

ENVIRONMENT COMMITTEE AGENDA

January 21, 2016 – North Conference Room

21630 11th Avenue South – Des Moines 50319

6:00P – 6:50P

1. Selection of Chair and Co-Chair

2. Approve minutes of the 6.18.2015 meeting

3. 2016 Work Program

(Discussion Item – 25 min)

Staff will seek confirmation from the Committee on the 2016 Work Program.

4. Low Impact Development Code Integration Project

(Discussion Item - 20 min)

Staff will seek Committee direction for hiring a consultant from the 2016-17 On-Call Roster for providing code review and update support to ensure compliance with the low impact development integration provision in the City's NPDES Permit that needs to be adopted by the end of the year.

DRAFT MINUTES - ENVIRONMENTAL COUNCIL COMMITTEE MEETING 6.18.2015

The meeting was called to order @ 5:58 PM, Thursday, June 18, 2015, in the North Conference room @ 21630 11th Avenue South, Des Moines with the following in attendance:

Council Members

Dave Kaplan, Chair
Melissa Musser
Vic Pennington

City Staff

Tony Piasecki, City Manager
Dan Brewer, PBPW Director
Loren Reinhold, SWM Utility Manager
Peggy Volin, Admin Asst II

AGENDA:

1. Approve minutes of 5. 21.2015 meeting
2. SWM CIP

MEETING:

1. Approve minutes of the May 21, 2015 meeting: Unanimously approved.
2. SWM CIP: SWM Utility Manager Loren Reinhold briefed the Committee on the proposed projects and schedule for the 2016-2021 SWM CIP and outlined the 19 high priority projects some of which the six year CIP included: 24th Avenue Pipeline Replacement/Upgrade; Lower Massey Creek Channel Modifications; Barnes Creek/Kent-Des Moines Road Culvert; Pipeline Replacement Program; 1st Avenue Pond Expansion; 5th Avenue/212th Street Pipe Upgrade; North Fork McSorley Creek Diversion; 6th Avenue/239th Pipe Replacement; 14th Avenue (268th to 272nd Street) Pipe Upgrade; 216th Place/Marine View Drive Pipe Upgrade; Kent-Des Moines Road/16th Avenue Pipe Replacement; and Des Moines Memorial Drive/208th St to 212th St Pipe Project.

Loren stated that the 24th Avenue Pipeline Project's description and map needs to be changed to show that the pipe replacement is from 224th to 227th, but the amount budgeted for the project would stay the same. The construction estimate for the Lower Massey Creek Channel project also needs to be increased by \$200,000 to account for anticipated higher costs associated with the installation of the sheet piles due to soil conditions at the site. This increased cost would be offset by including development fees from the FAA development.

Meeting Adjourned @ 6:45 pm

Submitted by: Peggy Volin, Admin Asst II

**2016 Environment Committee
Work Program
(January 12, 2016)**

January 21, 2016

2016 Work Program
LID Code/Standards Integration Project

February 18, 2016

CAO/SMP/Frequently Flooded Areas Code Update

March 17, 2016

LID Preliminary Assessment of Code and Policies
Highline Water District Comprehensive Water Plan - tentative
CAO/SMP/Frequently Flooded Areas Code Update

April 21, 2016

Update on CMP Pipe Replacement Inventory
LID Code Integration Project Update
CAO/SMP/Frequently Flooded Areas Code Update

May 19, 2016

Project Updates.
NPDES Program Update
Midway Sewer District Comprehensive Sewer Plan - tentative

June 16, 2016

FEMA Flood Map Update
Draft LID Ordinance

July 21, 2016

LID Integration - Draft Stormwater and Road Standards
Lakehaven Utility District Comprehensive Sewer Plan - tentative

August 18, 2016

Update on CMP Pipe Replacement Inventory

September 15, 2016

2017 SWM Capital Improvement Budget
2017 Budget Discussions
Project Updates

October 22, 2016

2nd Draft LID Ordinance

November 17, 2016

SWM Development Fees

December 15, 2016

No meeting scheduled.

DRAFT

Low Impact Development (LID) Stormwater Standards

LID will soon be the required method for managing stormwater in Western Washington's urban areas.

Recent NPDES stormwater requirements issued by the Department of Ecology (Ecology) mean that municipalities will need to integrate LID principles and best management practices into local codes and ordinances. This new requirement will affect local government activities, policies, and processes in various ways, and each jurisdiction will be responsible for making the necessary preparations for being in compliance with their NPDES Municipal Stormwater Permits. Since we are under a Phase II Permit, the deadline for Des Moines is December 31, 2016.

Here is a link with more information about Low Impact Development in Western Washington:
<http://www.awcnet.org/TrainingEducation/LowImpactDevelopment/WesternWashington.aspx>

Attached a few AWC Fact Sheets for your use and review.



Integrating LID methods will change how development occurs. Over the next 12 months, we will be working on reviewing our regulations and standards to identify ways that we can integrate LID efforts into our codes, ordinances, policies, processes and standards in order to be in compliance with the new requirements. This effort will need to include a review of:

- Comprehensive Plans and Policies
- Subdivision and Zoning Codes
- Clearing and grading Code
- Landscaping requirements
- Utility requirements
- Street Design and Construction Standards
- Transportation plans and policies

This will take a lot of coordination between the Planning, Building, Engineering Services, Public Works, and SWM Divisions in order to ensure consideration of the most effective and efficient approach. It will be crucial to select and implement LID methods that provide a variety of options for property owners and developers, while at the same time are in the best interest of the City for the long term. As we move through this process we will take advantage of and benefit from the work and experience of what other jurisdictions have done in this area.

Staff will work closely with the Environment Committee as we go through this process, and we will provide periodic updates to the full Council so you are all informed of the issues.

Daniel J. Brewer, P.E., P.T.O.E.
Planning, Building, and Public Works Director
21650 11th Avenue South
Des Moines, WA 98198
(206) 870-6581

LID is coming! What does it mean to my jurisdiction?



Low Impact Development (LID) is now the preferred method for managing stormwater in urban areas of Western Washington and is expanding to Eastern Washington urban areas in the near future. New NPDES stormwater requirements issued by the Department of Ecology (Ecology) means that municipalities will need to integrate LID into stormwater management plans upon expiration of current stormwater permits. This new requirement will affect local government activities, policies, and processes in various ways, and each jurisdiction will be responsible for making the necessary preparations.

Here are some tips for preparing your jurisdiction for the new LID requirements:

1. Identify budget needs

Making the transition to LID may introduce transitional costs for local governments, including costs for reporting, internal procedure and design criteria changes, new tools and equipment, and additional staffing. Private developers may also incur costs for formally integrating LID as part of the standard development process.

Jurisdictions will need to consider the costs that may be incurred from the new LID requirements and identify opportunities for financing these costs in upcoming budget deliberations. See Fact Sheet #3 "Cost and Planning Considerations" for more detailed information.

2. Find out your jurisdiction's timeline

Timeline

Western Washington municipalities must integrate new permit requirements by:

- **June 30, 2015:** Phase I cities and counties (Western WA only)
- **Dec 31, 2016:** Most Phase II Western WA municipalities
- **June 30, 2017:** Cities of Kelso, Longview, and Centralia and Cowlitz County
- **June 30, 2018:** City of Aberdeen

Eastern Washington municipalities must implement the new permit requirements by December 31, 2017.

See Fact Sheet #2 "Regulation - What do I Need to Know?" for more detailed information about timelines, or go online to www.ecy.wa.gov/programs/wq/stormwater/municipal/index.html

3. Effective planning starts now

- Identify project team and lead staff for ordinance work
- Determine staffing needs and impacts for implementing requirements
- Determine budget needs and impacts to support transition and ongoing implementation
- Facilitate interdepartmental coordination when incorporating these new LID requirements to ensure consideration of the most effective and efficient organizational approach

See Fact Sheet #3 "Cost and Planning Considerations" for more detailed information.

4. Incorporate LID sooner rather than later

Starting the planning process now will provide sufficient time and flexibility to engage your community and identify best strategies. The benefits of starting now are:

- Start slowly to allow time to see what works for your jurisdiction
- Educating development community stakeholders early can ease the transition to LID
- Planning ahead for difficulties can ensure that you meet your permit deadlines on time
- Facilitating interdepartmental coordination ensures efficiencies across departments
- Benefit from the experience of other jurisdictions
- Use resources available through Ecology to help train staff

5. Review your jurisdiction's regulations and begin integrating LID efforts

Removing barriers to the implementation of LID through planning, code and ordinance updates is an important step in preparing for these permit revisions. Existing local codes, comprehensive plans, ordinances, and regulations may be affected, such as:

- Subdivision ordinances
- Zoning ordinances
- Clearing and grading ordinances
- Landscaping ordinances
- Utility requirements
- Road and parking standards

Early review of your jurisdiction's regulations and assessment of necessary changes can facilitate LID integration across codes and can reveal opportunities for additional efficiencies.

6. Encourage your jurisdiction to get training

To prepare your jurisdiction, it is important to identify which staff will be affected by the new requirements and schedule them for trainings. Ecology is providing tools to make the transition easier.

The new LID requirements will affect a variety of local government staff, including:

- Planning departments
- Public Works staff
- Operations and maintenance crews
- Capital project design teams

7. Engage the community

LID approaches will change how development occurs. It is critical for local governments to employ public outreach strategies that engage the community early and often around how LID works, the important role it plays in managing stormwater, and its multiple benefits. Efforts should be tailored specifically to the local community as requirements vary across the state.



What is happening with Low Impact Development (LID) regulations that I need to know about?



Ecology's NPDES municipal stormwater permits are requiring a large number of municipalities throughout Washington State to integrate LID into their development codes and standards within the next few years.

Until recently, LID was seen as an alternate approach to stormwater management. The current regulatory framework evolved around traditional stormwater management practices including detention ponds, pipes, and swales. However, under new stormwater permits issued by the Department of Ecology (Ecology), LID will no longer be the alternative approach, but will become the preferred method for stormwater management.

Q. When does this affect Western Washington municipalities?

Answer. It depends whether your jurisdiction is a Phase I or Phase II permittee. To find out whether your jurisdiction is a Phase I or Phase II permittee, please visit www.ecy.wa.gov/programs/wq/stormwater/municipal/MuniStrmWtrPermList.html

Phase I

The new Phase I permit came into effect on August 1, 2013 and relevant jurisdictions must fully implement LID site requirements and development codes by June 30, 2015. Phase I includes the cities of Seattle and Tacoma, and the counties of Clark, King, Pierce, Snohomish, as well as the Port of Seattle and Port of Tacoma.

Phase II

The Western Washington Phase II permit became effective on August 1, 2013. Phase II jurisdictions must integrate the new requirements at the time of their next scheduled Growth Management Act (GMA) Comprehensive Plan update. Most Phase II communities have until December 31, 2016, although a few jurisdictions have deadlines into 2017 and 2018. Phase II includes 82 cities, including Bellingham, Bremerton and Bellevue, and portions of five counties (King, Pierce, Snohomish, Kitsap and Whatcom.)

Q. When does this affect Eastern Washington municipalities?

Answer. The Eastern Washington Phase II permit becomes effective on August 1, 2014. Jurisdictions in Eastern Washington must allow LID as a viable stormwater management technique and must identify local feasibility criteria for infiltrating some runoff. This applies to all regulated small municipal stormwater systems which includes 18 cities and portions of six counties, including Spokane, Ellensburg, and Yakima.

The implementation of LID requirements in Eastern Washington is an incremental approach with a strong focus on identifying what will work in local conditions in different areas of Eastern Washington. Ecology will continue to work with jurisdictions and industry members to evaluate the results through 2019 before expanding to more prescriptive requirements.

Q. How will the new Western Washington LID requirements affect existing plans, codes, ordinances, and other regulations?

Answer. LID integration in Western Washington will involve reviewing and possibly updating existing plans, land development codes and ordinances. Updates may involve adding language or removing existing language that creates a barrier to LID implementation. A wide variety of codes, ordinances, and other regulations may be affected and each jurisdiction has the flexibility to identify what needs to be reviewed and updated. The good news is that numerous jurisdictions have already begun the work to review ordinances and identify barriers to LID. Their experiences, including lessons learned, are captured in an excellent guidance document entitled "Integrating LID into Local Codes: A Guidebook for Local Governments". (see Fact Sheet #4: Resources or visit: www.psp.wa.gov/downloads/LID_Guidebook/20120731_LIDguidebook.pdf). This document is cited in the Ecology permits as the guidance for reviewing and revising codes and ordinances.

Jurisdictions should look for ways to facilitate how developers select and use LID best management practices (BMPs) and LID principles in designing stormwater site plans. For example, bioretention will be more effective if it is coupled with modifications to road widths and parking standards. A great place to start is to look at the following types of regulations for opportunities to remove barriers to LID implementation, as well as considering the addition of new requirements, including:

- Subdivision ordinances
- Short plat ordinances
- Clearing and grading ordinances
- Stormwater ordinances
- Road standards
- Parking standards

- Utility requirements
- Landscaping ordinances
- Critical areas ordinances
- Road maintenance
- Park maintenance
- Public facilities maintenance
- Other land development and construction ordinances

Q. Where can I go for additional regulatory information?

Answer. Stormwater guidance manuals for Eastern and Western Washington explain the BMPs that need to be integrated. While the manuals are for guidance purposes, they are directly referenced in NPDES stormwater permit documents.

Western Washington Manual - Stormwater Management Manual for Western Washington

- Updated in late 2012 to match the NPDES permit requirements. Changes from the 2005 version include:
 - New standards for using LID to manage stormwater, either through the use of listed LID BMPs or the achievement of an hydrologic LID performance standard.
 - Revised guidance on designing infiltration facilities.
 - New and revised BMPs for stormwater source control and treatment as well as for construction.
 - Update and guidance on using the Western Washington Hydrology Model.
- The manual is available at: www.ecy.wa.gov/programs/wq/stormwater/manual.html

Eastern Washington Manual

- Eastern Washington permittees are developing an Eastern Washington LID guidance manual funded by an Ecology grant.
- The Stormwater Management Manual for Eastern Washington will be updated during the 2014-2019 permit term, in part to include LID BMPs and guidance from the Eastern Washington LID Manual.
- The 2004 (current) Eastern Washington manual is available at: www.ecy.wa.gov/programs/wq/stormwater/easternmanual/manual.html



Cost and planning considerations



Sweeping changes in stormwater regulations - specifically, new requirements for Low Impact Development (LID) - have city and county officials throughout Washington asking themselves the same question: "What is this going to cost us?" Given the budget realities that local governments currently face, this question is both timely and fair. Knowing what to expect in terms of costs will help cities and counties prepare for these changes.

This fact sheet - and other resources - will help answer this and other questions your jurisdiction may have. Note that regulations vary geographically from Western Washington (WWA) and Eastern Washington (EWA) to factor in regional differences.

Western Washington

Q. How much will it cost my jurisdiction to comply with new stormwater/ LID requirements?

Answer. It depends. Costs will vary depending on how big or small a jurisdiction is, whether or not it has already begun the process of integrating LID codes, standards, and plans, as well as many other factors. While costs for initial transition to LID will be higher, cities and counties can expect long-term costs to be lower.

Although no formula currently exists, the following cost considerations should be taken into account. These include:

- Regulatory transition costs: the review and update of ordinances and plans, regulations and standards; changes to permitting procedures; tracking and reporting, and staffing for inspection and maintenance

- Staff training: staff in various departments will need training to understand the new LID requirements; to review and permit LID project proposals, and; to design, install, and maintain LID facilities

It is worth noting that numerous studies have shown that LID methods can cost less to install, have lower operations and maintenance costs, and provide more cost-effective stormwater management and water-quality services than conventional practices.

Q. What areas of government services will be affected?

Answer. Some departments and programs will be affected more than others. Those that can expect the greatest amount of change include public works and planning/permitting/building. Others that will be impacted to a lesser degree include parks and fire/safety. A quick synopsis of what these departments and programs can expect follows.

Public works departments will need to integrate LID into public works projects and codes addressing stormwater runoff. Staff will need training to inspect LID projects to ensure that they were built as designed and are functioning properly. LID projects will also need to be maintained, both for city/county owned facilities and for facilities maintained by the jurisdiction. Public works staff will likely need training on maintaining LID facilities using new skills and equipment.

Planning/permitting/building will need to integrate LID requirements into development plans, codes, rules, and standards. Site plan review processes will need to be updated to reflect changes. Other codes, rules, and standards that will likely need updating include: zoning and subdivision codes; clearing and grading ordinances; street and parking standards and; stormwater and landscaping standards. Staff will likely need training on LID.

LID should be integrated into existing planning efforts and processes such as the Growth Management Act (GMA) update of comprehensive plans and critical areas ordinances. In many cases, integrating LID into local codes is consistent with actions called for in local salmon recovery plans and watershed plans, resulting in multiple benefits.

Fire and safety officials need to be involved with code and standard updates around street widths, access for emergency response, street layout within subdivisions, and street surfacing materials.

Parks staff will likely need training to assist with inspection and maintenance of vegetated stormwater best management practices (BMPs) like bioretention facilities.

Q. What support will my jurisdiction receive to help with compliance of these new requirements?

Answer. Ecology has developed a comprehensive LID Training Plan that will help jurisdictions get relevant staff trained appropriately. These trainings will address the municipal needs around LID training, from design and engineering to operations and maintenance, land use and stormwater code updates, hydrologic modeling, and others.

Eastern Washington

Question: How will the costs differ for Eastern Washington cities and counties compared to those in Western Washington?

Answer. Costs to local governments in EWA will be significantly lower than in WWA. Only a few jurisdictions will need to modify stormwater codes, and many will rely on the feasibility criteria in the Eastern Washington LID Guidance Manual. This manual, which is expected to be available by fall of 2013, funded by an Ecology grant and is designed to meet the December 2017 permit requirement.

Q: Will Eastern Washington cities and counties need staff training through the Ecology training program?

Answer. Yes, the training program is designed to help prepare and take input from EWA cities, counties and consultants for future LID requirements. Trainings will include developing and sharing information on siting and designing and maintaining LID facilities in local conditions for different areas of EWA.

What resources are available?

Numerous resources exist and others are in development to assist local governments with their transition to adopting the new requirements.

Code Integration

- Integrating LID into Local Codes: A Guidebook for Local Governments. Designed to help local government staff integrate LID requirements into local codes and standards. Available at: www.psp.wa.gov/downloads/LID_Guidebook/20120731_LIDguidebook.pdf
- Model ordinances developed as part of the development of the local codes guidebook. Model ordinances developed for 1) Grading, land clearing and tree cutting; 2) Off-street parking, 3) Planned unit development and 4) Site assessment. Available at: www.psp.wa.gov/LID_GLG.php
- Additional resources are available at the Association of Washington Cities' website: www.awcnet.org

Tools for estimating costs and benefits

- www.werf.org/bmpcost - A spreadsheet-based tool to help users identify and combine capital and ongoing maintenance costs for stormwater BMPs and LID.
- www.udfcd.org/downloads/software/BMP-REALCOST_v1.0.zip - A spreadsheet-based tool that analyzes the life cycle costs of BMPs for planning purposes.
- <http://greenvalues.cnt.org/national/calculator.php> - An online tool to help determine performance, costs and benefits of LID.



Resources for Low Impact Development Integration

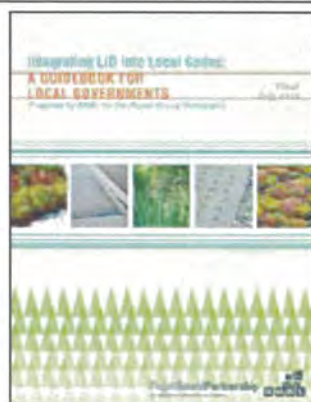
A comprehensive list of several LID-related guidance manuals and websites is provided below to serve as helpful resources for your jurisdiction as it integrates low impact development (LID) into stormwater management practices and moves towards compliance with the new stormwater permit. These resources are intended for a range of audiences and range from highly technical to less complex.

In response to the growing need for additional training in LID, the Washington Department of Ecology (Ecology) is investing in a \$4 million, 4-year training program that will provide elected officials and public works directors, stormwater practitioners, landscapers and nurseries, composters, realtors, and the building industry with training opportunities around the state. Details of training opportunities can be found on Ecology's website at www.ecy.wa.gov/programs/wq/stormwater/municipal/LID/TRAINING/elected.html.

Guidance manuals and websites

Washington-specific guidance

	2012 Stormwater Management Manuals for Western Washington Author: WA Department of Ecology Intended audience: Local municipalities, land developers and development engineers, and others covered under an Ecology stormwater general permit Contents: - Regionally-specific guidance on Best Management Practices (BMPs) for National Pollutant Discharge Elimination System (NPDES) permit compliance - LID-related definitions, requirements, infeasibility criteria, and performance standards in support of new permit requirements - Guidance on other stormwater requirements such as flow control and stormwater treatment Website: www.ecy.wa.gov/programs/wq/stormwater/manual.html
	2004 Stormwater Management Manual for Eastern Washington Author: WA Department of Ecology Intended audience: Local municipalities, land developers and development engineers, businesses in Eastern Washington Contents: - Regionally-specific guidance on BMPs for NPDES permit compliance - LID-related definitions, requirements, and performance standards in support of new permit requirements - Guidance to set stormwater requirements, design stormwater control and pollution prevention plans and infrastructure, and determine stormwater infrastructure Website: www.ecy.wa.gov/programs/wq/stormwater/easternmanual/manual.html Please note: The Stormwater Management Manual for Eastern Washington is being updated in the 2014-2019 permit term, including consideration of LID requirements.



Integrating LID into Local Codes: A Guidebook for Local Governments

Author: Puget Sound Partnership (2012)

Intended audience: Local government staff responsible for integrating LID into development codes and standards

Contents:

- Systematic, step-by-step approach for integrating LID into existing and new local codes, standards, and regulations
- Includes task timelines, lessons learned, and links to resources and blogs

Website: www.psp.wa.gov/LID_GLG.php



LID Technical Guidance Manual for Puget Sound

Author: Puget Sound Partnership and Washington State University Pierce County Extension

Intended audience: Stormwater managers, site designers, engineers, planners, landscape architects, technical staff, policy makers, developers

Contents:

- Descriptions of LID goals, objectives, specifications for individual practices, and flow reduction credits available to the Puget Sound
- Research and data to help inform LID application to jurisdictions

Website: www.psp.wa.gov/LID_manual.php



Washington Stormwater Center LID Website

Author: Washington State University Puyallup LID Research Program

Intended audience: Municipal stormwater permittees, designers, engineers, planners

Contents:

- Resources and statewide training programs
- Information on LID-related workshops and educational opportunities
- An LID Project Database that shares project successes and lessons learned from around the Northwest

Website: www.wastormwatercenter.org

National-level Guidance



EPA LID Website

Author: US Environmental Protection Agency

Intended audience: general public, including technical and non-technical audiences

Contents:

- Fact sheets and reports, including an LID Barrier Busters fact sheets for state and local decision makers and case study reports
- Design and guidance manuals on integrated LID design approaches, hydrologic analysis, urban design tools, and field evaluations
- Water Quality Scorecard that offers policy options for integrating green infrastructure across scales of land use and municipal departments
- Information resources, videos, and other multi-media

Website: water.epa.gov/polwaste/green/index.cfm



Low Impact Development Center Website

Author: Low Impact Development Center, a non-profit organization based in Maryland

Intended audience: general public, with a slight emphasis on more technical audiences

Contents:

- LID BMP fact sheets from case studies across the country
- Link to EPA LID literature review
- National manuals on LID design strategies
- Municipal and builders' guidance brochures
- Project and program websites that highlight case study projects, LID-related programs, and guidance for specific audiences and approaches

Website: lowimpactdevelopment.org

ATTACHMENT A

SCOPE OF WORK

City of SeaTac

Integration of LID into City Codes, Policies, and Standards

(Stormwater and Road Standards)

On September 11, 2015, the City of SeaTac (City) requested Herrera Environmental Consultants (Herrera) prepare a scope of work to provide code review and update support to help ensure compliance with the low impact development (LID) update and integration provision in the 2013-2018 National Pollutant Discharge Elimination municipal stormwater phase II permit (NPDES Phase II permit) for the City of SeaTac's stormwater and road standards. Work under this contract is described below. The scope of work for this project includes a discussion of the activities, assumptions, and deliverables associated with the following tasks:

- Task 1 – Review Road Design, Construction, and Stormwater Standards, Supplemental Stormwater and Road Standards, and Make Recommendations for Integration of LID
- Task 2 – City Council, Council Advisory Committee, and Public Participation Support
- Task 3 – Summary Report
- Task 4 – Project Management/Contract Administration

Task 1 – Review Road Design, Construction, and Stormwater Standards and Make Recommendations for Integration of LID

Task 1A: Kickoff Conference Call

At the beginning of the project, Herrera will work with the City to facilitate a kickoff conference call for City staff who will be directly involved in the review process.

The kickoff conference call will cover the following:

- Confirmation of document review list
- Summary of the LID Integration requirements in the NPDES Phase II permit
- Summary of the level of effort required from City staff to support the LID integration process
- Description of the process the City will use to meet this permit requirement
- Explanation of the expectations and roles that selected staff members will play in helping the City meet this permit requirement
- Overview of the project schedule

Task 1B: Preliminary Assessment

Following the kickoff meeting, Herrera will review the City Transportation Design Standards, Storm Drain Design Standards, supplemental City standards, and Construction in City Right of Way Standards, including external references (listed below) to identify which elements satisfy

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the NPDES Phase II permit requirements and which elements need to be revised or updated to minimize impervious surfaces, native vegetation loss, and stormwater runoff. The intent of the revisions will be to make LID the preferred and commonly-used approach to site development as well as attain/maintain equivalency with the NPDES Phase II permit required stormwater standards.

The documents proposed for review include the following:

City Transportation Design Standards:

- King County Road Design and Construction Standards (adopted by reference in the SeaTac Municipal Code (SMC), Section 11.05 – Road Standards)

Storm Drain Design Standards:

- King County Surface Water Design Manual (adopted by reference in SMC, Section 12.10 – Surface and Stormwater Management)
- City of SeaTac Addendum to the King County Surface Water Design Standards (adopted by reference in SMC, Section 12.10 – Surface and Stormwater Management)

City Right of Way Standards:

- Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction

Supplemental City Standards:

- Supplemental stormwater and road design/construction detail sheets provided by City of SeaTac

Herrera will work with appropriate City staff members to review the documents listed above. Since a majority of the documents identified for review are external references, the review of those documents will focus on any exceptions, exemptions, or variances recommended for incorporation into the City code sections referenced above and the City of SeaTac Addendum to the King County Surface Water Design Standards. Herrera will also identify, document, and recommend language to address equivalency issues between the City of SeaTac Addendum to the King County Surface Water Design Standards and the NPDES Phase II Permit.

The results of this preliminary review will be discussed at a Preliminary Findings meeting. Separate topic work sessions will be scheduled as needed to develop redlines/new language or to further discuss specific topic areas.

Task 1C: Draft Revisions

Herrera will use the results from the Task 1B review to develop draft revisions that satisfy the NPDES Phase II permit requirements. Herrera will provide City staff with draft redlines/new

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SCOPE OF WORK

language for the City of SeaTac Addendum to the King County Surface Water Design Standards and language that may need to be added to the SMC. Herrera will also create a Draft City of SeaTac Addendum to the King County Road Design and Construction Standards.

Assumptions

- One Herrera team member will attend a kickoff conference call
- The City will identify and invite City staff to participate as part of the SeaTac LID Team.
- One Herrera team member will attend a Preliminary Findings meeting to discuss the results of the preliminary review.
- This task is expected to include significant coordination with City staff regarding the recommended updates to ensure that internal and external stakeholders will be amenable to the proposed code changes.
- Up to two Herrera team members will attend up to two half-day meetings to discuss the draft revisions. The following meetings are anticipated:
 - One meeting to discuss proposed code language to address any identified gaps in the King County Road Design and Construction Standards or WSDOT Standard Specifications for Road, Bridge, and Municipal Construction and the Draft City of SeaTac Addendum to the King County Road Design and Construction Standards.
 - One meeting to discuss proposed changes to the City of SeaTac Addendum to the King County Surface Water Design Standards including changes to address equivalency issues identified, and changes to address any identified gaps or changes in the King County Surface Water Design Manual, including the integration of supplemental standards.

Deliverables

- Draft and final agenda for the kickoff conference call
- Draft review forms (from the LID Code Update/Integration Toolkit) or a gap analysis memorandum summarizing the results of the preliminary review
- Final review forms or a gap analysis memorandum that incorporate comments/edits provided by City staff
- Revised draft redlines/new language for the SMC and the City of SeaTac Addendum to the King County Surface Water Design Standards
- Final language for the SMC and the City of SeaTac Addendum to the King County Surface Water Design Standards (incorporating comments from public review process)
- Draft language for road standards addendum
- Final language for road standards addendum

ATTACHMENT A SCOPE OF WORK

Task 2 – City Council, Council Advisory Committee, and Public Participation Support

Herrera will develop materials for and lead one External Stakeholder Review Meeting (an External Stakeholder Orientation Meeting will be held as part of Phase I of this project). The role of the stakeholders is to provide input on code and policy changes prior to City Council adoption. It is anticipated that the City will consult with potentially interested stakeholders during the municipal code review and revision process. The External Stakeholder Review Meeting will be scheduled in the late spring of 2016 prior to the City Council process. The intent of this meeting will be to review and to provide input on the recommended changes to the SMC and the City of SeaTac Addendum to the King County Surface Water Design Standards.

Herrera will also develop materials for and present at one City Council meeting. Materials are anticipated to include a Powerpoint presentation and a handout summarizing proposed changes to incorporate as part of the LID code integration process.

Assumptions

- The City will identify and assist with inviting potentially interested stakeholders to the external stakeholders meetings.
- The City will lead coordination with the City Council required for this task.
- Up to two Herrera team members will lead the External Stakeholder Review Meeting
- One Herrera team member will attend one City Council meeting
- Handouts for the City Council are expected to be up to 4 pages long
- Deliverables
- Draft and final agendas for the External Stakeholder Review Meeting
- PowerPoint presentation and supporting handouts for one City Council meeting

Task 3 – Summary Report

Herrera will prepare a report summarizing the results of the review and revision process, per NPDES Phase II Permit requirements. The summary report for this project will be combined with a report being developed under a separate contract to update land use and development codes into a single summary report. The summary report will include a list of participants; all City codes, rules, standards, other enforceable documents reviewed; and the revisions made to those documents. The summary report will also include a summary of the City's existing requirements for LID principles and LID BMPs.

Assumptions

- No in-person meetings will be conducted as part of this task.
- The City will provide comments on the Draft Summary Report within 2 weeks.

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Deliverables

- Draft Summary Report (for City review)
- Final Summary Report that incorporates comments/edits provided by City staff

Task 4 – Project Management/Contract Administration

Herrera will be responsible for ongoing management and contract administration of this project, including tracking and updating the project schedule, preparing invoices, and coordinating work efforts with the City's project manager, Don Robinett. Herrera's project manager (Rebecca Dugopolski) and assistant project manager (Anneliese Sytsma) will have phone and e-mail contact with Don Robinett on an as-needed basis.

Deliverables

- Monthly invoices and progress reports
- Proactive communications via email regarding issues potentially affecting scope, schedule, and/or budget.

ATTACHMENT A SCOPE OF WORK

Project Budget

Task	Budget
Task 1. Review Road Design, Construction, and Stormwater Standards and Make Recommendations for Integration of LID	\$9,716
Task 2. City Council, Council Advisory Committee, and Public Participation Support	\$5,179
Task 3. Summary Report	\$2,612
Task 4. Project Management and Contract Administration	\$2,389
Total	\$19,965

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Schedule of Tasks and Deliverables

Task	Deliverable	Timeline
Task 1A	Kickoff conference call	December 2015
Task 1B	Draft review form(s) or gap analysis memorandum	February 2016
	Preliminary Findings meeting	February 2016
	Final review form(s) or gap analysis memorandum	March 2016
Task 1C	Discussion meeting to address identified gaps in the King County Road Design and Construction Standards or WSDOT Standard Specifications for Road, Bridge, and Municipal Construction	April 2016
	Discussion meeting to discuss proposed changes to the City of SeaTac Addendum to the King County Surface Water Design Standards to address any identified gaps or changes in the King County Surface Water Design Manual	April 2016
	Revised draft redlines/new language for the SMC and the City of SeaTac Addendum to the King County Surface Water Design Standards	May 2016
	Final language for the SMC and the City of SeaTac Addendum to the King County Surface Water Design Standards	June 24, 2016
Task 2	External Stakeholder Review Meeting	Late spring 2016
	Draft handout summarizing changes made through the LID code integration process	May 2016
	Final handout summarizing changes made through the LID code integration process	June 24, 2016
	One City Council meeting	Late summer and/or fall of 2016
Task 3	Draft Summary Report	November 18, 2016
	Final Summary Report	December 30, 2016
Task 4	Project Management/Contract Administration	October 2015 through December 2016

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City of SeaTac Integration of LID into City Codes, Policies, and Standards

On July 27, 2015, the City of SeaTac (City) requested Herrera Environmental Consultants (Herrera) prepare a scope of work to provide code review and update support to help ensure compliance with the low impact development (LID) update and integration provision in the 2013-2018 National Pollutant Discharge Elimination municipal stormwater Phase II permit (NPDES Phase II permit). This scope of work includes a discussion of the activities, assumptions, and deliverables associated with the following tasks:

- Task 1 – Review Code and Development Standards and Make Recommendations for Integration of LID
- Task 2 – City Council, Council Advisory Committee, and Public Participation Support
- Task 3 – Summary Report

Task 1 – Review Code and Development Standards and Make Recommendations for Integration of LID

Task 1A: Kickoff Meeting

At the beginning of the project, Herrera will work with the City to facilitate a code update/integration kickoff meeting for City staff who will be directly involved in the code and policy review process. This meeting will include a short presentation and overview of the LID Code Update and Integration Toolkit developed for use by Phase II permittees and supporting materials that Herrera has successfully used in past LID code review processes.

The kickoff meeting will also cover the following:

- Summary of the LID Integration requirements in the NPDES Phase II permit
- Summary of the level of effort required from City staff to support the LID integration process
- Description of the process the City will use to meet this permit requirement
- Explanation of the expectations and roles that selected staff members will play in helping the City meet this permit requirement
- Overview of the project schedule

Task 1B: Preliminary Assessment of Codes and Policies

Following the kickoff meeting, Herrera will review relevant sections of the SeaTac Municipal Code (SMC) and other applicable documents (summarized below) to identify which elements satisfy the NPDES Phase II permit requirements and which elements need to be revised or updated to minimize impervious surfaces, native vegetation loss, and stormwater runoff. The

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intent of the revisions will be to make LID the preferred and commonly-used approach to site development.

The codes and documents proposed for review include the following:

- SMC, Section 11.10 – Right-of-Way Use Code
- SMC, Section 12.10 – Surface and Stormwater Management
- SMC, Title 13 – Buildings and Construction
- SMC, Title 14 – Subdivisions
- SMC, Title 15 – Zoning Code
- SMC, Title 16A – Development Review Code
- SMC, Title 18 – Shoreline Management Code
- SeaTac Shoreline Master Program
- SeaTac Comprehensive Plan
- American with Disabilities Act (ADA) – Access Requirements
- Other documents identified by the SeaTac LID Team, as budget allows

Herrera will work with appropriate City staff members to review the codes and documents listed above, noting potential barriers and conflicts that will inhibit the use of LID practices. The topic and subtopics reviewed, a section/page reference for relevant sections, and a summary of the existing text and the conflict/gap that was identified (if any) will be recorded in a review form similar to the review form included in the LID Code Update and Integration Toolkit. The results of this preliminary review will be discussed at a Preliminary Findings meeting. Separate topic work sessions will be scheduled as needed to develop redlines/new language or to further discuss specific topic areas.

Task 1C: Draft Revisions to Applicable Codes and Policies

Herrera will use the results from the Task 1B code and policy review to develop draft revisions that satisfy the NPDES Phase II permit requirements and help to make LID more implementable in the City. Herrera will provide City staff with draft redlines/new language for the codes and documents with identified gaps in Task 1B organized by code/document section. Herrera will also prepare summary sheets organized by code/document section that summarize the existing language, suggested revisions to the existing text (redlines/new language), the type of gap (required, preferred, or optional), and a section for the City to track their decision process (amend existing language, develop new language, or decide not to incorporate any changes). If the City decides not to incorporate any changes, the reason why should also be documented (e.g., competing needs such as ADA requirements conflict with reducing sidewalks widths).

Assumptions

- Up to two Herrera team members will attend a kickoff meeting
- The City will identify and invite City staff to participate as part of the SeaTac LID Team
- One Herrera team member will attend a Preliminary Findings meeting to discuss the draft review forms

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- This task is expected to include significant coordination with City staff regarding the recommended updates to ensure that internal and external stakeholders will be amenable to the proposed code changes
- Up to two Herrera team members will attend up to three half-day meetings to discuss the draft redlines/new language. The following meetings are anticipated:
 - One meeting to discuss proposed changes to the SMC
 - One meeting to discuss proposed changes to the SeaTac Shoreline Master Program
 - One meeting to discuss proposed changes to the SeaTac Comprehensive Plan and other City documents identified for review

Deliverables

- Draft and final agenda for the kickoff meeting
- Draft review forms (from the LID Code Update/Integration Toolkit) for the SMC, SeaTac Shoreline Master Program, and SeaTac Comprehensive Plan
- Final review forms that incorporate comments/edits provided by City staff
- Summary sheets (including draft redlines/new language) for the SMC, SeaTac Shoreline Master Program, and SeaTac Comprehensive Plan
- Revised draft redlines/new language for codes and documents
- Final language for codes and documents (incorporating comments from public review process)

Task 2 – City Council, Council Advisory Committee, and Public Participation Support

Herrera will develop materials for and lead two external stakeholder meetings: the External Stakeholder Orientation Meeting and the External Stakeholder Review Meeting. The role of the stakeholders is to provide input on code and policy changes prior to City Council adoption. It is anticipated that the City will consult with potentially interested stakeholders during the municipal code review and revision process. The External Stakeholder Orientation Meeting will be scheduled in early 2016. The intent of this meeting will be to summarize the review and revision process and to invite input on the initial barriers and proposed options that the SeaTac LID Team and Herrera have outlined. The External Stakeholder Review Meeting will be scheduled in the late spring of 2016 prior to the City Council process. The intent of this meeting will be to review and to provide input on the redlined code, policy, and enforceable document language.

Herrera will also develop materials for and present at up to two Planning Commission/City Council meetings. Materials are anticipated to include a Powerpoint presentation and a handout summarizing proposed changes to incorporate as part of the LID code integration process.

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Assumptions

- The City will identify and assist with inviting potentially interested stakeholders to the external stakeholders meetings.
- The City will lead coordination with the Planning Commission and City Council required for this task.
- Up to two Herrera team members will lead the following external stakeholder meetings:
 - External Stakeholder Orientation Meeting
 - External Stakeholder Review Meeting
- One Herrera team member will attend up to two Planning Commission/City Council meetings
- Handouts for the Planning Commission and City Council are expected to be up to 4 pages long and will not include the development of any graphics

Deliverables

- Draft and final agendas for the external stakeholder meetings
- PowerPoint presentation and supporting handouts for up to two Planning Commission/City Council meetings

Task 3 – Summary Report

Herrera will prepare a report summarizing the results of the review and revision process, per NPDES Phase II Permit requirements. The summary report will include a list of participants; all City codes, rules, standards, other enforceable documents reviewed; and the revisions made to those documents. The summary report will also include a summary of the City's existing requirements for LID principles and LID BMPs.

Assumptions

- No in-person meetings will be conducted as part of this task.
- The City will provide comments on the Draft Summary Report within 2 weeks.

Deliverables

- Draft Summary Report (for City review)
- Final Summary Report that incorporates comments/edits provided by City staff

Task 4 – Project Management/Contract Administration

Herrera will be responsible for ongoing management and contract administration of this project, including tracking and updating the project schedule, preparing invoices, and coordinating work efforts with the City's project manager, Don Robinett. Herrera's project manager (Rebecca

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Dugopolski) and assistant project manager (Anneliese Sytsma) will have phone and e-mail contact with Don Robinett on an as-needed basis.

Deliverables

- Monthly invoices and progress reports
- Proactive communications via email regarding issues potentially affecting scope, schedule, and/or budget.

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Project Budget

Task	Budget
Task 1. Review Code and Development Standards and Make Recommendations for Integration of LID	\$27,816
Task 2. City Council, Council Advisory Committee, and Public Participation Support	\$11,171
Task 3. Summary Report	\$ 7,221
Task 4. Project Management and Contract Administration	\$ 3,746
Total	\$49,954

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Schedule of Tasks and Deliverables

Task	Deliverable	Timeline
Task 1A	Kickoff meeting	August 2015
Task 1B	Draft review forms for the SeaTac Municipal Code	October 16, 2015
	Draft review form for the SeaTac Shoreline Master Program	October 30, 2015
	Draft review form for the SeaTac Comprehensive Plan	November 13, 2015
	Preliminary Findings meeting	November 2015
	Final review forms	December 31, 2015
Task 1C	Summary sheet (draft redlines/new language) for the SMC	January 15, 2016
	SeaTac Municipal Code Discussion meeting	January 2016
	Summary sheet for the SeaTac Shoreline Master Program	February 12, 2016
	SeaTac Shoreline Master Program Discussion meeting	February 2016
	Summary sheet (including draft redlines/new language) for the SeaTac Shoreline Master Program	March 11, 2016
	SeaTac Comprehensive Plan Discussion meeting	March 2016
	Revised draft redlines/new language for codes and documents	April 29, 2016
	Final language for codes and documents	June 24, 2016
Task 2	External Stakeholder Orientation Meeting	Jan – Feb 2016
	External Stakeholder Review Meeting	Late spring, 2016
	Draft handout summarizing changes made through the LID code integration process	April 29, 2016
	Final handout summarizing changes made through the LID code integration process	June 24, 2016
	Two Planning Commission/ City Council meetings	Late summer and/or fall of 2016
Task 3	Draft Summary Report	November 18, 2016
	Final Summary Report	December 30, 2016