



# *Reining in the Rain:*

## *Watershed-Friendly “Low Impact Development” Site Design & Permeable Pavements for Stormwater Management*

### Monterey Bay Area Workshop

Veterans Memorial Building, Santa Cruz

**Friday, April 25, 2008**

**9:00 am – 4:00 pm**

*Sponsored by the California Coastal Commission; Center for Water & Land Use at UC Davis Extension; USC Sea Grant; and Resource Conservation District of Santa Cruz County; in association with the City of Santa Cruz.*

#### **AGENDA**

- 8:00 - 9:00 am**      *Check-in (coffee and pastries provided)*
- 9:00 - 9:10**        **Welcome**  
- *Ezra Neale, Resource Conservation District of Santa Cruz County*
- 9:10 - 9:30**        **Resource-Based Land Use Planning**  
The big picture: Linking land use to water quality, and how LID can help improve the health of our watersheds.  
- *Alfred Wanger, California Coastal Commission*
- 9:30 - 10:00**      **Low Impact Development – the How's and the Why's**  
Implementation of soil-based LID systems in stormwater management, and effect on flooding, in-stream erosion, maintaining the water balance, and pollutant removal.  
- *Timothy Lawrence, Center for Water and Land Use, UC Davis Extension*
- 10:00 - 10:45**      **LID Hydrology and Soils Issues**  
Major design issues associated with LID implementation, with real-world examples.  
- *Eric Berntsen, State Water Board, Storm Water Section*
- 10:45 - 11:00**      *Break (15 min)*
- 11:00 - 11:30**      **Stormwater Management and LID in Santa Cruz County**  
County of Santa Cruz’s policies and requirements for land development as they relate to LID/BMPs.  
- *Rachel Fatoohi, Santa Cruz County*
- 11:30 - 12:00**      **Incorporation of LID into State Water Board Programs**  
How LID is being incorporated into state resolutions, policies, and state and regional stormwater permits.  
- *Eric Berntsen, State Water Board, Storm Water Section*
- 12:00 - 12:45**      *Lunch (provided)*

## Two Afternoon Tracks

### Track A – Permeable Pavements:

Technical information on permeable pavement design, installation, applications, performance, pollutant removal, and maintenance.

12:45 - 1:30

#### How to Use Permeable Pavements in All Soil Types

The fundamentals of using permeable pavements to implement LID cost-effectively, with details on performing hydrological design for any type of soil situation – even clay soils.

- Andy Youngs, California Nevada Cement Association

1:30 - 2:15

#### Porous Asphalt Pavements

- Brandon Milar, California Asphalt Pavement Association (presented by Tom Carter, Teichert Aggregates)

2:15 - 2:30

*Break (15 min)*

2:30 – 3:15

#### Pervious Concrete Pavements

- Andy Youngs, California Nevada Cement Association

3:15 – 4:00

#### Permeable Interlocking Concrete Pavements

- David R. Smith, Interlocking Concrete Pavement Institute (presented by Vanessa Metz, California Coastal Commission)

4:00

#### Wrap-Up and Evaluations



### Track B – Implementing LID Locally:

A first-hand look at Low Impact Development solutions for stormwater management in the Monterey Bay Area, including project examples, design criteria, permitting, successes and failures, and lessons learned.

12:45 - 1:30

#### LID and Stormwater in Watsonville

Hindsight is 20/20: An honest review of bioretention, detention and other BMPs installed throughout Watsonville.

- Robert Ketley, City of Watsonville

1:30 - 2:15

#### Rain Water Catchment and Efficient Irrigation

- Bobby Markowitz, EarthCraft Design

2:15 - 2:30

*Break (15 min)*

2:30 - 3:15

#### Rain Gardens and Bioretention

- Sarah Peterson and Joni Janceki, Joni L. Janceki & Associates, Inc.

3:15 - 4:00

#### Selection, Design and Maintenance of BMPs for LID

Selection of the BMP most appropriate to the site, design process, meeting county design standards, implementation, and maintenance of the selected BMP.

- Robyn Cooper and Peter Haase, Fall Creek Engineering Inc.

4:00

#### Wrap-Up and Evaluations

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Hand-outs and presentations will be available at [http://www.coastal.ca.gov/nps/lid\\_workshops.html](http://www.coastal.ca.gov/nps/lid_workshops.html).