



STATE REVOLVING FUND LOAN PROGRAM

GREEN PROJECT RESERVE SUSTAINABILITY INCENTIVE

DRINKING WATER CHECKLIST

SRF Loan Program Participant Information

Participant Name: _____

Project Name/Location: _____

Date: _____ Revision No. _____

Instructions

This checklist shall be completed by the SRF Loan Program participant and be updated as the project changes from concept to design through construction completion. A checklist should be submitted with:

- 1. The SRF Loan Program Application,
2. The Preliminary Engineering Report, along with GPR project description and cost estimates,
3. The Post-Bid Documents, including GPR construction costs, and
4. Construction completion.

Please see the U.S. EPA Green Project Reserve Guidance, available at www.srf.in.gov, for a detailed review of eligibility; definition of the GPR categories: Green Infrastructure, Water Efficiency, Energy Efficiency and Environmentally innovative; examples of ineligible projects; categorical projects and those that require business cases. All GPR projects, components, and activities must be eligible for SRF funding.

Check all that apply to the project:

I. GREEN INFRASTRUCTURE

1. Categorical Projects

- The following types of projects, done at a utility-owned facility or as part of a water infrastructure project, can be counted toward the GPR if they are a part of an eligible DWSRF project:
- Pervious or porous pavement,
- Bioretention,
- Green roofs,
- Rainwater harvesting/cisterns,
- Gray water use,
- Xeriscape,
- Landscape conversion programs, and
- Moisture and rain sensing irrigation equipment.

2. Decision Criteria For Business Cases

- Green infrastructure projects are designed to mimic the natural hydrologic conditions of the site or watershed.
- Projects capture, treat, infiltrate, or evapotranspire stormwater on the parcels where it falls and does not include inter basin transfers of water.
- GPR project is in lieu of or to supplement municipal hard/gray infrastructure.
- Other - Please provide an attachment explaining the scope of the project and brief explanation of the approach for the business case.

II. WATER EFFICIENCY

1. Categorical Projects

- Installing or retrofitting water efficient devices such as plumbing fixtures and appliances.
 - For example – showerheads, toilets, urinals, and other plumbing devices.
 - Water sense labeled products.
 - Implementation of incentive programs to conserve water such as rebates.
- Installing any type of water meter in previously unmetered areas, if rate structures are based on metered use.
 - Can include backflow prevention devices if installed in conjunction with water meter.
- Replacing existing broken/malfunctioning water meters with:
 - Automatic meter reading systems (AMR), for example:
 - Advanced metering infrastructure (AMI)
 - Smart meters
 - Meters with built in leak detection,
 - Can include backflow prevention devices if installed in conjunction with water meter replacement.
- Retrofitting/adding AMR capabilities or leak equipment to existing meters (not replacing the meter itself).
- Conducting water utility audits, leak detection studies, and water use efficiency baseline studies, which are reasonably expected to result in a capital project or in a reduction in demand to alleviate the need for additional capital investment.
- Developing conservation plans/programs reasonably expected to result in a water-conserving capital project or in a reduction in demand to alleviate the need for additional capital investment.
- Recycling and water reuse projects that replace potable sources with non-potable sources:
 - Gray water, condensate, and wastewater effluent reuse systems (where local codes allow the practice).
 - Extra treatment costs and distribution pipes associated with water reuse.
- Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems, including moisture and rain sensing controllers.
- Projects that result from a water efficiency related assessments (such as water audits, leak detection studies, conservation plans, etc) as long as the assessments adhered to the standard industry practices referenced above.
- Distribution system leak detection equipment, portable or permanent.
- Automatic flushing systems (portable or permanent).
- Pressure reducing valves (PRVs).
- Internal plant water reuse (such as backwash water recycling).

2. Decision Criteria for Business Cases

- Water efficiency can be accomplished through water saving elements or reducing water consumption. This will reduce the amount of water taken out of rivers, lakes, streams, groundwater, or from other sources.
- Water efficiency projects should deliver equal or better services with less net water use as compared to traditional or standard technologies and practices.
- Efficient water use often has the added benefit of reducing the amount of energy required by a drinking water system, since less water would need to be treated and transported; therefore, there are also energy and financial savings.
- Proper water infrastructure management should address where water losses could be occurring in the system and fix or avert them. This could be achieved, for example, by making operational changes or replacing aging infrastructure.
- Other – Please provide an attachment explaining the scope of the project and brief explanation of the approach for the business case.

3. Example Projects Requiring a Business Case

- Water meter replacement with traditional water meters.
- Distribution pipe replacement or rehabilitation to reduce water loss and prevent water main breaks.
- Storage tank replacement/rehabilitation to reduce water loss.
- New water efficient landscape irrigation system.

III. ENERGY EFFICIENCY

1. Categorical Projects

- Renewable energy projects, which are part of a larger public health project, such as wind, solar, geothermal, and micro-hydroelectric that provide power to a utility. Micro-hydroelectric projects involve capturing the energy from pipe flow.
 - Utility-owned renewable energy projects can be located on-site or off-site
 - Includes the portion of a publicly owned renewable energy project that serves the utility's energy needs
 - Must feed into the grid that the utility draws from and/or there is a direct connection
- Utility energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas, which are reasonably expected to result in energy efficiency capital projects or in a reduction in demand to alleviate the need for additional capital investment.
- National Electric Manufacturers Association (NEMA) Premium energy efficiency motors (<http://www.nema.org/gov/energy/efficiency/premium/>).

2. Decision Criteria For Business Cases

- Projects should include products and practices which will decrease environmental impacts, such as reducing greenhouse gas emissions, and provide financial savings.
- Projects should include approaches to integrate energy efficient practices into daily management and long-term planning.
- Operator training in conjunction with any energy savings project is strongly encouraged in order to maximize the energy savings potential.
- Using existing tools such as Energy Star's Portfolio Manager (http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager) or Check Up Program for Small Systems (CUPSS) (<http://www.epa.gov/cupss/>) to document current energy usage and track anticipated savings.
- Other – Please provide an attachment explaining the scope of the project and brief explanation of the approach for the business case.

3. Example Projects Requiring A Business Case

- Energy efficient retrofits, upgrades, or new pumping systems and treatment processes (including variable frequency drives (VFDs)).
- Pump refurbishment to optimize pump efficiency (such as replacing or trimming impellers if pumps have too much capacity, replacing damaged or worn wearing rings/seals/bearings, etc).
- Projects that result from an energy efficiency related assessments (such as energy audits, energy assessment studies, etc), that are not otherwise designated as categorical.
- Projects that cost effectively eliminate pumps or pumping stations.
- Projects that achieve the remaining increments of energy efficiency in a system that is already very efficient.
- Upgrade of lighting to energy efficient sources (such as metal halide pulse start technologies, compact fluorescent, light emitting diode, etc).
- Automated and remote control systems (SCADA) that achieve substantial energy savings (see AWWA M2 Instrumentation and Control).

IV. ENVIRONMENTALLY INNOVATIVE

1. Categorical Projects

- Total/integrated water resources management planning, or other planning framework where project life cycle costs (including infrastructure, energy consumption, and other operational costs) are minimized, which enables communities to adopt more efficient and cost-effective infrastructure solutions.
 - Plans to improve water quantity and quality associated with water system technical, financial, and managerial capacity.
 - Eligible source water protection planning:
 - Periodic, updated, or more detailed source water delineation or assessment as part of a more comprehensive source water protection program,
 - Source water monitoring (not compliance monitoring) and modeling as part of a more comprehensive source water protection program.
 - Planning activities by a utility to prepare for adaptation to the long-term effects of climate change and/or extreme weather.
- Utility Sustainability Plan consistent with EPA's SRF sustainability policy.
- Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry), as long as it is being done for a facility which is eligible for DWSRF assistance.
- Source Water Protection Implementation Projects.
 - Voluntary, incentive based source water protection measures pursuant to Section 1452(k)(1)(A)(ii), where the state primacy agency has determined that the use of such measures will reduce or preclude the need for treatment.
- Construction of US Building Council LEED certified buildings, or renovation of an existing building, owned by the utility, which is part of an eligible DWSRF project.
 - Any level of certification (Platinum, Gold, Silver, Certified).
 - All building costs are eligible, not just stormwater, water efficiency and energy efficiency related costs. Costs are not limited to the incremental additional costs associated with LEED certified buildings.

2. Decision Criteria For Business Cases

- State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical and climatological conditions.
 - Technology or approach whose performance is expected to address water quality but the actual performance has not been demonstrated in the state; or
 - Technology or approach that is not widely used in the state, but does perform as well or better than conventional technology/approaches at lower cost; or
 - Conventional technology or approaches that are used in a new application in the state.
- Other – Please provide an attachment explaining the scope of the project and brief explanation of the approach for the business case.

3. Example Projects Requiring A Business Case

- Projects or components of projects that result from total/integrated water resources management planning (including climate change) consistent with the Decision Criteria for environmentally innovative projects and that are DWSRF eligible,
- Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the Decision Criteria for environmentally innovative projects, such as:
 - Projects that significantly reduce or eliminate the use of chemicals in water treatment,
 - Treatment technologies or approaches that significantly reduce the volume of residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals,
 - Trenchless or low impact construction technology,

- Using recycled materials or re-using materials on-site.
- Educational activities and demonstration projects for water or energy efficiency (such as rain gardens).
- Projects that achieve the goals/objectives of utility asset management plans.

V. CLIMATE AND EXTREME WEATHER RESILIENCY

1. Categorical Projects – none at this time.

2. Decision Criteria for Business Cases

- Utility functions and performance can be disrupted by climate change/extreme weather events.
 - Flooding
 - Drought
 - Tornado
 - Lightning
 - Earthquake
- Incorporate project elements that provide flexibility to adapt operations and functionality as external conditions change.
- Project components designed to perform beyond the minimum Building Code or Design Standards.
- Utilize climate resiliency and adaptation strategies when siting or routing key project structures or components.
- Ability to modify or expand proposed facilities based on future climate change issues.
- Other - Please provide an attachment explaining the scope of the project and brief explanation of any aspects in the planning, construction or operation phase that support the approach for the business case.

3. Examples of Projects Requiring a Business Case

- Utilizing natural, native and drought resistant planted elements that are economically replaced at project sites for storm water control or landscaping.
- Siting new structures away from flash flood areas or poor structural soils in former waterway areas.
- Consideration of finished floor elevation above the 100-year flood elevation or normal code requirements.
- Increasing structural, roof (snow) or wind loadings beyond code requirements for new structures.
- Incorporate passive cooling systems for instrumentation, control or power panel rooms subject to high heat conditions.