



CASQA 2013 Conference

Annual Awards Program


Awards Program Mission

The mission of the CASQA Awards Program is to advance the stormwater quality management profession by identifying and recognizing exemplary leadership, outstanding projects, research, and contributions to the field of stormwater quality management.

CASQA Award Categories

- *Outstanding Stormwater BMP Implementation Project or Program*
- *Outstanding Stormwater News, Information, Outreach and Media*
- *Outstanding Stormwater Research Project or Program*
- *Outstanding Sustainable Stormwater Project or Program*
- *Leadership*



The background is a solid blue color with several curved, overlapping bands of varying shades of blue, creating a sense of depth and movement. The text is centered and written in a bold, italicized, yellow font.

CASQA 2013 Award
for
Outstanding Stormwater BMP
Implementation Project

CASQA 2013 Award

***Outstanding Stormwater
BMP Implementation Project***

Presented to

***Boeing Company – Santa Susana Field
Laboratory Stormwater Filter
Paul Costa, Boeing Company***



***2013 CASQA Award
for***

***Outstanding Stormwater News,
Information, Outreach and Media
Award***



srcity.org/stormwaterandcreeks

Creek Stewardship Program

Provide opportunities for the community to learn about creeks.





Creek Stewardship Program

Instill a creek ethic in youth.



srcity.org/stormwaterandcreeks

Creek Stewardship Program
**Welcome help with
restoration projects.**





srcity.org/stormwaterandcreeks



Creek Stewardship Program

Encourage the reporting of dumping.



srcity.org/stormwaterandcreeks

Creek Stewardship Program

Support volunteer cleanups.




CASQA 2013 Award

***Outstanding Stormwater News,
Information, Outreach, and Media***

Presented to

***City of Santa Rosa's and Sonoma County
Water Agency Creek Stewardship Program***



***CASQA 2013 Award
for
Outstanding Sustainable
Stormwater Project***

Development of the LID Guidebook

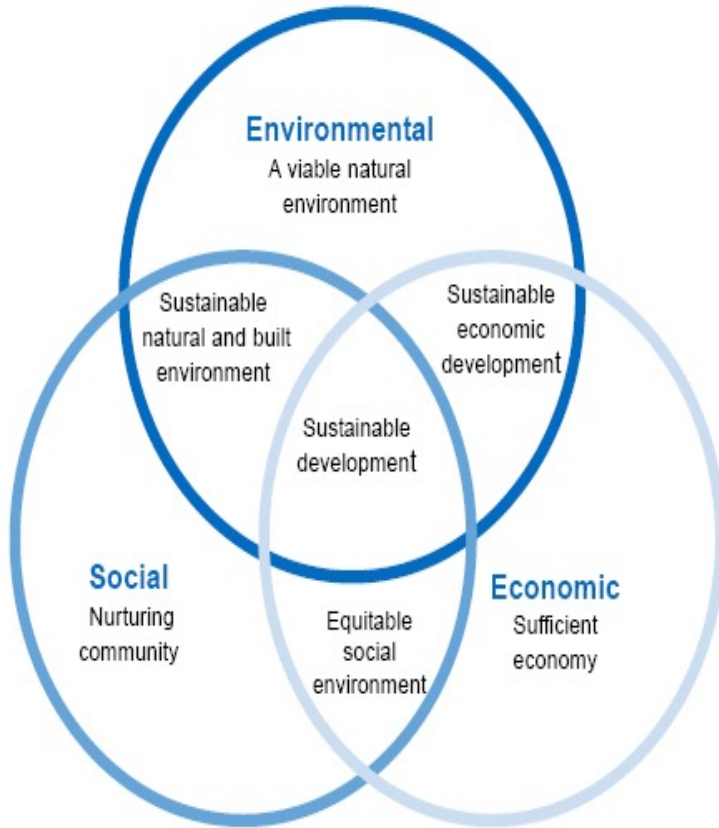
- *Proactively tackle the changing stormwater regulatory landscape;*
- *Address 303(d) list TMDL designations for Squaw Creek, Lake Tahoe and the Truckee River; and*
- *Develop a comprehensive streamlined permitting process*



Guidebook Vision

To protect and enhance the natural environment of Placer County in the Yuba, Truckee and American River watersheds through the promotion of innovative stormwater and water quality management and other techniques applicable to the Sierra Nevada.

Project Sustainability and Benefits



Tools Developed in Guidebook

Runoff Management Measure Fact Sheets

Site Design Fact Sheets

GENERAL DESCRIPTION	
<p>Stormwater disconnection is a technique that reduces the volume of stormwater delivered to storm drains by disconnecting the runoff from impervious areas on the site and minor roads and redirecting the runoff to permeable areas (e.g., vegetation) that promote runoff filtration and infiltration. Design variations include:</p> <ul style="list-style-type: none"> • Rooftop direct runoff and downspout disconnection. • On-site driveway, walkway, parking areas, and patial disconnection. • Minor road runoff disconnection via curb cuts and curb removal. 	
DESIGN STRATEGIES	
<ul style="list-style-type: none"> • Reduce amount and peak of stormwater flow. Where possible, use shallow undrunkalized flow in lieu of piped discharge to increase the time of concentration of flow. • Direct flow into stabilized vegetated areas for infiltration and detention. Flow can also be diverted from impervious surfaces via sheet flow to these vegetated areas. • Use curb cuts and curb removal for minor road runoff disconnection. Pools flow can be attenuated using one of the strategies below. Disconnect runoff at streets by removing part of a curb and allow for infiltration into a depression or planter box. Install curb cuts at intervals and route flows through street and vegetated areas in an alternating fashion. 	
PLANNING AND DESIGN STRATEGIES	
GENERAL GUIDELINES	
COMPONENT	GUIDELINE
Rooftop Direct Runoff and On-Site Disconnection	
Site Layout	<ul style="list-style-type: none"> • Building Setback – 20' • Drainage Area – Average a 500 sq ft maximum in a 1,000 sq ft • Topography – 10% minimum
Design Criteria	<ul style="list-style-type: none"> • Impervious/Porous Ratio – 2:1 minimum • Slope – Must discharge to a gradual slope away from the building at 1% to 5%. • Soil – Amended soils with infiltration rates less than 1 inch or use an underdrain • Water Table – 2' minimum separation, 10' minimum separation for infiltration
Conveyance and Overflow	<ul style="list-style-type: none"> • Level Spreading Device – Place a level spreading device (e.g., pea gravel diaphragm) or energy dissipating device (e.g., splash pad) at the downspout discharge location to distribute runoff evenly over the pervious area
Minor Road Disconnection	
Site Layout	<ul style="list-style-type: none"> • Available Space – Minimum disconnection flow length: 40' • Drainage Area – 1 ac maximum per unit • Topography – 10% minimum
Design Criteria	<ul style="list-style-type: none"> • Soil – Amended soils with infiltration rates less than 1 inch • Water Table – 2' minimum separation
Materials	<ul style="list-style-type: none"> • Vegetation – Intensity of vegetated areas as dictated by the design storm, road slope, siteivity, location and other factors. An initial target distance of 20 feet can be used for both road length and vegetative flow path length.

CONSTRUCTION CONSIDERATIONS	
<ul style="list-style-type: none"> • Soil Disturbance and Compaction: Allow only vehicular traffic necessary for construction on the pervious areas where flow will be discharged. If vehicle traffic is unavoidable, then the pervious area should be filled to a depth of 1" to loosen the compacted soil. • Erosion and Sediment Control: If possible, direct construction runoff away from the proposed discharge location. After the contributing drainage area and the discharge location are stabilized and vegetated, remove erosion and sediment control structures. • Compaction: Compaction of amended soils will significantly decrease the efficiency of infiltration in bioretention basins. For vehicle traffic and high foot traffic from the area, planting trees around the perimeter of the amended area is one technique for preventing vehicle access, or use permeable paving. • Standing Water and Ponding: Test areas to be vegetated to verify that standing water infiltrates or evaporates within 48 hours following a storm event. When longer ponding periods are observed, improve soil infiltration by decompacting, aerating, tilling, regrading and/or adding compost. 	
OPERATIONS AND MAINTENANCE CONSIDERATIONS	
<ul style="list-style-type: none"> • Ingate and maintain vegetated areas to maintain infiltration and filtering capacity. • Periodically check for clogging of any subsurface pipes or infiltration systems and repair as needed. • Develop a maintenance agreement with property owners or managers to ensure that downspouts remain disconnected and the pervious area remains pervious. • If ponding of water for longer than 48 hours occurs, the pervious area should be decompact and aerated. • If ponding persists, regrading or tilling to ensure compaction and/or addition of compost to improve soil moisture retention may be required. 	



PLACER COUNTY LOW IMPACT DEVELOPMENT GUIDEBOOK
SW Flowpath Disconnection
Fact Sheet RM-1



REFERENCES	
<ul style="list-style-type: none"> • See Section xxx in the text for more information • Low Impact Development Approaches Handbook, 2009. CWS. Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2007. • Stormwater BMP Design Supplement for Cold Climates, 1997. • Low Impact Development Stormwater Management Planning and Design Guide, 2010. TRCA. • Low Impact Development Manual for Michigan: A Design Guide for Implementers and Reviewers, 2008. SEMCOG. 	

Protect Natural Conditions	
PLACER COUNTY LOW IMPACT DEVELOPMENT GUIDEBOOK	
Fact Sheet SD-1	

Protect Natural Conditions is a site design measure that can be applied to most projects, and includes preserving natural areas such as riparian buffers and tree clusters; protecting environmentally sensitive areas and designated open space; protecting natural drainage features; and minimizing soil compaction during site clearing and grading.

Planning and Design Strategies	
<p>Site design to preserve natural conditions is guided by these general strategies:</p> <ul style="list-style-type: none"> • Protect as much of the existing natural/vegetated areas of the site as possible • Protect environmentally sensitive areas and designated open space • Preserve and use existing natural drainage features and flow paths whenever possible. If not possible, restore these features to pre-project conditions • Minimize soil compaction during and after construction 	
Protect Natural Conditions	
<p>Riparian Buffer: Riparian buffer areas are important elements of local communities' green infrastructure and/or LID tool box. These areas are critical to the biological, chemical, and physical integrity of our watersheds. Riparian buffer areas protect water quality by cooling water, stabilizing banks, mitigating flow rates, and providing for pollution and sediment removal by filtering over and sheet runoff before it enters the water. The Environmental Protection Agency defines buffer areas as, "areas of planted or preserved vegetation between developed land and surface water, which are effective at reducing sediment and nutrient loads."</p> <p>Trees and Tree Clusters: Tree conservation at development sites will help to maintain a natural hydrologic regime. If tree conservation is not an option, plant new trees in pervious areas of development sites. Tree clusters planted in turf grass or barren ground can reduce stormwater runoff volume and peak flow, improve water quality, generate organic soils, absorb greenhouse gases, create wildlife habitat, and provide shading to mitigate temperature increases at development sites.</p>	
Protect Environmentally Sensitive Areas and Designated Open Space	
<p>Open Space: Open space areas are generally defined through zoning where urban development is not permitted. These areas may be used for parks, playgrounds, etc.</p> <p>Environmentally Sensitive Areas: Environmentally sensitive features include waters of the state such as wetlands, vernal pools, seasonal and perennial creeks, as well as habitat for endangered or threatened species.</p>	
Preserve Natural Drainage Features	
<p>A main goal of LID is to maintain or mimic a site's pre-project hydrologic regime. Preserving natural drainage features, such as swales, depressions, and watercourses, and utilizing the site's natural topography will minimize site disturbance. The natural vegetation in these features will filter, slow and infiltrate stormwater runoff to protect water quality. Designers can use natural drainage features to reduce or eliminate the need for structural underground drainage systems. In areas where natural drainage features need to be modified or piped to accommodate the development, approval must be obtained from the appropriate permitting and resource agencies.</p>	
Minimize Soil Compaction	
<p>Minimizing soil compaction is the practice of protecting and minimizing damage to existing soil quality and permeability caused by land development activities. Minimizing soil compaction will sustain and maintain infiltration rates for various LID features. It is also possible to enhance soil composition with soil amendments and mechanical restoration after it has been damaged (see fact sheet SD-3).</p>	
OPPORTUNITIES AND BENEFITS	
<ul style="list-style-type: none"> • Protecting of natural areas and riparian buffers (if preserved) will improve water quality and reduce runoff velocities and flows through filtration and infiltration, enhance site aesthetics, and provide habitat. • Owning riparian buffers with natural and aesthetic value can lead to higher property values. • Using riparian buffers can provide a canopy to reduce water temperature, sequester carbon and create oxygen for clean air and reduced greenhouse gases, and provide shade to reduce surface and subsurface temperatures. Tree roots enhance infiltration capacity of the soil. • Protecting natural drainage features, and working with the existing site topography will maximize natural hydrologic functions and reduce the need for cut and fill, structural stormwater drainage facilities, and associated costs. • Minimizing soil compaction maintains the site's natural infiltration capacity and maintains a healthy soil environment for vegetation. 	
<p>Right: Signs help to raise public awareness and understanding about the need for and benefits of protecting natural resources. Photo Credit: Shelia Schwabel, CDM</p>	



How has the Guidebook Benefited the Community?

- Provides Planning and Design Guidance to promote and encourage the application of appropriate and cost effective LID principles and strategies;*
- Gives developers, agency staff and homeowners an easy to use guide for implementing LID in high altitude areas; and*
- Implemented by several large development projects.*

CASQA 2013 Award

Outstanding Sustainable Stormwater Project

Presented to

Placer County

Low Impact Development Guidebook

Edmund Sullivan

Placer County Planning Department

The background is a deep blue with abstract, flowing shapes. On the left, there are several curved, parallel lines in varying shades of blue, creating a sense of movement. The overall composition is dynamic and modern.

CASQA 2013 Award

Leadership

National Leader in the Stormwater Management Profession

- *Contributed to the knowledge of BMP performance and advancing the science, especially in the transportation field*
- *ASCE Fellow*
- *Diplomat, Water Resources Engineer*
- *Transportation Research Board Committee, Chair, Water Quality Subcommittee*



State Leader in the Stormwater Management Profession

- *Facilitated CASQA's involvement on the Construction General Permit Training*
- *Contributed to training over 1000 potential QSDs/QSPs*
- *Provided recommendations on improvements to the program*
- *Promoted value to the CASQA Conference workshop on construction stormwater compliance*



Active in Leading CASQA

- *Spear-headed technical discussions on Stormwater issues*
- *Valued education for MS4s, Regulators, construction industry, building industry, and the general public*
- *Provided leadership in Stormwater outreach to Federal and State Regulators*



Contributions to CASQA

- *Board of Director for CASQA (6 years),*
- *Chair for CASQA (2 years)*
- *Vice Chair for CASQA (2 years)*
- *Chair of the CASQA Policy and Permitting Subcommittee (2 years)*
- *Chair of the CASQA Membership Committee (5 years)*
- *BMP Web portal Technical Advisory Committee (2 years)*
- *Conference Committee (4 years)*
- *Stormwater Quality Task Force (5 years)*

Dedication to CASQA

Advancement of CASQA's mission at the State and National levels

“Scott.... has shown exceptional character in working with stakeholders and exhibiting professional skills needed to advance CASQA’s mission and I can say that without reservation.”

Scott McGowen, P.E.

Chief Environmental Engineer, California Department of Transportation

CASQA Board Member

CASQA 2013 Leadership Award



Presented to
Mr. Scott Taylor



CASQA 2013 Awards
for
Outstanding Service

***The 2013 Outstanding Service
Awards go to the following
CASQA members:***



2013 Outstanding Service Awards

💧 *Daniel Apt,*

💧 *Matt Lentz*

💧 *Katharine Wagner*

💧 *Jamison Crosby*

💧 *Dave Tamayo*

💧 *Kelly Moran*

💧 *Armand Ruby*

💧 *Rebecca Winer-Skonovd*

💧 *Cathleen Garnand*

💧 *Terri Fashing*

💧 *Stephanie Reyna-Hiestand*

💧 *Sharon Gosselin*

Thanks to the 2013 Awards Committee Members

💧 *Gerhardt Hubner*

💧 *Ventura County
Watershed Protection
District*

💧 *Jill Bicknell*

💧 *EOA/SCVURPPP*

💧 *Sharon Gosselin*

💧 *Alameda Countywide
Clean Water Program*

💧 *Jeff Endicott*

💧 *AEI-CASC
Engineering*

💧 *Mack Walker*

💧 *Drew Kleis*

💧 *Stephanie Reyna-
Hiestand*

💧 *Keyle McKinney*

💧 *Nicole West*

💧 *Kristina Schneider*

Special Thanks to CASQA Members

**...that took the time to identify
worthy people and projects,
prepare nomination packages,
and review nomination packages!**

***This Concludes the 2013
CASQA Awards Program***



**Watch for the
2014 Awards Program
Call for Nominations
Spring 2014**

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**Congratulations
2013 CASQA Award
Winners!**