Agenda

ENVIRONMENTAL SERVICES COMMISSION MEETING

450 - 110th Avenue NE (City Hall)
July 16, 2015
5:30-7:30PM CIP Tour – Meet at ServiceFirst
7:45PM Regular Meeting
Conference Room 1E-113

		Page No.	Action
1.	CIP Tour		
2.	Call to Order – Keith Swenson , Chair		
3.	Oral Communications Note: Three-minute limit per person, maximum of three persons for each side of topic. Additional comments may be heard at Agenda Item 11.		
4.	Approval of Agenda *	1	X
5.	Approval of Minutes *		X
	• June 18, 2015	2 - 10	
6.	Reports & Summaries		
	• ESC Calendar/Council Calendar *	11 - 12	
7.	New Business		
	• Storm System Plan Strategic Initiatives Discussion *Presenter: Paul Bucich, Assistant Director, Engineering, Kit Paulsen, Watershed Planning Manager and Brian Ward, Sr. Engineer*	13	
	• Low Impact Development – LID Principles Project *Presenter: Phyllis Varner, NPDES Manager and Catherine Drews, Legal Planner*	14 - 44	
	• Water System Plan – Plan Findings & Recommendations *Presenters: Pam Maloney, Water Resource Planning Manager and Doug Lane, Sr. Engineer*	45 - 48	
8.	New Business		
9.	Commission Report		
10.	Director's Office Report		
11.	Continued Oral Communications		
12.	Adjournment		

* Materials included in packet
\# Materials separate from packet

Wheelchair accessible. American Sign Language (ASL) interpretation available upon request by calling (425) 452-6466 (v) at least 48 hours in advance. Assistance for the hearing-impaired: Dial 711.

CITY OF BELLEVUE
ENVIRONMENTAL SERVICES COMMISSION
MEETING MINUTES

Thursday
June 18, 2015
6:30 p.m.

Conference Room 1E-112
Bellevue City Hall
Bellevue, Washington

COMMISSIONERS PRESENT: Swenson, Pauley, Howe, Wang, Morin, Mach, Shin

COMMISSIONERS ABSENT: None

OTHERS PRESENT: Andrew Lee, Deputy Director; Kit Paulsen, Planning Manager; Paul Bucich, Asst. Director Engineering; Pam Maloney, Water Resources Manager and Doug Lane, Senior Engineer

MINUTES TAKER: Laurie Hugdahl

1. CALL TO ORDER:

The meeting was called to order by Vice Chair Swenson at 6:36 p.m.

2. ORAL COMMUNICATIONS

None

3. ELECT CHAIR AND VICE CHAIR

Commissioner Mach nominated Keith Swenson. Commissioner Pauley nominated Calvin Wang.

Motion made by Commissioner Morin, seconded by Pauley to close the nominations for Chair. Motion passed unanimously (7-0).

The two nominees left the room and discussion followed.

Motion made by Commissioner Pauley, seconded by Commissioner Morin, to elect Keith Swenson as Chair and Calvin Wang as Vice Chair. Motion passed unanimously (7-0).

4. APPROVAL OF AGENDA

Motion made by Commissioner Morin, seconded by Commissioner Howe, to approve the agenda as presented. Motion passed unanimously (7-0).

5. WELCOME NEW COMMISSIONER

Deputy Director Lee introduced Lisa Shin as a new commissioner. Commissioner Shin introduced herself and reviewed her background. The Commission welcomed her. Deputy Director Lee announced that Diann Strom would be the other new commissioner and reviewed her background. She will be attending the next meeting.

6. APPROVAL OF MINUTES

April 16, 2015 Regular Meeting Minutes

Commissioner Wang referred to page 9 and noted *Commissioner* Robertson should be corrected to ***Councilmember***. He also noted that the last four paragraphs on page 11 can be deleted because that section is repeated from the previous page.

Motion made by Commissioner Wang, seconded by Commissioner Howe, to approve the minutes corrected. Motion passed unanimously (7-0).

May 21, 2015 Regular Meeting Minutes

Commissioner Mach thought there was a discussion on an easement that was not recorded. Commissioner Morin noted there was a paragraph regarding easements at the bottom of page 15. Commissioner Mach indicated that was sufficient.

Motion made by Commissioner Morin, seconded by Commissioner Shin, to approve the minutes. Motion passed unanimously (7-0).

7. REPORTS AND SUMMARIES

- ESC Calendar/Council Calendar

  Deputy Director Lee noted that the Utilities CIP tour would start at 5:30 July 16 and would cover three projects: Bellefield Pump Station Replacement, Yarrow Creek Tributary Culvert Removal, and Water Quality Improvements at the Parks Department's Complete the Circle Project. Commissioner Wang asked to visit Kelsey Creek prior to the culvert replacement. Deputy Director Lee indicated he would look into that.

  Deputy Director Lee then proposed September 2 and 3 as possible dates for the retreat. September 3 appeared to be the preference. Commissioner Mach said he thought that the retreat was going to be just the Environmental Services Commission and not the Council Liaison in order to have an opportunity for more open discussion. Commissioner Wang asked if there would be an agenda or just informal, open discussion. Deputy Director Lee

explained the Council Liaison usually comes to the retreats for the other commissions. There is food and discussion about important upcoming issues for the year. There is usually an agenda, but there is also time for open discussion. Commissioner Wang said he had some items he would like to talk about at the retreat.

Commissioner Mach asked about having the retreat in December instead of September and keeping the August recess the same. Deputy Director Lee indicated that might be a possibility and asked whether the Commissioners would prefer to have the retreat in December instead of in August. The Commissioners indicated that their preference would be to have the retreat in December. Deputy Director Lee said that he would look into potential retreat dates in December.

Deputy Director Lee reviewed items on the Council Calendar. Commissioner Morin asked if the Commission would be involved in the Solid Waste Transfer and Disposal Options discussion. Deputy Director Lee said there would be a presentation to the Council on four potential options, but he would check with Director Otal about ESC involvement.

8. NEW BUSINESS

- Storm System Plan
  Presenters: Kit Paulsen, Watershed Planning Supervisor and Paul Bucich, Assistant Director Engineering

Assistant Director Bucich reviewed the Strategic Initiatives:

1. Utility Department Property Management Plans
2. Primary Stormwater Infrastructure
3. Improving Water Quality
4. Open Streams Assessment
5. Watershed Planning

Asst. Director Bucich stated that the first three initiatives were discussed at the last meeting; all the initiatives were included in the packet for Commission review and this meeting will focus on the last two initiatives. Asst. Director Bucich explained that staff would bring these back again in July to get feedback and answer any questions. There will be an open house in August, and the complete document will come back for approval in September.

Beginning the presentation, Watershed Planning Supervisor Kit Paulsen began the discussion on the Open Streams Assessment initiative. She explained the problem facing the City with streams stewardship and restoration: that they are impacted by urban development, there is a lack of information or strategy to meet the City's vision for streams, and the fact that only 38% of the 80 miles of open stream sections are located on publicly owned land. The City

knows that the streams are degraded and there are limitations, but it is not really known what is needed to restore stream function. In order to do a good job of managing stormwater, it is important to address stream corridors. The City would like to determine the health of the stream system, ways the City can work to improve the areas that need the most help, and what methods are available to work with the private owners. Currently, streams range from severely impacted from development to areas that are still pretty natural looking, but still receive runoff and pollutants. There is potential to improve the whole stream corridor.

The initiative would provide options to develop a comprehensive plan and strategy to meet the city vision for streams. It would also establish a clear understanding of the city, department, and private owner roles. It would be done by collecting data about current conditions and stressors, identifying clear objectives and performance measures by basin, and developing options for system improvements for flow, water quality, and habitat.

Commissioner Wang asked about a definition for streams. Commissioner Pauley explained that this is getting into a legal area. Asst. Director Bucich noted that Bellevue already has a definition for streams. The real question is: *What is the potential for improving the aquatic systems and their ecosystem?* Ms. Paulsen noted that the state has definitions for streams and legal ways of interpreting whether they are fish-bearing or non-fish-bearing. Staff recognizes that not all basins and streams are the same. One of the things staff wants to do is evaluate the basins and streams and determine goals for the different areas. Commissioner Wang suggested putting the definition of stream in writing somewhere and following that with clarifications. Asst. Director Bucich added that there are categorizations of streams that Fish and Wildlife has already established. Staff will be looking at the function and value of all the streams.

Commissioner Pauley referred to the five pictures of streams, discussed differences in them, and noted all of them are considered streams, but there are differences in potential. Ms. Paulsen agreed. Asst. Director Bucich commented that collecting the data will help to prioritize the streams that need the most focus to achieve faster responses.

Stormwater Management regulations are now done on a parcel by parcel approach. Stormwater investments are based on redevelopment, not strategic methods. The City is trying to meet flow and water quality "forested" standards in developed lands even with increased population and urban constraints. What the City wants to do is look at all regulatory options available and figure out how to consolidate the mitigation required by development regulations so it will do the most good, articulate the priorities for restoration, and see results in basins. The City wants to develop a strategic plan for restoration, support development and address multiple regulatory

requirements. The problem is over 38% of the City was developed prior to stormwater controls. Also, with the scattered, parcel-by-parcel redevelopment regulatory approach, benefits in streams won't be seen for many years. Watershed-based strategic stormwater investments with out of basin mitigation are not supported by Bellevue's current regulatory approach.

Redmond is currently trying a watershed approach where development is assessed on a basin scale and development mitigation is placed into priority basins. New development cannot degrade beyond current conditions, but additional stormwater flow control and treatment required by regulation could be moved off-site. Asst. Director Bucich explained it is exciting that it might be a possibility for Bellevue to be allowed to bank credit by Ecology. After 20 years of trying it the other way and not seeing improvements, it is finally looking like something that might work.

Commissioner Morin expressed concern about the continued growth in Bellevue despite the impacts to the environment. Asst. Director Bucich explained that the Growth Management Act mandates a certain amount of growth in Bellevue, but it is up to the City Council to determine how this is done. Increasing density in urban areas helps protect the suburban and rural areas from urban development. Ms. Paulsen explained that this is exciting, but there are also some challenges associated with this. One of the questions is if the City needs to construct the project up front. If so, are the rules going to be consistent long enough that the City can get the money back out of it? Also, there is a question of how to manage it and do it efficiently. This will require investigating different options to determine the best way for Bellevue. Asst. Director Bucich pointed out that the Storm and Surface Water Strategic Initiatives are long-term goals and will take at least five to ten years.

Commissioner Mach suggested a change in wording in order to not imply the City is doing a bad job. He noted that the current approach doesn't allow the City the opportunity to globally make an improvement in the watershed, but he doesn't think it will actually make things worse. Similarly with streams, there are areas that the City is doing a great job in terms of stream restoration projects. Asst. Director Bucich noted that the projects the City does are important, but those projects are very limited in nature in the context of the whole system because the City only owns 38% of the streams. Most of that is in areas that are wetlands which are undevelopable and have not been impacted. Commissioner Mach said he recognizes the need to look at things globally, but he wants to also recognize that the City is doing a pretty decent job with what is in place. Staff said they appreciated and will incorporate Commissioner Mach's recommendations. Asst. Director Bucich commented on the current challenges of different priorities between different city departments such as Parks and Transportation. This project will help identify who is responsible for what and how it will occur.

Commissioner Shin asked how the City evaluates the effectiveness of the programs if it is not possible to take a global approach. Asst. Director Bucich replied that Kit Paulsen and the Stream Team volunteers do salmon spawning surveys and macroinvertebrate bug counts every year. This gives the City a gauge of the health of the system and shows that things are not getting better. When it comes to doing restoration work, projects get built and monitored for a period of time and then forgotten. Ms. Paulsen added that one of the reasons staff is bringing the initiative forward is because results are not being realized from project-specific activities since there are so many other influences affecting the projects that are outside of the City's control.

Chair Swenson asked staff to repeat the information about the number of salmon in Kelsey Creek versus Coal Creek. Ms. Paulsen stated that approximately 640 Coho adults were released into Kelsey Creek with zero reds. Around 1500 Coho were released into Coal Creek, and there were fish for 3½ months and about 200 reds. This was a significant difference since there were only fish, alive or dead, in Kelsey Creek for four days. This represents 100% pre-spawn mortality in Kelsey Creek. Ms. Paulsen explained that the City has put in a lot of habitat and done a lot of work on Kelsey Creek, but the situation is not improving.

Commissioner Pauley asked if there is an idea why this is happening, noting that ten years ago he used to see huge numbers of Coho adults coming up the stream, but he hasn't seen one for years. Ms. Paulsen acknowledged that it has been grim. Staff started seeing about 30-40% pre-spawn mortality in 2000. After setting up water quality tests in Longfellow Creek with multiple agencies, staff believes it is related to road runoff. The Regional NPDES Permit monitoring group is helping to fund studies to find out exactly what the harmful chemical constituent is. The good news is that the LID infiltration treatments are resulting in 100% survival of the Coho. This is very hopeful. Asst. Director Bucich noted that staff has some ideas for things that might be successful on Kelsey Creek, but it's important to have more data on which to make those recommendations.

Commissioner Morin asked if the plan is intended to address just the 38% of the creeks that the City has access to or the private areas as well. Asst. Director Bucich said it will identify the best places to do restoration, if necessary, in the total area. If it is on private land, the City will determine the alternatives and actions for getting the work done.

Commissioner Mach asked staff to put together the cost impacts for the different projects. Asst. Director Bucich said it was impossible at this stage to quantify any costs until the assessments are done.

Commissioner Wang asked if the culvert improvement at Coal Creek could improve the salmon mortality rate in Coal Creek. Ms. Paulsen said the Utility

has had to extend their spawner surveys by over a mile because of the open culvert, since the fish are moving upstream a mile further than they used to. This is a sign of success. Asst. Director Bucich added that at Coal Creek there is a whole park upstream that is protecting a lot of the headwaters, combined with very low development and low traffic. There is some pre-spawn mortality there, but it is at low levels. It doesn't have the same kinds of impacts as Kelsey Creek does. Ms. Paulsen noted that the City is also seeing improvements in the natural returns to Coal Creek. Coho are being added to jumpstart that process with the Muckleshoot Indian Tribe. She believes there is hope for Coal Creek now that a lot of the stream areas are stabilized with logs.

Asst. Director Bucich summarized the schedule from this point noting the goal is to take this to the City Council this fall for approval.

- Water System Plan
  Presenters: Pam Maloney, Water Resources Manager and Doug Lane, Senior Engineer

Deputy Director Lee commented that staff would be focusing on the storage policy.

Senior Engineer Doug Lane reviewed the policy for Drinking Water Storage for Emergency Supply Outages. He reviewed the background of Department of Health (DOH) requirements for water storage for operational, equalizing, fire, and standby purposes. DOH generally recommends standby storage based on two days of average water usage minus a volume credit where there are multiple water sources, but allows for a minimum of one day. Bellevue's longstanding practice has been to provide at least the one-day storage minimum as recommended by DOH plus also provide separate fire storage. Mr. Lane discussed how Seattle Public Utilities has handled the situation, and that their analysis shows all indoor water usage could be met for at least 5-days based on modeling of three hypothetical water supply emergencies. He also discussed the chart showing the impacts vs. benefits for increasing to two-day standby storage. Benefits would be an additional 24 hours of water in the event of a complete supply outage. Impacts would include the cost of reservoir construction (engineering, permits, etc.); land acquisition; water quality degradation and increased water age; additional cost for pumping and transmission capacity; community impacts; increased O&M; and potential property condemnation costs.

Commissioner Morin asked how the cost of construction was calculated. Mr. Lane replied it is a rough estimate of present day worth with the approximate cost per gallon to construct reservoirs in the past. This number would inflate over time. Commissioner Morin asked about the frequency of these types of events. Mr. Lane replied there have been three times when one of Seattle's

two supply sources was shut off from a couple hours to a couple days, but there were no service interruptions from any of these events, due to the redundant supply and operational efforts. Commissioner Morin asked about the cost per capita. Mr. Bucich was not sure. He noted that the underlying issue is about the risk. He commented that the entire time that Bellevue Utilities has been in place there has never been a complete shutoff of water. He stated Bellevue theoretically has six days of water, based on Seattle's supply lasting at least 5 days plus Bellevue's 1 day of storage. Additionally the City has existing groundwater rights and is interested in exploring and developing those. Mr. Lane said that the City has broached the subject of using the wells as emergency supplies to Cascade Water Alliance, who thinks it's a great idea to add resiliency.

Commissioner Morin asked if volcanic activity was one of the scenarios considered. Mr. Lane replied that increased turbidity is one of the potential situations that could cause a Cedar River Watershed outage, but it wasn't looked at specifically. This could be ash from volcanic activity or from a forest fire. Particulates in the water could apply to any open reservoir.

Mr. Bucich was asked if Bellevue has had a situation where they have had to get into the one-day storage. Mr. Bucich said he has not heard of any. Bellevue would likely only encounter that situation when the water feeds are shut off. Staff is not recommending a two-day storage situation, but wanted to discuss it since it is the DOH default recommendation, and DOH recommends that community expectations be considered first before adopting the one day minimum storage standard. Mr. Bucich discussed staff's recommendation to look into groundwater rights and development in lieu of an additional day of water storage.

Commissioner Wang noted that AWWA had a meeting in town a couple weeks ago. He commended Doug Lane for making several presentations at that meeting and did a great job. Commissioner Wang encouraged other staff members to participate and make good use of opportunities. Mr. Bucich concurred and noted that other utilities staff members also made presentations.

Deputy Director Lee commented that Councilmember Robertson had requested a recommendation from the ESC about the water storage issue. Mr. Lane and Mr. Bucich added that staff would be asking the ESC for a recommendation on the entire Water System Plan prior to going to City Council in the Fall 2015.

10. COMMISSION REPORT

11. DIRECTOR'S OFFICE REPORT

Deputy Director Lee had the following items:

- Thanks to Gil Pauley for his service.
- Regarding AMI, an RFP was issued on June 4. Proposals will come in July, and a consultant will be hired in September. A mid-year budget adjustment will not be necessary.
- Water usage is up 14% higher than 2014 for the month of May. June is trending toward one of the highest water use months. Bellevue is still not being asked to conserve.

Commissioner Howe asked about the letters to the editor which criticized the City for encouraging people to use water. Deputy Director Lee gave some background on this matter. Staff's primary message was that there was not a need to curtail, but regular conservation measures should continue. Unfortunately this was not captured by the reporter, but the City did contact the newspaper about the way it was handled. The City will be following up with bill inserts. Commissioner Howe noted she was at a conference in California. From Anaheim to the northern California border, every major transportation message board informed people of the state of emergency regarding the drought and encouraged them to conserve water. She noted that it is a very serious issue.

12. CONTINUED ORAL COMMUNICATIONS

None

11. ADJOURNMENT

The meeting was adjourned at 9:05 p.m.

2015 Environmental Services Commission Calendar

July 15

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July

16 CIP Tour - Scott Taylor
Low Impact Development-LID Principles Project (Phyllis Varner/Catherine Drews)
Storm System Plan Initiative Q&A (Paul/Kit/Brian)
Water System Plan - Plan Findings & Recommendations (Pam Maloney/ Doug Lane)

August

1 Recess

September

17 2015 Mid-Bi Budget (Lucy Liu)
Asset Management Annual Report (Andrew Lee)
Storm System Plan - Request ESC Endorsement of Council Adoption (Kit/Brian)
Utilities Rate & Tax Relief Programs (Susan Fife-Ferris/Patricia Burgess)
Water System Plan - Plan Findings & Recommendations (Pam Maloney/ Doug Lane)

October

15 Solid Waste Contract Performance Audit & Customer Satisfaction Survey Results (Susan Fife-Ferris/ Stephanie Schwenger)
Water System Plan -Review Draft Plan (Pam Maloney/ Doug Lane)

November

19 Water System Plan - Request ESC Endorsement of council Adoption (Pam Maloney/Doug Lane)

January 16

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2015 Council Calendar

July 15

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July

20 Motion to award Construction of Wilburton Sewer Capacity Improvement (Paul Bucich/Regan)

Resolution authoriziing Execution of PSA with Tetra Tech for Sewer Lake Line Condition Assessment - Phase 2 (Paul/Regan

Resolution authorizing execution of PSA w/Herrera fro Post-Constrcution Project monitoring (Paul/Regan)

Resolution authorizing execution of PSA w/MSA for Meyd Bay Park Swer Line Replace & Grange Pumpstation(Paul/Regan)

27 Solid Waste Transfer & Disposal (Nav/Andrew)

Willowmore Project (Paul/KC)

September

8 Resolution Authorizing Execution of PSA w/Tetra Tech for Lower Coal Creek Flood Control Project (Regan/Paul)

January 16

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June 16

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City of Bellevue
Post Office Box 90012 • Bellevue, Washington • 98009 9012

_____	**Action**
X	**Discussion**
_____	**Information**

DATE: July 16, 2015

To: Environmental Services Commission

From: Brian Ward, P.E. Storm Water Systems Senior Engineer

Subject: Storm and Surface Water System Plan Update—Strategic Initiatives

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Action Required at this Time
No action is required at this time.

Staff will be available to receive feedback from the Environmental Services Commission (ESC) on the strategic initiatives proposed for the Storm and Surface Water System Plan.

Background
During the May and June 2015 ESC meetings, staff presented five strategic initiatives that are proposed for the Storm and Surface Water System Plan. The initiatives are intended to guide future storm and surface water management programs and since they were not included in the original updated Storm and Surface Water System Plan, approved by Commission in 2012, staff have brought them forward seeking the Commission's input.

Discussion
The July ESC meeting for this topic is the next opportunity for the Commission to provide comment on proposed storm water strategic initiatives. Staff are ready to receive any comments the Commission may have.

Next Steps
Staff will consider and incorporate your comments and questions into the proposed strategic initiatives.

- July 16, 2015: Opportunity for staff response(s) to questions or comments by Commission.
- August 2015: Storm System Plan public meeting.
- September 17, 2015. ESC recommendation for Council adoption of the Storm Plan.
- City Council adoption: 2015 (October or November depending on Council's calendar).

City of Bellevue

MEMORANDUM

	Action
X	**Information**
X	**Discussion**

DATE: July 16, 2015

TO: Environmental Services Commission

FROM: Catherine A. Drews, Legal Planner (Project Manager)
Development Services Department

Paul A. Bucich, P.E., Assistant Director of Engineering
Phyllis A. Varner, NPDES Permit Manager
Utilities Department

SUBJECT: Low Impact Development (LID) Principles Project

Action Required
No action is required by the Commission.

This is an informational briefing on the Low Impact Development Principles Project and upcoming opportunities to participate in exploring opportunities to further integrate LID Principles into development-related codes and standards.

Background
The 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit ("NPDES Permit") *requires the City to review and revise its development-related codes and standards to incorporate and require low impact development ("LID") principles.* LID principles are "land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff." The intent for the revisions is to make LID the preferred and commonly-used approach to site development.
Bellevue's review project is called the LID Principles Project (the Project) and the Project deadline is December 31, 2016. The Project Lead Team provided a project update to City Council on July 6, 2015 (Attachment 1) and received approval of the:

- Areas of Focus in the development-related codes and standards to be explored for opportunities to further integrate LID Principles into development-related codes and standards;
- Project Interest Statement
- Project Principles, with some additional language (Attachment 2).

The Project's Public Participation Plan was also introduced to Council and this informational briefing begins implementation of that Plan.

Staff will provide a short presentation on the Project to the Commission.

Attachments
1 LID Principles Project Update July 6, 2015 City Council Study Session Agenda Memo
2 Final LID Principles Project Interest Statement, Project Principles and Areas of Focus

July 6, 2015

CITY COUNCIL STUDY SESSION ITEM

SUBJECT
Update on the Low Impact Development Principles Project and Introduction of Areas of Focus

STAFF CONTACT

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POLICY CONSIDERATION
Should Council approve the Areas of Focus developed as part of Phase I of the LID Principles Project as the starting point to explore what revisions, if any, are appropriate for the City's development-related codes and standards to make LID the preferred and commonly-used approach to site development? The NPDES Permit requirement is included as Attachment A.

Comprehensive Plan
POLICY UT-23. Manage the storm and surface water system in Bellevue to maintain a hydrologic balance in order to prevent property damage, protect water quality, provide for the safety and enjoyment of citizens, and preserve and enhance habitat and sensitive areas.

POLICY EN-1. Consider the immediate and long-range environmental impacts of policy and regulatory decisions and evaluate those impacts in the context of the City's commitment to provide for public safety, infrastructure, economic development, and a compact Urban Center in a sustainable environment.

POLICY EN-17. Establish land use regulations that limit the amount of impervious surface area in new development and redevelopment city-wide.

POLICY EN-18. Implement land use incentives to minimize the amount of impervious surface area below that allowed through prescriptive standards, in new development, redevelopment, and existing development city-wide.

POLICY EN-27. Implement the citywide use of low impact development techniques and green building practices that provide benefits to critical areas functions.

POLICY EN-39. Restrict the runoff rate, volume, and quality to predevelopment levels for all new development and redevelopment.

DIRECTION NEEDED FROM COUNCIL
__X_Action
__X_Discussion
__X_Information

At the conclusion of the presentation, **staff seeks approval from Council to move forward with the Areas of Focus. Staff also seeks Council's approval of the Project Interest Statement and Project Principles.**

BACKGROUND/ANALYSIS

This memorandum presents an Executive Summary providing Council with an overview of the LID Principles Project and its status. Following the Executive Summary the memorandum provides Council with information on the following topics:

1. The proposed Project Interest Statement and Principles;
2. Overview of the City's NPDES Stormwater Permit and corresponding requirements;
3. Project status and phase 1 of the work;
4. Discussion of the Areas of Focus, the process to distill the areas, and the next phase of work
5. Information on the proposed Public Participation Plan; and
6. Next Steps

Executive Summary

The 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit ("NPDES Permit") requires the City to review and revise its development-related codes and standards to incorporate and require low impact development ("LID") principles. LID principles are "land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff." LID principles are different from LID Best Management Practices ("BMPs"), which are on-site stormwater control and treatment facilities such as rain gardens and permeable pavement. LID BMP requirements will be addressed in a different project. The intent for the revisions is to make LID the preferred and commonly-used approach to site development. A copy of the NPDES Permit requirement is included as Attachment A.

The permit, however, doesn't provide any metrics for reducing impervious surfaces and native vegetation loss, thus providing jurisdictions flexibility to determine appropriate measures. This allows development of Bellevue-appropriate recommendations that are area and context sensitive, thus avoiding a one-size-fits all approach. The permit does require, however, that the City's review of its development-related codes and standards be similar to the process described in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership 2012). Reviewing to integrate LID principles is a new requirement and process for all the Phase II permittees, including Bellevue. In addition to reviewing the City's development-related codes and standards, the process requires identifying and engaging stakeholders early in the process and ensuring successful implementation.

Bellevue's review project is called the LID Principles Project (the "Project") and the Project deadline is December 31, 2016. Early on, the Project team recognized the need for the Project to be context and area sensitive, recognizing that Bellevue has varying levels of urban development and targeted areas for growth. Consequently a one-size-fits-all approach is inappropriate. For example, what is appropriate for the highly urbanized Downtown, will not be appropriate in Bridle Trails, with its large, treed single-family lots and the community's strong desire to maintain neighborhood character. Bellevue also has development goals for the Downtown, Bel-Red, and Eastgate. Concentrating density in certain areas of the City, such as the Downtown, achieves two things. First, it helps the City meet its GMA obligations to meet growth targets (population and employment) and concentrating growth in areas alreadygrowing provides for concentrated impervious areas while maintaining reduced impervious cover in other areas of the City, which is a LID technique. Balancing environmental benefits with Bellevue's goals for economic development is important and will also be considered.

The Project not only supports permit compliance now and in the future, but it also has the potential to support or advance other Council goals and priorities and certain City programs. For example, minimizing native vegetation loss could result in increased tree canopy, helping to meet proposed tree canopy targets, decreased greenhouse gas emissions, reduced stormwater flows, and reinforcing Bellevue's reputation as a City in a Park. Other efforts that will benefit from the Project include aiding salmon recovery, supporting the Environmental Stewardship Initiative, implementing aspects of the Storm and Surface Water System Plan, and championing the Council's vision of a high quality built and natural environment for Bellevue. In the 2014 Budget Survey, Bellevue's

citizens ranked protecting Bellevue's water quality in its lakes and streams fifth in importance; only public safety issues ranked higher.

The internal Project team, with the assistance of the consulting firm AHBL, has completed reviewing the development-related codes and standards, and from that work has developed Areas of Focus. The Areas of Focus will be the starting point for discussions with the City's boards and commissions and stakeholders about what revisions are appropriate for Bellevue. At the conclusion of the Study Session, staff seeks Council approval of the Areas of Focus. Once approved, the Project may then move forward and begin the public participation process. The Project team will provide updates to the Council throughout the process and ensure Council's questions and concerns are addressed.

If the City adopts any land use code amendments, the adoption must occur before November 2016 to allow the East Bellevue Community Council ("EBCC") to hold a final public hearing on the adopted amendments in early December. Once the EBCC completes its final hearing, the City will have completed the Project and met the compliance deadline of December 31, 2016. A report detailing the review process, revisions which incorporate LID principles, and discussing measures to minimize impervious surfaces, loss of native vegetation, and other measures to reduce stormwater runoff is due to the Washington State Department of Ecology in March of 2017.

Project Principles
The Project Interest Statement and Principles will establish Council-approved guidelines for the Project. This document will guide staff and boards and commissions as they explore the feasibility of the Areas of Focus and develop recommendations to better align the City's codes and standards with the LID principles. These principles require consideration of:

- Bellevue-appropriate options (area and context sensitive);
- Engaging stakeholders (educate and seek input);
- Building on existing City programs;
- Maintaining Bellevue's compliance record with its NPDES permit; and
- Recognizing and seeking to balance competing needs.

A copy of the proposed Interest Statement and Project Principles is included as Attachment B to this memorandum. At the conclusion of the Study Session, staff seeks Council's approval of the Interest Statement and Project Principles or alternative direction.

NPDES Permit: Stormwater Management Program
LID principles are but one component of the City's Stormwater Management Program, required under the City's NPDES Permit, which is a requirement of the federal Clean Water Act ("CWA"). The CWA goal is to protect water quality and beneficial uses of the nation's surface waterbodies, such as aquatic life support, recreational activities and drinking water supply. The Stormwater Management Program is designed and intended to reduce pollutants discharged to and from the municipal storm drainage systems into waterbodies.

The NPDES Permit continues and builds upon the prior permit's Stormwater Management Program requirements by increasing and adding new requirements that are phased in over the 5-year permit term, including LID principles. Examples of increased or new requirements that staff are implementing include:

Requirement	2013-2018 Change
Municipal O&M	Reduce inspection/maintenance cycle from 4 to 2years for over 21,000 catch basins
Illicit Discharge Detection & Elimination (IDDE)	Field screen at least 40% of municipal storm system for illicit discharges

Monitoring	Participate in collectively-funded regional monitoring program
Public Education & Outreach	Measure a targeted audience's adoption of water quality protective measures
Controlling Runoff from New Development, Redevelopment & Construction Sites	Make LID (Principles and BMPs) the preferred and commonly-used approach to site development

Project Status – Phase I Work
Staff introduced the Project to Council on September 16, 2013. The September Study Session materials are included as Attachment C. Since introducing the Project, the City selected AHBL, Inc. as its consultant to assist in the required review. AHBL authored the guidebook *Integrating LID into Local Codes* for the Puget Sound Partnership that contains the review process the City must undertake for this project. Additionally, AHBL has provided consulting services for numerous jurisdictions seeking to integrate LID into codes and standards, including the cities of Newcastle, Redmond, Issaquah, and Kirkland.

The Project's first substantive work was the Opportunity Analysis of the City's Comprehensive Plan. Between February and June 2014, the consultant, with assistance and input from staff, reviewed the Comprehensive Plan to identify opportunities to integrate LID principles into the policy document. As a result of the analysis, it was concluded that, although the Comprehensive Plan provides excellent policy support for earlier LID requirements, opportunities exist to better align the City's polices with the new LID principle requirements. Based on this conclusion, on September 24, 2014, staff presented recommended policy amendments to the Planning Commission as part of the City's major Comprehensive Plan Update.

The Planning Commission's recommendation, which incorporated policy updates addressing LID, was presented to the Council on April 6, 2015. Council specifically reviewed the Environment Element policies, including LID on June 8. During that Study Session, Council raised questions about proposed policy EN-X6, in response to questions about the policy wording and the objectives of the NPDES Permit. A written response to Council's questions was provided with the July 6 Study Session materials for the Comprehensive Plan update. Staff will also be available to address Council's questions at the July 6 Study Session.

The Opportunity Analysis of the City's development codes and standards is also complete. To complete the analysis, AHBL conducted a thorough review of Bellevue's development codes and standards and development guidelines, including the:

- Transportation Code (Title 14);
- Land Use Code (Title 20);
- Construction Codes (Title 23);
- Utilities Codes (Title 24);
- Clearing and Grading Code and Development Standards;
- Critical Areas Handbook;
- Design Guidelines Building/Sidewalk Relationships, Central Business District;
- Environmental Best Management Practices & Design Standards;
- Pedestrian Corridor and Major Public Open Space Design Guidelines;
- Storm and Surface Water Engineering Standards; and
- Transportation Design Manual and Standards.

The Opportunity Analysis was presented to the internal staff team, which includes staff from Development Services, Transportation, Parks, Fire, and Utilities departments, and discussed over six working meetings. Like the Comprehensive Plan polices, the consultants and staff found the City's development-related codes and standards generally support LID Principles, and found opportunities exist to better align the City's development codes and standards with LID principles.

Moving to Next Phase of Work: Evaluating Appropriate Revisions
To better align the City's development codes and standards, themes or Areas of Focus were identified in the Opportunity Analysis for further consideration and discussion with stakeholders, the City's commissions and boards, and interested citizens. The goal of this next phase of work is to determine what revisions, if any, are appropriate to the City's development-related codes and standards to make LID the preferred and commonly-used approach to site development. The Areas of Focus Memorandum is included as Attachment D to this memorandum.

The internal team considered numerous issues when evaluating the appropriateness of the Areas of Focus, including:

- Providing site flexibility similar to allowed modifications to critical area buffers and setbacks;
- Ensuring the right vegetation in the right place;
- Thinking outside of the box for creative solutions, such as the use of incentives;
- Understanding impacts to public and private projects;
- Considering neighborhood concerns and goals;
- Implementing programs related to preserving and protecting trees;
- Improving processes – such as elevating site analysis to the forefront;
- Understanding what the market supports;
- Balancing competing interests and needs;
- Acknowledging known issues with LID BMPs;
- Focusing on solutions that support other Council goals and priorities; and
- Engaging in the process without pre-conceived ideas.

From these discussions, the following Areas of Focus emerged:

- Land Use Code
  - Evaluate use of LID principles (and BMPs) early in the site design process
  - Reduce impervious surface lot coverage
  - Preserve and enhance tree canopy
  - Improve options for clustering development
- Transportation Code and Design Standards
  - Reduce impervious surfaces in road rights-of-way
  - Increase tree canopy in transportation facilities.

For each area of focus, both the opportunities and challenges to implement each area were vetted and considered. The Areas of Focus were also presented to directors or their representatives from Parks, Utilities, and Transportation because their respective departments undertake development in the City that may be affected by incorporating LID Principles into the City's development codes and standards. Staff was interested in learning their impressions, questions, and concerns, and having the opportunity to inquire about possible stakeholders to invite to participate in the Project as it moves forward.

The next phase of work for the Project is to engage the public, stakeholders, commissions and boards and initiate discussions about what revisions to the City's development-related codes are appropriate for Bellevue. To initiate this next phase of work, staff is seeking Council's input on and approval of the Areas of Focus. The Council-approved Areas of Focus will be the starting point for the next project phase. If additional areas of focus in the codes and standards are identified by stakeholders, including the City, these additional areas will be evaluated for feasibility for inclusion in the Project or addressed during the next permit cycle.

Draft Public Participation Plan

A robust public participation plan is an important element of the Project. A copy of the draft public participation plan is included with this Memorandum as Attachment E. The goal of the public participation plan is to educate the public about low impact development, the NPDES Permit and its requirements, and Bellevue's approach to meeting the LID permit requirement. The public participation effort is intended to achieve specific desired outcomes, including:

- Providing clear information to the public on the purpose of the LID Principles project and the project process;
- Providing opportunities for interested parties to comment, and for people to listen and learn from one another;
- Conducting public participation events in multiple locations to capture an area's priorities and to make citizen participation easier;
- Seeking broad participation of all interested groups and individuals to capture different viewpoints;
- Harnessing the energies and knowledge of a broad range of stakeholders to ensure issues and concerns are understood, considered, and addressed wherever possible; and
- Creating a transparent process which documents all public input and makes that input readily available for review.

Components of the plan include public workshops, open houses, and presentations before the City's boards, commissions, and the East Bellevue Community Council. To provide easy access to information, the Project will establish a web page on the City's website where the public may access information, schedules, and contact information.

Next Steps

After Council direction, staff will next meet with the City's Parks Board and Environmental, Transportation and Planning Commissions to introduce the Project, explain the process, and identify roles and responsibilities as the Project moves forward. Staff will contemporaneously finalize the public engagement plan and begin engaging stakeholders and community members on exploring the feasibility of each of the Areas of Focus. Staff will provide Council with a status report this fall.

ALTERNATIVES

- Direct staff to explore the six Areas of Focus and approve the Project Interest Statement and Guidelines.
- Provide alternative direction to staff.

RECOMMENDATION

- Direct staff to explore the six Areas of Focus and approve the Project Interest Statement and Guidelines

ATTACHMENT(S)

A. NPDES Permit Requirement
B. Draft Project Interest Statement and Principles
C. September 16, 2013 Study Session materials
D. Areas of Focus Memorandum, AHBL
E. Draft Public Participation Plan

AVAILABLE IN COUNCIL DOCUMENT LIBRARY

Document	Information Summary	Meeting Date & Recommended Reading
Integrating LID into Local Codes	Guidance for required review	July 6 Study Session. Introduction.

	process	Reviewing Steps 2 and 3 illustrates project status to date

The public may access this document here:
http://www.psp.wa.gov/downloads/LID_Guidebook/20120731_LIDguidebook.pdf

Low Impact Development (LID) Principle Condition and Definitions from the 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit

S5.C.4 Controlling Runoff from New Development, Redevelopment and Construction Sites Special Condition S5.C.4.f.i. and ii. (pages 30-31):

f. Low impact development code-related requirements.

i. No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs.

The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations. Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: *Integrating LID into Local Codes: A Guidebook for Local Governments (Puget Sound Partnership, 2012).*

ii. Each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017. This summary shall include, at a minimum, a list of the participants (job title, brief job description, and department represented), the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development related codes. The summary shall be organized as follows:

a) Measures to minimize impervious surfaces;
b) Measures to minimize loss of native vegetation; and
c) Other measures to minimize stormwater runoff.

DEFINITIONS AND ACRONYMS

Low Impact Development means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning and distributed stormwater management practices that are integrated into a project design.

LID means Low Impact Development.

Low Impact Development Principles means land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Low Impact Development Best Management Practices means distributed stomwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.

BMP means Best Management Practice.

Low Impact Development Principles Project

For Council Consideration and Comment
Low Impact Development Principles Project
Draft Interest Statement and Project Principles
July 6, 2015

Purpose

The interest statement and project principles are intended to guide staff and the City's commission's and boards as they explore and develop appropriate options and recommended amendments to Bellevue's development codes and standards to make low impact development (LID) the preferred and commonly used approach to site development in Bellevue.

Background

The 2013-2018 NPDES[1] Western Washington Phase II Municipal Stormwater Permit requires the City to review and revise its development-related codes and standards to incorporate LID principles. The intent of the revisions is to make LID the preferred and commonly used approach to site development. The permit defines LID principles as land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff. LID principles are different from LID best management practices (BMPs), which are on-site stormwater control and treatment facilities such as rain gardens and permeable pavement. LID BMP requirements will be addressed in a different project. The LID principles are the focus of this project.

The review and revision process the City is undertaking must be similar to that described in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership 2012). Under the terms of the permit, this project must be completed by December 31, 2016. A report detailing how the project satisfies the permit conditions is due to Ecology in March of 2017.

Interest Statement

Bellevue has a long history of supporting low impact development principles in its development policies and regulations; from early (1987) sensitive or critical areas protection and long-standing significant tree and maximum impervious surface coverage regulations to the clustering and LID incentive regulations included in the recent (2009) Bel-Red Rezone. Bellevue supports the objective of maintaining the region's quality of life, including that of making low impact development the preferred and commonly used approach to site development.

[1] NPDES means National Pollutant Discharge Elimination System. The NPDES Permit is a Federal Clean Water Act permit intended to protect water quality and fishable, swimmable uses of the nation's surface water resources.

Project Principles

The Project Principles are intended to ensure the community's visions and goals are achieved while developing a program that supports development and redevelopment and meets LID Principles. The following Council-approved Project Principles will guide the LID Principles Project:

Bellevue Appropriate. Proposed amendments to Bellevue's development codes and standards will be area and context sensitive. Attention will be paid to the differing levels of urban development, watershed conditions, impervious surface coverage, tree canopy coverage, and areas of direct discharge. Proposed amendments, where feasible, will provide flexibility, incentives, and innovation in achieving the goal of making LID the preferred and commonly used approach to site development in Bellevue.

Engage Stakeholders. Provide a public participation process that seeks and includes input from a wide range of stakeholders. The process will provide opportunities for interested stakeholders to learn about LID principles, participate in developing options, and provide meaningful and informed comments.

Maintain Bellevue's Compliance Record with its NDPES Stormwater Permit. The LID principles project shall be timely completed to ensure compliance with the requirement that the amendments are effective by December 31, 2016.

Build On Existing Information and Programs. The LID Principles Project will build on existing City information and programs to develop and evaluate options to make LID the preferred and commonly used approach to site development.

Recognize and Seek to Balance Competing Needs. The LID Principles Project will recognize and seek to balance competing laws applicable to development and redevelopment, by considering and developing effective, innovative, flexible, and/or area-specific options.

Council Approved Areas of Focus for the LID Principles Project.

The City Council directs staff to begin exploring, in accordance with the Project Principles listed above, the following six Areas of Focus:

1. Land Use Code
    a. Evaluate use of LID principles (and BMPs) early in the site design process;
    b. Reduce impervious surface coverage
    c. Preserve and enhance tree canopy
    d. Improve options for clustering development

2. Transportation Code and Design Standards
    a. Reduce impervious surfaces in road rights-of-way
    b. Enhance tree canopy in transportation facilities

Item No. SS 2(b)
September 16, 2013

CITY COUNCIL STUDY SESSION ITEM

SUBJECT
New NPDES Western Washington Phase II Municipal Stormwater Permit
(NPDES = National Pollutant Discharge Elimination System)

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POLICY ISSUES
The Washington State Department of Ecology (Ecology) issued a new National Pollutant Discharge Elimination System (NPDES) Western Washington Phase II Municipal Stormwater Permit, effective August 1, 2013. Bellevue, along with over 80 other Western Washington municipalities, is required to comply with the new 5-year (2013-2018) Permit conditions. Provisions of the new permit will require Bellevue to modify existing regulations and practices.

DIRECTION NEEDED FROM COUNCIL
___Action
___Discussion
_X_Information

This briefing provides information on the new Permit. No action is required of Council.

BACKGROUND/ANALYSIS

Overview and Background
The National Pollutant Discharge Elimination System (NPDES) municipal storrmwater permits are federal Clean Water Act permits. The goal of the federal Clean Water Act (CWA) is to protect water quality and restore waters of the nation for "fishable, swimmable" uses. The permit requirements are intended to reduce pollutants discharged from municipal storm drainage systems to help achieve this goal.

NPDES Permit requirements are phased in over the 5-year permit term and apply to functions across municipal organizations. Within Bellevue government, departments take the lead for implementing

permit conditions that apply to their programs and, for permit conditions which apply to multiple department functions, a lead department will manage implementation of the condition through cross-departmental coordination or teams. Overall permit management is provided by the Utilities Department with oversight from a citywide Steering Committee reporting to the City Manager's Office. Enforcement provisions for the CWA permit include fines, imprisonment and 3rd party lawsuits.

Attachment 1 contains further background information on the NPDES permit.

Permit Status

In August 2012, Ecology:

- Extended the existing (2007-2012) Permit to July 31, 2013 with no new permit conditions;
- Issued a new 5-year Permit (2013-2018) effective August 1, 2013; and
- Issued a new 2012 Ecology Stormwater Manual containing significantly revised low impact development (LID) stormwater facility requirements (e.g., rain gardens, bioretention facilities, pervious pavement) for new development and redevelopment projects.

Although a Coalition of Phase II municipalities (including Bellevue) appealed certain conditions in the new Permit, there is no stay on permit conditions. For 2013, Bellevue has continued implementation of the remainder of the one year Permit conditions and began processes to implement the new 2013-2018 NPDES Permit conditions by the permit-specified deadlines. There are no new Permit conditions for 2013. Bellevue remains in compliance with current Permit requirements as documented in the March 2013 submittal of the 6th NPDES Annual Report to Ecology.

New 2013-2018 Permit

The new permit, effective August 1, 2013, retains the first permit's Stormwater Management Program structure and phased implementation approach. It continues and builds upon the first permit's Program requirements by:

1. Increasing permit requirements for the illicit discharge detection and elimination (IDDE) and municipal storm drainage system operation and maintenance (O&M) programs. Specifically, the:

   - Old Permit required field assessing storm drainage outfalls in three waterbodies for illicit discharges per a prescribed methodology, then tracking pollutants back to the source and taking steps with property owners to eliminate sources in a 4-year time period;

     New Permit requires developing a methodology to field assess 40% of the city-owned storm drainage system for illicit discharges, and then tracking pollutants back to the source and taking steps with property owners to eliminate sources in a 4 year, 5 month time period.

     Ecology is expected to issue guidance on implementing this new Permit requirement. If the guidance allows municipalities to utilize existing programs and the outfall approach from the first permit to meet the 40% requirement, then cost and resource impacts will be reduced.

   - Old Permit requires inspecting municipal storm drainage catch basins (over 23,000) once within the 5-year term;

New Permit requires inspecting municipal storm drainage catch basins in 4-years (by August 1, 2017) and, thereafter, inspecting them on a 2-year frequency.

Ecology subsequently issued guidance to clarify options and alternatives to meet the increased catch basin inspection frequency that may help mitigate resource and cost impacts for this new requirement. Utilities' surface water operations and maintenance staff will be evaluating Bellevue's options to comply with the requirement, protect water resources and minimize program resource and cost impacts.

2. Adding a new monitoring requirement;

- Old Permit required Phase II municipalities to prepare to implement a stormwater monitoring program in the next (new) permit.

- New Permit adds a 3-part monitoring program requirement and provides permittees with the option of either:
  - Paying to participate in a regional stormwater monitoring program (RSMP) to meet the new requirement (fee option)

  or
  - Conducting an independent monitoring program to meet the new monitoring program requirement (independent option).

  The 3-part monitoring program is intended to provide information on the:
  - Status and trends of water quality in urban and rural small streams and the marine nearshore ("Are our streams and marine shorelines getting better or worse?")
  - Effectiveness of stormwater activities required by the permit, ("Is this activity making stormwater cleaner?")
  - Improving protocols and sharing information about removing sources of pollution ("Is there someone I can ask about solving this type of pollution problem?").

  The regional program fee option will provide better data and cost Bellevue approximately $85,000 annually compared to the approximately $800,000 to $1 million annual cost for the independent program. For this permit requirement, Council approved the 2014 Utilities budget which includes the annual $85,000 funding for the RSMP fee option.

3. Adding two significant new development requirements and project vesting requirements;

- Old Permit required adoption of the development stormwater standards in the 2005 Ecology Stormwater Manual for Western Washington which included allowing low impact development techniques.

- New Permit requires adoption of two new low impact development (LID) requirements by December 31, 2016. The intent of the new requirements is that municipalities "shall make low impact development the preferred and commonly used approach to site development."

  - *The first requirement* is to amend codes and standards to require LID stormwater facilities for on-site stormwater management unless infeasible and to do so by adopting the new 2012 Ecology Stormwater Management Manual or an equivalent Phase I

Manual. The 2012 Ecology Manual requires all property owners developing or redeveloping property to do a site assessment and implement certain LID stormwater BMPs unless infeasible. The LID stormwater facilities include rain gardens, bioretention facilities, and pervious pavement.

Permit compliance will require amending three City codes, revising standards, and modifying development services programs and processes and documentation. There will also be post-development impacts for on-going inspection and maintenance of these dispersed new facilities to consider. A multi-department project team lead by Utilities will implement this permit requirement.

- *The second requirement* is to conduct a review and revision process of citywide land use policies, codes and standards with the intent of minimizing impervious surfaces and native vegetation loss. No metric is provided for impervious surfaces or native vegetation and each jurisdiction is given the flexibility of determining what is sufficient to that locale. Ecology requires a good faith effort be conducted that includes business and community members.

  Examples of land use code revisions provided by Ecology to meet this requirement include:
  - Site assessment, pre-application and review process
  - Reduce street lane widths
  - Eliminate curb and gutter requirements
  - Provide setback and height flexibility
  - Impervious surface limits
  - Native vegetation percent area requirements
  - LID stormwater facilities as part of open space/landscaping/rights-of-ways
  - LID design standards (streets, parking lots, driveways, sidewalks)
  - Allowance for clustered housing and efficient roads.

  The first step to implementing this requirement is to conduct an opportunity analysis of existing policies, codes and standards to help define the scope of the review and revision process. After this analysis is completed, the multi-departmental project team will develop a recommended project plan and public and/or stakeholder process for City Council direction. Policies, codes, and standards that Ecology requires municipalities to review include:
  - Comprehensive Plan
  - Subdivision and PUC development codes
  - Critical areas and shoreline management regulations
  - Zoning code
  - Open Space code
  - Fire Code
  - Bulk and dimensional consideration
  - Impervious surface limits
  - Landscaping/native vegetation/street landscaping standards

- Parking
- Design standard and guidelines for building and site design elements
- Street standards.

- *Vesting* - the new Permit also specifies vesting requirements for development projects. The requirements are generally consistent with the City's vesting regulations with the exception of a one-year window for subdivisions.

Next Steps

The first NPDES Annual Report under the new Permit is required to be submitted by March 31, 2014. Ecology has waived submittal of a compliance report for the 2013 transition year which means the first Annual Report under the new Permit will only contain the 2014 Stormwater Management Program Plan (SWMPP). The SWMPP describes the actions the City will take in 2014 to implement the new permit requirements. The City is currently in the process of performing a gap analysis between the old and the new permit conditions and developing a citywide 5-year work plan for the new permit. The 2014 SWMPP will be based on this work plan.

Multi-department project teams have begun work on the two new LID permit requirements and Utilities' staff has begun assessing options to meet the increased program requirements for the illicit discharge detection and elimination (IDDE) and municipal storm drainage O&M programs.

The budgetary impacts of the new Permit are being assessed and will be brought forward through the 2015-2016 budget process.

Staff will keep City Council informed and seek Council direction as the new Permit is implemented.

ALTERNATIVES: N/A

RECOMMENDATION: N/A

ATTACHMENT
Attachment 1: NPDES Permit Background Information.

AVAILABLE IN COUNCIL OFFICE FOR REVIEW
New 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit

Attachment 1

Background Information on the NPDES Western Washington Phase II Municipal Stormwater Permit

The National Pollutant Discharge Elimination System (NPDES) municipal storrmwater permits are federal Clean Water Act permits. The goal of the federal Clean Water Act (CWA) is to protect water quality and restore waters of the nation for "fishable, swimmable" uses. The permit requirements are intended to reduce pollutants discharged from municipal storm drainage systems to help achieve this goal.

The permit affects local governments and property owners. The CWA created a Phase I permit for large cities and counties[1] and a Phase II permit for medium and small cities and counties[2]. Bellevue is a Phase II permittee. The federal Environmental Protection Agency specified minimum permit requirements and delegated permit authority to state environmental agencies. State agencies can add additional requirements. In Washington, the permit authority is the state Department of Ecology.

In 2007, Ecology issued the first Western Washington Phase II municipal stormwater permit. The permit was issued to over 80 Phase II municipalities, including Bellevue, for a 5-year term, 2007-2012. A Coalition of Phase II municipalities (including Bellevue) appealed certain conditions in the Permit. Ecology modified the permit in 2009 in response to appeal rulings by the Washington State Pollution Control Hearings Board (PCHB).

The Permit requires municipalities to implement a Stormwater Management Program (Program) consisting of over 100 permit-specified "best management practices" (BMPs). The Program is intended to meet the federal compliance standard to protect water quality and reduce the discharge of pollutants to the "maximum extent practicable" (MEP) and meet state AKART (all known, available, and reasonable methods of prevention, control and treatment) waste discharge requirements.

The Program's best management practices are grouped under the following categories:

- Public Education and Outreach;
- Public Involvement and Participation;
- Illicit Discharge Detection and Elimination (IDDE);
- Controlling Runoff from New Development, Redevelopment and Construction Sites; and
- Pollution Prevention and Operations and Maintenance for municipal operations

In addition, the Permit requires:

- Water Quality Monitoring;
- Reporting (e.g., permit compliance documentation); and
- Implementation of waterbody-specific clean-up plans developed by Ecology, if applicable. To date, Ecology has not developed such plans for Bellevue waterbodies.

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[1] Phase I municipalities are those which had 100,000 or more in population in the 1990 census, includes Seattle, Tacoma; King, Snohomish, Pierce, Clark counties and WA Department of Transportation(WSDOT).

[2] Phase II municipalities are those which had between 10,000 and 100,000 in population in the 1990 census.

Attachment 1

Background Information on the NPDES Western Washington Phase II Municipal Stormwater Permit

NPDES Permit requirements are phased in over the 5-year permit term and apply to functions across municipal organizations. Within Bellevue government, departments take the lead for implementing permit conditions that apply to their programs and, for permit conditions which apply to multiple department functions, a lead department will manage implementation of the condition through cross-departmental coordination or teams. Overall permit management is provided by the Utilities Department with oversight from a citywide Steering Committee reporting to the City Manager's Office. Enforcement provisions for the CWA permit include fines, imprisonment and 3rd party lawsuits.

PROJECT MEMO

TO:	Catherine Drews and Phyllis Varner City of Bellevue	**DATE:**	May 5, 2015
FROM:	Wayne Carlson and Annalisa McDaniel AHBL	**PROJECT NO.:**	2130786.30
	Seattle – (206) 267-2425	**PROJECT NAME:**	Bellevue LID Principles Project
SUBJECT:	Bellevue LID Principles Project – Areas of Focus		

Introduction

The City is required under the 2013-2018 NPDES[1] Western Washington Phase II Municipal Stormwater Permit (NPDES Permit), to review and revise its development codes and standards to incorporate low impact development principles with the intent of making low impact development (LID) the preferred and commonly-used approach to site development. The NPDES Permit defines LID principles as land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff. The review and revision process the City is undertaking must be similar to that described in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership 2012). Under the terms of this permit, this project must be complete by December 2016. A report detailing the project is due to Ecology in March of 2017.

The first phase of this work, the opportunity analysis, is complete. This memorandum contains the results of the opportunity analysis of Bellevue's land use and development-related codes and standards for application of LID principles. Between November 2014 and April 2015, AHBL reviewed the City's codes and standards and met with City staff to address LID principles.

Based on our review of the City's codes and standards and discussions with City staff, we found that the City of Bellevue's land use and development-related codes and standards generally support the LID principles. There are opportunities to better align the City's codes and standards with the LID principles. This memorandum recommends six areas of focus in the codes and standards for further consideration and review.

Background

AHBL is assisting City of Bellevue staff in implementing the LID principles requirement of Special Condition S5.C.4.f of the NPDES Permit. The focus of this work is on the LID principles to minimize impervious surfaces, native vegetation loss and stormwater runoff in site development rather than on the LID Best Management Practices (BMPs).[2] Additionally the work analyzes how implementing these principles may affect the City's development codes, rules, and standards, some of which have not traditionally been considered part of the State's regulation of stormwater. Special Condition S5.C.4.f, as summarized below, states:

[1] NPDES means National Pollutant Discharge Elimination System. The NPDES Permit is a federal Clean Water Act permit intended to protect water quality and fishable, swimmable uses of the nation's surface water resources.

[2] The NPDES Permit requires municipalities to revise their stormwater development standards to require LID BMPs where feasible for new development and redevelopment. LID BMPs are stormwater management facilities such as rain gardens, bioretention facilities and permeable pavement. The City will address the LID BMP requirement in a separate project revising the City's stormwater engineering and clearing and grading codes and standards. The new LID BMPs condition is also required to be in place by December 31, 2016.

f. Low impact development code-related requirements.

i. No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. [...] The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations. Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: Integrating LID into Local Codes: A Guidebook for Local Governments (Puget Sound Partnership, 2012).

ii. [E]ach Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017. ... The summary shall be organized as follows:

a) Measures to minimize impervious surfaces;
b) Measures to minimize loss of native vegetation; and
c) Other measures to minimize stormwater runoff.

Between February and June 2014, AHBL reviewed the Bellevue Comprehensive Plan to identify opportunities to integrate LID principles into that policy document. We generally found that the City's Comprehensive Plan provided excellent policy support for the LID principles. There were, however, some opportunities to better align the City's policies with the LID principles. Our policy recommendations were presented to the Bellevue Planning Commission on September 24, 2014 as part of the City's broader eight-year, periodic update to its Comprehensive Plan. Amendments to the Comprehensive Plan, including LID policy recommendations, are scheduled to be considered and adopted by the Bellevue City Council in June of 2015.

AHBL next reviewed the Bellevue City Code and development standards for opportunities to integrate the LID principles identified in Special Condition S5.C.4.f.ii. The following codes and standards were analyzed:

- Transportation Code (Title 14)
- Land Use Code (Title 20)
- Construction Codes (Title 23)
- Utilities Codes (Title 24)
- Clearing and Grading Code and Development Standards
- Critical Areas Handbook
- Design Guidelines Building/Sidewalk Relationships, Central Business District
- Environmental Best Management Practices & Design Standards
- Pedestrian Corridor and Major Public Open Space Design Guidelines
- Storm and Surface Water Engineering Standards
- Transportation Design Manual and Standards

The results of our opportunity analysis of the codes and standards were presented to the City's internal LID Principles Team for review and discussion. We met with Bellevue's LID Principles Team on six occasions between December 2014 and April 2015 to discuss the integration of LID principles into the City's codes and standards. The following generally describes the nature of each meeting:

December 8, 2014	• Introduction by Bellevue's Project Manager about the permit requirements • Preliminary discussion of opportunities within the City's development codes and standards to minimize impervious surface cover and vegetation loss
January 6, 2015	• Transportation opportunities to minimize impervious surface cover
January 20, 2015	• Discussion of opportunities within the land use code to minimize impervious surface cover and native vegetation loss

	• Discussion of differences among various Bellevue neighborhoods and the implications for city-wide versus neighborhood-specific standards
February 5, 2015	• Discussion of strategies to encourage and/or require the preparation of site analyses at the initial phases of project conception • Discussion of opportunities for narrower streets including reduction of required street, bicycle lane, and sidewalk widths. • Discussion of vegetation retention strategies
February 18	• Detailed discussion of vegetation retention strategies
April 28	• Discussion of areas of focus

Our findings and recommendations are described below.

Findings and Recommendations

Like our findings for the Comprehensive Plan, we found that the City of Bellevue's existing land use and development-related codes and standards generally support the LID principles identified in the NPDES Permit. There are opportunities to better align the City's codes with the LID principles within the Permit. Based on our opportunity analysis and discussions with the LID team, we identified six areas of focus to elevate for further consideration for potential amendments to codes and standards.

The six areas of focus are:

1. Land Use Code
    a. Evaluate use of LID principles (and BMPs) early in the site design process
    b. Reduce impervious surface coverage
    c. Preserve and enhance tree canopy
    d. Improve options for clustering development

2. Transportation Code and Design Standards
    a. Reduce impervious surfaces in road rights-of-way
    b. Increase tree canopy in transportation facilities

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1. Land Use Code

Four areas of focus in the Land Use Code (BCC Title 20) were identified through our code review and meetings with staff. Areas of focus include site analysis and design, reducing impervious surfaces coverage, tree canopy preservation and enhancement, and clustering development, specifically reducing obstacles to clustering. These areas are interconnected, and it may be helpful to consider new code language and amendments that address more than one of these areas at once.

a. Site Analysis / Site Design

The Phase II NPDES Permit requires that LID is the preferred and commonly used approach to site development. Currently there are no requirements in Bellevue City Code that state that LID principles must be considered at the beginning of the development or redevelopment process. Early analysis in the site design process is critical to identify suitable areas for LID infrastructure within the constraints of a project site.

Opportunity

i. Evaluate use of LID principles (and BMPs) early in the site design process. At the outset of site development or redevelopment, evaluate LID principles and LID BMP

feasibility. Ensure that reviewers from all departments consider LID during development review.

Challenge

i. Designing a project to factor in LID at the beginning of site development will require a paradigm shift for developers and reviewers.

ii. Geotechnical, soil, and other analysis required before a property owner or developer can determine site feasibility may be costly.

b. *Impervious Surface Coverage*

Minimizing impervious surfaces is a low impact development principle. As a developed urban area, it is challenging for Bellevue to address this requirement. Opportunities to incorporate low impact development principles will largely be provided as properties redevelop.

Opportunities

i. Reduce impervious surface lot coverage in the City by reducing maximum allowed impervious surface coverage proportional to the area of the lot.

ii. Replace the term "Impervious Surface" with Ecology's definition of "Hard Surface" in BCC 20.20.010 and BCC 20.20.460 to reduce impervious surface coverage. "Hard surface" includes permeable surfaces such as permeable driveways, patios, and sport courts.

iii. Reduce vegetation loss by allowing site design flexibility similar to the flexibility provided in the Critical Areas Ordinance for setback and buffer requirements. Flexibility in site design will allow developers more options in site planning to meet LID goals.

Challenges

i. Reducing allowed impervious surface coverage might be perceived as the City taking away development rights of private property owners.

ii. It will need to be shown how a reduction in impervious surface coverage can both benefit the City and allow property owners to develop or redevelop their lots.

c. *Tree Preservation and Canopy Enhancement*

Tree canopy preservation and enhancement is a low impact development principle. Tree canopy in Bellevue decreased 20 percent between 1986 and 2006[3]. Preserving and increasing tree canopy is a priority of the City of Bellevue Environmental Stewardship Initiative.

[3] City of Bellevue Environmental Stewardship Initiative Strategic Plan, 2013-2018.

Opportunities

iii. Numerous opportunities were identified by staff. These opportunities likely need to be further refined and prioritized. The opportunities include:

a) Amend the definition of significant tree;

b) Enhance fencing and other requirements to reduce vegetation loss caused by construction staging;

c) Establish a fee in lieu program to replace trees removed on private property with trees planted at publicly owned priority sites; and

d) Establish innovative programs and/or incentives to preserve trees.

Challenges

i. There is an apparent cultural shift occurring in the City, moving away from tree preservation and toward view protection and tree removal.

ii. Land Use Code lacks the flexibility to accommodate development and vegetation preservation on R5 and higher intensity zoned lots.

iii. There is a limited number of staff available for enforcement.

d. Clustering Development

As noted above, opportunities to incorporate low impact development principles will largely be provided as properties redevelop. To increase the likelihood of clustered residential development and redevelopment, add tools to the Land Use Code to improve opportunities for clustering and allow for zero lot line development.

Opportunities

i. Amend Land Use Code criteria to improve clustering provisions and provide for zero-lot line development. This is possible through permitting short plats for clustered development that would not meet current lot size, setback, and access standards.

ii. Clustering and zero-lot line development may lead to less vegetation loss, more affordable housing options, and denser development compared to traditional single family development.

Challenges

i. The success of clustered development is dependent on market demand.

ii. There are currently no provisions for zero lot line development in the Bellevue City Code.

iii. Clustering and native vegetation preservation may be difficult to achieve without flexibility in setback and buffer requirements.

2. Transportation

a. *Impervious Surface (Road Rights-of-Way)*

Minimizing impervious surfaces is a low impact development principle. As a developed urban area, it is challenging for Bellevue to address this requirement. There are opportunities to explore variants to the City's existing street standards that serve to reduce impervious surface coverage. This may result in designs that may differ amongst the City's neighborhoods.

Opportunities

i. Minimize impervious surfaces by:

a) Reducing the overall impervious nature of improved Rights-of-Way by potentially reducing or eliminating lanes and/or widths and associated pedestrian and bicycle facilities.

Challenges

i. Loss of parking.

ii. Providing adequate fire access (IFC 503).

iii. Bicycle and pedestrian groups may object to changes within the City's street standards.

iv. The City wants to design complete streets for all users, but complete streets require a substantial amount of impervious surface coverage.

v. Reduction of impervious surface coverage may penalize non-polluting modes of transportation.

b. *Tree Canopy within Transportation Facilities*

Achieving City-wide tree canopy coverage of 40 percent is a central element within the Bellevue Environmental Stewardship Initiative Strategic Plan (ESI). The tree canopy enhancement goals of the Environmental Stewardship Initiative can be furthered by leveraging opportunities to integrate tree canopy within transportation facilities. Enhancing the tree canopy will serve two goals: integrating LID principles and increasing the tree canopy, which is a goal of the ESI.

Opportunities

i. Enhance City-wide tree canopy by increasing landscaping areas and/or integrating additional tree canopy into new and retrofit transportation designs.

ii. Specify coniferous species, where appropriate, to facilitate stormwater interception during the rainy winter months when deciduous species may not be fully leafed.

Challenges

i. A limited number of conifer species are suitable for use in street rights-of-ways.

WEC/AM/am

Low Impact Development Principles Project

DRAFT Public Participation Plan

Introduction

The City of Bellevue is updating its codes and standards to be consistent with the Low Impact Development Principles condition in the 2013-2018 National Pollutant Discharge Elimination System (NPDES) Western Washington Phase II Municipal Stormwater Permit. As a Phase II Permittee, the City is required to review and update its development codes and standards to make Low Impact Development (LID) the preferred and commonly-used approach to site development.

The intent of this Public Participation Plan is to describe opportunities for stakeholders to participate in the process and provide input on potential code and standard revisions to make LID the preferred and commonly-used approach to site development.

The public participation effort is intended to achieve specific desired outcomes, which include:

- Provide clear information to the public on low impact development, the LID Principles Project and project proposals;
- Involve commissions and boards early in and throughout the project;
- Provide opportunities for interested parties to comment and for people to listen and learn from one another;
- Conduct public participation events in multiple locations to capture an area's priorities and to make citizen participation easier;
- Seek broad participation of interested groups and individuals to capture differing viewpoints;
- Harness the energies and knowledge of a broad range of stakeholders to ensure issues and concerns are understood, considered, and addressed wherever possible;
- Create a transparent process which documents public input and makes it available for review.

The Public Participation Plan may be modified if necessary to meet the NPDES Permit compliance deadline of December 31, 2016. If the Public Participation Plan is modified, stakeholders are welcome to submit comments directly to the project contacts or participate through the City's boards, commissions, and City Council meetings.

Website

The LID Principles Project website is available at: *website address*

- The website provides education, project schedule and links to project documents, and contact information for the project team.

Stakeholder Notification

We will develop a notification process for distribution to a wide range of stakeholder groups. The notices will contain a brief description of the project and the opportunities for public participation in the project. The stakeholder groups identified so far, include:

- Neighborhood groups
- Environmental groups
- Developer groups
- Bicycle/Pedestrian groups
- Business associations
- Building associations
- Architecture, engineering, and planning professionals

Boards, Commissions, and EBCC: http://bellevuewa.gov/boards_commissions.htm

Four City boards and commissions which represent Bellevue citizen's interests and the East Bellevue Community Council (EBCC), representing Bellevue residents in the East Bellevue area, will be asked to provide input on the LID Principles Project early and periodically throughout the project. The public has the opportunity to attend and provide comments at these meetings. Early and periodically through the process.

Informational Briefings

The project team will provide informational briefings to the four boards and commissions after receiving Council direction for the project in June 2015.

- Planning Commission
- Environmental Services Commission
- Transportation Commission

- Parks and Community Services Board

The project team will also provide an informational briefing to East Bellevue Community Council (EBCC).

Public Workshops

The objective of the public workshops is to introduce and educate the public on Low Impact Development and the City of Bellevue's Low Impact Development Principles Project, respond to questions, gain public input, and ensure issues and concerns are understood, considered, and addressed wherever possible.

Three public workshops are proposed for September 2015 at different locations to facilitate broader participation and provide several opportunities to attend:

- One public workshop to be held at City Hall.
- One public workshop to be held in North Bellevue.
- One public workshop to be held in South Bellevue.

Public Open Houses on Proposed Changes to Codes and Standards

The objective of the public open houses obtain public input on initial code and standard proposals. It also is consistent with the code and standard evaluation process outlined in *Integrating LID into Local Codes: A Guidebook for Local Government* by having internal and external stakeholders review documents, particularly proposed regulations and standards, and provide feedback. City staff and the project consultant team will present proposed changes to City codes and standards for public input.

City staff and consultants will consider public input, and revise the documents to address identified concerns where appropriate. The intent is for City staff and the project consultant team to get detailed input from a range of stakeholders to create a balanced set of regulations and standards that reflect the permit requirements and community vision.

The following open houses are proposed to be held in early 2016:

One public open house to be held at City Hall.
One public open house to be held in North Bellevue.

- One public open house to be held in South Bellevue.

Stakeholder Groups

The project team will meet with stakeholders groups as requested or necessary. Our goal will be to obtain as much input through the public workshops, open houses and at commissions and boards listed above as much as possible because of the constraints imposed by the Permit and efficient use of resources.

Boards and Commissions and EBCC: http://bellevuewa.gov/boards_commissions.htm

Update Briefings on Proposed Changes to Codes and Standards

Proposed changes to codes and standards will be presented to the boards and commissions for their comment. Public input gained at the three public workshops, three open houses and stakeholder meetings preceding this update will be discussed. The proposed changes will reflect and respond to the public's input wherever possible. Public comment is welcome at the board and commission meetings.

The following update briefings are tentatively scheduled for April 2016:

- Planning Commission
- Environmental Services Commission
- Transportation Commission
- Parks and Community Services Board
- EBCC

Opportunities for Public Comment During Council Consideration of Amendments

Planning Commission Public Hearing

- The Planning Commission will hold one public hearing in June 2016 to provide stakeholders with the opportunity to officially comment on the LID Principles Project.

City Council Study Sessions

- Following the public workshops, open houses, stakeholder meetings, boards and commission meetings and the Planning Commission Public Hearing on the LID Principles proposed code amendments, City Council will consider the proposed amendments and take action per the following schedule:
- Consideration of proposed amendments at three study sessions: August TBD, September 12, and October 10.
- Action on proposed amendments either November 21 or November 28.

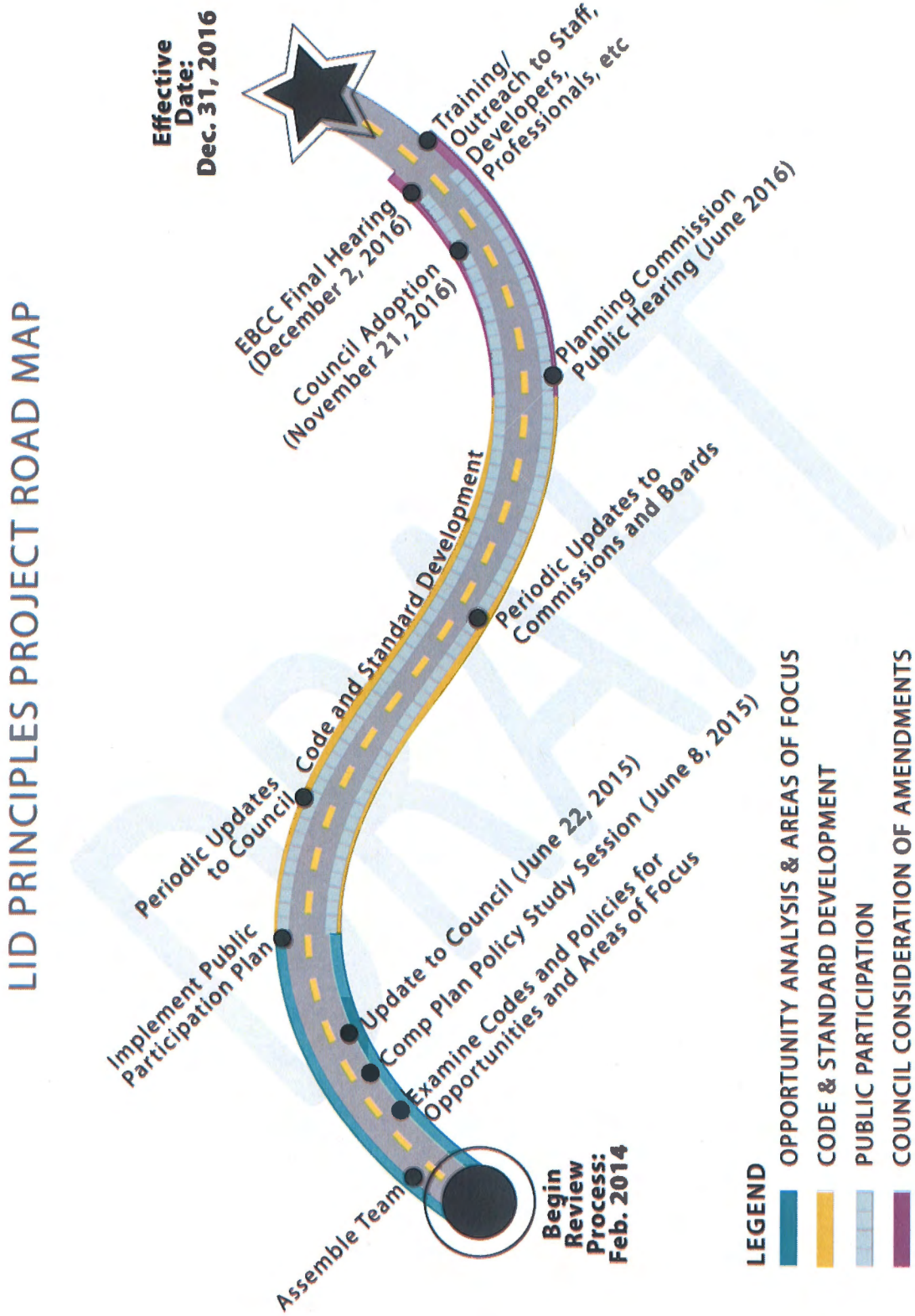
East Bellevue Community Council Final Hearing

- A final hearing is scheduled with EBCC for December 6, 2016.

Project Contacts: LIDPrinciplesProject@bellevuewa.gov

- The Project Team can be contacted at 425-452-6134.
- City of Bellevue project leads may be emailed at the addresses below:
    - Catherine Drews, Project Manager, cdrews@bellevuewa.gov
    - Phyllis Varner, NPDES Permit Manager, pvarner@bellevuewa.gov
    - Paul Bucich, Assistant Director of Engineering, Utilities, PBucich@bellevuewa.gov

Low Impact Development Principles Project



Low Impact Development Principles Project

For Council Consideration and Comment
Low Impact Development Principles Project
Draft Interest Statement and Project Principles
July 6, 2015

Purpose

The interest statement and project principles are intended to guide staff and the City's commission's and boards as they explore and develop appropriate options and recommended amendments to Bellevue's development codes and standards to make low impact development (LID) the preferred and commonly used approach to site development in Bellevue.

Background

The 2013-2018 NPDES[1] Western Washington Phase II Municipal Stormwater Permit requires the City to review and revise its development-related codes and standards to incorporate LID principles. The intent of the revisions is to make LID the preferred and commonly used approach to site development. The permit defines LID principles as land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff. LID principles are different from LID best management practices (BMPs), which are on-site stormwater control and treatment facilities such as rain gardens and permeable pavement. LID BMP requirements will be addressed in a different project. The LID principles are the focus of this project.

The review and revision process the City is undertaking must be similar to that described in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership 2012). Under the terms of the permit, this project must be completed by December 31, 2016. A report detailing how the project satisfies the permit conditions is due to Ecology in March of 2017.

Interest Statement

Bellevue has a long history of supporting low impact development principles in its development policies and regulations; from early (1987) sensitive or critical areas protection and long-standing significant tree and maximum impervious surface coverage regulations to the clustering and LID incentive regulations included in the recent (2009) Bel-Red Rezone.

Bellevue supports the objective of maintaining the region's quality of life, including that of making low impact development the preferred and commonly used approach to site development.

[1] NPDES means National Pollutant Discharge Elimination System. The NPDES Permit is a Federal Clean Water Act permit intended to protect water quality and fishable, swimmable uses of the nation's surface water resources.

Project Principles

The Project Principles are intended to ensure the community's visions and goals are achieved while developing a program that supports development and redevelopment and meets LID Principles. The following Council-approved Project Principles will guide the LID Principles Project:

Bellevue Appropriate. Proposed amendments to Bellevue's development codes and standards will be area and context sensitive. A one-size-fits-all is inappropriate. Attention will be paid to the differing levels of urban development, watershed conditions, impervious surface coverage, tree canopy coverage, and areas of direct discharge. Proposed amendments, where feasible, will provide flexibility, incentives, and innovation in achieving the goal of making LID the preferred and commonly used approach to site development in Bellevue.

Engage Stakeholders. Provide a public participation process that seeks and includes input from a wide range of stake holders. The process will provide opportunities for interested stakeholders to learn about LID principles, participate in developing options, and provide meaningful and informed comments.

Maintain Bellevue's Compliance Record with its NDPES Stormwater Permit. The LID principles project shall be timely completed to ensure compliance with the requirement that amendments are effective by December 31, 2016.

Build On Existing Information and Programs. The LID Principles Project will build on existing City information and programs to develop and evaluate options to make LID the preferred and commonly used approach to site development.

Recognize and Seek to Balance Competing Needs. The LID Principles Project will recognize and seek to balance competing laws applicable to development and redevelopment, by considering and developing effective, innovative, flexible, and/or area-specific options. The LID Principles Project will also recognize that supporting growth in urban areas is appropriate and that balancing environmental benefits with economic development goals is important.

Council Approved Areas of Focus for the LID Principles Project.

The City Council directs staff to begin exploring, in accordance with the Project Principles listed above, the following six Areas of Focus:

1. Land Use Code
    a. Evaluate use of LID principles (and BMPs) early in the site design process;
    b. Reduce impervious surface coverage
    c. Preserve and enhance tree canopy
    d. Improve options for clustering development

2. Transportation Code and Design Standards
    a. Reduce impervious surfaces in road rights-of-way
    b. Enhance tree canopy in transportation facilities

City of Bellevue
Post Office Box 90012 • Bellevue, Washington • 98009 9012

_____	**Action**
X	**Discussion**
_____	**Information**

DATE: July 16, 2015

To: Environmental Services Commission

From: Doug Lane, P.E. Water & Sewer Systems Senior Engineer

Subject: Water System Plan Update

Action Required at this Time
Staff will present findings and recommendations for the Water System Plan update. No formal action by the Commission is required at this time, although we do encourage your questions and input for consideration as we develop the draft Water System Plan.

Background
Bellevue Utilities Department has performed analysis for the Water System Plan, as described during the June 2015 ESC meeting. Table 1 (attached) presents the most significant findings and the recommended action for each. Minor findings with clear existing policy direction are not included in this table, for simplicity and brevity, but will be detailed in the draft Water System Plan.

Discussion
Commission input is important to ensure the Water System Plan guides water system operations and investment appropriately over the next planning period. The City Council appreciates a thorough vetting of utilities planning by ESC before the recommendations are brought forward for their approval.

Next Steps
Staff will consider and incorporate your input into the Draft Water System Plan. Findings and recommendations as a result of analysis will be presented to ESC in July and September. The entire Draft Water System Plan will be provided for ESC review, concurrent with the SEPA comment period and review by DOH and adjacent utilities in fall 2015.

Table 1: Water System Plan Findings and Recommendations

Finding	Recommendation	Applicable Policy
Low Chlorine Residual (water quality risk) due to older water age in some parts of the distribution system.	Conduct an engineering evaluation to identify alternatives to mitigate.	Water Quality Responsibility
The system includes some obsolete air & vacuum release valve assemblies with vents that could become submerged (water quality risk)	Address through selective abandonment or rehabilitation.	Water Quality Responsibility
Existing well sites may have insufficient well head protection to serve as potable water sources	Evaluate potential to change current use of the sites; conduct a siting study to identify other sites	Water Rights for Supply Redundancy (New Policy); Emergency Preparedness; Water Shortage Response
The system's inventory of backflow prevention assemblies has more than doubled in the past 12 years, making continued inspections by certified personnel challenging.	Evaluate practices and alternatives to achieve acceptable service levels and maintain regulatory compliance.	Cross-Connection Control
Some asset classes do not have programs established to fund timely asset renewal or replacement.	Establish Strategic Asset Management Plans (SAMPs) and implement them. Incorporate into CIP program if appropriate.	Waterworks Utility Financial Policies
About 4% of households have less than 1,000-gpm available fire flow	Continue to partially address via AC main replacement program. Use new modeling software to evaluate operational changes to improve fire flow, where pipe size increase will not resolve the issue.	Fire Flow Improvement Program
Due to population growth, additional inlet capacity will be required to meet peak hour demands in the West Operating Area.	Prepare an alternatives analysis to confirm timing and options. Implement recommended option(s) prior to projected deficit.	Service Pressure and Flow; Service Reliability

(Table continued on next page)

Finding	Recommendation	Applicable Policy
Engineering analysis confirmed that some areas of the system have projected storage deficits, due to growth or limited transmission capacity.	Conduct engineering analyses to evaluate alternatives at each location. Implement alternatives already recommended for the West Operating Area (EOA-WOA Transmission Evaluation; add access to Clyde Hill dead storage).	Service Reliability; Emergency Preparedness
Portions of the Sammamish 270 zone and other isolated customers in the system have less than 30-psi pressure at customer meters.	Work with Issaquah to add a PRV station, create a separate pressure zone in South Cove, and increase upstream pressure in Bellevue. Use new modeling software to evaluate operational changes to increase pressure.	Service Pressure and Flow
The Lake Hills 520 Zone historically received customer complaints of low pressure. (pressure is > 30 psi)	Evaluate whether adding PRVs to split the LH520 Zone could optimize operations while improving customer service.	Service Reliability
Existing power generating capacity is insufficient to run the full pumping capacity required to meet summer demands in the South Operating Area.	Evaluate risk and consequences of an extended power outage. Implement recommendations (possibly additional generating capacity, alternative supply, or curtailment) if appropriate.	Emergency Preparedness; Service Reliability
Seismic vulnerabilities of system piping were last assessed in 1996. Some but not all recommendations were implemented.	Participate in regional Water Supply Forum to evaluate seismic resiliency. Consider Forum recommendations. Update 1996 seismic study to reflect current Codes and standards. Evaluate & compare risk relative to costs and implement via CIP if warranted.	Emergency Preparedness; Service Reliability

(Table continued on next page)

Finding	Recommendation	Applicable Policy
Bellevue currently has no independent water supply beyond limited emergency storage in system reservoirs in case of a water supply source outage.	Analyze risk relative to cost of supply for developing existing wells for three alternatives: 1. Emergency-only non-potable supplies 2. Off-line potable water supply 3. On-line (connected to distribution system) potable water supply Develop wells in accordance with recommendations from analysis.	Water Rights for Supply Redundancy (New Policy); Emergency Preparedness; Water Shortage Response
Property availability for future facilities continues to diminish based on land values and development activity across the city.	Analyze the long term need for real property to continue optimal water service delivery. Analyze whether to retain and/or acquire properties proactively or as opportunities arise.	Service Reliability; Waterworks Utility Financial Policies