Low Impact Development
Site Assessment

Information session/workshop agenda

Doors open: 
9:00 am

Low impact development Site assessment presentation:
9:00 am-9:15 am

Questions/workshop:
9:15 am- 11:00 am

workshop close:
11:00 am
Presentation Overview

I. Why we are here
II. Background
III. What is LID?
IV. LID Site Assessment
V. Schedule
VI. Resources
I. Why we are here

We are here to present site assessment reviews!
and
We are here to listen!

We are at the onset of integrating LID principles into the City’s codes and enforceable stands for new and redevelopment projects.
I. Why we are here

• Site assessment is a fundamental step in low impact development. Completing the site assessment up-front will ensure implementation of lid techniques to the greatest extent practicable.

• We are here to present our preliminary concept of this site assessment review, listen to your ideas and concerns answer the questions that we can.
II. Background

• NPDES Permit Requirement - Controlling Runoff from New Development, Redevelopment and Construction Sites.
  ❖ By 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 shall be to make LID the preferred and commonly-used approach to site development.
  ❖ The LID approach is designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations.
III. What is LID?
Pre-Development Hydrologic Conditions

Undeveloped - Forest

- During winter months evaporation continues to be active while the transpiration component is minimal.
- Storm events moderated by infiltration, evaporation, and evaporotranspiration.
- Water is available in substrata to sustain stream base flows during summer months.
- As winter progresses, the interflow component of stream flow increases.
- During the Summer and Fall streams are maintained primarily by glacial melt water and/or groundwater flow.
Post-Development Hydrologic Conditions

Developed Conditions
- Overland flow increases and time of concentration decreases
- Less water in substrata available to sustain base stream flows
- Interflow highly variable depending on development

Water Table
- Groundwater
  - ~15%

Precipitation
- Evaporation/Transpiration
  - ~25%

~40% surface runoff
~30% interflow
Pre- and Post-Development Hydrologic Conditions
III. What is LID?

“Low-impact development (LID) is 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.”

Source: Department of Ecology’s Phase II NPDES Municipal Stormwater Permit
III. What is LID?

What the Permit Says:

• Key LID principles – site design/planning [aka SITE ASSESSMENT] to minimize impervious surfaces, native vegetation loss, and stormwater runoff
• Key LID best management practices (BMPs) required where feasible.
III. What is LID?

Benefits of LID stormwater BMPs:
- Increases groundwater recharge and helps to address lower stream flows in critical late summer months.
- Reduce size of conventional stormwater facilities
- Increase open space
- Visually attractive landscape features
- Can result in construction, possibly maintenance, savings
- Provide multiple functions
IV. LID Site Assessment

STEP 1 – Site Assessment

“The initial inventory and analysis process will provide baseline information necessary to design strategies that utilize areas most appropriate to evaporate, transpire, and infiltrate stormwater, and achieve the goal of minimizing the pre-development natural hydrologic conditions on the site.”

– 2014 SWMMWW
IV. LID Site Assessment – Site Assessment Review (SAR) – The Proposal

Bainbridge Island Municipal Code (BIMC) 15.19 Establishes the SAR
• Who Needs to Complete a Site Assessment Review?
• What comprises a Site Assessment Review?
• Who in the City will Review the Site Assessment Review?
• How Long will the Site Assessment Review take to Complete?
• How much will it cost?
Who Needs to Complete a Site Assessment Review?

Figure 1: Flow Chart for New Development

- Yes: All minimum requirements apply to the new and replaced hard surfaces and converted vegetation areas. MAJOR REVIEW
- No: See redevelopment section. Minimum requirements and Flow Chart Figure 2.

Figure 2: Flow Chart for Determining Requirements for Redevelopment

- Yes: Does the project result in 1,000 square feet or more of new plus replaced hard surface area? OR Does the land disturbing activity total 7,000 square feet or greater?
- No: Minimum requirements #1 through #4 apply to the new and replaced hard surfaces and the land disturbed.

- Yes: Minimum requirements #1 through #4 apply to the new and replaced hard surfaces and the land disturbed.
- No: Next Question

Next Question: Does the project result in 5,000 square feet or more of new hard surfaced? OR Convert % acres or more of vegetation to lawn or landscaped areas? OR Convert 2.5 acres or more of native vegetation to pasture?

- Yes: Minimum requirements #1 through #4 apply to the new and replaced hard surfaces and the land disturbed.
- No: Is the total new plus replaced hard surface less than 2,000 square feet?

- Yes: Is the value of the proposed improvements - including interior improvements - exceed 5% of the assessed value? If replacement value of the existing site improvements?
- No: MINOR REVIEW

Minimum requirements apply to the new and replaced hard surfaces and converted vegetation areas. MAJOR REVIEW

Minimum requirements #2 applies. NO REVIEW REQUIRED

Minimum requirements #2 applies. NO REVIEW REQUIRED

MINOR REVIEW

Minimum requirements #2 applies. NO REVIEW REQUIRED

SUB MINOR REVIEW
Does the site have 35% or more of existing impervious coverage?

- Yes: All minimum requirements apply to the new and replaced hard surfaces and converted vegetation areas. MAJOR REVIEW
- No:
  - Yes: Does the project result in 5,000 sqft, or greater, of new plus replaced hard surface area?
    - Yes: Does the project convert ¼ acres or more of vegetation to lawn or landscaped areas, or convert 2.5 acres or more of native vegetation to pasture?
      - Yes: Minimum Requirements #1-5 apply to the land disturbed
      - No: Does the project result in 800 sqft, or greater, of new plus replaced hard surface area?
    - No: Does the project result in less than 3,000 sqft. On new replacement or new area?

- No:
  - Yes: Minimum requirements #1-5 apply to the new and replaced hard surfaces and the land disturbed.
  - Sub MINOR REVIEW
Does the project result in 800 square feet, or more, of new plus replaced hard surface area? OR Does the land disturbing activity total 7,000 square feet or greater?

Yes:
- Minimum Requirements #1 through #5 apply to the new and replaced hard surfaces and the land disturbed.

No:
- Minimum Requirements #2 applies – NO REVIEW REQUIRED

Next Question

Does the project add 5,000 square feet or more of new hard surfaces? OR Convert ¾ acres or more of vegetation to lawn or landscaped areas? OR Convert 2.5 acres or more of native vegetation to pasture?

Yes:
- All minimum requirements apply to the new hard surfaces and the converted vegetation areas.
- MAJOR REVIEW

No:
- Is the total new + replaced hard surface less than 2000 sq ft?

Yes:
- SUB MINOR REVIEW
  - MR #1-5
  - Minimum Requirements #1 through #5 apply to the new and replaced hard surfaces.

No:
- MINOR REVIEW
  - MR #1-5
  - Minimum Requirements #1 through #5 apply to the new and replaced hard surfaces.

Is the total of new plus replaced hard surfaces 5,000 square feet or more AND does the value of the proposed improvements – including interior improvements – exceed 50% of the assessed value (or replacement value) of the existing site improvements?

Yes:
- All minimum requirements apply to the new and replaced hard surfaces and converted vegetation areas.

No:
- Is the project add 5,000 square feet or more of new hard surfaces? OR Convert ¾ acres or more of vegetation to lawn or landscaped areas? OR Convert 2.5 acres or more of native vegetation to pasture?

Yes:
- Minimum Requirements #2 applies – NO REVIEW REQUIRED

No:
- All minimum requirements apply to the new and replaced hard surfaces and the land disturbed.
What comprises a Site Assessment Review?

Needed at Submittal:
1. Survey
2. Soils Report
3. Vegetation survey*
4. Preliminary Drainage Report
5. Preliminary Site Plan
6. Sewer and Water non-binding availability letter*
7. Other technical reports*

*as needed
Who in the City will Review the Site Assessment Review?

• Public Works – Development Engineer
• Planning Staff
How Long will the Site Assessment Review take to Complete?

• Dependent on Submittal Package?
How much will it cost?

- Sub – Minor: $360
- Minor: $1,440
- Major: $4,320
- Revisions: ?
IV. Schedule

- Tree/LID Committee – March 15
- City Council – March 21
- City Council Public Hearing – April 11
- Adoption by Consent – April 25
V. Resources