Phase I & WWA Phase II Municipal Stormwater Permits Workshop

Washington State Department of Ecology

October / November 2012
Presentation Outline

Introduction to Permits

2012-2013 Permits

2013-2018 Permits

Newly Permitted Areas

Permit Revisions

Construction/Post-Construction & LID

Monitoring and Assessment
Helpful WebPages

Response to Comments


Workshop Handouts


Municipal Stormwater Website


2012 Stormwater Management Manual for Western Washington (SWMMWW)

LID Training and Assistance Plan

2013 training – LID Maintenance, SWMM WW

Legislature funding LID training - $1 M for 5 years

- Ecology working with: AWC, WSAC, BIAW, AWB & WA Stormwater Center developing training plan.
- Local govts – engineering review and maintenance
- Building industry – design and construction
- General public, homeowner associations, landscapers, realtors.
Municipal Stormwater Permits Implement Clean Water Act NPDES Program & EPA Stormwater Rules
The Municipal Stormwater Permits regulate discharges from municipal separate storm sewer systems (MS4’s):

- Publicly owned or operated conveyance structure
- Collects and conveys stormwater
- Not part of sewage treatment plant or combined sewer.
- In urban areas with population >1000; or brought in by Ecology review.
2012 Legislation (RCW 90.48.260)

- **Reissue updated Phase II permits**
- **Reissue current Phase II permits (2007)**

**Effective:**
- EWA 2014 – 2019
- WWA 2013 – 2018

- **Require no earlier than December 31, 2016 (or GMA update deadline):**
- 1-acre threshold (WWA)
- Codes for Low impact development
- Increased inspections
  - Catch basins
  - Illicit discharge

**Effective:**
- EWA 2012 – 2014
- WWA 2012 – 2013

Legislation (RCW 90.48.260)
Phase II 2012-2013 Permit

- No new requirements
- Level of effort commensurate with 5\textsuperscript{th} year of 2007 permits
- Clarifies requirements in table at beginning of the permit

Legislative intent not to reduce requirements but to retain at current levels
Phase I 2012-2013 Permit

Level of effort commensurate with 5th year of 2007 permits

Clarifies Requirements by making minor edits within the body of the permit

Clarifies S5.C.9.b.ii.(3) Annual Inspections for Private Facilities

Clarifies S8 Monitoring Program Endpoints
• Complete three years of discharge monitoring started under the 2007 permit
• Enter monitoring data into Ecology’s EIM database

• Meet QAPP objectives for program effectiveness studies

• Meet statistical goals or collect 35 samples
• Enter data into the International Stormwater BMP Database
Questions?
Newly Permitted Areas

New Permittees - Cities:
- Snoqualmie
- Lynden

Expanded coverage - County UGAs
- Whatcom County for the unincorporated Birch Bay UGA
- Yakima County for the unincorporated Sunnyside UGA (2014).

Coverage for WWA New Permittees & expanded areas begins August 1, 2013
New Permittee Requirements

New Permittees follow requirements as modified by footnotes

Implementation phased in over 5 years

No monitoring requirements under S8.B, C or D during first permit term
Questions?
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Phase I & Phase II Permit Changes
## Phase I & Phase II Changes

<table>
<thead>
<tr>
<th>SWMP Plan looks forward</th>
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<tbody>
<tr>
<td><strong>Coordination</strong></td>
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<tr>
<td>• Requires internal coordination</td>
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<tr>
<td>• Describe in first year report (both permits)</td>
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<tr>
<td><strong>Online annual reporting</strong></td>
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</table>
Annual Reporting Timelines

11-month permit effective 9/1/12 – 7/31/13

5-year permit effective 8/1/2013 – 7/31/2018

2012

3/31/2013 Annual Report Due on 2012 Activities

Permit Transition

2013

3/31/2014 No Annual Report Due on 2013 Activities

2014

3/31/2015 Annual Report Due on 2014 Activities
Use measures of one audience and one topic area to improve program.

Involve or partner with others to involve public in stewardship activities.

Reorganized to separate public awareness from behavior change.

Changes identify new audiences and subject areas.
Illicit Discharge Detection & Elimination

Phase II Mapping – maintain maps

Phase II Implement compliance strategy

• Includes education and technical assistance
• Ordinance may need to include source control BMPs and private maintenance.

Phase II – Review & update ordinance as needed by Feb 2018
IDDE: Field Screening

Field screening allows more flexibility

Document methods in annual report
IDDE: Field Screening

Phase II
- Complete 40% by Dec. 31, 2017
- Aberdeen: Complete 40% by June 30, 2018
- And average 12% per year thereafter

Phase I
- Cities: Complete within incorporated area by July 31, 2018
- Counties: Complete within urban/higher density rural sub-basins by July 31, 2018
- Complete on average 12% each calendar year
Update maintenance standards (SWMMWW 2012)

Focuses inspections & maintenance on Stormwater Treatment and Flow Control BMPs/Facilities

Phase II: By August 1, 2017 (Aberdeen: June 30, 2018) inspect all catch basins, and every two years thereafter, or implement catch basin inspection alternatives
Catch Basin Inspection Alternatives

- Modify inspection schedule based on maintenance records
- Complete inspections on a circuit basis
- Clean all pipes, ditches, catch basins & inlets within a circuit once during permit term
TMDLs: Water Clean Up Plans
S7 and Appendix 2

Appendix 2 includes MS4 actions from TMDLs approved since 2007

Previous (2007) TMDLs have updated actions
Timelines for New Secondary Permittees are in footnotes

Clarifies requirements for leased lands
- Obligations for property under functional control of Secondary Permittee

Ports of Seattle and Tacoma
- Mapping down to 12” outfalls & 8” connections
- Annual field screening at 20% of system
Phase I Only
2013-2018 Permit Cycle
Counties finish mapping the remaining half of their urban/higher density rural sub-basins

Map Connections to tributary conveyances equal to 8”

Map Connections between stormwater treatment and flow control BMPs/facilities and tributary conveyances

New Mapping (S5.C.2.b) by December 31, 2017
Source Control (S5.C.7):
Flexibility in generating list of sites (instead of businesses)

Structural Control (S5.C.6):
• Improves reporting & calculating project benefits
• Retained and added project types
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Runoff Controls for New & Redevelopment

Removes Phase II 1-acre threshold

Specifies a deadline for effective dates of updated codes; and applicability to projects

- Applications received after the deadline must meet the new requirements.
- Complete applications received prior to the deadline but not starting construction within 5 years must meet new requirements.
Phase II – Removed the erosivity waiver

Revisions to wetland guidance
- Match pre-project water
- + 20% Daily; + 15% Monthly inputs
LID addressed on 3 levels

- Site & subdivision - S5.C.4.a.i. & ii. (S5.C.5.a in Phase I)
- Development Codes - S5.C.4.f.
- Watershed Scale - S5C.4.g.
Other Related Permit Conditions

Plan review, Initial inspections, enforcement - S5.C.4.b

Long-term maintenance inspections – S5.C.4.c

Staff training – S5.C.4.e.
LID addressed on 3 levels

- Site & subdivision - S5.C.4.a.i. & ii. (S5.C.5.a in Phase I)
- Development Codes - S5.C.4.f.
- Watershed Scale - S5C.4.g.
Site & Subdivision: Appendix 1 – LID revisions

Added definitions of LID related terms: Thresholds – “hard” replaces “impervious”

MR#2 Additional Element - Protect LID BMPs

Revises MR #5 for LID

- LID Performance Standard
- BMP Lists #1 and #2 (modified from draft permit)
- Infeasibility Criteria now in manual (see handout)
- Limited applicability in flow control exempt areas
Projects subject only to MR #1 - #5
2,000 sq ft ≥ hard surfaces < 5,000 sq ft

Use List #1

Or

Meet LID Performance Standard

- Cannot use Rain Gardens
- Can use Bioretention
- Demonstrate compliance w/approved models & methods
List #1

Lawn and landscaped areas:

• Soil Quality and Depth (T5.13)

Roofs: Consider in order listed; use first feasible

• Full Dispersion or Full Infiltration (T5.30 or T5.10A)
• Rain Gardens or Bioretention (T5.14A or B)
  • ≥ 5% of drainage area
• Downspout Dispersion Systems (T5.10B)
• Perforated Stub-out Connections (T5.10C)
Other Hard Surfaces (driveways, patios, walks, parking lot) consider in order listed; use first feasible

- Full Dispersion (T5.30)
- Permeable pavement, or Rain Gardens, or Bioretention
  - (T5.15, T5.14A, T5.14B)
  - RG or Bioretention area ≥ 5% of drainage area
- Sheet Flow Dispersion, or Concentrated Flow Dispersion (T5.12 or T5.11)
### LID Performance Standard

Match post-development discharge durations to pre-developed durations from 8% of the 2-year flow to 50% of the 2-year flow

- Pre-development generally a forested land cover
LID Performance Standard addresses the lower, more frequent stormwater flows (8% of 2-year through 50% of the 2-year).

Flow Control Standard addresses the higher, less frequent stormwater flows (50% of the 2-year through the full 50-year).
## Projects Triggering MR #1 - #9

<table>
<thead>
<tr>
<th>Project Type &amp; Location</th>
<th>Requirement</th>
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| Development (new or redevelopment) on any parcel inside the UGA, or development outside the UGA on a parcel less than 5 acres | LID Performance Standard and BMP T5.13  
OR  
List #2  
(applicant option) |
| Development (new or redevelopment) outside the UGA on a parcel of 5 acres or larger | LID Performance Standard and BMP T5.13 |
List #2

- Rain Gardens not an option
- Other Hard Surfaces:
  - Permeable Pavement is 2\(^{nd}\) priority
  - Bioretention is 3\(^{rd}\) priority
- Vegetated roof consideration deleted

Same as List #1 with two changes:
Initial Inspection & Maintenance of Permanent Stormwater BMPs/Facilities

Inspection to verify proper installation of all permanent stormwater facilities – includes LID BMPs/facilities. S5.C.4.b.iv

Verification of maintenance plan & responsible party for “stormwater treatment and flow control BMPs/facilities.” (See definition) S5.C.4.c

Inspect “stormwater treatment and flow control facilities” & catch basins in residential developments every 6 months until 90% of lots constructed (or until construction has stopped and the site is stabilized). S5.C.4.c.iv
Long-term Inspection & Maintenance of “Stormwater Treatment and Flow Control BMPs/Facilities”


Phase II – annual inspections and maintenance compliance applies only to those built under 2007, 2012, and 2013 NPDES permit provisions S5.C.4.c.iii
3 levels

- Site & subdivision - S5.C.4.a.i. & ii. (S5.C.5 in Phase I)
- Development Codes - S5.C.4.f.
- Watershed Scale - S5C.4.g.
Manual References for Phase I - S5.C.5.a.ii and Phase II - S5.C.4.a.ii (see handout)

(a) Site planning requirements (Vol. I, Ch. 3)
(b) BMP selection criteria (Vol. II - V)
(c) BMP design criteria (Vol. II – V)
(d) BMP infeasibility criteria (Vol. III & V)
(e) LID competing needs criteria (Vol. V)
(f) BMP limitations (Vol. II – V)
Stormwater Management Manual for Western Washington

Most Significant Edits:

- LID (Vol. V: Chapters 5 & 7)
- Revised guidance for designing infiltration facilities (Vol. III, Ch. 3)
- New & revised source control, construction & treatment BMPs
- WWHM update and modeling guidance

Questions?
3 levels

- Site & subdivision - S5.C.4.a.i. & ii. (S5.C.5 in Phase I)
- **Development Codes** - S5.C.4.f.
- Watershed Scale - S5C.4.g.
LID – Local Development Codes

Make LID the preferred and commonly used approach for site development

- Minimize impervious surface
- Minimize native vegetation loss

PSP Integrating LID into Local Codes Guidebook
Adopt new site & subdivision stormwater codes

Phase I: June 30, 2015
Phase II: December 31, 2016*

Review and revise development-related codes, rules & standards

Phase I: June 30, 2015
Phase II: December 31, 2016*

* Or GMA update deadline, whichever is later
3 levels

- Site & subdivision - S5.C.4.a.i. & ii. (S5.C.5.a.i. & ii in Phase I)
- Development Codes - S5.C.4.f. (S5.C.5.b. in Phase I)
- Watershed Scale - S5C.4.g. (S5.C.5.c. in Phase I)
Phase I County selects a watershed and leads a planning process

• Select watershed by **Oct. 31, 2013**
• Submit scope of work by **April 1, 2014**
• Submit final plan by **Oct. 1, 2016**
Proposed watersheds

- Streams impacted by development & retain anadromous fish
- Targeted to accept significant growth
- ≥ 10 sq. mi.
- MS4 service area
- Watersheds proposed in Phase I permit
Planning Process

- Baseline assessment
- Mapping
- Continuous Runoff Model Calibration
- Predict future hydrologic, biologic, and WQ conditions
- Evaluate strategies to meet WQ Standards
- Implementation Plan & Schedule
- Public review and comment
Phase II Watershed Planning Responsibilities (S5.C.4.g)

- Provide WQ and flow records
- Provide monitoring locations
- Participate with strategy development
- Provide maps
LID Training

LID training for local governments, building industry, and others – 5-year plan.

2013 Workshops:
• 2012 SWMMWW
• Updated WWHM
• LID O&M standards and guidance
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S8 Monitoring and Assessment

Changes from draft permit

- Not required to enter into an agreement
- No opt-out for Source ID info repository
Permit becomes effective August 1, 2013
QAPPs available prior to this date

Permittees notify Ecology of decision to opt in or out by December 1, 2013

RSMP begins after August 15, 2014

RSMP = Regional Stormwater Monitoring Program
Puget Sound RSMP pay-in option

- 100 small streams in Puget lowlands and 40 nearshore sites adjacent to UGAs
- Probabilistic sampling design

Water and sediment quality
Information about biota in receiving waters
Puget Sound opt-out monitoring

- QAPP-defined small stream and nearshore sites in each jurisdiction
- Numbers of sites based on population
- Same sampling, same timing and frequency

Water and sediment quality

Information about biota in receiving waters
S8.C Effectiveness Studies

- Initial list of studies was included in draft permit
- Findings of literature review will be used to finalize the RSMP list
- Studies begin in fall 2014
S8.C Effectiveness Studies

- Outfall monitoring
- Phase I only: pay half and do a study
- Clark County only: paired studies option

Opt-out monitoring
S8.D Source Identification and Diagnostic Monitoring

SIDIR

- No opt-out
- Pay in to create the repository
- Initial analysis of data contributed for annual reporting on S5
Information for Permittees

Ecology is currently developing a website with more detailed information about S8

- Current draft QAPPs and updates
- Current lists of effectiveness studies
- Links to stakeholder recommendations
Questions?
Thank you!


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