LID Resources

Matt Yeager
San Bernardino County Flood Control District

Jill Bicknell, P.E., EOA, Inc.
Santa Clara Valley Urban Runoff Program
Presentation Outline

- Southern California LID Manual
- Northern California Resources
- CASQA LID Portal
- Other LID Resources
- Other CASQA Resources
SMC LID Manual

Low Impact Development Manual for Southern California:

Technical Guidance and Site Planning Strategies

Prepared for

the Southern California Stormwater Monitoring Coalition

in cooperation with the State Water Resources Control Board

By

The Low Impact Development Center Inc.

The Low Impact Development Center, Inc.
Who Is The SMC?

- Southern California Stormwater Monitoring Coalition
  - SCCWRP
  - SoCal Municipal Stormwater Programs
    - Six Counties
    - Cities of LA and Long Beach
  - SoCal Regional Water Boards
    - Los Angeles (Region 4), Santa Ana (Region 8), San Diego (Region 9)
  - State Water Resources Control Board
  - Caltrans
  - USEPA

- Strong Regulator-Permittee Partnership--Signatories to an Agreement
  - www.socalsmc.org
Technical Manual

- **How-to guidance for LID implementation in Southern California**
  - Addresses needs of MS4 Permits
- **Fill in the information gaps**
  - BMP Design
  - Implementation Challenges/Barriers
- **Integrate with CASQA BMP Handbooks**
  - Available from CASQA LID Website and SMC Website
Field Monitoring

- **Ground truth LID BMP features**
  - So Cal Semi-arid applicability
  - Effectiveness
    - pollutant removal
    - hydrologic change reductions
- **Provide support for technical guidance**
  - Ongoing with several sites over 3-5 years
Regulatory Objectives for LID

Pollutants | Hydrology | Habitat

From Regulations

Need a Square-to-Rounded Translator

To Implementation

Local Jurisdiction Development Process

Zoning | CEQA | Planning Commission | General Plan | Landscape Ordinances | Fire Codes
Regulatory Objectives for LID

Pollutants  Hydrology  Habitat

LID Guidance and Training

Local Jurisdiction Development Process

Zoning  CEQA  Planning Commission  General Plan  Landscape Ordinances  Fire Codes
Northern California Resources

- Bay Area Stormwater Management Agencies Assoc.:
  - “Start at the Source” Manual
  - “Using Site Design Techniques to Meet Development Standards for Stormwater Quality”
- Local Guidance Documents (examples)
  - Emeryville
  - Contra Costa Countywide Clean Water Program
  - San Francisco
  - San Mateo Countywide Water Pollution Prevention Program
  - Santa Clara Valley Urban Runoff Program
Start at the Source


- First “LID” Manual in California
- Describes site design concepts, planning and zoning
- Provides design details for:
  - Permeable paving
  - Streets
  - Parking lots
  - Driveways
  - Buildings
  - Landscape
  - Outdoor work areas
- Case studies for different land uses
Using Site Design Techniques to Meet Development Standards for Stormwater Quality


- Guidance on how to use site design techniques to reduce stormwater treatment requirements
  - Zero Discharge Areas
  - Self-Treating Areas
  - Runoff Reduction Areas
Local Guidance Documents

- Emeryville, CA
  - “Stormwater Guidelines for Green, Dense Redevelopment” (2005)
    www.epa.gov/smartgrowth/emeryville.htm

- Contra Costa Clean Water Program
    www.cccleanwater.org
Local Guidance Documents

- San Francisco
    www.sfwater.org

- San Mateo County
  - Sustainable Green Streets and Parking Lots Design Guidebook (2009)
    www.flowstobay.org
Santa Clara Valley Urban Runoff Program

www.scvurppp.org
Santa Clara Valley Urban Runoff Program
Site Design Award Winners

Permeable Pavers, Palo Alto/Stanford Community Playing Fields

Landscaped Detention Area, Alum Rock Library, San Jose

Pervious Concrete Parking Lot, Congregation Sinai, San Jose
The CA LID Portal

- Hosted at the California Stormwater Quality Association (CASQA) website
- A brain-child of collaboration between the California Coastal Commission, UC Davis Extension Center for Water and Land Use, Southern California Storm Water Monitoring Coalition, Central Coast Regional Water Quality Control Board and CASQA to find effective ways to bring LID resources to California users.
- Will be up and running by May, 2010 at: www.californialid.org
The CA LID Portal is intended to provide access to basic LID resources to the stormwater management community. The information will include selected links and references to existing material, as well as information and tools specifically developed for the site. The initial website content will provide access to technical, regulatory, and program LID resources.
Other Resources

- Low Impact Development Center
  www.lowimpactdevelopment.org
- Center for Watershed Protection
  www.cwp.org
- US EPA LID Website
  www.epa.gov/nps/lid
- California Coastal Commission
- CalWaLUP
- UC Davis Center for Water & Land Use
CASQA Resources

- **BMP Handbooks:**
  - Construction
  - New Development and Redevelopment
  - Municipal
  - Industrial and Commercial

- **Introduction to Hydromodification**
  - White Paper, Fact Sheet, Presentation

- **Municipal Stormwater Program Effectiveness Assessment Guidance Document**

www.casqa.org