

PROCESS OVERVIEW MODULE

Project WQMP Preparation and Review (Public Projects)



New Development and Significant Redevelopment Program
Roll-out Training

July 2011

TRAINING MODULES

Introductory Modules

Overall Program Documents

Model WQMP

Technical Guidance Document

WQMP Template and Non-Priority Project Plan



Process Overview Modules

Development of LIPs/SSMPs

Project WQMP Preparation and Review (Private Project)

Project WQMP Preparation and Review (Public Project)



Technical Focus Modules

Level of Detail in Conceptual/Preliminary and Project WQMPs

Site and Watershed Assessment

BMP Selection and Prioritization

BMP Sizing and Hydrologic Analysis

LID Feasibility Criteria

Regional BMPs, Watershed-Based Plans, and Alternative Compliance Options

BMP Selection and Sizing Consideration for Green Streets Projects

Agenda

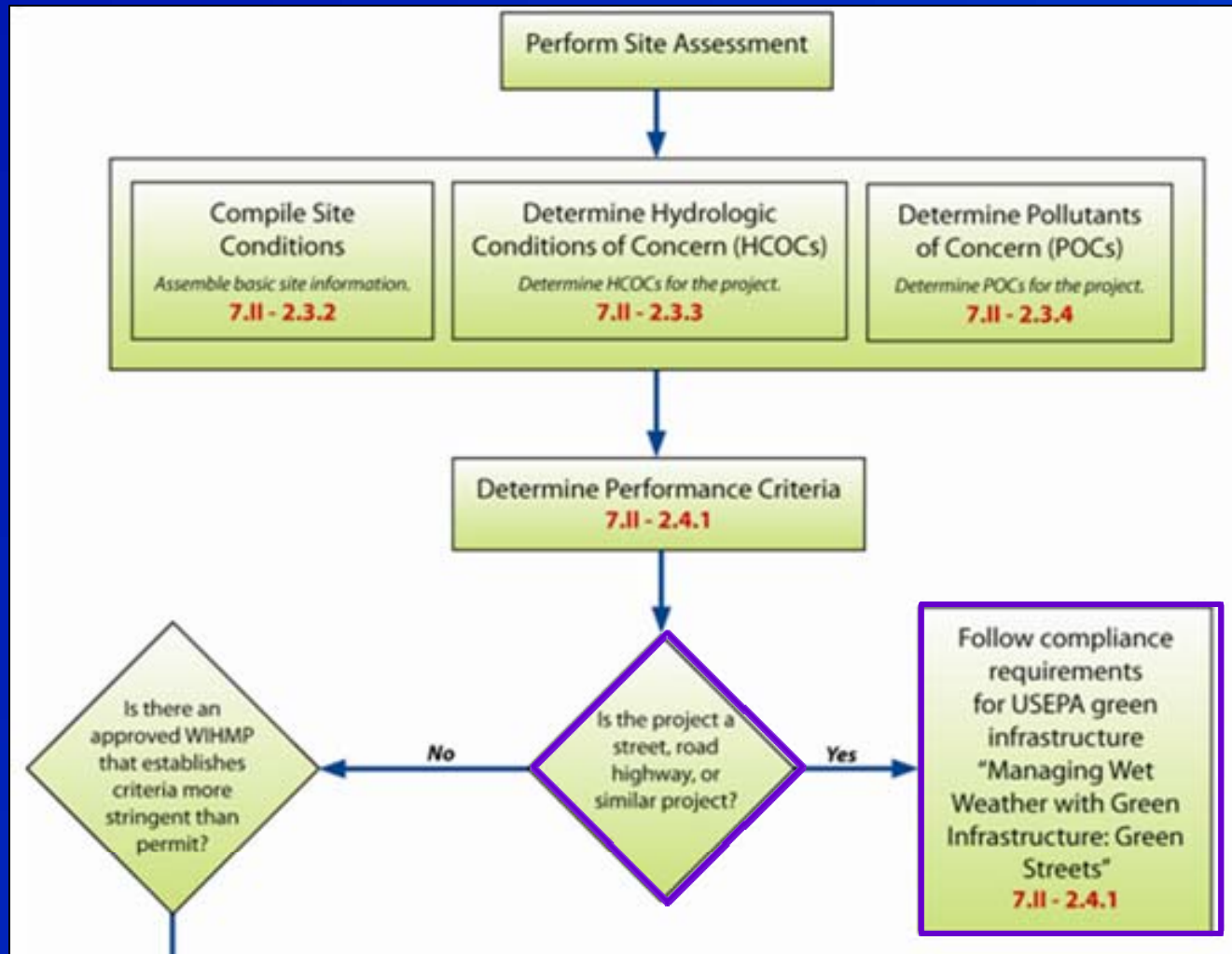
- Introduction
- Project WQMP Preparation
- Streets, roads, highways and freeways
- Above ground linear lined drainage projects
- Below ground linear projects
- Municipal Non-Structural Source Control Measures
- Master Project WQMP

Introduction

- Projects that fit definitions of Priority Project Categories (e.g. Parks and recreation facilities public buildings)
 - ◆ Addressed the same as private projects
- Streets, roads, highways, freeways
5,000 sf or more of impervious surface
 - ◆ Follow “Green Infrastructure” approach
- Above ground linear lined drainage projects (e.g. lined channel)
 - ◆ Follow “Green Infrastructure” approach

Introduction

Initial development steps similar to private projects

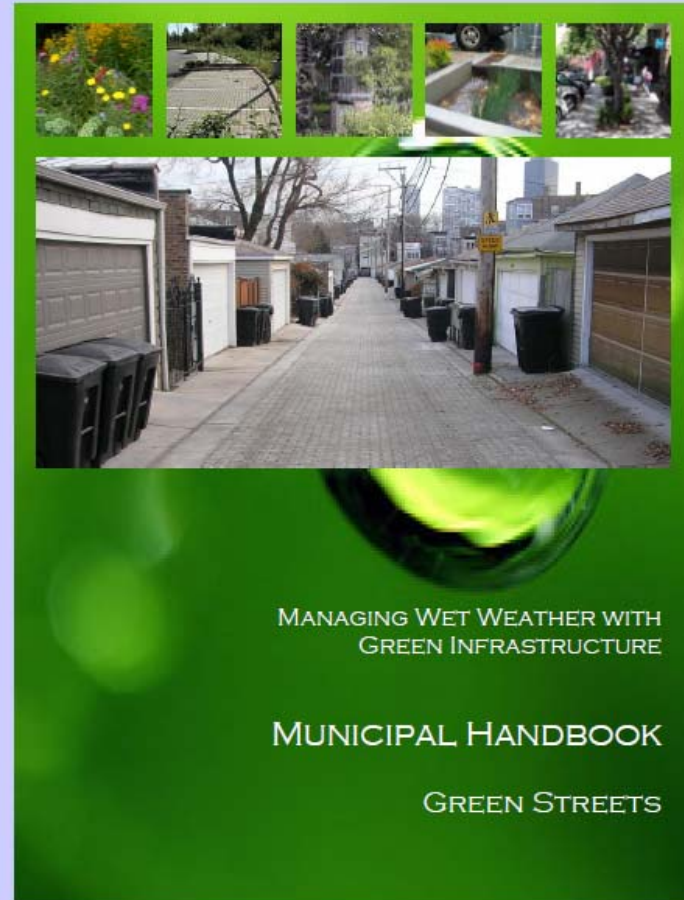


Project WQMP Preparation

- For all projects except roadway and linear projects, prepare similar WQMP to private development projects – can use same template

Streets, Roads, Highways, and Freeways

- 5,000 square feet or more of paved surface
- Follow USEPA guidance “Managing Wet Weather with Green Infrastructure: Green Streets”
- Consistent with MEP Standard
- BMPs do not need to meet DCV



Green Streets Approach

- Site Assessment Considerations for Applicable Green Streets Projects
 - ◆ Ownership of land adjacent to right of ways
 - ◆ Location of existing utilities
 - ◆ Grade differential between road surface and storm drain system
 - ◆ Longitudinal slope
 - ◆ Potential access opportunities

Green Streets – BMPs

Potential BMPs for Applicable Green Streets Projects

BMP Type	Opportunity Criteria for Applicable Green Streets Projects
Street Trees, Canopy Interception	<ul style="list-style-type: none"> • Access roads, residential streets, local roads and minor arterials • Drainage infrastructure, sea walls/break waters • Effective for projects with any slope • Trees may be prohibited along high speed roads for safety reasons
Stormwater Curb Extensions / Stormwater Planters	<ul style="list-style-type: none"> • Access roads, residential streets, and local roads with parallel or angle parking and sidewalks • Can be designed to overflow back to curblines and to standard inlets • Shape is not important and can be integrated wherever unused space exists • Can be installed on relatively steep grades with terracing
Bioretention Areas	<ul style="list-style-type: none"> • Low density residential streets without sidewalks • Requires more space than curb extensions/ planters, most feasibly implemented in combination with minimized road widths
Permeable Pavement	<ul style="list-style-type: none"> • Parking and sidewalk areas of residential streets, and local roads • Should not receive significant run-off from major roads • Should not be subject to heavy truck/ equipment traffic • Light vehicle access roads
Permeable Friction Course Pavement	<ul style="list-style-type: none"> • High speed roadways unsuitable for full depth permeable pavement • Suitable for parking lots and all roadway types

Green Streets – BMPs

Potential BMPs for Applicable Green Streets Projects

BMP Type	Opportunity Criteria for Applicable Green Streets Projects
Vegetated Swales	<ul style="list-style-type: none"> • Roadways with low to moderate slope • Residential streets with minimal driveway access • Minor to major arterials with medians or mandatory sidewalk set- • Access roads • Swales running parallel to storm drain can have intermittent discharge points to reduce required flow capacity
Filter strips (amended road shoulder)	<ul style="list-style-type: none"> • Access roads • Major roadways with excess ROW • Not practicable in most ROWs because of excessive width requirements
Proprietary Biotreatment	<ul style="list-style-type: none"> • Constrained ROWs • Typically have small footprint to tributary area ratio • Simple install and maintenance • Can be installed on roadways of any slope • Can be designed to overflow back to curb line and to standard inlet
Infiltration Trench	<ul style="list-style-type: none"> • Constrained ROWs • Can require small footprint where soils are suitable • Low to moderate traffic roadways • Infiltration trenches are not suitable for high traffic roadways • Requires robust pretreatment
Cartridge Media Filters	<ul style="list-style-type: none"> • Highly constrained ROW with little available surface area • Installed in underground vaults, manholes, or catch basins • Require minimum available head loss • Simple installation and maintenance

Above Ground Linear Lined Drainage Projects

- Lined vertical or trapezoidal channels
- More than 10,000 square feet of impervious surface (new projects)
- Use Green Streets Guidance

Master Project WQMP

- A Permittee may elect to prepare a Master Project WQMP for all anticipated future projects with similar characteristics
- List all qualifying streets, roads, and highways projects anticipated to occur within the Permittee's jurisdiction over a given time period
- List proposed methods of compliance with the Model WQMP

Below Ground Linear Utility Projects

- Replacement of more 5,000 square feet or more of impervious surface
- Within a developed public street, road or highway such as storm drains, sewers and water lines



Below Ground Linear Utility Projects

- Maintains original line and grade, hydraulic capacity, original purpose of the facility, or occur in response to an emergency to protect public health and safety
 - ◆ Non-Priority Project ⇒ Non-Priority Project Plan
 - ◆ May be prepared after-the-fact, but within three business days of the project's completion
- Alters the original line and grade or hydraulic capacity of storm drain facilities below ground
 - ◆ Priority Project ⇒ Project WQMP

Municipal Non-Structural Source Control Measures

- Bay/Harbor Activities
- Building Maintenance and Repair
- Maintenance and Repair
- Fueling
- Landscape Maintenance
- Material Loading and Unloading
- Material Storage, Handling, and Disposal
- Minor Construction
- Parking Lot Maintenance
- Spill Prevention and Control
- Vehicle and Equipment Cleaning
- Vehicle and Equipment Storage
- Waste Handling and Disposal

Source control and maintenance measures added to Public Agency Activities (DAMP Section 5) for new facilities

Design Review for Public Agency Projects

- Prior to initiating grading or construction activities, ensure that the construction plans for public works projects reflect:
 - ◆ The BMPs described in the approved Project WQMP or the Non-Priority Project Plan
 - ◆ Consistency with the BMP design criteria and guidance

QUESTIONS

