DEPARTMENT OF
ECOLOGY
State of Washington

Funding Guidelines

SFY 2012-2013

Water Quality Financial Assistance Guidelines

Centennial Clean Water Program

Clean Water Act Section 319 Program

Washington State Water Pollution Control Revolving Fund Program

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Funding Guidelines

SFY 2012-2013
Water Quality Financial Assistance Guidelines

by
the Water Quality Program's
Financial Management Section

Water Quality Program
Washington State Department of Ecology
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Program Overview

The Washington State Department of Ecology's (Ecology) Water Quality Program administers three main funding programs under an integrated annual funding cycle. Ecology awards grants and loans on a competitive basis to eligible agencies for high priority water quality projects throughout Washington State. Proposed projects address point and nonpoint source water pollution control issues. This document describes how to apply for funding, meet program requirements, and manage funded projects.

The three main funding programs are:

- The Centennial Clean Water Program (Centennial)
- The Clean Water Act Section 319 Nonpoint Source Grant Program (Section 319)
- The Washington State Water Pollution Control Revolving Fund Program (Revolving Fund)

Eligible public bodies include:

- Counties, cities, and towns
- Conservation Districts
- Political Subdivisions
- Municipal or Quasi-municipal Corporation
- Federally recognized tribes
- Washington State institutions of higher education (provided that the project is not included in that institution's statutory responsibilities)
- Not-for-profit organizations that are recognized as tax exempt by the Internal Revenue Service (Section 319 only)

Eligible project categories include:

Wastewater Facility

- Comprehensive Sewer Planning
- Facilities Plans
- Facilities Design
- Facilities Construction
- Water Reclamation Facilities

Nonpoint Source Activity

- Best Management Practices
- Agricultural Best Management Practices
- Demonstration Projects
- Groundwater/Aquifer/Wellhead Planning and/or Protection
- Lake Restoration Planning and Implementation
- Riparian/Wetland Restoration Planning and Implementation
- Public Outreach and Education
- Total Maximum Daily Loads (TMDL) Support
- Water Quality Monitoring
- Watershed Planning and Implementation

On-site Septic System

- Community Systems (planning, design, and construction)
- Planning/Survey
- Repair/Replacement Program

Stormwater

- Low Impact Development Techniques
- Outreach and Education
- Source Control Activities
- Stormwater Pollution Control Facilities
- Stormwater Retrofit
- Stormwater Best Management Practices

Statutory requirements, administrative rule uses and limitations, and program and agency policy provide the framework for the Funding Guidelines. Listed below are the statutes, rules, and policies, along with web links to those documents. References to the statues, rules, and policies are provided at the end of applicable section of this document.

- Chapter 173-98 WAC, *Uses and Limitations of the Water Pollution Control Revolving Fund*. http://apps.leg.wa.gov/WAC/default.aspx?cite=173-98
- Chapter 173-95A WAC, *Uses and Limitations of the Centennial Clean Water Program.* http://apps.leg.wa.gov/WAC/default.aspx?cite=173-95A
- Chapter 70.146 RCW, *Water Pollution Control Facilities Financing*. http://apps.leg.wa.gov/RCW/default.aspx?cite=70.146
- Chapter 90.50A RCW - *Water Pollution Control Facilities – Federal Capitalization Grants*. http://apps.leg.wa.gov/RCW/default.aspx?cite=90.50A
- Federal Clean Water Act of 1987, Section 319 http://www.epa.gov/nps/cwact.html
- *Administrative Requirements for Recipients of Ecology Grants and Loans –Yellow Book.* http://www.ecy.wa.gov/biblio/9118.html
- Chapter 173-240 WAC, *Submission of Plans and Reports for Construction of Wastewater Facilities.* http://apps.leg.wa.gov/WAC/default.aspx?cite=173-240
- Chapter 90.46 RCW, *Reclaimed Water Use*. http://apps.leg.wa.gov/RCW/default.aspx?cite=90.46

How Much Funding is Available?

Funding levels for the Water Quality program vary from year to year based on a variety of factors which may include federal and state legislative decisions, special one-time appropriations or Revolving Fund repayment schedules. The backbone of the Water Quality Program funding is the Revolving Fund, which typically provides a majority of funds available each year.

The funding programs

Ecology manages the following three sources of water quality funding under an integrated annual funding cycle. Applicants use one integrated financial assistance application to apply for Water Quality funds from all three funding sources. Ecology distributes funds to the highest priority projects in a combination of grants and loans depending on the project type and funding source.

Revolving fund

The United States Congress established the Washington State Water Pollution Control Revolving Fund Program (Revolving Fund) as part of the Clean Water Act (CWA) Amendments of 1987. The Environmental Protection Agency (EPA) offers states capitalization grants each year according to a formula established in the CWA. The capitalization grants are required to be matched with 20 percent state funds and are added to payments of principal and interest from previous loans. Ecology loans out the combined funds to eligible public bodies, and loan recipients make payments to the Revolving Fund with interest. This means that the Revolving Fund continues to revolve and grow and more money becomes available to fund water quality projects. Today, the majority of the fund consists of repaid principal and interest. The Revolving Fund has a portfolio of approximately $1 billion.

Centennial

The Centennial program (Centennial) is state-funded through the Washington State General Fund, primarily through the State Building Construction Account. Ecology administers the Centennial Program by providing grants to local governments and tribes. The grant funds are available for nonpoint source pollution projects to improve water quality, such as stormwater low impact development practices, stream restoration, on-site septic repair and replacement, and other nonpoint activities. Ecology also uses Centennial grants for facilities-type projects, including wastewater treatment construction projects for financially distressed communities.

Section 319

The United States Congress established the Section 319 program (Section 319) as part of the CWA amendments of 1987. The EPA provides Section 319 grant funds to the State and the State is required to provide a 40 percent match. While Ecology has no specific state rule to guide the management of Section 319, much of the program is steered by federal regulations and guidelines, as well as Centennial rule. Ecology places a high priority on the collection of data in order to estimate load reductions of nitrogen, phosphorus, and sediments. All states must report these load reductions to the EPA on an annual basis.

Prior funding levels

In the last four years, total funds available for the Water Quality program have varied from a low of $67.5 million to a high of $140.2 million. The amount of funding available on a competitive basis for each State Fiscal Year (SFY) varies based on the legislative provisos and previous commitments. At the time of application for each fiscal year, the exact amount of funding available for each of the programs is not known. Ecology will not know exact funding levels

until federal appropriations are made and the State Legislature passes its capital budget for the coming year. For example, the applications for the SFY 2012 are due on November 5, 2011, but the State Legislature does not pass its budget until the spring of 2012.

Table 1 below shows the level of funding for the previous four years. The extended payment grant for Spokane County/City is $5,000,000 annually and is a long-term funding commitment which runs through the year 2015. The previous commitment Revolving Fund loan for Spokane County is for $16,225,000 annually and runs through the year 2013.

Table 1 – Prior Funding Levels

FUNDING CATEGORY	SFY 2008	SFY 2009	SFY 2010	SFY 2011
Total Funds Available	**$ 111 M**	**$ 67.5 M**	**$ 140.2 M**	**$ 108.5 M**
Total Centennial (state funds)	**$ 41.6 M**	**$ 18.1 M**	**$ 15 M**	**$ 15 M**
Less Spokane County/City Extended Payment Grant	$(5.0) M	$(5.0) M	$(5.0) M	$(5.0) M
Less Legislative Provisos	$(23.5) M			
Less Small Community Hardship Grants	$(2.5) M	$(2.5) M		
Competitive Centennial Grants -	$10.6 M	$ 10.6 M	$ 10 M	$ 10 M
Hardship Facilities	*$ 7.1 M*	*$ 5.4 M*	*$ 6.7 M*	*$ 6 M*
Nonpoint Activities	*$ 3.5 M*	*$ 2.7 M*	*$ 3.3 M*	*$ 2 M*
Stormwater				*$ 1 M*
On-site Septic System				*$ 1 M*
Total Revolving Fund (federal/state funds)	**$70 M**	**$50 M**	**$ 58 M**	**$ 87.4 M**
Less Spokane County Previous Commitment Loan			$(16.2) M	$(16.2) M
Competitive Revolving Fund -	$ 70 M	$ 50 M	$ 41.8 M	$ 71.2 M
80% to Facility Loans	*$ 56 M*	*$ 40 M*	*$ 30.2 M*	*$ 40 M*
20% to Nonpoint Activity Loans	*$ 14 M*	*$ 10 M*	*$ 11.6 M*	*$ 10 M*
Green Project Reserves				*$ 7 M*
Hardship Forgivable Principal				*$ 14.2 M*
Section 319 Nonpoint Activity Grants (federal funds)	**$ 1.9 M**	**$ 1.9 M**	**$ 1.8 M**	**$ 1.8 M**
Stormwater Retrofit Low Impact Development (state funds)				**$ 4.3 M**
American Recovery and Reinvestment Act (federal funds)			**$ 65.4 M**	

Funding ceilings and match requirements

Funding ceilings and match requirements vary by funding program, funding type (e.g., grant, loans), and project type. Loans do not require a match. Centennial does offer loans, but they are rare, with the vast majority of the Centennial funds offered as grants.

Forgivable principal loans are a relatively new provision of the Revolving Fund, with Congress authorizing the use of forgivable principal loans in the 2010 Clean Water Act appropriation. Forgivable principal means the portion of a loan that is not required to be paid back by the borrower. Applicants receiving a forgivable principal loan must also take a standard Revolving Fund loan. Forgivable principal loans may be offered in the 2012 and 2013 funding cycles if authorized again by Congress in the Clean Water Act 2012 and 2013 appropriation.

Applicants for hardship funding must meet certain requirements to be eligible. Hardship funding requirements are discussed in the following section.

Most nonpoint source activity grants have matching requirements. The basic grant share for most nonpoint source activity projects, funded through Centennial or Section 319, are 75 percent of the total eligible costs. Match is often in the form of cash, but some grants may be matched with in-kind-other contributions, or through interlocal contributions. The type of match depends on the type of grant or the amount of the grant. Table 2 provides a description of funding ceiling and match requirements for each funding program and project type.

Reference:
Chapter 173-98-300 (5) WAC
Chapter 173-98-520 WAC
Chapter 173-95A-420 (5) WAC
Chapter 173-95A-520 WAC
Chapter 173-95A-530 WAC

Table 2 – Funding Ceilings and Match Requirements

Program Project Type	Funding Type	Funding Ceiling	Required Match
Revolving Fund			
Wastewater Facility	Loan	50% of Available Funding in Category	0%
Wastewater Facility - Hardship	Forgivable Principal [1] or Subsidized Loan	$5 Million in Forgivable Principal; 50% of Available Funding in Category for Subsidized Loan [2]	0%
Nonpoint Source Activity	Loan	50% of Available Funding in Category	0%
On-site Septic System	Loan	50% of Available Funding in Category	0%
On-site Septic System - Hardship	Subsidized Loan	50% of Available Funding in Category	0%
Stormwater	Loan	50% of Available Funding in Category	0%
Stormwater - Hardship	Subsidized Loan	50% of Available Funding in Category	0%
Green Project Reserves	Loan	50% of Available Funding in Category [2]	0%
Green Project Reserves	Forgivable Principal [1]	50% of Eligible Project Costs [2]	0%
Centennial			
Wastewater Facility	Loan	$5 Million	0%
Wastewater Facility - Hardship	Grant	$5 Million	0%
Nonpoint Source Activity	Loan	$500,000	0%
Nonpoint Source Activity	Grant	$250,000 with any combination of In-kind or cash match $500,000 with cash match	25%
Stormwater (projects not required by a permit)	Grant or Loan	$250,000 with any combination of In-kind or cash match $500,000 with cash match	25%
Stormwater - Hardship [4]	Grant or Loan	$500,000 with cash or interlocal match	50%
On-site Septic System [3]	Grant	$500,000 with cash match	50%
Section 319			
Nonpoint Source Activity	Grant	$250,000 with any combination of In-kind or cash match $500,000 with cash match	25%

[1] Must take Revolving Fund loan with Forgivable Principal loan.
[2] Total combined funding for Revolving Fund Loan and Forgivable Principal Loan is 50% of funding available in category.
[3] Must have matching funds in loan or other funding and commit to implement a repair/replacement loan program.
[4] Limited to education and outreach, monitoring, establishing a stormwater utility, or identification and mapping of pollution sources.

Cash match

A cash match is any project cost paid for by the recipient that is not reimbursed by the grant.

Interlocal contributions

Interlocal contributions are those made by another government pursuant to an interlocal agreement and not reimbursed by the grant or other outside funding source. The interlocal agreement should detail the work to be accomplished, the goods and services to be provided, and its value. Interlocal contributions can satisfy a cash match requirement. Interlocal contributions differ from other in-kind contributions, because the following are eligible match:

- An indirect rate of up to 25 percent of salaries and benefits.
- Cost of transportation through mileage or an indirect rate. Mileage is charged at the current state mileage rate.
- Per Diem, travel, and subsistence expenses at state travel rates.
- Prevailing wages of the public body.

In-kind other

In-kind other matches are property or services contributed to the recipient (or any contractor under the agreement) without direct monetary compensation. In-kind other contributions must be fully documented and reported separately when requesting reimbursement. In-kind other includes donated or loaned real or personal property, volunteer services, and employee services donated to a project.

The current in-kind rate for volunteer services includes the value of travel expenses contributed by volunteers:

- Adults: $15.00 per hour.
- Children (under 18): Washington State minimum wage at the time the service is provided.

The following are examples of ineligible in-kind-other contributions:

- Contributions of overhead costs, per-diem, travel, and subsistence expenses.
- Contributed time from individuals receiving compensation through the grant, except when that individual is off duty and contributing on their own time.
- Time spent at advisory groups or meetings.
- Studies conducted by other state or federal agencies.

Third-party in-kind contribution

When a third-party employer (not the recipient or a contractor under the agreement) contributes the services of an employee, in the employee's normal line of work, to the project at no charge to the recipient, the services will be valued at the employee's regular rate of pay.

Small Towns Environment Program (STEP)

In-kind contributions may be used for an Ecology-designated STEP project.

Grants used to match grants

Check with the funding agency issuing the grant to ensure that it can be used as match for an Ecology grant. The following applies when using other grants to match an Ecology grant:

- The scope of work on the matching grant must directly satisfy the portion of the scope of work on the Ecology grant where the work is contributed.
- The date that the costs for the matching grant are incurred must fall within the effective and expiration dates of the Ecology grant.
- The costs incurred under the matching grant must be eligible according to all criteria set forth for the Ecology grant.
- Generally, the matching grant cannot originate from the same funding source as the Ecology grant.

Loans used to match grants

Centennial or Revolving Fund loans may be used to match Centennial and Section 319 grants.

Donations

Donations that become the long-term property of the recipient are considered cash match.

Hardship consideration

Ecology may offer a combination of hardship grants, forgivable principal loans or subsidized loans for facility construction, on-site septic repair and replacement local loan fund, and stormwater projects. The hardship criteria and funding subsidies vary depending on the type of project and level of hardship. Hardship criteria for each project type are discussed below.

Wastewater treatment facility projects

Ecology may consider wastewater treatment facility applicants for financial hardship consideration if they meet the following criteria:

- The existing residential population of the service area for the proposed projects is 25,000 or less at the time of application.
- There is existing residential need at the time of application.
- Sewer user fees two percent or higher of the median household income (MHI) for the service area. Sewer user fees include existing and new operation and maintenance costs, and debt service on the wastewater facility.

If Ecology determines that financial hardship exists, it may structure an offer that includes a combination of grant, forgivable principal loan, and subsidized loan terms. Subsidized loan terms could include a combination of an extended repayment period (up to 20 years) and reduced interest rate (down to zero percent). Hardship funding covers 110 percent of existing residential need at the time of application. Applicants offered forgivable principal loans must also accept a Revolving Fund loan (standard or subsidized loan).

Ecology uses a sliding scale to determine hardship designation for wastewater treatment facility construction projects. Table 3 displays the hardship interest rate continuum for construction loans. Table 4 shows the hardship forgivable principal loan continuum for construction projects.

Table 3 - Hardship Construction Loan Interest Rate Continuum

Sewer User Fee divided by MHI	Below 2.0%	2.0% and above, but Below 3.0%	3.0% and above, but below 5.0%	5.0% and above
Hardship Designation sewer user rates in relation to MHI	***Non-Hardship*** (Not funded with grant dollars)	***Moderate Hardship***	***Elevated Hardship***	***Severe Hardship*** Very high sewer user rates in relation to MHI
Loan hardship-Funding Continuum	Loan at 60% of market rate	Loan at 40% of market rate	Loan at 20% of market rate	Loan at 0% interest

Table 4 – Forgivable Principal Loan Continuum

Sewer User Fee divided by MHI	Below 2.0%	2.0% and above, but Below 3.0%	3.0% and above, but below 5.0%	5.0% and above
Hardship Designation sewer user rates in relation to MHI	***Non-Hardship***	***Moderate Hardship***	***Elevated Hardship***	***Severe Hardship*** Very high sewer user rates in relation to MHI
Forgivable Principal Loan Hardship- Funding Continuum	Not eligible for principal forgiveness loan	50% principal forgiveness loan (up to $5 million)	75% principal forgiveness loan (up to $5 million)	100% principal forgiveness loan (up to $5 million)

Reference:
Chapter 173-98-300 WAC
Chapter 173-95A-400 WAC

On-site septic system projects

Hardship funding is available for on-site septic system projects in the form of grants and subsidized loans. Centennial grants may be used for On-site Septic Local Loan programs to establish, maintain, and supplement a revolving local loan program. Grants, in the amount of up to $500,000, may be awarded with a 50 percent cash match. Match may be either a State Revolving Fund loan or the recipient's own source of funds. Ecology determines the final subsidized interest rate for the subsidized Revolving Fund loan based on the loan rates provided to homeowners and small commercial enterprises throughout the duration of the project.

Recipients may use Centennial grants and Revolving Fund loans for the following:

- Subsidizing loans for financial hardship
  - Household income not to exceed 80 percent of county MHI
  - Small commercial enterprise annual revenue not to exceed $100,000
- Project administration and management
- Establishment of a Loan Loss Reserve Account
  - The grant recipient can establish and accumulate a Reserve Account using Centennial Clean Water Grant Funds and local sources to secure the potential loss from default on individual homeowner on-site septic system repair or replacement local loans.
  - Up to 10 percent of the total eligible cost for an individual on-site septic repair and replacement project may be deposited, from the Centennial grant, into the Reserve Account.
  - Recipients must apply the amount of Centennial Funds on deposit in the Reserve Account to either:
    - Cover, in part or in full, losses realized by the grant recipient on homeowner on-site septic system repair or replacement loan default.
    - Additional on-site septic system repair or replacement local loans at the timing discretion of the grant recipient, if not so applied.

Reference:
Chapter 173-98-310 WAC
Chapter 173-95A-410 WAC

Stormwater projects

Hardship funding is available for stormwater projects in the form of grants and subsidized Revolving Fund loans. Ecology may award grants for stormwater projects, in the amount of up to $500,000, with a 50 percent cash match. Grant Recipients may meet match requirements for grants by either a State Revolving Fund loan or the recipient's own source of funds. Stormwater grants are limited to certain activities which include education and outreach, monitoring, and planning for permitted facilities. The subsidized interest rate for hardship communities is 30 percent of the market rate. The market rate is based on the average market interest rate from the period 60 to 30 days before the annual funding application cycle begins.

Ecology determines hardship consideration for grants and subsidized loans for stormwater projects using the following criteria:

- Service area population of 25,000 or less
- The project is required under a permit
- Community's MHI is 60 percent or less of average statewide MHI (SFY 2011 statewide average MHI is $63,656 [MHI based on 2000 census adjusted annually by the consumer price index])

Reference:
Chapter 173-98-320 WAC
Chapter 173-95A-420 WAC

What Types of Projects are Funded?

Some projects are eligible for both loans and grants, while other projects are eligible for only loans. Eligible projects fall into four main categories, wastewater facilities, nonpoint source activity, on-site septic, and stormwater. In addition to these four categories, Green Project Reserves (GPR) is a designation that can be applied to an entire project or a component of a project.

For more information regarding the eligibility of specific projects or project components, see the tables in *Appendix C. Comparison of Eligibility of Costs in the Funding Programs* and *Appendix D. Best Management Practices (BMP) Eligibility Matrix*, or contact Ecology's financial management staff.

Wastewater facility projects

Water pollution control facilities projects can include facilities planning, design, construction of a traditional wastewater pollution control facility, and construction of water reclamation facilities. The technical prerequisites and approval process for facilities projects can be extensive. Ecology encourages applicants to work closely with the Ecology project engineers to ensure that all technical prerequisites are in place when planning a facilities project.

The eligibility for capacity for growth differs between the Centennial and Revolving Fund programs. For example, the Centennial program funds only the existing residential need plus ten percent at the time of application. The Revolving Fund program funds up to twenty years capacity for growth.

Facility design

The plans and specifications must be consistent with Chapter 173-240 WAC, *Submission of Plans and Reports for Construction of Wastewater Facilities*, the approved facilities plan, Ecology's *Criteria for Sewage Works Design*, and other applicable requirements. Applicants must base the plans and specifications on the preferred cost effective alternative identified in the approved facilities plan.

Facilities plans

Preparation of facilities plans is eligible for Water Quality Program funding. Applicants must comply with facilities planning requirements in order to be eligible for financial assistance from Ecology.

Facilities plans approved by Ecology more than two years prior to the close of a loan and grant application period must contain evidence of a recent review by Ecology to ensure that the document reflects current conditions. Facilities plans must address the requirements of Chapter 90.46 RCW *Reclaimed Water Use*, Chapter 173-240 WAC *Submission of Plans and Reports for Construction of Wastewater Facilities*, and Code of Federal Regulations (40.CFR, Part 35), State and Local Assistance, as well as the State Environmental Review Process (SERP) and generally recognized engineering standards and good practices.

Comprehensive sewer plans

Development of comprehensive sewer plans, also known as general sewer plans, is eligible for loan funding. These plans must comply with Chapter 173-240 WAC, *Submission of Plans and Reports for Construction of Wastewater Facilities.*

The "general sewer plan" is a comprehensive plan for a system of sewers adopted by a local government entity. The general sewer plan includes:

- The general location and description of treatment and disposal facilities.
- The general location and description of trunk and interceptor sewers.
- The general location and description of pumping stations.
- The general location and description of monitoring and control facilities.
- A depiction of the local service areas.
- A general description of the collection system to serve those areas.
- A preliminary engineering in adequate detail to assure technical feasibility.
- The method of distributing the cost and expense of the sewer system.
- An indication of the financial feasibility of plan implementation.

Water reclamation facilities

Water reclamation facilities are eligible for loans. Reclaimed water facilities must meet the same eligibility standards as other water pollution control facilities, including demonstrating that the project is the cost effective solution to a water quality problem. Cost effectiveness can include the environmental benefits of advanced wastewater treatment as well as the provision of additional water supplies.

Generally project components with water quality benefits are eligible. Components with strictly water supply benefits are not eligible. Eligible project elements may include, but not limited to:

- Wastewater treatment plant facilities.
- Rapid infiltration basins.
- Dedicated irrigation systems necessary to support the use of the water, such as poplar plantations.
- Purchase of land when that purchase is necessary for water storage or is the cost effective option, such as a dedicated land application site.
- Distribution piping and appurtenances needed to transport reclaimed water to the reuse site.

The purchase of land and distribution systems for recreation facilities (e.g., golf courses, ball fields, and parks) and similar community development features not directly related to water and wastewater infrastructure needs are not eligible for financial assistance.

Construction funding

Construction bid overruns

Ecology may adjust a facilities construction loan or grant agreement by amendment in order to meet the low, responsive, responsible bid. If the low, responsive, responsible bid exceeds the engineer's estimate of construction costs, Ecology may approve a funding increase for up to ten percent of the construction costs based on the percentage of Ecology’s participation in the overall funding of the project. Funding ceiling amounts apply to bid overruns. If funding is available

for bid overruns, hardship communities will be given first priority based on the severity of financial need of the community. Non-hardship recipients are funded on a first-come first-served basis.

If the low, responsive, responsible bid falls below the existing loan or grant agreement amount, Ecology will adjust the agreement to match the actual eligible bid amount based on the percentage of Ecology's participation in the overall funding of the project. Ecology will initiate the amendment process with the recipient as soon as possible after the completion of the bid process in order to make any surplus funds available to other public bodies.

Reference:
Chapter 173-98-520 (4) WAC

Construction change orders
Ecology may provide a five-percent contingency for change orders (if it falls within the existing loan or grant award). The five-percent contingency will be based on the total eligible cost of the actual bid award amount. The five-percent contingency can be included in the grant or loan agreement. Change orders are not eligible for design-build or design-build-operate projects. If funding is available for change orders, hardship communities will be given first priority based on the severity of financial need of the community. Non-hardship recipients are funded on a first-come first-served basis.

A change order is a formal document that modifies some condition(s) of the original construction contract document. Ecology reviews all construction change orders (for technical merit) and approves or disapproves them. Ecology's reviews cover technical merit, impact on the construction schedule, and compliance with other regulatory program requirements. The funding recipient must execute a change order any time there is a variation in an original construction contract document. Variations typically include changes in scope of work, contract price, construction methods, times to complete the work, and major design or process changes (such as changes in location, size, or capacity). Ecology may require a final quantity adjustment at the end of each contract to reconcile the originally contracted quantities with the quantities actually used.

Reference:
Chapter 173-98-520 (5) WAC

Nonpoint source activity projects

Nonpoint source water pollution control activities include a wide variety of projects that do not involve constructing or preparing to construct a traditional wastewater pollution control facility. These types of projects involve installing best management practices (BMPs) and use outreach and education to help improve water quality by addressing nonpoint source pollution. Ecology may require specific review and approval for certain BMPs in the individual loan or grant agreements.

All proposed nonpoint source activity projects must implement an element of a state or local plan directed at addressing water quality issues (e.g., watershed management plan, nonpoint source

pollution control plan). The plan being implemented must meet the criteria of the nine Key Elements for nonpoint source projects as outlined in the EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. A copy of the handbook can be found at: http://www.epa.gov/nps/watershed_handbook/

All funded Ecology nonpoint source activity projects must also meet the objectives of *Washington's Water Quality Management Plan to Control Nonpoint Sources of Pollution (Vol. 3)*. A copy of the plan can be found at: http://www.ecy.wa.gov/pubs/0510027.pdf

Water quality projects located in the Puget Sound watershed must be consistent with the Puget Sound Partnership's *Puget Sound Action Agenda*. Projects in the Puget Sound basin that address specific actions outlined in the *Puget Sound Action Agenda* receive a preference over projects in the Puget Sound that do not. A copy of the agenda can be found at: http://www.psp.wa.gov/aa_action_agenda.php

Following is an overview of project types that qualify as nonpoint source activity projects. *Appendix C. Comparison of Eligibility of Costs in the Funding Programs* contains an expanded list of eligible nonpoint source activity projects and project elements by applicable funding sources.

Best management practices projects

Best management practices (BMPs) are defined as structural or non-structural method(s), recommended through a planning process, that have a demonstrated success for addressing or preventing water quality degradation. Implementation of BMPs refers to the use of established approaches or practices to address water quality problems. BMPs are physical, structural, and managerial practices that prevent or reduce nonpoint source pollution.

BMPs that address or correct water quality degradation through facility- or activity-focused projects may be funded using Ecology's Water Quality Program financial assistance. However, BMP eligibility is not the same for loans and grants.

Appendix D. Best Management Practices (BMP) Eligibility Matrix contains a list of eligible BMPs and applicable funding sources.

BMP funding eligibility

BMPs on private property, public property, public easements, or public rights-of-way through private property are eligible for loan funding. Grant eligible BMPs include livestock exclusion fencing, riparian buffer establishment and planting, and riparian restoration activities.

Implementation of agricultural BMPs on property owned by Washington State and federal governments are largely ineligible, regardless of the eligibility of the applicant. However, in recognition of the complexity of watersheds and the benefits of cooperative efforts, Ecology can provide financial assistance to an eligible public body to participate with other state and federal agencies in comprehensive watershed planning and large scale monitoring programs that extend substantially beyond federal and state lands.

Ecology specialists evaluate additional BMPs and add them to the grant funding eligibility list on an ongoing basis. Ecology provides information on additional grant eligible BMPs as an addendum to this document.

Agricultural best management practices

Direct seed systems
Direct seed systems are eligible for Water Quality Program financial assistance. Direct seed systems plant and fertilize into undisturbed soil and eliminate full width tillage for seedbed preparation. Implements used for direct seed disturb only a narrow strip of soil and retain a majority of residue from the previous crop. Direct seed systems significantly reduce erosion, improve soil quality, reduce fuel consumption, and are a viable alternative to traditional, full tillage systems. Direct seeding systems are eligible for three types of funding:

- Equipment rental cost reimbursement
- Cost of custom application fee reimbursement
- Direct seed equipment purchase

See *Appendix K. Direct Seed System* for complete eligibility conditions for direct seed systems.

Livestock off-stream watering facilities
If livestock exclusion fencing is installed as part of a riparian protection/restoration project and meets the minimum standards for that BMP, grant dollars may be used to install an off-stream watering facility. Off-stream watering is used to provide an alternative source of watering where fencing or other method(s) exclude livestock from streams in order to protect water quality. Off-stream watering facilities (including well construction) are conditionally eligible for Water Quality Program financial assistance for projects that include privately owned livestock operations.

See *Appendix L. Livestock Off-stream Watering Facilities* for complete eligibility conditions for off-stream watering facilities are provided in.

Livestock feeding BMPs
Livestock feeding BMPs are intended to support the relocation of livestock feeding areas that threaten water quality, or to enhance existing feeding areas distanced from surface waters. Recipients may install a combination of these BMPs when appropriate. Funding for livestock feeding BMPs only applies to projects that will improve existing water quality problems, and may not be used to rebuild feeding facilities where the primary purpose is to repair existing structures. Ecology's project management team must approve all projects before installation. Eligible livestock BMPs include heavy use area protection, waste storage facilities, and windbreaks.

See *Appendix M. Livestock Feeding BMPs* for complete eligibility conditions for Livestock Feeding BMPs.

Demonstration projects

Ecology will consider demonstration BMP activity projects for funding under two conditions. First, that the practice has a proven record. Second, that the practice has not previously been demonstrated in the Ecology region where the project is proposed. (Regardless of funding source).

Demonstration projects should be relatively small in scope, yet large enough to clearly evaluate BMP effectiveness. Effectiveness monitoring is factored into a demonstration project. Demonstration projects also need to incorporate education and outreach, including direct involvement from the local county cooperative extension office or local conservation district. Planned outreach should include news articles, focus sheets, or other written materials to maximize public exposure and increase the public awareness of the project. The applicant should include approaches for planned outreach in the financial assistance proposal.

Groundwater/aquifer/wellhead planning and implementation

Planning for and implementation of wellhead protection projects, groundwater protection projects, and critical aquifer recharge area projects are eligible for loan or grant funding. These are projects undertaken to protect the quality of ground water used as a public drinking water supply. Decommissioning of abandoned wells and land acquisition for groundwater protection are not eligible for funding.

Lake restoration planning and implementation

Lake restoration planning and implementation projects on lakes with public access are eligible for loan or grant funding. Lake restoration implementation projects where there is no public access are not eligible for funding. The Step Process is required for all lake restoration projects. Step one is planning and involves the identification of problems and evaluation of cost-effective alternatives. Step two is the implementation of the planning document. If the project includes construction, a design element may be included before the implementation step.

Aquatic plant control is eligible for grant and loan funding if to applicant establishes that water quality degradation is due to the presence of aquatic plants.

Public outreach and education projects

Projects with public outreach and education components are eligible for loan or grant funding. Public outreach and education involves using effective mechanisms and programs, guided by a detailed outreach strategy, to engage the public's interest in improving water quality. A key factor to consider when developing a strategy is that the public has different levels of background knowledge of both water quality management and its role in reducing water pollution. Hence you should take a multi-pronged approach to outreach efforts by:

- Generating basic awareness of water pollution.
- Educating at a more sophisticated level using more substantive content.
- Building on existing recognition of the issue to prompt behavior changes that reduce pollution (or the opportunities for pollution).

The strategy should also specifically address the integration of public outreach with the implementation of other water quality program management measures. This aspect of outreach could involve more substantive education, possibly short training courses, live presentations and slideshows, handbooks, posters with educational content and captioned illustrations, and Web-based training modules, or websites with photos of good and bad practices.

Appendix I. Developing Public Communication and Education Project Proposals provides guidance on how to develop outreach and education project proposals. Ecology provides this

information as a resource or checklist and does not required the applicant to follow it. The goal of the checklist is to help design effective projects that change behaviors and achieves environmental results.

Riparian/wetland restoration planning and implementation

Planning for and implementation of riparian and wetland habitat restoration and enhancement projects are eligible for loan or grant funding. Land acquisition for wetland habitat preservation is eligible for loans only. Applicants can include installation of livestock exclusion fencing as part of a riparian protection/restoration project. The Step Process is not required for riparian and wetland projects, but is strongly encouraged.

Ecology's *Restoring Wetlands in Washington: A Guidebook for Wetland Restoration, Planning & Implementation* provides guidance in developing a project proposal. A copy of the guidebook can be found at: http://www.ecy.wa.gov/biblio/93017.html

Aquatic plant control is eligible for grant and loan funding if the applicant establishes that water quality degradation is due to the presence of aquatic plants.

Total Maximum Daily Loads (TMDL) support projects

Projects that support the planning and implementation of TMDL programs are eligible for grant and loan funding. The BMPs recommended for TMDL implementation are subject to the same eligibility criteria as projects that are not part of a TMDL implementation plan. Applicants should work directly with Ecology's TMDL coordinators in their region on planning for and managing these projects. A list of TMDL coordinators can be found at: http://www.ecy.wa.gov/programs/wq/tmdl/contacts.html

Water quality monitoring

Water quality monitoring before, during, and after implementation and project completion is critical for tracking environmental and project results. Ecology may provide loan or grant funding for water quality monitoring projects. Typically, a recipient undertakes monitoring to characterize the existing conditions of ground and surface waters, to identify or quantify pollutant sources or loads, or to establish the effectiveness of BMPs. Monitoring may be the entire project or a component of a larger project. Short- and long-term monitoring should be a component of all projects to ensure that project results are achieved and environmental results are addressed and ultimately achieved.

Quality Assurance Project Plan (QAPP)

Prior to initiating water quality monitoring activities, the applicant must prepare a Quality Assurance Project Plan (QAPP). The QAPP must follow Ecology's *Guidelines and Specifications for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004 (Ecology Publication No. 04-03-030). A QAPP template is available at Ecology's Environmental Assessment Program (EAP) website: http://www.ecy.wa.gov/programs/eap/qa/docs/QAPPtool/index.html

The applicant may also reference the *Technical Guidance for Assessing the Quality of Aquatic Environments*, revised February 1994 (Ecology Publication No. 91-78) or more current revision,

in developing the QAPP. A copy of the Technical Guidance can be found at:
http://www.ecy.wa.gov/pubs/9178.pdf

The QAPP must:

- Describe in detail the monitoring and data quality objectives, procedures, and methodologies that will be used to ensure that all environmental data generated will meet the QAPP requirements.
- Describe in detail the water quality monitoring approach and laboratory protocols, including types of data and samples to be collected, sample location, sampling frequency, sampling procedures, analytical methods, quality control procedures, and data handling protocols.
- Describe data assessment procedures.
- Explain how the project will yield sufficient information to achieve the purpose and intent of monitoring.
- Discuss data accuracy and statistical requirements.

The recipient must submit the QAPP to Ecology's project manager for review, comment, and approval before starting the environmental monitoring activities. Any monitoring activity conducted before the QAPP receives final approval is not eligible for reimbursement.

Use of an accredited laboratory

The recipient must use an environmental laboratory accredited by Ecology to analyze water samples for all parameters to be analyzed that require bench testing. Information on currently accredited laboratories and the accreditation process is provided on the Ecology's Environmental Assessment Program's website, available at:
http://www.ecy.wa.gov/programs/eap/labs/search.html

The recipient should manage all monitoring data collected or acquired under this agreement to be available to secondary users and meet the "ten-year rule." The ten-year rule means that data documentation is sufficient to allow an individual not directly familiar with the specific monitoring effort to understand the purpose of the data set, methods used, results obtained, and quality assurance measures taken ten years after data are collected.

Methodologies and technologies - pollutant source identification DNA-typing

Some project proposals may include Deoxyribonucleic Acid (DNA)-typing as one of the tasks or methods within the task. Ecology's Environmental Assessment Program (EAP) has studied the processes over the past several years, and has concluded that the method has potential value under certain limited conditions. Please note the protocol developed below for possible eligibility. Ecology will make specific eligibility decisions in coordination with EAP's DNA specialist. Applicants considering this type of monitoring should contact EAP prior to submitting project proposal.

- Define location of bacterial sources through monitoring: establish where sources of fecal coliform loading are occurring. This means conducting monitoring of possible inputs, such as tributaries and stormwater, and segmenting areas of the main stem. It also means obtaining flow measurements so loading estimates can be obtained.
- Prioritize: look at highest loading sources first.
- Make clearly identified pollution control corrections in these areas.
- Consider source identification tools if there is still a bacteria problem. For example, DNA-typing, chemical indicators, antibiotic resistance analyses, species-specific indicators, etc.

Monitoring data management and submittal
The recipient must submit all monitoring data to Ecology's Environmental Information Management System (EIM) including meta-data (data about the data) and a complete data-dictionary. Common standards must be used for infrastructure details, such as geographic names, Geographic Information System (GIS) coverage, list of methods, and reference tables. The data submittal portion of the EIM website provides information and help on formats and requirements for submitting tabular data. The EIM website is available at:
http://www.ecy.wa.gov/eim

Specific questions about data submittal can be directed to the EIM Data Coordinator, currently available at:
https://fortress.wa.gov/ecy/eimsubmittal/eimimport/Contact.aspx?urlBack=submit.htm

Recipients must submit water quality data collected during the project to the EIM database before project close-out and release of final payment.

Watershed planning and implementation

Watershed planning projects are eligible for loan or grant funding. If the project is located in the 12 counties that border Puget Sound, it must comply with planning criteria contained in Chapter 400-12 WAC, *Local Planning and Management of Nonpoint Source Pollution*. Ecology provides guidance for other jurisdictions.

All watershed plans must comply with the State Environmental Policy Act (SEPA) and must be submitted to Ecology for review and approval. Watershed-wide planning projects funded by Section 319 must also meet EPA's 9 Key Elements for Watershed Plans. EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters* can be found at:
http://www.epa.gov/nps/watershed_handbook/

On-site septic system projects

On-site septic system projects are grant and loan eligible. Past projects have included Planning, Design, and Construction of community large on-site septic systems (LOSS), survey of existing septic systems throughout watersheds, local government loan programs provided to homeowners and small commercial enterprises for the repair and replacement of failing on-site septic systems, and homeowner education and outreach on the topic of septic system operation and maintenance.

Large on-site systems (LOSS)

The Department of Health permits large on-site sewage disposal systems (WAC 246-272B) that are designed to treat less than 100,000 gallons per day. With the exception that planning and design documents are approved through the Department of Health, these systems are considered facilities, and all the rules and requirements for facility projects apply. For example, LOSS projects are eligible for hardship subsidy and SERP environmental review is required.

Planning/survey

Septic system pollution identification and survey projects may be conducted throughout a watershed. Past projects have included identification of septic systems along the marine water

shoreline and fresh water drainage shoreline. In addition to identification of fecal coliform hotspots within the water body, the grant and loan dollars may be used to conduct door-to-door surveys for sewer infrastructure evaluation. Other project components eligible for funding include: Homeowner Septic Self-Inspection Trainings or Septics 101 classes.

Local loan program

Ecology may provide loans and grants to local governments to establish and manage on-site septic system repair or replacement local loan funds. The availability of an On-site Septic System (OSS) funding program through local governments provides low-interest loan options to homeowners and small commercial enterprises for on-site septic system repair or replacement. Local governments that have OSS funding programs in place have ensured improvement to water quality, protection of public health, and assisted in the protection and restoration of critical commercial and recreational shellfish habitat through the reduction of fecal coliform bacteria and nutrient levels in surface waters.

If local loan funds are used for on-site sewage system repair and replacement, side-sewer connections, or any other facilities projects, the public body administering the loan must be in compliance with the GMA at the time of the loan award to the public body.

Grant dollars may be used to implement, market, and manage an OSS local loan program, assist financially challenged homeowners with on-site septic system repairs or replacements, and to establish a loan-loss reserve account.

Revolving Fund loan interest rates may be adjusted to a lower rate at the end of the project based on the local governments' assistance to financially challenged homeowners. Adjusted interest rates on the local loan program are calculated using homeowners' income in comparison to the county Median Household Income (MHI).

Side sewer repair or replacement is eligible for loan funding through the Centennial program, or the SRF program under certain circumstances:

1. If there is an existing side-sewer lateral, an easement is needed for loan participation in the septic system abandonment and connection to the available sewer trunk line.
2. If there is no existing side-sewer lateral, documentation is needed for the septic system abandonment and connection to the available sewer trunk line. The documentation must include:
    a. the on-site septic system failure
    b. poor soil conditions that will not support a rehabilitated system

Local loan funds for BMPs funded through SRF may not provide assistance for waste management systems that are considered to be concentrated animal feeding operations (CAFOs).

Because local loan programs are flexible, the local government can tailor the OSS financial assistance program to fit into its existing water quality management strategies and efforts. Local governments may use an outside administrator for complete program management, or provide all aspects of the loan program using internal staffing resources.

Those local governments with successful local loan programs use a variety of internal and external sources for marketing and implementing the OSS loan program, application review, loan authorization and processing, and establishment and collection of homeowner installment payments.

Aspects of a successful program include one or more of the following:

- Establishment of a program framework which addresses the identification and/or assessment of the failing septic system, homeowner loan application, processing, and management, and an on-going Operation and Maintenance program for repaired septic systems.
- Establishment of environmental and credit worthiness criteria
- Staffing resources for program oversight
- Marketing and promotion of the program through the local Health Department, Septics 101 workshops, and local septic designers, installers, and pumpers
- Septic surveys to identify septic system failures

Before signing a loan agreement, the Water Quality Program must review and approve:

- The priority system used by a local government to identify and fund projects with the most critical water quality and public health problems
- The local government's dedicated source of revenue to repay the loan to Ecology
- Procedures to ensure that the citizens repay their loans to the local governments
- Procedures to ensure adequate inspection of the project by the local governments during implementation

Assurances that citizens receiving local loan funds will properly operate and maintain the systems that are constructed

The following guidelines must be used when local governments consider providing loans from local loan funds to small commercial enterprises for on-site septic tank rehabilitation or replacement:

- No more than one-third of the local loan fund may be used by small commercial enterprises for on-site wastewater treatment corrections
- No more than half of this one-third amount (one-sixth) may be loaned to any single individual or business, up to a maximum of $50,000
- The average daily flows for any one single individual or business cannot exceed 3500 gallons per day

These enterprises may include public lodging (including motels, hotels, and bed and breakfast establishments), rentals (apartments, duplexes or houses), small restaurants, stores, or taverns.

Stormwater projects

Ecology may provide loans or grants to eligible applicants for stormwater related projects. Non-permitted activities are grant and loan eligible. NPDES (National Pollutant Discharge Elimination System) permit required activities are loan eligible only. Eligible local governments may apply for financial hardship consideration for a stormwater-related project. Refer to page 11 for stormwater hardship criteria.

Guidance for the development of stormwater projects can be found in the following documents.

- Stormwater Management Manuals for Eastern and Western Washington: http://www.ecy.wa.gov/programs/wq/stormwater/tech.html

- Green Infrastructure approaches to managing wet weather with State Revolving Funds: http://www.epa.gov/owm/cwfinance/cwsrf/green_if.pdf

- Low Impact Development Technical Guidance Manual for Puget Sound: http://www.psparchives.com/publications/our_work/stormwater/lid/LID_manual2005.pdf

Projects located in the Puget Sound basin must comply with the Puget Sound Action Agenda, including meeting the requirements of the Basic Program and the Comprehensive Program. A copy of the Action Agenda can be found at: http://www.psparchives.com/publications/our_work/pscrp/MGMTPLAN.pdf

Following is a list of grant and loan eligible activities:
- Land use/stormwater management planning
- Reviewing existing local stormwater regulations
- Conducting inventories and mapping of stormwater sources

The following list consists of project components that are eligible for loan only:
- Establishment of stormwater utilities
- Source control activities
- Implementation of Low Impact Development techniques
- Stormwater retrofit planning, design, and construction
- Stormwater pollution control facility planning, design, and construction

Green Project Reserves

Green Project Reserves (GPR) is a category of projects or project elements that focus on green infrastructure, water or energy efficiencies, and environmentally innovative activities. Although GPR projects can be stand alone projects, they typically are elements of a larger project type. Congress, in the most recent Clean Water Act appropriation, directed that at least twenty percent of the Revolving Fund capitalization grant be dedicated to GPR. To encourage GPR applications, Ecology makes available half of the GPR funding in the form of Forgivable Principal loans and the remaining half available in standard loans. Ecology may offer GPR funding in this funding cycle if by Congress again authorizes it in the Clean Water Act 2012 appropriation.

To qualify for GPR consideration, projects must meet the general categorical definition of GPR as identified in EPA guidelines. A copy of the EPA guidelines can be found in *Appendix E. Green Project Reserves Eligible Projects.*

Green infrastructure

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, 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.

Water efficiency improvements

EPA's Water Sense Program defines water efficiency improvement as the use of improved technologies and practices to deliver equal or better services with less water. This encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future. Water efficiency improvement projects include reduction of water usage, water conservation, or water reuse.

Energy efficiency improvements

Energy efficiency improvement is the use of improved technologies and practices to reduce the energy consumption of water quality infrastructure projects, use energy in a more efficient way, and/or produce or use renewable energy.

Environmentally innovative activities

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

Refinancing existing debt

Revolving Fund loans are available for refinancing of existing debt. Refinancing can take the form of interim refinance and standard refinance.

Interim refinance

Any project that is eligible for a Revolving Fund loan is eligible for interim refinance. Applicants can apply for interim refinancing when their project is in progress and they are proceeding with funds from a source other than Ecology.

Applicants for interim refinancing apply for funding in the same manner as any new project. Ecology rates and ranks applicants for interim refinance along with all other applications for new projects. Ecology awards funding on a competitive basis for all applications (including interim refinance application) based on project ranking, project category, funding program eligibility, and funding availability.

Applicants need to clearly state in the project description that the project is underway. Applicants should also note that the loan request is to retire an existing debt and to fund all or part of the rest of the project. As with any other project, an applicant must meet all applicable requirements for that project type.

Standard refinance

Standard refinance is for those projects that have been successfully completed using non-Ecology funding sources and may want to refinance at a lower interest rate. Standard refinance is limited to water pollution control facilities where project construction began after March 7, 1985. Applicants must meet all applicable requirements for the project and must meet all Ecology prerequisites at the time the project was undertaken. Hardship assistance is not available for standard refinance projects.

Standard refinance projects are a low priority, and Ecology does not rate and rank them as competitive projects. Ecology makes funding offers for standard refinance project only if insufficient demand exists for funding of competitively ranked projects. Ecology ranks multiple standard refinance projects competing for funding according to financial burden on the ratepayers.

Applicants must explain the original source of project funding (e.g., internal funds, other agencies, bond issuance). Applicants must also explain the specific provisions for repayment. The debt for the project must still be outstanding and bonds must be callable. Ecology will not advance refund a prior debt.

Ineligible projects

In general, projects or project elements that do not have a direct water quality benefit are not eligible for funding. Projects or project elements prohibited by statute, federal appropriation, or administrative rule are also ineligible. Following is a list of ineligible projects or project elements for the Revolving Fund and Centennial programs.

Revolving Fund

Projects or project elements ineligible for Revolving Fund funding include but are not limited to:

- Abandonment or demolition of existing structures not interfering with proposed construction of a wastewater or storm water treatment facility.
- Acts of nature that alters the natural environment, thereby causing water quality problems.
- Aquatic plant control for aesthetic reasons, navigational improvements, or other purposes unrelated to water quality.
- Bonus or acceleration payments to contractors to meet contractual completion dates for construction.
- Commercial, institutional or industrial wastewater pollution control activities or facilities or portions of those facilities that are solely intended to control, transport, treat, dispose, or otherwise manage wastewater.
- Commercial, institutional or industrial monitoring equipment for sampling and analysis of discharges from municipal water pollution control facilities.
- Commercial, institutional or industrial wastewater pretreatment.
- Cost-plus-a-percentage-of-cost contracts (also known as multiplier contracts), time and materials contracts, and percent-of-construction contracts in facilities projects.
- Engineering reports.
- Projects or project elements intended solely for flood control.

- Interest on bonds, interim financing, and associated costs to finance projects.
- Landscaping for aesthetic reasons.
- Mitigation unless it addresses water quality impacts directly related to the project, and determined on a case-by-case basis.
- Operation and maintenance costs.
- Permit fees.
- Reclamation of abandoned mines.
- Refinancing of existing debt.
- Solid or hazardous waste cleanup.
- Water quantity or other water resource projects that solely address water quantity issues.

Centennial and 319

Projects or project elements ineligible for Centennial and 319 funding include but are not limited to:

- Abandonment or demolition of existing structures.
- Acts of nature that alter the natural environment, thereby causing water quality problems.
- Commercial, institutional or industrial wastewater pretreatment.
- Cost-plus-a-percentage-of-cost contracts (also known as multiplier contracts), time and materials contracts, and percent-of-construction contracts in facilities projects.
- Facilities intended solely to control, transport, treat, dispose, or otherwise manage commercial, institutional, or industrial wastewater.
- Projects or project elements intended solely for flood control.
- Interest on bonds, interim financing, and associated costs to finance projects.
- Landscaping for aesthetic reasons.
- Operation and maintenance costs.
- Permit fees.
- Reclamation of abandoned mines.
- Refinancing of existing debt.
- Solid or hazardous waste.
- Water quantity or other water resource projects that solely address water quantity issues.

How do I Apply?

Ecology manages the three major funding programs for water quality projects together as one program. There is one combined funding cycle, one application form, and one Final Offer List and Intended Use Plan.

The funding cycle

The funding cycle covered by these Guidelines is for the State Fiscal Year (SFY) 2012 and 2013. The SFY 2012 application cycle begins on September 1, 2010. Ecology receives applications in the fall of 2010 prior to the State Legislature taking action in the spring of 2011 on the SFY 2012 State budget.

Before the application period opens, Ecology posts information explaining the application process and sends out a public notice about the application period and corresponding application workshops. Ecology will hold application workshops in September at four locations around the state. For 2010, Ecology will hold the application workshops in Lynnwood, Ellensburg, Lacey, and Spokane.

During the funding cycle for each fiscal year, Ecology:

- Accepts applications from September 1, 2010, to the first Friday in November (November 5, 2010, for the 2012 cycle and November 3, 2011, for the 2013 cycle).
- Rates and ranks the eligible applications based on the evaluation criteria.
- Solicits advice on project scope of work from other state agencies, if applicable.
- Conducts an evaluators' meeting to discuss the project proposals, water quality priorities, finalize evaluations, and develops a Draft Offer List and Intended Use Plan (Draft List).
- Sends the Draft List to the Governor's Office of Financial Management and the State Legislature for consideration during the funding appropriation process.
- Opens a 30-day public review and comment period.
- Makes adjustments to the Draft Offer List based on legislative provisions.
- Conducts a public meeting during the 30-day public review process to present the Draft List.
- Issues a responsiveness summary to comments received on the Draft List.
- Publishes the Final Offer List and Intended Use Plan (Final List).
- Develops project agreements by January 31 of the year following the publication date of the Final List.
- Closes-out projects within five years of the publication date of the Final List.

The following figure illustrates the estimated timeline for the funding cycle steps for SFY 2012.

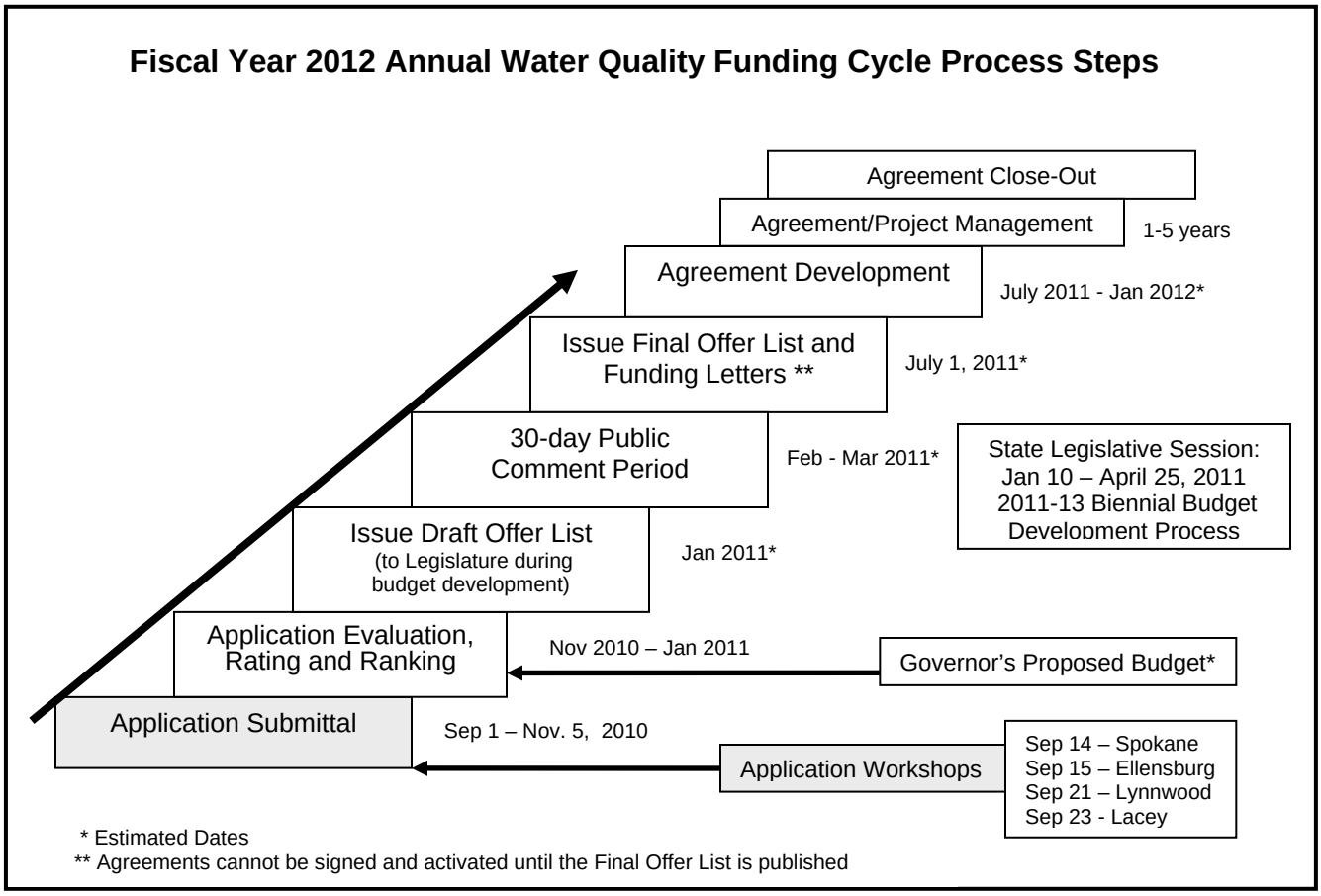

Figure 1 – The Funding Cycle

How to apply

The application

The Water Quality Financial Assistance Application Form (Application) has two parts; both parts must be completed to be considered for funding. Part 1 of the Application requests general information about the applicant, project type, project location, and the amount of funds requested. Part 2 of the Application requests detailed information about the project and the water quality benefits envisioned as a result of the project. Ecology staff use Part 2 of the Application in the evaluation process to rate and rank the applications.

Application material is available at application workshops or from Ecology' Website at:

http://www.ecy.wa.gov/programs/wq/funding/cycles/2012/index.html

The Application is provided in Microsoft Word format and must be returned in Microsoft Word format on a CD-ROM. Ecology staff is available to assist with any questions you may have in filling out the application. Page v of this document provides a list of Ecology staff contacts.

Applicants need not specify a funding program in the application. Ecology will determine the appropriate funding program based on eligibility, project type and availability of funds.

The applicant need only fill out one of the project-type sections (sections 9-12 of Part 1) of the Application that best describes the applicant's project. The project categories are wastewater facility, on-site septic system, stormwater, or nonpoint source activity.

Applicants must complete Section 13 of Part 1 of the Application in order to be considered for Green Project Reserves funding. Page 24 of this document provides an overview of Green Project Reserves categories.

Applicants requesting hardship consideration for a wastewater facility project must also fill out and return the hardship application with the completed application. Page 9 of this document provides further discussion on hardship consideration for wastewater treatment projects.

Submitting the application

Applications must include all of the following:

- One Application with an original signature.
- Two paper copies of the signed original.
- One electronic version of the Application in Microsoft Word format on CD ROM (maps and other attachments to the Application can be submitted in PDF format with the electronic version.)

The signed original must be in the hands of Ecology headquarters' staff on or before the application submittal deadline of 5:00 p.m. on November 5, 2010. Ecology will not accept applications after November 5, 2010, even if they are postmarked prior to the deadline. The signed application can be hand delivered, sent by package delivery service, or by U.S. mail to Ecology's headquarters building in Lacey.

Ecology will not accept faxed applications.

The addresses for sending packages to Ecology via U.S. mail and package delivery service are different:

U.S. Postal Mailing Address:
(not to be used for UPS or other package delivery services)
Department of Ecology
Water Quality Program
Financial Management Section
P.O. Box 47600
Olympia, WA 98504-7600

Overnight Mail or Hand Delivery Address:
(physical location/package delivery – not to be used for U.S. Mail)
Department of Ecology
Water Quality Program
Financial Management Section
300 Desmond Drive
Lacey, WA 98503

Evaluation process

Ecology evaluates project proposals based on responses to Part 2 of the application. A total of 1,000 points are possible for the evaluation. Table 5 shows the scoring breakdown by question and rating criteria. The beginning of each section in Part 2 of the application includes a more detailed explanation of the scoring criteria.

Table 5 – Application Rating and Ranking Criteria

Question	Rating Criteria	Points Available
1.	The quality of the proposed scope of work.	Up to 250
2.	Reasonableness of the project budget.	Up to 150
3.	The overall water quality and public health problem and the benefits of the proposed solution, including water quality goals and the measures of success.	Up to 250
4.	State or federal mandates that the project addresses (e.g., permit requirements, enforcement orders).	Up to 100
5.	Project team.	Up to 50
6.	Local government initiatives and support to ensure success (e.g., what other projects have been accomplished and what government and public support exists for the project).	Up to 75
7.	Readiness to proceed (e.g., technical prerequisites for planning, design, environmental review, permitting).	Up to 75
8.	Sewer ratepayer impacts for small, financially-challenged communities. (Must meet hardship requirements, see page 9).	50
	TOTAL	**Up to 1,000**

Two Ecology staff will review the project proposal; each reviewer will give the proposal a numerical score. One reviewer will be from the Ecology region where the project is located, and the second reviewer will be from one of the other regions. Ecology staff will compare the two scores to ensure evaluation consistency for the application. If needed, a third Ecology reviewer will perform an evaluation to ensure accurate, consistent scoring. Ecology will develop a ranked list of projects based on the project scores.

Ecology may request input from other state agencies about certain types of projects. This outside review may not generate a numerical score, but it can influence the score. Outside reviewers could include staff from the State Conservation Commission, Puget Sound Partnership, or the State Department of Health.

The information provided in the Application will be the basis for the scope of work used in a funding agreement. If the applicant makes significant changes to the scope of work after the application deadline, Ecology may withdraw a funding offer.

The successful project proposal

Demand for water quality program funding has routinely outstripped available funding. For the SFY 2011 funding cycle, Ecology received 143 applications requesting approximately $270 million. Ecology was able to offer funding to only 56 applicants for a total of approximately $108 million. With such a competitive funding environment, applicants must develop a strong project application to display the project in the best light. While there is no guarantee that a project proposal will be funded, applicants can do several thing to improve their chances of success.

In general, a successful project proposal will:

Show how the project solves a water quality problem.

- Identify a documented water quality issue.
- Demonstrate a clear connection between the proposed project and how it will help resolve the identified water quality issue.
- Explain how the applicant will document the water quality benefit.

Explain why this project was chosen.

- Describe what process was used to select this project over other solutions.
- Provide documentation of plan(s) that supports this project.
- Explain why this project is the applicant's number one priority.

Demonstrate that the project is well thought out.

- Include a well-defined scope of work that has goals, objectives, and measurable outcomes.
- Show how the project enjoys broad support by the community and agency partners.

Show that funds will be well spent.

- Provide an accurate and reasonable budget.
- Show that the amount of funding request is reasonable compared to the proposed water quality benefit.

Illustrate that the project is ready to go.

- Confirm that all required environmental review is complete.
- Document that the applicant has obtained or applied for all permits.
- Verify that the applicant has completed all necessary easements, property owner agreements, or land acquisition.

Be easy to read and understand.

- Carefully read the evaluation criteria and scoring guide at the beginning of each section in Part 2 of the Application. Make sure that your application addresses all of the items identified in the evaluation criteria and scoring guide.
- Give clear, concise answers to all questions.
- Write in complete sentences.

Helpful hints:

- Verify that the budget in Part 2, Question 2 is consistent with Part 1, Question 14.
- Include maps, diagrams, and pictures of the project and project area and display past projects (if any exist).
- Provide documentation to support answers.
- Include applicable letter(s) of support.
- Include citations.
- Include applicable forms, such as Financial Hardship Analysis Form.

Application requirements

Applicants with facilities projects will need to complete certain prerequisites and be in compliance with state environmental and Growth Management laws in order to be able to apply for funding assistance. All applicants will be evaluated on how they are implementing the State's requirements for Greenhouse Gas Emissions reductions. Applicants in the Puget Sound watershed must be consistent with the Puget Sound Partnership's Action Agenda.

Planning requirements

Applicants that propose facilities projects must proceed according to a systematic method known as the Step Process. The Step Process consists of three steps.

- Step One (planning) involves preparing a site-specific facilities plan that identifies the cost-effective alternatives for addressing a water pollution control problem.
- Step Two (design) involves preparing plans and specifications for use in construction.
- Step Three (construction) is the actual building of the facilities based on the approved design. Funding for one Step does not guarantee funding for subsequent Steps.

Ecology must approve the facility plan before the applicant can apply for Step Two funding. Ecology must also approve the plans and specifications before the applicant can apply for Step Three funding. The applicant must provide a copy of Ecology's signed approval letter with their application.

Stormwater projects, irrigation efficiency projects, and other types of projects that do not require facility planning may substitute a pre-design report for Step One of the process.

Design and construction (Steps Two and Three) can be combined into one application in certain cases and are called Step Four projects. To qualify for Step Four, the project must be $5 million or less and the applicant must be able to demonstrate that they can complete the design and have it approved within one year of the funding agreement.

Ecology encourages applicants to follow the Step Process for activities projects; however it is not required and may not be applicable in every case. Lake restoration and planning activities on lakes with public access are eligible for loan or grant funding. The Step Process is required for nonpoint source activity lake restoration projects.

GMA compliance

To be eligible for grant and loan funding, applicants with facilities projects in jurisdictions that are required to plan under Washington's Growth Management Act (GMA) must be in compliance with the GMA. For Ecology's purposes, applicants must comply with the requirements for comprehensive planning and development regulations.

For special districts (such as sewer districts or public utility districts), the county, city or town in which the facility is located must be in compliance with the requirements for comprehensive planning and development regulations.

Any public body required to comply with the GMA must certify its compliance with the applicable GMA requirements at the time a loan or grant agreement is signed, unless exceptional situations exist. The public body certifies its compliance by signing the loan agreement. Ecology may make exceptions in situations involving a public health need or a significant environmental degradation.

GMA compliance impacts the program in several ways:

1. GMA compliance status may have an impact on the priority evaluation of proposed facilities projects, because facilities projects in areas out of compliance with the GMA may not be ready to proceed.
2. Ecology coordinates with the Washington State Department of Commerce to help ensure the applicants are in compliance when the financial assistance agreement is signed. Loan and grant offers are effective for six months from the publish date of the Final List. If GMA compliance is achieved during that time period, the agreement may be signed.
3. Ecology exceptions do not relieve applicants of their responsibilities to comply with the GMA requirements. However, under certain circumstances Ecology will make temporary exceptions to the GMA compliance requirement if the proposed projects are required to address a "serious public health need" or a "significant environmental degradation." Such determinations based on designations proposed by applicants are scrutinized very carefully, and Ecology makes these determinations on a case-by-case basis.

GMA compliance does not affect activity project applications, such as watershed planning, water quality monitoring, public information and education, etc. Also unaffected are facilities projects proposed by public bodies not planning under the GMA.

Reference:
Chapter 173-98-710 WAC
Chapter 173-985A-610 WAC

Environmental review

Environmental review applies primarily to facility construction projects. However, all watershed plans must comply with the State Environmental Policy Act (SEPA) and must be submitted to Ecology for review and approval.

State environmental review process

The State Environmental Review Process (SERP) helps to ensure that Revolving Fund recipients with a facilities project select environmentally sound and cost-effective alternatives. All

recipients must comply with SEPA and other applicable state and federal environmental statutes, regulations, and executive orders.

To complete SERP, the applicant must receive Ecology's concurrence on all SEPA documents and be in compliance with all federal cross cutting authorities. In addition, if other funding agencies are involved, the applicant needs to coordinate with those other funding agencies to avoid duplication of SERP or the National Environmental Policy Act review process. For further information on SERP, the applicant should contact the engineering staff of the applicable Ecology regional office. (See contact list on page v.)

Applicants must complete most SERP requirements prior to receiving Revolving Fund loans. Traditional wastewater treatment projects must meet the SERP requirements at the time of application. Ecology defines traditional wastewater treatment projects as projects preparing engineering reports under Chapter 173-240 WAC, *Submission of plans and reports for construction of wastewater facilities*. The consultation processes required for Endangered Species Act and National Historic Preservation Act compliance do not have to be complete at the time of application. However, applicants must submit any information required to initiate consultation (typically a biological assessment or cultural resources survey) by the application due date.

Reference:
Chapter 173-98-720 WAC

Historic and cultural resources
Ecology staff is currently working on guidance and procedures to address preservation of state historic and cultural resources. Many proposed projects have the potential to significantly impact culturally or historically significant locations or artifacts. Ecology staff is coordinating with the Department of Archeology and Historic Preservation (DAHP) to meet all state or federal requirements regarding cultural and historic preservation.

All projects that disturb soils from their natural state must comply with the applicable state or federal law. Staff from Ecology's Water Quality Program will help grant and loan recipients follow the appropriate steps to work with DAHP and relevant tribes to determine if a site has the potential of disturbing or significantly impacting cultural or historic resources. All activities associated with site assessments for cultural and historic resources are grant and loan eligible.

Recipients should contact their Ecology Project and Financial Managers for detailed information, guidance, procedures, and other related resources. Information is also available on the DAHP website: http://www.dahp.wa.gov/

Puget Sound Action Agenda

The Puget Sound Partnership is a new Washington State agency created by the State Legislature and is charged to create a real Action Agenda that turns things around and leads to a healthy Puget Sound. The Puget Sound Partnership Action Agenda prioritizes cleanup and improvement projects, coordinates federal, state, local, tribal and private resources, and makes sure that they are all working cooperatively.

Water quality projects located in the Puget Sound watershed must not be in conflict with the Puget Sound Partnership Action Agenda. The Puget Sound watershed is defined at WRIAs 1 through 19 (see Appendix F for a map of WRIAs in Washington State). Projects in the Puget Sound basin that address specific actions outlined in the Puget Sound Partnership Action Agenda receive a preference over projects in the Puget Sound that do not. Following is a web link to the Puget Sound Partnership Action Agenda: http://www.psp.wa.gov/aa_action_agenda.php

Greenhouse gas emission reductions

In 2009, the State Legislature passed ESSB 5560 adding new policies related to Green House Gas (GHG) emissions to state funding for infrastructure. These policies are codified in Chapter 70.235.070 RCW, *Distribution of funds for infrastructure and capital development projects -- Prerequisites* and must be put into action in calendar year 2010.

Requirements of Chapter 70.235.070 RCW, *Distribution of funds for infrastructure and capital development projects -- Prerequisites* must be included in the Revolving Fund and Centennial programs as a factor for consideration as part of the competitive selection process. The integration of GHG consideration should be a factor that influences project selection, but should not overwhelm the underlying goals of the funding programs. Ecology has supplemented the rating process with criteria related to applicant and project consistency with GHG emissions reduction goals. Question 4 of part 2 of the application asks the applicant to describe how it is meeting requirements of Chapter 70.235.070 RCW, *Distribution of funds for infrastructure and capital development projects -- Prerequisites*.

Below are examples of how the applicant might demonstrate what measures it is taking to reduce GHG emissions.

Measures the **applicant** can take to reduce GHG emissions:

- Enacting goals and policies committing to GHG emissions reduction targets.
- Adopting energy efficiency policies to reduce consumption in buildings and infrastructure.
- Adopting policies that promote and support the generation and use of alternative energy.
- Adopting waste reduction and diversion policies such as methane recovery or waste to energy programs.
- Adopting policies to replace or repower existing vehicles with cleaner, more efficient vehicles.
- Adopting equipment procurement policies that result in reduced consumption of fossil fuels.
- Implementing commute Trip Reduction plans and policies that establish reduction goals and strategies to reduce annual per capita VMT of the entity's community or workforce.
- Adopting policies that preserve forest, agricultural, and open space lands.
- Adopting comprehensive land use plans or county/city/Tribal-wide planning policies that promote and support development patterns that encourage compact and transit-friendly communities and protect natural resources lands from conversion.

Examples of how **the project** can be designed and/or built to reduce GHG emissions.

- Project Site –The project site reduces GHG emissions by being located in:
  - Existing developed areas (e.g., high density areas, urban growth areas or designated urban centers) where services exist or are planned.
  - Areas where transportation choices can be efficiently provided.
  - Areas where conversion of natural resources and rural land is prevented.
  - Areas that promote transportation choices such as transit, bicycle, and pedestrian accessibility.
  - Brownfield redevelopment areas.
  - Other areas that encourage the use of non-single occupancy vehicles and minimize the amount of land to be devoted to the project.

- Project design, construction and operation – Methods used to develop the project reduce the use of fossil fuels (GHG emissions) by:
  - Using high performance sustainable building design, such as the use of green building standards.
  - Using green materials and high energy efficiency measures.
  - Promoting the use of recycled content materials for building construction.
  - Supporting environmental/ecological footprint improvements (e.g., energy efficiency, water conservation, habitat preservation, green alternatives, waste-to-energy, and lowering surface disturbance).
  - Implementing new technologies, practices and equipment to lower energy use for operation.
  - Using renewable energy (wind, geothermal, solar, etc.), distributed energy (solar photovoltaic [PV] panels), and/or purchased green power.

Public review and request for reconsideration

Applicants and the public receive notices from Ecology about the 30-day public comment period on the combined Draft Offer List and Intended Use Plan. During the 30-day public comment period, applicants may provide comment on the process or request reconsideration of a project proposal.

Official comments on the list and process or requests for reconsideration must be submitted to Ecology in writing within the 30-day comment period. Any request for reconsideration must be well defined and supported.

Ecology will provide a response to written comments in the combined Final Offer List and Intended Use Plan. Ecology publishes these documents following the final approval of the State's budget that provides appropriation authority for funding.

What Happens if I am Offered a Loan or Grant?

Ecology makes formal funding offers at the time of the publication of the Final Offer List and Intended Use Plan (Final List). Ecology will assign a Project Management Team to each project receiving a funding offer. The Project Management Team consists of a Financial Manager from the headquarters office and a Project Manager from the regional office where the project is located. Ecology's Project Management Team will contact the applicant within four weeks of the loan or grant offer to schedule a time to discuss the funding agreement (e.g., expectations, deliverables, timeframes).

The loan and grant development process

The Ecology Project Management Team will use information found in the funding proposal as the basis for developing the funding agreement. Clearly defined project proposals that include a detailed scope of work, measurable objectives, and accurate budgets will take less time to develop. Proposed funding agreements that deviate substantially from the funding proposal may result in the withdrawal of the funding offer.

To speed development and processing, Ecology standardizes much of the funding agreement language and includes general terms and conditions and other requirements that are required by state or federal law. Ecology incorporates many of these requirements as attachments.

After developing the agreement, the Project Management Team will request a quick funding program review. The financial manager will then send the funding agreement to the applicant for signature. The applicant will send the funding agreement back to the financial manager for the final signature by the Water Quality Program Manager or the authorized designee. The agreement becomes effective once signed by Ecology's Program Manager. Once the agreement goes into effect, a fully executed original will be returned to the recipient. The applicant becomes the recipient once the agreement is signed.

Incurring eligible costs

The recipient can begin incurring eligible project costs on the date that the funding agreement is signed by Ecology. In some instances, The recipient can incur eligible costs before the effective date of an agreement if prior authorization is granted by the department or interim refinancing is approved. While applicants can incur eligible costs before the effective date of the agreement, they do so in these cases at their own risk.

In order to receive prior authorization, the recipient must send a formal written request to Ecology's Water Quality Program Manager, stating the critical reasons for the request. Ecology will notify the recipient in writing of the approval for prior authorization of incurred costs. Prior authorization only applies to the period after the publication of the Final List before the funding agreement is effective. Prior authorization does not guarantee reimbursement of expenses, and Ecology cannot release funds before the effective date of the agreement.

Important dates

The time limits for starting and ending projects are based on the publication date of the Final List that identifies the project for funding. These time limits apply to Centennial and Revolving Fund funded projects only.

The funding agreement for the project must be signed by both parties no later than 7 months after the publication date of the Final List.

Actual work on the project must begin no later than 10 months after the publication date of the combined Final List**.**

The project must be completed within 5 years of the publication date of the Final List. After the five-year limit is reached, a time extension of no more than 12 months may be made with valid reasons supporting the time extension. Completion dates will be negotiated in the funding agreement. In no event can the project be extended beyond six years of the publication date of the Final List identifying the project.

The completion date or expiration date is the date that all tasks and project deliverables must be completed. A reasonable expiration date is negotiated and stated in the agreement.

The initiation of operation date (facilities construction projects only) is the actual date that a facility starts operation and is used for its intended purpose. This date may occur prior to final inspection. Ecology will determine the initiation of operation date after consultation with the recipient. This date may be the same as the date of project completion, or it may be earlier. The initiation of operation date triggers the start of the loan repayment grace period of one year. If the project completion date occurs first, the repayment date is triggered.

Time limits for ending projects for Section 319 grants are subject to an Environmental Protection Agency (EPA) timeline, which is based on the date on which Ecology receives funds from the EPA. Section 319 grant projects will typically have shorter durations than Centennial or Revolving Fund projects.

Credit worthiness assessment

Ecology will conduct credit worthiness assessments on public bodies receiving loans. These assessments may require Ecology staff to review current financial statements to determine the ability of applicants to repay debt. Ecology cannot sign loan agreements without a credit worthiness assessment. Financial data required by all facilities project applicants include:

- Accounting method used (cash basis or accrual).
- Financial ratios (past three years of operating ratio and debt/worth ratio).
- Date and type of last audit (indicating any audit findings).
- Date of last rate study (if using a user fee to secure this loan).

General loan elements

Ecology requires the following items are required conditions of applicants receiving a Revolving Fund loan.

Authorizing ordinance or resolution

Applicants must provide an authorizing ordinance or resolution that states that the applicant accepts its responsibility to repay the loan and abide by the provisions of the agreement. The resolution must be signed by the governing board or council and included in the loan agreement as an attachment.

Disbursements

Ecology disburses loan funds on a cost-reimbursable basis. An incurred cost is defined as a cost that has occurred and is eligible for payment. Interest begins to accrue on each disbursement at the time it is paid to the recipient.

Insurance

Where applicable, recipients must maintain comprehensive insurance coverage on projects in amounts equal to the funds disbursed.

Operation and maintenance of utility

The recipients must keep the utility in good working order and operate the utility efficiently.

Opinion of recipient's legal counsel

Applicants must provide a statement from legal counsel regarding the final draft of the loan agreement. The statement will be included in the loan agreement as an attachment. A copy of the statement can be found in Appendix J. *Opinion of Recipient's Legal Counsel.*

Pledge of net revenue or ULID assessments

As long as the loan is outstanding, the recipient must irrevocably pledge to pay the net revenue of the utility (and, if applicable, Utility Local Improvement District [ULID] assessments in the ULID,) when due, and the principal of and interest on the loan.

Repayments

Semi-annual loan repayment begins one year after the project completion date or initiation of operation date, whichever date comes first. There is no restriction or penalty for early loan repayment.

Reserve requirement

For a loan that is a revenue-secured debt with a term greater than five years, Ecology requires the recipient to accumulate a reserve equivalent to at least the average annual debt service on the loan. The recipient must establish this reserve during the first five years of the repayment period of the loan.

Terms and interest rates

Ecology bases interest rates for non-hardship projects on the average market interest rate for tax exempt municipal bonds as published in the Bond Buyer's Index. Interest rates are based on the average daily market interest rate for the period 60 to 30 days before the start of the application cycle. Interest is compounded monthly.

For a repayment period of up to five years, the rate is 30 percent of market rate for tax-exempt municipal bonds. For a repayment period of more than five years, but no more than 20 years, the rate is 60 percent of market rate for tax-exempt municipal bonds. Interest rates for hardship loans and on-site local loan funds may vary.

Important Terms and Conditions

The following are important terms and conditions that play a role in the day-to-day decisions made on loan or grant projects. A complete listing of the administrative requirements for all grants and loans administered Ecology is contained in the *Administrative Requirements for Recipients of Ecology Grants and Loans –Yellow Book.* A copy of the "Yellow Book" can be found at: http://www.ecy.wa.gov/pubs/9118.pdf

Accounting standards

Recipients must maintain accounting records in accordance with Chapter 43.09.200 RCW *Local government accounting--Uniform system of accounting*.

Advisory committee time

Time spent by advisory councils to carry out projects is an eligible cost, including costs incurred by advisory councils or committees established according to federal or state requirements.

Amendment process

Modifications and changes to the funding agreement may become necessary. The recipient must negotiate changes and document the changes as an amendment to the funding agreement. All proposed project changes are subject to approval by Ecology.

The recipient initiates the amendment process. The recipient sends a written request to Ecology's project manager. If the project manager concurs with the request, the financial manager prepares the amendment.

Ecology sends three original copies of the formal amendment to the recipient for signature, and the recipient returns all three originals to Ecology. Ecology's Water Quality Program Manager or designee signs the amendment, at which time it becomes effective. Ecology sends one of the original copies of the signed amendment to the recipient contact.

Reasons for formal amendments could include:

- Budget increases or decreases
- Scope of work changes
- Changes to required performance
- Time extensions

A letter amendment is an amendment that is signed by Ecology's financial manager. The financial manager sends the original to the recipient with a copy to the project manager and places a copy in Ecology's fiscal file.

Ecology uses letter amendments for:

- Redistributing amounts among tasks or object in the budget provided the changes do not increase or decrease the total eligible costs or the "bottom line."
- Allowing Ecology's fiscal office to track to the total eligible costs ("bottom line") instead of by budget element.

Appeals process

Loan or grant recipients may formally appeal a written decision by Ecology. A recipient cannot bring a lawsuit to Superior Court unless the aggrieved party follows the procedures listed below. The procedures are intended to encourage the informal resolution of disputes.

1. The recipient may seek review of the financial assistance program's initial decision within thirty days of the decision. The recipient makes the request for review in writing to the water quality program manager.

2. The program manager will consider the appeal information and will issue a written decision within 30 days from the time the appeal is received.

3. If the recipient is not satisfied with the program manager's decision, the recipient has 30 days to submit a written request to the deputy director of Ecology for a review of the decision.

4. The deputy director will consider the appeal information and will issue a written decision within 30 days from the time the appeal is received. The deputy director's decision will be the final decision of the department.

5. If the recipient is not satisfied with the deputy director's final decision, the recipient may appeal to the Thurston County superior court, pursuant to RCW 34.05.570(4), *Judicial Review*, which pertains to the review of "other agency action."

6. Unless all parties to such appeal agree that a different time frame is appropriate, the parties shall attempt to bring the matter for a superior court determination within four months of the date in which the administrative record is filed with the court. This time frame is to ensure minimal disruptions to the program.

Disbursements of loan and grant funds

Ecology disburses loan and grant funds to recipients on a cost-reimbursable basis. The recipient must incur eligible costs within the effective date and expiration date of the funding agreement unless prior authorization or interim refinancing is approved.

Equipment purchase/equipment fees

Equipment purchases are eligible if Ecology's Project Management Team approved them in advance. The recipient may charge an appropriate use fee for equipment owned by the recipient.

A use fee for equipment owned by the recipient or utilized through a valid interlocal agreement:

- Must be justifiable, fair, and reasonably attributed to the project.
- Must directly satisfy the project scope of work.
- Must be shown to be cost effective.
- Cannot exceed the acquisition cost of the equipment or facilities.
- Cannot exceed the rental rate or purchase price for comparable equipment or facilities in the recipient's market.

Extensions and project completion

Ecology can grant time extensions for valid and substantiated reasons if they occur during the five year timeframe from the date of the Final List and Intended Use Plan. Ecology can grant an extension of up to 12 months beyond the five-year date under certain conditions, including but not limited to:

- Schedules included in water quality permits, consent decrees, or enforcement orders.
- Work that falls within an environmental window in a specific season of the year.

To ensure timely processing, the recipient must request extensions no less than three months before the funding agreement is due to expire.

Section 319 grants have limitations on contract extensions based on when the grant is awarded to the State.

Force accounts/staffing plans

Force account refers to a local government that uses its own staff to complete a facilities project. For activity-type projects it may be considered a staffing plan. Force accounts and staffing plans may be eligible if:

- The work is performed by qualified employees of the public body.
- The recipient complies with laws on discrimination, such as wages, job safety, insurance, licenses, and certifications.
- The work is accomplished more economically than if procured competitively.

The recipient must maintain separate and identifiable records for a force account to ensure eligible costs are charged to the project. Overtime differential is not allowed.

Indirect rate

The recipient can charge an indirect rate of up to 25 percent of salaries and benefits to cover overhead costs that benefit more than one activity of the recipient and that are not directly assignable to a particular objective of the project. Recipients may be required to submit documentation at any time listing what is included in the indirect rate.

Interlocal agreements

Interlocal agreements must be consistent with the terms of the loan or grant agreement and Chapter 39.34 RCW *Interlocal Cooperation Act*. A copy of the Interlocal Cooperation Act can be found at the following website: http://apps.leg.wa.gov/RCW/default.aspx?cite=39.34

Light refreshments

Light refreshment costs for meetings or conferences are eligible (as permitted by Ecology's travel policy.) They must also be approved by the project manager.

Coffee and any other non-alcoholic beverage, such as tea, soft drinks, juice or milk, and snacks that may be served at meetings or conferences are considered light refreshments.

Payment holds or termination

If a recipient does not satisfy conditions in the funding agreement, Ecology may terminate the agreement and request that the recipient repay all of the funds disbursed, withhold a payment, or decrease the payment by the amount proportionate to the costs associated to the incomplete work.

Payment processing

The recipient submits a completed A19-1A Invoice Voucher and all required forms to Ecology's financial manager. The recipient's authorized signatory must sign the A19-1A Invoice Voucher, preferably in blue ink. If the costs are eligible and project progress is acceptable, Ecology's financial manager will approve the request. If not, the financial manager and project manager will work with the recipient to resolve the issue.

Payment requests forms

Payment requests must include the following forms:

Any Match Combination	Cash Only Match	Where Applicable
Form A19-1A (original signature)	Form A19-1A (original signature)	Form E (ECY 060-12)
Form B1 (ECY 060-3)	Form B2 (ECY 060-7)	Form F (ECY 060-13)
Form C1 (ECY 060-8)	Form C2 (ECY 060-9)	Form H (F-21)
Form D (ECY 060-11)	Form D (ECY 060-11)	Form I (ECY 060-15)
Form G (ECY 060-14)	Form G (ECY 060-14)	Form G (ECY 060-14)

A copy of the forms listed are provided at the following website:
http://www.ecy.wa.gov/programs/wq/funding/GrantLoanMgmtDocs/GrantLoanMgmtTools.html

Ecology's financial manager may request additional documentation to support the costs reflected in a payment request at any time. Recipients must keep supportive documentation available in project files for the duration of the project and for five years following project completion.

Permits

Recipients must secure any required permits and must provide documentation upon request. Work on the permit preparation is an eligible cost, but Ecology considers permit fees a normal operating expense and so permit fees are not eligible for funding.

Procuring goods and services

The recipient is responsible for procuring professional, personal, and other services using sound business judgment and good administrative procedures consistent with applicable federal, state, and local laws, orders, regulations, and permits. This includes issuance of invitation of bids, requests for proposals, selection of contractors, award of sub-agreements, and other related procurement matters.

The Office of Minority and Women Owned Business Enterprises (OMWBE) has established voluntary goals for the participation of minority- and women-owned businesses in procurements made with Ecology funds. Each loan and grant agreement will contain a condition regarding OMWBE. While participation is voluntary, Ecology requires reporting the level of participation.

Progress reports

Ecology requires recipients to submit progress reports on a regular basis. Reports are due 15 days following the end of the reporting period. Typically, the recipient submits progress reports quarterly of each year:

- January – March.
- April – June.
- July – September.
- October – December.

Progress reports should include a description of any success, problems, and delays that affect the project. If a problem exists, recipients must discuss the corrective actions taken or proposed and identify any Ecology assistance that may be needed.

The Project Management Team may request an update on progress at any time in order to verify costs submitted on a payment request.

Ecology will hold payments if the recipient has not submitted progress reports.

Project management team

Ecology assigns a grant and loan Project Management Team to each project. The Team works to develop and negotiate funding agreements and monitor recipient performance. The Team consists of a financial manager from the Lacey headquarters office and a project manager from the regional office nearest the recipient.

Ecology assigns a regional project engineer for most facilities projects to provide engineering technical assistance, conduct engineering review and approvals, and determine eligibility of project components. The engineer may also serve as the project manager.

The financial manager reviews and approves payment requests and assists the project manager in the negotiation of agreements. The financial manager also administers the project, determines eligibility, and maintains project files.

The regional project manager is the primary contact for technical assistance and day-to-day questions. The project manager also works with the financial manager to resolve payment or eligibility issues if they arise. When in doubt, call any member of the Team for information.

Public awareness

Recipients must inform the public about the project and about Ecology and the EPA participation for the following:

- Any site-specific project that is accessible to the public must have signs acknowledging state and federal participation. Logos are available from Ecology financial managers for use on signs.

- All publications must include acknowledgment of state and federal participation.
- Section 319 grant recipients must notify the public about the project. Requirements for the notification usually include: goals of the project, total cost, and the involvement of Ecology and the federal government.

Risk-based approach to project management

Ecology uses a risk-based approach in which Ecology requires some loan and grant recipients to submit additional backup documentation on payment requests. In addition, Ecology's Project Management Team may conduct additional site visits to provide technical assistance and verify progress or payment information.

Ecology will usually notify the loan or grant recipient selected for increased oversight in the loan or grant offer letter or during the loan or grant agreement negotiations. Increased oversight or request for additional documentation can occur at any point during the life of a project based on specific project conditions.

Transportation costs

The recipient can recover the cost of transportation through the state mileage rate, a use fee, or an indirect rate. The recipient may charge mileage may be charged to the project at the current state mileage rate. This mileage charge includes all vehicle-related needs, such as gas, tires, insurance, and maintenance.

Appendices

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Appendix A. Acronyms, Abbreviations, and Contractions

Acronym, Abbreviation, or Contraction	Program Name
BMP	Best Management Practice
Centennial	Centennial Clean Water Fund
CWA	Clean Water Act
EAP	Ecology's Environmental Assistance Program
Ecology	Washington State Department of Ecology
Ecology Coastal Protection	Ecology Administered Coastal Protection Fund
EID	Environmental Information Document
EIM	Ecology Information Management System
EPA	Environmental Protection Agency
FOTG	Field Office Technical Guide
GMA	Washington State's Growth Management Act
GPR	Green Project Reserves
LID	Low Impact Development
N/A	Not applicable
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resource Conservation Service
OMWBE	Office of Minority and Women Owned Business Enterprises
QAPP	Quality Assurance Project Plan
RCW	Revised Code of Washington
SEA	Shorelands and Environmental Assistance Program
SEPA	State Environmental Policy Act
SERP	State Environmental Review Process
SFY	State Fiscal Year
Revolving Fund	Washington State Water Pollution Control Revolving Fund
Section 319	The Clean Water Act Section 319 Nonpoint Source Grant Program
STAG	State and Tribal Assistance Grants
STEP	Small Town Environmental Process
SWRLID	Stormwater Retrofit Low Impact Development
TMDL	Total Maximum Daily Loads
ULID	Utility Local Improvement District
WAC	Washington State Administrative Code

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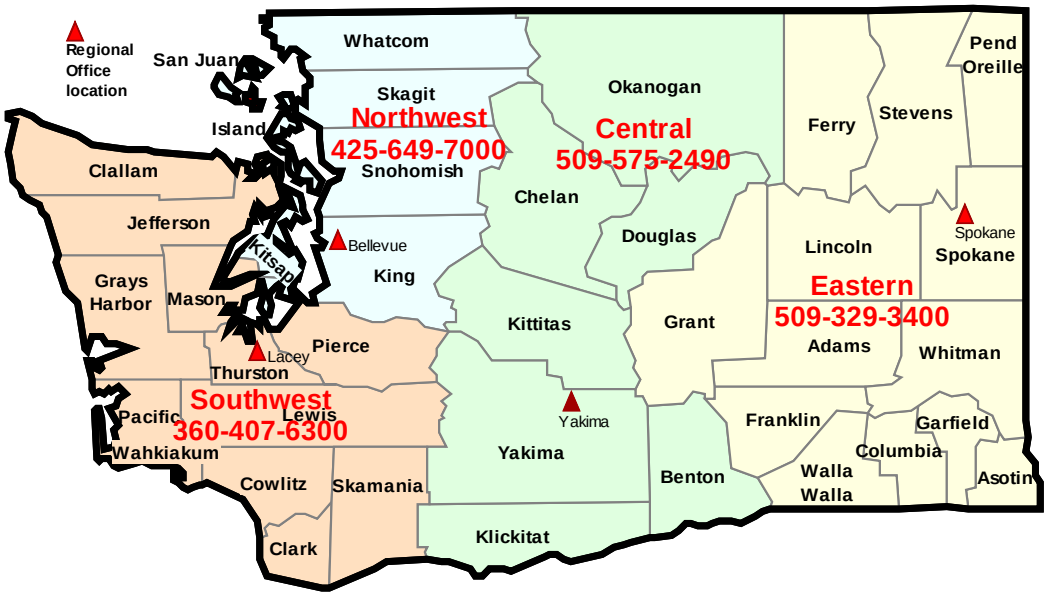
Appendix B. Department of Ecology Regional Offices

Headquarters (Lacey) 360-407-6000



Persons with a hearing loss can call 711 for Washington Relay Service.
Persons with a speech disability can call 877-833-6341.

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Appendix C. Comparison of Eligibility of Costs in the Funding Programs

Part One - Eligibility of Project Types (may also be components of a project)
Part Two - Eligibility of Project Components

Not all scenarios are covered. For clarification, contact Ecology staff about your proposed project. Staff contact information is found at the beginning of the guidelines on page v.

How to read this table:
Revolving Fund FP…….Revolving Fund Forgivable Principal Loan
Y……Yes
N……No
N*……..No, but may be eligible for hardship applicants.
Part One…… Examples of project types.
Part Two……Examples of project components. Components may not be eligible for grant funding if overall project is not eligible.

APPENDIX C, Part One - Eligibility of Project Types (may also be components of a project)

Item Description	Centennial Grant	Centennial Loan	Revolving Fund FP	Revolving Fund Loan	Section 319 Grant
WASTEWATER FACILITY					
Combined sewer overflow abatement	N*	Y	N*	Y	N
Facilities for the control, storage, treatment, disposal, or recycling of domestic wastewater	N *	Y	N *	Y	N
Facilities to meet existing need	N *	Y	N *	Y	N
Facilities with reserve capacities to accommodate flows associated with 20-year projected growth	N	N	N	Y	N
Facilities with reserve capacities to meet up to 110 percent of existing needs	N	Y	N*	Y	N
Facility plans	N	Y	N	Y	N
Plans and specifications (facility design)	N	Y	N	Y	N
Planning: Comprehensive sewer planning including wastewater element of capital facilities planning under the Growth Management Act	N	Y	N	Y	N
Sewer laterals, individual pump stations, or other appurtenances on private residential property, where the facilities are not owned and maintained by a public body	N	Y	N	N	N
Sewer laterals, individual pump stations, or other appurtenances on private residential property, where the facilities are owned and maintained by a public body	N *	Y	N *	Y	N
Sewer laterals, individual pump stations, or other appurtenances on private residential property, where the project addresses a source of nonpoint pollution	N *	Y	N *	Y	N
Sewer systems, including collection to eliminate failing or failed on-site septic systems, where a public health emergency or severe public health hazard	N *	Y	N *	Y	N

Item Description	Centennial Grant	Centennial Loan	Revolving Fund FP	Revolving Fund Loan	Section 319 Grant
has been declared by the Washington State Department of Health or a similar advisory issued by a local health department or district					
Sewers and side sewer laterals on public property for infiltration and inflow correction projects (when documented to be the cost effective alternative for wastewater treatment in the facilities plan approved by Ecology)	N *	Y	N *	Y	N
Standard refinancing for construction of facilities initiated after March 7, 1985, provided Revolving Fund requirements are met	N	N	N	Y	N
Refinancing: Interim or standard refinancing for construction of facilities	N	N	N	Y	N
NONPOINT SOURCE ACITIVITY					
Aquatic plant control when it has been established that water quality degradation is due to the presence of aquatic plants, and sources of pollution have been addressed sufficiently	Y	Y	N	Y	Y
Best management practices implementation on private property [1,2 & 3]	Y	Y	N	Y	Y
Best management practice implementation on public property	Y	Y	N	Y	Y
Planning: Comprehensive basin, watershed, and area-wide water quality planning	Y	Y	N	Y	Y
Education and stewardship programs	Y	Y	N	Y	Y
Farm planning	Y	Y	N	Y	Y
Ground water protection	Y	Y	N	Y	Y
Lake restoration implementation [3]	Y	Y	N	Y	Y
Lake water quality planning	Y	Y	N	Y	Y
Riparian and wetlands habitat restoration and enhancement	Y	Y	N	Y	Y
Stream restoration projects for water quality purposes	Y	Y	N	Y	Y
Irrigation efficiency implementation (such as drip, mist, or low delivery systems)	N	Y	N	Y	N
Total Maximum Daily Load (Water Cleanup Plan) development and implementation	Y	Y	N	Y	Y
Transferring ownership of a small wastewater system to a public entity (costs associated with) [4]	N *	Y	N	Y	N
Monitoring: Water quality monitoring	Y	Y	N	Y	Y
Wellhead protection	Y	Y	N	Y	Y
NPDES permit activities	N	Y	N	Y	N
ON-SITE SEPTIC SYSTEM					
Large On-Site Community wastewater systems	N*	Y	N	Y	N
Large On-Site Community wastewater systems through a local loan fund	N*	Y	N	Y	N
Local loan fund other than on-site septic repair/replacement	N	Y	N	Y	N
Local loan fund for onsite septic repair and replacement programs	Y	Y	N	Y	N
On-site wastewater system education, information, and technical assistance programs	Y	Y	N	Y	Y
STORMWATER PROJECTS					
Stormwater projects required by stormwater permits	N*	Y	N	Y	N
Stormwater projects not required by stormwater permits	Y	Y	N	Y	Y
Planning: Comprehensive stormwater planning examining facilities needs (such as conveyance and treatment)	N	Y	N	Y	N

Item Description	Centennial Grant	Centennial Loan	Revolving Fund FP	Revolving Fund Loan	Section 319 Grant
GREEN PROJECT RESERVES (requires case by case eligibility determination)					
Green Infrastructure	N	N	Y	Y	N
Energy Efficiency	N	N	Y	Y	N
Water Efficiency	N	N	Y	Y	N
Environmentally Innovative Activities	N	N	Y	Y	N
INELEGIBLE PROJECTS					
Acts of nature: Projects related to acts of nature that alter the natural environment, thereby causing water quality problems	N	N	N	N	N
Aquatic plant control for aesthetic reasons, navigational improvements, or other purposes unrelated to water quality	N	N	N	N	N
Engineering reports	N	N	N	N	N
Facilities or portions of facilities that are solely intended to control transport, treat, dispose or otherwise manage commercial institutional or industrial wastewater.	N	N	N	N	N
Facilities to address primary treatment	N	N	N	N	N
Flood control	N	N	N	N	N
Lake restoration implementation where there is no public access	N	N	N	N	N
Previously funded objectives	N	N	N	N	N
Reclamation of abandoned mine land if undertaken to protect water quality	N	N	N	N	N
Scientific research unrelated to a specific activity or facility	N	N	N	N	N
Solid and hazardous waste	N	N	N	N	N
State and federal agency facilities and other duties and responsibilities	N	N	N	N	N
Projects solely for Water supply and conveyance	N	N	N	N	N

Footnotes:

1. **Agricultural best management practices on private property**: Centennial and Section 319 grants to local governments may be available for the following projects only:
   - Riparian re-vegetation or fence construction if a landowner agreement is given by the landowner
   - New innovative/alternative technology if they have not yet been demonstrated in the Washington State Department of Ecology Region in which they are proposed
   - New BMPs approved by Ecology as they are evaluated. New BMPs will be environmentally sound, effective, and consistent with the funding program goals and objectives.

2. **Agricultural best management practices on private property**: Concentrated animal feeding operations (CAFOs) are eligible for Centennial loans. If the project is proposed in areas covered by federally designated National Estuaries (Puget Sound and Lower Columbia River, currently), then the project may be eligible for a Revolving Fund loan.

3. **Facilities elements within a lake implementation project will be eligible for loans only**.

4. **Costs associated with transferring a small wastewater system to a public entity**: Costs associated with the establishment of a satellite support system for facilities management that would provide for the transfer, through ownership or contract, of the operation and maintenance responsibilities from the owner of a small wastewater system to a public entity capable of providing these services (such costs could include associated planning, costs of a feasibility study, preparation of an implementation plan, and facility construction and equipment acquisition necessary to permit system implementation).

APPENDIX C, Part Two - Eligibility of Project Components:

Item Description	Centennial Grant	Centennial Loan	Revolving Fund FP	Revolving Fund Loan	Section 319 Grant
Eligible Components					
Computer equipment specific to a funded project	Y	Y	Y	Y	Y
Diagnostic studies to assess current water quality	Y	Y	N	Y	Y
Equipment and/or tools pre approved for a funded project	Y	Y	Y	Y	Y
Indirect rate (up to 25% of salaries and benefits)	Y	Y	Y	Y	Y
Land acquisition as an integral part of the treatment process (e.g., land application) or for prevention of water pollution	N	Y	N	Y	N
Land acquisition for siting of wastewater treatment plants, sewer rights-of-way and easements, and associated costs	N	Y	N	N	N
Land acquisition for wetland habitat preservation	N	Y	N	Y	N
Landscaping for erosion control directly related to a project	Y	Y	Y	Y	Y
Legal expenses associated with development of local ordinances for water quality protection	Y	Y	N	Y	Y
Legal expenses associated with use of a bond counsel in developing a loan agreement	N	Y	N	Y	N
Light refreshments for meetings if pre approved	Y	Y	Y	Y	Y
Mitigation to comply with requirements in SEPA/NEPA or other environmental review directly related to a project	Y	Y	Y	Y	Y
Model ordinances to prevent or reduce pollution from nonpoint sources development/dissemination of	Y	Y	N	Y	Y
Monitoring equipment used for water quality assessment	Y	Y	N	Y	Y
Ineligible Components					
Removal of existing structures or demolition of structures that are not interfering with proposed construction	N	N	N	N	N
Bond costs for debt issuance	N	N	N	N	N
Bonus or acceleration payments to contractors to meet contractual completion dates for construction	N	N	N	N	N
Cost-plus-a-percentage-of-cost contracts (also known as multiplier contracts), time and materials contracts, and percent-of-construction contracts	N	N	N	N	N
Culvert repair or replacement	N	N	N	N	N
Easement fees	N	N	N	N	N
Equipment required for site and building maintenance [1]	N	N	N	N	N
Fees for permits	N	N	N	N	N
Fines and penalties due to violations of or failures to comply with federal, state, or local laws	N	N	N	N	N
Application preparation (grant or loan)	N	N	N	N	N
Interest on bonds, interim financing, and associated costs to finance projects	N	N	N	N	N
Landscaping for aesthetic reasons	N	N	N	N	N
Lobbying or expenses associated with lobbying	N	N	N	N	N
Monitoring equipment used by an industry for sampling and analyses of industrial discharges to municipal water pollution control facilities	N	N	N	N	N

Item Description	Centennial Grant	Centennial Loan	Revolving Fund FP	Revolving Fund Loan	Section 319 Grant
Office furniture	N	N	N	N	N
Operating expenses of local government, such as the salaries and expenses of a mayor, city council member, city attorney, etc.	N	N	N	N	N
Overtime differential paid to employees of local government to complete administrative or force account work	N	N	N	N	N

Footnotes:

1. **Specialized vehicle eligibility decided by Ecology on a case-by-case basis:** Recipient must clearly demonstrate that specialized vehicles are essential to directly satisfy the project scope of work and to achieve the project water quality goals and outcomes. Ecology will determine if purchasing specialized vehicles is the best use of limited loan and grant funds.

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Appendix D. Best Management Practices (BMP) Eligibility Matrix

Introduction

Best management practices (BMP) that address or correct water quality degradation through facility or activity focused projects may be funded using Ecology's Water Quality Program financial assistance. The implementation of BMPs refers to the use of established approaches or practices to address these water quality problems.

BMPs are defined as, *"Structural or non-structural method(s), recommended through a planning process, that have a demonstrated success for addressing or preventing water quality degradation."*

Projects such as agricultural BMPs on property owned by Washington state and federal governments are largely ineligible, regardless of the eligibility of the applicant. However, in recognition of the complexity of watersheds and the benefits of cooperative efforts, Ecology can provide financial assistance to an eligible public body to participate with other state and federal agencies in comprehensive watershed planning and large scale monitoring programs that extend substantially beyond federal and state lands.

The three major funding programs that Ecology's Water Quality Program administers (Centennial, Section 319, and Revolving Fund) originate from federal or state funds, which are used to address water quality problems on publicly owned lands or lands with public access.

Eligible BMPs:

- Recommended through a multi-agency watershed management planning process
- Required in order to meet a National Pollution Discharge Elimination System (NPDES) permit (loans only)
- Provide public benefits through improved water quality
- Based on water quality improvements and not on production needs
- Target the most critical areas and structural and non-structural practices that, if properly managed, will provide the greatest protection or improvement in water quality

Ecology limits its financial assistance to public bodies. However, the public body that receives a grant or a loan can provide financial assistance to a private landowner.

BMPs on private property are limited to:

- Implementation of BMPs in the riparian zone on private property consisting of revegetation or fence construction and where a landowner agreement is signed by the landowner.
- Implementation of no-till BMPs on private property where a landowner agreement is in place in areas where sedimentation and erosion affect water quality in streams and rivers.
- Implementation of livestock feeding BMPs on private property where a landowner agreement is in place and activity from livestock is contributing to fecal coli form and sedimentation problems in the riparian area or stream.
- Implementation of BMPs on private property, where the practice consists of a demonstration of new, innovative, or alternative technology not yet demonstrated in the Washington State Department of Ecology region in which they are proposed, and where a public easement, conservation easement, or landowner agreement is granted by the landowner.

Agricultural BMPs must comply with the corresponding Natural Resource Conservation Service (NRCS) Field Office Technical Guide (FOTG). If a FOTG is not available to address a problem then the BMP must be designed by a licensed engineer. See Section IV at the following Web address:

http://efotg.nrcs.usda.gov/treemenuFS.aspx?Fips=53077&MenuName=menuWA.zip

Stormwater BMPs in Western Washington will also need to comply with the Western Washington Stormwater Management Manual (*Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001,* Ecology Publication Numbers 99-11; 99-12; 99-13; 99-14; 99-15). Eastern Washington projects need to comply with the *Stormwater Management Manual for Eastern Washington,* Ecology Publication Number 04-10-076*).* The stormwater manuals can be found at:
http://www.ecy.wa.gov/programs/wq/stormwater/municipal/StrmwtrMan.html

FY 2011 BMP Eligibility Matrix

PROJECT	Eligibility for Type of Assistance - Yes (Y)/ No (N)			
	CCWF Grant	CCWF Loan	REVOLVING FUND Loan	Section 319 Grant
Most BMPs on federal and state owned property	N	N	N	N
BMPs that affect upland areas or that are production oriented	N	N	N	N
Erosion and sediment control, bank stabilization, riparian, lake shore & wetland restoration				
Installation of rip rap, boulders, and retaining walls [a]	N	N	N	N
Installation of log structures	Y	Y	Y	Y
Installation of root wads	Y	Y	Y	Y
Acquisition/installation of native plant material	Y	Y	Y	Y

PROJECT	Eligibility for Type of Assistance - Yes (Y)/ No (N)			
	CCWF Grant	CCWF Loan	REVOLVING FUND Loan	Section 319 Grant
Acquisition/installation of plant material stabilizer	Y	Y	Y	Y
Planting trees for future harvesting [a]	N	N	Y	N
Watering riparian plantings [c]	Y	Y	Y	Y
Residue management via no till, direct seeding [a b]	Y	Y	Y	Y
Riparian forest buffers	Y	Y	Y	Y
Use of sediment settlers (e.g., Polyacrylamide) [a]	N	Y	Y	N
Grass filter strips [a]	Y	Y	Y	Y
Conservation plans and targeted BMP plans	Y	Y	Y	Y
Site monitoring and follow-up maintenance	Y	Y	Y	Y
Site preparation work (e.g., weed removal)	Y	Y	Y	Y
Weed control associated with riparian revegetation	Y	Y	Y	Y
Lakeshore riparian installation [a]	Y	Y	Y	Y
Wetlands restoration [a]	Y	Y	Y	Y
Land acquisition for wetlands protection, restoration, and construction	N	Y	Y	N
Armoring of the toe	Y	Y	Y	Y
Sediment control basins	N	Y	Y	N
Channel re-establishment or naturalization/meander reconstruction/ re-sloping	Y	Y	Y	Y
Stream bank revegetation	Y	Y	Y	Y
Wetlands restoration	Y	Y	Y	Y
Wetland creation	N	Y	Y	N
Farm & livestock management				
Livestock exclusion fencing on private property [a, b]	Y	Y	Y	Y
Livestock exclusion fencing on public property [a, c]	Y	Y	Y	Y
Acquisition/installation of fencing along stream	Y	Y	Y	Y
Acquisition/installation of side/cross	N	N	N	N

PROJECT	Eligibility for Type of Assistance - Yes (Y)/ No (N)			
	CCWF Grant	CCWF Loan	REVOLVING FUND Loan	Section 319 Grant
fencing				
Bridges (livestock only) – up to 6 ft wide	Y	Y	Y	Y
Bridges (vehicle)	N	N	N	N
Hardened stream crossings for livestock [a, b, c]	Y	Y	Y	Y
Off-stream watering provisions [a, b, c]	Y	Y	Y	Y
Spring development [a, b, c]	Y	Y	Y	Y
Livestock feeding BMPs including heavy use are protection, waste storage facilities, and windbreaks [a, b]	Y	Y	Y	Y
On-site Septic Systems				
Septic system surveys	Y	Y	Y	Y
Septic system repair/replacement [a]	N	Y	Y	N
Large On-Site Community systems (planning, design, and construction)	N	Y	Y	N
Public information and education				
Education, outreach, information	Y	Y	Y	Y
Educational signage	Y	Y	Y	Y
Educational programs and materials not relating to water quality issues	N	N	N	N
Pledge programs	Y	Y	Y	Y
School programs [a, d]	Y	Y	Y	Y
Structural protection or reconstruction				
Culvert reconstruction or replacement	N	N	N	N
Culvert removal for riparian restoration purposes	Y	Y	Y	Y
Well decommissioning	N	Y	Y	N
Stormwater projects				
Implementation of educational activities	Y	Y	Y	Y
Stormwater related land use planning	Y	Y	Y	Y
Stormwater inventories	Y	Y	Y	Y
Establishment of stormwater utilities	Y	Y	Y	Y
Detention facilities, (ponds, tanks, or vaults, et. al.)	N	Y	Y	N
Infiltration systems (dry wells, swales, trench, pond)	N	Y	Y	N

PROJECT	Eligibility for Type of Assistance - Yes (Y)/ No (N)			
	CCWF Grant	**CCWF Loan**	**REVOLVING FUND Loan**	**Section 319 Grant**
Stormwater treatment facilities (constructed wetlands, bioretention, etc.)	N	Y	Y	N
Individual residential stormwater infiltration treatment and collection systems, such as rain gardens or biofiltration swales on private property	N	N	N	N
Low-impact development BMPs	N	Y	Y	N
Pet waste management signs	Y	Y	Y	Y
Irrigation water management				
Technical assistance for irrigation water management such as planning and soil testing	Y	Y	Y	Y
Irrigation efficiency implementation (such as drip, mist, or low delivery systems)	N	Y	Y	N

Footnotes

[a] Indicates specific criteria or guidelines apply.

[b] Work on private property requires landowner agreement.

[c] May have Ecology's Water Resources (WR) or Shorelands and Environmental Assistance (SEA) Program issues. Applicants, recipients, and Ecology staff may need to inquire as to specific project limitations.

[d] School Districts are not eligible for funding.

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Appendix E. Green Project Reserves Eligible Projects

Procedures for Implementing Certain Provisions of EPA's Fiscal Year 2010 Appropriation Affecting the Clean Water and Drinking Water State Revolving Fund Programs. 4/21/2010

PART A – CWSRF GPR SPECIFIC GUIDANCE

The following sections outline the technical aspects for the CWSRF Green Project Reserve. It is organized by the four categories of green projects: green infrastructure, water efficiency, energy efficiency, and environmentally innovative activities. Categorically green projects are listed, as well as projects that are ineligible. Design criteria for business cases and example projects that would require a business case are also provided.

1.0 GREEN INFRASTRUCUTRE

1.1 Definition: Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintain and restore 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.

1.2 Categorical Projects

- 1.2-1 Implementation of green streets (combinations of green infrastructure practices in transportation rights-of-ways), for either new development, redevelopment or retrofits including: permeable pavement2, bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
- 1.2-2 Wet weather management systems for parking areas including: permeable pavement[2], bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
- 1.2-3 Implementation of comprehensive street tree or urban forestry programs, including expansion of tree boxes to manage additional stormwater and enhance tree health.

[2] The total capital cost of permeable pavement is eligible, not just the incremental additional cost when compared to impervious pavement.

1.2-4 Stormwater harvesting and reuse projects, such as cisterns and the systems that allow for utilization of harvested stormwater, including pipes to distribute stormwater for reuse.

1.2-5 Downspout disconnection to remove stormwater from sanitary, combined sewers and separate storm sewers and manage runoff onsite.

1.2-6 Comprehensive retrofit programs designed to keep wet weather discharges out of all types of sewer systems using green infrastructure technologies and approaches such as green roofs, green walls, trees and urban reforestation, permeable pavements and bioretention cells, and turf removal and replacement with native vegetation or trees that improve permeability.

1.2-7 Establishment or restoration of permanent riparian buffers, floodplains, wetlands and other natural features, including vegetated buffers or soft bioengineered stream banks. This includes stream day lighting that removes natural streams from artificial pipes and restores a natural stream morphology that is capable of accommodating a range of hydrologic conditions while also providing biological integrity. In highly urbanized watersheds this may not be the original hydrology.

1.2-8 Projects that involve the management of wetlands to improve water quality and/or support green infrastructure efforts (e.g., flood attenuation).3

1.2-8a Includes constructed wetlands.

1.2-8b May include natural or restored wetlands if the wetland and its multiple functions are not degraded and all permit requirements are met.

1.2-9 The water quality portion of projects that employ development and redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design.

1.2-10 Fee simple purchase of land or easements on land that has a direct benefit to water quality, such as riparian and wetland protection or restoration.

1.3 Projects That Do Not Meet the Definition of Green Infrastructure

1.3-1 Stormwater controls that have impervious or semi-impervious liners and provide no compensatory evapotranspirative or harvesting function for stormwater retention.

1.3-2 Stormwater ponds that serve an extended detention function and/or extended filtration. This includes dirt lined detention basins.

1.3-3 In-line and end-of-pipe treatment systems that only filter or detain stormwater.

1.3-4 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.

1.3-5 Stormwater conveyance systems that are not soil/vegetation based (swales) such as pipes and concrete channels. Green infrastructure projects that include pipes to collect stormwater may be justified as innovative environmental projects pursuant to Section 4.4 of this guidance.

3 Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, vernal pools, and similar areas.

1.3-6 Hardening, channelizing or straightening streams and/or stream banks.

1.3-7 Street sweepers, sewer cleaners, and vactor trucks unless they support green infrastructure projects.

1.4 Decision Criteria for Business Cases

1.4-1 Green infrastructure projects are designed to mimic the natural hydrologic conditions of the site or watershed.

1.4-2 Projects that capture, treat, infiltrate, or evapotranspire water on the parcels where it falls and does not result in interbasin transfers of water.

1.4-3 GPR project is in lieu of or to supplement municipal hard/gray infrastructure.

1.4-4 Projects considering both landscape and site scale will be most successful at protecting water quality.

1.4-5 Design criteria are available at: http://cfpub.epa.gov/npdes/greeninfrastructure/munichandbook.cfm and http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm and

1.5 Examples of Projects Requiring A Business Case

1.5-1 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.

2.0 WATER EFFICIENCY

2.1 Definition: EPA‟s WaterSense program defines water efficiency as 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.

2.2 Categorical Projects

2.2-1 Installing or retrofitting water efficient devices, such as plumbing fixtures and appliances

2.2-1a For example -- shower heads, toilets, urinals and other plumbing devices

2.2-1b Where specifications exist, WaterSense labeled products should be the preferred choice (http://www.epa.gov/watersense/index.html).

2.2-1c Implementation of incentive programs to conserve water such as rebates.

2.2-2 Installing any type of water meter in previously unmetered areas

2.2-2a If rate structures are based on metered use

2.2-2b Can include backflow prevention devices if installed in conjunction with water meter

2.2-3 Replacing existing broken/malfunctioning water meters, or upgrading existing meters, with:

2.2-3a Automatic meter reading systems (AMR), for example:

2.2-3a(i) Advanced metering infrastructure (AMI)

2.2-3a(ii) Smart meters

2.2-3b Meters with built in leak detection

2.2-3c Can include backflow prevention devices if installed in conjunction with water meter replacement

2.2-4 Retrofitting/adding AMR capabilities or leak detection equipment to existing meters (not replacing the meter itself).
2.2-5 Water audit and water conservation plans, which are reasonably expected to result in a capital project.
2.2-6 Recycling and water reuse projects that replace potable sources with non-potable sources,
2.2-6a Gray water, condensate and wastewater effluent reuse systems (where local codes allow the practice)
2.2-6b Extra treatment costs and distribution pipes associated with water reuse.
2.2-7 Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems, including moisture and rain sensing controllers.
2.2-8 Retrofit or replacement of existing agricultural irrigation systems to more efficient agricultural irrigation systems.

2.3 Projects That Do Not Meet the Definition of Water Efficiency
2.3-1 Agricultural flood irrigation.
2.3-2 Lining of canals to reduce water loss.
2.3-3 Replacing drinking water distribution lines. This activity extends beyond CWSRF eligibility and is more appropriately funded by the DWSRF.
2.3-4 Leak detection equipment for drinking water distribution systems, unless used for reuse distribution pipes.

2.4 Decision Criteria for Business Cases
2.4-1 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.
2.4-2 Water efficiency projects should deliver equal or better services with less net water use as compared to traditional or standard technologies and practices
2.4-3 Efficient water use often has the added benefit of reducing the amount of energy required by a POTW, since less water would need to be collected and treated; therefore, there are also energy and financial savings.

2.5 Examples of Projects Requiring a Business Case.
2.5-1 Water meter replacement with traditional water meters (see AWWA M6 Water Meters – Selection Installation, Testing, and Maintenance).
2.5-2 Projects that result from a water audit or water conservation plan
2.5-3 Storage tank replacement/rehabilitation to reduce loss of reclaimed water.
2.5-4 New water efficient landscape irrigation system.
2.5-5 New water efficient agricultural irrigation system.

3.0 ENERGY EFFICIENCY

3.1 Definition: Energy efficiency is 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.
3.2 Categorical Projects

3.2-1 Renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined heat and power systems (CHP) that provide power to a POTW. (http:///www.epa.gov/cleanenergy). Micro-hydroelectric projects involve capturing the energy from pipe flow.

3.2-1a POTW owned renewable energy projects can be located onsite or offsite.

3.2-1b Includes the portion of a publicly owned renewable energy project that serves POTW" s energy needs.

3.2-1c Must feed into the grid that the utility draws from and/or there is a direct connection.

3.2-2 Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR4. Retrofit projects should compare energy used by the existing system or unit process5 to the proposed project. The energy used by the existing system should be based on name plate data when the system was first installed, recognizing that the old system is currently operating at a lower overall efficiency than at the time of installation. New POTW projects or capacity expansion projects should be designed to maximize energy efficiency and should select high efficiency premium motors and equipment where cost effective. Estimation of the energy efficiency is necessary for the project to be counted toward GPR. If a project achieves less than a 20% reduction in energy efficiency, then it may be justified using a business case.

3.2-3 Collection system Infiltration/Inflow (I/I) detection equipment

3.2-4 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 are eligible. Guidance to help POTWs develop energy management programs, including assessments and audits is available at http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf .

3.3 Projects That Do Not Meet the Definition of Energy Efficiency

3.3-1 Renewable energy generation that is privately owned or the portion of a publicly owned renewable energy facility that does not provide power to a POTW, either through a connection to the grid that the utility draws from and/or a direct connection to the POTW.

3.3-2 Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency.

3.3-3 Facultative lagoons, even if integral to an innovative treatment process.

3.3-4 Hydroelectric facilities, except micro-hydroelectric projects. Micro-hydroelectric projects involve capturing the energy from pipe flow.

[4] The 20% threshold for categorically eligible CWSRF energy efficiency projects was derived from a 2002 Department of Energy study entitled *United States Industrial Electric Motor Systems Market Opportunities Assessment, December 2002* and adopted by the Consortium for Energy Efficiency. Further field studies conducted by Wisconsin Focus on Energy and other States programs support the threshold.

[5] A unit process is a portion of the wastewater system such as the collection system, pumping stations, aeration system, or solids handling, etc.

3.4 Decision Criteria for Business Cases

3.4-1 Project must be cost effective. An evaluation must identify energy savings and payback on capital and operation and maintenance costs that does not exceed the useful life of the asset. http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf

3.4-2 The business case must describe how the project maximizes energy saving opportunities for the POTW or unit process.

3.4-3 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://water.epa.gov/infrastructure/drinkingwater/pws/cupss/index.cfm) to document current energy usage and track anticipated savings.

3.5 Examples of Projects Requiring a Business Case

3.5-1 POTW projects or unit process projects that achieve less than a 20% energy efficiency improvement.

3.5-2 Projects implementing recommendations from an energy audit that are not otherwise designated as categorical.

3.5-3 Projects that cost effectively eliminate pumps or pumping stations.

3.5-4 Infiltration/Inflow (I/I) correction projects that save energy from pumping and reduced treatment costs and are cost effective.

3.5-4a Projects that count toward GPR cannot build new structural capacity. These projects may, however, recover existing capacity by reducing flow from I/I.

3.5-5 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.

3.5-6 Replacing pre-Energy Policy Act of 1992 motors with National Electric Manufacturers Association (NEMA) premium energy efficiency motors.

3.5-8a NEMA is a standards setting association for the electrical manufacturing industry (http://www.nema.org/gov/energy/efficiency/premium/).

3.5-7 Upgrade of POTW lighting to energy efficient sources such as metal halide pulse start technologies, compact fluorescent, light emitting diode (LED).

3.5-8 SCADA systems can be justified based upon substantial energy savings.

3.5-9 Variable Frequency Drive can be justified based upon substantial energy savings.

4.0 ENVIRONMENTALLY INNOVATIVE

4.1 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.

4.2 Categorical Projects

4.2-1 Total/integrated water resources management planning likely to result in a capital project.

4.2-2 Utility Sustainability Plan consistent with EPA’s SRF sustainability policy.

4.2-3 Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry)

4.3-3a Note: GHG Inventory and mitigation plan is eligible for CWSRF funding.

4.2-3b EPA Climate Leaders: http://www.epa.gov/climateleaders/basic/index.html Climate Registry: http://www.theclimateregistry.org/

4.2-4 Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather.

4.2-4a Office of Water – Climate Change and Water website: http://www.epa.gov/water/climatechange/

4.2.5 Construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities.

4.2-5a Any level of certification (Platinum, Gold, Silver, Certified).

4.2-5b 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.

4.2-5c U.S. Green Building Council website http://www.usgbc.org/displaypage.aspx?CategoryID=19

4.2-6 Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems.

4.2-6a Decentralized wastewater systems include individual onsite and/or cluster wastewater systems used to collect, treat and disperse relatively small volumes of wastewater. An individual onsite wastewater treatment system is a system relying on natural processes and/or mechanical components, that is used to collect, treat and disperse or reclaim wastewater from a single dwelling or building. A cluster system is a wastewater collection and treatment system under some form of common ownership that collects wastewater from two or more dwellings or buildings and conveys it to a treatment and dispersal system located on a suitable site near the dwellings or buildings. Decentralized projects may include a combination of these systems. EPA recommends that decentralized systems be managed under a central management entity with enforceable program requirements, as stated in the EPA Voluntary Management Guidelines. http://www.epa.gov/owm/septic/pubs/septic_guidelines.pdf

4.2-6b Treatment and Collection Options: A variety of treatment and collection options are available when implementing decentralized wastewater systems. They typically include a septic tank, although many configurations include additional treatment components following or in place of the septic tank, which provide for advanced treatment solutions. Most disperse treated effluent to the soil where further treatment occurs, utilizing either conventional soil absorption fields or alternative soil dispersal methods which provide advanced treatment. Those that discharge to streams, lakes, tributaries, and other water bodies require federal or state discharge permits (see below). Some systems promote water reuse/recycling, evaporation or wastewater uptake by plants. Some decentralized systems, particularly cluster or community systems, often utilize alternative methods of collection with small diameter pipes which can flow via gravity, pump, or siphon, including pressure sewers, vacuum sewers and small diameter gravity sewers. Alternative collection systems generally utilize piping that is less than 8 inches in diameter, or the minimum diameter allowed by the state if greater than 8 inches, with shallow burial and do not require manholes or lift stations. Septic tanks are typically installed at each building served or another location upstream of the final treatment and dispersal site. Collection systems can transport raw sewage or septic tank effluent. Another popular dispersal option used today is subsurface drip infiltration. Package plants that discharge to the soil are

generally considered decentralized, depending on the situation in which they are used. While not entirely inclusive, information on treatment and collection processes is described, in detail, in the "Onsite Wastewater Treatment Technology Fact Sheets" section of the EPA Onsite Manual
http://www.epa.gov/owm/septic/pubs/septic_2002_osdm_all.pdf
and on EPA's septic system website under Technology Fact Sheets.
http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=283

4.3 Projects That Do Not Meet the Definition of Environmentally Innovative

- 4.3-1 Air scrubbers to prevent nonpoint source deposition.
- 4.3-2 Facultative lagoons, even if integral to an innovative treatment processes.
- 4.3-3 Surface discharging decentralized wastewater systems where there are cost effective soil-based alternatives.
- 4.3-4 Higher sea walls to protect POTW from sea level rise.
- 4.3-5 Reflective roofs at POTW to combat heat island effect.

4.4 Decision Criteria for Business Cases

- 4.4-1 State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical or climatological conditions.
  - 4.4-1a Technology or approach whose performance is expected to address water quality but the actual performance has not been demonstrated in the state;
  - 4.4-1b 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
  - 4.4-1c Conventional technology or approaches that are used in a new application in the State.

4.5 Examples of Projects Requiring a Business Case

- 4.5-1 Constructed wetlands projects used for municipal wastewater treatment, polishing, and/or effluent disposal.
  - 4.5-1a 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.
  - 4.5-1b Projects may not (further) degrade natural wetlands.
- 4.5-2 Projects or components of projects that result from total/integrated water resource management planning consistent with the decision criteria for environmentally innovative projects and that are Clean Water SRF eligible.
- 4.5-3 Projects that facilitate adaptation of POTWs to climate change identified by a carbon footprint assessment or climate adaptation study.
- 4.5-4 POTW upgrades or retrofits that remove phosphorus for beneficial use, such as biofuel production with algae.
- 4.5-5 Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the Decision Criteria for environmentally innovative projects such as:
  - 4.5-5a Projects that significantly reduce or eliminate the use of chemicals in wastewater treatment;
  - 4.5-5b 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. (National Biosolids Partnership, 2010; Advances in Solids Reduction Processes at Wastewater Treatment Facilities Webinar; http://www.e-wef.org/timssnet/meetings/tnt_meetings.cfm?primary_id=10WCAP2&Action=LONG&subsystem=ORD%3cbr).

4.5-5b(i) Includes composting, class A and other sustainable biolsolids management approaches.

4.5-6 Educational activities and demonstration projects for water or energy efficiency.

4.5-7 Projects that achieve the goals/objectives of utility asset management plans (http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_bestpractices.pdf; http://www.epa.gov/owm/assetmanage/index.htm).

4.5-8 Sub-surface land application of effluent and other means for ground water recharge, such as spray irrigation and overland flow.

4.5-8a Spray irrigation and overland flow of effluent is not eligible for GPR where there is no other cost effective alternative.

Business Case Development

This guidance is intended to be comprehensive; however, EPA understands our examples projects requiring a business case may not be all inclusive. A business case is a due diligence document. For those projects, or portions of projects, which are not included in the categorical projects lists provided above, a business case will be required to demonstrate that an assistance recipient has thoroughly researched anticipated 'green' benefits of a project. Business cases will be approved by the State (see section III.A. in the *Procedures for Implementing Certain Provisions of EPA's Fiscal Year 2010 Appropriation Affecting the Clean Water and Drinking Water State Revolving Fund Programs*). An approved business case must be included in the State's project files and contain clear documentation that the project achieves identifiable and substantial benefits. The following sections provide guidelines for business case development.

5.0 Length of a Business Case

5.0-1 Business cases must address the decision criteria for the category of project

5.0-2 Business cases should be adequate, but not exhaustive.

5.0-2a There are many formats and approaches. EPA does not require any specific one.

5.0-2b Some projects will require detailed analysis and calculations, while others many not require more than one page.

5.0-2c Limit the information contained in the business case to only the pertinent 'green' information needed to justify the project.

5.0-3 A business case can simply summarize results from, and then cite, existing documentation – such as engineering reports, water or energy audits, results of water system tests, etc.

5.1 Content of a Business Case

5.1-1 Quantifiable water and/or energy savings or water loss reduction for water and energy efficiency projects should be included.

5.1-2 The cost and financial benefit of the project should be included, along with the payback time period where applicable. (NOTE: Clean Water SRF requires energy efficiency projects to be cost effective.)

5.2 Items Which Strengthen Business Case, but Are Not Required

5.2-1 Showing that the project was designed to enable equipment to operate most efficiently.

5.2-2 Demonstrating that equipment will meet or exceed standards set by professional associations.

5.2-3 Including operator training or committing to utilizing existing tools such as Energy Star's Portfolio Manager or CUPSS for energy efficiency projects.

5.3 Example Business Cases Are Available at http://www.srfbusinesscases.net/.

Appendix F. Map of Water Resource Inventory Areas (WRIAS) in Washington

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Appendix G.

DEPARTMENT OF ECOLOGY
State of Washington

Financial Hardship Analysis Form

Centennial Clean Water Fund
State Revolving Fund (Revolving Fund
State Fiscal Year 2012 (SFY12)

Applicant _____

Purpose: The information provided on this form is used by Ecology to determine if a water pollution control facilities (WPCF) construction project will cause financial hardship for residential sewer ratepayers. Financial hardship assistance may be available to loan and grant recipients when a WPCF construction project results in a residential user charge of two percent or greater of the applicable median household income. If financial hardship exists, Ecology may offer funding recipients reduced interest rates, repayment terms to 20 years, or grant funding.

Please direct any questions or comments to the staff of the Financial Management Section of Ecology's Water Quality Program.

I. NAME OF PERSON COMPLETING THIS FORM

Name: _____

Title: _____

Address: _____

_____

Phone Number: _____

Email Address: _____

II. ROLES AND RESPONSIBILITIES

This section is intended to summarize the key management agencies, the roles they will be assigned, and the agreements that will be needed to provide for continued cooperation in the management of the facility.

A. Will any other agencies or jurisdictions, beside the applicant, be responsible for the facility in terms of:

1. Ownership: _____
2. Operation: _____
3. Financing: _____

B. If so, please describe:

1. The type and amount of the contributions(s):

_____

_____

2. The nature of the cooperative agreement(s):

_____

_____

III. COST ESTIMATE AT TODAY'S PRICES

This section is intended to provide a realistic picture of all costs that will be incurred, including management, overhead, outside services, and equipment related to the project.

A. Construction Cost Estimates for Facilities

- Treatment Plants $ _____
- Pump Stations $ _____
- Interceptor Sewers $ _____
- Combined Sewer Overflow Reduction Measures $ _____
- Collection Sewers $ _____
- Land Acquisition $ _____
- Other (Specify) Stormwater $ _____

- Total Construction Costs $ _____

B. Estimated Annual Operation, Maintenance, and Equipment Replacement Costs for the Proposed Facilities.

(Do **not** include depreciation on equipment or buildings.)

- Labor $ _____
- Utilities $ _____
- Materials and Supplies $ _____
- Outside Services $ _____
- Miscellaneous Expenses $ _____
- Equipment Replacement (e.g., pumps, vehicles) $ _____
- Other (Specify) $ _____

- Annual Operation, Maintenance and Equipment Replacement Costs $ _____

IV. FINANCING

A. Breakdown of Funding Committed or Anticipated for the Project, including Ecology funding.

System Components	Estimated Cost	Local Contributions	Ecology Share	Other Grants (Specify)	Other Loans (Specify)
• Facilities Planning	$	$	$	$	$
• Facilities Design	$	$	$	$	$
• Treatment Plant	$	$	$	$	$
• Pump Stations	$	$	$	$	$
• Interceptors	$	$	$	$	$
• Collectors	$	$	$	$	$
• Land Acquisition	$	$	$	$	$
• Other Stormwater	$	$	$	$	$
Totals	$	$	$	$	$

B. Source of Loan Financing from Other Lenders, if Any (from IV A). Only include secured/committed funds.

Year	Financing Method	Amount Borrowed	Interest Rate	Term of Maturity	Annual Debt Service Payments
	Revolving Fund Loan	$	$	$	$
	CCWF Loan	$	$	$	$
	General Obligation Bond	$	$	$	$
	Revenue Bond	$	$	$	$
	PWTF	$	$	$	$
	USDA/RD	$	$	$	$
	Other Loan(s) (specify)	$	$	$	$
	Totals	**$**			**$**

C. Estimated Annual Water Pollution Control Facilities Costs

Existing annual operation, maintenance and equipment replacement costs. (Do not include depreciation on equipment or buildings.)

- Labor (+)$ _____
- Utilities (+)$ _____
- Materials and Supplies (+)$ _____
- Outside Services (+)$ _____
- Miscellaneous Expenses (+)$ _____
- Equipment Replacement (e.g., pumps, vehicles) (+)$ _____
- Other (City and State taxes, permits and interest) (+)$ _____

Total existing annual operating, maintenance and equipment replacement costs = $ _____

1. Discontinued portion (savings) of above costs as a result of proposed project (–)$ _____
2. Estimated annual operation and maintenance and equipment replacement costs for proposed facilities (from III-B) (+)$ _____
3. Annual debt service on existing wastewater facilities not associated with this project (+)$ _____
4. Existing annual debt service on this wastewater facility, if any (from IV-B) (+)$ _____

Total estimated annual water pollution control facilities costs = $ _____

5. Non-residential share of total annual costs _____

V. DEMOGRAPHIC INFORMATION

A. Population Estimates

1. Population in 2000 _____
2. Current Population _____
3. Estimated Population in 2010 _____
4. Planning Year _____
5. Planning Year Population _____
6. Number of Households _____

Source of Estimates _____

B. Median Household Income (MHI)

(1) 2000: _____

(2) 2011 MHI: _____

(See the *2012-13 Funding Guidelines, Appendix H, Median Household Income Table* for information on 2011 estimated median household income.

C. Sewer Users:	a. Number ERU*s	b. % of Total ERUs
Residential Customers:		
Industrial & Institutional Customers		
Growth		

What was the monthly sewer rate for a single family household using 1000 cubic feet of water in

2007? _____ 2008? _____ and 2009? _____

MHIs are updated from 2000 census levels for many communities in the state. If a funding applicant/recipient can show that the updated census do not reflect existing circumstances, Ecology

_____

_____

_____

_____

_____

_____

_____

VI. SIGNATURE

The Financial Hardship Analysis Form will not be reviewed without complete signatures and the phone number of the person completing this form.

Signature of Person Responsible for Completing This Form.

_____ _____
(Date)

Signature of Authorized Representative.

_____ _____
(Date)

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Appendix H. 2011 Median Household Income Table

Estimated Median Household Incomes for Communities in Washington State, Updated for Use With the Fiscal Year 2012 Funding Cycle.

NOTES:

- CDP = Census Designated Place.
- Figures for 2011 are based on the 2000 Census figures adjusted for inflation using the Consumer Price Index for all Urban Consumers (CPI-U).

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CPI-U	3.4%	2.8%	1.6%	2.3%	2.7%	3.4%	3.2%	2.8%	3.8%	-0.4%	2.0%*

* Based on Washington State Economic and Revenue Forecast, Feb. 2010

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Aberdeen City	$30,683	$40,272	$805	$67.12
Aberdeen Gardens CDP	$38,403	$50,404	$1,008	$84.01
Acme CDP	$41,964	$55,078	$1,102	$91.80
Ahtanum CDP	$48,352	$63,462	$1,269	$105.77
Airway Heights City	$29,829	$39,151	$783	$65.25
Albion Town	$40,179	$52,735	$1,055	$87.89
Alderwood Manor CDP	$61,199	$80,324	$1,606	$133.87
Alger CDP	$13,542	$17,774	$355	$29.62
Algona City	$50,833	$66,719	$1,334	$111.20
Allyn-Grapeview CDP	$46,224	$60,669	$1,213	$101.12
Almira Town	$30,208	$39,648	$793	$66.08
Amboy CDP	$50,896	$66,802	$1,336	$111.34
Ames Lake CDP	$93,224	$122,357	$2,447	$203.93
Anacortes City	$41,930	$55,034	$1,101	$91.72
Arlington City	$46,302	$60,772	$1,215	$101.29
Arlington Heights CDP	$60,518	$79,430	$1,589	$132.38
Artondale CDP	$63,500	$83,344	$1,667	$138.91
Ashford CDP	$27,917	$36,641	$733	$61.07
Asotin City	$35,083	$46,047	$921	$76.74
Auburn City	$39,208	$51,461	$1,029	$85.77
Ault Field CDP	$24,406	$32,033	$641	$53.39

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Bainbridge Island City	$70,110	$92,020	$1,840	$153.37
Bangor Trident Base CDP	$32,246	$42,323	$846	$70.54
Banks Lake South CDP	$37,500	$49,219	$984	$82.03
Barberton CDP	$64,779	$85,023	$1,700	$141.71
Baring CDP	$40,875	$53,649	$1,073	$89.41
Basin City CDP	$29,444	$38,646	$773	$64.41
Battle Ground City	$45,070	$59,155	$1,183	$98.59
Bay Center CDP	$38,409	$50,412	$1,008	$84.02
Bay View CDP	$27,250	$35,766	$715	$59.61
Beaux Arts Village Town	$96,916	$127,203	$2,544	$212.01
Bellevue City	$62,338	$81,819	$1,636	$136.37
Bell Hill CDP	$66,442	$87,206	$1,744	$145.34
Bellingham City	$32,530	$42,696	$854	$71.16
Benton City	$33,636	$44,148	$883	$73.58
Bickleton CDP	$34,500	$45,282	$906	$75.47
Big Lake CDP	$57,500	$75,469	$1,509	$125.78
Bingen City	$24,375	$31,992	$640	$53.32
Birch Bay CDP	$40,040	$52,553	$1,051	$87.59
Black Diamond City	$67,092	$88,059	$1,761	$146.76
Blaine City	$36,900	$48,432	$969	$80.72
Blyn CDP	$38,750	$50,860	$1,017	$84.77
Bonney Lake City	$60,282	$79,121	$1,582	$131.87
Bothell City	$59,264	$77,785	$1,556	$129.64
Brady CDP	$67,386	$88,445	$1,769	$147.41
Bremerton City	$30,950	$40,622	$812	$67.70
Brewster City	$21,556	$28,292	$566	$47.15
Bridgeport City	$25,531	$33,510	$670	$55.85
Brier City	$73,558	$96,546	$1,931	$160.91
Brinnon CDP	$27,885	$36,599	$732	$61.00
Brush Prairie CDP	$59,408	$77,974	$1,559	$129.96
Bryn Mawr-Skyway CDP	$47,385	$62,193	$1,244	$103.66
Buckley City	$49,453	$64,908	$1,298	$108.18
Bucoda Town	$34,286	$45,001	$900	$75.00
Burbank CDP	$50,522	$66,311	$1,326	$110.52
Burien City	$41,577	$54,570	$1,091	$90.95

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Burlington City	$37,848	$49,676	$994	$82.79
Camano CDP	$54,262	$71,219	$1,424	$118.70
Camas City	$60,187	$78,996	$1,580	$131.66
Carbonado Town	$50,250	$65,954	$1,319	$109.92
Carlsborg CDP	$28,103	$36,885	$738	$61.48
Carnation City	$60,156	$78,955	$1,579	$131.59
Carson River Valley CDP	$33,598	$44,098	$882	$73.50
Cascade-Fairwood CDP	$57,996	$76,120	$1,522	$126.87
Cascade Valley CDP	$37,344	$49,014	$980	$81.69
Cashmere City	$34,854	$45,746	$915	$76.24
Castle Rock City	$37,212	$48,841	$977	$81.40
Cathan CDP	$58,875	$77,274	$1,545	$128.79
Cathcart CDP	$65,357	$85,782	$1,716	$142.97
Cathlamet Town	$33,409	$43,850	$877	$73.08
Centerville CDP	$31,250	$41,016	$820	$68.36
Centralia City	$30,078	$39,478	$790	$65.80
Central Park CDP	$45,719	$60,007	$1,200	$100.01
Chehalis City	$33,482	$43,945	$879	$73.24
Chehalis Village CDP	$30,357	$39,844	$797	$66.41
Chelan City	$28,047	$36,812	$736	$61.35
Cheney City	$22,593	$29,654	$593	$49.42
Cherry Grove CDP	$58,750	$77,110	$1,542	$128.52
Chewelah City	$25,238	$33,125	$663	$55.21
Chinook CDP	$30,417	$39,923	$798	$66.54
Clarkston City	$25,907	$34,003	$680	$56.67
Clarkston Heights-Vineland CDP	$48,306	$63,402	$1,268	$105.67
Clear Lake CDP	$37,143	$48,751	$975	$81.25
Cle Elum City	$28,144	$36,939	$739	$61.57
Clinton CDP	$43,625	$57,258	$1,145	$95.43
Clyde Hill City	$132,468	$173,866	$3,477	$289.78
Cohassett Beach CDP	$26,490	$34,768	$695	$57.95
Colfax City	$36,622	$48,067	$961	$80.11
College Place City	$30,330	$39,808	$796	$66.35
Colton Town	$47,500	$62,344	$1,247	$103.91
Colville City	$27,988	$36,735	$735	$61.22

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Conconully Town	$23,214	$30,469	$609	$50.78
Concrete Town	$29,375	$38,555	$771	$64.26
Connell City	$33,992	$44,615	$892	$74.36
Conway CDP	$33,750	$44,297	$886	$73.83
Copalis Beach CDP	$33,194	$43,567	$871	$72.61
Cosmopolis City	$41,106	$53,952	$1,079	$89.92
Cottage Lake CDP	$92,388	$121,260	$2,425	$202.10
Coulee City Town	$25,938	$34,044	$681	$56.74
Coulee Dam Town	$37,391	$49,076	$982	$81.79
Country Homes CDP	$36,630	$48,077	$962	$80.13
Coupeville Town	$33,938	$44,544	$891	$74.24
Covington City	$63,711	$83,621	$1,672	$139.37
Creston Town	$25,417	$33,360	$667	$55.60
Cusick Town	$14,583	$19,140	$383	$31.90
Custer CDP	$22,500	$29,531	$591	$49.22
Dallesport CDP	$36,250	$47,578	$952	$79.30
Darrington Town	$32,813	$43,067	$861	$71.78
Davenport City	$37,900	$49,744	$995	$82.91
Dayton City	$31,409	$41,225	$824	$68.71
Deer Park City	$32,470	$42,617	$852	$71.03
Deming CDP	$52,292	$68,634	$1,373	$114.39
Desert Aire CDP	$35,719	$46,882	$938	$78.14
Des Moines City	$48,971	$64,275	$1,285	$107.12
Dishman CDP	$32,512	$42,672	$853	$71.12
Dixie CDP	$33,125	$43,477	$870	$72.46
Dollar Corner CDP	$56,875	$74,649	$1,493	$124.42
DuPont City	$52,969	$69,522	$1,390	$115.87
Duvall City	$71,300	$93,582	$1,872	$155.97
East Cathlamet CDP	$40,000	$52,500	$1,050	$87.50
Eastgate CDP	$65,598	$86,098	$1,722	$143.50
East Hill-Meridian CDP	$65,721	$86,259	$1,725	$143.77
Easton CDP	$37,708	$49,492	$990	$82.49
East Port Orchard CDP	$42,571	$55,875	$1,117	$93.12
East Renton Highlands CDP	$65,268	$85,665	$1,713	$142.77
East Wenatchee City	$34,919	$45,832	$917	$76.39

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
East Wenatchee Bench CDP	$45,496	$59,714	$1,194	$99.52
Eatonville Town	$43,681	$57,332	$1,147	$95.55
Echo Lake CDP	$62,250	$81,704	$1,634	$136.17
Edgewood City	$56,658	$74,364	$1,487	$123.94
Edison CDP	$46,607	$61,172	$1,223	$101.95
Edmonds City	$53,522	$70,248	$1,405	$117.08
Elbe CDP	$13,750	$18,047	$361	$30.08
Electric City Town	$42,321	$55,547	$1,111	$92.58
Elk Plain CDP	$54,400	$71,401	$1,428	$119.00
Ellensburg City	$20,034	$26,295	$526	$43.82
Elma City	$32,031	$42,041	$841	$70.07
Elmer City Town	$32,500	$42,657	$853	$71.09
Endicott Town	$28,594	$37,530	$751	$62.55
Entiat City	$33,450	$43,903	$878	$73.17
Enumclaw City	$43,820	$57,514	$1,150	$95.86
Ephrata City	$35,060	$46,017	$920	$76.69
Erlands Point-Kitsap Lake CDP	$45,947	$60,306	$1,206	$100.51
Eschbach CDP	$37,708	$49,492	$990	$82.49
Esperance CDP	$58,622	$76,942	$1,539	$128.24
Everett City	$40,100	$52,632	$1,053	$87.72
Everson City	$35,313	$46,349	$927	$77.25
Fairchild AFB CDP	$33,512	$43,985	$880	$73.31
Fairfield Town	$29,545	$38,778	$776	$64.63
Fairwood CDP	$59,682	$78,333	$1,567	$130.56
Fall City CDP	$61,848	$81,176	$1,624	$135.29
Farmington Town	$27,250	$35,766	$715	$59.61
Federal Way City	$49,278	$64,678	$1,294	$107.80
Felida CDP	$78,934	$103,602	$2,072	$172.67
Ferndale City	$36,375	$47,743	$955	$79.57
Fife City	$31,806	$41,746	$835	$69.58
Finley CDP	$42,820	$56,202	$1,124	$93.67
Fircrest City	$54,912	$72,073	$1,441	$120.12
Five Corners CDP	$51,688	$67,841	$1,357	$113.07
Fords Prairie CDP	$42,927	$56,342	$1,127	$93.90
Forks City	$34,280	$44,993	$900	$74.99

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Fort Lewis CDP	$32,384	$42,504	$850	$70.84
Fox Island CDP	$69,135	$90,740	$1,815	$151.23
Frederickson CDP	$56,862	$74,632	$1,493	$124.39
Freeland CDP	$38,409	$50,412	$1,008	$84.02
Friday Harbor Town	$35,139	$46,120	$922	$76.87
Garfield Town	$36,250	$47,578	$952	$79.30
Garrett CDP	$38,750	$50,860	$1,017	$84.77
Geneva CDP	$65,324	$85,738	$1,715	$142.90
George City	$21,181	$27,800	$556	$46.33
Gig Harbor City	$43,456	$57,036	$1,141	$95.06
Glacier CDP	$10,875	$14,274	$285	$23.79
Gleed CDP	$44,161	$57,962	$1,159	$96.60
Gold Bar City	$45,714	$60,000	$1,200	$100.00
Goldendale City	$26,030	$34,165	$683	$56.94
Graham CDP	$52,824	$69,332	$1,387	$115.55
Grand Coulee City	$21,818	$28,636	$573	$47.73
Grand Mound CDP	$42,153	$55,326	$1,107	$92.21
Grandview City	$32,588	$42,772	$855	$71.29
Granger Town	$26,250	$34,453	$689	$57.42
Granite Falls City	$47,643	$62,532	$1,251	$104.22
Grayland CDP	$25,776	$33,831	$677	$56.39
Green Acres CDP	$36,290	$47,631	$953	$79.38
Greenwater CDP	$39,545	$51,903	$1,038	$86.51
Hamilton Town	$31,500	$41,344	$827	$68.91
Harrah Town	$36,875	$48,399	$968	$80.66
Harrington City	$29,792	$39,102	$782	$65.17
Hartline Town	$27,917	$36,641	$733	$61.07
Hatton Town	$29,375	$38,555	$771	$64.26
Hazel Dell North CDP	$43,063	$56,521	$1,130	$94.20
Hazel Dell South CDP	$36,571	$48,000	$960	$80.00
Highland CDP	$61,136	$80,242	$1,605	$133.74
Hobart CDP	$75,334	$98,877	$1,978	$164.79
Hockinson CDP	$69,757	$91,557	$1,831	$152.59
Hoquiam City	$29,658	$38,926	$779	$64.88
Humptulips CDP	$26,000	$34,125	$683	$56.88

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Hunts Point Town	$179,898	$236,118	$4,722	$393.53
Ilwaco City	$29,632	$38,892	$778	$64.82
Inchelium CDP	$24,375	$31,992	$640	$53.32
Index Town	$43,125	$56,602	$1,132	$94.34
Indianola CDP	$52,852	$69,369	$1,387	$115.61
Inglewood-Finn Hill CDP	$72,130	$94,671	$1,893	$157.79
Ione Town	$24,083	$31,609	$632	$52.68
Issaquah City	$57,892	$75,984	$1,520	$126.64
John Sam Lake CDP	$52,656	$69,112	$1,382	$115.19
Jordan Road-Canyon Creek CDP	$51,370	$67,424	$1,348	$112.37
Junction City CDP	$32,292	$42,384	$848	$70.64
Kahlotus City	$38,750	$50,860	$1,017	$84.77
Kalama City	$38,152	$50,075	$1,001	$83.46
Kelso City	$29,722	$39,010	$780	$65.02
Kendall CDP	$24,821	$32,578	$652	$54.30
Kenmore City	$61,756	$81,055	$1,621	$135.09
Kennewick City	$41,213	$54,092	$1,082	$90.15
Kent City	$46,046	$60,436	$1,209	$100.73
Kettle Falls City	$27,031	$35,478	$710	$59.13
Kingsgate CDP	$65,046	$85,374	$1,707	$142.29
Kingston CDP	$40,347	$52,956	$1,059	$88.26
Kirkland City	$60,332	$79,186	$1,584	$131.98
Kittitas City	$26,985	$35,418	$708	$59.03
Klickitat CDP	$28,750	$37,735	$755	$62.89
Krupp Town	$37,679	$49,454	$989	$82.42
La Center City	$55,333	$72,625	$1,453	$121.04
Lacey City	$43,848	$57,551	$1,151	$95.92
La Conner Town	$42,344	$55,577	$1,112	$92.63
La Crosse Town	$30,893	$40,547	$811	$67.58
Lake Bosworth CDP	$57,917	$76,017	$1,520	$126.69
Lake Cavanaugh CDP	$66,250	$86,954	$1,739	$144.92
Lake Forest Park City	$74,149	$97,321	$1,946	$162.20
Lake Goodwin CDP	$65,044	$85,371	$1,707	$142.28
Lake Ketchum CDP	$60,029	$78,789	$1,576	$131.31
Lakeland North CDP	$62,292	$81,759	$1,635	$136.26

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Lakeland South CDP	$62,529	$82,070	$1,641	$136.78
Lake McMurray CDP	$65,536	$86,017	$1,720	$143.36
Lake Marcel-Stillwater CDP	$61,250	$80,391	$1,608	$133.99
Lake Morton-Berrydale CDP	$75,337	$98,881	$1,978	$164.80
Lake Roesiger CDP	$70,500	$92,532	$1,851	$154.22
Lake Shore CDP	$62,476	$82,000	$1,640	$136.67
Lake Stevens City	$65,231	$85,616	$1,712	$142.69
Lakeview CDP	$30,588	$40,147	$803	$66.91
Lakewood City	$36,422	$47,804	$956	$79.67
Lamont Town	$32,778	$43,021	$860	$71.70
Langley City	$34,792	$45,665	$913	$76.11
Latah Town	$40,417	$53,048	$1,061	$88.41
Lea Hill CDP	$65,706	$86,240	$1,725	$143.73
Leavenworth City	$35,692	$46,846	$937	$78.08
Lebam CDP	$33,125	$43,477	$870	$72.46
Lewisville CDP	$65,221	$85,603	$1,712	$142.67
Liberty Lake CDP	$60,854	$79,871	$1,597	$133.12
Lind Town	$40,147	$52,693	$1,054	$87.82
Lochsloy CDP	$52,375	$68,743	$1,375	$114.57
Long Beach City	$23,611	$30,990	$620	$51.65
Longview City	$35,171	$46,162	$923	$76.94
Longview Heights CDP	$48,802	$64,053	$1,281	$106.76
Lyle CDP	$33,438	$43,888	$878	$73.15
Lyman Town	$34,318	$45,043	$901	$75.07
Lynden City	$42,767	$56,132	$1,123	$93.55
Lynnwood City	$42,814	$56,194	$1,124	$93.66
Mabton City	$26,650	$34,978	$700	$58.30
McChord AFB CDP	$35,319	$46,357	$927	$77.26
McCleary City	$30,769	$40,385	$808	$67.31
Machias CDP	$75,000	$98,438	$1,969	$164.06
Malden Town	$26,250	$34,453	$689	$57.42
Malone-Porter CDP	$37,875	$49,711	$994	$82.85
Maltby CDP	$77,534	$101,764	$2,035	$169.61
Manchester CDP	$52,213	$68,530	$1,371	$114.22
Mansfield Town	$28,750	$37,735	$755	$62.89

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Maple Falls CDP	$41,250	$54,141	$1,083	$90.24
Maple Heights-Lake Desire CDP	$75,741	$99,411	$1,988	$165.68
Maple Valley City	$67,159	$88,147	$1,763	$146.91
Marblemount CDP	$25,156	$33,018	$660	$55.03
Marcus Town	$27,500	$36,094	$722	$60.16
Marietta-Alderwood CDP	$39,902	$52,372	$1,047	$87.29
Markham CDP	$63,750	$83,673	$1,673	$139.45
Marrowstone CDP	$38,182	$50,114	$1,002	$83.52
Martha Lake CDP	$57,568	$75,559	$1,511	$125.93
Maryhill CDP	$37,250	$48,891	$978	$81.48
Marysville City	$47,088	$61,803	$1,236	$103.01
Mattawa Town	$31,964	$41,953	$839	$69.92
May Creek CDP	$46,310	$60,782	$1,216	$101.30
Meadow Glade CDP	$67,230	$88,240	$1,765	$147.07
Medical Lake City	$42,159	$55,334	$1,107	$92.22
Medina City	$133,756	$175,556	$3,511	$292.59
Mercer Island City	$91,904	$120,625	$2,412	$201.04
Mesa City	$38,750	$50,860	$1,017	$84.77
Metaline Town	$22,981	$30,163	$603	$50.27
Metaline Falls Town	$17,083	$22,422	$448	$37.37
Midland CDP	$34,817	$45,698	$914	$76.16
Mill Creek City	$69,702	$91,485	$1,830	$152.47
Mill Plain CDP	$58,432	$76,693	$1,534	$127.82
Millwood Town	$34,565	$45,367	$907	$75.61
Milton City	$48,166	$63,218	$1,264	$105.36
Minnehaha CDP	$46,766	$61,381	$1,228	$102.30
Mirrormont CDP	$87,945	$115,429	$2,309	$192.38
Moclips CDP	$27,500	$36,094	$722	$60.16
Monroe City	$50,390	$66,137	$1,323	$110.23
Montesano City	$40,204	$52,768	$1,055	$87.95
Morton City	$31,063	$40,770	$815	$67.95
Moses Lake City	$36,467	$47,863	$957	$79.77
Moses Lake North CDP	$26,645	$34,972	$699	$58.29
Mossyrock City	$29,750	$39,047	$781	$65.08
Mountlake Terrace City	$47,238	$62,000	$1,240	$103.33

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Mount Vernon City	$37,999	$49,874	$997	$83.12
Mount Vista CDP	$66,406	$87,159	$1,743	$145.26
Moxee City	$32,500	$42,657	$853	$71.09
Mukilteo City	$67,323	$88,362	$1,767	$147.27
Naches Town	$42,083	$55,234	$1,105	$92.06
Napavine City	$40,966	$53,768	$1,075	$89.61
Naselle CDP	$35,769	$46,947	$939	$78.25
Navy Yard City CDP	$36,285	$47,624	$952	$79.37
Neah Bay CDP	$21,635	$28,396	$568	$47.33
Neilton CDP	$35,250	$46,266	$925	$77.11
Nespelem Town	$30,000	$39,375	$788	$65.63
Nespelem Community CDP	$39,688	$52,091	$1,042	$86.82
Newcastle City	$80,320	$105,421	$2,108	$175.70
Newport City	$25,709	$33,743	$675	$56.24
Nisqually Indian Community CDP	$35,000	$45,938	$919	$76.56
Nooksack City	$44,000	$57,750	$1,155	$96.25
Normandy Park City	$70,367	$92,357	$1,847	$153.93
North Bend City	$61,534	$80,764	$1,615	$134.61
North Bonneville City	$35,583	$46,703	$934	$77.84
North Creek CDP	$67,289	$88,317	$1,766	$147.20
North Marysville CDP	$56,699	$74,418	$1,488	$124.03
North Omak CDP	$25,500	$33,469	$669	$55.78
Northport Town	$21,719	$28,506	$570	$47.51
North Stanwood CDP	$58,194	$76,380	$1,528	$127.30
North Sultan CDP	$65,179	$85,548	$1,711	$142.58
Northwest Snohomish CDP	$67,167	$88,157	$1,763	$146.93
North Yelm CDP	$36,833	$48,344	$967	$80.57
Oakesdale Town	$31,094	$40,811	$816	$68.02
Oak Harbor City	$36,641	$48,092	$962	$80.15
Oakville City	$30,357	$39,844	$797	$66.41
Ocean City CDP	$17,813	$23,380	$468	$38.97
Ocean Park CDP	$22,932	$30,098	$602	$50.16
Ocean Shores City	$34,643	$45,469	$909	$75.78
Odessa Town	$34,038	$44,675	$894	$74.46
Okanogan City	$26,994	$35,430	$709	$59.05

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Olympia City	$40,846	$53,611	$1,072	$89.35
Omak City	$24,089	$31,617	$632	$52.70
Opportunity CDP	$38,658	$50,739	$1,015	$84.57
Orchards CDP	$49,216	$64,596	$1,292	$107.66
Oroville City	$22,301	$29,270	$585	$48.78
Orting City	$53,464	$70,172	$1,403	$116.95
Oso CDP	$75,315	$98,852	$1,977	$164.75
Othello City	$30,291	$39,757	$795	$66.26
Otis Orchards-East Farms CDP	$46,946	$61,617	$1,232	$102.70
Oyehut-Hogans Corner CDP	$23,355	$30,654	$613	$51.09
Pacific City	$45,673	$59,946	$1,199	$99.91
Paine Field-Lake Stickney CDP	$40,831	$53,591	$1,072	$89.32
Palouse City	$34,583	$45,391	$908	$75.65
Parkland CDP	$39,653	$52,045	$1,041	$86.74
Parkwood CDP	$41,869	$54,953	$1,099	$91.59
Pasco City	$34,540	$45,334	$907	$75.56
Pateros City	$30,938	$40,606	$812	$67.68
Peaceful Valley CDP	$32,357	$42,469	$849	$70.78
Pe Ell Town	$27,321	$35,859	$717	$59.77
Picnic Point-North Lynnwood CDP	$54,913	$72,074	$1,441	$120.12
Pomeroy City	$28,958	$38,008	$760	$63.35
Port Angeles City	$33,130	$43,483	$870	$72.47
Port Angeles East CDP	$34,730	$45,583	$912	$75.97
Port Hadlock-Irondale CDP	$32,202	$42,265	$845	$70.44
Port Ludlow CDP	$56,938	$74,732	$1,495	$124.55
Port Orchard City	$34,020	$44,652	$893	$74.42
Port Townsend City	$34,536	$45,329	$907	$75.55
Poulsbo City	$38,875	$51,024	$1,020	$85.04
Prairie Ridge CDP	$52,367	$68,732	$1,375	$114.55
Prescott Town	$39,500	$51,844	$1,037	$86.41
Priest Point CDP	$52,344	$68,702	$1,374	$114.50
Prosser City	$39,185	$51,431	$1,029	$85.72
Pullman City	$20,652	$27,106	$542	$45.18
Puyallup City	$47,269	$62,041	$1,241	$103.40
Quilcene CDP	$40,385	$53,006	$1,060	$88.34

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Quincy City	$32,181	$42,238	$845	$70.40
Rainier Town	$42,955	$56,379	$1,128	$93.96
Ravensdale CDP	$44,850	$58,866	$1,177	$98.11
Raymond City	$25,759	$33,809	$676	$56.35
Reardan Town	$38,750	$50,860	$1,017	$84.77
Redmond City	$66,735	$87,590	$1,752	$145.98
Renton City	$45,820	$60,139	$1,203	$100.23
Republic City	$25,284	$33,186	$664	$55.31
Richland City	$53,092	$69,684	$1,394	$116.14
Ridgefield City	$46,012	$60,391	$1,208	$100.65
Ritzville City	$32,560	$42,735	$855	$71.23
Riverbend CDP	$69,716	$91,503	$1,830	$152.50
River Road CDP	$35,893	$47,110	$942	$78.52
Riverside Town	$23,125	$30,352	$607	$50.59
Riverton-Boulevard Park CDP	$39,034	$51,233	$1,025	$85.39
Rochester CDP	$43,090	$56,556	$1,131	$94.26
Rockford Town	$40,227	$52,798	$1,056	$88.00
Rock Island City	$33,618	$44,124	$882	$73.54
Rockport CDP	$48,750	$63,985	$1,280	$106.64
Ronald CDP	$39,063	$51,271	$1,025	$85.45
Roosevelt CDP	$45,694	$59,974	$1,199	$99.96
Rosalia Town	$33,214	$43,594	$872	$72.66
Roslyn City	$35,313	$46,349	$927	$77.25
Roy City	$32,727	$42,955	$859	$71.59
Royal City	$28,529	$37,445	$749	$62.41
Ruston Town	$48,393	$63,516	$1,270	$105.86
St. John Town	$33,393	$43,829	$877	$73.05
Salmon Creek CDP	$53,917	$70,767	$1,415	$117.94
Sammamish City	$101,592	$133,341	$2,667	$222.23
Satsop CDP	$37,125	$48,727	$975	$81.21
Satus CDP	$32,143	$42,188	$844	$70.31
SeaTac City	$41,202	$54,078	$1,082	$90.13
Seattle City	$45,736	$60,029	$1,201	$100.05
Seattle Hill-Silver Firs CDP	$72,554	$95,228	$1,905	$158.71
Sedro-Woolley City	$37,914	$49,763	$995	$82.94

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Selah City	$42,386	$55,632	$1,113	$92.72
Sequim City	$27,880	$36,593	$732	$60.99
Shaker Church CDP	$54,750	$71,860	$1,437	$119.77
Shelton City	$32,500	$42,657	$853	$71.09
Shoreline City	$51,658	$67,802	$1,356	$113.00
Silvana CDP	$33,274	$43,672	$873	$72.79
Silverdale CDP	$48,164	$63,216	$1,264	$105.36
Skokomish CDP	$24,038	$31,550	$631	$52.58
Skykomish Town	$45,357	$59,532	$1,191	$99.22
Smokey Point CDP	$46,202	$60,641	$1,213	$101.07
Snohomish City	$46,396	$60,895	$1,218	$101.49
Snoqualmie City	$52,697	$69,165	$1,383	$115.28
Snoqualmie Pass CDP	$81,883	$107,472	$2,149	$179.12
Soap Lake City	$20,459	$26,853	$537	$44.75
South Bend City	$29,211	$38,340	$767	$63.90
South Cle Elum Town	$45,833	$60,156	$1,203	$100.26
South Hill CDP	$60,524	$79,438	$1,589	$132.40
South Prairie Town	$50,250	$65,954	$1,319	$109.92
South Wenatchee CDP	$29,741	$39,035	$781	$65.06
Spanaway CDP	$46,210	$60,651	$1,213	$101.09
Spangle Town	$38,393	$50,391	$1,008	$83.99
Spokane City	$32,273	$42,359	$847	$70.60
Sprague City	$29,079	$38,166	$763	$63.61
Springdale Town	$28,333	$37,187	$744	$61.98
Stanwood City	$44,512	$58,422	$1,168	$97.37
Starbuck Town	$18,125	$23,789	$476	$39.65
Startup CDP	$40,227	$52,798	$1,056	$88.00
Steilacoom Town	$46,113	$60,524	$1,210	$100.87
Stevenson City	$31,979	$41,973	$839	$69.95
Stimson Crossing CDP	$61,042	$80,118	$1,602	$133.53
Sudden Valley CDP	$51,843	$68,044	$1,361	$113.41
Sultan City	$46,619	$61,188	$1,224	$101.98
Sumas City	$29,297	$38,453	$769	$64.09
Summit CDP	$52,685	$69,150	$1,383	$115.25
Summitview CDP	$66,944	$87,865	$1,757	$146.44

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Sumner City	$38,598	$50,660	$1,013	$84.43
Sunnyside City	$27,583	$36,203	$724	$60.34
Sunnyslope CDP	$68,224	$89,545	$1,791	$149.24
Suquamish CDP	$46,667	$61,251	$1,225	$102.08
Tacoma City	$37,879	$49,717	$994	$82.86
Taholah CDP	$24,688	$32,403	$648	$54.01
Tanglewilde-Thompson Place CDP	$45,000	$59,063	$1,181	$98.44
Tanner CDP	$73,105	$95,951	$1,919	$159.92
Tekoa City	$30,833	$40,469	$809	$67.45
Tenino City	$34,526	$45,316	$906	$75.53
Terrace Heights CDP	$47,601	$62,477	$1,250	$104.13
Thorp CDP	$33,125	$43,477	$870	$72.46
Three Lakes CDP	$71,080	$93,293	$1,866	$155.49
Tieton Town	$30,052	$39,444	$789	$65.74
Tokeland CDP	$24,531	$32,197	$644	$53.66
Toledo City	$29,271	$38,418	$768	$64.03
Tonasket City	$23,523	$30,874	$617	$51.46
Toppenish City	$26,950	$35,372	$707	$58.95
Touchet CDP	$37,500	$49,219	$984	$82.03
Town and Country CDP	$40,668	$53,377	$1,068	$88.96
Tracyton CDP	$51,290	$67,319	$1,346	$112.20
Trentwood CDP	$41,128	$53,981	$1,080	$89.97
Trout Lake CDP	$35,104	$46,074	$921	$76.79
Tukwila City	$40,718	$53,443	$1,069	$89.07
Tulalip Bay CDP	$43,594	$57,218	$1,144	$95.36
Tumwater City	$43,329	$56,870	$1,137	$94.78
Twisp Town	$26,354	$34,590	$692	$57.65
Union Gap City	$30,676	$40,263	$805	$67.10
Union Hill-Novelty Hill CDP	$98,061	$128,706	$2,574	$214.51
UnionTown Town	$36,042	$47,305	$946	$78.84
University Place City	$50,287	$66,002	$1,320	$110.00
Vader City	$30,750	$40,360	$807	$67.27
Vancouver City	$41,618	$54,624	$1,092	$91.04
Vantage CDP	$26,250	$34,453	$689	$57.42
Vashon CDP	$58,261	$76,468	$1,529	$127.45

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Venersborg CDP	$65,912	$86,510	$1,730	$144.18
Veradale CDP	$46,676	$61,263	$1,225	$102.10
Verlot CDP	$29,519	$38,744	$775	$64.57
Waitsburg City	$33,527	$44,005	$880	$73.34
Walla Walla City	$31,855	$41,810	$836	$69.68
Walla Walla East CDP	$49,844	$65,421	$1,308	$109.03
Waller CDP	$47,350	$62,147	$1,243	$103.58
Wallula CDP	$26,071	$34,218	$684	$57.03
Walnut Grove CDP	$52,788	$69,285	$1,386	$115.47
Wapato City	$25,804	$33,868	$677	$56.45
Warden City	$31,071	$40,781	$816	$67.97
Warm Beach CDP	$51,420	$67,489	$1,350	$112.48
Washougal City	$38,719	$50,819	$1,016	$84.70
Washtucna Town	$34,688	$45,528	$911	$75.88
Waterville Town	$36,458	$47,851	$957	$79.75
Waverly Town	$38,125	$50,039	$1,001	$83.40
Weallup Lake CDP	$35,143	$46,126	$923	$76.88
Wenatchee City	$34,897	$45,803	$916	$76.34
West Clarkston-Highland CDP	$29,311	$38,471	$769	$64.12
West Lake Sammamish CDP	$86,415	$113,421	$2,268	$189.03
West Lake Stevens CDP	$57,331	$75,248	$1,505	$125.41
West Longview CDP	$34,421	$45,178	$904	$75.30
West Pasco CDP	$65,865	$86,448	$1,729	$144.08
Westport City	$32,037	$42,049	$841	$70.08
West Richland City	$57,750	$75,797	$1,516	$126.33
West Side Highway CDP	$46,604	$61,168	$1,223	$101.95
West Valley CDP	$51,201	$67,202	$1,344	$112.00
West Wenatchee CDP	$44,028	$57,787	$1,156	$96.31
White Center CDP	$40,480	$53,130	$1,063	$88.55
White Salmon City	$34,787	$45,658	$913	$76.10
White Swan CDP	$35,189	$46,186	$924	$76.98
Wilbur Town	$32,563	$42,739	$855	$71.23
Wilkeson Town	$44,375	$58,243	$1,165	$97.07
Wilson Creek Town	$23,750	$31,172	$623	$51.95
Winlock City	$30,000	$39,375	$788	$65.63

Community	2000 Census	2011 Estimate	2% of MHI	2% of MHI /12
Winthrop Town	$25,417	$33,360	$667	$55.60
Wishram CDP	$26,667	$35,001	$700	$58.33
Woodinville City	$68,114	$89,400	$1,788	$149.00
Woodland City	$40,742	$53,474	$1,069	$89.12
Woods Creek CDP	$66,139	$86,808	$1,736	$144.68
Woodway City	$101,633	$133,394	$2,668	$222.32
Yacolt Town	$39,444	$51,771	$1,035	$86.28
Yakima City	$29,475	$38,686	$774	$64.48
Yarrow Point Town	$117,940	$154,797	$3,096	$258.00
Yelm City	$39,453	$51,782	$1,036	$86.30
Zillah City	$38,214	$50,156	$1,003	$83.59

Appendix I. Developing Public Communication and Education Project Proposals

Following is a checklist that applicants can refer to in developing public communication and education project proposals. The goal of the checklist is to help in the design of projects that are effective at changing behaviors and achieving environmental results.

1. **Project Background**
   - Consider the water quality problem that is the focus of the project; target population; geographic area; socio-economic status of targeted population; predominant land uses; and the behavioral change you seek to achieve for each target identified (source of the water quality problem or issue - one target could be responsible for several problems).
   - What knowledge, attitude, and skills do you desire in the targeted population?
   - Be careful to use 1 or 2 primary objectives and be realistic about what you can accomplish during the grant period.
   - If this is a continuing attitude or behavior change that you wish to affect, how do you propose to sustain it?
2. **Project Design**
   - Agree on the optimal way to identify and reach your audiences.
   - Identify common needs in participants and how the project can fulfill these needs.
   - Identify conflicting needs (associated with barriers analysis).
   - Identify the specific barriers, both internal to the person or organization as well as external, such as lack of knowledge or conditions, and practical barriers to desired change (no place local to change oil properly). Tell us how your project will remove these barriers.
   - Identify the project team and their qualifications.
   - Will you use volunteers and if so, how? How will you recruit and retain them?
   - Identify community leaders, decision makers, and trusted peers and leaders within business, non-profit, and community groups that have similar interests in environmental change/ sustainability. These are the people and organizations that will help you advance your project and its objectives. Please explain how you will leverage their influence to amplify your results.
   - Determine resources you will use, including training materials, facilities, media and corresponding distribution strategy.
   - Also consider: (a) regular reminders of the desired behavior; (b) trusted and credible sources for communication; (c) communication that is direct, simple, personal and vivid; (d) leaders, described above, to model and promote the behavior you seek (what kind of changes do you want people to make in the way they make decisions?); (e) personal commitments from groups and individuals.
   - Plan to pilot and field test your materials or activities with a small segment of your intended audience before “going big” and final.
   - Make sure that your plan can be adjusted during the project to accommodate lessons learned. (Can it be changed in mid-course?)
   - Design your project with evaluation tools and methodologies in mind and don’t make it an afterthought.

3. **Education Plan**
   - State measurable objectives and goals of the project.
   - List the performance measures you will use to assess how effective your project was. Success is defined as progress towards meeting your goals and objectives.
   - List your specific actions, implementing entities and both timetable and cost per action.
   - List media and promotions to be utilized (including the use of music and art).
   - For Public Participation, record the number of participants at events, number of one-on-one contacts, and number of groups interested.
4. **Monitoring and Post-Project Evaluation**
   - What kind of assessment and evaluation tools will you use to evaluate the effectiveness of your program? Examples include customer feedback surveys (telephone tends to work better), interviews, focus groups, observations, and, before and at least after six months, "records" that can infer change.
   - How will you measure the participant's knowledge, skill, attitudes, and actions?
   - How is the evaluation strategy linked to the stated goals and objectives?
   - How will you evaluate presenter activities and materials?
   - How will you monitor or evaluate the relationship between the educational activities and changes in behavior and water quality changes?
5. **Resources**

   Suggested resources to facilitate a project may include: Visual Tools for Watershed Education; The National Environmental Education & Training Foundation; and The Henry P. Kendall Foundation; National Leadership Forum Report; "Fostering Sustainable Behavior" by Doug McKenzie-Mohr and William Smith; and "Targeting Outcomes of Programs," Claude Bennett and Kay Rockwell.

Appendix J. Opinion of Recipient's Legal Counsel

I am an attorney at law admitted to practice in the state of Washington and the duly appointed attorney of _____ (the "RECIPIENT"); and I have examined any and all documents and records pertinent to the AGREEMENT.

Based on the foregoing, it is my opinion that:

A. The RECIPIENT is a duly organized and legally existing municipal corporation or political subdivision under the laws of the state of Washington or a federally recognized Indian tribe;

B. The RECIPIENT has the power and authority to execute and deliver, and to perform its obligations under, the AGREEMENT;

C. The AGREEMENT has been duly authorized and executed by the RECIPIENT's authorized representatives and, to my best knowledge and after reasonable investigation, all other necessary actions have been taken to make the AGREEMENT valid, binding, and enforceable against the RECIPIENT in accordance with its terms, except as such enforcement is affected by bankruptcy, insolvency, moratorium, or other laws affecting creditors' rights and principles of equity if equitable remedies are sought;

D. To my best knowledge and after reasonable investigation, the AGREEMENT does not violate any other agreement, statute, court order, or law to which the RECIPIENT is a party or by which it or its properties is bound; and

E. There is currently no litigation seeking to enjoin the commencement or completion of the PROJECT or to enjoin the RECIPIENT from entering into the AGREEMENT or from accepting or repaying the LOAN. The RECIPIENT is not a party to litigation which will materially affect its ability to repay such loan on the terms contained in the AGREEMENT.

[F. The AGREEMENT constitutes a valid general obligation of the RECIPIENT payable from annual ad valorem taxes to be levied within the constitutional and statutory tax limitations provided by law without a vote of the electors of the RECIPIENT on all of the taxable property within the boundaries of the RECIPIENT.]

[F. The AGREEMENT constitutes a valid obligation of the RECIPIENT payable from the Net Revenues of the Utility [and ULID Assessments in the ULID]].

Capitalized terms used herein shall have the meanings ascribed thereto in the AGREEMENT between the RECIPIENT and the DEPARTMENT.

_____

RECIPIENT'S Legal Counsel Date

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Appendix K. Direct Seed Systems

Direct seed systems are eligible for Water Quality Program financial assistance. Direct seed systems plant and fertilize into undisturbed soil and eliminate full width tillage for seedbed preparation. Implements used for direct seed disturb only a narrow strip of soil and retain a majority of residue from the previous crop. Direct seed systems significantly reduce erosion, improve soil quality, reduce fuel consumption, and are a viable alternative to traditional, full tillage systems.

The following eligibility conditions must be met in order to consider a direct seeding system for a Water Quality program grant or loan:

- Cropland acres currently planted with a single pass, low disturbance direct seed are not eligible.
- Rental and custom application cost reimbursement will be provided to only those producers or landowners that have not previously implemented a single pass, direct seeding system.
- A landowner or producer that owns a single pass, low disturbance direct seed drill is not eligible for rental or custom application cost reimbursement.
- The landowner and producer must use a direct seed system or plan for three full years.
- A single pass, low-disturbance direct seed drill must be used for all planting.
- Crop residue cannot be burned.
- Grant recipients must offer educational opportunities in conjunction with direct seed programs. Examples of such opportunities include a mentoring program, workshops, or referrals to direct seed organizations. Grant recipients may coordinate with other Conservation Districts, organizations or associations to fill this need.
- Cropland acres with any post-harvest or pre-planting tillage are not eligible. This includes the use of inversion tillage equipment such as moldboard plows, chisel plow, rod weeders and disks. Conventional summer fallow is not eligible.
- To be eligible for reimbursement, the public entity recipient and the landowner and producer must sign a landowner agreement prior to renting direct seed equipment or contracting with a custom applicator to plant with a single pass, low disturbance direct seed drill. The agreement must allow inspection by the grant recipient staff and by Ecology staff.
- The landowner agreement must include, but is not limited to:
  - Commitment from the landowner and producer to implement a full three year crop rotation.
- The grant recipient must report on the following information. Additional requirements may be added as part of any grant contract.
  - Number of acres enrolled in program
  - Number of landowners/producers enrolled
  - Location of acres enrolled including information such as county, farm number, tract number, and field number. GIS layers and other relevant spatial reference information may also be required.

Direct seeding systems are eligible for three types of funding:

- Equipment rental cost reimbursement: Producers may be reimbursed for a portion of the cost of renting a single pass, low-disturbance direct seed drill.
  - Producer may be reimbursed from the grant for a portion of the cost to rent a single pass, low disturbance drill.
  - Producer must agree to try the practice for a full three year direct seed rotation.
  - Cost share is available for only a first-time, full three year direct seed rotation. Reimbursement payments will be made for eligible expenses during the initial three year rotation only.
  - If a three year direct seed rotation is not completed, the producer is not eligible for any future direct seed reimbursements.
  - Cost share must not exceed $25 dollar per acre, up to 200 acres, per producer. Total eligible cost shall not exceed $5,000 per producer, per year for up to 3 years.
  - The grant recipient must verify the number of acres planted with a single pass, low disturbance direct seed drill before reimbursement is provided.

- Cost of custom application fee reimbursement: Producers may be reimbursed for a portion of the cost of hiring a custom applicator to plant with a single pass, low disturbance direct seed drill.
  - Producer may be reimbursed from the grant for a portion of the cost to have a custom applicator seed a section of the producer's land with a single pass, low disturbance drill.
  - Producer must agree to try the practice for a full three year direct seed rotation.
  - Cost share is available for only a first-time, full three year direct seed rotation. Reimbursement payments will be made for eligible expenses during the initial three year rotation only.
  - If a three year direct seed rotation is not completed, the producer is not eligible for any future direct seed reimbursements.
  - Cost share most not exceed $25 dollar per acre, up to 200 acres, per producer. Total cost shall not exceed 5,000 per producer, per year for up to 3 years.
  - The grant recipient must verify the number of acres planted with a single pass, low disturbance direct seed drill before reimbursement of is provided.

- Direct seed equipment purchase: Public entities are eligible to receive a one-time grant to purchase a single pass, low disturbance direct seed drill for the purpose of providing regional access to direct seed equipment and facilitating education, outreach, and technical assistance to promote the benefits of direct seeding systems.
  - The grant recipient must sign a ten-year maintenance agreement to keep drill in best condition.
  - Drill must be a low disturbance, one pass drill.
  - Cost share for equipment shall not exceed $150,000 per grantee.
  - Producer may not receive rental reimbursement or custom application reimbursement payments from an Ecology funded program when using a seed drill purchased with an Ecology grant.
  - Grant recipients may charge a fee for the use of the Ecology funded drill to cover the cost of maintenance and storage. However, the fees should be set to encourage broad participation and must not be set to gain a profit.
  - Grant recipient must provide staff with knowledge of direct seed systems or equivalent experience.

Appendix L. Livestock Off-stream Watering Facilities

If livestock exclusion fencing is installed as part of a riparian protection/restoration project and meets the minimum standards for that BMP, grant dollars may be used to install an off-stream watering facility. Off-stream watering is used to provide an alternative source of watering where fencing or other method(s) are used to exclude livestock from streams in order to protect water quality. The following conditions must be met to meet eligibility requirements for off-stream watering facilities to be considered for a Water Quality program grant:

Off-Stream Watering for Livestock

Off-stream water facilities (including well construction) are conditionally eligible for Water Quality Program financial assistance for projects that include privately owned livestock operations.

1. Land use must currently be dedicated to livestock or milk production.

2. A landowner agreement must be signed between the property owner and the public entity recipient before the off-stream watering facility is installed. The agreement must allow inspection by the recipient and by Ecology staff, and may provide for public and educational tours to be arranged between the recipient and the landowner.

   The landowner agreement will include, but not be limited to:
   a. A ten-year maintenance agreement that is transferred with the ownership of the land.
   b. Provisions to ensure that water supplied is for livestock use only.

      i. Per Ecology Water Resources Program Policy 1025, facilities provided must serve no greater number of livestock than historically range that parcel of property. The quantity of water consumed by livestock as a result of the funded off-site watering facility should not exceed the quantity consumed if the stock were to drink directly from the stream.

      ii. If land use is changed from livestock management to residential, commercial, or industrial development during the 10-year landowner/recipient agreement period, all financial assistance issued for the off-stream watering facilities must be immediately repaid by the loan or grant recipient to Ecology.

3. Livestock exclusion fencing or another equally effective exclusionary BMP installed to provide a minimum of a 35-foot riparian buffer from the high water mark in the riparian area.

4. Riparian revegetation, as needed, will be installed to provide controlled overland flow filtering of pollutants (in accordance with, but not limited to, all applicable Natural Resources Conservation Services Field Operating Technical Guide (FOTG) Practices).

5. Off-stream water facilities (not including well construction) may be provided for less than 20 Animal Units.

6. For wells to be eligible, operations must have (on or before the beginning of the funding cycle) at least 20 "Animal Units" (see Animal Units Chart in No. 8 of this section).

   A cost-effective analysis for wells must be completed in accordance with the following criteria:
   a. Gravity feeding or pumping from existing surface and groundwater sources and water hauling are to be considered as first choices. If these alternatives are not feasible, dug or drilled wells may be considered.
   b. Wells must be either less costly or demonstrably more cost-effective (may include analysis of such issues as hydraulic flow, sediment clogging, freezing).
   c. The practice chosen must be in accordance with the conservation plan (or more focused plan involving livestock exclusion and off-stream water provisions).
   d. Plan(s) must be completed and approved by at least the respective conservation district before off-stream watering is installed.

7. Financial Assistance Limits and Other Provisions.
   a. Off-stream livestock water provisions are eligible only where permanent and continuous exclusion from waters of the state is provided.
   b. Off-stream livestock water provisions are eligible for financial assistance based on the continuous linear distance of riparian exclusion per land owner. Financial assistance is limited to 75% of the total eligible costs. See table 1 below for limits. Maximum of $30,000 per landowner.
   c. Off-stream water developments must be located a distance away from surface waters that will prevent water quality impacts.
   d. Loans may be issued to cover up to 100 percent of eligible project cost.
   e. Pumps, pipes, water troughs, and wells, as needed, are eligible.
   f. Neither electrical nor mechanical power provisions are eligible. All components of solar powered pumps are project eligible.
   g. Heavy use area protection at watering facilities is eligible as needed. The cost of heavy use area protection is included in the final cost of the off-stream watering facility and is included in the funding limitations.
   h. The loan or grant will not reimburse recipients for costs associated with unsuccessful well drilling.
   i. Cross fencing is currently ineligible.
   j. Third party contributions above the eligible financial costs are eligible to be counted toward match.

Table L1 - Miles of Livestock riparian Exclusion and Financial Assistance Limits

Miles of Livestock Riparian Exclusion	Financial Assistance Limit (per project)
Less than ½ mile	75 percent of total eligible cost or $6,000 (whichever is less)
Greater than or equal to ½ mile and less than 1 mile	75 percent of total eligible cost or $9,000 (whichever is less)
Greater than or equal to 1 mile and less than 1.5 miles	75 percent of total eligible cost or $12,000 (whichever is less)
Greater than or equal to 1.5 miles and less than 2 miles	75 percent of total eligible cost or $18,000 (whichever is less)
Greater than or equal to 2 miles and less than 2.5 miles	75 percent of total eligible cost or $24,000 (whichever is less)
Greater than or equal to 2.5 miles	75 percent of total eligible cost or $30,000 (whichever is less)

8. Animal Units as defined WAC 173-224-030:

Table L2 – Animal Units

Animal Type	Number of Animal Units per Animal
Dairy Cows	
Jersey Breed	
Milking Cow	0.900
Dry Cow	0.900
Heifer	0.220
Calf	0.220
Other Breeds	
Milking Cow	1.400
Dry Cow	1.000
Heifer	0.800
Calf	0.500
Feedlot Beef	0.877
Horses	0.500
Sheep	0.100
Swine for breeding	0.375
Swine for slaughter	0.110
Laying hens & pullets > 3 months	0.004
Broilers & pullets < 3 months	0.002

Example Calculation: 23 Feedlot Beef X 0.877 = 20 Animal Units

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Appendix M. Livestock Feeding BMPs

The following BMPs are intended to support the relocation of livestock feeding areas that threaten water quality, or enhance existing feeding areas distanced from surface waters. A combination of these BMPs may be installed when appropriate. Funding for the following BMPs only applies to projects that will improve existing water quality problems, and may not be used to rebuild feeding facilities where the primary purpose is to repair existing structures. All projects must be approved by Ecology's project management team before installation.

The following conditions apply to all livestock feeding/confinement BMPs:

- Operations meeting the definition of the Concentrated Animal Feeding Operation Permit are not eligible for funding.
- When BMPs are installed, the feeding areas must be located or relocated so that the feeding area will no longer threaten to impact surface water quality. Grant recipients must provide assurances to the Ecology Project Manager that the location of the new or existing feeding location optimizes water quality protection. Ecology will not fund projects that are located too close to waters of the state. BMPs are eligible only when livestock feeding currently occurs within or adjacent to riparian areas and can be an assumed threat to the integrity of the riparian area and water quality.
- All BMPs must be built and located according to NRCS specifications.
- The producer must exclude livestock from all waters of the state, with a minimum 35-foot setback from the ordinary high water mark.
- The owner or operator must have a plan in place to manage manure.
- The landowner must sign a landowner agreement.

The following livestock BMPs are eligible for funding when appropriate:

- Heavy Use Area Protection.
  - Heavy use area protection must prevent erosion and polluted runoff at feeding and watering facilities.
  - Concrete and other cement based materials, rock aggregate, and other appropriate materials are eligible for funding. Heavy use area protection areas must be designed and constructed according to NRCS standards.
  - Producer must use a waste storage facility meeting the criteria below to be eligible for heavy use area protection.
  - Building permanent feed lots where livestock will be confined continuously throughout the year is not eligible for Heavy Use Area Protection funding.
  - Heavy use area protection is eligible only to protect critical areas directly surrounding feeding and watering locations.
  - Heavy use area protection is eligible for 50% of the total eligible cost, up to a maximum of $3,000 per landowner.

- Waste storage facilities.
  - Waste storage facilities, waste storage covers, and roof runoff structures are eligible for funding.
  - Waste storage facilities must include covers and roof runoff structures.
  - The total package of waste storage BMPs is eligible for 50% of the total eligible cost, up to a maximum of $6,000 per land owner.
  - This BMP must be part of a manure management plan in order to be eligible for funding.

- Windbreaks.
  - Windbreaks are planted tree rows used to shelter livestock from summer sun and winter wind, and therefore encourage the congregation of livestock and utilization of pasture or rangeland away from the riparian area.
  - Windbreaks are eligible to support the relocation of winter feeding operations upland, away for riparian areas, and to prevent water quality impacts.
  - Windbreaks are eligible for 50% of the total eligible cost, up to a maximum of $1,000 per landowner.