



FY 2007

**Low Impact Development
Stormwater Management
Grant Program Guidelines**

July 2006

Ecology Publication 06-10-055

 *Printed on Recycled Paper*

Blank Page

FY 2007

**Low Impact Development
Stormwater Management
Grant Program Guidelines**

Financial Management Section
Water Quality Program

July 2006
Ecology Publication 06-10-055



Printed on Recycled Paper

Contact Information:

| | |
|--|---|
| Internet: | Water Quality Program: http://www.ecy.wa.gov/programs/wq Funding Information: http://www.ecy.wa.gov/programs/wq/funding/NewLowImpactProgram.htm |
| Ecology Regional Office Contacts: | Northwest Regional Office (NWRO) Bellevue (425) 649-7000* Anne Dettelbach (425) 649-7093 adet461@ecy.wa.gov Southwest Regional Office (SWRO) Lacey (360) 407-6300* Alison Chamberlin (360) 407-4787 acha461@ecy.wa.gov <i>(*Number is spill and environmental emergency line after hours.)</i> |
| Financial Assistance - General: <i>(Lacey Headquarters)</i> Stormwater Engineering: <i>(Lacey Headquarters)</i> | Dan Filip (360) 407-6509 dfil461@ecy.wa.gov Emily Morris (360) 407-6703 emar461@ecy.wa.gov Jeff Nejedly (360) 407-6566 jnej@461@ecy.wa.gov Ed O'Brien (360) 407-6438 eobr461@ecy.wa.gov David Dunn (360) 407-6503 dadu461@ecy.wa.gov |
| Application Copies: <i>(Section Secretary)</i> | Kathy Markos (360) 407-6502 e-mail kmar461@ecy.wa.gov |
| U.S. Mail Address: <i>(Not to be used for UPS or other package delivery services)</i> | Department of Ecology, Water Quality Program Financial Management Section P.O. Box 47600 Olympia, WA 98504-7600 |
| Street Address: <i>(Physical location/package delivery - not to be used for U.S. Mail)</i> | Department of Ecology, Water Quality Program Financial Management Section 300 Desmond Drive Lacey, WA 98503 |

The Department of Ecology is an equal opportunity agency and does not discriminate on the basis of race, creed, color, disability, age, religion, national origin, sex, marital status, disabled veteran's status, Vietnam Era veteran's status, or sexual orientation.

If you need this publication in an alternate format, please contact the Water Quality Program at (360) 407-6502. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.

Table of Contents

| | |
|---|-----------|
| Chapter 1: Overview, Application, and Award Provision..... | 1 |
| 1.1 How to Use These Guidelines..... | 1 |
| 1.2 Overview and Purpose of the Program | 1 |
| 1.3 Eligible Project Activities | 1 |
| 1.4 Required Activities | 2 |
| 1.5 Evaluation Criteria and Process..... | 2 |
| 1.6 Water Quality Goals, Outcomes, Milestones, and Post Project Assessment..... | 3 |
| 1.7 Flow Control Provisions | 4 |
| 1.8 Eligible Recipients, Available Funding, and Application | 5 |
| 1.9 Important Dates to Remember | 6 |
| Chapter 2: Developing and Managing the Grant Agreement..... | 7 |
| 2.1 Grant Overview and Offer | 7 |
| 2.2 Scope of Work | 7 |
| 2.3 Required Performance | 7 |
| 2.4 Project Budget..... | 7 |
| 2.5 Disbursement of Grant Funds and Progress Reports | 7 |
| 2.6 General Terms and Conditions | 8 |
| 2.7 Special Terms and Conditions | 8 |
| 2.8 Signature Process..... | 8 |
| 2.9 Prior Authorization | 8 |
| Appendix A: The FY 2007 Low Impact Development Stormwater Management Grants Program - at a Glance | 9 |
| Appendix B: Low Impact Development Stormwater Management Program Monitoring Criteria | 11 |
| Appendix C: Example Letter of Intent..... | 15 |
| Appendix D: General Terms and Conditions Pertaining to Grant and Loan Agreements of the Department of Ecology | 17 |
| Appendix E: Low Impact Development Stormwater Management Schedule FY 2007 Low Impact Development Grant Program Schedule..... | 25 |

Blank Page

Chapter 1: Overview, Application, and Award Provision

1.1 How to Use These Guidelines

These guidelines describe how to apply for water quality financial assistance under the Low Impact Development (LID) Stormwater Management Grant Program from the Washington State Department of Ecology (Ecology) Water Quality Program. The guidelines also explain requirements of an applicant once Ecology awards a grant. Guidelines are not a comprehensive listing and explanation of all rules and policies that may apply to this funding program. The guidelines help facilitate the application process and initial steps of administering a funded project. Applicants should request additional information and consultation whenever needed.

The appendices to these guidelines contain additional information that will be useful to most applicants. Please review the list of appendices and use them as a resource. For example, Appendix A: *FY 2007 Low Impact Development Stormwater Management Grant Program - at a Glance*, summarizes main program features.

1.2 Overview and Purpose of the Program

The 2006 Washington State Legislature appropriated \$2.5 million from the State Toxics Account to fund this pilot program. The purpose of this program is to provide grants to local governments in Puget Sound to develop innovative, LID stormwater management projects. The financial assistance is intended to help local governments meet critical stormwater management needs that protect and restore water quality.

LID is a relatively new engineering design approach for stormwater management coupled with comprehensive land planning. LID practices try to maintain or enhance the pre-development hydrologic flow of an urban or developing watershed. As stormwater regulations become more stringent, the need to finance the high capital cost of stormwater infrastructure and meet National Pollutant Discharge Elimination Permit System (NPDES) requirements increases the community's burden. However, the LID approach is an environmentally sound and economically sustainable approach to address many stormwater management needs.

1.3 Eligible Project Activities

The following list shows eligible project elements. Other elements related to the LID program may be eligible if in accordance with the program purpose and the negotiated agreement.

- Permeable pavement, vegetated roofs, rainwater harvest, reverse slope sidewalks, minimal excavation foundations, bioretention (rain gardens), and dispersion.
- LID techniques consistent with the *Low Impact Development Technical Guidance Manual for Puget Sound*, which can be found at: http://www.psat.wa.gov/Publications/LID_tech_manual05/LID_manual2005.pdf
- Design, installation, and monitoring costs for new LID construction or existing facilities that are redesigned or retrofitted with LID elements.

1.4 Required Activities

Implement LID Technique(s)

Projects must implement an LID practice. Design-only or monitoring-only projects do not meet the purpose and intent of the program.

Meet Design Guidelines

See the *Technical Guidance Manual for Puget Sound* (see section 1.3). Local governments can demonstrate that site conditions warrant a deviation from the guidance manual as long as the design provides similar performance.

Monitor LID Technique(s) Performance

See Appendix B: *Low Impact Development (LID) Stormwater Management Program Monitoring and Analysis Matrix*. Local governments are encouraged to work with a qualified third party, or may submit qualifications to conduct their own performance monitoring.

Share Findings and Conduct Community Outreach

Local governments must provide site access and give tours to developers, architects, builders, public groups, chambers of commerce, and others. They also must demonstrate the differences between traditional stormwater management and LID techniques through giving presentations and make project findings available. This task will become a required performance of the grant agreement.

Examples:

- LID newsletters and conferences
- Site tours
- Local forums
- Local WEB pages
- Ecology's *Water Quality Stories*
- Environmental Protection Agency's (EPA) *Water Talk*
- Puget Sound Action Team's (PSAT) *Sound Waves*

1.5 Evaluation Criteria and Process

Evaluators from Ecology and the PSAT will score projects based on the application information submitted by the local governments.

The following table outlines four of the criteria and weighting that will be used to score project proposals:

Scoring Criteria

Water Quality Protection, Restoration, and Other Positive Impacts (20%)

Applicants need to show how the project addresses identified water quality issues, including both water quality and quantity (as applicable) issues in the watershed. Applicants need to explain how the project will meet the goals to either minimize hydrologic modification for new construction projects or improve hydrology for retrofit projects.

Overall Quality of Project Proposed and Likelihood of Success (30%)

Applicants need to identify outcomes and milestones, and explain the environmental benefits the project will likely achieve. Proposals should have a clear scope of work, project plan, and identify project team. The applicant's ability to meet flow control objectives, if applicable, must be explained (see section 1.6). However, this criterion is not assigned points; because it does not pertain to all proposals.

Usefulness of Project Outcomes for Other Environmental Efforts (30%)

Proposals should address community outreach measures. Applicants need to explain the potential for the local government to incorporate LID techniques into regular practice. Applicants are also asked to discuss the local partnerships established that will contribute to continued LID project implementation. Applicants need to identify methods for distribution of project information and results supporting LID, both within and outside the local community. Applicants are also asked to describe the use of a variety of LID practices, if applicable. However, this criterion is not assigned points because it does not pertain to all proposals.

Readiness to Proceed (20%)

Applicants must demonstrate their ability to move forward and complete the project. They must explain the steps taken to have the design approved and to have the construction bid contract shortly after the Offer and Applicant List is issued. Applicants need to outline their approaches to ensure speedy project completion.

The other factors that *may* be considered in selecting projects include use of a variety of LID practices (if applicable) and geographic distribution around Puget Sound for information sharing.

1.6 Water Quality Goals, Outcomes, Milestones, and Post Project Assessment

Recipients will measure and report on project goals, outcomes, and milestones. These will become part of the agreement.

Goals - *tangible positive environmental changes achieved or directly addressed by the project:*

- a. New development** needs to minimize changes to the natural hydrology and provide water quality protection. Priority will be given based on the degree to which an applicant proposes to use LID to approach the hydrology of the historic land cover.
- b. Retrofit projects** need to provide significant improvement to site hydrology and water quality.

Outcomes - *realistic quantitative results that will directly lead to the goal.*

Examples

- Site will have a 95% reduction in stormwater runoff
- Undetectable gasoline and diesel fuel from the under drain system
- Reduce fecal coliform levels at site and adjacent park
- Enhanced treatment through bioretention, per Chapter 3.4 of Vol. V of DOE 2005

Milestones - *actions that measurably lead to achieving the outcomes and goal.*

Examples

- Develop a Qualitative Assurance Project Plan (QAPP) by December 31, 2006
- Submit design plan to Ecology for approval by January 1, 2007
- Hold three workshops, one pre-construction, during construction, and post-construction

Post Project Assessment

The Legislature directed Ecology to implement an outcome-focused approach to ensure that state money invested through water quality loans and grants leads to the greatest possible environmental benefit. Ecology chose to illustrate this through project milestones, outcomes, and goals.

During the negotiation of the agreement, recipients are asked to agree to a special condition to participate in a post project assessment. This could consist of a brief survey and a possible interview to assess the project goals and outcomes. The survey and post-project assessment will occur approximately three years after project completion.

The post project assessment process requires a “Post-Project Assessment Plan.” This plan describes how the recipient will assist Ecology in meeting the outcomes and goals after project completion. The plan outlines water quality goals, outcomes, project performance. As noted in Appendix B: *Low Impact Development Stormwater Management Grant Program Monitoring Criteria*, the Post-Project Assessment Plan may detail an adequate, modified monitoring frequency for the period following project completion.

1.7 Flow Control Provisions

Recipients should attempt to meet the following Ecology and PSAT guidance documents if flow control measures are proposed: *Low Impact Development Technical Guidance Manual* (Section 1.4.2) available at http://www.psat.wa.gov/Publications/LID_tech_manual05/LID_manual2005.pdf and the *2005 Stormwater Management Manual for Western Washington, Volume I* (Section 2.5.7), available at <http://www.ecy.wa.gov/biblio/0510029.html>.

1.8 Eligible Recipients, Available Funding, and Application

Eligible Recipients

All projects must have a positive impact on Puget Sound or its tributaries. The following local governments within the 12 Puget Sound counties (Whatcom, San Juan, Skagit, Snohomish, Island, King, Pierce, Thurston, Mason, Kitsap, Jefferson, and Clallam) are eligible recipients:

- Cities
- Towns
- Counties
- Water-sewer districts
- Public utility districts
- Port districts
- Irrigation districts
- Conservation districts
- Flood control districts
- School districts*

Any other municipal corporation, quasi-municipal corporation, or other political subdivision authorized to levy special benefit assessments for sanitary or storm sewage systems, domestic water supply or distribution systems, or road construction or improvement purposes are also eligible recipients.**

* For purposes of the FY 2007 Program, Ecology includes school districts.

** Derived from Title 84 RCW, Property Taxes, available at:

<https://apps.leg.wa.gov/RCW/default.aspx?cite=84.33.035>

Available Funding

The total amount of funds available from this program is \$2.5 million. Ecology does not impose a grant ceiling amount; however, Ecology plans to fund only five to ten projects. Projects that provide a cash, in-kind, or interlocal match will receive additional priority points; however, providing a match is not required.

Application

The *Fiscal Year 2007 Low Impact Development Stormwater Management Grant Program Application* is online at:

<http://www.ecy.wa.gov/programs/wq/funding/NewLowImpactProgram.htm>

The application may also be requested by contacting the Water Quality Program Financial Management Section Secretary at (360) 407-6502.

1.9 Important Dates to Remember

This program is on a fast track to award grant money to the local governments for high-priority projects. Ecology must obligate all funds to worthy applicants before **June 30, 2007**.

The application period is from July 14, 2006 – September 15, 2006 (5:00 p.m.). Ecology will issue an Offer and Applicant List and letters to the applicants chosen for funding by October 18, 2006.

Applicants offered funding need to send Ecology a Letter of Intent (see sample format in Appendix C) by November 30, 2006, and sign a grant agreement by March 30, 2007.

For those applicants offered funding who do not submit a Letter of Intent, their grant offer will go to the next highest applicant on the Offer and Applicant List. Ecology will issue a second round of additional offers, as needed, by December 31, 2006. The second round of applicants need to sign Letters of Intent to Ecology by February 15, 2007, and sign their agreements by June 30, 2007.

- Applications due to Ecology by **September 15, 2006, at 5:00 p.m.**
- Ecology will issue the Offer and Applicant List by **October 18, 2006**.
- Original applicants need to sign Letters of Intent by **November 30, 2006**.
- Original applicants need to sign the agreement by **March 30, 2007**.
- The second round of applicants must sign Letters of Intent by **February 15, 2007**.
- The second round of applicants must sign the agreement by **June 30, 2007**.
- The project must begin no later than four (4) months after the effective date of the agreement.

Remainder of page left intentionally blank

Chapter 2: Developing and Managing the Grant Agreement

2.1 Grant Overview and Offer

The grant agreement is the formal written contractual arrangement signed by authorized representatives of the local government referred to as “the recipient” and “Ecology”. At a minimum, the agreement includes an approved scope of work, total project costs, and a budget.

Ecology expects to have the Offer and Applicant List available by October 18, 2006.

Ecology sends individual funding offer letters to priority applicants. In the letter, Ecology assigns a project manager and a financial manager to work with each applicant to develop an agreement. These managers will contact the recipient to discuss the scope of work, conditions of the offer, timelines, special conditions, and any additional information.

2.2 Scope of Work

The agreement must contain a detailed scope of work describing the project work elements and milestones that relate to the outcomes and goals. Ecology’s project manager will contact the applicant and develop a schedule to negotiate the agreement.

2.3 Required Performance

The agreement will contain milestones listed from the recipient’s application. These become required performances and ensure outcomes and goals are achieved.

2.4 Project Budget

The agreement must include a project budget that establishes eligible costs for task elements and/or budget objects. The budget also details funding sources, amounts, and type of matching options. Ecology’s financial manager will help answer questions about budget development during project negotiations.

2.5 Disbursement of Grant Funds and Progress Reports

Funds are disbursed on a cost-incurred basis in accordance with the required performance milestones.

Progress reports are due quarterly, with each payment request, or other schedule established in the agreement. If no schedule is established in the agreement, progress reports will be due quarterly. The recipient submits reports regardless of the level of work completed during the period. Progress reports are required for timely processing of payment requests.

2.6 General Terms and Conditions

All Ecology agreements contain non-negotiable requirements called General Terms and Conditions. See Appendix E: *General Terms and Conditions*. These conditions can change depending on program needs.

2.7 Special Terms and Conditions

Special Terms and Conditions modify or clarify project elements specific to the project or to program guidelines. Special Terms and Conditions can modify and do take precedence of certain provisions in the General Terms and Conditions.

2.8 Signature Process

Once a scope of work is negotiated between the applicant and Ecology, the financial manager routes it to Ecology staff to check legality, cost coding, etc. Once returned to the financial manager, three original agreements are sent to the recipient for signature.

The applicant should thoroughly review the agreement and have all three copies signed by the authorized signatory, or the signatory's designee, before returning them to the financial manager for final signature by the Water Quality Program Manager. One completed agreement is returned for the recipient's files. The agreement becomes effective on the date of signature by the Water Quality Program Manager, unless prior authorization states otherwise.

2.9 Prior Authorization

Prior authorization gives the recipient the ability to incur eligible project costs before the Water Quality Program Manager signs the agreement. Work performed by the recipient that is not consistent with the conditions specified in Ecology's prior authorization letter, agreement, and applicable criteria will not be eligible for reimbursement.

Prior authorization will only be considered if project progress would otherwise be delayed.

Process for Obtaining Prior Authorization

- The recipient signatory must write a letter to Ecology's Water Quality Program Manager.
- Ecology will reimburse costs for the time frame agreed to in the prior authorization letter from the Ecology Water Quality Program Manager after the grant agreement is signed.
- Costs incurred before the prior authorization date are the sole responsibility of the recipient.
- The applicant assumes responsibility for costs incurred before an agreement has been signed, as Ecology cannot guarantee that a grant will be awarded.

Appendix A: The FY 2007 Low Impact Development Stormwater Management Grants Program - at a Glance

| | |
|--------------------------------|---|
| Purpose | Provide grants to local governments in the Puget Sound Basin to fund innovative, low impact development (LID) stormwater management projects to meet critical stormwater management needs that protect and restore water quality as outlined in the Governor's Proposed 2006 Supplemental Budget. |
| LID Location Examples: | Puget Sound Basin local government building sites, road layouts, and stormwater control structures configured to minimize soil and vegetation disturbance and take advantage of the site's natural stormwater processing capabilities through distributed small-scale controls. |
| Eligible Applicants | <p>Local governments are distinguished as any (Puget Sound Basin) city, town, county, water-sewer district, public utility district, port district, irrigation district, conservation district, flood control district, or any other municipal corporation, quasi-municipal corporation, or other political subdivision in the Puget Sound area authorized to levy special benefit assessments for sanitary or storm sewerage systems, domestic water supply or distribution systems, or road construction or improvement purposes.* School districts are also considered local governments in this program. Private for-profit groups (e.g., developers) cannot be considered for financial assistance.</p> <p>* Derived (in part) from Title 84 RCW, Property Taxes, available at: http://apps.leg.wa.gov/RCW/default.aspx?cite=84.33.035</p> |
| Total Funds Available | \$2,500,000 for grants appropriated by the 2006 Legislature. |
| Financial Assistance | <p>Ecology does not impose match requirements or grant ceiling limits; however:</p> <ul style="list-style-type: none"> • Ecology plans to offer five (5) to ten (10) grant projects. • Projects that provide cash and/or in-kind match will receive additional evaluation points. |
| Project Goals | <ul style="list-style-type: none"> • New development: minimize changes to the natural hydrology and provide protection of water quality. Priority will be given based on the degree to which an applicant proposes to use LID to approach the hydrology of the historic land cover. • Retrofit: provide significant improvement to site hydrology and water quality. |
| Eligible LID Activities | <ol style="list-style-type: none"> 1. Projects must meet the following criteria: <ul style="list-style-type: none"> • Used for projects on local government property including rights-of-way or easements. • Implement innovative stormwater management techniques. • Meet critical stormwater management needs and protect or restore water quality. 2. Projects may include use of the following LID practices: <ul style="list-style-type: none"> • Bioretention • Rainwater harvest • Permeable pavement • Vegetated roofs • Other (LID) techniques noted in or consistent with the <i>Low Impact Development Technical Guidance Manual for Puget Sound</i>, available at: http://www.psat.wa.gov/Publications/LID_tech_manual05/LID_manual2005.pdf 3. Eligible costs also consist of: <ul style="list-style-type: none"> • Design, installation, and monitoring costs for new LID construction or existing facilities that are redesigned or retrofitted with LID elements. |
| Required Activities | <p>All local governments awarded LID grant funding must:</p> <ul style="list-style-type: none"> • Implement an LID practice. • Meet the design guidelines contained in the <i>Technical Guidance</i> (unless the local government can demonstrate that site conditions warrant a deviation from the design guidelines and the deviations in design shall provide similar performance). • Include performance monitoring. • Provide site access to developers, architects, and builders. • Conduct community outreach and report findings. |

| | |
|--|--|
| Evaluation Criteria Used | <ul style="list-style-type: none"> • Water quality protection, restoration, and other positive impacts • Overall quality of project proposed and likelihood of success • Usefulness of the project for other efforts • Readiness to proceed • Ability of the proposed project to leverage completion of related (LID) projects in the area • Diversity of projects submitted • As appropriate, a variety of LID practices in project • Adequate geographic distribution around the Puget Sound (for public education purposes) • As applicable, the extent to which proposed project aids achievement of flow control guidance: <i>Low Impact Development Technical Guidance Manual</i> (Section 1.4.2) (See page 1 for hyperlink); and the <i>2005 Stormwater Management Manual for Western Washington, Volume I</i> (Section 2.5.7), available at: http://www.ecy.wa.gov/biblio/0510029.html. |
| Monitoring Provisions | Local governments can partner with a qualified outside group, contract with qualified third party, and/or submit the qualifications of their own group. Ecology will provide performance monitoring guidance to all applicants. |
| Share Findings | Circulating information about projects is of utmost importance to the program. Examples include, but are not limited to, (LID) newsletters and conferences, site tours, local forums, local WEB pages, Ecology WEB pages, such as <i>Water Quality Stories</i> , EPA's <i>Water Talk</i> and PSAT's <i>Sound Waves</i> publications. These tasks will become required performance measures in the grant agreements. |
| Ineligible Project Proposals | Project proposals for monitoring or design alone. |
| Application and Evaluation Provisions | <ol style="list-style-type: none"> 1. Eligible applicants apply for grants in accordance with the Program Guidelines. The application period is for mid-July to September 15, 2006. 2. Evaluations take place from September 16, 2006 to October 13, 2006. 3. An Offer and Applicant List will be issued approximately October 18, 2006. |
| Offer and Award Provisions | <ul style="list-style-type: none"> • The Offer and Applicant List and offer letters will be issued by approximately October 18, 2006 and will identify Ecology staff that will negotiate the agreement. • Sign a letter of intent (or grant itself) by November 30, 2006. • Original offer list applicants need to sign the grant agreement by March 30, 2007. • Ecology will make additional offers to second round applicants, as needed, to the priority projects below the original funding cutoff line by December 31, 2006. • The second round applicants need to sign letters of intent by February 15, 2007. • The second round of applicants needs to sign the grant agreement by June 30, 2007. • Agreements must be signed before eligible grant costs can be incurred. • Prior authorization to incur costs before the grant agreement is signed may be issued by the Water Quality Program Manager if project progress would otherwise be delayed. |
| Disbursement of Grant Funds | Funds will be disbursed in accordance with required performance measures negotiated in the agreement on a cost-incurred basis. |
| Progress Reports | Due quarterly, regardless of the amount of work or disbursement requested. Ecology will likely need to prepare reports on the overall efficacy of the program as it progresses, reports may be standardized. |

Appendix B: Low Impact Development Stormwater Management Program Monitoring Criteria

The following table identifies specific parameters and monitoring approaches that may be appropriate for the given Low Impact Development (LID) technologies. Ecology is not requiring applicants to implement any specific methods as part of the proposed monitoring task(s). Applicants may propose scientifically valid alternative monitoring approaches.

The duration of all monitoring efforts will be at least 3 years, unless the project manager and the recipient agree on a shorter duration. The Post-Project Assessment Plan can outline a modified monitoring plan to address long-term LID performance beginning one year from project completion.

Depending on the type of monitoring proposed and whether the recipient proposes to partner with a contractor, the recipient may need to prepare a Quality Assurance Performance Plan (QAPP). Project managers can determine this. If a QAPP is needed, recipients may include this development in the scope of work. Ecology will review the QAPP following the grant award.

Monitoring and analysis tasks must reference applicable EPA and/or Ecology guidance and quality assurance and quality control document. Local governments must use EPA/Ecology approved methods for monitoring and EPA/Ecology accredited laboratories to conduct water quality analyses.

Ecology encourages recipients to coordinate their monitoring efforts with other grant recipients.

Ecology encourages the collection of digital photographic records for educational purposes. Submit electronic copies in quarterly and final project reports.

Remainder of page left intentionally blank

| LID No.¹ | Type of Project | Parameters Measured | Acceptable Method(s) | Frequency |
|----------------------------|--|---|---|---|
| 7.1 | Permeable Pavement | Volumetric flow rate and volume of any surface runoff; particulate and dissolved Zinc (Zn), Copper (Cu), Lead (Pb), Cadmium (Cd); oil and grease (small projects); Total Petroleum Hydrocarbons (TPH) gasoline (Gx), Diesel fuel (Dx), and total Polycyclic Aromatic Hydrocarbon's (PAH's) (large project); fecal coliform. | Paired flow and chemical monitoring with an adjacent, or nearby, impervious pavement with same level of use. Chemical parameters from the pervious pavement site are sampled from water that collects in an under drain system (only if installed as part of the project) ² , or water that collects in a roadside ditch or gutter from underflow; chemical parameters for impervious site collected from surface runoff. Automated flow composite samplers preferred but may not be possible for the permeable system. Tipping bucket for flow and flow splitter for samples may work. TPH & coliform must be grab samples. | Continuous flow; at least 10 chemical and fecal coliform sampling events during monitoring period, if possible. |
| 7.2 | Dispersion | | | |
| 7.2.1 | Full Dispersion for the entire construction site (Treatment and flow controls met) | Volumetric flow rate, total phosphorus, fecal coliform. | Initially, visual observations for discharges during extreme events and during extended wet periods. Monitor if there is surface discharge. Prefer paired monitoring with a nearby similar development with traditional stormwater management components. | Continuous flow; 10 flow composite samples preferred. If not possible, 1 grab sample per 24-hour period; at least 10 grab samples during monitoring period after construction are preferred, if possible. |
| 7.2.2 | Full Dispersion/all or part of construction site | Same as 7.2.1 | Same as 7.2.1 | Same as 7.2.1 |
| 7.2.3 | Partial Dispersion at local government Buildings | Same as 7.2.1 | Same as 7.2.1 | Same as 7.2.1 |
| 7.2.4 | Road Projects | Volumetric flow rate; total and dissolved Zn, Cu, Pb, Cd; oil and grease (small project), TPH (Gx and/or Dx) and total | Initially, visual observations for surface runoff leaving the dispersal area during extreme events and extended wet periods. Monitor if surface discharges | Same as 7.2.1 |

¹ Low Impact Development Designation Number from *Low Impact Development Technical Guidance Manual for Puget Sound, January 2005*, available at:

http://www.psat.wa.gov/Publications/LID_tech_manual05/LID_manual2005.pdf

² Recipients are not required to install under drains. However, if the project purpose is to demonstrate treatment benefits, under drains will facilitate sampling of water that has infiltrated through the pavement. If the project purpose is to demonstrate flow reduction benefits, under drains should not be installed.

| LID No.¹ | Type of Project | Parameters Measured | Acceptable Method(s) | Frequency |
|----------------------------|--|--|---|---|
| | | PAH's (large project); fecal coliform. | leave the dispersal limits. Prefer paired monitoring with similar nearby road length. TPH and coliform must be grab samples. | |
| 7.3 | Vegetated Roofs | Daily rainfall on-site; Volumetric flow rate and volume. | Flow running off the roof. Prefer paired monitoring with a similar, nearby non-vegetated roof. | Continuous flow monitoring. |
| 7.4 | Rainwater Harvest | Daily rainfall on-site; Volume discharged (i.e., escaping storage) per month | Volume that bypasses the storage system. Prefer paired monitoring with a similar, nearby roof. | Continuous flow monitoring. |
| 7.5 | Reverse Slope Sidewalks | Volumetric flow rate. | Visual observations with video, if possible. If surface discharge from the dispersal area, describe runoff pattern and suggest improvements to design. Prefer comparisons to standard sidewalks during same period. | During heavy precipitation and extended wet periods. |
| 7.6 | Minimal Excavation Foundations | Determine bulk density of soil before and after construction at several locations around and within perimeter of installation. Compare relative humidity in crawl space and soil bulk density at minimal excavation foundations to conventional foundations. | Visual observations during extreme events and extended wet periods. Recommend improvements in design. Visual monitoring of surface flow in an around foundation. Monitor relative humidity at both sites. | Continuous for relative humidity. |
| 7.7 | Bioretention (Rain Gardens) | | | |
| 7.7 | Bioretention/Pot hole Bioretention Cells | For sites without under drains ³ : influent & overflow volumetric flow rate and volume, TSS, fecal coliforms. If under drains are installed: influent & underflow volumetric flow rate and volume; influent & underflow TSS, fecal coliform, total phosphorus, Total Kjeldahl Nitrogen (TKN), | Flow-paced, composite sampling of influent and overflow. Time composite samples thru series of grab samples per storm event for underflow. If underflow volume is tracked, several methods are acceptable using a primary measuring device and sensor. TPH & bacteria must be grab samples. | Continuous flow monitoring; at least 10 chemical sampling events during monitoring period, if possible. |

³ Recipients are not required to install under drains. However, if the project purpose is to demonstrate treatment benefits, under drains will facilitate sampling of water that has infiltrated through the bioretention soil. If the project purpose is to demonstrate flow reduction benefits, under drains should not be installed.

| LID No. ¹ | Type of Project | Parameters Measured | Acceptable Method(s) | Frequency |
|----------------------|--------------------------------------|---|--|---|
| | | and nitrate. If serving a road or parking lot (and under drains are installed) add influent, underflow total, dissolved Cu, Zn, Pb, Cd; TPH (Dx and/or Gx); and total PAH's. | | |
| 7.7 | Bioretention/ Swales or Slopes | Same as above for potholes, except no influent flow, hemical and bacteria samples if influent is road sheet flow. Add rain gauge. If possible, obtain influent samples from nearby road surface with similar use. | Same as above for potholes except no influent sampling if influent is road sheet flow. | Continuous flow monitoring; at least 10 chemical sampling events during monitoring period, if possible. |

Remainder of page left intentionally blank

Appendix C: Example Letter of Intent

| | | |
|---|-------------------|-------------------|
| Project Title: | | |
| Applicant Name <i>(City, Town, or County):</i> | | |
| Name of Applicant Signatory <i>(Please Print):</i> | | Signature: |
| Applicant Staff Contact: | | |
| Name: | | |
| Title: | Telephone Number: | E-Mail Address: |
| Mailing Address: | | |

PROJECT SUMMARY - *In one to a few sentences, please briefly summarize the project.*

Total Project Cost - *full cost of the project:* \$ _____

Ecology Grant Request - *how much the applicant is eligible to receive:* \$ _____

Where to send and ask questions about this example?

| |
|--|
| Emily Morris Water Quality Program Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 Phone: (360) 407-6703 Fax: (360) 407-7151 e-mail: emar461@ecy.wa.gov |
|--|

Blank Page

Appendix D: General Terms and Conditions Pertaining to Grant and Loan Agreements of the Department of Ecology

A. Recipient Performance

All activities for which grant/loan funds are to be used shall be accomplished by the RECIPIENT and RECIPIENT's employees. The RECIPIENT shall not assign or subcontract performance to others unless specifically authorized in writing by the DEPARTMENT.

B. Subgrantee/Contractor Compliance

The RECIPIENT must ensure that all subgrantees and contractors comply with the terms and conditions of this agreement.

C. Third Party Beneficiary

The RECIPIENT shall ensure that in all subcontracts entered into by the RECIPIENT pursuant to this agreement, the state of Washington is named as an express third-party beneficiary of such subcontracts with full rights as such.

D. Contracting For Services (Bidding)

Contracts for construction, purchase of equipment and professional architectural and engineering services shall be awarded through a competitive process, if required by State law. RECIPIENT shall retain copies of all bids received and contracts awarded, for inspection and use by the DEPARTMENT.

E. Assignments

No right or claim of the RECIPIENT arising under this agreement shall be transferred or assigned by the RECIPIENT.

F. Compliance with All Laws

1. The RECIPIENT shall comply fully with all applicable Federal, State and local laws, orders, regulations and permits.

Prior to commencement of any construction, the RECIPIENT shall secure the necessary approvals and permits required by authorities having jurisdiction over the project, provide assurance to the DEPARTMENT that all approvals and permits have been secured, and make copies available to the DEPARTMENT upon request.

2. Discrimination. The DEPARTMENT and the RECIPIENT agree to be bound by all Federal and State laws, regulations, and policies against discrimination. The RECIPIENT further agrees to affirmatively support the program of the Office of Minority and Women's Business Enterprises to the maximum extent possible. The RECIPIENT shall report to the DEPARTMENT the percent of grant/loan funds available to women or minority owned businesses.

3. Wages and Job Safety. The RECIPIENT agrees to comply with all applicable laws, regulations, and policies of the United States and the State of Washington which affect wages and job safety.

4. Industrial Insurance. The RECIPIENT certifies full compliance with all applicable state industrial insurance requirements. If the RECIPIENT fails to comply with such laws, the DEPARTMENT shall have the right to immediately terminate this agreement for cause as provided in Section K.1, herein.

G. Kickbacks

The RECIPIENT is prohibited from inducing by any means any person employed or otherwise involved in this project to give up any part of the compensation to which he/she is otherwise entitled, or receive any fee, commission or gift in return for award of a subcontract hereunder.

H. Audits and Inspections

1. The RECIPIENT shall maintain complete program and financial records relating to this agreement. Such records shall clearly indicate total receipts and expenditures by fund source and task or object.

All grant/loan records shall be kept in a manner which provides an audit trail for all expenditures. All records shall be kept in a common file to facilitate audits and inspections.

Engineering documentation and field inspection reports of all construction work accomplished under this agreement shall be maintained by the RECIPIENT.

2. All grant/loan records shall be open for audit or inspection by the DEPARTMENT or by any duly authorized audit representative of the State of Washington for a period of at least three years after the final grant payment/loan repayment or any dispute resolution hereunder. If any such audits identify discrepancies in the financial records, the RECIPIENT shall provide clarification and/or make adjustments accordingly.
3. All work performed under this agreement and any equipment purchased, shall be made available to the DEPARTMENT and to any authorized state, federal or local representative for inspection at any time during the course of this agreement and for at least three years following grant/loan termination or dispute resolution hereunder.
4. RECIPIENT shall meet the provisions in OMB Circular A-133 (Audits of States, Local Governments & Non Profit Organizations), including the compliance Supplement to OMB Circular A-133, if the RECIPIENT expends \$300,000 or more in a year in Federal funds. The \$300,000 threshold for each year is a cumulative total of all federal funding from all sources. The RECIPIENT must forward a copy of the audit along with the RECIPIENT'S response and the final corrective action plan to the DEPARTMENT within ninety (90) days of the date of the audit report.

I. Performance Reporting

The RECIPIENT shall submit progress reports to the DEPARTMENT with each payment request or such other schedule as set forth in the Special Conditions. The RECIPIENT shall also report in writing to the DEPARTMENT any problems, delays or adverse conditions which will materially affect their ability to meet project objectives or time schedules. This disclosure shall be accompanied by a statement of the action taken or proposed and any assistance needed from the DEPARTMENT to resolve the situation. Payments may be withheld if required progress reports are not submitted. Quarterly reports shall cover the periods January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31. Reports shall be due within twenty (20) days following the end of the quarter being reported.

J. Compensation

1. **Method of Compensation.** Payment shall normally be made on a reimbursable basis as specified in the grant agreement and no more often than once per month. Each request for payment will be submitted by the RECIPIENT on State voucher request forms provided by the DEPARTMENT along with documentation of the expenses. Payments shall be made for each task/phase of the project, or portion thereof, as set out in the Scope of Work when completed by the RECIPIENT and certified as satisfactory by the Project Officer.

The payment request form and supportive documents must itemize all allowable costs by major elements as described in the Scope of Work. Instructions for submitting the payment requests are found in "Administrative Requirements for Ecology Grants and Loans," part IV, published by the DEPARTMENT. A copy of this document shall be furnished to the RECIPIENT. When payment requests are approved by the DEPARTMENT, payments will be made to the mutually agreed upon designee.

Payment requests shall be submitted to the DEPARTMENT and directed to the Project Officer assigned to administer this agreement.

2. **Budget Deviation.** Deviations in budget amounts are not allowed without written amendment(s) to this agreement. Payment requests will be disallowed when the RECIPIENT's request for reimbursement exceeds the State maximum share amount for that element, as described in the Scope of Work.
3. **Period of Compensation.** Payments shall only be made for action of the RECIPIENT pursuant to the grant/loan agreement and performed after the effective date and prior to the expiration date of this agreement, unless those dates are specifically modified in writing as provided herein.
4. **Final Request(s) for Payment.** The RECIPIENT must submit final requests for compensation within forty-five (45) days after the expiration date of this agreement and within fifteen (15) days after the end of a fiscal biennium. Failure to comply may result in delayed reimbursement.
5. **Performance Guarantee.** The DEPARTMENT may withhold an amount not to exceed ten percent (10%) of each reimbursement payment as security for the RECIPIENT's performance and a financial bond. Monies withheld by the DEPARTMENT may be paid to the RECIPIENT when the project(s) described herein, or a portion thereof, have been completed if, in the DEPARTMENT's sole discretion, such payment is reasonable and approved according to this agreement and, as appropriate, upon completion of an audit as specified under section J.6. herein.
6. **Unauthorized Expenditures.** All payments to the RECIPIENT shall be subject to final audit by the DEPARTMENT and any unauthorized expenditure(s) charged to this grant/loan shall be refunded to the DEPARTMENT by the RECIPIENT.
7. **Mileage and Per Diem.** If mileage and per diem are paid to the employees of the RECIPIENT or other public entities, it shall not exceed the amount allowed under state law for state employees.
8. **Overhead Costs.** No reimbursement for overhead costs shall be allowed unless provided for in the Scope of Work hereunder.

K. Termination

1. For Cause. The obligation of the DEPARTMENT to the RECIPIENT is contingent upon satisfactory performance by the RECIPIENT of all of its obligations under this agreement. In the event the RECIPIENT unjustifiably fails, in the opinion of the DEPARTMENT, to perform any obligation required of it by this agreement, the DEPARTMENT may refuse to pay any further funds thereunder and/or terminate this agreement by giving written notice of termination.

A written notice of termination shall be given at least five working days prior to the effective date of termination. In that event, all finished or unfinished documents, data studies, surveys, drawings, maps, models, photographs, and reports or other materials prepared by the RECIPIENT under this agreement, at the option of the DEPARTMENT, shall become Department property and the RECIPIENT shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

Despite the above, the RECIPIENT shall not be relieved of any liability to the DEPARTMENT for damages sustained by the DEPARTMENT and/or the State of Washington because of any breach of agreement by the RECIPIENT. The DEPARTMENT may withhold payments for the purpose of setoff until such time as the exact amount of damages due the DEPARTMENT from the RECIPIENT is determined.

2. Insufficient Funds. The obligation of the DEPARTMENT to make payments is contingent on the availability of state and federal funds through legislative appropriation and state allotment. When this agreement crosses over state fiscal years the obligation of the DEPARTMENT is contingent upon the appropriation of funds during the next fiscal year. The failure to appropriate or allot such funds shall be good cause to terminate this agreement as provided in paragraph K.1 above. When this agreement crosses the RECIPIENT's fiscal year, the obligation of the RECIPIENT to continue or complete the project described herein shall be contingent upon appropriation of funds by the RECIPIENT's governing body; provided, however, that nothing contained herein shall preclude the DEPARTMENT from demanding repayment of ALL funds paid to the RECIPIENT in accordance with Section O herein.
3. Failure to Commence Work. In the event that the RECIPIENT fails to commence work on the project funded herein within four months after the effective date of this agreement, or by any date mutually agreed upon in writing for commencement of work, the DEPARTMENT reserves the right to terminate this agreement.

L. Waiver

Waiver of any RECIPIENT default is not a waiver of any subsequent default. Waiver of a breach of any provision of this agreement is not a waiver of any subsequent breach and will not be construed as a modification of the terms of this agreement unless stated as such in writing by the authorized representative of the DEPARTMENT.

M. Property Rights

1. Copyrights and Patents. When the RECIPIENT creates any copyrightable materials or invents any patentable property, the RECIPIENT may copyright or patent the same, but the DEPARTMENT retains a royalty-free, nonexclusive and irrevocable

license to reproduce, publish, recover or otherwise use the material(s) or property and to authorize others to use the same for federal, state or local government purposes.

Where federal funding is involved, the federal government may have a proprietary interest in patent rights to any inventions that are developed by the RECIPIENT as provided in 35 U.S.C. 200-212.

2. Publications. When the RECIPIENT or persons employed by the RECIPIENT use or publish information of the DEPARTMENT; present papers, lectures, or seminars involving information supplied by the DEPARTMENT; use logos, reports, maps or other data, in printed reports, signs, brochures, pamphlets, etc., appropriate credit shall be given to the DEPARTMENT.
3. Tangible Property Rights. The DEPARTMENT'S current edition of "Administrative Requirements for Ecology Grants and Loans," Part V, shall control the use and disposition of all real and personal property purchased wholly or in part with funds furnished by the DEPARTMENT in the absence of state, federal statute(s), regulation(s), or policy(ies) to the contrary or upon specific instructions with respect thereto in the Scope of Work.
4. Personal Property Furnished by the DEPARTMENT. When the DEPARTMENT provides personal property directly to the RECIPIENT for use in performance of the project, it shall be returned to the DEPARTMENT prior to final payment by the DEPARTMENT. If said property is lost, stolen or damaged while in the RECIPIENT's possession, the DEPARTMENT shall be reimbursed in cash or by setoff by the RECIPIENT for the fair market value of such property.
5. Acquisition Projects. The following provisions shall apply if the project covered by this agreement includes funds for the acquisition of land or facilities:
 - a. Prior to disbursement of funds provided for in this agreement, the RECIPIENT shall establish that the cost of land/or facilities is fair and reasonable.
 - b. The RECIPIENT shall provide satisfactory evidence of title or ability to acquire title for each parcel prior to disbursement of funds provided by this agreement. Such evidence may include title insurance policies; Torrens certificates or abstracts; and attorney's opinions establishing that the land is free from any impediment, lien, or claim which would impair the uses contemplated by this agreement.
6. Conversions. Regardless of the contract termination date shown on the cover sheet, the RECIPIENT shall not at any time convert any equipment, property or facility acquired or developed pursuant to this agreement to uses other than those for which assistance was originally approved without prior written approval of the DEPARTMENT. Such approval may be conditioned upon payment to the DEPARTMENT of that portion of the proceeds of the sale, lease or other conversion or encumbrance which monies granted pursuant to this agreement bear to the total acquisition, purchase or construction costs of such property.

N. Recycled/Recyclable Paper

All documents and materials published under this agreement shall be produced on recycled paper containing the highest level of post consumer and recycled content that is available. At a minimum, paper with 10 percent post consumer content and 50 percent recycled content shall be used. Whenever possible, all materials shall be published on paper that is unbleached or has not been treated with chlorine gas and/or hypochlorite.

As appropriate, all materials shall be published on both sides of the paper and shall minimize the use of glossy or colored paper and other items which reduce the recyclability of the document.

O. Recovery of Payments to Recipient

The right of the RECIPIENT to retain monies paid to it as reimbursement payments is contingent upon satisfactory performance of this agreement, including the satisfactory completion of the project described in the Scope of Work. In the event the RECIPIENT fails, for any reason, to perform obligations required of it by this agreement, the RECIPIENT may, at the DEPARTMENT'S sole discretion, be required to repay to the DEPARTMENT all grant/loan funds disbursed to the RECIPIENT for those parts of the project that are rendered worthless in the opinion of the DEPARTMENT by such failure to perform.

Interest shall accrue at the rate of twelve percent (12%) per annum from the time the DEPARTMENT demands repayment of funds. If payments have been discontinued by the DEPARTMENT due to insufficient funds as in Section K.2 above, the RECIPIENT shall not be obligated to repay monies which had been paid to the RECIPIENT prior to such termination. Any property acquired under this agreement, at the option of the DEPARTMENT, may become the DEPARTMENT'S property and the RECIPIENT'S liability to repay monies shall be reduced by an amount reflecting the fair value of such property.

P. Project Approval

The extent and character of all work and services to be performed under this agreement by the RECIPIENT shall be subject to the review and approval of the DEPARTMENT through the Project Officer or other designated official to whom the RECIPIENT shall report and be responsible. In the event there is a dispute with regard to the extent and character of the work to be done, the determination of the Project Officer or other designated official as to the extent and character of the work to be done shall govern. The RECIPIENT shall have the right to appeal decisions as provided for below.

Q. Disputes

Except as otherwise provided in this agreement, any dispute concerning a question of fact arising under this agreement which is not disposed of in writing shall be decided by the Project Officer or other designated official who shall provide a written statement of decision to the RECIPIENT. The decision of the Project Officer or other designated official shall be final and conclusive unless, within thirty days from the date of receipt of such statement, the RECIPIENT mails or otherwise furnishes to the Director of the DEPARTMENT a written appeal.

In connection with appeal of any proceeding under this clause, the RECIPIENT shall have the opportunity to be heard and to offer evidence in support of this appeal. The decision of the Director or duly authorized representative for the determination of such appeals shall be final and conclusive. Appeals from the Director's determination shall be brought in the Superior Court of Thurston County. Review of the decision of the Director will not be sought before either the Pollution Control Hearings Board or the Shoreline Hearings Board. Pending final decision of dispute hereunder, the RECIPIENT shall proceed diligently with the performance of this agreement and in accordance with the decision rendered.

R. Conflict of Interest

No officer, member, agent, or employee of either party to this agreement who exercises any function or responsibility in the review, approval, or carrying out of this agreement, shall participate in any decision which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested; nor shall he/she have any personal or pecuniary interest, direct or indirect, in this agreement or the proceeds thereof.

S. Indemnification

1. The DEPARTMENT shall in no way be held responsible for payment of salaries, consultant's fees, and other costs related to the project described herein, except as provided in the Scope of Work.
2. To the extent that the Constitution and laws of the State of Washington permit, each party shall indemnify and hold the other harmless from and against any liability for any or all injuries to persons or property arising from the negligent act or omission of that party or that party's agents or employees arising out of this agreement

T. Governing Law

This agreement shall be governed by the laws of the State of Washington.

U. Severability

If any provision of this agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this agreement which can be given effect without the invalid provision, and to this end the provisions of this agreement are declared to be severable.

V. Precedence

In the event of inconsistency in this agreement, unless otherwise provided herein, the inconsistency shall be resolved by giving precedence in the following order: (a) applicable Federal and State statutes and regulations; (b) Scope of Work; (c) Special Terms and Conditions; (d) Any terms incorporated herein by reference including the "Administrative Requirements for Ecology Grants and Loans," and (e) the General Terms and Conditions.

Blank Page

Appendix E: Low Impact Development Stormwater Management Schedule

| FY 2007 Low Impact Development Stormwater Management Grant Program Schedule | | | | | | |
|--|-------------|--|-------------|-------|----------|----------------|
| Application Preparation | → | | | | | |
| Application Workshop | 7/20 & 7/25 | | | | | |
| Application Period | → | | 9/15 | | | |
| Eligibility Screening & Evaluation | | | 9/15 → 10/6 | | | |
| Offer Letters & Offer List Issued & List Made Available to Legislature | | | | 10/18 | | |
| Letter of Intent to sign grant | | | | | By 11/30 | |
| Additional offers made, as needed, to priority projects below the original funding cutoff line | | | | | | 12/31 |
| Any "second round" applicants must sign a Letter of Intent | | | | | | 2/15 |
| Applicants who submitted letters of intent by Nov 30th must sign grant | | | | → | | 3/30 |
| All "second round" agreements must be signed | | | | | | → 6/30/2007 |