



## Financing Energy, Land, and Water Conservation Projects

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The Georgia Environmental Finance Authority (GEFA) works to develop innovative programs to maintain Georgia's energy, land, and water resources. GEFA also strives to make such initiatives more accessible and financially sound for communities throughout Georgia. Protecting the state's natural resources is not only important for the environment, but also for its economic growth, and supports the state's culture of conservation. This document outlines the wide range of energy, land, and water conservation projects that GEFA can finance.

Visit [gefa.georgia.gov](http://gefa.georgia.gov) for more information on how to access GEFA's loan programs to facilitate the construction of energy, land, and water conservation projects.

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## Financing Water Loss Reduction and Water Conservation

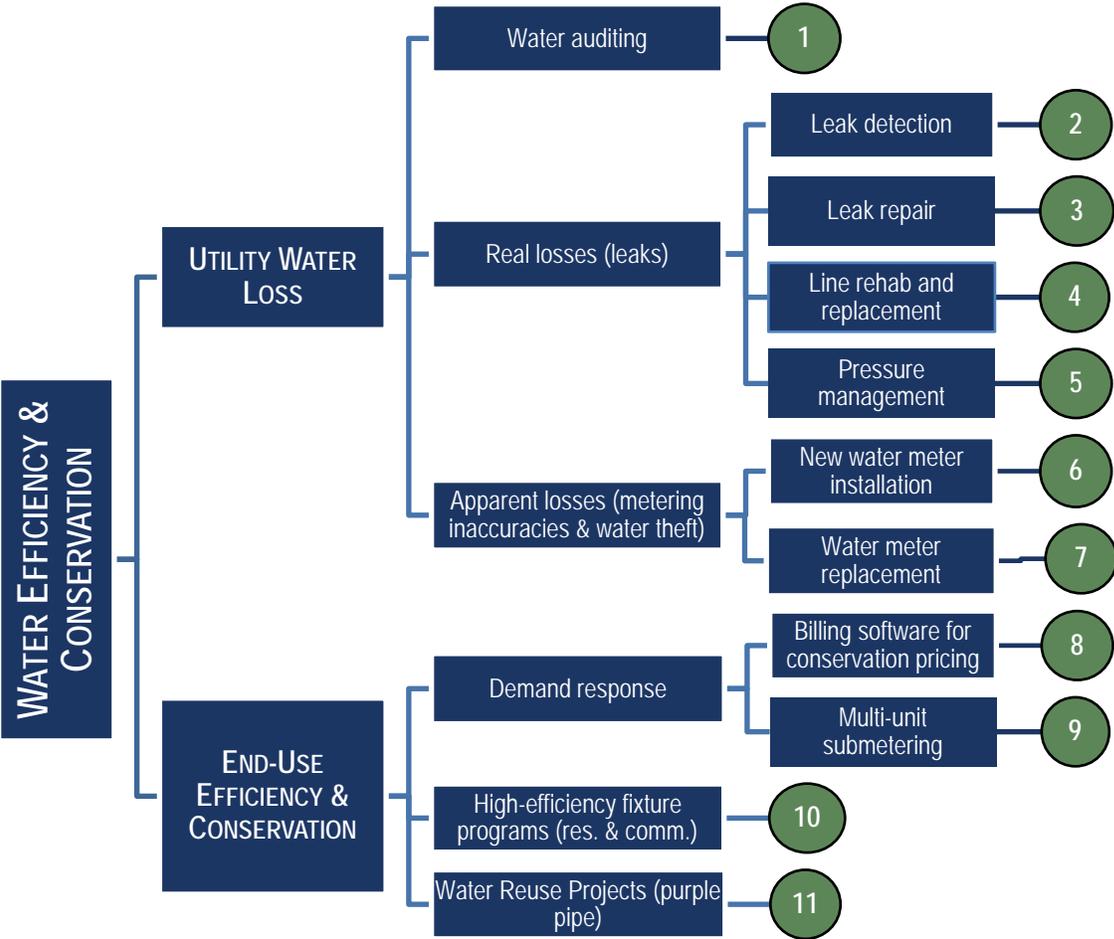
GEFA provides low-interest financing for local government water utilities. Several of GEFA's loan programs can be used to finance a range of water conservation projects in the areas of water loss and end-use water efficiency.

- Utility water loss consists of “real” losses, in the form of leaks, and “apparent” losses, such as metering inaccuracies and water theft.
- End-use water efficiency projects include upgrading water fixtures (e.g., toilets, faucets, irrigation systems, etc.), encouraging water conservation by utility customers, and water reuse projects.

## Financing Programs

GEFA operates three loan programs that can be used by water utilities to finance a wide range of water conservation projects – the state-funded Georgia Fund, and the federally-funded Clean Water and Drinking Water State Revolving Funds (SRF).

Diagram 1: Potential Water Efficiency and Conservation Projects for Water and Wastewater Utilities



**Table 1: Applicable Funding for Potential Water Efficiency and Conservation Projects**

1	<b>Water Auditing</b> – Auditing is an important first step for utilities to determine their total non-revenue water and the scale of real and apparent water loss in their system.	Water auditing assistance may be financed as part of large construction projects through the Georgia Fund and the Drinking Water SRF.
2	<b>Leak Detection</b> – Several practices can help utilities to detect leaks within a water system, such as ultrasonic listening and advanced flow monitoring.	Georgia Fund and the Drinking Water SRF.
3	<b>Leak Repair</b> – Leak repairs, such as leaky water line replacement.	Georgia Fund and the Drinking Water SRF.
4	<b>Line Rehabilitation and Replacement</b> – Leaks can be avoided by reconditioning or replacing lines before the end of their useful life.	Georgia Fund and the Drinking Water SRF.
5	<b>Pressure Management</b> – Since higher pressure can lead to severe leakage, methods such as using pressure reducing valves to regulate water supply pressure in various zones of the water system can reduce water loss.	Georgia Fund and the Drinking Water SRF.
6	<b>New Water Meter Installation</b> – Installing water meters at residential or commercial buildings previously without meters.	Georgia Fund and the Drinking Water SRF.
7	<b>Water Meter Replacement</b> – Replacing older, inaccurate water meters with new meters.	Georgia Fund and the Drinking Water SRF.
8	<b>Billing Software Upgrades</b> – A water utility must sometimes upgrade its billing software to support the implementation of conservation initiatives such as a tiered pricing structure, refining of customer classes, etc.	Billing software upgrades may be financed as part of larger construction projects through the Georgia Fund and the Drinking Water SRF.
9	<b>Multi-Unit Submetering</b> – Submetering of individual units in a multifamily building allows customers to get an accurate account of their water use, better guiding their water use behavior.	The Drinking Water SRF and the Georgia Fund can potentially finance submetering in publicly-owned buildings, such as a housing authority complex. The Drinking Water SRF may be able offer financing to a public utility system to provide incentives for multi-unit submetering, depending on certain aspects of program design.
10	<b>High-efficiency Fixture Programs</b> – Utilities can provide rebates and other programs to encourage customers to upgrade to high-efficiency fixtures.	Clean Water SRF and Drinking Water SRF, contingent upon approval of local oversight and verification procedures.
11	<b>Water Reuse Projects (purple pipe)</b> – Recycling and water reuse projects that displace the use of potable water for such uses as irrigation of golf courses, park areas and other landscaping needs.	Georgia Fund, the Drinking Water SRF and the Clean Water SRF.

**Table 2: Financing Terms and Conditions for Eligible Water Conservation Projects**

Program	Financing Terms for Water Conservation Projects	Annual Loan <sup>1</sup> Maximum	Maximum Loan Term
Georgia Fund	1 percent interest rate reduction with 1 percent closing fee Click <a href="#">here</a> for current interest rates	\$3 million per borrower per year	20 years
Clean Water SRF	1 percent interest rate reduction with 1 percent closing fee Click <a href="#">here</a> for current interest rates	\$25 million per borrower per year	30 years
Drinking Water SRF	1 percent interest rate reduction with 1 percent closing fee** Click <a href="#">here</a> for current interest rates	\$25 million per borrower per year	20 years

<sup>1</sup>Final funding availability is contingent upon loan repayments and appropriations.

\*\*Interest rate is net of 1 percent interest rate reduction for water conservation projects.

## Financing Energy Production and Conservation

GEFA has several loan programs that can be used by local governments to finance a broad range of energy projects in the areas of energy production, energy conservation, and energy management at water and sewer facilities and municipally-owned landfills.

- The production of energy through the collection of landfill gas at a governmentally-owned landfill or the through the installation of solar panels at the landfill site.
- Energy production where the energy is used directly or indirectly by the water or wastewater utility.
- Projects designed to reduce the energy consumption of the water or wastewater facilities.
- Energy management initiatives undertaken to identify potential energy saving projects or processes at water or wastewater utilities.

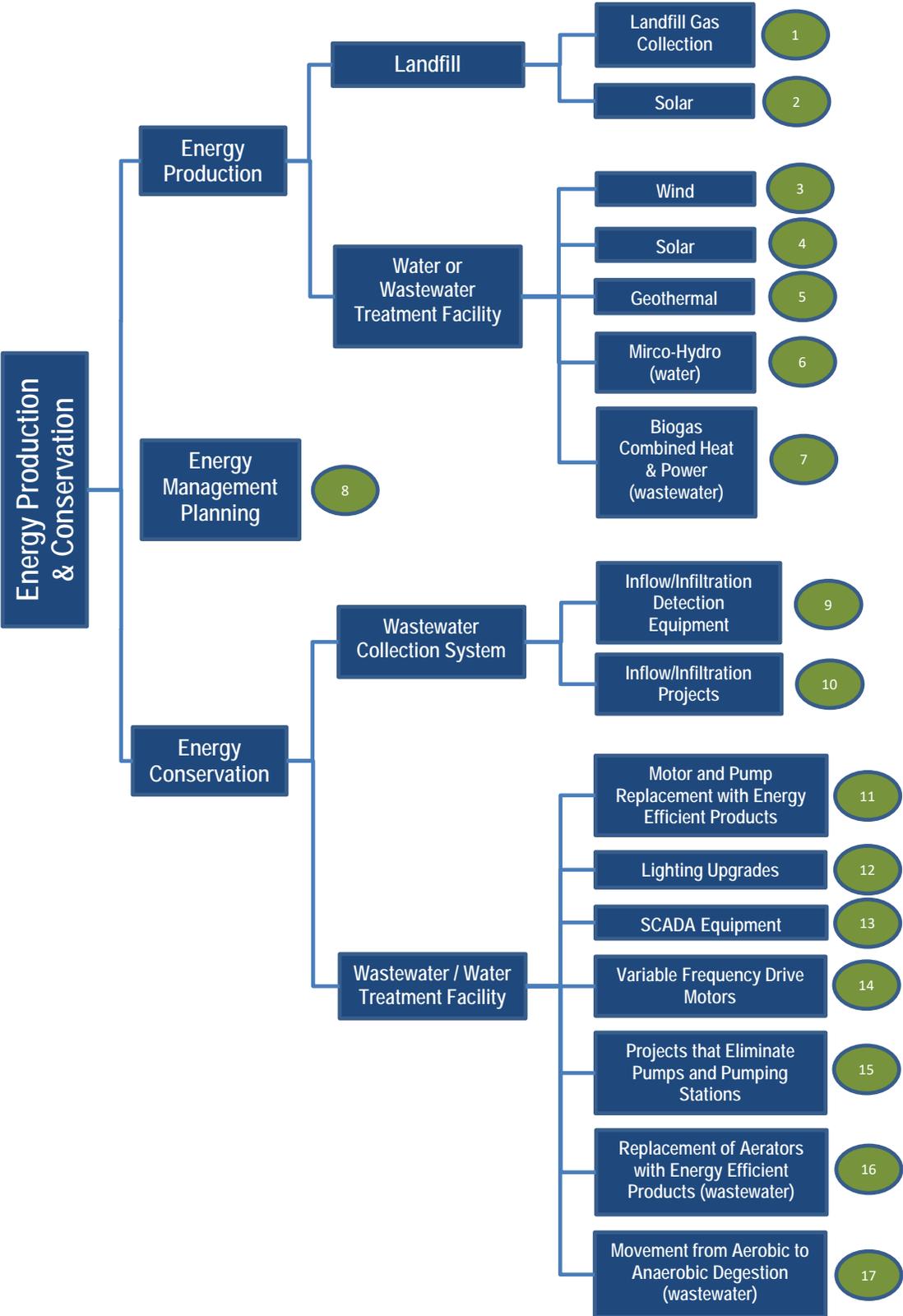
## Financing Programs

GEFA operates three low-interest loan programs that can be used by local governments to finance a wide range of energy production and conservation projects – the state-funded Georgia Fund, and the federally-funded Clean Water and Drinking Water State Revolving Funds (SRF).

The Georgia Fund can fund a broad array of water, wastewater and landfill energy projects. The Clean Water SRF program can fund a variety of energy production and conservation projects at wastewater facilities, while the Drinking Water SRF program can fund energy production and conservation projects at water facilities.

Eligible energy production or energy conservation projects may be funded as a portion of a larger infrastructure project or as a stand-alone project. GEFA will work with the borrower to identify which portion(s) of the project are eligible for the energy conservation designation.

Diagram 2: Potential Energy Production and Conservation Projects for Local Government Facilities



This chart is not intended to be an all-inclusive list, but does represent many of the energy projects eligible for funding.

**Table 3: Applicable Funding for Potential Energy Production and Conservation Projects**

1	<b>Landfill Methane Gas Collection</b> – Projects that collect methane gas from a municipal landfill to produce electricity or fuel. Project may also incorporate the production of compressed natural gas (CNG).	Georgia Fund
2	<b>Landfill Solar Power Production</b> – Projects that install solar panels at a municipal landfill for the purpose of generating electricity.	Georgia Fund
3	<b>Wind Power Production</b> – Wind projects that provide power to the water or wastewater facility. Wind power projects can either be located onsite for direct use, or located either onsite or offsite but provide power to the grid that the utility draws from.	Georgia Fund, Drinking Water SRF and Clean Water SRF
4	<b>Solar Power Production</b> – Solar projects that provide power to the water or wastewater facility. The installation of solar-powered reservoir circulators is also eligible in this category.	Georgia Fund, Drinking Water SRF and Clean Water SRF
5	<b>Geothermal Power Production</b> – Projects that harness geothermal energy located onsite at the water or wastewater facility or located offsite, and provide power to the grid that the utility draws from.	Georgia Fund, Drinking Water SRF and Clean Water SRF
6	<b>Micro-hydro Power Production</b> – Projects that involve capturing energy from pipe flow and provide power to the facility or to the grid that the utility draws from.	Georgia Fund and the Drinking Water SRF
7	<b>Biogas Combined Heat and Power</b> – Biogas projects that provide power to the wastewater facility. Project may also incorporate the production of compressed natural gas (CNG).	Georgia Fund and the Clean Water SRF
8	<b>Energy Management Planning</b> – 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, can be funded as a part of a larger project.	Georgia Fund, Clean Water and the Drinking Water SRF
9	<b>Inflow/Infiltration (I/I) Detection Equipment</b> – Wastewater collection system I/I detection equipment used to identify and correct I/I problems that save energy from pumping and reduced treatment costs.	Georgia Fund and the Clean Water SRF
10	<b>Inflow/Infiltration (I/I) Projects</b> – (I/I) Projects that save energy from reduced pumping and reduced treatment costs.	Georgia Fund and the Clean Water SRF
11	<b>Motor Replacement</b> – Projects that replace pre-Energy Policy Act of 1992 motors with National Electric Manufacturers Association (NEMA) premium energy efficiency motors. Replacing a motor at the end of its useful life with something of average efficiency is not eligible.	Georgia Fund, Drinking Water SRF and Clean Water SRF
12	<b>Lighting Upgrades</b> – Upgrade lighting at a water and/or wastewater facility to energy efficient sources such as metal halide pulse start technologies, compact fluorescent, or LED.	Georgia Fund, Drinking Water SRF and Clean Water SRF
13	<b>SCADA Equipment</b> – Some SCADA system projects at water and wastewater facilities that result in substantial energy savings.	Georgia Fund, Drinking Water SRF and Clean Water SRF
14	<b>Variable Frequency Drive Motors</b> – Energy-efficient retrofits, upgrades, or new pumping systems and treatment processes such as variable frequency drives (VFDs) that result in substantial energy savings.	Georgia Fund, Drinking Water SRF and Clean Water SRF
15	<b>Projects that Eliminate Pumps and Pumping Stations</b> – Projects that cost effectively eliminate pumps or pumping stations.	Georgia Fund, Drinking Water SRF and Clean Water SRF

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<i><b>Aerator Replacement</b></i> – Projects that replace inefficient aerators with energy-efficient aerators. Replacing an aerator at the end of its useful life with something of average efficiency is not eligible.	Georgia Fund and Clean Water SRF
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<i><b>Aerobic to Anaerobic Digestion</b></i> – Projects that convert wastewater treatment from aerobic digestion to anaerobic digestion to reduce energy costs. Only the cost of the treatment process is eligible.	Georgia Fund and Clean Water SRF
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**Table 4: Financing Terms and Conditions for Eligible Energy Conservation Projects**

Program	Financing Terms for Energy Production and Conservation Projects	Annual Loan Maximum	Maximum Loan Term
Georgia Fund	1 percent interest rate reduction with 1 percent closing fee Click <a href="#">here</a> for current interest rates	\$3 million per borrower per year	20 years
Clean Water SRF	1 percent interest rate reduction with 1 percent closing fee Click <a href="#">here</a> for current interest rates	\$25 million per borrower per year	30 years
Drinking Water SRF	1 percent interest rate reduction with 1 percent closing fee Click <a href="#">here</a> for current interest rates	\$25 million per borrower per year	20 years

### Financing Renewable Energy Production Projects

GEFA’s renewable energy production loan program provides low-interest financing for energy production projects that benefit publicly-owned water or wastewater utilities and municipal solid waste landfills. Examples include, but are not limited to, wind, solar, geothermal, micro-hydroelectric, biogas, combined heat and power, and alternative fuel.

### Borrower/Owner Requirements

According to Georgia law [O.G.C.A. § 50-23-4(7)], the following entities are eligible to borrow from GEFA:

- Cities, towns and counties
- Local water, sewer, and sanitary districts created by the General Assembly; and
- State and local authorities, boards, and political subdivisions created by the General Assembly.

### Project Eligibility Requirements

Publicly-owned renewable energy projects that provide energy to a publicly-owned water, wastewater or municipal solid waste landfill are eligible for GEFA financing, including:

1. Projects located on-site that provide renewable energy to water, wastewater or landfill facilities for the purpose of direct energy use.
  - a. Additional renewable energy production in excess of the needs of the facility can be sold back to the electrical grid or natural gas distribution system, but GEFA will only fund projects sized to meet the peak demand of the water or wastewater facility. There are no sizing limitations on landfills.
2. Projects located on-site that provide renewable energy to the electrical grid or natural gas distribution system for the purpose of selling renewable energy (e.g., Georgia Power’s Advanced Solar Initiative Program).

- a. GEFA will only fund projects sized to meet the peak demand of the water or wastewater facility. There are no sizing limitations on landfills.
- 3. Projects located off-site of the facility designed to provide renewable energy to the same electrical grid or natural gas distribution system in which the facility is connected.
  - a. Renewable energy generated off-site can be sold to the electrical grid or natural gas distribution system, but GEFA will only fund projects sized to meet the peak demand of the water or wastewater facility. There are no sizing limitations on landfills.

**Table 5: Eligible Energy Production Projects**

	Project Eligibility	
	On-site Project	Off-site Project
Renewable energy directly used by: <ul style="list-style-type: none"> <li>• Publicly-owned water facility</li> <li>• Publicly-owned wastewater facility</li> <li>• Publicly-owned municipal solid waste landfill</li> </ul>	Eligible	Eligible
Renewable energy sold to the electrical grid or natural gas distribution system (must be the same electrical grid or natural gas system in which the publicly-owned water, wastewater or landfill is connected)	Eligible	Ineligible

### Operations and Maintenance Requirements

Long-term operations and maintenance of a renewable energy project can be performed by the borrower or can be contracted to a private entity. GEFA funds cannot be used for operations and maintenance of a renewable energy project.

### Competitive Bidding Requirements

State law does not require the competitive procurement of design services for renewable energy projects, but state law and GEFA’s loan agreement does require the competitive procurement of all construction-related services. Design/Build construction is an acceptable procurement format if the Design/Build is competitively procured.

**Table 6: Financing Terms and Conditions for Eligible Energy Production Projects**

	Georgia Fund (state-funded)	Clean Water State Revolving Fund (federally-funded)	Drinking Water State Revolving Fund (federally-funded)
<b>Borrower Requirements</b>	Public entity as defined by O.G.C.A. § 50-23-4(7).	Public entity as defined by O.G.C.A. § 50-23-4(7).	Public entity as defined by O.G.C.A. § 50-23-4(7).
<b>Ownership Requirements</b>	Project must be owned by public entity as defined by O.G.C.A. § 50-23-4(7).	Project must be owned by public entity as defined by O.G.C.A. § 50-23-4(7).	Project must be owned by public entity as defined by O.G.C.A. § 50-23-4(7).
<b>Sizing Limits</b>	Sized to meet the peak demand of the water or wastewater facility. There is no sizing limitation on landfills.	Sized to meet the peak demand of the water or wastewater facility.	Sized to meet the peak demand of the water or wastewater facility.

<b>Operations and Maintenance Requirements</b>	May be performed by a public or private entity, but cannot be funded through a GEFA loan.	May be performed by a public or private entity, but cannot be funded through a GEFA loan.	May be performed by a public or private entity, but cannot be funded through a GEFA loan.
<b>Competitive Bidding Requirements</b>	All construction-related services require competitive bidding. GEFA will fund projects via Design/Bid/Build or Design/Build construction.	All construction-related services require competitive bidding. GEFA will fund projects via Design/Bid/Build or Design/Build construction.	All construction-related services require competitive bidding. GEFA will fund projects via Design/Bid/Build or Design/Build construction.
<b>Borrowing Limitation</b>	\$3 million per borrower per calendar year.	\$25 million per borrower per calendar year.	\$25 million per borrower per calendar year.
<b>Federal Compliance Requirements</b>	N/A	<ul style="list-style-type: none"> <li>• Environmental approval by Georgia Environmental Protection Division</li> <li>• Davis-Bacon wage rate requirements</li> <li>• Buy American requirement for iron and steel products</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental approval by Georgia Environmental Protection Division</li> <li>• Davis-Bacon wage rate requirements</li> <li>• Buy American requirement for iron and steel products</li> </ul>

## Financing Land Conservation

GEFA provides low-interest financing for local governments, state agencies and conservation organizations with land conservation projects approved by the Georgia Land Conservation Program (GLCP). Approved projects must result in the *permanent protection* of *conservation land* and convey some form of *water quality benefit*.

- Permanent protection is achieved through a deed restriction on publicly-owned property or a conservation easement on privately-owned property.
- Actions that produce water quality benefit must be consistent with the state's Nonpoint Source Management Plan, as determined by the Environmental Protection Division (EPD).
- Conservation land is permanently protected and exhibits one or more of the 10 conservation criteria.

## Financing Programs

GEFA operates three funding mechanisms that can be used by local governments, state agencies and non-government conservation organizations to finance land conservation projects – the Clean Water SRF, Georgia Land Conservation Trust Fund, and the Georgia Conservation Tax Credit. From the Clean Water SRF, \$55 million has been set aside to finance land conservation projects. The Trust Fund receives state appropriations and taxpayer donations through Checkoff Georgia. Tax credits are withdrawn from state income tax payments.

GEFA's grants and low-interest loan financing have been leveraged by other state funds, local funds, federal funds and private donations to protect conservation land in Georgia. GEFA encourages the use of multiple funding sources and partners to complete land conservation projects.

**Table 7: 10 Conservation Criteria for The Georgia Land Conservation Program**

1	<i>Water quality protection for rivers streams, and lakes</i>	Areas that border surface waters or rest upon aquifer recharge areas.
2	<i>Flood protection</i>	Areas within the 100-year floodplain of surface water bodies.
3	<i>Wetlands protection</i>	Areas that fall within or border delineated wetlands.
4	<i>Reduction of erosion through protection of steep slopes, erodible soils and stream banks</i>	Areas that contain slopes with a >10% grade and/or are underlain by soils labeled 'erodible' by the NRCS.
5	<i>Protection of riparian buffers and other areas that serve as natural habitat and corridors for native plant and animal species</i>	Areas that are known habitat for threatened, endangered or high-priority non-game wildlife species.
6	<i>Protection of prime agricultural and forestry lands</i>	Areas underlain by soils that currently and will forever be capable of supporting agriculture &/or silvicultural land uses.
7	<i>Protection of cultural sites heritage corridors, and archaeological and historic resources</i>	Structures or areas that are listed on the state &/or national Register of Historic Resources or fall within designated National Heritage Corridors.
8	<i>Scenic protection</i>	Areas that border designated Wild & Scenic Rivers or Scenic Byways.
9	<i>Provision of passive recreation</i>	Areas that support public access for boating, hiking, camping, fishing, hunting, jogging, biking, walking & similar activities.

<p><i>Connection of existing or planned areas contributing to the aforementioned goals</i></p>	<p>Lands that border and fall between at least two other areas that exhibit the previous nine conservation values.</p>
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**Table 8: Financing Terms and Conditions for Eligible Land Conservation Projects**

Program	Financing Terms for Land Conservation Projects	Award Maximum	Maximum Loan Term
<p>Clean Water SRF (Land Conservation Set-aside)</p>	<p>Loans to local governments and non-government conservation organizations. 1.0 percent interest rate reduction with 1 percent closing fee. Click <a href="#">here</a> for current interest rates</p>	<p>\$25 million per borrower per year</p>	<p>20 years</p>
<p>Georgia Land Conservation Trust Fund</p>	<p>One-time grants to local governments and state agencies. Click <a href="#">here</a> for information on the status of the Trust Fund</p>	<p>N/A</p>	<p>N/A</p>
<p>Georgia Conservation Tax Credit</p>	<p>State income tax credits available to individual and corporate donors of conservation land and easements. <a href="http://www.glcp.ga.gov/taxcredit">www.glcp.ga.gov/taxcredit</a></p>	<p>25% of donation up to \$250,000 for individual taxpayers and \$500,000 for corporate taxpayers</p>	<p>Tax credit recipients have up to ten tax years to use the credit.</p>