



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, FINANCIAL ASSISTANCE CENTER
CLEAN WATER STATE REVOLVING FUND
GREEN PROJECT RESERVE

FOR OFFICE USE ONLY
PROJECT NUMBER
DATE RECEIVED

NOTE ► Submit only if the proposed project includes Green Project Reserve components.

1.0 APPLICANT INFORMATION

NAME OF PROJECT			
NAME OF APPLICANT	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE

2.0 GREEN INFRASTRUCTURE

DEFINITION
 Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and maintains and restores natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavements, and cisterns.

2.1 CATEGORICAL PROJECTS (CHECK ALL THAT MAY APPLY)

<input type="checkbox"/> Green streets.	<input type="checkbox"/> Restoration of permanent natural features.
<input type="checkbox"/> Wet weather managements systems for parking areas.	<input type="checkbox"/> Management of wetlands.
<input type="checkbox"/> Street tree or urban forestry program.	<input type="checkbox"/> Preservation of hydrologic processes.
<input type="checkbox"/> Downspout disconnection.	<input type="checkbox"/> Acquisition of land or easements benefitting water quality.
<input type="checkbox"/> Retrofit program to keep wet weather out of sewers.	

2.2 CATEGORICAL PROJECT SUMMARY (ATTACH SUPPORTING DOCUMENTATION)

2.3 ESTIMATED CATEGORICAL GREEN PROJECT RESERVE AMOUNT
 \$

2.4 BUSINESS CASE PROJECTS (CHECK ALL THAT MAY APPLY)

- Projects designed to mimic the natural hydrologic conditions of the site or watershed.
- Projects that capture, treat, infiltrate, or evapotranspire water on the parcels where it falls and does not result in interbasin transfers of water.
- Projects in lieu of or to supplement municipal hard/gray infrastructure.
- Projects considering both landscape and site scale to protect water quality.

2.5 BUSINESS CASE NARRATIVE (ATTACH SUPPORTING DOCUMENTATION)

2.6 ESTIMATED BUSINESS CASE GREEN PROJECT RESERVE AMOUNT
 \$

3.0 WATER EFFICIENCY

DEFINITION

The use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future.

3.1 CATEGORICAL PROJECTS (CHECK ALL THAT MAY APPLY)

- Installing or retrofitting water efficient devices.
- Installing water meters in unmetered areas.
- Replacing existing broken/malfunctioning water meters, or upgrading existing meters, with:
 - Automatic meter reading (AMR) systems;
 - Meters with built in leak detection; and/or
 - Backflow prevention devices installed in conjunction with water meter replacement.
- Retrofitting/adding AMR capabilities or leak detection equipment to existing meters (not replacing the meter itself).
- Water audit and water conservation plans, which are reasonably expected to result in a capital project.
- Recycling and water reuse projects that replace potable sources with non-potable sources.
- Retrofit or replacement of existing landscape irrigation systems with more efficient landscape irrigation systems, including moisture and rain sensing equipment.
- Retrofit or replacement of existing agricultural irrigation system with more efficient agricultural irrigation systems.

3.2 CATEGORICAL PROJECT SUMMARY (ATTACH SUPPORTING DOCUMENTATION)

3.3 ESTIMATED CATEGORICAL GREEN PROJECT RESERVE AMOUNT

\$

3.4 BUSINESS CASE PROJECTS (CHECK ALL THAT MAY APPLY)

- Projects utilizing water saving elements or reducing water consumption.
- Projects delivering equal or better services with less net water use as compared to traditional or standard technologies and practices.
- Projects with efficient water use thereby creating an energy and financial savings.

3.5 BUSINESS CASE NARRATIVE (ATTACH SUPPORTING DOCUMENTATION)

3.6 ESTIMATED ANNUAL COST SAVINGS

\$ per year

3.7 ESTIMATED ANNUAL WATER SAVINGS

gallons / year

3.8 ESTIMATED BUSINESS CASE GREEN PROJECT RESERVE AMOUNT

\$

4.0 ENERGY EFFICIENCY

DEFINITION

The use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

4.1 CATEGORICAL PROJECTS (CHECK ALL THAT MAY APPLY)

- Renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined head and power systems that provide power to a publicly owned treatment works (POTW).
- Achieving a 20 percent reduction in energy consumption.
- Collection system infiltration and inflow (I/I) detection equipment.
- POTW 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 a capital project.

4.2 CATEGORICAL PROJECT SUMMARY (ATTACH SUPPORTING DOCUMENTATION)

4.3 ESTIMATED CATEGORICAL GREEN PROJECT RESERVE AMOUNT

\$

4.4 BUSINESS CASE PROJECTS (CHECK ALL THAT MAY APPLY)

- Projects that are cost effective and presented by an evaluation identifying the energy savings and payback on capital and operation and maintenance costs that does not exceed the useful life of the asset.
- Projects maximizing on energy saving opportunities for the POTW or unit process.
- Projects utilizing tools such as the Environmental Protection Agency (EPA) Energy Star's Portfolio Manager or EPA Check Up Program for Small Systems to document current energy usage and track anticipated savings.

4.5 BUSINESS CASE NARRATIVE (ATTACH SUPPORTING DOCUMENTATION)

4.6 EXISTING PUMP/MOTOR EFFICIENCY RATING (IF APPLICABLE)

%

4.7 NEW PUMP/MOTOR EFFICIENCY RATING (IF APPLICABLE)

%

4.8 ESTIMATED ANNUAL COST SAVINGS

\$ per year

4.9 ESTIMATED ANNUAL ELECTRIC SAVINGS

kilowatt / year

4.10 ESTIMATED BUSINESS CASE GREEN PROJECT RESERVE AMOUNT

\$

5.0 ENVIRONMENTALLY INNOVATIVE

DEFINITION

Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way.

5.1 CATEGORICAL PROJECTS (CHECK ALL THAT MAY APPLY)

- Total/integrated water resources management planning likely to result in a capital project.
- Utility sustainability plan consistent with the EPA State Revolving Fund's sustainability policy.
- Greenhouse gas inventory or mitigation plan and submission to a registry (such as Climate Leaders or Climate Registry).
- Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather.
- Construction of US Building Council Leadership in Energy and Environmental Design (LEED) certified buildings or renovation of an existing building on POTW facilities.
- Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems.

5.2 CATEGORICAL PROJECT SUMMARY (ATTACH SUPPORTING DOCUMENTATION)

5.3 ESTIMATED CATEGORICAL GREEN PROJECT RESERVE AMOUNT

\$

5.4 BUSINESS CASE PROJECTS (CHECK ALL THAT MAY APPLY)

- Innovative technology or process whose performance is expected to address water quality, but the actual performance has not been demonstrated in Missouri.
- Technology or process that is not widely used in Missouri, but does perform as well or better than conventional technology or process at a lower cost.
- Conventional technology or process that is used in a new application in Missouri.

5.5 BUSINESS CASE NARRATIVE (ATTACH SUPPORTING DOCUMENTATION)

5.6 ESTIMATED BUSINESS CASE GREEN PROJECT RESERVE AMOUNT

\$

6.0 CERTIFICATION

I certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete and accurate. I agree if funding is awarded, to comply with all applicable terms, conditions and procedures of the Missouri Department of Natural Resources, the applicable rules and regulations of the Missouri Clean Water Commission and the terms and conditions of the loan agreement.

SIGNATURE OF AUTHORIZED REPRESENTATIVE

PRINTED NAME

DATE

TITLE

TELEPHONE NUMBER WITH AREA CODE

EMAIL ADDRESS

Mail completed copy to:

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FINANCIAL ASSISTANCE CENTER
P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

INSTRUCTIONS FOR COMPLETING CLEAN WATER STATE REVOLVING FUND GREEN PROJECT RESERVE

Any funding assistance is subject to all State Revolving Fund requirements. Potential applicants should contact the Missouri Department of Natural Resources' Financial Assistance Center prior to completing and submitting an application. Contact the Financial Assistance Center at 573-751-1192 or toll free at 800-361-4827 or visit online at dnr.mo.gov/env/wpp/srf/index.html for more information.

The Green Project Reserve (GPR) became a provision of the Clean Water State Revolving Fund program in 2009 as a result of the American Recovery and Reinvestment Act. Certain federal capitalization grants, since 2009, have included language relating to the establishment of the GPR and to specify a targeted percentage of funds for GPR projects or components of projects (to the extent applications are received). The U.S. Environmental Protection Agency has developed guidance that describes the federal requirements for GPR. Visit EPA's website for the current available information at water.epa.gov/grants_funding/cwsrf/Green-Project-Reserve.cfm. The department also has a webpage dedicated to the GPR information available at dnr.mo.gov/env/wpp/srf/gpr.htm.

GPR projects are divided into four categories: green infrastructure, water efficiency, energy efficiency, or environmentally innovative. The EPA has identified project elements which are considered "categorically green" for each of the four categories. For project elements not specifically identified as "categorically green," a business case needs to be developed.

Business Case Development

A business case is a due diligence document which demonstrates that the project element(s) meets the GPR criteria.

Length of a business case:

- Business cases should be adequate but not exhaustive. There is no specific format or approach required.
- Limit the information contained in the business case to only the pertinent "green" information needed to justify the project, which may include a detailed analysis and/or calculations.
- A business case can simply summarize results from, and then cite, existing documentation such as facility plans, water or energy audits, results of a sanitary sewer evaluation study (SSES), etc.

Content of a business case:

- Business cases must address the decision criteria for the category of project.
- Quantifiable water and/or energy savings or water loss reduction and energy efficiency projects should be included.
- The cost and financial benefit of the project should be included, along with the payback time period, where applicable.

Items which strengthen business case, but are not required:

- Showing that the project was designed to enable equipment to operate most efficiently.
- Demonstrating that equipment will meet or exceed standards set by professional associations.
- Including operator training or committing to utilizing existing tools such as the EPA Energy Star's Portfolio Manager (www.energystar.gov/) or EPA Check Up Program for Small Systems (CUPSS) (water.epa.gov/infrastructure/drinkingwater/pws/cupss/index.cfm) for energy efficiency projects.

Example business cases are available at:

- EPA's GPR website: water.epa.gov/grants_funding/cwsrf/Green-Project-Reserve.cfm.
- Department's GPR webpage: dnr.mo.gov/env/wpp/srf/gpr.htm.

- 1.0 Complete the applicant information. Include the name of the project, name of the applicant entity and contact information.
- 2.0 Complete the green infrastructure section, if applicable.
Projects that do not meet the definition of green infrastructure include:
 - A. Stormwater controls that have impervious or semi-impervious liners and provide no compensatory evapotranspirative or harvesting function for stormwater retention.
 - B. Stormwater ponds that serve an extended detention function and/or extended filtration. This includes soil lined detention basins.
 - C. In-line and end-of-pipe treatment systems that only filter or detain stormwater.
 - D. Underground stormwater control and treatment devices such as swirl concentrators, hydrodynamic separators, baffle systems for grit, trash removal/floatables, oil and grease, inflatable booms and dams for in-line underground storage and diversion of flows.
 - E. Stormwater conveyance systems that are not soil/vegetation based (swales) such as pipes and concrete channels.
 - F. Hardening, channelizing, or straightening streams and/or stream banks.
 - G. Street sweepers, sewer cleaners, and vactor trucks unless they support green infrastructure projects.
- 2.1 Check all of the applicable boxes which correspond to the categorically green infrastructure components of the proposed project.
- 2.2 Briefly describe the green infrastructure categorical components of the proposed project. Attach supporting documentation as needed.
- 2.3 Provide the estimated green infrastructure categorical total capital cost of the proposed project.
- 2.4 Check all of the applicable boxes which can be considered for a green infrastructure business case.
Examples of projects requiring a green infrastructure business case are as follows:

- A. Fencing to keep livestock out of streams and stream buffers. Fencing must allow buffer vegetation to grow undisturbed and be placed a sufficient distance from the riparian edge for the buffer to function as a filter for sediment, nutrients, and other pollutants.
- 2.5 Briefly describe the business case for the green infrastructure components of the proposed project. Attach supporting documentation as needed.
- 2.6 Provide the estimated green infrastructure business case(s) total capital cost of the proposed project.
- 3.0 Complete the water efficiency section, if applicable.
Projects that do not meet the definition of water efficiency include:
- Agricultural flood irrigation.
 - Lining of canals to reduce water loss.
 - Replacing drinking water distribution lines.
 - Leak detection equipment for drinking water distribution systems, unless used for reuse distribution pipes.
- 3.1 Check all of the applicable boxes which correspond to the categorically water efficient components of the proposed project.
- 3.2 Briefly describe the water efficiency categorical components of the proposed project. Attach supporting documentation as needed.
- 3.3 Provide the estimated water efficiency categorical total capital cost of the proposed project.
- 3.4 Check all of the applicable boxes which can be considered for a water efficiency business case.
Examples of projects requiring a water efficiency business case are as follows:
- Water meter replacement with traditional water meters.
 - Projects that result from a water audit or water conservation plan.
 - Storage tank replacement/rehabilitation to reduce loss of reclaimed water.
 - New water efficient landscape irrigation system (where there currently is not one).
 - New water efficient agricultural irrigation system (where there currently is not one).
- 3.5 Briefly describe the business case for the water efficiency components of the proposed project. Attach supporting documentation as needed.
- 3.6 Provide the estimated annual cost savings by implementing the proposed water efficiency business case(s).
- 3.7 Provide the estimated annual water savings in terms of gallons per year by implementing the proposed water efficiency business case(s).
- 3.8 Provide the estimated water efficiency business case(s) total capital cost of the proposed project.
- 4.0 Complete the energy efficiency section, if applicable.
Projects that do not meet the definition of energy efficiency include:
- Renewable energy generation that is privately owned or the portion of a publicly owned renewable energy facility that does not provide power to a publicly owned treatment works (POTW), either through a connection to the grid that the utility draws from and/or a direct connection to the POTW.
 - Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency.
 - Facultative lagoons, even if integral to an innovative treatment process.
 - Hydroelectric facilities, except micro-hydroelectric projects.
- 4.1 Check all of the applicable boxes which correspond to the categorically energy efficient components of the proposed project.
- 4.2 Briefly describe the energy efficiency categorical components of the proposed project. Attach supporting documentation as needed.
- 4.3 Provide the estimated energy efficiency categorical total capital cost of the proposed project.
- 4.4 Check all of the applicable boxes which can be considered for an energy efficiency business case.
Examples of projects requiring an energy efficiency business case are as follows:
- POTW projects or unit process projects that achieve less than a 20 percent energy efficiency improvement.
 - Projects implementing recommendations from an energy audit that are not otherwise designated as categorical.
 - Projects that cost effectively eliminate pumps or pumping stations.
 - Infiltration/Inflow (I/I) correction projects that save energy from pumping and reduced treatment costs and are cost effective.
 - Projects that count toward GPR cannot build new structural capacity. These projects may, however, recover existing capacity by reducing flow from I/I.
 - I/I correction projects where excessive groundwater infiltration is contaminating the influent requiring otherwise unnecessary treatment processes (i.e., arsenic laden groundwater) and I/I correction is cost effective.
 - Replacing pre- Energy Policy Act of 1992 motors with National Electric Manufacturers Association (NEMA) premium energy efficient motors.
 - NEMA is a standards setting association for the electrical manufacturing industry (www.nema.org/Policy/Energy/Efficiency/Pages/NEMA-Premium-Motors.aspx).
 - Upgrade of POTW lighting to energy efficient sources such as metal halide pulse state technologies, compact fluorescent, light emitting diode (LED).
 - Supervisory control and data acquisition (SCADA) systems can be justified based upon substantial energy savings.
 - Variable-frequency drives (VFDs) can be justified based upon substantial energy savings.

- 4.5 Briefly describe the business case for the energy efficiency components of the proposed project. Attach supporting documentation as needed.
- 4.6 Provide the existing pump or motor efficiency rating if the energy efficiency business case includes replacement of existing pumps or motors.
- 4.7 Provide the proposed pump or motor efficiency rating if the energy efficiency business case includes replacement of existing pumps or motors.
- 4.8 Provide the estimated annual cost savings by implementing the proposed energy efficiency business case(s).
- 4.9 Provide the estimated annual energy savings in terms of kilowatts per year by implementing the proposed energy efficiency business case(s).
- 4.10 Provide the estimated energy efficiency business case(s) total capital cost of the proposed project.
- 5.0 Complete the environmentally innovative section, if applicable.
Projects that do not meet the definition of environmentally innovative include:
- A. Air scrubbers to prevent nonpoint source deposition.
 - B. Facultative lagoons, even if integral to an innovative treatment process.
 - C. Surface discharging decentralized wastewater systems where there are cost effective soil-based alternatives.
 - D. Reflective roofs at POTW to combat heat island effect.
- 5.1 Check all of the applicable boxes which correspond to the categorically environmentally innovative components of the proposed project.
- 5.2 Briefly describe the environmentally innovative categorical components of the proposed project. Attach supporting documentation as needed.
- 5.3 Provide the estimated environmentally innovative categorical total capital cost of the proposed project.
- 5.4 Check all of the applicable boxes which can be considered for an environmentally innovative business case.
Examples of projects requiring an environmentally innovative business case are as follows:
- A. Constructed wetland projects used for municipal wastewater treatment, polishing, and/or effluent disposal.
 - 1. Natural wetlands, as well as the restoration/enhancement of degraded wetlands, may not be used for wastewater treatment purposes and must comply with all regulatory/permitting requirements.
 - 2. Projects may not (further) degrade natural wetlands.
 - B. Projects or components of projects that result from total/integrated water resource management planning consistent with the decision criteria for environmentally innovative projects.
 - C. Projects that facilitate adaptations of POTWs to climate change identified by a carbon footprint assessment or climate adaptation study.
 - D. POTW upgrades or retrofits that remove phosphorus for beneficial use, such as biofuel production with algae.
 - E. Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the decision criteria for environmentally innovative projects such as:
 - 1. Projects that significantly reduce or eliminate the use of chemicals in wastewater treatment.
 - 2. Treatment technologies or approaches that significantly reduce the volume or residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals.
 - 3. Includes composting, class A and other sustainable biosolids management approaches.
 - F. Educational activities and demonstration projects for water or energy efficiency.
 - G. Projects that achieve the goals/objectives of utility asset management plans.
 - H. Sub-surface land application of effluent and other means for groundwater recharge, such as spray irrigation and overland flow.
 - 1. Spray irrigation and overland flow of effluent is not eligible for GPR where there is no other cost effective alternative.
- 5.5 Briefly describe the business case for the environmentally innovative components of the proposed project. Attach supporting documentation as needed.
- 5.6 Provide the estimated environmentally innovative business case(s) total capital cost of the proposed project.
- 6.0 All applications must be signed in accordance with 10 CSR 20-6.010(2)(B) and the signature must be **original**.

Make a copy of the completed and signed application for your records.

Mail the completed form to the Missouri Department of Natural Resources, Financial Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

If there are any questions concerning this form, contact the department at 800-361-4827 or 573-751-1300 or visit dnr.mo.gov/env/wpp/srf/index.html.