacity is determined by the following formula:
 Specific yield (gpm/ft) from actual pump tests x available drawdown (ft) x 1080 min/day**

The water pumped from the university’s wells is metered and these meters are read and recorded daily. Water supplied to the distribution system is used for a variety of purposes in the dormitories and other facilities of the university campus. Uses include normal domestic, sanitary, heating and cooling, laboratory, fire protection, and any other uses normal to a large university campus. URIKC-Water exists as a service to the university and operates as a division of the university administration so historically there are no separate charges for water service. As a result, there has been no reason to meter individual buildings (with the exception of the boiler plant make-up water). In the University’s Demand Management Strategy, that has been approved by the Water Resource Board, URI will install meters as new buildings are built or existing ones renovated.

Water demands in 2016 for various metrics are noted below:

System wide per capita usage: 19.48 gallons/person/day
 Average Daily Demand - Annual: 376,932 gallons/day
 Average Daily Demand – Peak Month: 499,333 gallons/day
 Maximum Daily Demand: 669,300 gallons/day

Water use has decreased nearly 10% over the past ten years while at the same time the campus has added 500 beds and 425,000 square feet of academic space.

Table 2 - Concentration of six PFAS compounds (ppt)

Date	Well 2	Well 3*	Well 4
9/23/2021	25.83	2.7	39.17
12/3/2021	28.46	3.22	43.85
3/30/2022	32.98	2.66	40.85

*Well 3 has remained inactive due to PFAS hot spot nearby.

Table 3

IRON & MANGANESE SUMMARY

All units mg/L

SAMPLE DATE	WELL #2		WELL #3		WELL #4	
	Fe	Mn	Fe	Mn	Fe	Mn
5/24/2022	ND	ND	0.0585	ND	ND	0.137
3/1/2022	0.0472	ND	NS	NS	0.0429	0.174
12/21/2021	0.0434	ND	0.0584	ND	0.0506	0.177
9/29/2021	NS	NS	0.545	0.0178	NS	NS
6/15/2021	0.0309	0.0062	NS	NS	0.0654	0.143
6/1/2021	ND	0.0179	NS	NS	0.0849	0.124
5/18/2021	ND	ND	NS	NS	ND	0.131
5/4/2021	ND	0.007	NS	NS	0.0322	0.113
4/20/2021	ND	0.009	NS	NS	0.0332	0.11
3/16/2021	ND	ND	NS	NS	ND	0.098
3/3/2021	ND	ND	NS	NS	ND	0.0955
2/16/2021	0.114	ND	NS	NS	0.0685	0.103
2/3/2021	0.0369	ND	NS	NS	0.0551	0.108
1/19/2021	ND	0.0172	NS	NS	0.0472	0.134
1/5/2021	ND	0.0081	NS	NS	0.0728	0.115
12/22/2020	ND	ND	NS	NS	0.035	0.11
12/1/2020	0.0314	0.0155	NS	NS	0.0464	0.111
11/17/2020	ND	0.0056	NS	NS	0.0332	0.136
11/3/2020	0.0451	0.0125	NS	NS	0.0385	0.147
10/20/2020	ND	ND	NS	NS	ND	0.167
10/7/2020	ND	ND	NS	NS	ND	0.132
8/18/2020	ND	ND	NS	NS	ND	0.132
8/5/2020	0.0303	ND	NS	NS	ND	0.127
7/21/2020	ND	ND	NS	NS	0.0308	0.122
7/7/2020	ND	ND	NS	NS	ND	0.121
6/16/2020	ND	0.0101	NS	NS	0.0539	0.174
6/2/2020	0.104	0.0077	NS	NS	0.177	0.151
4/2/2019			0.075	0.0124		

WELL #3 REDEVELOPMENT 2019 INITIAL SAMPLES

ND=Not Detected

Fe (MDL) = 0.0285

NS=Not Sampled

Mn (MDL) = 0.004

 **AIA[®] Document B104[™] – 2017****Standard Abbreviated Form of Agreement Between Owner and Architect**

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Design Agent's client identified as the Owner:
(Name, legal status, address and other information)

**State of Rhode Island, acting by and through the Department of Administration,
Division of Purchases
One Capitol Hill, Second Floor
Providence, Rhode Island 02908-5855
401.578.8100 (telephone); 401.574.8387 (facsimile)
www.purchasing.ri.gov
and
The University of Rhode Island Board of Trustees
35 Campus Avenue, Green Hall
Kingston, Rhode Island 02881**

on behalf of the User Agency:
(Name, legal status, address, telephone and facsimile numbers, and website)

The University of Rhode Island
45 Upper College Road
Kingston, Rhode Island 02881
401.874.1000 (telephone)

and the Design Agent:
(Name, legal status, address, telephone and facsimile numbers, and website)

for the following Project:
(Name, location and detailed description)

The Owner and Design Agent agree as follows.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Init.

TABLE OF ARTICLES

1	INITIAL INFORMATION
2	DESIGN AGENT'S RESPONSIBILITIES
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4	SUPPLEMENTAL AND ADDITIONAL SERVICES
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10	MISCELLANEOUS PROVISIONS
11	COMPENSATION
12	SPECIAL TERMS AND CONDITIONS
13	SCOPE OF THE AGREEMENT

ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth below:

(State below details of the Project's site and program, Owner's contractors and consultants, Design Agent's consultants, Owner's budget for the Cost of the Work, and other information relevant to the Project.)

§ 1.2 The Owner and Design Agent may rely on the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Design Agent shall appropriately adjust the schedule, the Design Agent's services and the Design Agent's compensation. The Owner shall adjust the Owner's budget for the Cost of the Work and the Owner's anticipated design and construction milestones, as necessary, to accommodate material changes in the Initial Information.

§ 1.3 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form.

§ 1.3.1 Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 DESIGN AGENT'S RESPONSIBILITIES

§ 2.1 The Design Agent shall provide the professional services set forth in this Agreement consistent with the professional skill and care ordinarily provided by Design Agents practicing in the same or similar locality under the same or similar circumstances. The Design Agent shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project. No part of the professional services shall be performed by subconsultants or subcontractors without the Owner's prior written consent.

Init.

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User Notes:

(1129804587)

§ 2.2 The Design Agent shall maintain the following types and limits of insurance until termination of this Agreement, unless different amounts have been specified in the Solicitation:

.1 General Liability

Commercial General Liability (including broad-form contractual liability and completed operations) with policy limits not less than \$1,000,000 for each occurrence and aggregate for bodily injury and property damage.

.2 Automobile Liability

Commercial Automobile Liability covering vehicles owned, hired, and nonowned vehicles used by the Design Agent with policy limits of not less than \$1,000,000 combined single limit and aggregate bodily injury, death or any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles, along with any other statutorily required automobile coverage.

.3 Workers' Compensation at statutory limits.

.4 Professional Liability

Professional Liability covering bodily injury and property damage due to the Design Agent's negligent acts, errors, and omissions in the performance of professional services with policy limits of not less than \$2,000,000 per claim and in the aggregate, maintained during the term of this Agreement and for a period of 5 years after the Final Completion of any and all of the Design Agent's Basic and Additional Services under this Agreement. Any retroactive date or prior acts exclusions to which such coverage is subject shall predate the date on which services hereunder are commenced and the date of this Agreement.

§ 2.2.5 The Design Agent may achieve the required limits and coverage for Commercial General Liability and Commercial Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella liability insurance policies result in the same or greater coverage as the coverages required under this Article 2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 2.2.6 **Additional Insured Obligations.** The Design Agent shall cause the primary and excess or umbrella policies for Commercial General Liability and Commercial Automobile Liability to include the Owner and the User Agency as an additional insured for claims caused in whole or in part by the Design Agent's negligent acts or omissions. The additional insured coverage shall be primary and non-contributory to any of the Owner's and the User Agency's insurance policies and shall apply to both ongoing and completed operations.

§ 2.2.7 The Design Agent shall provide the Owner and the User Agency, on an annual basis for the duration of this Agreement and from time to time upon request, with a copy of a policy endorsement and certificates of insurance that name the State of Rhode Island and the User Agency as "certificate holders" and as "additional insureds" and that otherwise evidences compliance with the requirements of this Section 2.5. The certificate of insurance must state that 30 working days' advance notice of cancellation, nonrenewal, or material change (together with a copy of the materially changed policy or endorsement) in coverage will be sent to: The University of Rhode Island Purchasing Department, 10 Tootell Road, Kingston, Rhode Island 02881, fax (401) 874-2306, and must reference the Project and this Agreement. Material changes that are not acceptable to the Owner may result in termination by the Owner pursuant to Section 9.4. All policies, endorsements, and certificates of insurance must include the following language: Coverage is primary and noncontributory. Subrogation is waived for the additional insured.

ARTICLE 3 SCOPE OF DESIGN AGENT'S BASIC SERVICES

§ 3.1 The Design Agent's Basic Services consist of those described in the Solicitation and this Article 3 and include usual and customary structural, mechanical, and electrical engineering services. The Design Agent shall consult with the Owner and the User Agency and facilitate and attend Project meetings. Services not set forth in this Article 3 or the Solicitation are Supplemental or Additional Services.

§ 3.1.1 The Design Agent shall coordinate its services with those services provided by the Owner and the Owner's consultants. The Design Agent shall be entitled to rely on (1) the accuracy and completeness of the services and information furnished by the Owner and (2) the Owner's written approvals. The Design Agent shall provide prompt written notice to the Owner if the Design Agent becomes aware of any error, omission, or inconsistency in such services or information.

§ 3.1.2 The Owner and the User Agency have provided the Project Schedule to the Design Agent. As soon as practicable after the date of this Agreement, the Design Agent shall submit for the approval of the Owner and the User Agency a schedule for the performance of the Design Agent's services. Once approved by the Owner and the User Agency, time limits established by the schedule shall not, except for reasonable cause, be exceeded by the Design Agent or Owner. With the prior written approval of the Owner and the User Agency, the Design Agent shall adjust the schedule, if necessary, as the Project proceeds until the commencement of construction.

§ 3.1.3 The Design Agent shall timely assist the Owner and the User Agency in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

§ 3.2 Design Phase Services

§ 3.2.1 The Design Agent shall review the program and other information furnished by the Owner, and shall review and be familiar with laws, codes, and regulations applicable to the Design Agent's services.

§ 3.2.2 The Design Agent shall discuss with the Owner the Owner's program, schedule, budget for the Cost of the Work, Project site, and alternative approaches to design and construction of the Project. The Design Agent shall reach an understanding with the Owner regarding the Project requirements.

§ 3.2.3 The Design Agent shall consider the relative value of alternative materials, building systems and equipment, together with other considerations based on program, aesthetics, and any sustainable objectives, in developing a design for the Project that is consistent with the Owner's schedule and budget for the Cost of the Work.

§ 3.2.4 Based on the Project requirements, the Design Agent shall prepare Design Documents for the Owner's approval consisting of drawings and other documents appropriate for the Project and the Design Agent shall prepare and submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3. As necessary or appropriate, the Design Agent and its consultants shall participate in value engineering review meetings with the Owner.

§ 3.2.5 The Design Agent shall submit the Design Documents to the Owner and request the Owner's written approval.

§ 3.3 Construction Documents Phase Services

§ 3.3.1 Based on the Owner's approval of the Design Documents, the Design Agent shall prepare for the Owner's written approval Construction Documents consisting of Drawings and Specifications setting forth in detail the requirements for the construction of the Work. The Owner and Design Agent acknowledge that in order to construct the Work the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Design Agent shall review in accordance with Section 3.4.4.

§ 3.3.2 The Design Agent shall incorporate the design requirements of governmental authorities having jurisdiction over the Project into the Construction Documents.

§ 3.3.3 The Design Agent shall submit the Construction Documents to the Owner, update the estimate for the Cost of the Work and advise the Owner of any adjustments to the estimate of the Cost of the Work, take any action required under Section 6.5, and request the Owner's approval.

Init.

§ 3.3.4 The Design Agent, following the Owner's approval of the Construction Documents and of the latest estimate of the Cost of the Work, if and to the extent requested by the Owner, shall assist the Owner in obtaining bids or proposals and awarding and preparing contracts for construction.

§ 3.4 Construction Phase Services

§ 3.4.1 General

§ 3.4.1.1 The Design Agent shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor, as modified by the Owner.

§ 3.4.1.2 The Design Agent shall advise and consult with the Owner during the Construction Phase Services. The Design Agent shall supervise all Project meetings and record and distribute all meeting minutes. The Design Agent shall have authority to act on behalf of the Owner only to the extent provided in this Agreement. The Design Agent shall review the schedule of values submitted by the Contractor to assure that the Contract Sum is allocated properly to the various portions of the Work. The schedule of values shall be in such form and supported by such data to substantiate its accuracy as the Design Agent and the Owner may require, this schedule, if and when approved by the Design Agent and the Owner in writing, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Design Agent shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor shall the Design Agent be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Design Agent shall be responsible for the Design Agent's negligent acts or omissions, but shall not have control over or charge of and shall not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the Work.

§ 3.4.1.3 Subject to Section 4.2, the Design Agent's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date the Design Agent issues, with the written approval of the Owner, the final Certificate for Payment.

§ 3.4.2 Evaluations of the Work

§ 3.4.2.1 The Design Agent and its consultants shall each visit the site as required by Section 4.2.2 and otherwise at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in accordance with the Contract Documents and in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Design Agent shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Design Agent shall keep the Owner and the User Agency informed about the progress and quality of the portion of the Work completed, and promptly report in writing to the Owner and the User Agency (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work.

§ 3.4.2.2 The Design Agent has the authority and the responsibility to reject Work that does not conform to the Contract Documents and has the authority and responsibility to require inspection or testing of the Work.

§ 3.4.2.3 The Design Agent shall interpret matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Design Agent's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 3.4.2.4 When making such interpretations, the Design Agent shall endeavor to secure faithful performance by both the Owner and the Contractor, shall not show partiality to either, and shall not be liable for results of interpretations rendered reasonably in the Design Agent's professional judgment and in good faith.

§ 3.4.2.5 Deleted.

§ 3.4.3 Certificates for Payment to Contractor

§ 3.4.3.1 The Design Agent shall review and certify the amounts due the Contractor and shall issue certificates in such amounts. The Design Agent's certification for payment shall constitute a representation to the Owner, based on the Design Agent's evaluation of the Work as provided in Section 3.4.2 and on the data comprising the Contractor's Application for Payment, that, to the best of the Design Agent's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified.

§ 3.4.3.2 The issuance of a Certificate for Payment shall not be a representation that the Design Agent has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences, or procedures, (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 3.4.4 Submittals

§ 3.4.4.1 The Design Agent shall review and approve, or take other appropriate action, upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the Contractor's responsibility. The Design Agent shall provide prompt written notice to the Owner and the User Agency, however, if the Design Agent becomes aware of any error, omission, or inconsistency in such submittals or information. The Design Agent's review shall not constitute approval of safety precautions or any construction means, methods, techniques, sequences, or procedures.

§ 3.4.4.2 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials, or equipment, the Design Agent shall specify the appropriate performance and design criteria that such services must satisfy. The Design Agent shall review and take appropriate action on Shop Drawings and other submittals related to the Work designed or certified by the Contractor's design professional, provided the submittals bear such professional's seal and signature when submitted to the Design Agent. The review shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Design Agent shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals.

§ 3.4.4.3 The Design Agent shall review and respond to written requests for information about the Contract Documents. The Design Agent's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness.

§ 3.4.5 Changes in the Work

The Design Agent may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Design Agent shall: (i) review with the Owner and the User Agency all other changes in the Work proposed by the Contractor; and (ii) advise the Owner and the User Agency regarding their scope, cost, and adjustment in time. Subject to Section 4.2.3, the Design Agent shall prepare Change Orders and Construction Change Directives for the Owner's written approval and execution in accordance with the Contract Documents.

§ 3.4.6 Project Completion

The Design Agent shall conduct inspections to determine the date or dates of Substantial Completion and the date of Final Completion; issue Certificates of Substantial Completion; forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and received from the Contractor; and, with the Owner's prior written approval, issue a final Certificate for Payment based upon a final inspection indicating that the Work complies with the requirements of the Contract Documents.

§ 3.4.6.1 Upon request of the Owner, and prior to the expiration of one year from the date of Final Completion, the Design Agent shall, without additional compensation, conduct a minimum of two (2) meetings with the Owner and the User Agency to review the facility operations and performance.

ARTICLE 4 SUPPLEMENTAL AND ADDITIONAL SERVICES

§ 4.1 The services specifically set forth in the Solicitation shall be deemed to be Basic Services for all purposes under this Agreement and shall not require additional compensation. If there are services listed below in this Section 4.1, the Design Agent shall provide them as Supplemental Services as the Design Agent's responsibility, and the Owner shall compensate the Design Agent as provided in Section 11.2.
(Identify below the Supplemental Services, if any, that the Design Agent is required to provide.)

§ 4.2 The Design Agent may provide Additional Services after execution of this Agreement without invalidating the Agreement. Upon recognizing the need to perform Additional Services, the Design Agent shall notify the Owner. The Design Agent shall not provide the Additional Services until the Design Agent receives the Owner's written authorization. Except for services required due to the fault of the Design Agent, any Additional Services provided in accordance with this Section 4.2 shall entitle the Design Agent to compensation pursuant to Section 11.3.

§ 4.2.1 The Design Agent shall provide services necessitated by a change in the Initial Information, changes in previous instructions or approvals given by the Owner, or a material change in the Project including size; quality; complexity; the Owner's schedule or budget for Cost of the Work; or procurement or delivery method as an Additional Service.

§ 4.2.2 The Design Agent has included in Basic Services:

- .1 2 reviews of each Shop Drawing, Product Data item, sample and similar submittals of the Contractor'
- .2 weekly visits to the site by the Design Agent during construction, and as necessary to resolve construction exigencies, and biweekly visits to the site by the Project engineers during any installation of their portion of the Work;
- .3 2 inspections for any portion of the Work to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents;
- .4 2 inspections for any portion of the Work to determine Final Completion;
- .5 2 inspections within 12 months, as directed by the Owner or the User Agency following Final Completion to determine punch list and warranty compliance.

§ 4.2.3 The Design Agent shall, as an Additional Service, provide services made necessary by a Contractor's proposed change in the Work approved in writing by the Owner. The Design Agent shall prepare revisions to the Design Agent's Instruments of Service necessitated by Change Orders and Construction Change Directives as an Additional Service.

§ 4.2.4 If the services covered by this Agreement have not been completed within () months of the date of this Agreement, through no fault of the Design Agent, extension of the Design Agent's services beyond that time shall be compensated as Additional Services.

ARTICLE 5 OWNER'S RESPONSIBILITIES

§ 5.1 Unless otherwise provided for under this Agreement, the Owner shall provide information in a timely manner regarding requirements for and limitations on the Project.

§ 5.2 If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Design Agent. The Owner and the Design Agent shall thereafter agree to a corresponding change in the Project's scope and quality.

§ 5.3 The Owner shall furnish surveys to describe physical characteristics, legal limitations, and utility locations for the site of the Project; a written legal description of the site; and services of geotechnical engineers or other consultants, when the Design Agent requests such services and demonstrates that they are reasonably required by the scope of the Project.

Init.

§ 5.4 The Owner shall coordinate the services of its own consultants with those services provided by the Design Agent. Upon the Design Agent's request, the Owner shall furnish copies of the scope of services in the contracts between the Owner and the Owner's consultants.

§ 5.5 The Owner shall furnish tests, inspections, and reports required by law or the Contract Documents, such as structural, mechanical, and chemical tests; tests for air and water pollution; and tests for hazardous materials.

§ 5.6 Deleted.

§ 5.7 The Owner shall provide prompt written notice to the Design Agent if the Owner becomes aware of any fault or defect in the Project, including errors, omissions, or inconsistencies in the Design Agent's Instruments of Service.

§ 5.8 Deleted.

§ 5.9 The Owner shall provide the Design Agent access to the Project site prior to commencement of the Work and shall obligate the Contractor to provide the Design Agent access to the Work wherever it is in preparation or progress.

§ 5.10 Deleted.

ARTICLE 6 COST OF THE WORK

§ 6.1 For purposes of this Agreement, the Cost of the Work shall be the total cost to the Owner to construct all elements of the Project designed or specified by the Design Agent and shall include contractors' general conditions costs, overhead and profit. The Cost of the Work also includes the reasonable value of labor, materials, and equipment, donated to, or otherwise furnished by, the Owner. The Cost of the Work does not include the compensation of the Design Agent; the costs of the land, rights-of-way, financing, or contingencies for changes in the Work; or other costs that are the responsibility of the Owner.

§ 6.2 The Owner's budget for the Cost of the Work is provided in Initial Information, and shall be adjusted throughout the Project as required under Sections 5.2, 6.4 and 6.5. Evaluations of the Owner's budget for the Cost of the Work, and the preliminary estimate of the Cost of the Work and updated estimates of the Cost of the Work prepared by the Design Agent, represent the Design Agent's judgment as a design professional. It is recognized, however, that neither the Design Agent nor the Owner has control over the cost of labor, materials, or equipment; the Contractor's methods of determining bid prices; or competitive bidding, market, or negotiating conditions. Accordingly, the Design Agent cannot and does not warrant or represent that bids or negotiated prices will not vary from the Owner's budget for the Cost of the Work, or from any estimate of the Cost of the Work, or evaluation, prepared, or agreed to by the Design Agent.

§ 6.3 The Design Agent, if an architect, shall provide detailed cost estimates of the Cost of the Work at the intervals specified in the Project Schedule. In preparing estimates of the Cost of Work, the Design Agent shall be permitted to include contingencies for design, bidding, and price escalation; to determine what materials, equipment, component systems, and types of construction are to be included in the Contract Documents; to recommend reasonable adjustments in the program and scope of the Project; and to include design alternates as may be necessary to adjust the estimated Cost of the Work to meet the Owner's budget. The Design Agent's estimate of the Cost of the Work shall be based on current area, volume, or similar conceptual estimating techniques. The Design Agent, if an engineer, shall provide an opinion of probable construction value. An engineer must provide detailed cost estimates if such estimates are identified as a Supplemental Service in Section 4.1.

§ 6.4 If, through no fault of the Design Agent, construction procurement activities have not commenced within 90 working days after the Design Agent submits the Construction Documents to the Owner the Owner's budget for the Cost of the Work shall be adjusted to reflect changes in the general level of prices in the applicable construction market.

§ 6.5 If at any time the Design Agent's estimate of the Cost of the Work exceeds the Owner's budget for the Cost of the Work, the Design Agent shall make appropriate recommendations to the Owner to adjust the Project's size, quality or budget for the Cost of the Work, and the Owner shall cooperate with the Design Agent in making such adjustments.

Init.

§ 6.6 If the Owner's current budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services is exceeded by the lowest responsive bid or negotiated proposal, the Owner shall:

- .1 give written approval of an increase in the budget for the Cost of the Work;
- .2 authorize rebidding or renegotiating of the Project within a reasonable time;
- .3 terminate in accordance with Section 9.5;
- .4 in consultation with the Design Agent, revise the Project program, scope, or quality as required to reduce the Cost of the Work; or
- .5 implement any other mutually acceptable alternative.

§ 6.7 If the Owner chooses to proceed under Section 6.6.4, the Design Agent shall modify the Construction Documents as necessary to comply with the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services, or the budget as adjusted under Section 6.6.1. If the Owner requires the Design Agent to modify the Construction Documents because the lowest responsive bid or negotiated proposal exceeds the Owner's budget for the Cost of the Work due to market conditions the Design Agent could not reasonably anticipate, the Owner shall compensate the Design Agent for the modifications as an Additional Service pursuant to Section 11.3; otherwise the Design Agent's services shall be without additional compensation. In any event, the Design Agent's modification of the Construction Documents shall be the limit of the Design Agent's responsibility under this Article 6.

§ 6.8 The Owner may also engage the services of an estimator to assist in the evaluation of the Owner's budget and the Cost of the Work. The Design Agent and the Owner will exchange and reconcile the detailed information of their estimators to refine and confirm the Owner's budget and the Cost of the Work.

ARTICLE 7 COPYRIGHTS AND LICENSES

§ 7.1 The Design Agent and the Owner warrant that in transmitting Instruments of Service, or any other information, the transmitting party is the copyright owner of such information or has permission from the copyright owner to transmit such information for its use on the Project.

§ 7.2 The Design Agent and the Design Agent's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and shall retain all common law, statutory and other reserved rights, including copyrights. Submission or distribution of Instruments of Service to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Design Agent and the Design Agent's consultants.

§ 7.3 Upon execution of this Agreement, the Design Agent grants to the Owner a nonexclusive perpetual license to use the Design Agent's Instruments of Service, including electronic or digital documents, solely and exclusively for purposes of constructing, using, maintaining, altering and adding to the Project, and shall have and retain all rights to use and reproduce them for the production and maintenance of the Work described therein, provided that the Owner substantially performs its obligations under this Agreement, including prompt payment of all sums when due pursuant to Article 9 and Article 11. The Design Agent shall obtain similar nonexclusive licenses from the Design Agent's consultants consistent with this Agreement. These Instruments of Service shall be conveyed to the Owner in their original operative, editable, electronic form in order to allow the Owner's integration of the data into the Owner's or User Agency's facilities management database. The license granted under this section permits the Owner to authorize the Contractor, Subcontractors, Sub-subcontractors, and suppliers, as well as the Owner's consultants and separate contractors, to reproduce applicable portions of the Instruments of Service, solely and exclusively for use in performing services or construction for the Project. If the Design Agent rightfully terminates this Agreement for cause as provided in Section 9.4, the license granted in this Section 7.3 shall terminate.

§ 7.3.1 Upon full payment of all sums due the Design Agent under this Agreement, all of the original Drawings, Specifications, and electronic data prepared by the Design Agent for the Project shall, without further action by the Design Agent, become the property of the Owner. In the event the Owner or others use the Instruments of Service without retaining, directly or indirectly, the authors of the Instruments of Service, the Owner releases the Design Agent and Design Agent's consultant(s) from all claims and causes of action arising from such uses. Design Agent The terms of this Section 7.3.1 shall not apply if the Owner rightfully terminates this Agreement for cause under Section 9.4.

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§ 7.4 Except for the licenses granted in this Article 7, no other license or right shall be deemed granted or implied under this Agreement. The Owner shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of the Design Agent. Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Design Agent and the Design Agent's consultants.

§ 7.5 Except as otherwise stated in Section 7.3, the provisions of this Article 7 shall survive the termination of this Agreement.

ARTICLE 8 CLAIMS AND DISPUTES

§ 8.1 General

§ 8.1.1 The Owner and Design Agent shall commence all claims and causes of action against the other and arising out of or related to this Agreement, whether in contract, tort, or otherwise, in accordance with the requirements of the binding dispute resolution method selected in this Agreement and within the period specified by applicable law. The Design Agent waives all claims and causes of action not commenced in accordance with this Section 8.1.1.

§ 8.1.2 To the extent damages are covered by property insurance, the Owner and Design Agent waive all rights against each other and against the contractors, consultants, agents, and employees of the other, for damages, except such rights as they may have to the proceeds of such insurance as set forth in AIA Document A104-2017, Standard Abbreviated Form of Agreement Between Owner and Contractor, as modified by the Owner. The Design Agent shall require of its consultants, agents, and employees of any of them, similar waivers in favor of the other parties enumerated herein.

§ 8.1.3 The Design Agent waives consequential damages for claims, disputes, or other matters in question, arising out of or relating to this Agreement. This waiver is applicable, without limitation, to all consequential damages due to the termination of this Agreement, except as specifically provided in Section 9.6.

§ 8.1.4 To the fullest extent permitted by law, the Design Agent shall indemnify and hold harmless the Owner, the User Agency, and the State of Rhode Island in accordance with Rhode Island Procurement Regulation 220-RICR-30-00-13.21.

§ 8.1.4.1 Without limiting the generality of the foregoing, the defense and indemnity set forth in this Section 8.1.4 includes, without limitation, all judgments, liabilities, damages, losses, claims, demands, and actions on account of bodily injury, death, or property loss to a person or entity indemnified hereunder or any other persons or entities, whether based upon statutory (including, without limitation, workers compensation), contractual, tort, or other liability of any person or entity so indemnified.

§ 8.1.4.2 The remedies set forth herein shall not deprive any person indemnified hereunder of any other indemnity action, right, or remedy otherwise available to any such person or entity at common law or otherwise.

§ 8.1.4.3 The Design Agent will include the indemnity set forth in this Section 8.1.4 without modification, in each Subcontract with any Subconsultant or Subcontractor.

§ 8.1.4.4 Notwithstanding any other language in the Contract Documents to the contrary, the indemnity hereunder shall survive Final Completion of the Work and final payment under this Agreement and shall survive any termination of this Agreement.

§ 8.1.5 The Owner shall have the right to deduct from any payments due to the Design Agent the amount of any unpaid obligations owed to the State of Rhode Island by the Design Agent, including without limitation, any and all unpaid taxes, the amount of any claim against the Design Agent arising out of this Agreement, or any amount on account of any other reason permitted by applicable law.

§ 8.2 Initial Decision and Mediation.

§ 8.2.1 Claims shall be referred to the Initial Decision Maker for initial decision. The Purchasing Agent appointed pursuant to the provisions of the "State Purchases Act," R.I. Gen. Laws § 37-2-1 et seq., will serve as the Initial

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Decision Maker in accordance with the provisions of the State Purchases Act, State of Rhode Island Procurement Regulations, and this Section 8.2.1. An initial decision shall be required as a condition precedent to binding dispute resolution pursuant to Section 8.3.1 of any Claim arising prior to the date final payment is due.

§ 8.2.2 For any Claim not resolved by the Initial Decision Maker procedures set forth in Section 8.2.1, and prior to the implementation of the binding dispute resolution procedures set forth in Section 8.3.1, the Design Agent shall have the option to pursue mediation, exercisable by written notice to the Owner within 30 calendar days of an Initial Decision. In the event of the exercise of such option by the Design Agent, the Owner and the Design Agent shall attempt to select a mediator, and in the event that the Owner and the Design Agent cannot agree on a mediator, either party may apply in writing to the Presiding Justice of the Providence County Superior Court, with a copy to the other, with a request for the court to appoint a mediator, and the costs of the mediator shall be borne equally by both parties.

§ 8.2.3
(Paragraphs deleted)
Deleted.

§ 8.3 Binding Dispute Resolution

§ 8.3.1 For any Claim not resolved by the Initial Decision Maker procedures set forth in Section 8.2.1, or mediation at the option of the Design Agent pursuant to Section 8.2.2, the method of binding dispute resolution shall be determined in accordance with the provisions of the "Public Works Arbitration Act," R.I. Gen. Laws §§ 37-16-1 et seq.

§ 8.3.1.1 Deleted.

§ 8.3.2 Deleted.

§ 8.3.3 Deleted.

§ 8.3.4 Deleted.

§ 8.3.4.1 Deleted.

§ 8.3.4.2 Deleted.

§ 8.3.4.3 Deleted.

§ 8.4 The provisions of this Article 8 shall survive the termination of this Agreement.

ARTICLE 9 TERMINATION OR SUSPENSION

§ 9.1 If the Owner fails to make payments to the Design Agent in accordance with this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the Design Agent's option, cause for suspension of performance of services under this Agreement. If the Design Agent elects to suspend services, the Design Agent shall give 7 working days' written notice to the Owner before suspending services. In the event of a suspension of services, the Design Agent shall have no liability to the Owner for delay or damage caused the Owner because of such suspension of services. Before resuming services, the Owner shall pay the Design Agent all sums due prior to suspension and any expenses incurred in the interruption and resumption of the Design Agent's services. The Design Agent's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.2 The Owner may suspend the Project as provided in this Agreement, the State Purchases Act, R.I. Gen. Laws §§ 37-2-1 et seq., the State of Rhode Island Procurement Regulations, or other applicable law. If the Owner suspends the Project, the Design Agent shall be compensated for services performed prior to notice of such suspension. If and when the Project is resumed, the Design Agent's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.3 If the Owner suspends the Project for more than 90 cumulative working days for reasons other than the fault of the Design Agent, the Design Agent may terminate this Agreement by giving not less than 7 working days' written notice.

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§ 9.4 Either party may terminate this Agreement upon not less than 7 working days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

§ 9.5 The Owner may terminate this Agreement upon written notice to the Design Agent for the Owner's convenience and without cause. The Owner may also terminate this Agreement: (i) in the event of the unavailability of appropriated funds; (ii) in the absence of a determination of continued need; or (iii) as otherwise provided in the State Purchases Act, R.I. Gen. Laws §§ 37-2-1 et seq., the State of Rhode Island Procurement Regulations, or other applicable law.

§ 9.6 In the event of termination not the fault of the Design Agent, the Design Agent shall be compensated for services performed prior to termination and Reimbursable Expenses incurred.

§ 9.7
(Paragraphs deleted)
Deleted.

§ 9.8 Except as otherwise expressly provided herein, this Agreement shall terminate one year from the date of Substantial Completion.

ARTICLE 10 MISCELLANEOUS PROVISIONS

§ 10.1 This Agreement is subject to, and governed by, the laws of the State of Rhode Island, including all procurement statutes and regulations (available at www.ridop.ri.gov), and applicable federal and local law, all of which are incorporated into this Agreement by this reference. In the event of any conflict between this Agreement and any such procurement statutes or regulations or any other provision of Rhode Island law, the procurement statutes, regulations, and Rhode Island law will control. The Design Agent hereby consents to and confers exclusive personal jurisdiction upon the courts of the state of Rhode Island and of the federal government sitting within this state. In the event of any conflicts or discrepancies among the Contract Documents, the provisions of the Contract Documents will be interpreted in the order of priority set forth in in Rhode Island Procurement Regulation 220-RICR-30-00-13.4(B).

§ 10.2 Terms in this Agreement shall have the same meaning as those in AIA Document A104–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor, as modified by the Owner.

§ 10.3 The Owner and Design Agent, respectively, bind themselves, their agents, successors, assigns and legal representatives to this Agreement; provided, however, that the Design Agent may not assign its rights nor delegate its responsibilities under this Agreement without the Owner's prior written consent.

§ 10.4 If the Owner requests the Design Agent to execute certificates or consents, the proposed language of such certificates or consents shall be submitted to the Design Agent for review a reasonable time prior to the requested dates of execution.

§ 10.5 The User Agency is a disclosed third-party beneficiary of this Agreement and shall have all of the rights and benefits to which such a party is entitled hereunder. Nothing contained in this Agreement shall create any other contractual relationship with, or a cause of action in favor of, a third party against the Owner, User Agency, or Design Agent.

§ 10.6 The Design Agent shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

§ 10.7 The Design Agent shall have the right to include photographic or artistic representations of the design of the Project among the Design Agent's promotional and professional materials. However, the Design Agent's materials shall not include as the Owner's confidential or proprietary information. The Owner shall provide professional credit for the Design Agent in the Owner's promotional materials for the Project. This Section 10.7 shall survive the termination of this Agreement unless the Owner terminates this Agreement for cause pursuant to Section 9.4.

§ 10.8 The invalidity of any provision of the Agreement shall not invalidate the Agreement or its remaining provisions. If it is determined that any provision of the Agreement violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Agreement shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Agreement.

§ 10.9 The Owner is the State of Rhode Island, acting by and through The University of Rhode Island Purchasing Department, and therefore, pursuant to the provisions of R.I. Gen. Laws § 34-28-31, liens against the Project are not enforceable.

ARTICLE 11 COMPENSATION

§ 11.1 For the Design Agent's Basic Services described under Article 3, the Owner shall compensate the Design Agent as set forth in the Cost Proposal Exhibit.
(Paragraphs deleted)

§ 11.2 For Supplemental Services identified in Section 4.1, the Owner shall compensate the Design Agent as follows:
(Insert amount of, or basis for, compensation. If necessary, list specific services to which particular methods of compensation apply.)

§ 11.3
(Paragraphs deleted)
Deleted.

§ 11.4 Deleted.

§ 11.5 Deleted.
(Table deleted)

§ 11.6 Deleted.

§ 11.6.1 Deleted.

§ 11.7 The hourly billing rates for services of the Design Agent and the Design Agent's consultants, if any, are set forth
(Paragraphs deleted)
in the Cost Proposal Exhibit below.
(Table deleted)

§ 11.8 Compensation for Reimbursable Expenses

§ 11.8.1 Reimbursable Expenses are in addition to compensation for Basic, Supplemental, and Additional Services and include expenses incurred by the Design Agent and the Design Agent's consultants directly related to the Project, as follows:

- .1 transportation and authorized out-of-town travel and subsistence, except for travel to and from the Design Agent's offices or the Consultant's offices, to meet with the Owner, the User Agency, or to visit the Project site; travel reimbursable expenses are subject to the limitations established from time to time for state employees by the Rhode Island Department of Administration Office of Accounts and Control;
- .2 Deleted;
- .3 permitting and other fees required by authorities having jurisdiction over the Project;
- .4 printing, reproductions, plots, and standard form documents, provided to the Owner and/or Contractor(s) for review, bidding, and construction administration;
- .5 postage, handling, and delivery;
- .6 expense of overtime work requiring higher than regular rates if authorized in advance by the Owner;
- .7 renderings, physical models, mock-ups, professional photography, and presentation materials in excess of those required by the Solicitation, if any and requested in writing by the Owner;
- .8 Deleted;

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- .9 all taxes levied on professional services and on reimbursable expenses;
- .10 site office expenses; and
- .11 other similar Project-related expenditures.

§ 11.8.2 For Reimbursable Expenses the compensation shall be the exact expenses incurred by the Design Agent and the Design Agent's consultants.

§ 11.9 Payments to the Design Agent

§ 11.9.1 Initial Payment

No initial payment shall be made upon execution of this Agreement.

§ 11.9.2 Progress Payments

§ 11.9.2.1 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed.

Payments are due and payable

(Paragraphs deleted)

not later than the 30th working day following written approval by the Owner of the Design Agent's invoice. No interest shall be due or payable on account of any payment due or unpaid except in accordance with the provisions of "Prompt Payment by Department of Administration," R.I. Gen. Laws §§ 42-11.1-1 et seq.

§ 11.9.2.2 The Owner shall not withhold amounts from the Design Agent's compensation to impose a penalty or liquidated damages on the Design Agent, or to offset sums requested by or paid to contractors for the cost of changes in the Work unless the Design Agent agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

§ 11.9.2.3 Records of Reimbursable Expenses, expenses pertaining to Additional Services, and services performed on the basis of hourly rates shall be available to the Owner upon reasonable notice.

(Paragraphs deleted)

§ 11.9.3 Within 10 working days of receipt of any progress payment from the Owner, the Design Agent must pay its Subconsultants and Subcontractors the full amount included for each such Subconsultant and Subcontractor reflected in the Design Agent's invoice for payment.

§ 11.9.4 Retainage in the amount of five (5%) percent of any amount otherwise due the Design Agent hereunder, excluding reimbursable expenses, shall be retained until the close-out of the Project.

§ 11.9.5 The Owner may, at its sole option, issue joint checks to the Design Agent and to any Subconsultant or Subcontractor or material or equipment suppliers to whom the Design Agent failed to make payment for Work properly performed or material and equipment suitably delivered.

ARTICLE 12 Deleted.

ARTICLE 13 SCOPE OF THE AGREEMENT

§ 13.1 This Agreement represents the entire and integrated agreement between the Owner and the Design Agent and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Owner and Design Agent.

§ 13.2 This Agreement is comprised of the following documents identified below:

- .1 The Purchase Order issued by the Owner
- .2 Solicitation # _____ issued by the Owner, including without limitation, the Invitation to Bid, the Instructions to Bidders, the Specifications and Drawings, any Addenda, and the Bid Checklist (with applicable forms)
- .3 AIA Document B104™–2017, Standard Abbreviated Form of Agreement Between Owner and Design Agent, as modified by the Owner.
(Paragraphs deleted)

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4 Exhibits:
(Clearly identify any other exhibits incorporated into this Agreement, including any exhibits identified in Section 4.1.)

Cost Proposal Exhibit

.5 Other documents:
(List other documents, if any, including additional scopes of service forming part of the Agreement.)

The Design Agent's Response to the Solicitation, including without limitation, the Bidder Certification Cover Form, the Technical Proposal, and the Cost Proposal.

The person signing for the Design Agent represents that he or she has been duly authorized to execute this Agreement on behalf of the Design Agent.

This Agreement entered into as of the day and year first written above; provided, however, that this Agreement shall not become a valid, binding, and enforceable contract unless and until the Owner shall have issued a Purchase Order.

**THE STATE OF RHODE ISLAND, acting by
and through it's The University of Rhode Island
Purchasing Department and THE UNIVERSITY OF
RHODE ISLAND BOARD OF TRUSTEES**

OWNER *(Signature)*

(Printed name and title)

DESIGN AGENT *(Signature)*

(Printed name, title, and license number, if required)



AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:

(Name, legal status and address)

State of Rhode Island
One Capitol Hill, Second Floor
Providence, Rhode Island 02908-5855
(401) 574-8100 (telephone)
(401) 574-8387 (facsimile)

(Paragraphs deleted)

acting by and through

(Paragraphs deleted)

The University of Rhode Island Purchasing Department

(Paragraphs deleted)

10 Tootell Road
Kingston, Rhode Island 02881
(401) 874-2171 (telephone)
(401) 874-2306 (facsimile)

<http://web.uri.edu/purchasing/>

(Paragraph deleted)

and

(Paragraphs deleted)

The University of Rhode Island Board of Trustees
35 Campus Avenue, Green Hall
Kingston, Rhode Island, 02881

(Paragraphs deleted)

On behalf of the User Agency

THE USER AGENCY

(Paragraphs deleted)

(Name, address, telephone and facsimile numbers, and web address)

(Paragraphs deleted)

The University of Rhode Island

(Paragraphs deleted)

Office of Capital Projects
60 Tootell Road – Sherman Building
Kingston, Rhode Island 02881
(401) 874-2725 (telephone)

(Paragraphs deleted)

THE Design Agent:

(Paragraphs deleted)

(Name, legal status, address, telephone and facsimile numbers, and web address)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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(1431520817)

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (the Agreement) and consist of the Agreement (and the documents enumerated therein), Conditions of the Contract (General Conditions, Supplementary Conditions, if any, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Design Agent.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Design Agent or the Design Agent's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Design Agent or the Design Agent's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Design Agent shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Design Agent's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Design Agent and the Design Agent's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items and services necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; the Contractor shall perform all work reasonably inferable from the Contract Documents as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

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§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 In the event of any conflicts or discrepancies among the Contract Documents, the provisions of the Contract Documents will be interpreted in the order of priority set forth in Rhode Island Procurement Regulation 220-RICR-30-00-13.4(B).

§ 1.2.5 In the event of any conflicts or discrepancies between the Contract Documents and the State of Rhode Island Procurement Regulations or any provision of the Rhode Island General Laws, the State of Rhode Island Procurement Regulations and the Rhode Island General Laws will control.

§ 1.2.6 In the event of any inconsistency between the Drawings and Specifications, the better quality or greater quantity of Work shall be provided.

§ 1.2.7 The Owner will be the final decision maker for any and all interpretations.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Owner and the User Agency shall have a perpetual license to utilize the Drawings, Specifications, and other documents, including electronic or digital documents, prepared by the Design Agent and the Design Agent's consultants, for the execution of the Project and shall have and retain all rights to use them and reproduce them for the production and maintenance of the Work described therein. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Design Agent's or Design Agent's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Design Agent and the Design Agent's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Design Agent does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 Deleted.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Deleted.

§ 2.2.2 The Contractor shall secure and pay for permits and fees, necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 If required for the Work in the discretion of the Owner, the Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of any information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Deleted.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a 10 working-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Design Agent's additional services made necessary by such default, neglect, or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Design Agent. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Design Agent, or by tests, inspections, or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Owner and the Design Agent any errors, inconsistencies, or omissions discovered by or made known to the Contractor or additional Drawings, Specifications, or instructions required to define the Work in greater detail to permit the proper progress of the Work as a request for information in such form as the Design Agent may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Design Agent and the Owner any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Design Agent or Owner may require.

§ 3.2.3.1 Omissions from the Drawings and Specifications of items obviously needed to perform the Work properly, such as attachments, bolts, hangers, and other fastening devices, shall not relieve the Contractor from the obligation to furnish and install such items.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Design Agent issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2, 3.2.3, or 3.2.3.1, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Design Agent for damages resulting from errors, inconsistencies, or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.2.4.1 The Contractor shall not make any changes without prior written authorization from the Design Agent and the Owner.

§ 3.2.5 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Design Agent for evaluating and responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Design Agent and shall not proceed with that portion of the Work without further written instructions from the Design Agent. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

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§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Whenever the Contractor has an obligation to provide labor and materials under the Agreement, the Contractor, at a minimum, shall provide the labor for, and furnish and install and place in operation all items, including without limitation, all proper connections.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Design Agent in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Design Agent and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and the Design Agent that materials and equipment furnished under the Contract will be of first quality, prime manufacture, and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements, including substitutions not properly authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Design Agent, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

§ 3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.6.2 The State of Rhode Island is exempt from payment of any federal or state excise, transportation, or sales tax. The Rhode Island Department of Administration Division of Purchases will furnish Exemption Certificates upon request.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections required by the Rhode Island State Building Code necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded. The Contractor shall be responsible for obtaining the Certificate of Occupancy from the appropriate governmental authorities.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 The Contractor shall promptly notify the Design Agent and the Owner if the Contractor becomes aware that the Contract Documents are not in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Design Agent before conditions are disturbed and in no event later than 21 working days after first observance of the conditions. The Design Agent will promptly investigate such conditions and, if the Design Agent determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Design Agent determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Design Agent shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Design Agent's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Design Agent. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Design Agent the name and qualifications of a proposed superintendent. The Design Agent may reply within 14 working days to the Contractor in writing stating (1) whether the Owner or the Design Agent has reasonable objection to the proposed superintendent or (2) that the Design Agent requires additional time to review. Failure of the Design Agent to reply within the 14 working-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Design Agent has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, within 20 working days after the issuance of the Purchase Order, shall prepare and submit for the Owner's and Design Agent's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals, not less frequently than monthly, as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The Contractor shall certify on the initial schedule and all revised schedules that they comply with the Contract Documents.

§ 3.10.2 The Contractor shall prepare a submittal schedule, within 20 working days after the issuance of the Purchase Order, and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Owner's and the Design Agent's approval. The Owner's and the Design Agent's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Owner and the Design Agent reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Design Agent.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Design Agent and shall be delivered to the Design Agent for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Design Agent is subject to the limitations of Section 4.2.7. Informational submittals upon which the Design Agent is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Design Agent without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Design Agent Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Owner and the Design Agent or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Design Agent that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Design Agent.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Design Agent's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Design Agent in writing of such deviation at the time of submittal and (1) the Design Agent has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Design Agent's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Design Agent on previous submittals. In the absence of such written notice, the Design Agent's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Design Agent will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Design Agent. The Owner and the Design Agent shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Design Agent have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Design Agent will review, approve, or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.12.11 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Design Agent for evaluation of resubmittals.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, and any restrictions imposed by the User Agency or the Owner, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Design Agent access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Design Agent harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Design Agent. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Design Agent and the Owner.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, the User Agency and the State of Rhode Island in accordance with Rhode Island Procurement Regulation 220-RICR-30-00-13.21.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

§ 3.18.3 Without limiting the generality of the foregoing, the defense and indemnity set forth in this Section 3.18 includes, without limitation, all liabilities, damages, losses, claims, demands, and actions on account of bodily injury, death, or property loss to a person or entity indemnified hereunder or any other persons or entities, whether based upon statutory (including, without limitation, workers compensation), contractual, tort, or other liability of any person or entity so indemnified.

§ 3.18.4 The remedies set forth herein shall not deprive any person indemnified hereunder of any other indemnity action, right, or remedy otherwise available to any such person or entity at common law or otherwise.

§ 3.18.5 The Contractor will include the indemnity set forth in this Section 3.18, without modification, in each Subcontract with any Subcontractor.

§ 3.18.6 Notwithstanding any other language in the Contract Documents to the contrary, the indemnity hereunder shall survive Final Completion of the Work and final payment under the Agreement and shall survive any termination of the Agreement.

ARTICLE 4 DESIGN AGENT

§ 4.1 GENERAL

§ 4.1.1 The Design Agent is the person lawfully licensed to practice his or her profession in the State of Rhode Island or an entity lawfully practicing its profession in the State of Rhode Island and identified in the Contract Documents as the Design Agent. The term "Design Agent" means the Design Agent or the Design Agent's authorized representative.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Design Agent as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Design Agent. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Design Agent is terminated, the Owner shall employ a successor Design Agent as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Design Agent.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Owner with assistance from the Design Agent will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction through the date the Design Agent issues the final Certificate for Payment and continuing until the expiration of the one-year period following Final Completion. The Design Agent will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Design Agent will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Design Agent will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Design Agent will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.2.1 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Design Agent for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.

§ 4.2.3 On the basis of the site visits, the Design Agent will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Design Agent will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Design Agent will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Design Agent about matters arising out of or relating to the Contract. Communications by and with the Design Agent's consultants shall be through the Design Agent. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Design Agent's evaluations of the Contractor's Applications for Payment, the Design Agent will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Design Agent has authority to reject Work that does not conform to the Contract Documents. Whenever the Design Agent considers it necessary or advisable, the Design Agent will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Design Agent nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Design Agent to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Design Agent will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Design Agent's action will be taken in accordance with the submittal schedule approved by the Design Agent or, in the absence of an approved

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submittal schedule, with reasonable promptness while allowing sufficient time in the Design Agent's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Design Agent's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Design Agent's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Design Agent, of any construction means, methods, techniques, sequences or procedures. The Design Agent's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Design Agent will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Design Agent will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Design Agent will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Design Agent agree, the Design Agent will provide one or more project representatives to assist in carrying out the Design Agent's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Design Agent will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Design Agent's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Design Agent will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Design Agent will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Design Agent's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents and approved by the Owner.

§ 4.2.14 The Design Agent will review and respond to requests for information about the Contract Documents. The Design Agent's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Design Agent will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner and the Design Agent the names of

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persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each portion of the Work. The Owner may reply within 14 working days to the Contractor in writing stating (1) whether the Owner or the Design Agent has reasonable objection to any such proposed person or entity or (2) that the Owner or Design Agent requires additional time for review.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Design Agent has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Design Agent has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Design Agent has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Design Agent makes reasonable objection to such substitution.

§ 5.2.5 MANUFACTURERS AND FABRICATORS

§ 5.2.5.1 Not later than 10 working days after the date of commencement of the Work, the Contractor shall furnish in writing to the Owner and the Design Agent the names of the manufacturers or fabricators for certain products, equipment, and systems identified in the Specifications and, where applicable, the name of the installing Subcontractor. The Owner may reply within 14 working days to the Contractor in writing, stating: (i) whether the Owner or the Design Agent has reasonable objection to any such proposed person manufacturer or fabricator; or (ii) whether the Owner or Design Agent requires additional time to review.

§ 5.2.5.2 The Contractor shall not contract with a proposed manufacturer, fabricator, or Subcontractor to whom the Owner or Design Agent has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.5.3 If the Owner or Design Agent has an objection to a manufacturer, fabricator, or Subcontractor proposed by the Contractor, the Contractor shall propose another to whom the Owner or Design Agent has no objection.

§ 5.2.5.4 The Contractor shall not substitute a manufacturer, fabricator, or Subcontractor previously selected if the Owner or Design Agent makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Design Agent. Upon the request of the User Agency and/or the Owner, the Contractor shall provide the User Agency and/or the Owner with copies of each subcontract agreement. Each subcontract agreement shall preserve and protect the rights of the Owner and Design Agent under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

- § 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

(Paragraph deleted)

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 working days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Design Agent apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

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§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement between the Owner and the Contractor; a Construction Change Directive requires agreement by the Owner and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Design Agent alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Contractor and signed by the Owner, Contractor and Design Agent stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Subsequent to the approval of a Change Order as provided in § 7.1.2, whether such Change Order changes the Contract Sum or Contract Time or both, no additional claim related to such Change Order will be considered by the Owner. Any change, once incorporated into a Change Order, is all inclusive, and includes all factors that could have been considered at the time of the Change Order such as Project impact or schedule "ripple" effect.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Design Agent and signed by the Owner, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 Deleted.

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§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Design Agent of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Design Agent shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in Section 7.3.1. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Design Agent may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of delivery;
- .3 Rental costs of machinery and equipment, exclusive of hand tools; or
- .4 Costs of premiums for all bonds and insurance and permit fees related to the Work..

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Design Agent. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Design Agent will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Design Agent determines, in the Design Agent's professional judgment, to be reasonably justified. The Design Agent's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Design Agent concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Contractor will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 The combined overhead and profit included in the total cost to the Owner for a change in the Work shall be based on the following schedule:

- .1 For the Contractor, for work performed by the Contractor's own forces, an amount not to exceed ten (10%) percent of the cost.
- .2 For the Contractor, for work performed by the Contractor's Subcontractors, an amount not to exceed five (5%) of the amount due to the Subcontractors.
- .3 For each Subcontractor, for work performed by the Subcontractor's own forces, an amount not to exceed ten (10%) percent of the cost.
- .4 Where the Work represents both additions and deletions and results in a net increase, the allowable overhead and profit shall be in accordance with this Section 7.3.11, but in no event shall the amount exceed fifteen (15%) percent of the net increase in the cost of the Work.

§ 7.3.12 All proposals with an aggregate cost equal to or in excess of \$500.00 shall be accompanied by a detailed itemization of costs, including labor, materials (quantities and prices), and Subcontracts, in a form acceptable to the Owner. In no event will a change order request reflecting an aggregate cost equal to or in excess of \$500.00 be approved without such itemization.

§ 7.4 MINOR CHANGES IN THE WORK

The Design Agent with the prior written approval of the Owner has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be affected by written order signed by the Design Agent and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

The date of commencement of the Work is the date established in Section 3.1 of the Agreement..

(Paragraph deleted)

§ 8.1.3 The date of Substantial Completion is the date certified by the Design Agent in accordance with Section 9.8.

§ 8.1.4 Deleted.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Design Agent, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, then the Contract Time shall be extended by Change Order for such reasonable time as the Owner may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

(Paragraph deleted)

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Within 20 working days of the issuance of the Purchase Order, and promptly if revision is necessary from time to time as a result of a Change Order, the Contractor shall submit to the Owner, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Design Agent and the Owner may require. This schedule, if and when approved by the Design Agent and the Owner in writing, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least 10 working days before the date established for each progress payment, the Contractor shall submit to the Design Agent and the Owner for approval an itemized Application for Payment prepared in accordance with the schedule of values for completed portions of the Work. Such application shall be notarized, if required, and supported

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by such data substantiating the Contractor's right to payment as the Owner or the Design Agent may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 All Applications for Payment for Change Orders must be accompanied by a Notice of Change in Purchase Order issued by the Owner, and if directed by the Owner, by the User Agency.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 The form of Application for Payment shall be AIA Document G702, Application and Certification for Payment, supported by AIA Document G702A, Continuation Sheet.

§ 9.3.1.4 Until Substantial Completion, the Owner shall pay ninety-five (95%) percent of the amount due the Contract on account of progress payments.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. The Contractor shall immediately satisfy any lien, claim, or encumbrance against the site where the Project is located and indemnify the Owner from and against all resulting costs and expenses, including without limitation, attorneys' fees.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Design Agent will, within 7 working days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Design Agent determines is properly due, or notify the Contractor and Owner in writing of the Design Agent's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Design Agent to the Owner, based on the Design Agent's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Design Agent. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Design Agent has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.4.3 The Contractor must submit all product literature, material and color samples with each Application for Payment, or as otherwise required by the Owner.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Design Agent will withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Design Agent's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Design Agent is unable to certify payment in the amount of the Application, the Design Agent will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Design Agent cannot agree on a revised amount, the Design Agent will promptly issue a Certificate for Payment for the amount for which the Design Agent is able to make such representations to the Owner. The Design Agent may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Design Agent's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 failure to carry out the Work in accordance with the Contract Documents; or
- .8 any other failure to comply with the obligations of the Contractor under the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 The Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Design Agent and the Design Agent will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Design Agent has issued a Certificate for Payment and the Owner has approved the Certificate for Payment in writing, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Design Agent.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than 10 working days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Design Agent will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Design Agent and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within 7 working days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. The Owner shall have the right to withhold payment(s) to the Contractor in the event that any Subcontractors or material and equipment suppliers have not been properly paid. Neither the Owner nor Design Agent shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Design Agent does not issue a Certificate for Payment, through no fault of the Contractor, within 7 working days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within 7 working days after the date established in the Contract Documents the amount certified by the Design Agent or awarded by binding dispute resolution, then the Contractor may, upon 7 additional working days' written notice to the Owner and Design Agent, make a claim for payment as provided under the provisions of applicable law.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Design Agent a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Design Agent will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Design Agent's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Design Agent. In such case, the Contractor shall then submit a request for another inspection by the Design Agent to determine Substantial Completion. The Design Agent will perform no more than 2 inspections to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Design Agent for any additional inspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Design Agent will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment less the amount of five (5%) percent to be retained by the Owner in accordance with R.I. Gen. Laws § 37-12-10.1. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments,

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retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Design Agent as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Design Agent.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Design Agent shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Design Agent will promptly make such inspection and, when the Design Agent finds the Work acceptable under the Contract Documents and the Contract fully performed, the Design Agent will promptly issue a final Certificate for Payment stating that to the best of the Design Agent's knowledge, information and belief, and on the basis of the Design Agent's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Design Agent's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. The Design Agent will perform no more than 2 inspections to determine whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Design Agent for any additional inspections.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Design Agent (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 working days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner, and (6) all other close-out documents required by the Owner, including without limitation, all as-built plans, warranties, manuals, and other materials set forth in the Contract Documents. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, Final Completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting Final Completion, and the Design Agent so confirms, the Owner shall, upon application by the Contractor and certification by the Design Agent, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Design Agent prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;

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- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 claims permitted under the State of Rhode Island General Conditions of Purchase Regulation.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.11 The Contractor and the Contractor's surety shall be liable for and shall pay the Owner as liquidated damages the sums specified in the Solicitation and Bid Form, or if completed, the amount set forth in Section 3.4 of the Agreement.

§ 9.12 Warranties required by the Contract Documents shall commence on the date of Final Completion of the Work.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel and in consultation with the appropriate governmental authorities.

§ 10.2.4.1 When use or storage of explosives, or other hazardous materials, substances or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall give the User Agency and the Owner reasonable advance notice.

§ 10.2.4.2 If the Contract Documents require the Contractor to handle materials or substances that under certain circumstances may be designated as hazardous, the Contractor shall handle such materials in an appropriate manner.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Design Agent or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Design Agent.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Design Agent in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Design Agent the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Design Agent will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Design Agent has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Design Agent have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the extent permitted by the provisions of R.I. Gen. Laws §§ 9-31-1 et seq., the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Design Agent, Design Agent's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as is specified in the Solicitation and as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.1.2 The Contractor's liability insurance shall include all major coverages and be on a comprehensive general liability basis.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance as specified in the Solicitation and as otherwise acceptable to the Owner shall be filed with the Owner and the User Agency prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 working days' prior written notice has been given to the Owner and the User Agency. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the User Agency, and their elected and appointed officials, members, employees, and agents, the Design Agent and the Design Agent's consultants as additional insureds for claims caused in whole or in part by the Contractor's acts or omissions during the Contractor's operations; and (2) the Owner, the User Agency, and their

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elected and appointed officials, members, employees, and agents, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.1.5 The Contractor shall be responsible for the prompt payment to the Owner of any deductible amounts under any insurance policies required under the Contract Documents for claims made pursuant to such policies.

§ 11.2 OWNER'S LIABILITY INSURANCE.

§ 11.2.1 The Contractor shall furnish the Owner and the User Agency, through the Design Agent, an insurance certificate providing Owner's Protective Liability extended to include the interests of the Design Agent, and to protect the Owner, User Agency, and Design Agent from any liability which might be incurred against any of them as a result of any operation of the Contractor or Subcontractors or their employees or anyone for whom either the Contractor or Subcontractors are responsible. Such insurance shall be written for the same limits as the Contractor's commercial general liability insurance and shall include the same coverage.

§ 11.2.2 If the Owner engages separate contractors to perform work for, or in or around, the Project, it shall require in its contracts with each separate contractor that Contractor and its officers, directors, partners, members, employees, and agents shall be: (i) named as additional insureds on a primary, noncontributory basis to any commercial general liability, pollution liability, and excess liability insurance policies; and (ii) provided a waiver of subrogation on all workers compensation and professional liability insurance policies.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the state of Rhode Island, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the User Agency, the Contractor, Subcontractors and Sub-subcontractors in the Project. If the Owner and/or the User Agency incur any damages by failure of the Contractor to maintain such insurance, then the Contractor shall bear all reasonable cost resulting from such failure.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Design Agent's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 Deleted.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 Deleted.

§ 11.3.3 Deleted.

§ 11.3.4 Deleted.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 working days' prior written notice has been given to the Owner and the User Agency.

§ 11.3.7 WAIVERS OF SUBROGATION

The Contractor waives all rights against the Owner and the User Agency and any of their subcontractors, sub-subcontractors, agents and employees, and (2) the Design Agent, Design Agent's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Design Agent, Design Agent's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under this property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Contractor's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Contractor shall deposit in a separate account proceeds so received, which the Contractor shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Contractor as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within 5 working days after occurrence of loss to the Contractor's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Solicitation.

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§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Design Agent's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Design Agent, be uncovered for the Design Agent's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Design Agent has not specifically requested to examine prior to its being covered, the Design Agent may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Design Agent or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Design Agent's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Final Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable time after receipt of notice from the Owner or Design Agent, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.2.4 Upon request by the Owner and prior to the expiration of one year from the date of Final Completion, the Design Agent will conduct and the Contractor shall attend 2 meetings with the Owner to review the facility operations and performance.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be

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sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the State of Rhode Island.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to any executive, legislative, judicial, regulatory, or administrative body of the state, or any political subdivision thereof, including without limitation, any department, division, agency, commission, board, office, bureau, authority, school, water, or fire district, or other agency of Rhode Island state or local government that exercises governmental functions, any other governmental authority, and any quasi-public corporation and/or body corporate and politic. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice, or when received, if manually delivered or transmitted by electronic mail or facsimile to the last such address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Design Agent or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Design Agent timely notice of when and where tests and inspections are to be made so that the Design Agent may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Design Agent, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Design Agent will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Design

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Agent of when and where tests and inspections are to be made so that the Design Agent may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Design Agent's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Design Agent.

§ 13.5.5 If the Design Agent is to observe tests, inspections or approvals required by the Contract Documents, the Design Agent will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

No interest shall be due or payable on account of any payment due or unpaid under the Contract Documents except in accordance with the provisions of "Prompt Payment by Department of Administration," R.I. Gen. Laws §§ 42-11.1-1 et seq.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 calendar days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped; or
- .3 Because the Design Agent has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1

§ 14.1.2 Deleted.

§ 14.1.3 If one of the reasons described in Section 14.1.1 exists, the Contractor may, upon 7 working days' written notice to the Owner and Design Agent, terminate the Contract and recover from the Owner payment for Work executed.

§ 14.1.4 If the Work is stopped for a period of 60 calendar days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon 7 additional days' written notice to the Owner and the Design Agent, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor:

- .1 refuses or fails to supply enough properly skilled workers or proper materials;

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- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 disregards or fails to comply with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- .4 otherwise is guilty of breach of a provision of the Contract Documents; or
- .5 cancels or the Contractor or the Owner receives notice of cancellation or nonrenewal of any insurance required under the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, 7 working days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Agent's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The
(Paragraphs deleted)

Owner shall not be liable to the Contractor or any Subcontractor for claims or damages of any nature caused by or arising out of any delays. The sole remedy against the Owner for delays shall be the allowance of additional time for completion of the Work in accordance with the provisions of Section 8.3.1.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party. Such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly serviced if delivered in person, by mail, by courier, or by electronic transmission. Claims by either party must be initiated within 21 working days after occurrence of the event giving rise to such Claim or within 21 working days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Design Agent will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.5.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

§ 15.1.5.4 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

§ 15.1.6 The Contractor waives Claims against the Owner for consequential damages arising out of or relating to this

(Paragraphs deleted)

Contract. This waiver includes damages incurred by the Contractor for principal office expenses, including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit. This waiver is applicable, without limitation, to all consequential damages due to the Contractor's termination in accordance with Article 14. Nothing in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims shall be referred to the Initial Decision Maker for initial decision. The University of Rhode Island Vice President for Administration and Finance appointed pursuant to the provisions of the "Delegation of Limited Procurement Authority," dated January 19, 2018, will serve as the Initial Decision Maker in accordance with the provisions of the "Delegations of Limited Procurement Authority," State Purchases Act, State of Rhode Island Procurement Regulations, and this Section 15.2.1. An initial decision shall be required as a condition precedent to binding dispute resolution pursuant to Section 15.3.1 of any Claim arising prior to the date final payment is due.

§ 15.2.2 Deleted.

§ 15.2.3 Deleted.

§ 15.2.4 Deleted.

§ 15.2.5 Deleted.

§ 15.2.6 Deleted.

§ 15.2.6.1 Deleted.

§ 15.2.7 Deleted.

§ 15.2.8 Deleted.

§ 15.3 MEDIATION

§ 15.3.1 For any Claim not resolved by the Initial Decision Maker procedures set forth in Section 15.2.1, and prior to the implementation of the binding dispute resolution procedures set forth in Section 15.4.1, the Contractor or the Design Agent shall have the option to pursue mediation, exercisable by written notice to the Owner within 30 calendar days of an Initial Decision. In the event of the exercise of such option by the Contractor or the Design Agent, the Owner and the Contractor or the Design Agent shall attempt to select a mediator, and in the event that the Owner and the Contractor or the Design Agent cannot agree on a mediator, either party may apply in writing to the Presiding Justice of the Providence County Superior Court, with a copy to the other, with a request for the court to appoint a mediator, and the costs of the mediator shall be borne equally by both parties.

§ 15.3.2 Deleted.

§ 15.3.3 Deleted.

§ 15.4 BINDING DISPUTE RESOLUTION

§ 15.4.1 For any Claim not resolved by the Initial Decision Maker procedures set forth in Section 15.2.1, or mediation at the option of the Contractor pursuant to Section 15.3.1, the method of binding dispute resolution shall be determined in accordance with the provisions of the "Public Works Arbitration Act," R.I. Gen. Laws §§ 37-16-1 et seq.

(Paragraphs deleted)

§ 15.4.4 Deleted.

§ 15.4.4.1 Deleted.

§ 15.4.4.2 Deleted.

§ 15.4.4.3 Deleted.

§ 16 COMPLIANCE WITH APPLICABLE LAW

The Contractor and its Subcontractors shall comply with all applicable federal, state, and local laws.

Init.

Attachment F

Bid Form

Bid Item	Cost
Base Bid: Bridging Documents	
Allowance: Code Review, Scheduling and Supplemental Engineering Analysis Outside of Base Scope of Work as directed by the University	\$15,000.00
TOTAL BID:	

Staff	Hourly Rates **

**** Hourly rates are requested in case the University decides to add services to the base contract.**