



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

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## Department of Environmental Protection

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# Clean Water State Revolving Fund

## 2020 Project Construction Evaluation Form

### Instructions and Guidance

File: cwpef 2019-09-09

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.  
TTY# MassRelay Service 1-800-439-2370  
MassDEP Website: [www.mass.gov/dep](http://www.mass.gov/dep)

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## **INTRODUCTION**

The Massachusetts Department of Environmental Protection (MassDEP) seeks to finance projects that mitigate documented impacts to public health or the environment and encourages proponents to complete comprehensive planning and alternatives analysis for potential construction projects. Details supplied through the Project Evaluation Form (PEF) will help MassDEP to determine the extent to which the proposed project meets the goals of the State Revolving Fund (SRF) program and therefore any PEF submitted for an eligible planning project will automatically qualify for financing on the Intended Use Plan (IUP).

**Proponents seeking SRF financing for planning water pollution abatement projects must complete the online PEF to be submitted no later than 12:00 noon on August 23, 2019.**

Please use the following link to access the online PEF:

<https://www.mass.gov/lists/state-revolving-fund-applications-forms>

***If you need assistance in filling out the online PEF, please contact our SRF Data Support Team at [srfmadep@mass.gov](mailto:srfmadep@mass.gov)***

The Project schedule for any proposal must meet the following deadlines:

Local Appropriation of Project Cost	June 28, 2020
Scope of Services or Plan of Study	October 16, 2020
Loan Assistance Application	October 16, 2020
Planning NTP or Start of Study	Six months from the issuance of the Project Approval Certificate (PAC) and no later than June 30, 2021

If the project schedule cannot meet these deadlines and has no reasonable justification for an extension of a deadline, it will not be eligible to receive SRF funding from the 2020 IUP.

Please be aware of the following high priorities for the 2020 Clean Water SRF proposals.

- Asset Management Planning- The Massachusetts Clean Water Trust will make available up to \$2M to subsidize the cost for systems to plan and implement Asset Management Planning (AMP) programs. Subsidy will be in the form of a grant (SRF loan forgiveness) of not more than \$150,000 or 60% of the cost to develop the plan. AMP grants can be applied for by filling out and submitting a PEF under the Clean Water Asset Management Planning PEF CWSRF: <https://www.mass.gov/service-details/asset-management-planning-grant-program>

Since the AMP PEF's for grants are evaluated and rated, the possibility exists that only a limited number of grants will be awarded on the 2020 IUP. Applicants should also consider simultaneously submitting a PEF for a Clean Water Planning PEF CWSRF since it will automatically qualify for a 2% loan.

- Housing Choice communities will receive a discount on their SRF interest rate, not less than 1.5%: <https://www.mass.gov/info-details/2018-housing-choice-communities#list-of->

## DEFINITIONS AND INSTRUCTIONS FOR PARTS I, II, III AND IV

### **Part I - Applicant and Project Identification and Certification**

Provide the following applicant information:

- Name of the **Local Governmental Unit (LGU)** including name; mailing address; telephone number; and Federal Employer Identification Number (This number is used by MassDEP in its SRF project tracking database).
- **Authorized Representative** information including name, mailing and email address and telephone number
- Project LGU Primary Contact information (if different from above)
- Engineering/Consultant Firm information including name; mailing address; telephone number; and Federal Employer Identification Number.
- Engineer or Engineering Consultant Contact information including name, mailing and email address and telephone number.
- Project Identification which provides how the name of the project will appear on the IUP (limited to 50 characters); whether it's a previously submitted project to the current IUP year; and a brief description of the planning project (limited to 750 characters) which adequately describes the project and its benefits. Identification of the project area using a site plan and or locus map should be attached to the submission (Examples of project descriptions follow the definitions below).

### **Definitions**

**Local Government Unit or Local Governmental Unit** - Any town, city, district, commission, agency, authority, board or other instrumentality of the commonwealth or of any of its political subdivisions, including any regional local governmental unit defined in M.G.L. c. 29C, which is responsible for the ownership or operation of a water pollution abatement project and is authorized by a bond act to finance all or any part of the cost thereof through the issue of bonds.

**Authorized Representative** - List the name, title, complete address, e-mail address, and telephone and fax numbers of the authorized representative. The application must contain a resolution or authorization designating by title the official (Mayor, City or Town Manager, Chairman of the Board of Sewer Commissioners, Chairman of the Board of Selectmen, etc.) to act as the representative of the applicant to sign for, accept, and take whatever action is necessary relative to the project. In the city form of government, the City Council will generally name the authorized representative. If the community is governed by Town Meeting, then the Town Meeting action will name the appropriate group, such as the Board of Selectmen or Board of Public Works. The appropriate governing body will then name the authorized representative. If the authority to file statement names an office, then a certified statement is required specifically identifying the individual currently holding that office. For wastewater districts, provide the requisite authorization of the governing board.

**The following are examples of Construction Project descriptions:**

- **Secondary Wastewater Treatment:** The construction project includes modifications and additions to the existing WWTP. These improvements include the replacement of aged systems that have exceeded their useful life as well as the addition of new treatment systems related to the Town's new NPDES permit. Specifically, to achieve compliance with nutrient discharge limits, improvements include modification of the secondary treatment system to create a Bardenpho system for advanced nitrogen removal and the construction of a new tertiary treatment system and superstructure with cloth disk filters for phosphorus removal.
- **Advanced Wastewater Treatment:** The project is to upgrade the Wastewater Treatment Facility to address the more stringent NPDES permit limits, reduce nutrient discharges and protect the impaired receiving waters downstream, specifically cited as impacts to the Taunton River estuary, as well as Mt. Hope Bay and Narragansett Bay waters in Rhode Island. The current treatment process cannot meet the Total Nitrogen and unlikely to be able to meet the Total Phosphorus limits a consistent basis with the existing unit processes. The current plant was constructed in 1977 and has not undergone a major upgrade since that time. The plant is designed for an average flow of 2.16 MGD and maximum flow of 7.1 MGD.
- **Infiltration/Inflow Correction:** This project will implement the recommendations from the Sewer System Evaluation Survey (SSES) to remove cost effective I/I. The project includes chemically root treating 3,174 feet of sewer; cleaning, inspecting, testing and sealing 20,135 feet of sewer; installing 356 linear feet of structural liner; installing 5,769 feet of structural cured-in-place pipe; performing two spot repairs; television inspecting and testing 230 service connections; grouting 230 service connections; rehabilitating 1,453 manholes; sealing 154 manhole inverts; root treating 48 manholes; and other related tasks.
- **Sewer System Rehabilitation:** This project entails the construction of less than half a mile of sewer to relieve an existing undersized sewer. The existing sewer does not have sufficient capacity to carry the full flow amount that it receives without surcharging and occasional sanitary sewer overflows. The SSOs discharge onto the streets and into Labor- in-Vain brook. The project is consistent with the Town's 2002 planning report for its wastewater pumping stations and the Massachusetts Estuaries Project. This project also entails the upgrade of the Dublin Street Pump Station to increase pumping capacity to handle the increased flows to be conveyed to it from the proposed relief sewer.
- **New Collectors and Appurtenances:** The Town is experiencing water quality problems associated with failing private on-site wastewater disposal systems. The Phase I Sewer Extension project is located in the Flint Pond Watershed Basin, which is well documented as an impaired basin. All proposed sewerage is within the current wastewater discharge permit limits for flow rate. Removing failing and/or improperly operating septic systems will serve to protect and enhance the Merrimack Watershed and preserve its designated uses.
- **New Interceptor and Appurtenances:** This project involves the construction of new sewers to address the nitrogen issue from on-site disposal systems. The project consists of

the Collection System Extension and Improvements by upgrading the Stage Harbor Pump Station and further extending the wastewater collection system as defined in the approved CWMP.

- **CSO Correction:** The primary objective of the CSO control plan is to bring CSO discharges in Boston Harbor and its tributaries into compliance with state and federal requirements. This component of the plan will involve nine sewer separation projects. All the projects will be accomplished by constructing new storm drains and allowing the existing combine sewers to function as separate sanitary sewers, or by constructing new sanitary sewers and allowing the existing combined sewer to serve as storm drains. The project will result in the elimination of CSO discharges at several outfalls.
- **Storm Sewers:** The work within this integrated planning project will lay the foundation for future stormwater and wastewater improvements within the City needed to meet the requirements of the Clean Water Act, while maximizing the effectiveness of limited capital resources.
- **Stormwater Conveyance Infrastructure:** The proposed project involves modifications to the former pond including enlargement of the basin outlet pipes and spillways, stabilization of the stream banks, creation of new constructed wetlands and detention basin for stormwater quantity and quality control. The improvements will include realignment of an existing municipal sewer inverted siphon which runs within the embankment. The constructed wetlands and detention basin will be designed to accommodate additional stormwater flows anticipated from future sewer separation of the combined sewer system.
- **Stormwater Treatment Systems:** The objective of this Wastewater Collection System and Drainage System Improvements project is to improve water quality in coastal receiving waters and to improve the operations of the Town's wastewater collection system and treatment plant by reducing the volume of infiltration and inflow (I/I) entering the collection system, and improving the water quality of storm water discharges through the removal of illicit connections to the sewer system and through the construction of Best Management Practices (BMPs). The project will provide the foundation for the reduction of pathogen discharges to Sippican Harbor and Buzzards Bay as well as significantly reduce the volume of public and private I/I entering the collection system.
- **Green Infrastructure:** This project includes the construction of a wind turbine with a minimum rated capacity of 600 KW. The Town consumes approximately 12,000,000kWh of electricity per year and the estimated net energy production for the turbine is 993,400kWh annually.
- **Green Infrastructure:** The green energy upgrades to the plant will include: Replacing existing process operations building with a more energy-efficient structure. Energy efficient improvements include: reconstruction of the main operations building using energy efficient (LEED) design principles (including replacement of existing belt filter press with rotary press, aeration system upgrade of existing mechanical surface aerators, and pump replacement with higher efficiency equipment); lighting, heating and ventilation systems upgrade; and upgrading building exterior (windows and insulation) - \$2,600,000; Installing up to a 65 kW solar photovoltaic system onsite- \$455,000.

## **Part II – Project Schedule and Cost**

Provide the following applicant information:

- Project scheduling information to include when the scope of services or plan of study will be submitted to MassDEP (Boston and Regional Office) associated with the project for review; when the LGU's consultant estimates beginning and ending the planning project after review; and when the loan or financial assistance application will be submitted to MassDEP.
- The total project cost should reflect the costs associated with completing all eligible items.
- Local Funding Authorization which asks if the funding has been voted and approved by the LGU and, if not, when is it estimated to be voted on (no later than 6/30/2020).
- Other Assistance which asks if the LGU is seeking additional funding sources or not; and if so, provides who the LGU is seeking the funding from, under what title does the funding come under, the amount requested and how much will actually be provided.

## **Part III: Project Evaluation**

### **Project Narrative**

The purpose of the project narrative is to allow applicants to concisely describe the nature of the problem and how the proposed project will address the issue. The narrative helps the reviewer by providing a sense of what the proposal will address and provides the key areas on which the reviewer should focus.

MassDEP anticipates the narrative (without attachments) to be about 5 pages in length, but not more than 10 pages. The narrative must include a discussion of each of the following topics in the order presented below.

Applicants should check all items that apply and are documented as described below. For each item checked, the applicant must provide details in the narrative including but not limited to: Area(s) examined, information or conditions found, conclusions, etc. If you are working from a planning document that addresses any of the items, please provide a copy and provide specific page references where the information is found.

### **Guidance for Project Narratives**

- Briefly describe the objectives of the project. What water quality or public health issues are being addressed, and how severe are the problems?
- Describe the scope of the project and key facilities or tasks being proposed. Describe the environmental benefit that you anticipate will result from implementation of the strategy you plan to execute.
- Proponents are required to submit with the PEF a map of the project area with an overlay of the service system and any relevant resource areas.
- Describe planning efforts that have been undertaken to develop this proposal, including any alternative analysis. Note in the narrative the Comprehensive Wastewater Management Plan (CWMP) or Project Evaluation Report (PER) from which the project was developed, and how the project is consistent with the Plan or Report. Please provide a copy of the report.
- For construction projects, provide the basis of cost estimate and engineer's cost estimate.

## **Part IV: Project Ranking**

### **A. Public Health Criteria**

#### **1. What is the cause of the environmental/public health problem or nuisance that the project will address?**

##### **a) Contaminated Stormwater**

Means storm water runoff, snowmelt, and surface runoff that picks up pollutants and deposits them in surface waters or ground water. The proposed project must directly control the cause of the stormwater-related threat to public health via BMP controls between the catch basin and outfall (including wet weather conditions).

##### **b) Illicit Connections**

Illegal sewer connections to storm drainage systems, evidenced by dry weather data, smoke testing, I&I and SSES studies, BOH records or other official reports (This section is separate from contaminated stormwater. If both conditions exist, please describe separately.)

##### **c) Combined Sewer Overflow (CSO)**

Occurs when a single collection pipe is used to convey both storm runoff and sanitary wastes. During heavy rains or snowmelts, the overflow, which includes sewage, is discharged into a nearby water body. Provide the location and dates of the overflows and number of times MassDEP was notified of overflow release in the past year. Overflows as predicted by modeling will be accepted if contained in MassDEP approved reports. Points may be given when the collection system has documented incidents of CSO, and the project includes work on the collection system or treatment works that will potentially reduce the risk of CSO events. Projects rarely receive points as both a CSO and a SSO. If both, please explain.

##### **d) Widespread Septic System Failure**

Occurs when service area suffers 15% or more on-site septic system failures due to hydraulic breakout and/or direct discharge to groundwater. Provide board of health report or reports from local sewer authority, and street or lot location for each system breakout. Only the following scenarios will be indicative of failure: actual Board of Health documented failures, properties with pumping rates of 2 or more per year, and very small lots (< ¼ acre if private well on-site and < 5,000 SF if public water is available). Lesser points are given if 10% or more of on-site septic system are failures as described above.

##### **e) Raw Sewage Backup from Municipal System**

Chronic municipal sewer system surcharging causing sewage to back up into homes and/or private buildings. Provide board of health reports or reports from local sewer authority, date, and street address for each event. Failing septic systems do not trigger this criteria.

##### **f) Sanitary Sewer Overflow (SSO) 1-2/year, 3/year, >3/year**

A sanitary sewer overflow is an overflow, spill, release, or diversion of wastewater from a sanitary sewer that occurs prior to the headworks of a treatment plant. Sanitary sewer overflows include:



- Overflows or releases of wastewater that reach waters of the United States
- Overflows or releases of wastewater that do not reach waters of the United States
- Wastewater backups into buildings that are caused by blockages of flow conditions in a sanitary sewer other than a building lateral. The applicant should submit report of occurrence and location. Describe the type of flow. i.e. from manhole? Into public areas or basements?

Points may be given when the collection system has documented incidents of SSO, and the project includes work on the collection system or treatment works that will potentially reduce the risk of SSO events. Projects rarely receive points as both a CSO and a SSO. If both, please explain.

**g) Water Pollution Related Odor Problem**

Describe the cause/source of odors and report instances of complaints, distances from source, and status of odor control equipment.

**h) Landfill Leachate**

Report the extent of the plume, identify wells affected or other receiving waters affected and provide sampling/analysis of contaminants and whether drinking water MCLs are exceeded.

**i) Publicly Owned Treatment Works (POTW) Malfunction**

Malfunctions are considered to be malfunctions of major process units or collection systems that affect permit limits. Also, a facility that does not meet permit limits would be considered as having a malfunction due to lack of appropriate treatment processes. Applicant should report history of malfunctions and note any and all NPDES limits exceeded.

**j) Other**

MassDEP has included usual contributing causes, but will entertain arguments for additional public health causes, such as may exist in individual situations. MassDEP reserves the right to accept or reject any arguments advanced on this question and assign points as deemed appropriate. Points can only be issued to this item if justification for it is not covered by any other category.

**2. What is the nature of the resource affected?**

Please note that applicants can receive half the allotted points for preventive approaches versus remedial approaches. It is MassDEP’s opinion that preventive approaches are important, but not as critical as remediating existing problems.

The number of people exposed to pollutants, as well as the means of those exposures, are important determinants in the rating system. MassDEP seeks information to help determine the extent of the exposure. On the project site map noted in the previous section, show location of resources affected (public and private drinking water supplies, private homes, public streets and parklands, etc.)

Explain how resources are being affected and to what degree by providing documentation (Watershed Management Plan, CWMP, PER, sampling and lab results, Board of Health records, etc.). As an applicant, you must attempt to a make direct connection between

resources affected and documentation submitted.

Describe the cause of the problems, discussing how the problem affects the resource(s) noted, the size and character of the population threatened or negatively affected by the identified risk to public health including sensitive populations, and the frequency and magnitude of the problem.

**Documentation MUST be provided for approval of this application.** Documentation should be in the form of published reports, including laboratory results, of Municipal, Local, State or Federal entities engaged in the protection of Public health. Please provide the reports with page number references to the relevant information. *Note: Any item that does not include documentation within the application will not receive points.*

**a) Public Drinking Water Supply** as defined in 310 CMR 22.02 (found on the MassDEP Web site at <https://www.mass.gov/regulations/310-CMR-22-the-massachusetts-drinking-water-regulations>) is located within the project area. Document impacts to the supply via laboratory analysis or reports. If the supply is the only source available to the supplier, please note. For groundwater supplies, documentation must consist of sampling at either the withdrawal point or within the Zone II at a MassDEP- DWP-approved monitoring location. In the case of nitrogen contamination, total N of 5 ppm or greater would demonstrate the existence of an impact, provided that the elevated concentration can be related to the problem, considering factors such as the existence of other potential pollution sources, the location of the wells in relation to the problem area, and the strata from which the groundwater is drawn. Document all potential hydrogeological impacts to a public drinking water supply.

**b) Private Drinking Water Supply** refers to private wells within the project area that are shown via sampling analysis to be affected by waterborne pollutants. Affected wells should be pointed out on the site map. Is there any option for residents to connect to any other source?

**c) Private Homes** refers to any residence affected by sanitary sewer back-up from a municipal sewer system into the home. Some evidence of the back-up should be presented. Boards of Health (BOH) reports or reports from the local sewer authority are acceptable documentation.

**d) Public Streets or Parklands** refers to incidences of raw sewage flowing directly into public streets or parkland areas that would increase the potential for exposure to people. Such incident locations should be noted on the site map. Documentation from the BOH or the local sewer authority should be supplied.

**e) Swimming Areas.** A designated swimming area that is posted, maintained, and monitored by a health or recreation agency, that the problem to be corrected, has a documented closure(s) and the project has a potential impact on the closing of these areas.

**f) Boating Areas.** An area of the affected water body that has identified public access points and a documented impact on these locations.

**g) Sensitive Population Affected.** This refers to a concentration of population which would be expected to be particularly at-risk via exposure. Applicable populations would be schools, nursing homes and hospitals served by a private well, or whose grounds are affected directly by contamination.

**h) Population Affected.** The project specific population immediately impacted or served by the proposed project. Explain the parameters of the population selected.

**i) Other**

MassDEP has included usual receiving resources, but will entertain arguments for additional public health resources affected, such as may exist in individual situations. MassDEP reserves the right to accept or reject any arguments advanced on this question and assign points as deemed appropriate. Points can only be issued to this item if justification for it is not covered by any other category.

**B. Environmental Criteria**

**1. What is the nature of the environmental problem encountered?**

Briefly and in narrative form, describe the nature and extent of any problems identified in the checklist, discussing the manner in which the problem affects the resource(s) noted.

**a) NPDES Permit Exceedance** - The application would only receive points if the proposed project addresses impacts to permit limits. An example would be upgraded disinfection to meet bacterial limits.

**b) Aquatic Toxicity** - Project should address either (a) applicable permit limit violations or (b) a receiving water toxicity problem. The 303(d) list includes aquatic toxicity as impairment for some waterbodies. The PEF should make a connection between the project and a decrease in toxicity (example: addition or upgrading of dechlorination). CSO and SSO projects that attempt to reduce I/I are not presumed to address aquatic toxicity without documentation. Note that pathogens are not considered aquatic toxicity.

**c) Nutrients** - Defined as either (a) applicable permit limit issue (upcoming or existing) and/or (b) receiving water nutrient 303(d) impaired water for nutrients (example: upgrading to address phosphorus from a wastewater treatment facility (WWTF) or sewerage an area upstream of a 303(d) list nutrient impaired pond).

**d) Bacteria** - The presence of coliform bacteria in a drinking water source, or E. coli, other coliform bacteria, or enterococcus in a water body, as determined with analytical data. The 303(d) listing of "pathogens" is acceptable data. The information presented in the PEF should provide the data and the relevant limit exceeded or threatened (permit limit, drinking water Maximum Contaminant Level (MCL), swimming (beach)). Problems that are assumed to contribute to exposure to bacteria include CSOs, SSOs, on-site system breakouts, and on-site systems within groundwater.

**e) Turbidity** - Suspended particles in a waterbody as a result of human activity. The 303(d) list includes turbidity as a problem for some waterbodies. Examples of projects addressing turbidity include nonpoint stormwater projects and treatment of phosphorous to reduce alga growth. CSO and SSO situations are presumed to cause turbidity problems.

**f) Dissolved Oxygen** - PEF should show DO problem in receiving water and must demonstrate that the proposed project will address/mitigate problem.

**g) Temperature** - PEF should show temperature problem in receiving water and must demonstrate that the proposed project will address/mitigate problem.

**h) Noxious Aquatic Plants** - For the purposes of this PEF, “noxious aquatic plants” refers to the excessive growth of plant species in or near a waterbody, affecting the water quality and habitat. Documentation includes listing on the 303(d) list, diagnostic/feasibility studies, Total Maximum Daily Load (TMDL) reports/recommendations, or MassDEP Assessment reports. Proposed project must in some manner mitigate the noxious weed problem.

**i) Aesthetics** - Floating solids, strong odors and discoloration of a waterbody indicate aesthetic concerns. These may be documented in the 303(d) list. CSOs and SSOs are both assumed to include floating solids and therefore would be considered to have an aesthetics concern. Other demonstration of aesthetic concerns should include photos (unless odor), with accompanying report and date, location, duration or intensity and person observing the problem. Official town reports are the appropriate documentation.

**j) Other** - MassDEP has included above usual environmental problems encountered, but will entertain arguments for additional causes to environmental problems, such as may exist in specific situations. MassDEP reserves the right to accept or reject any arguments advanced with documentation on this question, and may assign points as deemed appropriate. Points can only be issued to this item if justification for it is not covered by any other category.

## **2. What environmental resources are affected?**

Points will only be given if the targeted pollution is shown to have a direct and adverse impact on the resources listed below, are within the project area and the project scope will address the documented issue. *NOTE: PLEASE DELINEATE AFFECTED RESOURCE AREA ON PROJECT MAP.*

**a) Public Water Supply - Zone A:** It is defined at 310 CMR 22.02 (found on the MassDEP Web site at

[https://www.mass.gov/files/documents/2016/10/us/310cmr22\\_372\\_16185.pdf](https://www.mass.gov/files/documents/2016/10/us/310cmr22_372_16185.pdf)).

Generally it is the protected area in closest proximity with a surface water supply. Points are available only for Zone A or Zone B, not both. Points will be given if the project area is within the Public Water Supply- Zone A.

**b) Public Water Supply - Zone I:** It is defined at 310 CMR 22.02. Generally it is the protected area in closest proximity to a groundwater supply. Points are available only for Zone I or Zone II, not both. Points will be given if the project area is within the Public Water Supply - Zone I.

- c) Outstanding Resource Water (ORW)** – It is defined at 314 CMR 4.0 (found on the MassDEP Web site at <https://www.mass.gov/files/documents/2016/11/nv/314cmr04.pdf>) These waters include public water supplies and their tributaries. Vernal pools and waters protected by Special Legislation are also ORWs.
- d) Areas of Critical Environmental Concerns (ACEC):** The Executive Office of Energy and Environmental Affairs (EOEEA) designate ACECs within the Commonwealth. These areas include marshlands, embayments, unique habitats, and swamps.
- e) Public Water Supply Zone B** – It is defined at 310 CMR 22.02. Generally this is the secondary area of protection surrounding the Zone A of a Public Water supply. Points are available only for Zone A or Zone B, not both. Points will be given if the project area is within the Public Water Supply- Zone B.
- f) Public Water Supply Zone II** – It is defined at 310 CMR 22.02. Generally this is the secondary area of protection surrounding the Zone I of a Public Water supply. Points are available only for Zone I or Zone II, not both. Points will be given if the project area is within the Public Water Supply- Zone I.
- g) Commercial Fishery/Shellfish Area** - There are 303 shellfish growing areas designated by the Division of Marine Fisheries (DMF), with 6 classifications ranging from “Approved” to “Prohibited”. There are also data layers in MassGIS for “Designated Shellfish Growing Areas” and “MA DMF Lobster Harvest Zones”. Applicant must demonstrate that water quality improvement due to project implementation may result in expansion of area available for harvesting, or extend periods when beds/areas are open.
- h) Endangered Species Habitat** - Areas identified in the Massachusetts Natural Heritage Atlas (available at Conservation Commissions). There are also data layers in MassGIS, but they are only available by special request to the Natural Heritage and Endangered Species Program (NHESP). Points will be given if the project area is within the Endangered Species Habitat area.
- i) Sole Source Aquifer (SSA)** - The 7 SSAs designated by US EPA, shown as the “EPA Designated Sole Source Aquifers” data layer of MassGIS. Applicant will have to successfully argue an impact to the aquifer resulting from the water quality problem.
- j) Ocean Sanctuary** - The 5 areas described in M.G.L. c.132A, s.13. Project must be demonstrated to improve water quality entering a designated Ocean Sanctuary. This item refers to projects where water enters the designated Ocean Sanctuary pre-project, and water quality is improved through the project. Discharge does not need to be directly into an ACEC.
- k) Recreational Fisheries/Shellfish Area** - Project area would include a water body whose uses have historically included recreational fishing or shell fishing. Implementation of the project would have to be expected to improve water quality sufficiently to allow for a return or expansion of the fish population.
- l) Federally Designated River** - Certain Federal designations impart a higher level of significance to those rivers so designated. The proposed project would have to have a direct impact on the water quality of a federally designated river. Federal designations include Wild

and Scenic, and Natural Heritage. **MassDEP has expanded this category to include rivers wherein stocking of Atlantic salmon is conducted, namely the Merrimack and the Connecticut and their tributaries.** Generally, only communities bordering the main stem of the designated river are considered to have the potential for direct impact.

**m) Other** - MassDEP has included above usual environmental resources, but will entertain arguments for additional environmental resources affected, such as may exist in specific situations. MassDEP reserves the right to accept or reject any arguments advanced with supporting documentation on this question and may assign points as deemed appropriate. (*Note: Please delineate affected resource area on project map.*) MassGIS maintains data layers for ACECs, ORWs, Surface Water Supply Protection Areas, and MassDEP Wellhead Protection Areas. Points can only be issued to this item if justification for it is not covered by any other category.

### **C. Project Effectiveness**

*Note that any item that does not include documentation within the application will not receive points.*

#### **1. Indicate how and to what extent will the project eliminate or mitigate the problem?**

In the previous sections you discussed the nature and extent of the environmental and public health problems as well as the impacts of those problems upon resources. In a brief narrative, describe how the proposed project will specifically impact the resources and resolve problems that you have noted. Describe how the LGU has the jurisdiction and overall ability to implement the solution described. MassDEP expects that a competitive proposal will thoroughly address applicable items below:

- a) Reduces violations of water quality standards;
- b) Restores designated uses;
- c) Reduces potential adverse impacts to sensitive resources;
- d) Protects designated uses;
- e) Reduces or eliminate public health problems or nuisances;
- f) Protects public health resources from contamination;
- g) Other- addresses pollution sources other than those being addressed by the project that contribute to the problem.
- h) To what extent will the project eliminate or mitigate the problem?

The applicant's ability to tie an effective corrective action to the problems and impacts listed previously will be determined in this section. The rating points assessed to this section have significant weight.

**D. Program and Implementation Criteria**

*Note that any item that does not include supporting documentation within the application will not receive points.*

**1. Consistency with EOEEA/MassDEP Watershed Management Plans or Priorities.**

This section is intended to measure the extent to which this project implements planning recommendations or implements State or Federal requirements. Information supplied by the applicant will indicate the extent to which the LGU has explored and considered various options available. Points are awarded only for one planning category.

**a) Implements a recommendation** - Identify and describe how, and to what extent, the project implements or is consistent with one or more current priorities identified through Water Resource and Wastewater Planning, for example (but not limited to) an EOEEA Watershed Management Plan; a CWMP, a PER, a Comprehensive Performance Evaluation (CPE), a Sewer System Evaluation Survey (SSES) (PER Level), a Stormwater Management Plan, a Water Quality Assessment Report, or a Diagnostic/Feasibility Study.

Applicants should refer to the planning requirements in the CWSRF regulations at 310 CMR 44.09, found on the MassDEP web site at: <https://www.mass.gov/files/documents/2017/10/30/310cmr44.pdf> to determine whether the planning satisfies the criteria for comprehensive wastewater management planning. Facility’s plans or comprehensive wastewater management plans that are more than 15 years old will be considered the equivalent of local planning studies in MassDEP’s evaluation. Attach the planning document and indicate the date of MassDEP approval. Reference the pertinent pages that support the proposed project.

Points may be issued for planning documents that are approved or considered “approvable” by MassDEP.

**b) Compliance and enforcement**

Indicate if the project is related to any regulation, permit or enforcement action. In a table like the one below, list any regulations, permits, or enforcement actions that apply, including federal administrative orders, Massachusetts administrative orders, Notices of Noncompliance (NONs), federal permits, Massachusetts permits, federal regulations, and state regulations. List the type of action, subject matter, reference number, appropriate section/page related to this project and deadlines for compliance.

Type of Action	Subject	Reference Number	Section & page	Compliance Deadline(s)
EXAMPLE: Fed. Adm. Order	Order for action pursuant to Sec 308 of Clean Water Act re: CSOs	#97-02	Sec 4 & 6, p.5-8	May 2002 June 2002
EXAMPLE: NPDES Permit	NPDES permit for WWTP discharge permit limit for toxicity	9701234	Sec II and III, p.6-9	As of 6/1/97
EXAMPLE: NON	Surcharging of sewer @ E. Main	WE-98-NON-1001	p.2	As of 6/1/98
EXAMPLE: MA Reg. 314 CMR 5.00	Groundwater discharge re: stormwater needing permit	Not applicable	Sec 5.04, pp185,186	N/A

Explain how compliance with the above action will address the environmental problem

identified in the previous sections. Describe the specific tasks identified in the enforcement action that will eliminate or mitigate the problem. Voluntary compliance also applies to this item.

**c) Multi-community or regional solution**

Indicate whether the project constitutes or is a component of a multi-community or regional approach to addressing the identified environmental problem, and describe the additional benefits resulting from such an approach. Examples include: A) Host community assisting another to resolve a water quality problem.

B) Community entering into an Inter-Municipal Agreement. C) Project implementing a specific recommendation in a Regional study relative to the proposed project.

Points are available for projects that include significant I/I or stormwater recharge. The points given vary depending on whether it is in (a) a high or medium stressed basin or (b) a low stress basin so the applicant should note the stress level of basin. Also, points similar to those for recharge in a high or medium stress basin should be given for those in a portion of a low stress basin that has localized stress conditions mentioned in the applicable Water Management Act permit. See this site for listing of stressed basins: <https://www.mass.gov/stressed-basins-in-massachusetts-report>

**d) Innovative technology**

MassDEP encourages municipalities to consider using innovative technology to achieve their clean water goals. The narrative also should include certification from a Professional Engineer that the innovative technology meets current engineering standards/practices, and a statement from a Professional Engineer addressing the likelihood the innovative technology would be successful for the project being presented. MassDEP publishes a list of “new technologies” that have been approved for use in Massachusetts: <https://www.mass.gov/guides/innovative-technology-fundamentals>

**e) Pricing system under MGL c.40, s.39J**

Has the LGU implemented a pricing system for sewer services in accordance with the provisions of MGL c.40, s.39J? If so, attach a copy of the pricing system and certification that the LGU has adopted the provisions of MGL c.40, s.39J to the PEF submittal. A proponent who does not supply a copy of the certification to Ch. 40 will receive no credit for this response.

**f) Energy Efficiency**

**Relative benefit of the project** - Indicate if the project was recommended by a third party audit, assessment or feasibility study. Projects resulting from an audit/assessment/study will receive double the number of points for projects without energy audits. Include the applicable portion of the audit and an explanation of the energy savings expected from the project.

**Will the project implement an energy efficiency measure?** If the project includes implementation of an energy efficient measure or installation of a more efficient resource, calculate the percent energy savings expected due to the proposed project. Energy savings will be the kW hours expected to be saved by the energy efficient resource, in relation to total kW



hours of the entire facility (i.e. the pump station or treatment plant) per year and expressed as a percentage. New installations, such as premium motors or vfds, are only eligible if they are upgrades to an existing facility. New facilities are not eligible for energy efficiency points unless they employ LEED design. Projects which reduce energy consumption over 25% will get points for “Substantial EE”. Projects which reduce energy consumption between 10-25% will get points for “Moderate EE”. Projects which reduce energy consumption up to 10% will get points for “Nominal EE”.

### **g) Renewable Energy**

**Relative benefit of the project** - Indicate if the project was recommended by a third-party audit, assessment or feasibility study. Projects resulting from an audit/assessment/study will receive double the number of points for projects without the acceptable study. Include the applicable portion of the audit and an explanation of the energy savings expected from the project.

**Will the project result in on-site renewable energy power generation?** If the project includes a renewable energy resource component such as wind power, solar (either photovoltaic or solar thermal), hydropower, biogas generation, or combined heat and power (CHP), calculate the expected renewable energy production benefit. Projects which produce over 50% of demand will get points for “Substantial RE”. Projects which produce between 20-50% of demand will get points for “Moderate RE”. Projects which produce up to 20% of demand will get points for “Nominal RE”.

### **E. Threshold Criteria**

1. Aimed at identifying to what extent the project will duplicate the existing treatment or disposal capacity. Indicate whether and to what extent the capacity to be provided by the project duplicates existing treatment or disposal capacity already available at an economic cost within the relevant region.
2. Aimed at identifying the extent of potential negative impacts. Identify and describe the extent of any potential negative impacts to water quality or to the public health attributable to the project, and assess whether and to what extent any such negative impacts outweigh the project’s environmental or public health benefits.

### **F. Best Management Practices (BMPs):**

Aimed at identifying if you are implementing the Trust’s BMPs and including proper supporting documentation in your application. For guidance visit the Trust website at

<https://www.mass.gov/info-details/borrower-documents-reports-and-publications-mcwt#best-management-practices->

- a) **Asset Management-** Asset Management Planning (AMP) is a process that utilities can use to prioritize and schedule maintenance and replacement of capital assets (pipes, valves, equipment, structures, etc.) in a proactive and cost effective manner that allows for more predictable budget projections.

- b) **Full Cost Pricing-** Full cost pricing encompasses all direct and indirect costs related to the service in order to maintain long-term financial sustainability.
- c) **Enterprise Funds-** An enterprise fund is a separate accounting and financial reporting mechanism for which revenues and expenditures are segregated into a fund with financial statements separate from all other government activities.
- d) **Inter-Municipal Agreement-** Inter-Municipal cooperation on Water infrastructure projects.

### **G. Qualifying Green Projects**

EPA requires that a portion of the capitalization grants to fund the SRF programs be targeted to green projects or components of projects. It is necessary that all green components be identified in the PEF to assure that the minimum target requirements are met. Guidance and examples of what is considered “green” can be found in the following documents:

[https://www.epa.gov/sites/production/files/2015-04/documents/green\\_project\\_reserve-crosswalk-table.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve-crosswalk-table.pdf) [https://www.epa.gov/sites/production/files/2015-04/documents/green\\_project\\_reserve-qanda.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve-qanda.pdf) [https://www.epa.gov/sites/production/files/2015-04/documents/green\\_project\\_reserve\\_eligibility\\_guidance.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve_eligibility_guidance.pdf)

The applicant is required to do the following to obtain points in this category:

- Identify each component of its project that may be considered green.
- Determine each component of the project that meets each of the green components from the following list. The code for each green component should be entered in line G1
- An approximate estimate of the value of the green work as a dollar value should be reported on line G2 and as a percentage of the entire project cost on line G3. The actual costs for the green components will be defined at the time of contract bid and award.

- RE1 Renewable energy installation not classified elsewhere (explain in narrative/text)
- RE2 Wind Turbine installation
- RE3 Solar photovoltaic array installation
- RE4 Solar hot water installation
- RE5 Geothermal installation
- RE6 Hydroelectric turbine
- RE7 Combined Heat and Power system – digester gas fueled micro turbine
- RE8 Combined Heat and Power system – digester gas fueled reciprocating engine
- RE9 Fuel cell installation
- EE1 Energy efficiency measure not classified elsewhere (explain in narrative/text)
- EE2 Costs to perform an Energy Audit
- EE3 Purchase and installation of highest or higher efficiency HVAC system (i.e. boiler, AC, heater)
- EE4 Purchase and installation of premium motor for blower or pump (retrofit or upgrade)
- EE5 Purchase and install variable speed drive or variable frequency drive (retrofit or upgrade)
- EE6 Purchase of leak detection equipment for treatment works
- EE7 Retrofit/upgrade of wastewater treatment processes
- EE8 Modification/retrofit or replacement of wastewater pumping systems resulting in greater than 20% increase in energy efficiency (requires future submittal of a Business Case)

- EE9 Lighting upgrades at treatment plant or pump station, including bulb changes, occupancy sensors, or lighting control systems
- EE10 LEED certification
- EE11 Building envelope retrofit/upgrades (insulation, windows, etc.)
- EE12 Passive lighting, new building
- EE13 Passive lighting retrofit (e.g. skylights)
- EE14 Passive heating and cooling
- EE15 Install low-polluting engine/generator for backup power (EPA TIER 4 certification or CARB certification required)
- EE16 Control system, new installation at existing facility
- EE17 Control system, retrofit or upgrade (i.e. SCADA, replace pneumatic controls, thermostats, etc.)
- EE18 Aeration system retrofit or upgrade
- EE19 Install turbo blower
- EE20 Install dissolved oxygen monitoring and automated control
- EE20 Perform Sewer System Evaluation Survey (must include cost effectiveness and I/I flow reduction)
- EE21 Perform Infiltration and Inflow Study (must include cost effectiveness and I/I flow reduction)
- EE22 Infiltration and Inflow project, e.g. pipe lining, (requires future submittal of business case)
- WE1 Water efficiency measure not classified elsewhere (explain in narrative, needs Business Case)
- WE2 Purchase and installation of water efficient fixtures, fittings, equipment, or appliances (e.g. toilets, faucets, showers, etc.) on Town/City property
- WE3 Retrofit or replacement of existing water using fixtures, fittings, equipment or appliances with more efficient equipment on Town/City property
- WE4 Purchase of water efficient fixtures, fittings, equipment or appliances as part of Town/City-wide rebate program
- WE5 Purchase of leak detection devices and equipment
- WE6 Purchase and installation of water meters, meter reading equipment and systems and pipe, for a previously unmetered area
- WE7 Purchase/install replacement water meters and meter reading equipment
- WE8 Construction and installation activities that implement capital water efficiency projects.
- WE9 Install/retrofit of efficient landscape or irrigation equipment for publicly owned facilities.
- WE10 Install system to recycle gray water
- WE11 Installation of dual pipe distribution systems as a means of lowering costs of treating water to potable standards
- WE12 Replacement or rehabilitation of distribution lines (requires future submittal of business case)
- WE13 Development of Integrated Water Resource Management Plan
- WE14 Development of a water conservation plan
- WE15 Costs associated with development of a water conservation plan if required as a condition of SRF assistance
- WE16 Public Education: development or implementation of programs on conservation
- WE17 Incentive Programs (e.g., rebates, tax breaks, vouchers, and conservation rate structures)
- DEVELOPMENT
- WE18 Incentive Programs (e.g., rebates, tax breaks, vouchers, and conservation rate structures)
- IMPLEMENTATION
- WE19 Incentive Programs (e.g., rebates, tax breaks, vouchers, and conservation rate structures)

## ADMINISTRATION

- WE20 Technical assistance to systems on how to conserve water (e.g., water audits, leak detection, and rate structure consultation)
- WE21 Development and implementation of ordinances or regulations to conserve water
- WE22 Drought monitoring
- SW1 Stormwater efficiency measure not classified elsewhere (explain in narrative, needs Business Case)
- SW2 Implement Green Streets (combinations of green infrastructure practices in transportation rights-of ways) for new development, redevelopment or retrofits
- SW3 Implement water reuse or water harvesting programs
- SW4 Installation of green roof(s)
- SW5 Downspout disconnection program (to remove stormwater from combined sewers and storm sewers)
- SW6 Implement wet weather management system for parking areas, such as incremental cost of porous pavement, bioretention, green roofs, trees, and other practices that mimic natural hydrology and reduce effective imperviousness
- SW7 Hydromodification to restore riparian buffers, floodplains or wetlands
- SW8 Implement comprehensive street tree or urban forestry programs (expand tree boxes, etc.)
- SW9 Implement wet weather management system designed to keep wet weather discharges out of sewer systems using green infrastructure technologies and approaches such as permeable pavement, bioretention, green roofs, trees, and other practices that mimic natural hydrology and reduce effective imperviousness
- SW10 Wetland restoration and constructed wetlands (not used for wastewater treatment)
- SW11 Development of a Stormwater Management Plan including illegal detection program
- EI1 General project that demonstrates new and/or innovative approach to managing water resources in a more sustainable way, including projects that achieve pollution prevention or pollutant removal with reduced costs (requires future submittal of a Business Case)
- EI2 Decentralized wastewater treatment solutions to existing deficient or failing on site systems
- EI3 Water reuse projects that reduce energy consumption, recharge aquifers or reduce water withdrawals and treatment costs
- EI4 The water quality portion of projects that employ development & redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design.
- EI5 Projects that use water balance approaches (water budgets) at the project, local or state level that preserve site, local or regional hydrology. Such an effort could showcase efforts to plan and manage in a concerted manner, surface and groundwater withdrawals, stream flow (aquatic species protection), wetland and floodplain storage, groundwater recharge and regional or local reuse and harvesting strategies using a quantified methodology.
- EI6 Projects that facilitate adaptation of clean water programs and practices to climate change.
- EI7 The water quality portion of projects that demonstrate the energy savings and greenhouse reduction benefits of sustainable site design practices and the use of green stormwater infrastructure.
- EI8 Projects that identify & quantify the benefits of using integrated water resources management approaches.
- EI9 Projects that incorporate differential uses of water based on the level of treatment to reduce the costs of treating all water to potable-water standards.
- EI10 Development of Comprehensive Wastewater Management Plan (sustainability plan)
- EI11 Development of Water Resources Management Plan and likely to result in a capital project (e.g., System Master Plan, etc.)