

# A REQUEST FOR PROPOSALS SANITARY SEWER FACILITIES PLAN

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# 1. Introduction

The Town of Johnston (Town) is seeking the services of a qualified engineering firm (Consultant) to prepare a comprehensive Wastewater Facilities Plan update in order to identify the infrastructure necessary to deliver sanitary sewer service to our current and future customers. Completion of this update shall include connections and updates to the mapping of our sewer system and the development of a prioritized short-term and long-term Capital Improvements Plan (CIP) with detailed descriptions and cost estimates, which shall be prepared based on the findings and design criteria for construction, maintenance and expansion of the sanitary sewer system. Proposals should additionally include any tasks they believe are important and should be part of the study. In addition to complying with the scope of work set forth in this RFP, proposals should also demonstrate the ability to comply with the checklist used by the RI Department of Environmental Management to determine eligibility for construction assistance programs using federal funding found in Appendix A of this document.

# 2. Project Description

The Town's existing sewer collection system has been constructed over a period of approximately 63 years beginning in 1960. It spans over 58 miles of sewers including both gravity sewer and pressurized lines. There are 14 pump stations in the system. Plans are missing for parts of the system and field work may be required to develop a clear understanding of the system's entirety. Portions of the system were developed privately and subsequently acquired by the Town and the specifications and location of some of those lines are not precisely known.

Sewer service in the Town is provided by Narragansett Bay Commission (NBC) interceptors and the town who owns and maintains the lateral system. Some residents and businesses are served by systems belonging to the cities of Cranston and Smithfield. The current system serves over 5,500 households and businesses.

#### **Project Goals and Objectives:**

- 1. Update the Wastewater Facilities Plan (last updated 2011) using all subsequent studies in order to identify strategies for planning, budgeting and improving the Town's wastewater system based on current demands, future growth, maintenance conditions of the system and emergency contingencies.
- 2. Update the systemwide map to include all sewer lines and properties that are served by the system and to connect errors in our maps. Our intent is to include this information as part of our GIS system to contain links to information of manholes, pump stations and any design mapping that is available.
- 3. Provide solutions to existing problems and inadequate sanitary sewer systems.
- 4. Guide the expansion and extension of the sanitary sewer system to serve future growth, including estimates of associated costs.

- 5. Provide a review of the current funding for the sanitary sewer program and define possible funding options.
- 6. Provide sanitary sewer program services that can include, but is not limited to: planning and budget support for the Capital Improvements Program, assistance with grant applications, update of maps, project designs and specifications.

# 3. Scope of Work

The Wastewater Facilities Plan Update is intended to provide an evaluation of the system plans, current system conditions, and projected future needs for serving build-out within the Town. Future urban service demands and capacity enhancement measures are also to be analyzed. A conceptual description of the engineered systems to serve certain areas of interest for expansion to the current system and a planning level cost will be part of the analysis.

#### A. The Scope of Work Includes:

- 1. Development of an inventory of existing sanitary sewer facilities.
- 2. Development of design criteria for analysis of existing facilities and design for future facilities.
- 3. Analysis and evaluation of the existing system under existing and future development conditions.
- 4. Review of existing Wastewater Facilities Plans, reports, studies, codes, regulations
- 5. Development of a plan showing the recommended improvements to the system incorporating existing facilities and wherever possible, a technical analysis of alternatives.
- 6. Address all comments from Rhode Island Department of Environmental Management and revise the facilities plan as required during the RIDEM review and approval process.
- 7. Preparation of cost estimates for the recommended improvements specifying any parameters for a system development charge or connection fee associated with new connections to the sanitary sewer system.
- 8. Prioritization of the sanitary sewer improvements with justifications to support integration into a Capital Improvement Plan program.
- 9. Analysis of the current funding structure and recommendations for additional options.
- 10. Preparation of a Wastewater Facilities Plan, including detailed maps and exhibits.

A more detailed scope and cost of this work will be determined separately with the selected consultant.

#### The finished Wastewater Facilities Plan Update will include:

- An executive summary that includes a general overview of the history of the system, including population demographic, a detailed description of the current system and an explanation of why this Wastewater Facilities Plan Update is being prepared.
- A detailed summary of the findings of the Wastewater Facilities Plan Update
- Provide a detailed list of the conclusions of the Wastewater Facilities Plan Update.
- Provide a detailed list of the recommendations for the Wastewater Facilities Plan Update including project descriptions and cost estimates. An operational strategy and a detailed capital improvement plan are of major importance.

#### At a minimum, these sections should address the following issues:

- 1. Community Background: Briefly describe the customer base and land use, residential, commercial and industrial customers, political jurisdictions and agreements, population and a history of Johnston's sanitary sewer system.
- 2. Johnston's Existing Sanitary System: Provide information and mapping of the physical features of the existing system plus an explanation of how the system is currently operated. Describe Johnston's existing sanitary sewer system and include community, system infrastructure, regulatory and financial background.
- 3. Evaluate Current Plans, System Conditions, and Preliminary Alternatives: Consultant shall review existing Wastewater Facilities Plans, reports, studies, codes, regulations, etc., provided by the Town; prepare final schedule, and hold a kick-off meeting with Town of Johnston staff.
- 4. Implementation: Provide an implementation strategy for the recommended plan. Details will include graphs, cost tables and description of sufficient detail to give the Town information to schedule and plan phased improvements depending on demand. This Plan Update will give Town staff sufficient information to:
  - Determine if the sewer system has the capacity to serve future proposed development;
  - Determine the required sewer system improvements e.g. line size, gravity service or lift stations;
  - Determine the approximate cost of the required improvements; and
  - Determine how the required improvements fit within the overall plan for expanding the sewer system.
- 5. Federal, State and Local Rules and Regulations: Provide a discussion of the Federal, State and local rules and regulations that relate to the Johnston sanitary sewer system.
- 6. Funding/ Budget: Provide a description and discussion of Johnston's existing funding mechanisms encompassing operations and maintenance (O & M and capital improvements plan. Discuss the Town's sewer assessment fee and its inter-relationship with NBC.
- 7. Appendices: The Wastewater Facilities Plan Update appendices will include data, modeling results, reference list, maps, other reports, and any other material necessary to provide full background information relied upon in developing the Wastewater Facilities Plan Update recommendations. The appendices may be bound in a separate volume.

### **B.** Goals of The Wastewater Facilities Plan Update

- 1. To review, validate and update as appropriate the growth assumptions and needed projects listed in the current master plan document to accommodate current projected growth.
- 2. To solve operational and infrastructure problems with the existing system and ensure compliance with regulatory guidelines.
- 3. To analyze both operational deficiencies and infrastructure deficiencies of the existing sewer system. This will be accomplished through reviewing existing reports, by holding interviews with appropriate Town staff, and field investigation. Infrastructure requirements include the need to make appropriate considerations for future service. What reserve capacity may exist, and what potential future urban areas can be most efficiently and cost effectively served by extension of the existing or planned Town system.
- 4. To Propose and evaluate alternatives that will meet the stated goals and address future sewer demands, infrastructure needs, regulatory issues, and implementation. Each alternative proposed will include a detailed description, cost analysis, layout drawings and other appropriate material.
- 5. To develop alternatives and improvements to the current operational strategy.
- 6. To develop detailed alternatives for collection and transmission to the NBC System. The selected Consultant will work closely with designated Town staff in developing the above alternatives and in implementing system operational and maintenance strategies.
- 7. The Town will be very interested in innovative ideas the Consultant may have that would save the Town money in operation, maintenance, design and construction of future sewer systems and financing, all of which would fall within the scope of a Master Plan.
- 8. To describe the recommended improvements that will allow Johnston to provide sewer service to our existing and future users. This will incorporate the recommended sewer system operational strategy and any other recommended operational and maintenance improvements. *Again, a detailed and prioritized capital improvement plan is an absolute necessity.* Prioritization of proposed plans and alternatives will be accomplished jointly by Consultant and Town staff. The recommended physical improvements will encompass collection and transmission to the NBC system. Detailed mapping, narrative project descriptions, and cost tables will be included. Costs will be based on the current year and will be indexed to the most applicable ENR index for future construction. Provide a "cash flow analysis" using the past three year's audited financial statements as a basis. This analysis is to be projected out no more than ten years at current bond interest rates for the sewer fund.

# C. Procedurally, the Consultant Shall:

- 1. Meet with Town staff to establish a working relationship, detailed task outline and project schedule
- 2. Analyze and evaluate rules, statutes, regulations, and technical information pertinent to study development. The plan must meet the requirements of the Rhode Island Department of Environmental Management rules and regulations for the Operation and Maintenance of Wastewater Treatment Facilities (250-RICR-150-10-4).
- 3. As draft chapters are completed, they are to be presented to staff for review and comment. The Town assumes there will be a 60% and 90% review of the draft before the final report is prepared.
- 4. Supply twenty-five (25) printed copies and one (1) electronic version in PDF of the DRAFT plan to the Town for public review and comment.
- 5. Present a draft report to the Town staff, the Planning Commission and the Town Council in work sessions.
- 6. Assist staff with the process of public hearings (at least two) and presentations to the Planning Commission (at least one) and the Town Council (at least one) for adoption.
- 7. Produce a final copy of adopted plan and deliver twenty-five (25) printed copies and one (1) electronic version in PDF of the adopted Wastewater Facilities Plan to the Town.

# 4. Proposal Submission and Project Schedule

# Closing Date and Anticipated Project Schedule

Submit one (1) original, four (4) copies, and an electronic PDF version of the consultant's proposal in an envelope marked:

TOWN OF JOHNSTON, RHODE ISLAND REQUEST FOR PROPOSALS FOR CONSULTANT SERVICES, WASTEWATER FACILITIES PLAN UPDATE

#### Addressed to:

Purchasing Agent/Town Clerk Town of Johnston 1385 Hartford Avenue Johnston, Rhode Island 02919

All proposals must be received no later than 3:00 p.m. (local time) on March 12, 2024

Proposals received after this date and time will not be accepted. Faxed or emailed proposal submittals will not be accepted.

Award of a Consultant contract is anticipated to occur on April 12, 2024. It is anticipated that a final executed contract will be procured within 30 days after the award.

The initial draft Wastewater Facilities Plan shall be completed by April 16, 2025. Draft copies of the plan will be submitted to staff for review and comment. Over a four-week period, the consultant will meet with staff to present the draft plan, answer staff questions, and incorporate appropriate comments into draft plan. At this time and on behalf of the Town, the Consultant will submit the Wastewater Facilities Plan Update to RI Department of Environmental Management for their review and comment. The consultant will be required to respond to comments from RI Department of Environmental Management.

At the end of this four-week period, public meetings will be scheduled with the Planning Board and the Town Council at which the Consultant will present the plan. The Consultant shall prepare a simple summary brochure/presentation for the meetings and assist staff in presenting the plan.

#### **General Conditions for Proposals**

Proposals should demonstrate the ability to comply with the checklist used by the RI Department of Environmental Management to determine eligibility for construction assistance programs as applicable using federal funding found in Appendix A.

Consultants submitting proposals, which are evaluated as being highly responsive to the RFP, may be requested to make an oral presentation to the Consultant Selection Committee.

Proposals shall remain in effect for a period of sixty (60) days after the closing date. Each responding Consultant may withdraw their proposal in writing at any time before closing date and time.

The proposal must state that the Consultant is an Equal Opportunity Employer and will comply with all Federal, State and local laws, rules and regulations.

The Town reserves the right to:

- Accept or reject any or all proposals received as a result of this RFP
- Negotiate contract terms with qualified Consultant
- Take into consideration any or all information supplied by the Consultant in their proposal and the Town's investigation into the experience and responsibility of the Consultant.
- Award a contract to that respondent the Town determines to be the most responsive and responsible to this RFP
- Cancel the RFP process entirely if deemed in the best interest of the Town
- In addition, the Town may accept or reject proposals based on minor deviations from the stated specifications, when such action is deemed to be in the Town's best interest. The successful Consultant shall commence work only after an agreement with the Town is negotiated, a contract fully executed, and a notice to proceed has been issued.
- Incurring costs: Neither the Town of Johnston, nor its agents, are liable for costs incurred by consultants prior to the issuance of a contract.

Addenda and Contact with Town Personnel: From the date of issuance of this RFP until the opening of the received proposals, consultants may not speak with Town staff about this RFP. All questions or requests for clarification shall be filed in writing to Debbie Pavone at <a href="mailto:dpavone@johnston-ri.us">dpavone@johnston-ri.us</a>. All questions must be received ten (10) calendar days prior to the RFP closing date. All questions will be answered by written Addenda which will be issued on the Town's webpage at <a href="https://townofjohnstonri.com/request-for-proposals">https://townofjohnstonri.com/request-for-proposals</a> and the State of Rhode Island's procurement page seven (7) days prior to the RFP closing date. It is the responsibility of the proposer to check for any posted addenda, and ensure that the submitted proposal includes said addenda. The Town is not responsible for any explanation, clarification, interpretation, or approval made or given in any other manner.

# 5. Contract Terms

The successful Consultant shall complete a Town standard contract in the form of a Professional Services Contract which shall incorporate a contract, the Scope of Work, a list of tasks, a work schedule, and certificates of insurance.

The Town will issue the Notice to Proceed after the execution of the contract.

The contract shall not be assigned in part or in total and the Consultant shall be solely responsible for the work of sub-consultants.

<u>Project Budget:</u> Prospective Consultants shall clearly show and define which tasks they will perform for their proposed fee. Details shall include Consultant and sub-consultant staff hours for each task.

Contract Payment Schedule: Payment for work will be made monthly upon receipt of Consultant's billing statement, consistent with Town procedures and as established by the Finance Department. Each statement must include a summary of progress made through the date of the billing and shall be submitted to the Director, Department of Development and Public Service. Monthly payments will be based on the costs incurred as summarized in the progress report.

Insurance Coverage: The selected Consultant will be required to provide Errors and Omissions, Professional Liability Insurance in the amount of \$1,000,000 for this project as well as the other insurance coverage including Worker's Compensation. The Consultant shall carry, at a minimum, comprehensive or commercial general liability, personal injury, and property damage insurance in the amount of \$1,000,000 aggregate total for all claims arising out of a single accident or occurrence. The Consultant shall include the Town, its officers, agents, and employees as named insured on insurance policies issued for this project, or shall furnish an additional insured endorsement naming the same as an additional insured to the Consultant's existing public liability and property damage insurance.

The Consultant shall carry, at a minimum, automobile liability in the amount of \$1,000,000 aggregate total for all claims arising out of a single accident or occurrence. In addition, the Consultant shall insure the work for 100 percent of replacement value for the life of the contract against all loss or damage by fire, theft, vandalism, and malicious mischief.

Before the contract is executed, the Consultant shall furnish to the owner a certificate of insurance for limits set out above which is to be in force and applicable to the project.

# 5. Proposal Requirements

# **Proposal Instructions**

The Consultant must submit a definitive proposal for the end results that are set forth in this RFP. The proposal must describe the intended performance of the Consultant on the activities prescribed and the resources to perform the activities. The selected Consultant must have demonstrated experience in this type of study. The professional staff necessary to conduct the required study must be available for timely response in preparing the Plan Update. The Consultant should have available a project manager with demonstrated skill in managing an interdisciplinary team. The Town expects the Consultant to maintain the same project manager and key team members through the duration of the project. Subconsultants proposed by the Consultant shall be listed in the proposal.

<u>Required Information:</u> The proposal shall include, as a minimum, the following items:

- 1. The name of the person(s) authorized to represent the Consultant in negotiating and signing any contract that may result from this document.
- 2. A description of the organization, size, and structure of the Consultant's team.

A statement that the proposal includes all terms and conditions of the RFP.A problem statement from the Consultant's viewpoint, the objectives of the proposed Consultant work, the Consultant's proposed methodology, and a work plan for completing the work. If the Consultant chooses to

modify the objectives section, those modifications shall be explained. The Consultant should clearly define the assumptions behind the proposal.

Acknowledgment that the Consultant has the ability to produce a final plan that will comply, where applicable, with the checklist used by the RI Department of Environmental Management to determine eligibility for construction assistance programs using federal funding found in Appendix A of this document.

- 3. At least three (3) references of former clients with summaries or samples of previous work that demonstrate the Consultant's ability to conduct a study of this scope and magnitude.
- 4. A list of similar master plans developed within the past five (5) years.
- 5. The name of the Consultant's project manager and the names of professional persons who will perform the work, a current resume for each, including a description of qualifications, skills, responsibilities, and the special knowledge material to this project.
- 6. A list of the tasks, responsibilities, and qualifications of any proposed sub-consultant(s).
- 7. A work schedule showing duration, dependency, and the dates of completion of the tasks necessary to meet the Town's objectives.
- 8. Any Consultant proposed modification or addition to the objectives detailed in the proposal will be separately assigned resources to permit clear distinction between those items required for the requested proposal and modified proposal.
- 9. The Consultant shall provide a current rate schedule for all consultant and sub-consultant team members who will be assigned to the project. This rate schedule shall be submitted in a separate sealed envelope with the following information clearly printed on the envelope:

Town of Johnston, Rhode Island

Request for Proposals for Consultant Services

Wastewater Facilities Plan Update

Consultant & Sub-Consultant Rate Schedule

- 10. The rate schedule envelope will be opened when a consultant has been selected and negotiations for final scope of work and Consultant fees are undertaken.
- 11. Provide a statement outlining the anticipated involvement of Town staff.
- 12. Provide a schedule of the Consultant and sub-consultant staff hours associated with each task defined in the proposal.
- 13. A brief discussion of whether and how any work done on behalf of any other agencies within Rhode Island would affect work to be provided to the Town.

# **Evaluation Criteria**

The proposals will be reviewed by a selection committee consisting of at least two Town staff members and will be scored and ranked using the following criteria for a total possible award of 100 points:

- Introductory letter (5 points)
- Firm capabilities (20 points)
- Project team (20 points)
- Project approach (40 points)
- Supporting information (15 points)

#### Appendix A

#### Wastewater Planning & Design / State Revolving Fund Facilities Plan Checklist

The following checklist is used by the RI Department of Environmental Management to determine eligibility for construction assistance programs using federal funding. All proposals relating to the Town of Johnston's Sanitary Sewer Facilities Plan must demonstrate the ability to with this checklist where applicable.

#### I. Executive Summary

# Il. Statement of Project Need

- A. Health, Security, Aging Infrastructure, and Resiliency
- B. Service Area Growth
- C. New RIPDES permit limit(s) or other enforceable actions

# Ill. Planning Area

- A. Provide a description of the following:
  - 1. Planning area (include map
  - 2. Geographical boundaries (include map
  - 3. Institutional (governmental unit) structure
  - 4. A description of wastewater utility management structure
  - 5. The current rate structure
  - 6. The entities conducting planning
- B. Relationship between FP and the Community Comprehensive Plan (CCP)
- C. Provide a map which shows:
  - 1. Service area
  - 2. Political boundaries
  - 3. Natural (e.g. wetlands, coastal), cultural, historical and archeological resources consistent with CCP inventory

#### IV. Effluent Limitations

- A. copy of RIPDES permit
- B. Is the receiving water impaired (303(d) List: Category 5)?

- C. Will the project(s) contemplated in the FP address impacted waters (303(d) List: Cat. 4a, 4b, 5)?
- V. Assess Current Situation
  - A. Existing Environmental Conditions (provide text and maps)
    - 1. Geophysical
    - a. Soils
    - b. Topography
    - c. Geology
    - d. Hydrology
- 2. Surface water watersheds, wetlands, floodplains, estuarine (coastal) areas and water supply sources
- 3. Groundwater aquifers, recharge, and wellhead protection areas
- 4. Surface and Groundwater quality, quantity, and uses
- 5. Documentation of OWTS problem areas
- 6. Land-use and demographic data consistent with CCP
- B. Existing System and Flows
  - 1.Existing System
    - a. Wastewater Treatment Facilities (WWTF)
      - i. Location of all treatment plants, sludge treatment and disposal areas, pretreatment facilities
      - ii. WWTF performance compared to RIPDES permit
      - iii. Quality of operation and process control
      - iv. Actual number and qualifications of operating staff versus planned/needed
      - v. Adequacy of
        - 1) Plant hydraulics
        - 2) Laboratory facilities
        - 3) Sampling & testing
        - 4) Maintenance program
      - vi. Cost recovery and user charges

- vii. Impact of septage on WWTF
- viii. Effluent treatment/reuse methods
- ix. Sludge treatment/disposal/reuse methods
- x. Flow/waste reduction measures.
- b. Collection System (include map)
  - i. Location of all pumping stations and sewers
  - ii. Number of service connections and population currently served by sewers
  - iii. Present design service population
  - iv. Location and description of major industrial discharges
  - v. Location of all bypasses and overflows
- 2. Existing Flows and Wasteloads
  - a. Monthly average, maximum month, maximum day and peak hour flows
  - b. Dry and wet weather
  - c. Septage (in-town and out-of-town)
  - d. Combined sewer overflows
  - e. Proportion and quantity bf flow attributed to infiltration/inflow
  - f. Wastewater characteristics (BOD, TSS, TN, TP, Ammonia, etc.)
  - g. Proportion of residential/commercial/industrial flows
- 4. Assess Future Situation (Twenty-year Planning Period)
  - A. Land-use Forecasts
    - 1. Consistent with local CCP
    - 2. Utilized in estimating future development
    - 3. Utilized in estimating future wasteloads
  - B. Demographic Forecasts (consistent with State Guide Plan (SGP))
  - C. Socioeconomic Forecasts (consistent with SGP)
    - 1. Industrial projections
      - 2. Commercial projections.
      - 3. Median household income or other financial data
      - 4. Designated environmental justice area(s)
  - D. Forecasted Flows and Wasteloads
    - 1. Residential
    - a. Residential wastewater strength approximates 0.17 lb/day BOD, 0.2 lb/day TSS

- b. Domestic future flows are based on analysis of flow records and/or approximates 70 gpcd
- c. Sewer service area extensions consistent with CCP

#### 2. Industrial

- a. Industrial flows are consistent with similar flows and loads within the service area
- b. Forecasted future industrial flows are consistent with the CCP

#### 2. Commercial

- a. Future commercial flows are consistent with similar flows and loads within the service area
- b. Forecasted future commercial flows are consistent with the CCP
- 3. Septage
- a. Septage forecasts are based on sewered/unsewered forecasts in CCP
- b. Septage forecasts consider domestic, industrial, commercial sources
- c. Out-of-town septage considered in forecasts
- 4. Sludge treatment and disposal
- a. Forecasts quantity and composition of sludge generated from WWTF treatment process(es) and septage
- b. Forecasts quantity and composition of sludge from sludge treatment and dewatering process
- c. Method for final disposal of sludge complies with DEM's Sewage Sludge Management Regulations
- d. If method for final disposal is for liquid sludge only, ability to dewater sludge is still maintained
- 5. Flow and wasteload reduction programs
- a. Infiltration/Inflow (1/1)
  - i. Does an 1/1 study exist for the sewer service area?
  - ii. Does excessive 1/1 exist by DEM criteria? (i.e. 120 gpcd of infiltration during periods of high groundwater, and during a storm event inflow flow does not exceed 275 gpcd or cause WWTF operational problems)
  - iii. Does a sewer rehabilitation program (SSES) exist or is one proposed which includes a cost-effectiveness analysis of reduction versus treatment costs, scope of work, cost estimates, and schedule for completion which is reasonable and represents realistic expectations for excessive 1/1 reduction?
- b. Pretreatment

Is the Pretreatment Program currently in compliance with DEM regulations?

E. Climate Change and Resiliency

Wastewater infrastructure will need to be resilient to the impacts of climate change. To that end the FP must address the following:

- 1. Consistency with DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure
  - 2. Implementation of projects and/or improvements identified in any WWTF Resiliency Plan required under the RIPDES permit.

#### VII. Development and Evaluation of Alternatives

All reasonable alternatives generated must be based upon and consistent with the local CCP and the SGP and must be evaluated to include the following factors: no action alternative; direct, indirect, beneficial, and detrimental impacts of the entire municipal wastewater treatment system on all other related environmental objectives; existing and future environmental conditions, including all other related environmental objectives, affected by the entire system; the total life-cycle costs of the alternative, including net annualized cost; land-use and other socioeconomic parameters affected by the entire system; cumulative impacts evaluated within the context of complete municipal treatment system as well as other public works projects and future community growth.

## A. Optimizing Existing Facilities (i.e. "no-build" alternative)

- 1. The optimum performance level possible with the existing process design
- 2. The age and reliability of existing equipment and its remaining useful life
- 3. The qualifications, number and training of current operating personnel
- 4. Additional operating modifications/improvements and laboratory facilities needed to monitor and/or improve operations
- 5. Possible process or operational modifications
- 6. The impact of reducing 1/1 or other flow and waste reduction programs including storm water (i.e. integrated planning)

#### B. Regional Solutions

Regionalizing facilities and services must be considered. An analysis of regional solutions should address the following special considerations:

- 1. Effects of interceptor location on land use, particularly where land is undeveloped
- 2. Effects of alternative combinations on surface waters in the region
- 3. Possible limitation on future expansion due to unavailability of land
- 4. Differences in reliability, operation, and maintenance of facilities.
- 5. The regionalization alternative is consistent with the recommendations of the applicable water quality management (WQM) plan/TMDL and the SGP
- 6. Are there inter-municipal service agreements?

7. Evaluates cost savings realized through economies of scale/more efficient operation

#### C. Unsewered Areas

(If after a public meeting, the recommendation of this section is to implement an OWTS management program solely featuring the repair/replacement of individual systems on individual lots, then the community may elect to end the facilities planning process for unsewered areas at this point and request a Categorical Exclusion. The information developed to this point shall be used to justify the Categorical Exclusion request. A group or community OWTS unit cannot qualify for a Categorical Exclusion.)

#### 1. Description of the unsewered area

- a) Identification of the approximate number, type, and location of OWTS
- b) Map of the unsewered area
- c) Identification of the approximate number of and impacts of failed/failing systems on surface and ground water
- d) An analysis of the cause(s) in OWTS failure area(s)
- e) An estimated cost for repairing/replacing failed OWTS in the area
- 2. Assessment of the continued use of OWTS within the unsewered area(s). If continued use is found to be unsuitable, evaluate alternatives (e.g. septic system management program, advanced OWTS, cluster systems, sewers) for other means of wastewater disposal and establish a schedule for implementation of those alternatives. (Note: this assessment can form the basis for an Onsite Wastewater Management Plan (OWMP) but is not, in and of itself, an OWMP.)
- 3. Description of a method to ensure regular OWTS maintenance including, but not limited to: an information and education initiative with a method for tracking maintenance activities; an information and education initiative with inspection and maintenance incentives- (e.g. pump-out subsidies); a requirement for regular inspection and maintenance.
- 4. Description of a community assistance program for OWTS repair/replacement. At a minimum this should include:
  - a) The nature and extent of the assistance to be provided to the community (i.e. financial, technical, etc.)
  - b) Application procedure and any community-imposed eligibility requirements
  - c) Method to advertise the assistance
  - d) Designation of a party responsible for the assistance program
  - e) Estimated cost(s) for OWTS management program as described

#### D. Sewer Extensions

- 1. The need for sewers is justified and documented, including justification for abandoning OWTS rather than implementing a wastewater management district (WWMD)
- 2. Consideration is given to conveyance of treated wastewater by small diameter, low-pressure, vacuum or variable grade sewers
- 3. Alternative methods of collection and disposal have been evaluated and compared to conventional sewers with regard to total costs and environmental impacts

- 4. The sewers will not encourage or induce development in identified environmentally sensitive areas (e.g. wetlands, prime farmland)
- 5. The sewers are aligned and designed so construction will minimize impacts to identified environmentally sensitive areas
- 6. Preliminary designs and the resulting cost estimates reflect state design guidelines

#### E. Combined Sewer Overflows (CSOs)

1. Does the municipality/sewer authority have an approved Long-Term Control Plan (LTCP) and, if so, are the CSO controls in the FP consistent with the CSO controls in the approved LTCP?

If yes to item 1 above, no further evaluation is necessary. If no, the FP must include an evaluation consistent with items 2-6 below. The plan for control of pollution from CSOs must be considered if application of Best Available Technology (BAT) for wet-weather flows would not meet water quality standards. Where measures are to be considered for CSOs, the FP is to evaluate the following for a 20-year planning period.

- 2. Alternative control techniques and management practices that could attain various levels of pollution control
- 3. Cost of achieving various levels of pollution control by each of the control techniques that appear to be most feasible and cost effective
- 4. Benefits to receiving waters of a range of pollution control alternatives during wet weather conditions
- 5. Costs and benefits from addition of advanced wastewater treatment (AWT) processes or dry weather flows in the area as an alternative to CSO control
- 6. A final alternative selected for control of CSOs must meet the following criteria:
  - a) Recommendations are consistent with the RI CSO Policy
  - b) Provision has been made for treatment to RIPDES effluent limits of all dry weather flows in the planning area

#### F. Septage Treatment and Disposal

- 1. Does the FP consider a WWMD as the mechanism for regulating septage?
- 2. Has the applicant given appropriate consideration to current and future septage treatment and disposal by evaluating several alternatives?
- 3. Do the alternatives evaluated include regionalized treatment and disposal at an existing WWTF?
- G. Treatment Technologies
  - 1. Evaluated treatment technologies capable of meeting RIPDES effluent limits
  - 2. Small communities (usually populations of 10,000 or less) have considered low-cost treatment technologies
  - 3. Treatment process appropriate for the character and quantity of the wastewater and the size and location of the community

4. Treatment technologies evaluated for water and energy efficiency

#### F. Sludge Treatment and Disposal

- 1. Sludge treatment and disposal methods comply with regulatory requirements of applicable state and federal laws (e.g. RI Clean Air Act, RI Groundwater Protection Act, Resource Conservation and Recovery Act)
- 2. Appropriate consideration given to sludge treatment and disposal by evaluating several alternatives
- 3. Selected/evaluated sludge treatment and disposal method(s) appropriate to the size and location of the project
- 4. Consideration given to sludge treatment and disposal alternatives which recycle or reclaim sludge such as methane recovery, self-sustaining incineration, composting, and land application

#### G. Environmental

- 1. Forecasts the future environment in the planning area without the proposed project(s) (i.e. "no build" alternative)
- 2. Direct Impacts
- a. Disruption of traffic, business or other daily activities during construction
- b. Damage to historical, archaeological, cultural, prime farmlands or recreational areas during construction or permanently
- c. Disturbance of sensitive ecosystems such as wetlands, essential fish habitats, Floodplains, and habitats of endangered or threatened species during construction or permanently
- d. Pollution of surface waters due to erosion in the project(s) area(s) during or after construction
- e. Impacts on water quality from WWTF effluent discharge(s) during construction or operation
- f. Displacements of households, businesses, or services during construction or permanently (indicate how many)
- g. Visual impacts resulting from the project
- h. Increased air or noise pollution, solid waste production, or demand for potable water from induced changes in population and land use
- i. Impacts to barrier beaches and other coastal zone features

#### 3. Indirect Impacts

- a. Adequate discussion of indirect impacts
- b. Special attention given to determine that the project(s) will not violate federal, state, or local laws
- c. Consideration given to impacts on induced sprawl

#### 4. General Aspects

- a. Adequate consideration of cumulative impacts
- b. Mitigation measures specified for direct and indirect detrimental impacts
- 5. Summary of Environmental Considerations
  - a. Summary of the existing system and environmental needs
  - b. Summary of the future environment without the project

c. Summary of the alternatives generation, evaluation, and selection process which led to the preferred alternative

#### H. Phased Construction

- 1. Determine if adding plant capacity or extending sewers in phases during the planning period is more cost effective/affordable than full construction initially
- 2. Compare the relative cost of providing full capacity initially to the present worth of deferred costs for providing capacity when needed
- I. Is this a multiple purpose project? (i.e. meets RIPDES permit requirements, but also may serve agricultural, recreational, commercial, industrial, water supply, or energy production purposes)

#### J. Financial

- 1. For phased construction, develop a schedule and an affordable financing plan for the construction of all contracts, to provide adequate capacity for wastewater treatment needs during the twenty-year planning period
- 2. Construction and costs consistent with the implementation and capital improvement budget elements of the CCP for the next five years
- 3. Rate structure analysis performed that defines the least expensive cost recovery/rate increases necessary to build the contracts proposed in the FP

#### VII. Plan Selection

#### A. Selected Plan

- 1. Summary of why the proposed plan was selected
- 2. Narrative summary demonstrating that the proposed plan is cost-effective and environmentally sound
- 3. Summary of how the selected alternative will address and comply with federal, state, and local environmental laws and regulations

#### B. Evaluation and Ranking of Proposals

- 1. Engineering considerations (e.g. reliability, energy use, process complexity) used to evaluate and select the plan
- 2. Monetary considerations (e.g. capital costs, annual O&M costs, cost per user/household/capita) used to evaluate and select the plan
- 3. Waste reduction, recycling, and reclamation considered in evaluating and selecting the plan
- 4. Legal, institutional, and financial constraints considered in evaluating and selecting the plan

#### C. Environmental Impacts of Selected Alternative

1. Unavoidable detrimental impacts identified

- 2. Mitigation measures for unavoidable detrimental impacts identified
- 3. Irretrievable and irreversible commitments of resources identified
- 4. Relationship between short-term impacts to the environment and the maintenance and/or enhancement of long-term environmental benefits
- 5. Mitigation measures for all significant detrimental impacts

#### IX. Plan Implementation

- A. Implementation Steps (including phased construction)
  - 1. Implementation/construction schedule (if necessary to implement the FP) consistent with enforceable requirements of the RIPDES discharge permit
- B. Operation and Maintenance
  - 1. Staffing plan for both the WWTF and collection system
- X. Preliminary Design and Cost Estimates
  - A. Basic design criteria that meet state guidelines
  - B. If applicable, explanation of whether each phased contract will result in a fully operational component of the plan.
  - C. Detailed cost estimates along with a current ENR cost index number

#### XI. Cost and Effectiveness

Evaluate the cost and effectiveness of the process, materials, techniques, and technologies for carrying out the proposed project(s). The selection of a project or activity that maximizes the following factors must also be considered:

- A. Efficient water use, reuse, recapture, and conservation
- B. Energy conservation
- C. Cost of construction
- D. Cost of operating and maintaining the project over the life of the project
- E. The cost of replacing the project

#### XII. Fiscal Sustainability Plan (FSP)

The recipient of a loan for a project that involves the repair, replacement, or expansion of a publicly owned treatment works must develop and implement an FSP that includes, at minimum, the following factors:

- A. Inventory of critical assets that are part of the treatment works
- B. Evaluation of the condition and performance of inventoried assets or asset groupings
- C. Certification that the assistance recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan
- D. A plan for maintaining, repairing and, as necessary, replacing the treatment works and a plan for funding such activities

E. FSP to be regularly reviewed, revised, expanded and implemented as a part of the operation and management of the system

# XIII. Public Participation

- A. Public participation program implemented which adequately informed the public of the project alternatives and provided a mechanism for comment
- B. Public meeting/workshop held to solicit further public comment at the point where several reasonable alternatives were identified for detailed study
- C. Public notice of a scoping meeting (if an EIS is necessary)
- D. Public hearing held to present the final DRAFT FP and EA/EIS
- E. Discussion of any substantive public comments
- F. Copies of all agency and substantive public comments appended to the FP
- G. Responses to all substantive comments
- H. Views of the public considered in selecting the preferred alternative

#### XIV. Intergovernmental Review

- A. Copies of the FP recommended alternatives sent to the agencies indicated on DEM's Intergovernmental Review Contacts list
- B. Copies of all intergovernmental review correspondence appended to the FP