# Presentation Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM</td>
<td>Introduction</td>
</tr>
<tr>
<td>10:15 AM</td>
<td>Volume I</td>
</tr>
<tr>
<td>11:45 AM</td>
<td>Lunch</td>
</tr>
<tr>
<td></td>
<td><strong>Volume II</strong></td>
</tr>
<tr>
<td>1:30 PM</td>
<td>Volume III</td>
</tr>
<tr>
<td>2:10 PM</td>
<td>Break</td>
</tr>
<tr>
<td>2:25 PM</td>
<td>Volume IV</td>
</tr>
<tr>
<td>2:45 PM</td>
<td>Volume V</td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
Volume II

- Managing stormwater impacts associated with construction activities
- Discusses best management practices (BMPs)
- Applies to all construction activities
Municipal Permit also refers to the BMPs & Element #13 in Volume II
What’s new?...

Changes to CSWGP

2010 Reissuance of CSWGP

Coordinated language

Changes to Volume II
• Chapter 1 – Importance of construction stormwater management

• Chapter 2 – Regulations

• Chapter 3 – The SWPPP

• Chapter 4 – BMPs
Chapter 1

Highlights importance of construction stormwater management in preventing pollution of waters of the state.
Chapter 1 (cont’d)

Lists the 12 elements used in the Construction Stormwater General Permit

Introduces Element #13

- Specific to Low-Impact Development (LID)
- Required by the Municipal Permit
Chapter 2 (cont’d)

- Regulatory background
- Triggers in the National Pollutant Discharge Elimination System (NPDES) program
Chapter 2 (cont’d)

Overviews sites that require permit coverage under the CSWGP.

Discusses water quality standards.

Looks at the construction site’s possible relationship to the Endangered Species Act.
Chapter 3

- Guide for construction site planning
- Discusses SWPPP in detail

- Narrative
- Drawings
- Data
- Pollution prevention plan checklist
Chapter 3 (cont’d)

- Expands on the 12 elements
- Introduces **Element #13** – Protect Low-Impact Development (LID) BMPs (sometimes required as part of the Municipal Permits)
Chapter 4

• Chapter 4 is your “go to” place for source control BMPs
• Offers 145 pages of BMP details
What’s new?

• Refer to your handout “Proposed Changes to the SWMMWW”
• Revised to simplify/clarify language
• The 13 elements
What’s new?...

Element #13

• Protect bioretention, rain garden, and permeable pavement BMPs

• Install/maintain erosion & sediment control BMPs on part of site draining to bioretention, rain garden, or permeable pavement BMPs
What’s new?...

Element #13 (cont’d)

- Fully restore BMPs if they accumulate sediment during construction
- Keep construction equipment and foot traffic off bioretention, rain garden, & permeable pavement BMPs
What’s new?...

Element #13 (cont’d)

• Keep muddy equipment off pavement or base material
• Keep runoff off permeable pavements
• Keep heavy equipment off final grades (don’t compact it)
Element #13

Suggested BMPs

BMP C102: Buffer Zones

BMP C103: High Visibility Plastic or Metal Fence

BMP C200: Interceptor Dike and Swale

BMP C201: Grass-Lined Channels

What’s new?
Element #13 (Cont.)

Suggested BMPs

- BMP C207: Check Dams
- BMP C208: Triangular Silt Dike
- BMP C231: Brush Barrier
- BMP C233: Silt Fence
- BMP C234: Vegetated Strip

What's new?
What’s new? ...

Chapter 1

• Chapter 1 was updated with simpler and clearer language

• We added Element #13 – Protect Low Impact Development BMPs
What’s new? ...

Chapter 2

• Clearer text
• Coordinated with the new CSWGP
• New 2.1 and 2.2 discuss the CSWGP and the SWPPP
What’s new? ...

Chapter 3

• Revised SWPPP elements to coordinate with the new construction stormwater general permit (December 2010)

• Most updates to the construction SWPPP requirements and elements: see Chapter 3, Sections 3.2 and 3.3
What’s new? ...

<table>
<thead>
<tr>
<th>Chapter 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Added</strong> approved equivalent BMP sections</td>
<td><strong>Renumbered tables</strong></td>
</tr>
</tbody>
</table>
Chapter 4

Table 4.1.1 – “Source Control BMPs”

- This table gives you the connection between the BMPs and the SWPPP elements – very helpful!
<table>
<thead>
<tr>
<th>BMP or Element Name</th>
<th>Element #1 Preserve Vegetation/Mark Clearing Limits</th>
<th>Element #2 Establish Construction Access</th>
<th>Element #5 Stabilize Soils</th>
<th>Element #6 Protect Slopes</th>
<th>Element #9 Control Pollutants</th>
<th>Element #11 Maintain BMPs</th>
<th>Element #12 Manage the Project</th>
<th>Element #13 Protect Low Impact Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMP C101: Preserving Natural Vegetation</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C102: Buffer Zones</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C103: High Visibility Plastic or Metal Fence</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C105: Stabilized Construction Entrance / Exit</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C106: Wheel Wash</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C107: Construction Road/Parking Area Stabilization</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C120: Temporary and Permanent Seeding</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C121: Mulching</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C122: Nets and Blankets</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C123: Plastic Covering</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C124: Sodding</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C125: Topsoiling / Composting</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What’s new? ...

Chapter 4

• Section 4.1 Manual now matches CSWGP
• “Additional Guidance” under each element – think of them as helpful hints!
What’s new? ...

Chapter 4

• Several BMPs: more guidance, more detail, or updates
• BMP C103 added high-visibility silt fence
• BMP C104 for stake-and-wire fence was removed
What’s new? ...

Chapter 4

• BMP C120 and C121 –
  • New language re: mulching thickness
  • Shift in language between the two BMPs
• BMP C123 – Consider BMPs other than plastic sheeting for longer-term erosion control
What’s new? … Chapter 4

BMP C151 Concrete Handling

BMP C152 Sawcutting and Surfacing Pollution Prevention

BMP C154 Concrete Washout Area

More in keeping with new CSWGP language in response to field observation
What’s new? ...Chapter 4

BMP C160 – CESCL clarified

BMP C180 – Removed

• 1-acre designation no longer applies
What’s new? ...

Chapter 4

Table 4.2.1 – “Runoff Conveyance and Treatment BMPs

• Like Table 4.1.1
• Correlates the BMPS to these Elements (3, 4, 6, 7, 8, 9, 10, 13)
<table>
<thead>
<tr>
<th>BMP or Element Name</th>
<th>Element #3 Control Flow Rates</th>
<th>Element #4 Install Sediment Controls</th>
<th>Element #6 Protect Slopes</th>
<th>Element #7 Protect Drain Inlets</th>
<th>Element #8 Stabilize Channels and Outlets</th>
<th>Element #9 Control Pollutants</th>
<th>Element #10 Control De-Watering</th>
<th>Element #13 Protect Low Impact Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMP C200: Interceptor Dike and Swale</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>BMP C201: Grass-Lined Channels</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C202: Channel Lining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C203: Water Bars</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C204: Pipe Slope Drains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C205: Subsurface Drains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C206: Level Spreader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C207: Check Dams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>BMP C208: Triangular Silt Dike (Geotextile Encased Check Dam)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>BMP C209: Outlet Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>BMP C220: Storm Drain Inlet Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>BMP C231: Brush Barrier</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C232: Gravel Filter Berm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C233: Silt Fence</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMP C234: Vegetated Strip</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What’s new?...

Chapter 4

• BMP C230 – No more straw bales!
What’s new? ...

Chapter 4

- **Alternatives** to straw bales must be used
Alternatives to straw bales

- Prefabricated concrete washout structure containers
- Silt fence for perimeter control
- Rock check dams or fiber rolls for check dams
- Filter fabric, gravel bags or other designs for storm drain inlet protection
- Geotextiles & compost blankets for slope protection
What’s new? ...

Chapter 4

• BMP C236 Vegetated Spray Fields

• This BMP provides guidance on how best to use spray fields for turbid stormwater or dewatering water
What’s new? ...

Chapter 4

BMP C250 Construction Stormwater Chemical Treatment –

• Revised since 2005 permit
• Previously online

New language coordinates BMP C250 with the CTAPE program
What’s new? ...

Chapter 4

BMP C251 – Construction
Stormwater Filtration

New language adds sizing criteria
What’s new? ...
Chapter 4
• BMP C252 High pH Neutralization Using $\text{CO}_2$
  – Previously online
What’s new? ...

Chapter 4

• BMP C252 discusses the causes of high pH
• Discusses advantages of CO$_2$ sparging
• Discusses the treatment process in great detail
What’s new?
Chapter 4

• BMP C253 – pH Control for High-pH Water – New
• Like C252, BMP C253 discusses neutralizing pH in stormwater
• Disposal methods: infiltrate, disperse, or send to sanitary sewer or concrete batch plant
What’s new? ...

• Appendix II-B – Background information on Chemical Treatment

• The language in Appendix II-B also updated to accommodate the practical application of BMPs 252/253
Questions?