

# 2016 CASQA TWELFTH ANNUAL CONFERENCE

SEPTEMBER 12-14, 2016

PARADISE POINT

SAN DIEGO, CA

WWW.CASQA.ORG

## STORMWATER EVOLUTION: SOURCE TO RESOURCE



P  
R  
O  
G  
R  
A  
M



Scan to view  
the latest  
conference  
agenda and  
abstracts on  
our website



Get the new  
CASQA Annual  
Conference  
Mobile App for  
personalized  
features





# *Stormwater Evolution: Source to Resource*

**Delivering innovative planning and engineering solutions  
for sustainable stormwater management and water quality**

TMDL Implementation • Water Quality Master Planning • BMP Retrofit & Design  
Watershed Planning • NPDES Program Development • Construction Stormwater Compliance  
Industrial Stormwater Compliance • Monitoring & Special Studies



**MTBAKERINTL.COM**







## 2016 CASQA CONFERENCE

The 2016 California Stormwater Quality Association (CASQA) annual conference theme “*Stormwater Evolution: Source to Resource*” reflects shifting attitudes toward urban stormwater from a flood control problem, nuisance, and pollutant source to recognition as an important resource for groundwater recharge, water supply, and habitat management. The conference highlights integrated regional and watershed planning processes, multi-benefit projects, and creative governance that showcase recent innovations.

CASQA returns to San Diego, California for the third time at its twelfth conference at Paradise Point on Mission Bay. Last year almost 800 stormwater professionals were in attendance

and similar numbers are expected for 2016. The conference features training workshops, technical sessions, and poster presentations on wide ranging stormwater industry topics, with a focus around the conference theme.

CASQA is the largest professional association dedicated to stormwater quality issues. For over a quarter century, CASQA has assisted municipalities, special districts, businesses, the state of California, and the United States Environmental Protection Agency in developing and implementing effective stormwater quality management programs in response to municipal, industrial, and construction NPDES stormwater permit requirements.



### GET THE NEW CASQA ANNUAL CONFERENCE MOBILE APP <https://crowd.cc/s/fRH6>

Attendees with Apple iOS or Android devices are now able to personalize their conference experience with our CASQA Annual Conference mobile app. Here are just some of the many features:

- Bookmark presentations and events in the conference agenda to create a personalized schedule, which can be exported to the native calendar on your smartphone or digital tablet.
- Preview Training Workshop agendas, Technical Program abstracts, and speaker bios.
- Find meeting rooms, exhibitor booths, and event locations via the interactive conference maps.
- Message other attendees directly, easily access individual message threads, and share contact information to stay connected after the conference.



# Your Education & Outreach Headquarters

Whether you need a little help or a whole lot, Goldstreet is here to guide you through your NPDES education and outreach requirements.

- ✓ Social Marketing Campaigns and Behavior Change
- ✓ Target Audience Research & Analysis
- ✓ Outreach Program Development
- ✓ Kid's Activities



**GOLDSTREET**  
DESIGNS

***The gold standard of utility outreach.***

1 866-742-8287 • [www.goldstreetdesigns.com](http://www.goldstreetdesigns.com)



Call Erin Keith to discuss your next education and outreach project.

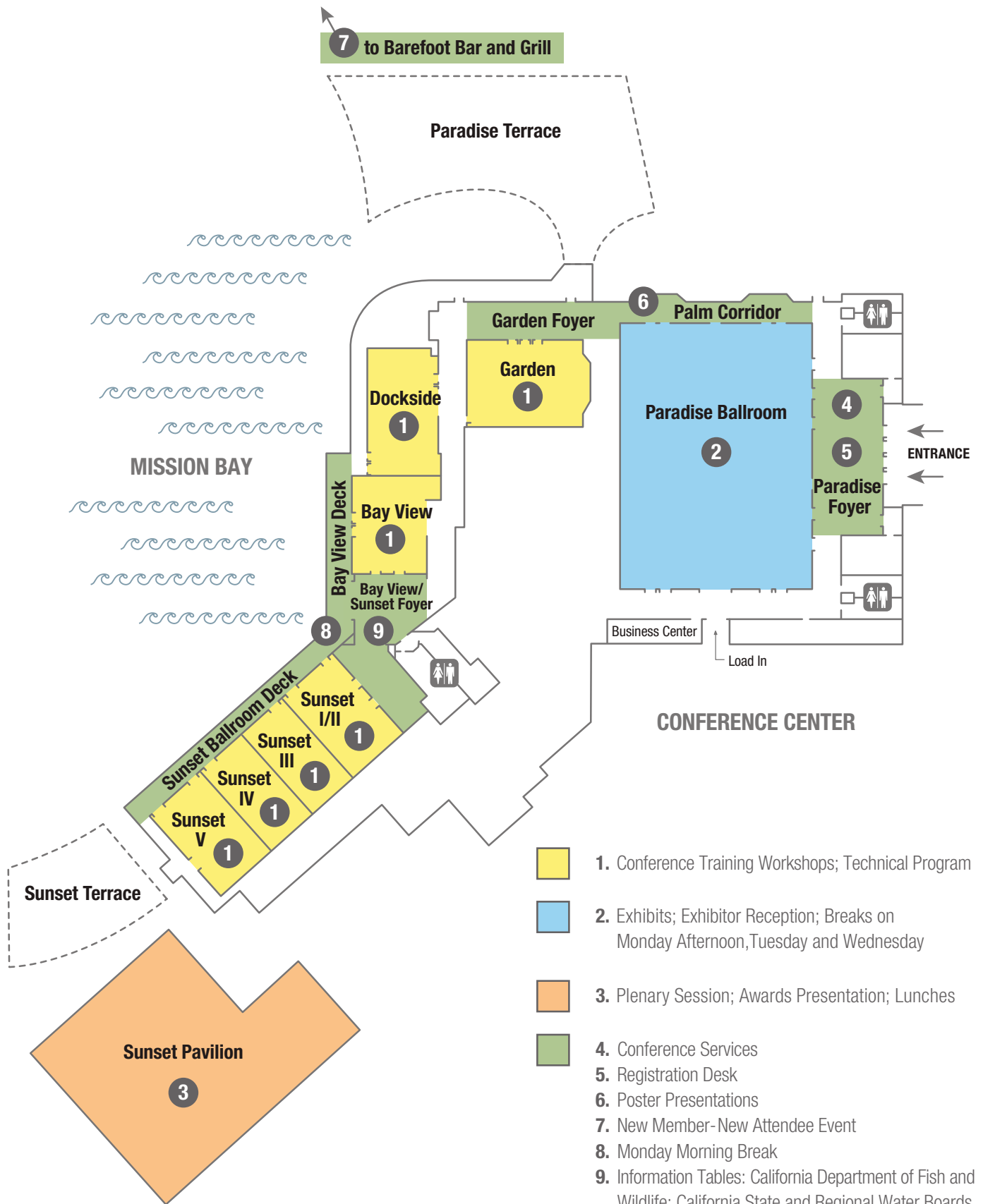
(866) 742-8287, Ext. 205

[erin@goldstreetdesigns.com](mailto:erin@goldstreetdesigns.com)





## CASQA CONFERENCE MAP



-  1. Conference Training Workshops; Technical Program
-  2. Exhibits; Exhibitor Reception; Breaks on Monday Afternoon, Tuesday and Wednesday
-  3. Plenary Session; Awards Presentation; Lunches
-  4. Conference Services
- 5. Registration Desk
- 6. Poster Presentations
- 7. New Member-New Attendee Event
- 8. Monday Morning Break
- 9. Information Tables: California Department of Fish and Wildlife; California State and Regional Water Boards

(See Information Table Hours on page 17)





# STORMWATER EVOLUTION: FROM SOURCE TO RESOURCE

## IN-DEPTH TRAINING WORKSHOPS

Monday, September 12, 2016

The 2016 Training Workshops include six half-day and four full-day training workshops, as well as one full-day field tour. Attendee registration includes two half-day training workshops, one full-day training workshop, or the full-day field tour. Webcast registration includes the half-day and full-day training workshops, but does not include the full-day field tour. Viewers may “channel surf” between the training workshops.



© Magdalena

## Full-Day Training Workshops

- **Field Tour: From “Bud” to Bay**  
Includes a visit to the Claude “Bud” Lewis Carlsbad Desalination Plant and projects in the Mission Bay area
- **Bacteria TMDLs and Compliance: How Do We Get There?**
- **Industrial General Permit**
- **Trash: Approaches for Trash Capture and Compliance**
- **Watershed Planning: The Realities of Watershed Management Plan and Green Infrastructure Plan Implementation**



## Half-Day Training Workshops

### MORNING WORKSHOPS

- **Legal Update**
- **Stormwater Management Through Natural Treatment Systems**
- **Stormwater Monitoring: Trends in Stormwater Monitoring**

### AFTERNOON WORKSHOPS

- **Biofilters – From A to Z**
- **Illicit Discharges: Regional Strategies and Techniques to Maximize Resources and Resource Protection**
- **Toxicity 101: Better Understanding and Using Toxicity Testing and Data**



(A) Gobernadora Basin photo by Bruce Phillips, PACE; (B) Orange County Water District; (C) Riverside County Flood Control and Water Conservation District; (D) Jennifer Shook, OC Public Works

Stormwater as a resource: (A) infiltration basin with wetland vegetation, (B) and (C) regional infiltration and local recreation on the Santa Ana River, and (D) habitat restoration fed by dry weather runoff





## TECHNICAL PROGRAM, Tuesday and Wednesday, September 13–14, 2016

The technical program will feature two full days of concurrent session presentations. Each of the major tracks for the concurrent session presentations is outlined below and is described in more detail on the CASQA website:

**Behavior Change and Training** - This track will focus on different methods or projects that inspire behavior change in communities and extraordinary training programs that build a strong compliance culture.

**City Projects Spotlight** - This track will allow municipalities to showcase projects that are unique or interesting and directly support the MS4 stormwater program.

**Construction General Permit** - The track will focus on proven strategies to ensure implementation and buy-in from all parties, particularly construction contractors, and will look ahead to the next construction general permit, and potential new approaches for compliance

**Effectiveness Assessment** - This track will focus on strategies to assess the effectiveness of BMPs and stormwater programs under the Municipal and/or Industrial General Permit.

**GIS Applications and Science** - This track will focus on the growing use of GIS for stormwater applications including regional watershed planning, effectiveness assessment, and the use of mobile applications and online GIS for public engagement.

**Industrial General Permit** - This track will highlight compliance strategies, resource utilization, BMP implementation, and methods to manage stormwater at sites covered under the IGP including real world case studies and adaptive compliance strategies.

**Integrating Watershed and Data Science into Decisions** - This track of invited experts looks at the interface of science and policy through case studies and a panel discussion including regulatory and practitioner perspectives.

**Low Flow Capture, Diversion, and Use** - This track will showcase projects that address pollutants associated with wash-off from urban environments during “first flush” conditions and non-storm water (“dry weather” discharges) associated with over-irrigation and other over-use of water.

**Monitoring** - This track will focus on monitoring methods, advances in monitoring technology, and communication of monitoring data.

**Municipal Stormwater Permit** - This track will focus on programs developed in response to municipal stormwater permits, and will highlight how California’s communities have adapted permit compliance in response to new regulations.

**Phase II MS4 Permit** - This track will highlight lessons learned by traditional and non-traditional Permittees while planning and implementing public outreach and education programs, meeting post construction requirement challenges, and developing monitoring and reporting programs.

**Public Information and Outreach** - This track will highlight innovative and inspirational stormwater outreach and education efforts involving multi-benefit messaging, community based social marketing, diverse collaborations and partnerships, and strategies for and use of technological tools and media.

**San Diego Spotlight** - This track will focus on stormwater and water supply issues in the San Diego region.

**Stormwater and Climate Change** - Climate change is expected to alter precipitation patterns and intensity as well as the frequency of large storm events. This track will cover on-going research, methods, and the challenges to stormwater management posed by climate change.

**Stormwater and Sustainability** - This track will focus on sustainable stormwater management approaches at the regional, municipal and project levels that are helping to create livable communities through integrated planning, holistic life-cycle designs, and balancing costs and benefits.

**Stormwater and Technology** - This track will focus on existing, up-and-coming, and innovative technologies for treatment, monitoring, mapping, modeling, and capture and use.

**Stormwater and Transportation** - This track will examine how to characterize, treat and otherwise minimize the detrimental effects of contaminated stormwater generated by transportation activities.

**Stormwater as a Resource** - This track will examine the value of stormwater as a resource, including case studies of capture and use, advanced treatment, collaborative watershed-level stormwater resource strategies, cost comparisons, and development of Stormwater Resource Plans.

**Stormwater Grants and Funding** - This track will focus on lessons learned and new ideas for innovative program funding.

**Stormwater Treatment** - This track will focus on stormwater treatment involving retention, bioretention, biofiltration, green infrastructure, green streets, and hydromodification and stormwater harvesting and use applications.

**TMDLs and Pollutant Specific Compliance** - This track will focus on the planning and implementation of TMDLs, the latest research and scientific information, innovative measures and technologies, assessments of compliance, and project-specific or watershed plans to address pollutants of concern.

**Trash** - This track will highlight recent efforts to reduce the impact of trash on water bodies, including approaches to meeting the Track 1 and 2 compliance options.

**Watershed Management** - This track will spotlight creative approaches to watershed management, studies that inform the science behind watershed health, and projects that provide multiple or unique benefits to a community.

### Panels and Forums

- Pioneering Visions in Stormwater / The National Perspective – Visions for Improving the Stormwater Program
- Regulatory Panel Discussion / Construction
- Regulatory Panel Discussion / Industrial
- Regulatory Panel Discussion / Municipal
- Integrating Watershed and Data Science Into Decisions
- Trainer of Record Forum / Construction General Permit
- Trainer of Record Forum / Industrial General Permit
- QISP Forum
- QSP / QSD Forum





# THANK YOU

CASQA would like to thank the following sponsors, advertisers, and exhibitors for supporting the 12th Annual Conference

## PREMIUM

HOST PROGRAM  
SPONSOR



PLATINUM  
STORMWATER  
STEWARDS



GOLD  
STORMWATER  
STEWARDS



## SPECIALTY

SILVER STORMWATER STEWARDS



## EVENT

LUNCH SPONSORS



BREAK SPONSORS



NETWORKING EVENT SPONSORS



- Charles Abbott Associates, Inc.
- EOA, Inc.
- TRC Solutions

EXHIBITOR RAFFLE

SPONSOR



## CUSTOMIZABLE

CONFERENCE APP SPONSOR



CHARGING STATION SPONSOR



## EXHIBITORS

### Super Premium Exhibitors

- Advanced Drainage Systems, Inc.
- Belgard
- Bio Clean & Modular Wetlands
- CleanWay Environmental Partners, Inc.
- CloudCompli, Inc.
- Contech Engineered Solutions
- Downstream Services, Inc.
- Jensen Precast
- Oldcastle Precast, Inc.

### Premium Exhibitors

- Campbell Scientific, Inc.
- City of San Diego
- Coanda, Inc.
- DeepRoot Green Infrastructure
- EnviroCert International, Inc.
- G2 Construction, Inc.
- Golder Associates, Inc.
- Gullywasher Stormwater Filters
- Heavyweight Sediment Control Solutions – WTB, Inc.
- Hydro International
- PACE Advanced Water Engineering

- Precon Products
- SonTek
- StormTrap
- LSC Environmental Products (formerly Terra Novo, Inc.)
- United Storm Water, Inc.
- Weck Laboratories, Inc.

### Regular Exhibitors

- AquaShield, Inc.
- California Filtration Specialists, LLC
- CLEARWATER SOLUTIONS, Inc.
- dat Mobile Solutions
- Earthsavers Erosion Control

- Pat Chem Laboratories
- Porous Technologies, LLC
- Prinsco
- Revel Environmental Manufacturing, Inc. (REM)
- SCI Consulting Group
- StormChamber
- StormwaterRx LLC

### Tabletop Exhibitors

- Angelus Block Co., Inc.
- CBI Systems
- SmartCover Systems
- Containment & Filtration Solutions (CF-S)



*Welcome* **CASQA members, sponsors  
and conferences attendees!**

Think Blue reflects San Diego's dedication to improving water quality and protecting its beaches and bays through education and outreach to residents and visitors alike.

Please enjoy the conference and take a good look at what Think Blue has accomplished. A beautiful San Diego for us makes a beautiful backdrop for you.

A change for the better begins with you.

Learn more at [www.thinkblue.org](http://www.thinkblue.org)

Host Program Sponsor

## LARRY WALKER ASSOCIATES



**Environmental engineering and consulting.**  
Providing innovative water quality solutions  
throughout California for 35 years.

Davis 530.753.6400

Berkeley, Carlsbad, San Jose, Santa Monica, Seattle, Ventura

[www.lwa.com](http://www.lwa.com)

Gold Stormwater Steward





## Thinking of water in new ways

From protecting our waterways to capturing and reusing stormwater runoff, making the most of our available water means getting creative.

Advancing stormwater: that's essential.  
That's Brown and Caldwell.



**Engineers | Scientists | Consultants | Constructors | [BrownandCaldwell.com](http://BrownandCaldwell.com)**

©2016 Brown and Caldwell. All rights reserved.

Gold Stormwater Steward

16 Years of Partnering with Our Clients  
to Deliver Award Winning and Cost-Effective  
Water Resources Solutions

[Geosyntec.com](http://Geosyntec.com)



Legacy Park, Malibu

**Geosyntec**  
consultants

engineers | scientists | innovators

Providing value-driven and  
sustainable solutions to stormwater  
and water resource challenges

- Development
- Construction
- Municipal
- Industrial



Boeing SSFL Stormwater  
Biofilter CASQA Outstanding  
Stormwater BMP 2013



Mill Creek Wetlands  
CASQA Outstanding  
Regional BMP 2014

Gold Stormwater Steward



# CASQA TRAINING WORKSHOPS AGENDA

Sunday & Monday,  
September 11-12, 2016

SUNDAY							
4:00p–7:00p	REGISTRATION DESK (Paradise Foyer)						
7:00p–10:00p	NEW MEMBER-NEW ATTENDEE EVENT (Barefoot Bar and Grill)						
MONDAY							
7:30a–5:30p	REGISTRATION DESK (Paradise Foyer)						
7:45a–8:15a	ROOM MONITOR TRAINING (Garden)						
10:00a–5:00p	POSTER SESSION (Palm Corridor and Garden Foyer)						
12:00p–6:00p	EXHIBIT HALL OPEN (Paradise Ballroom)						
OFF-SITE FIELD TOUR 8:00a–5:00p	<div><div><b>Field Tour</b> <b>From “Bud” to Bay</b> (Takes place offsite; Limited to 56 people)</div><div><b>Moderator: Melanie Sotelo, CASC Engineering and Consulting, Inc.</b> Travel up the coastline to visit sites that deliver new resources to the surrounding community. From the Claude “Bud” Lewis Carlsbad Desalination Plant to the assortment of projects in the Mission Bay area the group will view and discuss ocean desalination, rain gardens, green streets, and more.</div></div>						
TRAINING WORKSHOPS	<b>Stormwater Monitoring</b> <b>Trends in Stormwater Monitoring</b>  MORNING Room: Garden	<b>Stormwater Management</b> <b>Through Natural Treatment Systems</b>  MORNING Room: Dockside	<b>Legal Update</b>  MORNING Room: Bay View	<b>Trash Approaches for Trash Capture and Compliance</b> (Limited to 80 people)  FULL DAY Room: Sunset I & II	<b>Watershed Planning</b> <b>The Realities of Watershed Management Plan and Green Infrastructure Plan Implementation</b>  FULL DAY Room: Sunset III	<b>Bacteria TMDLs and Compliance</b> <b>How Do We Get There?</b>  FULL DAY Room: Sunset IV	<b>Industrial General Permit</b>  FULL DAY Room: Sunset V
MODERATOR	J. Michael Trapp Michael Baker International; Sean Porter Brown and Caldwell	Ashmita Sengupta Southern California Coastal Water Research Project	Rebecca Andrews Best Best & Krieger LLP	Karen Ashby Larry Walker Associates	Richard Watson, Richard Watson & Associates	Andrea Crumacker Weston Solutions, Inc.	Matt Lentz GSI Environmental; Katharine Wagner Attorney
8:30a–10:00a	<div>Introduction <i>J. Michael Trapp, Michael Baker International; Sean Porter Brown and Caldwell</i></div> <div>Trends in Monitoring Technology <i>Garth Engelhorn, Alta Environmental</i></div> <div>Challenges Related to the Move Towards Watershed Based Monitoring Programs <i>Andre Sonksen, City of San Diego</i></div>	<div>Panel Discussion: <i>Stan Grant, David Feldman, and Meg Rippy, University of California, Irvine; Andrew Mehning, Scripps, University of California, San Diego; Ashmita Sengupta, Southern California Coastal Water Research Project; Brandon Winfrey, University of California, Los Angeles; Perran Cook and Ana Deletic, Monash University</i></div> <div>Urban Wetlands <i>Peter Bowler, University of California, Irvine</i></div> <div>Restoring Catchment Hydrology <i>Stan Grant, University of California, Irvine</i></div> <div>Plant Harvesting <i>Brandon Winfrey, University of California, Los Angeles</i></div> <div>FIB Removal in Biofilters <i>Emily Parker, University of California, Irvine</i></div>	<div>Case Law Update <i>Melissa Thorne, Downey Brand LLP</i></div> <div>“Waters of the United States” Rulemaking Update and “Conduit Theory” Case Discussion <i>Samuel Brown, Hunton &amp; Williams LLP</i></div> <div>Developments in California Administrative Proceedings <i>Ryan Baron, Best, Best &amp; Krieger</i></div> <div>Panel Discussion</div>	<div>What is The Current Status of the Trash Policy?</div> <div>Trash Policy Update <i>Leo Cosentini, State Water Resources Control Board; Gayleen Perreira, State Water Resources Control Board</i></div> <div>Where Does the Trash Policy Apply Within My Jurisdiction?</div> <div>Identification of Priority Land Uses and Substitutions <i>Chris Sommers, EOA</i></div> <div>Hands-On Exercise #1 <i>Sandy Mathews, Larry Walker Associates</i></div>	<div>Introduction <i>Richard Watson, Richard Watson &amp; Associates</i></div> <div>Keynote The Color Wheel of Water Infrastructure and Water Quality Standards – Integrating the Full Spectrum <i>Steven Moore, Board Member – State Water Resources Control Board</i></div> <div>Panel Discussion: Expectations and Perceptions of Regulators and Environmental Organizations</div> <div>Panel Members: <i>Renee Purdy, Los Angeles Regional Water Quality Control Board; Keith Lichten, San Francisco Bay Regional Water Quality Control Board; Rita Kampalath, Heal the Bay</i></div>	<div>Introduction</div> <div>Panel Discussion: National, State, and Regional Water Board Bacteria TMDL / Policy Updates</div> <div>EPA National Bacteria Policy Update <i>Terrence Fleming, U.S. EPA Region 9</i></div> <div>EPA 2012 Bacteria Recommendations, California Implementation <i>Rik Rasumussen, State Water Resources Control Board</i></div> <div>Overview of Bacteria TMDLs in the San Francisco Bay Region <i>Jan O’Hara, San Francisco Bay Regional Water Quality Control Board</i></div>	<div>Introduction</div> <div>The First Year of the New Industrial General Permit in Review <i>Matt Lentz, GSI Environmental</i></div> <div>Lessons Learned and Challenges Ahead <i>Katharine Wagner, Attorney</i></div> <div>Exceedance Response Action Level 1 and Anticipating Level 2 – What are Industrial Facility Operators Doing? <i>Delyn Ellison-Lloyd, City of Roseville; Ed Childers, Clean Water Strategies; Edward Phillips, BNSF Railway; Mark Williams, AECOM</i></div>





# CASQA TRAINING WORKSHOPS AGENDA

Monday, September 12, 2016  
(continued)

10:00a–10:30a BREAK (Sunset Ballroom Deck and Bay View Deck) AND POSTER PRESENTATION AUTHORS AVAILABLE (Palm Corridor and Garden Foyer)							
TRAINING WORKSHOPS	<b>Stormwater Monitoring</b> <b>Trends in Stormwater Monitoring</b>  MORNING (continuation) Room: Garden	<b>Stormwater Management</b> <b>Through Natural Treatment Systems</b>  MORNING (continuation) Room: Dockside	<b>Legal Update</b>  MORNING (continuation) Room: Bay View	<b>Trash</b> <b>Approaches for Trash Capture and Compliance</b> (Limited to 80 people)  FULL DAY (continuation) Room: Sunset I & II	<b>Watershed Planning</b> <b>The Realities of Watershed Management Plan and Green Infrastructure Plan Implementation</b>  FULL DAY (continuation) Room: Sunset III	<b>Bacteria TMDLs and Compliance</b> <b>How Do We Get There?</b>  FULL DAY (continuation) Room: Sunset IV	<b>Industrial General Permit</b>  FULL DAY (continuation) Room: Sunset V
MODERATOR	J. Michael Trapp Michael Baker International; Sean Porter Brown and Caldwell	Ashmita Sengupta Southern California Coastal Water Research Project	Rebecca Andrews Best Best & Krieger LLP	Karen Ashby Larry Walker Associates	Richard Watson, Richard Watson & Associates	Andrea Crumpacker Weston Solutions, Inc.	Matt Lentz GSI Environmental; Katharine Wagner Attorney
10:30a–12:00p	Regional Cooperative Monitoring Programs – Southern California Bio-Assessment <i>Eric Stein, Southern California Coastal Water Research Project</i> Perspective on the Watershed-Based Monitoring and Participating in Multiple Efforts <i>Jon Ball, City of Los Angeles</i> <b>Panel Discussion:</b> Trends in Stormwater Monitoring	Plant Selection for Stormwater Capture Systems <i>Rich Ambrose, University of California, Los Angeles</i> Nofilter Maintenance <i>Meg Rippey, University of California, Irvine</i> Catchment Scale In-Stream Nitrate Management <i>Asal Askarizadeh, University of California, Los Angeles</i> Nitrate Removal in Biofilters <i>Emily Payne, Monash University</i> Green House Gases in Biofilters <i>Andrew Mehring, Scripps, University of California, San Diego</i> Discussion	Developments in State and Federal Policy <i>Jonathan Bishop, State Water Resources Control Board</i> Impacts of State and Federal Policies on Local Regulatory Approaches <i>Laurie Walsh, San Diego Regional Water Quality Control Board</i> Implications for Implementing Regulatory Approaches Through the Lens of the Phase II Remand Rule <i>Karen Ashby, Larry Walker Associates</i> Panel Discussion	<b>How Do I Implement My Approach? Municipal Case Studies/Panel</b>  Introduction <i>Chris Sommers, EOA</i>  Panel Members: <i>Con Kontaxis, California Department of Transportation; Rachael Keish, Keish Environmental; Amanda Carr, County of Orange; Rob Carson, County of Marin</i>	<b>Panel Discussion:</b> Overcoming Limitations of Watershed-Scale Plans  Panel Members: <i>Huub Cox, City of Los Angeles; Helen Davies, City of Escondido; Matt Fabry, San Mateo Countywide Water Pollution Prevention Program</i>  <b>Panel Discussion:</b> Tracking Progress, Measuring Effectiveness, and Managing Adaptively  Panel Members: <i>Lisa Austin, Geosyntec Consultants; William Johnson, County of Los Angeles; Jon Van Rhyn, County of San Diego</i>	<b>Panel Discussion:</b> Tools for Compliance  Quantitative Microbial Risk Assessment (QMRA) <i>Jeff Soller, Soller Environmental, LLC</i> Natural Source Exclusion <i>LB Nye, Los Angeles Regional Water Quality Control Board</i> Cost Benefit Analysis <i>Gretchen Greene, Rambol Environ</i> Reference System Approach <i>Martha Sutula, Southern California Coastal Water Research Project</i>	<b>Non-Industrial Sources – Technical Challenges and Expectations</b>  Solely Attributable or Not – Is Aerial Deposition Driving NAL Exceedances? <i>Brandon Steets, Geosyntec Consultants, Inc.</i>  <b>Panel Discussion on Advanced BMPs and Storm Water Treatment for Industrial Sites</b>  <i>Tim Bauters, Golder; Jeremy Laurin, PG&amp;E; Tim Simpson, GSI Environmental</i>
12:00p–1:35p EXHIBITOR FOCUS (Paradise Ballroom) AND LUNCH (Sunset Pavilion)							

## KEYNOTE SPEAKER Tuesday, September 13 at 8:30 a.m.



**Andy Lipkis**, keynote speaker for the 2016 CASQA Conference, is a practical visionary who has dedicated his life to healing the environment while improving the lives of individuals and communities.

He founded TreePeople in Los Angeles in 1973 at age 18 and continues to serve as its President. Andy has spearheaded an approach using trees and forest-inspired technologies to make cities sustainable while mitigating floods, drought, pollution, and global warming. This approach is being demonstrated in Los Angeles as a model for cities everywhere.

Photo courtesy of Andy Lipkis



# CASQA TRAINING WORKSHOPS AGENDA

Monday, September 12, 2016  
(continued)

TRAINING WORKSHOPS	<b>Toxicity 101</b> Better Understanding and Using Toxicity Testing and Data	<b>Biofilters - From A To Z</b>	<b>Illicit Discharges</b> Regional Strategies and Techniques to Maximize Resources and Resource Protection	<b>Trash</b> Approaches for Trash Capture and Compliance (Limited to 80 people)	<b>Watershed Planning</b> The Realities of Watershed Management Plan and Green Infrastructure Plan Implementation	<b>Bacteria TMDLs and Compliance</b> How Do We Get There?	<b>Industrial General Permit</b>
	AFTERNOON Room: Garden	AFTERNOON Room: Dockside	AFTERNOON Room: Bay View	FULL DAY (continuation) Room: Sunset I & II	FULL DAY (continuation) Room: Sunset III	FULL DAY (continuation) Room: Sunset IV	FULL DAY (continuation) Room: Sunset V
MODERATOR	Marilyn O'Neill Nautilus Environmental	Chris Crompton County of Orange; Eric Strecker Geosyntec Consultants, Inc.	James Fortuna County of Orange	Karen Ashby Larry Walker Associates	Richard Watson, Richard Watson & Associates	Andrea Crumpacker Weston Solutions, Inc.	Matt Lentz GSI Environmental; Katharine Wagner Attorney
1:35p–3:00p	<p>Welcome, Opening Remarks, and Overview <i>Marilyn O'Neill, Nautilus Environmental</i></p> <p>Primer on the Basics: Definition, Purpose, and Application of Toxicity Testing <i>Katie Payne, Nautilus Environmental</i></p> <p>Using the Data: Analyses, Tools, and Interpretation <i>Adrienne Cibar, Nautilus Environmental</i></p> <p>Toxicity Identification and Other Advanced Tools <i>Peter Arth, Nautilus Environmental</i></p>	<p><b>Overview:</b> Regulatory Requirements in Permits <i>Chris Crompton, County of Orange</i></p> <p>Making Bioretention and Biofilter Systems More Resilient <i>Eric Strecker and Aaron Poresky, Geosyntec Consultants, Inc.</i></p> <p>An Integrated Approach to Landscaping in LID Facilities <i>Jeff Justus, Schmidt Design Group, Inc.</i></p>	<p>Welcome, Opening Remarks, and Overview <i>James Fortuna, County of Orange</i></p> <p>Federal Resources and Response Activities <i>Robert Wise, United States Environmental Protection Agency</i></p> <p>Emergency Response Activities and Requirements for Stormwater Management Agencies <i>Charles Griffin, Santa Ana Regional Water Quality Control Board</i></p> <p>An Overview of Oil Spill Response <i>Chris Thixton and Scott D. Lipton, California Department of Fish &amp; Wildlife</i></p>	<p><b>How Much Will This Cost?</b></p> <p>Capital and Operations and Maintenance Costs <i>Jennifer Seguin, City of San Jose; Dawn Petschauer, City of Los Angeles</i></p> <p>Hands-On Exercise #2 <i>Anna Lantin, Michael Baker International</i></p>	<p><b>Panel Discussion:</b> Time and Agency Coordination Challenges</p> <p><b>Panel Members:</b> <i>Karina Danek, City of San Diego; Jolene Guerrero, County of Los Angeles; Tom Dalziel, Contra Costa Clean Water Program</i></p> <p><b>Panel Discussion:</b> Challenges of Retrofitting the Built Environment</p> <p><b>Panel Members:</b> <i>Eric Mosolgo, City of San Diego; Chad Helmle, Tetra Tech, Inc.</i></p>	<p><b>TMDL Implementation and Special Studies</b></p> <p>Phylochip <i>Eric Dubinsky, University of California, Berkeley</i></p> <p>QMRA to SSO: An Overview <i>Ruth Kolb, City of San Diego</i></p> <p>POLA - NSE <i>Andrew Jirik, Port of Los Angeles</i></p> <p>Development of a QMRA at a Marine Beach in Southern California <i>Sunny Jiang, University of California, Irvine</i></p>	<p><b>Panel Presentations / Discussion:</b> Incorporation of TMDL Provisions in the IGP</p> <p><i>Mark Angelo and Laurel Wardrip, State Water Resources Control Board; Laurie Walsh, San Diego Regional Water Quality Control Board; Pavlova Vitale, Los Angeles Regional Water Quality Control Board; Matt Zucca, Erler &amp; Kalinowski, Inc.</i></p>
3:00p–3:25p	BREAK AND EXHIBITOR FOCUS (Paradise Ballroom)						
3:25p–5:00p	<p><b>Real World Applications and Issues</b></p> <p>Brief Presentations and Q&amp;A Panel Discussion with Toxicity Data Users from the Regulated, Regulator, and Consulting Community Perspectives</p> <p>Additional Panel Members: <i>Bryn Phillips, University of California, Davis; Jeremy Burns and Chris Stransky, Amec Foster Wheeler</i></p>	<p>Biofiltration Monitoring, Lessons Learned So Far From the SMC CLEAN Project <i>Daniel Apt and J. Michael Trapp, Michael Baker International</i></p> <p>The Impact of Plants on the Removal of Fecal Indicator Bacteria in Biofilters <i>Stanley Grant, University of California, Irvine</i></p> <p>Field Protocols to Assess Bioretention/Biofiltration Maintenance Needs and Estimate Pollutant Load Reductions <i>Nicole Beck, 2NDNATURE</i></p> <p>Wrap-Up and Q&amp;A</p>	<p>Building Collaboration Between Agencies Through the Orange County Strikeforce <i>Leonard Washington, Orange County District Attorney's Office</i></p> <p>Incident Roundtable <i>Coordinated by James Fortuna, County of Orange</i></p> <p>Real World Case Studies – Cleanup Strategies, Effective Use of Regional Resources, Monitoring Techniques, and Agency Collaboration Examples</p> <ul style="list-style-type: none"> <li>- Industrial Facility Discharges</li> <li>- Industrial Chemical Fires</li> <li>- Petroleum Discharges</li> <li>- Major Sewage Spills</li> </ul>	<p><b>How Do I Make the Decision to Go Track 1 or Track 2?</b></p> <p>Introduction/ Purpose of Discussion <i>Paul Hartman, Larry Walker Associates</i></p> <p>Round Table Discussion</p> <p>Wrap-Up and Q&amp;A <i>Anna Lantin, Michael Baker International</i></p>	<p><b>Panel Discussion:</b> Getting Key Stakeholder Participation</p> <p><b>Panel Members:</b> <i>Matt Fabry, Bay Area Stormwater Management Agencies Association; Bill Harris, City of San Diego</i></p> <p><b>Panel Discussion:</b> Addressing the Financing Dilemma</p> <p><b>Panel Members:</b> <i>Andrew Fahlund, Water Foundation; Leslie Friedman-Johnson, Conservation &amp; Natural Resources Group; John Bliss, SCI Consulting Group</i></p> <p>Wrap-Up <i>Richard Watson, Richard Watson &amp; Associates</i></p>	<p><b>TMDL Implementation and Special Studies (continued)</b></p> <p>Middle Santa Ana River Bacteria TMDL, Special Studies <i>Marc Rodabaugh, County of San Bernardino</i></p> <p>Ventura County Special Studies <i>Arne Anselm, County of Ventura</i></p> <p>Strategies for Bacteria TMDL Implementation <i>Joanna Wisniewska, County of San Diego</i></p>	<p>Regulatory Perspectives on the ERAs <i>Laurel Wardrip, State Water Resources Control Board</i></p> <p>ERA Level 2 Strategies <i>David Dixon, Roux &amp; Associates</i></p> <p>IGP Coverage and NECs <i>Laurel Wardrip and Mark Angelo, State Water Resources Control Board</i></p> <p>Wrap-Up and Q&amp;A</p>
5:00p–6:00p	EXHIBITOR FOCUS (Paradise Ballroom)						
6:30p–10:30p	<p><b>NETWORKING EVENT</b> (Off-site: USS Midway Museum – complimentary shuttle buses provided) Included with 3-Day Full Conference Pass. Additional tickets can be purchased at Conference Services until 1:30 p.m. Monday 9/12 (\$80 - onsite pricing)</p>						





connected excellence  
in all we do

## Technical excellence in stormwater

In every challenging  
environment and sensitive  
situation, we see solutions.

Using advanced science and practical  
approaches, we provide cost-efficient  
solutions for our clients' stormwater  
management and green infrastructure  
challenges. From planning and policy  
through construction and program  
management, we are committed  
to innovative excellence in serving  
communities and industrial/commercial  
customers around the world.

[twitter.com/amec\\_fw](https://twitter.com/amec_fw)  
[linkedin.com/company/amecfw](https://linkedin.com/company/amecfw)  
[youtube.com/user/amecfw](https://youtube.com/user/amecfw)  
[facebook.com/amecfw](https://facebook.com/amecfw)

Oil & Gas | Clean Energy |  
Environment & Infrastructure | Mining

**amecfw.com**



Gold Stormwater Steward

## Practical, Efficient, Sustainable, Solutions for all of your Stormwater Program Needs



**CASC**  
Engineering and Consulting  
[www.cascinc.com](http://www.cascinc.com)

### Source to Resource!

We converted our own corporate office open  
space from water-loving turf into runoff-loving  
infiltration basins.

Gold Stormwater Steward

# CUSTOM STORMWATER SOLUTIONS



**Innovative. Modular.  
Adaptable. Site specific.**

**- VISIT US AT BOOTH #27 -**





## CONGRATULATIONS TO THE 2016 CASQA AWARD WINNERS

The CASQA annual awards recognize outstanding projects, activities, and people in the stormwater management profession. To learn more about CASQA's 2016 award winners, look for the blue ribbons in the conference program.

### OUTSTANDING STORMWATER BMP IMPLEMENTATION PROJECT

#### **Implementation of the City of Sacramento LID Standards at California State University, Sacramento**

*City of Sacramento, Office of Water Programs, and California State University, Sacramento (CSUS)*

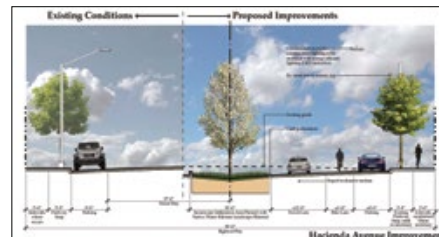


CSUS discharges urban runoff to the American River, an impaired water body. Multiple LID BMPs, including bioretention planters, rain gardens, porous pavement, infiltration bioswale and roof drain disconnects were installed at existing facilities. Project benefits include improved water quality along with educational and monitoring opportunities.

### OUTSTANDING SUSTAINABLE STORMWATER BMP PROJECT

#### **Hacienda Avenue Green Street Improvement Project**

*City of Campbell*

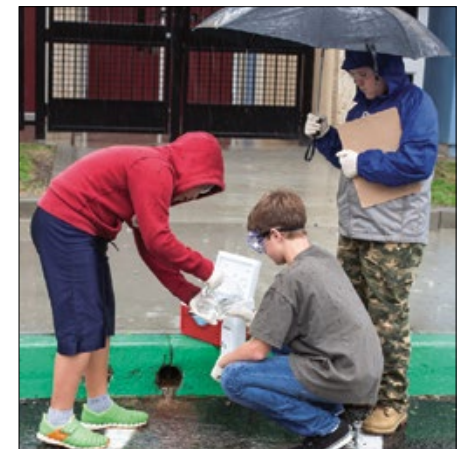


The City of Campbell's Green Street retrofit project improved 1.1 miles of existing streets by incorporating stormwater treatment, groundwater recharge, economic streetscape enhancements, pedestrian/bike/transit friendly features, and efficient lighting. The outcome is an environmentally sustainable and maintainable project.

### OUTSTANDING NEWS, INFORMATION, OUTREACH, AND MEDIA PROJECT

#### **SWPPP Internship Program**

*Encinitas Union School District*



Encinitas Union School District's science-based program engages 5th and 6th grade students in a deeper understanding of the impact stormwater runoff has in the community. The students develop a SWPPP and are then engaged in its implementation, including sampling, evaluation of lab results, and passing along the stormwater quality message to other students.

Photos and illustrations courtesy of the respective award winners



# CASQA TECHNICAL PROGRAM AGENDA Tuesday, September 13, 2016

TUESDAY							
7:30a–5:30p	REGISTRATION DESK (Paradise Foyer)						
7:45a–8:15a	ROOM MONITOR TRAINING (Garden)						
8:00a–5:00p	POSTER SESSION (Palm Corridor and Garden Foyer)						
8:00a–7:30p	EXHIBIT HALL OPEN (Paradise Ballroom)						
8:30a–9:55a	PLENARY SESSION (Sunset Pavilion) WELCOME AND OPENING REMARKS: Jill Bicknell, Chair, CASQA • CASQA AWARDS: Jeff Endicott, Chair, Awards Committee • EXHIBITOR AWARDS: Karen Ashby, Exhibitor Coordinator <b>Keynote Address: Andy Lipkis, TreePeople</b> (see bio on page 10)						
9:55a–10:20a	BREAK AND EXHIBITOR FOCUS (Paradise Ballroom)						
SESSION 1	GIS Applications and Science Web-Based Mapping and Open Data	City Projects Spotlight	Pioneering Visions in Stormwater The National Perspective	Industrial General Permit No Discharge, NONAs, and Low Impact Development Strategies	Effectiveness Assessment Quality Improvement	Monitoring Innovative Approaches	Regulatory Panel Discussion Construction
	Track A Room: Garden	Track B Room: Dockside	Track C Room: Bay View	Track D Room: Sunset I & II	Track E Room: Sunset III	Track F Room: Sunset IV	Track G Room: Sunset V
MODERATOR	Sheri Dister Weston Solutions, Inc.	Richard Lucera Baker International	Scott Taylor Michael Baker International	Jonathan Meronek SCS Engineers	Kathryn Hubbard Haley & Aldrich	Sean Porter Brown and Caldwell	Sandy Mathews Larry Walker and Associates
10:20a–10:50a	San Diego's Web-Based Mapping Applications Streamline Data-Driven Stormwater Project Planning  <i>Eric Mosolgo</i> <i>City of San Diego</i>	<b>2016 CASQA Award Winner – BMP Implementation Category</b>  Implementation of the City of Sacramento LID Standards at California State University, Sacramento: A Local Project with Regional Intent  <i>Maureen Kerner</i> <i>Water Programs at Sacramento State</i>	Visions for Improving the Stormwater Program (panel)  <i>Seth Brown</i> <i>U.S. EPA</i>  <i>Chris French</i> <i>Water Environment Federation</i>  <i>Scott Taylor</i> <i>Michael Baker International</i>  <i>Geoff Brosseau</i> <i>California Stormwater Quality Association (CASQA)</i>	Notice of Non-Applicability (NONA) in the Statewide Stormwater Industrial General Permit (IGP): Defining No Discharge  <i>Russell Hansen</i> <i>State Water Resources Control Board</i>	Grading Stormwater Quality Infrastructure: An Integrated, Quantitative, Regional Approach  <i>Grant Sharp</i> <i>County of Orange</i>	State of the Art Technology for Plume Mapping and Water Quality Monitoring  <i>Dragomir Bogdanic</i> <i>California Department of Transportation</i>	Regulatory Panel Discussion Construction  <i>Alex Alimohammadi</i> <i>Los Angeles Regional Water Quality Control Board</i>  <i>Christina Arias</i> <i>San Diego Regional Water Quality Control Board</i>  <i>Rich Muhl</i> <i>Central Valley Regional Water Quality Control Board</i>
10:55a–11:25a	Using Geo Apps to Facilitate a Community Stewardship-Based Adopt A Channel Program  <i>Kacen Clapper</i> <i>County of Orange</i>	Certified Watershed Wise Landscape Professionals Turn Treatment Control BMPs into a Landscaping New Norm  <i>Pamela Berstler</i> <i>Green Gardens Group</i>		Engineering a NONA Exemption – Lessons Learned During the First Two Years of the IGP  <i>Marty Spongberg</i> <i>Amec Foster Wheeler</i>	An Initiative to Improve Quality and Promote Consistency in Municipal Urban Runoff Program Assessment and Implementation Using Catchment Scale Discharge and Pollutant Loading Information  <i>Dominic Roques</i> <i>Central Coast Regional Water Quality Control Board</i>	Novel Methodologies to Measure Flows and Collect Automated Samples in Challenging MS4 Systems to Meet MS4 Permit Requirements  <i>Tommy Wells</i> <i>FMF Pandion</i>	<i>Laurel Warddrip</i> <i>State Water Resources Control Board</i>
11:30a–12:00p	Stormwater Evolution Through an Open Data Revolution  <i>Grant Sharp</i> <i>County of Orange</i>	Update on City of Torrance Stormwater Quality Projects  <i>Dana Brown</i> <i>Northgate Environmental Management, Inc.</i>		Using Low Impact Development to Address Heavy Metals in Stormwater Runoff at Industrial Facilities and High Density Commercial Areas  <i>Neil Weinstein</i> <i>The Low Impact Development Center, Inc.</i>	Harnessing the Cloud: Tracking and Assessing Watershed Management Programs with Web-Based Reporting Systems  <i>Dustin Bambic</i> <i>Paradigm Environmental</i>	The Secret Path Towards Eliminating Dry Weather Flows Might Be Hiding in Your Pocket. What Does a Smartphone, a Low Cost Web-Enabled Flowmeter and Dry Weather Flow Have in Common?  <i>Garth Engelhorn</i> <i>Alta Environmental</i>	





# CASQA TECHNICAL PROGRAM AGENDA

Tuesday, September 13, 2016  
(continued)

12:00p–1:15p LUNCH (Sunset Pavilion)							
1:15p–1:35p EXHIBITOR FOCUS (Paradise Ballroom)							
SESSION 2	<b>Stormwater and Climate Change</b>	<b>San Diego Spotlight Innovative Approaches to Watershed and Coastal Stormwater Management</b>	<b>Low Flow Capture, Diversion, and Use Technology Transfer</b>	<b>Industrial General Permit TMDLs and Treatment System Effectiveness</b>	<b>Regulatory Panel Discussion Municipal</b>	<b>Trash Understanding the New Regulations</b>	<b>Trainer of Record Forum Construction General Permit</b>
	Track A Room: Garden	Track B Room: Dockside	Track C Room: Bay View	Track D Room: Sunset I & II	Track E Room: Sunset III	Track F Room: Sunset IV	Track G Room: Sunset V
MODERATOR	Nancy Gardiner Haley and Aldrich	Lisa Skutecki Brown and Caldwell	Cory Jones SCS Engineers	Nicole West LSA	Jason Drew NCE	Trevor Alsop Geosyntec Consultants, Inc.	Marvin Sachse Brash Industries
1:35p–2:05p	Managing Water Quality in the Face of Uncertainty: A Case Study of the Effects of Future Land Use and Climate Change on Stormwater Management in the Los Angeles Region  John Riverson Paradigm Environmental	Offsite Stormwater Alternative Compliance Program  Eric Mosolgo City of San Diego	Diversionary Tactics: Pilot Testing Wet and Dry Weather Flow Diversions to Sanitary Sewer as a Means of Reducing PCBs from Stormwater  Cece Sellgren Contra Costa County Watersheds Program	Statewide Stormwater Industrial General Permit – Total Maximum Daily Loads Implementation  Shuka Rastegarpour State Water Resources Control Board	Regulatory Panel Discussion Municipal – The Evolution of Regulations  Chris Beegan State Water Resources Control Board  Adam Fischer Santa Ana Regional Water Quality Control Board	Development of a Monitoring Study Design to Quantify the Trash Load Reduction Associated with On-Land Cleanups  Donna Bodine Geosyntec Consultants, Inc.	CGP ToR: Improved Training Improves Permit Compliance  John Filipoff Lennar Homes  Mark Grey Building Industry Association of Southern California/ Construction Industry Coalition on Water Quality
2:10p–2:40p	Storm Surge Resiliency Planning—Protecting Resources  Kelly Havens Geosyntec Consultants, Inc.	Evaluating Urban and Naval Base Stormwater Impacts on Coastal Sediment Recontamination in San Diego Bay  Brandon Steets Geosyntec Consultants, Inc.	A New Look at Stormwater – Utilizing Existing Infrastructure to Harvest Flows for Drinking Water Use  Shawn Dent Carollo Engineers	Industrial Stormwater Treatment Solutions: How Effective Are They?  Mehran Ebrhimi GSI Environmental Inc.	Michael Rhoades County of Santa Clara  David Smith U.S. EPA Region 9  Todd Snyder San Diego County	Trash Amendments Cost Compliance Considerations for San Francisco  Erica Keyser Tetra Tech, Inc.	Lisa Haney Orange County Sanitation District  Russell Hansen State Water Resources Control Board  Matt O'Malley San Diego Coastkeeper
2:45p–3:15p	Climate Change is Risky Business. Learn More About Tools, Rules, and FAQs  Kathryn Hubbard Haley & Aldrich	Municipal Planning for Alternative Compliance  Richard Lucera Michael Baker International	Dry Weather Flow Capture and Potable Reuse  Sean Porter Brown and Caldwell	Cost and Pollutant Reduction Benefit for an Industrial Stormwater Treatment System  Scott Bourne CDIM Engineering, Inc.		Trash Full Capture Design and Determination of Compliance  Anna Lantin Michael Baker International	
3:15p–3:45p BREAK AND EXHIBITOR FOCUS (Paradise Ballroom)							



Photos by Chris Crompton

San Diego photos left to right: recreation on the Bay; waterfront skyline at night; USS Midway Museum, venue for the Monday evening Networking Event



# CASQA TECHNICAL PROGRAM AGENDA Tuesday, September 13, 2016 (continued)

SESSION 3	<b>Stormwater and Technology</b> Emerging Trends and Strategies for Open Data and NPDES Compliance  Track A Room: Garden	<b>Public Information and Outreach</b> Inspirational Engagement  Track B Room: Dockside	<b>Stormwater and Sustainability</b> Regional and Community Based Projects Designed for Sustainability  Track C Room: Bay View	<b>Regulatory Panel Discussion</b> Industrial  Track D Room: Sunset I & II	<b>Phase II MS4 Permit</b>  Track E Room: Sunset III	<b>TMDLs and Pollutant-Specific Compliance</b> Lake Elsinore TMDL and Nutrients  Track F Room: Sunset IV	<b>Construction General Permit</b> New Approaches to CGP Compliance  Track G Room: Sunset V
MODERATOR	Mary Larsen Stormwater Specialists, Inc.	Stephen Groner S. Groner Associates, Inc.	Lisa Austin Geosyntec Consultants	Matt Lentz GSI Environmental, Inc.	Sara Huber Weston Solutions	Ken Schiff Southern California Coastal Water Research Project	Lisa Haney Orange County Sanitation District
3:45p–4:15p	Stormwater Open Data  <i>Charlow Arzadon State Water Resources Control Board</i>	<b>2016 CASQA Award Winner – News, Information, Outreach, and Media Category</b>  Encinitas Union School District SWPPP Internship  <i>SWPPP Interns Encinitas Union School District</i>  <i>Bill Dean Dean &amp; Associates</i>	Walkable Watersheds: Community-Developed Equitable Investments in Infrastructure and Watershed Planning  <i>Marcus Griswold Skeo</i>	Regulatory Panel Discussion Industrial  <i>Michelle Beckwith Santa Ana Regional Water Quality Control Board</i>  <i>Rich Muhl Central Valley Regional Water Quality Control Board</i>  <i>Erica Ryan San Diego Regional Water Quality Control Board</i>	Stormwater Management and School Districts: A Lesson in Planning  <i>Annika Kubischta D-Max Engineering, Inc.</i>	Canyon Lake and Lake Elsinore TMDL – Historical Background  <i>Cynthia Gabaldon CG Resource Management and Engineering, Inc.</i>	Understanding and Managing Unpaved Roads  <i>Tanya Bilezikjian Michael Baker International</i>
4:20p–4:50p	How Technology Has Evolved As Your Resource For Meeting Your MS4 NPDES Permit Requirements  <i>Terrence Chen Michael Baker International</i>	The Art of Data Visualization  <i>Dane Atkins CloudCompli, Inc.</i>	<b>2016 CASQA Award Winner – Sustainability Category</b>  Hacienda Avenue Green Street Improvement Project  <i>Fred Ho City of Campbell</i>	<i>Luz Vargas Los Angeles Regional Water Quality Control Board</i>  <i>Laurel Warddrip State Water Resources Control Board</i>	Phase II Non-Traditional Stormwater Tools and Approaches  <i>Rachael Keish Keish Environmental</i>	The Lake Elsinore and Canyon Lake Nutrient TMDL – Understanding Water Quality Conditions and Challenges Related to Eutrophication, Elevated Salinity, and Support for Healthy Aquatic Communities  <i>Chris Stransky Amec Foster Wheeler</i>	Apocalyptic Erosion Control: Sustainable Soil Strategies Under El Niño and Drought Conditions  <i>Michael Harding Consultant</i>
4:55p–5:25p	Zero-Discharge BMPs: State Parks' Steps Toward Natural Water Quality Protection in 5 ASBS  <i>Yvana Hrovat Amec Foster Wheeler</i>	Having a Voice in Stormwater: Webinars, Emails, and Podcasts  <i>Ryan Janoch Mapistry</i>	Overview of San Diego's Regional Sustainable Landscapes Program Highlighting Regional Partnerships and Program Tactics of Statewide Relevance  <i>Carlos Michelin San Diego County Water Authority</i>		Program Effectiveness Assessment and Improvement Plan Tracking, Quantifying, and Reporting for Phase II MS4 Permit Compliance  <i>Avery Blackwell Geosyntec Consultants, Inc.</i>	Dynamic Internal Controls on Eutrophication in Lake Elsinore; the Role of "Bottom-Up" and "Top-Down" Limitation on Eutrophication in a Managed Lake System  <i>Steven Wolosoff CDM Smith</i>	Applying Lean Principles to Your Construction Stormwater Project  <i>Tom Burton Haley &amp; Aldrich</i>
5:30p–7:30p	EXHIBITOR RECEPTION (Paradise Ballroom)						

## GET CURRENT INFORMATION ON STORMWATER ISSUES

You will have an opportunity to interact with expert staff, ask questions, and get the latest scoop on California stormwater issues at these information tables in the Bay View/Sunset Foyer.

## California Department of Fish and Wildlife

### Monday, September 12

1:35 pm – 5:00 pm

## California State and Regional Water Boards (agenda/details posted online and at the table)

### Tuesday, September 13

8:00 am – 8:25 am  
10:00 am – 10:20 am  
11:30 am – 12:00 pm  
1:00 pm – 1:30 pm  
5:00 pm – 5:30 pm

### Wednesday, September 14

8:00 am – 9:30 am  
10:15 am – 11:00 am





# CASQA TECHNICAL PROGRAM AGENDA Wednesday, September 14, 2016

WEDNESDAY							
7:30a–3:30p	REGISTRATION DESK (Paradise Foyer)						
7:45a–8:15a	ROOM MONITOR TRAINING (Garden)						
8:00a–8:35a	EXHIBITOR FOCUS (Paradise Ballroom)						
8:00a–12:00p	EXHIBIT HALL OPEN (Paradise Ballroom)						
8:00a–1:20p	POSTER SESSION (Palm Corridor and Garden Foyer)						
SESSION 4	<b>Stormwater Treatment Innovative Designs</b>  Track A Room: Garden	<b>Public Information and Outreach Is Your Outreach Program Working?</b>  Track B Room: Dockside	<b>Stormwater as a Resource Los Angeles County (Part 1)</b>  Track C Room: Bay View	<b>Industrial General Permit The ERA Process, Stormwater Data Evaluation and Analysis</b>  Track D Room: Sunset I & II	<b>Municipal Stormwater Permit Making Permit Compliance</b>  Track E Room: Sunset III	<b>Watershed Management Innovation in Watershed Management</b>  Track F Room: Sunset IV	<b>QSP / QSD Forum</b>  Track G Room: Sunset V
MODERATOR	Melanie Sotelo CASC Engineering and Consulting, Inc.	Marcus Griswold Skeo	Marc Damikolas Brown and Caldwell	Laura Carpenter Brown and Caldwell	Oliver Galang Tetra Tech, Inc.	Michelle Mattson Weston Solutions	Lisa Haney Orange County Sanitation District
8:35a–9:05a	Manmade Lake Design for Maximizing Stormwater Quality Treatment and Reuse  Bruce Phillips PACE Advanced Water Engineering	How to Take Social Marketing by Storm  Erin Keith Gold Street Designs	Panel to Discuss the Practice of Stormwater Capture as a Method to Address Supply Reliability in Los Angeles County  Panel Moderator: Lisa Skutecki Brown and Caldwell  Grace Chan Metropolitan Water District  Angela George County of Los Angeles  David Pettijohn Los Angeles Department of Water and Power  Adel Hagekhalil City of Los Angeles Bureau of Sanitation	Statewide Stormwater Industrial General Permit (IGP): Exceedance Response Actions and Level Status  Laurel Warddrip State Water Resources Control Board	Key to Adaptive Stormwater Program Management: A Unique Prioritization Scheme  Erica Keyser Tetra Tech, Inc.	Turning the Tide on Stormwater: A Multi-Benefit Approach to Addressing Urban Watershed Health Issues  Richard Gomez Los Angeles County	QSP / QSD Forum  Julie Ballesteros City of San Diego  Bill Gilbert Orange County Sanitation District  Adam Weister Morgner Construction Management
9:10a–9:40a	Where Land Meets Sea – Case Study of Stormwater Treatment at a Marine Barge Terminal  Calvin Noling StormwaterRx LLC			A High-Level Perspective on the 2015-16 Industrial Stormwater Quality Data Entered into the California Stormwater Multiple Action and Report Tracking System (SMARTS) Database  Tim Bauters Golder Associates Inc.	Sediment Supply NPDES Permit Requirement for Hydromodification Management  Charles Mohrlock County of San Diego	Satellite Remote Sensing—A Geospatial Technology for Watershed Management  Samuel Darkwah Carollo Engineers	Kim Williams Geosyntec Consultants, Inc.  Russell Hansen State Water Resources Control Board
9:45a–10:15a	Overcoming the Design Challenges of the Torrance Airport Regional BMP Project  Samuel Darkwah Carollo Engineers	Strategies on Inciting Accountability Into Your Outreach  Edward Dong CloudCompli, Inc.	Applying a Long-Term Vision and Integrated Approach to State-of-the-Art Stormwater Infrastructure Planning in the City of Los Angeles  Mark Hanna Geosyntec Consultants, Inc.	20 Years of Stormwater Samples  Frederick Martin Retired	Establishing the Basis for Stormwater Pollutant Trading: The San Diego Water Quality Equivalency Process  Richard Haimann Haimann Engineering	Setting the New Standard for Strategic TMDL Compliance: Rapid, High-Resolution Watershed Master Planning  Eric Mosolgo City of San Diego	



# CASQA TECHNICAL PROGRAM AGENDA

Wednesday, September 14, 2016  
(continued)

10:15a–11:00a BREAK, EXHIBITOR FOCUS, AND PRIZE DRAWING (Paradise Ballroom)							
SESSION <b>5</b>	<b>Stormwater Treatment</b> Pilot Programs and Regional BMPs	<b>Behavior Change and Training</b> Audience Engagement	<b>Stormwater as a Resource</b> Fostering Stormwater Capture	<b>QISP Forum</b>	<b>Municipal Stormwater Permit</b> Moving from Planning to Implementing	<b>Integrating Watershed and Data Science</b> Into Decisions Part 1 – The Science	<b>Construction General Permit</b> A Recipe for Success
	Track A Room: Garden	Track B Room: Dockside	Track C Room: Bay View	Track D Room: Sunset I & II	Track E Room: Sunset III	Track F Room: Sunset IV	Track G Room: Sunset V
MODERATOR	Joyce Goode CASC Engineering and Consulting, Inc.	John Gross Goldstreet Design Agency	Brian Currier Water Programs at Sacramento State	Matt Lentz GSI Environmental, Inc.	Ashmita Sengupta Southern California Coastal Water Research Project	Greg Gearheart State Water Resources Control Board	Tanya Bilezikjian Michael Baker International
11:00a–11:30a	San Diego's Stormwater Pilot Program: Designing, Monitoring, and Maintaining a Non-Proprietary Subsurface Filter  Jonard Talamayan City of San Diego	Training as a Resource – Strategies that Engage Your Audience and Leave a Lasting Impression  Richard Boon County of Orange	Fostering Stormwater Capture and Use  Chris Beegan State Water Resources Control Board	QISP Forum  Rich Muhl Central Valley Regional Water Quality Control Board  Kevin Murphy Water Programs at Sacramento State	Landing the 747: Transitioning from Big Picture Planning to On-the-Ground Actions  Chad Helmle Tetra Tech, Inc.	Watershed Planning for Green Infrastructure Implementation through the GreenPlan-IT Toolset  Jing Wu San Francisco Estuary Institute	San Diego County Public Works – A Recipe for Construction General Permit Success  Dave Sluga Vali Cooper and Associates
11:35a–12:05p			Design / Operation of an Innovative Multipurpose Detention Basin Maximizing Stormwater Reuse – Gobernadora Basin  Bruce Phillips PACE Advanced Water Engineering	Laurel Warddrip State Water Resources Control Board  Matt Zucca Erler & Kalinowski, Inc.		Interpretation of Toxicity and Contaminant Monitoring Data: Case Studies from the Stream Pollution Trends Program (SPoT)  Bryn Phillips University of California, Davis	
12:05p–1:20p LUNCH AND CASQA MEMBER PRIZE DRAWING (Sunset Pavilion)							

## THANK YOU TO THE 2016 CASQA CONFERENCE SUBCOMMITTEE

### Conference Co-Chairs:

Tanya Bilezikjian and Lisa Skutecki

### CASQA Board of Directors:

Jill Bicknell: Chair  
Daniel Apt: Vice-Chair,  
Executive Program Committee Chair  
Erica Ryan: Treasurer, Finance Committee Chair  
Sandy Mathews: Secretary, Bylaws Committee Chair  
Amanda Carr: Program Coordinator  
Brian Currier  
Jeff Endicott: Awards Committee Chair  
Matt Fabry  
Gerhardt Hubner  
Stephanie Reyna-Hiestand  
Frank Wu

### CASQA Membership Committee Chair:

Scott Taylor

### CASQA Executive Director: Geoff Brosseau

### CASQA Annual Conference Coordinator,

### CASQA App and Website Manager:

Amy Porter

### CASQA Executive Assistant: Shelley Larson

### Advance Booking, Promotions Coordinator:

Chris Crompton

### Audio Visual Coordinator: Jason Lawrence

(Advanced Media Works, Inc.)

### Charging Station-Hotel Key Cards:

Nicky Galloway

### Exhibitor Coordinator: Karen Ashby

### Food and Beverage Coordinator:

Kristina Hysler

### Graphic Design: Bev Catli Manzano

(Beverly Catli Design)

### Moderator Coordinator (Tue-Wed): Nicole West

### New Member-New Attendee Event:

Tom Burton

### Poster Session Coordinator: Dave Mercier

### Registration Coordinator: April Krieg

### Room Monitor Coordinator: Sara Huber

### Sponsor Coordinator: Matt Lentz

### Technical Program Coordinator: Lisa Haney

### Training Workshop Lead: Andrea Crumpacker

**Abstract Reviewers:** Mirabel Aguilar, Jeremy Burns, Jessica Cassman, Kacen Clapper, Kristine Corneillie, Andrew Demers, Garth Engelhorn, Bryn Evans, Elisa Garvey, Sharon Gosselin, Kelly Havens, Anna Lantin, Tom Lawrence, Lou Leet, Amy Margolis, Dan McCoy, Lara Meeker, TJ Moon, Eric Mosolgo, Laura Prickett, Jim Rasmus, Hawkeye Sheene, John Steere, Ed Suher





# CASQA TECHNICAL PROGRAM AGENDA

Wednesday, September 14, 2016  
(continued)

SESSION 6	Stormwater and Transportation	Behavior Change and Training Program Results	Stormwater as a Resource Los Angeles County (Part 2)	Trainer of Record Forum Industrial General Permit	Municipal Stormwater Permit Permit Compliance in the Future	Integrating Watershed and Data Science Into Decisions Part 2 – More Science and the Decisions, A Moderated Panel Discussion	Stormwater Grants and Funding Maximize Stormwater Program Return on Investment
	Track A Room: Garden	Track B Room: Dockside	Track C Room: Bay View	Track D Room: Sunset I & II	Track E Room: Sunset III	Track F Room: Sunset IV	Track G Room: Sunset V
MODERATOR	<b>Randy Marx</b> Brown and Caldwell	<b>Bronwyn Kelly</b> Tetra Tech, Inc.	<b>Christian Carleton</b> Water Programs at Sacramento State	<b>Steve Herrera</b> Herrera Engineering	<b>Kristina Hysler</b> Amec Foster Wheeler	<b>Greg Gearheart</b> State Water Resources Control Board	<b>Michael Drennan</b> WSP I Parsons Brinckerhoff
1:20p–1:50p	Guidance on Green Infrastructure: Making LID in the Right-of-Way Standard Practice  <i>Rene Vidales</i> County of San Diego	Using Community-Based Social Marketing to Reduce Residential Water Runoff: Behavioral Results from Two Field Experiments  <i>Jennifer Tobanico</i> Action Research	Los Amigos Park, A Friend to the Environment  <i>Vik Bapna</i> CWE	IGP Trainer of Record Forum  <i>Brian Currier</i> Water Programs at Sacramento State  <i>Kelly Doyle</i> Rick Engineering	Taking South Orange County Water Quality Planning to the Next Level Water Quality Improvement Plan 2.0  <i>Richard Boon</i> County of Orange	What Kind of Biological Conditions Do Engineered Channels Support?  <i>Raphael Mazor</i> Southern California Coastal Water Research Project	The Stormwater Finance Game II—Paying for Success  <i>Chad Praul</i> Environmental Incentives
1:55p–2:25p	Leading Green Street Implementation  <i>Wing Tam</i> City of Los Angeles		The Los Angeles Stormwater Capture Master Plan: Harvesting Local Stormwater for Municipal Supply  <i>Scott Mansell</i> Geosyntec Consultants, Inc.	<i>Matt Lentz</i> GSI Environmental, Inc.  <i>Marvin Sachse</i> Brash Industries  <i>Laurel Warddrip</i> State Water Resources Control Board		Setting Instream Flow Targets in California Using Biological Community Health Indices  <i>Eric Stein</i> Southern California Coastal Water Research Project	
2:30p–3:00p	An Evaluation of Gray and Green Infrastructure to Address Water Quality and Manage Stormwater in the City of Encinitas  <i>Crystal Najera</i> City of Encinitas	Making Data Understandable: From Numbers to Stories to Change  <i>Stephen Groner</i> S. Groner Associates	Los Angeles Basin Stormwater Conservation Study  <i>Lee Alexanderson</i> Los Angeles County		A Guide to Performing Reasonable Assurance Analyses to Inform Municipal Stormwater Planning: “The Wheel is Turning and You Can’t Slow Down”  <i>David Smith</i> U.S. EPA Region 9	Panel: Decision Making for Water Quality and Resource Endpoints Using Data Science, Watershed Science and Adaptive Management  <i>Andrew Kleis</i> City of San Diego	Stormwater Funding—Accessibility and Barriers  <i>Jeffrey Albrecht</i> State Water Resources Control Board
3:05p–3:35p			Flexible Water: Real-Time Rainwater Management for Multi-Agency Benefits by the Greater LA Water Collaborative  <i>Brad Wardynski</i> Tetra Tech, Inc.			<i>Neil Weinstein</i> The Low Impact Development Center  <i>Renee Purdy</i> Los Angeles Regional Water Quality Control Board  <i>Laurie Walsh</i> , San Diego Regional Water Quality Control Board	Feasible Projects Due To Effective Teaming  <i>David Kirby</i> Ventura County Watershed Protection District



Conference networking and poster displays



## CASQA POSTER PRESENTATIONS Monday-Wednesday, September 12-14, 2016

CASQA is pleased to include a poster session at the Annual Conference again this year. The posters will be displayed in the Palm Corridor and Garden Foyer all days. The poster authors will be available to answer questions at the Monday morning break and during other breaks as available.

<p><b>* 2016 CASQA Award Winner</b>  <b>BMP Implementation Category</b> – Implementation of the City of Sacramento LID Standards at California State University, Sacramento: A Local Project with Regional Intent  <i>Maureen Kerner, Water Programs at Sacramento State</i></p>	<p>Infiltration Considerations and Challenges for Municipalities: Taking Stormwater Off of Our Streets and Into the Strata  <i>Edmond Suher, CASC Engineering and Consulting, Inc.</i></p>	<p>Demonstrating the Nexus between Stormwater and Water Efficiency: A Project that Provides both Water Quality and Water Supply Benefits  <i>Heaven Moore, City of Santa Rosa</i></p>
<p>* Overview of San Diego's Regional Sustainable Landscapes Program Highlighting Regional Partnerships and Program Tactics of Statewide Relevance  <i>Carlos Michelon, San Diego County Water Authority</i></p>	<p>LID Principles: A Simple Source to Resource Solution  <i>Joyce Goode, CASC Engineering and Consulting, Inc.</i></p>	<p>Integrating the Amended Soils Model Water Efficiency Landscape Ordinance Requirement into the BMP Design Manual to Make a Win:Win:Win Combination  <i>Stuart Kuhn, County of San Diego</i></p>
<p>* Using Community-Based Social Marketing to Reduce Residential Water Runoff: Behavioral Results from Two Field Experiments  <i>Jennifer Tabanico, Action Research</i></p>	<p>Identifying and Prioritizing In-Stream and Regional Hydromodification Control Opportunities  <i>Judd Goodman, Geosyntec Consultants, Inc.</i></p>	<p>Los Angeles County Public Works Project at Marina Del Rey – Parking Lot 9, Managing Stormwater Pollutants While Creating Open Public Multi-Benefit Spaces  <i>Charles Chen, County of Los Angeles</i></p>
<p>* Update on City of Torrance Stormwater Quality Projects  <i>Dana R. Brown, Northgate Environmental Management, Inc.</i></p>	<p>Demonstration of New Tools for Improved Source and Recontamination Potential Assessment  <i>Molly Colvin, SPAWAR Systems Center Pacific</i></p>	<p>Clean Bay Certified: Helping Restaurants Reduce Their Environmental Impact!  <i>Victoria Gambale, The Bay Foundation</i></p>
<p>* Using Geo Apps to Facilitate a Community Stewardship Based Adopt A Channel Program  <i>Kacen Clapper, County of Orange</i></p>	<p>Decay of Fecal Indicator Bacteria, DNA Markers, and Pathogens in a Coastal California Lagoon  <i>Jared Ervin, Geosyntec Consultants, Inc.</i></p>	<p>Risk-Base Model for Evaluating and Mitigating Pollutants of Concern, and Total Maximum Daily Load Using Best Management Practices  <i>Thomas Sinclair, Thomas Sinclair</i></p>
<p>* The Secret Path Towards Eliminating Dry Weather Flows Might Be Hiding in Your Pocket. What Does a Smartphone, a Low Cost Web-Enabled Flowmeter, and Dry Weather Flow Have in Common?  <i>Garth Engelhorn, Alta Environmental</i></p>	<p>The Uncertainty of Stormwater Management – Groundwater Recharge  <i>Chris Meng-Hong Hsu, GSI Environmental</i></p>	<p>Retrofitting an Existing Development Using LID Strategies: A Pathway to MS4 Permit and TMDL Compliance in South Lake Tahoe  <i>Russell Vadenais, CDM Smith</i></p>
<p>* Guidance on Green Infrastructure: Making LID in the Right-of-Way Standard Practice  <i>Rene Vidales, County of San Diego</i></p>	<p>A Discretionary Urban Low Impact Development Retrofit  <i>Jeff Endicott, CASC Engineering and Consulting, Inc.</i></p>	<p>Colonization Behavior and Other Uncontrollable Sources of Fecal Indicator Bacteria in Southern California Stream May Impede Water Quality Standards Attainment  <i>Tiffany Lin, CDM Smith</i></p>
<p>* Watershed Planning for Green Infrastructure Implementation Through the GreenPlan-IT Toolset  <i>Jing Wu, San Francisco Estuary Institute</i></p>	<p>Using Google "My Maps" to Map Industrial &amp; Commercial Pollutant Sources  <i>Brianna Martin, D-Max</i></p>	<p>Results and Lessons Learned from the Development of the Ventura Countywide Municipal Storm Water Resource Plan  <i>Adam Questad, Geosyntec Consultants, Inc.</i></p>
<p>† Water Quality Benefits of Targeted Aggressive Street Sweeping  <i>J. Michael Trapp, Michael Baker International</i></p>	<p>Encinitas Union School District – Student Education and Involvement  <i>Bill Dean, Encinitas Union School District/Dean &amp; Associates</i></p>	<p>Forecasting (and Measuring) the Benefits of Continuous Monitoring and Adaptive Control: Case Studies from California and the West Coast  <i>Aaron Poresky, Geosyntec Consultants, Inc.</i></p>
<p>Multi-Benefit Stormwater Management System – Port of West Sacramento's Treatment System for Stormwater and Groundwater Provides Year Round Benefits  <i>Nelson Pi, Wallace-Kuhl &amp; Associates</i></p>	<p>Pervious Concrete Made Easy – Installation and Maintenance  <i>David Kirby, Ventura County Watershed Protection District</i></p>	<p>* Poster + oral presentation          † Poster + alternate presentation</p>
	<p>What's Under Garrison Park  <i>William Strand, RRM Design Group</i></p>	
	<p>Assessing Water Use at a Brewery – The Path to Implementing Sustainability Initiatives  <i>Danielle Kerper, Haley &amp; Aldrich, Inc.</i></p>	

### CONTINUING EDUCATION CREDITS

Professional development credits can be earned for in-person attendance and webcast viewing. A professional development verification form is included in your attendee packet, and extras are available at Conference Services.

#### 2016 Participating Organizations (pending approval of the conference program)

- American Institute of Certified Planners (AICP)
- Certified Inspector Sediment and Erosion Control (CISEC)
- Certified Erosion, Sediment and Stormwater Inspector (CESSWI)
- Certified Municipal Separate Storm Sewer System Specialist (CMS4S)
- Certified Professional in Erosion and Sediment Control (CPESC)
- Certified Professional in Storm Water Quality (CPSWQ)
- California Water Environment Association (CWEA)
- Minimum Continuing Legal Education (MCLE)
- Professional Engineers (PE)





# CASQA TECHNICAL PROGRAM – ALTERNATE PRESENTATIONS

In the event of a cancellation of a planned presentation, an alternate presentation below will be substituted.

## City Projects Spotlight

### City Projects Spotlight

Mission Bay Watershed Case Study: City of San Diego's Integrated Monitoring Approach Before and After the Bacteria TMDL  
*Roshan Christoph, Amec Foster Wheeler*

## Effectiveness Assessment

### Quality Improvement

Water Quality Benefits of Targeted Aggressive Street Sweeping  
*J. Michael Trapp, Michael Baker International*

## GIS Applications and Science

### Web-Based Mapping and Open Data

From Pay Phones to Personal Hot Spots – How Technology Has Evolved Stormwater Management  
*Bryn Evans, Dudek*

## Industrial General Permit

### The ERA Process, Stormwater Data Evaluation and Analysis

Identifying Sources of Lead and Dioxins in Stormwater Runoff at the Santa Susana Field Laboratory  
*Jared Ervin, Geosyntec Consultants, Inc.*

### TMDLs and Treatment System Effectiveness

Cost-Effective Treatment of Log Yard Stormwater Under California's Industrial General Permit  
*Barry Kellems, Integral Consulting, Inc.*

## Low Flow Capture, Diversion, and Use

### Technology Transfer

Drought Resiliency and Water Quality Improvements: The Multi-Benefit BMP Design at Aliso Creek - Limekiln Creek  
*Merrill Taylor, Tetra Tech, Inc.*

## Monitoring

### Innovative Approaches

Use of Low Cost Data Loggers for Remote Deployment to Characterize Hydrologic Conditions Across a Large Geographic Region  
*Thomas Arthur, Amec Foster Wheeler*

## Municipal Stormwater Permit

### Making Permit Compliance

Evolving on the Fly: A City of San Diego Perspective on Adaptive Management of Stormwater Program Operations  
*Bryn Evans, Dudek*

### Moving from Planning to Implementing

Monitoring and Modeling Pilot Study to Evaluate the Effectiveness of Street Sweeping for Reducing the Mass of Sediment, PCBs and Mercury in Urban Runoff  
*Donna Bodine, Geosyntec Consultants, Inc.*

### Permit Compliance in the Future

Closing the Loop Between Regional Monitoring Programs, Discharger Data and Municipal Source Investigations  
*Eric Bollens, CloudCompli, Inc.*

## Phase II MS4 Permit

### Phase II MS4 Permit

Stormwater Compliance for Military Facilities – Stormwater Management and TMDLs  
*Anna Lantin, Michael Baker International*

## Public Information and Outreach

### Inspirational Engagement

Elementary Solutions to Water Quality – A Highly Evolved School Program Approach  
*Bryn Evans, Dudek*

## San Diego Spotlight

### Innovative Approaches to Watershed and Coastal Stormwater Management

Urban LID Green Streets with Suspended Paving: City of San Diego BMP Implementation Project  
*Merrill Taylor, Tetra Tech, Inc.*

## Stormwater and Climate Change

### Stormwater and Climate Change

Los Penasquitos Lagoon: A Combined Modeling Framework to Inform Restoration and BMP Implementation Needs  
*Lindsey Sheehan, ESA*

## Stormwater and Sustainability

### Regional and Community Based Projects Designed for Sustainability

Green Streets and Creek Rehabilitation to Transform a Dense Urban Neighborhood  
*John Quenzer, D-Max Engineering*

## Stormwater and Transportation

### Stormwater and Transportation

The Impact of Pavement Degradation on Stormwater Runoff from Local Roads  
*Russell Wigart, El Dorado County*

## Stormwater as a Resource

### Stormwater as a Resource in Los Angeles County (Part 1)

Stormwater Harvesting and Reuse – What Are the Risks?  
*Jacqueline McMillen, Alta Environmental*

## Stormwater Grants and Funding

### Maximize Stormwater Program Return on Investment

P3s – Can They Truly Deliver Solutions That Work for Government, Taxpayers, Residents, Industry, Regulators, and the Environment?  
*Ken Susilo, Geosyntec Consultants, Inc.*

## Stormwater Treatment

### Pilot Programs and Regional BMPs

Collaborative Multibenefit Project Opportunities in County Unincorporated Communities  
*Ewelina Mutkowska, County of Ventura*

## TMDLs and Pollutant-Specific Compliance

### Lake Elsinore TMDL and Nutrients

Merging Science and Effective Public Policy to Implement Effective Nutrient Management in the Santa Margarita River Watershed – An Alternative TMDL Approach  
*Ashli Desai, Larry Walker Associates*

## Trash

### Understanding the New Regulations

Regional Perspective on Trash and Debris from Rivers to the Sea in Southern California  
*Shelly Moore, Southern California Coastal Water Research Project*

## Watershed Management

### Innovation in Watershed Management

Assessing Adaptive Management: Tracking, Quantifying, and Reporting BMP Implementation  
*Avery Blackwell, Geosyntec Consultants, Inc.*



The marina at Paradise Point, San Diego

# Identify Sources of Fecal Pollution



Submit Water Samples for Microbial Source Tracking

- Results in as little as 1 day
- Detect 11 fecal pollution sources
- Shipping materials and sampling bottles provided
- Strict Quality Assurance/Quality Control
- Outstanding customer service



# The Best Storm Drain Filters Period.



- ✓ 4.5" easy access sample port
- ✓ Durable designs made in USA
- ✓ Rigid stainless steel strainer
- ✓ Vector truck serviceable
- ✓ One person installation
- ✓ Adaptive designs fit any basin
- ✓ A variety of filter media available
- ✓ Heavy metals removal with MetalZorb®

Visit our new website today to place your order.



[cleanwayusa.com/storm](http://cleanwayusa.com/storm)

800.723.1373



## CLOUDCOMPLI

MAKING STORMWATER COMPLIANCE  
EASY, EFFICIENT AND DEPENDABLE

### « THE ART OF DATA VISUALIZATION »

DATE/TIME: TUESDAY, SEP 13, 4:20PM TO 4:50PM

PRIMARY SPEAKER: DANE ATKINS, CLOUDCOMPLI INC.

### STRATEGIES ON INCITING « ACCOUNTABILITY INTO YOUR » OUTREACH PROGRAMS

DATE/TIME: WEDNESDAY, SEP 14, 9:45AM TO 10:15AM

PRIMARY SPEAKER: EDWARD DONG, CLOUDCOMPLI INC.

LOCATION: DOCKSIDE

BOOTH NUMBER: 10 AND 11





# CONFERENCE EXHIBITORS AND EXHIBIT HALL MAP

## Exhibit Hall Hours

### Monday, September 12

Exhibit Hall Open	12:00 pm – 6:00 pm
Lunch and Exhibitor Focus	12:00 pm – 1:35 pm
Break and Exhibitor Focus	3:00 pm – 3:25 pm
Exhibitor Focus	5:00 pm – 6:00 pm
Networking Event (offsite)	6:30 pm – 10:30 pm

### Tuesday, September 13

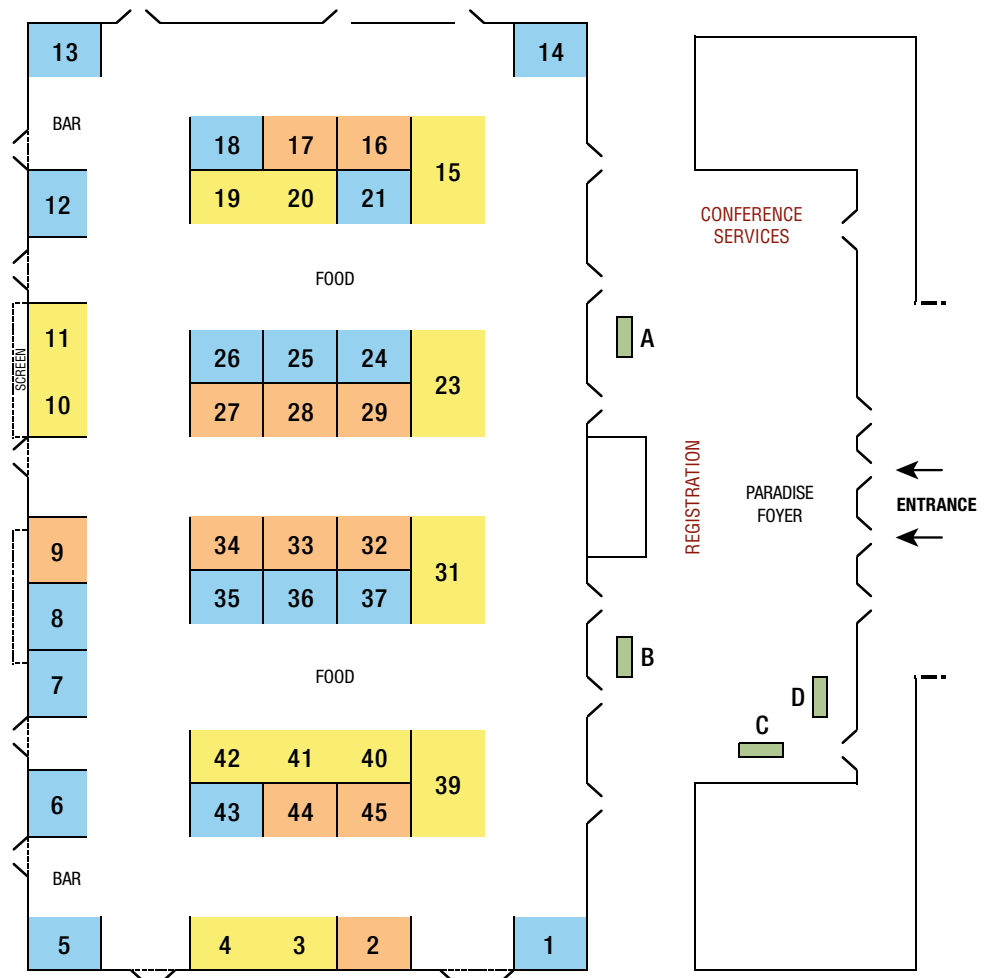
Exhibit Hall Open	8:00 am – 7:30 pm
Break and Exhibitor Focus	9:55 am – 10:20 am
Lunch and Exhibitor Focus	12:00 pm – 1:35 pm
Break and Exhibitor Focus	3:15 pm – 3:45 pm
Exhibitor Reception	5:30 pm – 7:30 pm

### Wednesday, September 14

Exhibit Hall Open	8:00 am – 12:00 pm
Exhibitor Focus	8:00 am – 8:35 am
Break, Exhibitor Focus, and Prize Drawing	10:15 am – 11:00 am

## Exhibit Hall Floor Plan – Paradise Ballroom

- Super Premium Exhibitor
- Premium Exhibitor
- Regular Exhibitor
- Tabletop Exhibitor



### 1 G2 Construction, Inc.

John Alvarado  
1352 East Borchard Ave.  
Santa Ana, CA 92705  
(714) 748-4242  
[www.g2construction.com](http://www.g2construction.com)

### 2 Earthsavers Erosion Control

Howard Schau  
P. O. Box 2083  
Woodland, CA 95776  
(866) 928-8537  
[www.earth-savers.com](http://www.earth-savers.com)

### 3/4 Clean Way Environmental Partners, Inc.

Steve McInnis  
P.O. Box 30087  
Portland, OR 97294  
(800) 723-1373  
[www.cleanwayusa.com](http://www.cleanwayusa.com)

### 5 Weck Labs

Leo Raab  
14859 E. Clark Avenue  
City of Industry, CA 91745  
(626) 336-2139  
[www.wecklabs.com](http://www.wecklabs.com)

### 6 StormTrap

Jeremy Sherwood  
1287 Windham Parkway  
Romeoville, IL 60446  
(815) 955-6655  
[www.stormtrap.com](http://www.stormtrap.com)

### 7 United Storm Water, Inc.

Lydia Perry  
14000 E. Valley Blvd.  
Industry, CA 91746  
(626) 961-9326  
[www.unitedstormwater.com](http://www.unitedstormwater.com)





**Oldcastle Precast®**

**OLDCASTLE STORMWATER SOLUTIONS PROVIDES INNOVATIVE  
PRODUCTS & ENGINEERING SUPPORT FOR ALL YOUR  
STORMWATER MANAGEMENT NEEDS**

---



Detention/  
Retention



Permeable  
Solutions



Harvesting/  
Reuse



Bioretention/  
Biofiltration



Media  
Filtration



Hydrodynamic  
Separation



Inlet  
Filtration



Trash  
Capture

---

 **Visit Oldcastle at Booth #40**

 **Stormwater**  
(800) 579-8819  
oldcastlestormwater.com



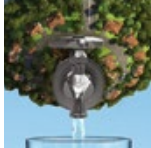
**BELGARD COMMERCIAL HARDSCAPES**  
Site Solutions Utilizing Permeable Pavers



**Jeff Bal**  
(909) 355-6422

**BELGARD**  
BELGARDCOMMERCIAL.COM

10714 Poplar Ave  
Fontana, CA 92337



## CONFERENCE EXHIBITORS (continued)

### 8 Heavyweight Sediment Control Solutions

Kristin Parkinson  
1627 Main Ave., Suite 4  
Sacramento, CA 95838  
(916) 922-9222  
[durawattle.com](http://durawattle.com)

### 9 StormChamber

Ed Haq  
P.O. Box 672  
Occoquan, VA 22125  
(703) 492-0686  
[www.stormchambers.com](http://www.stormchambers.com)

### 10/11 CloudCompli, Inc.

Jason Locklin  
23441 South Pointe Drive, Suite 190  
Laguna Hills, CA 92653  
(949) 226-6743  
[www.cloudcomplli.com](http://www.cloudcomplli.com)

### 12 Golder Associates, Inc.

Tim Bauters  
425 Lakeside Drive  
Sunnyvale, CA 94086  
(408) 220-9223  
[www.golder.com](http://www.golder.com)

### 13 City of San Diego

City of San Diego Storm Water Division  
9370 Chesapeake Drive, Suite 100  
San Diego, CA 92123  
(619) 235-1000  
[www.sandiego.gov/thinkblue](http://www.sandiego.gov/thinkblue)

### 14 Precon Products

Dan Zarraonandia  
P.O. Box 940669  
Simi Valley, CA 93094  
(800) 882-3399  
[www.preconproducts.com](http://www.preconproducts.com)

### 15 Downstream Services, Inc.

Jake Jacobson  
2855 Progress Place  
Escondido, CA 92029  
(760) 746-2544  
[www.downstreamservices.com](http://www.downstreamservices.com)

### 16 California Filtration Specialists, LLC

Mitchel Whitson  
11021 Via Frontera, Suite E  
San Diego, CA 92127  
(858) 705-6483  
[www.californiafiltrationspecialists.com](http://www.californiafiltrationspecialists.com)

### 17 Prinsco

Doug Berg  
1717 16th Street NE  
Willmar, MN 56201  
(800) 992-1725  
[www.prinsco.com](http://www.prinsco.com)

### 18 SonTek

Richard Butler  
9940 Summers Ridge Road  
San Diego, CA 92121  
(858) 546-8327  
[www.sontek.com](http://www.sontek.com)

### 19/20 Advanced Drainage Systems, Inc.

Ryan Wade  
4640 Trueman Boulevard  
Hilliard, OH 43026  
(925) 956-0738  
[www.ads-pipe.com](http://www.ads-pipe.com)

### 21 PACE Advanced Water Engineering

Bruce Phillips  
17520 Newhope Street, Suite 200  
Fountain Valley, CA 92708  
(714) 481-7300  
[www.pacewater.com](http://www.pacewater.com)

### 23 Contech Engineered Solutions

Vaikko Allen  
9025 Centre Pointe Drive  
West Chester, OH 45069  
(800) 338-1122  
[www.conteches.com](http://www.conteches.com)

### 24 EnviroCert International, Inc.

Melissa Parry  
49 State Street  
Marion, NC 28752  
(828) 655-1600  
[www.envirocertintl.org](http://www.envirocertintl.org)

### 25 DeepRoot Green Infrastructure

Rachel Roberts  
101 Montgomery St., Suite 2850  
San Francisco, CA 94104  
(415) 746-1553  
[www.deeproot.com](http://www.deeproot.com)

### 26 Hydro International

Dorene Begin  
94 Hutchins Dr.  
Portland, ME 4102  
(207) 321-6200  
[www.hydro-int.co](http://www.hydro-int.co)

### 27 AquaShield, Inc.

Stacey Scott  
2733 Kanasita Drive, Suite 111  
Hixson, TN 37343  
(888) 344-9044  
[www.aquashieldinc.com](http://www.aquashieldinc.com)

### 28 StormwaterRx LLC

Calvin Noling  
122 SE 27th Avenue  
Portland, OR 97214  
(800) 680-3543  
[www.stormwaterx.com](http://www.stormwaterx.com)

### 29 CLEARWATER SOLUTIONS, Inc.

Joe Arthur  
P.O. Box 2078  
Vista, CA 92085-2078  
(800) 758-8817  
[www.clearwaterbmp.com](http://www.clearwaterbmp.com)

### 31 Bio Clean & Modular Wetlands

William Harris  
398 Via El Centro  
Oceanside, CA 92058  
(760) 433-7640  
[www.biocleanenvironmental.com](http://www.biocleanenvironmental.com)

### 32 dat Mobile Solutions

Vishnu Arakere  
4744 Baltimore Ave.  
Hyattsville, MD 20781  
(443) 538-5421  
[www.datmobilesolutions.com](http://www.datmobilesolutions.com)



**THE KRAKEN FILTER**

**BIO CLEAN ENVIRONMENTAL**

**MODULAR WETLANDS**

Offering the most innovative line of proven stormwater treatment technologies.

[www.BioCleanEnvironmental.com](http://www.BioCleanEnvironmental.com)

p. 760.433.7640

# Reclaim - Reuse - Recycle

## Multi-Product Stormwater Solutions

- Fine Pollutant Removal & Detention
- Infiltration & Storage
- Evapotranspiration & Bioretention
- Pollutant Numeric Discharge Requirements
- Rainwater Harvesting & Stormwater Reuse
- Soil Erosion Control & Channel Stabilization
- Spill Prevention, Control & Counter Measures (SPCC)
- Pre-Treatment Trash, Debris & Coarse Pollutant Removal



**JENSEN**  **STORMWATER SYSTEMS**

**Find out more. Visit us at booth #39**

521 Dunn Circle • Sparks, NV 89431  
877 649 0095 • [JensenPrecast.com](http://JensenPrecast.com)





## CONFERENCE EXHIBITORS (continued)

<b>33</b>	<b>Pat Chem Laboratories</b>  Stephen Berentsen 11990 Discovery Court Moorpark, CA 93021 (805) 532-0012 www.pat-chem.com	<b>39</b>	<b>Jensen Precast</b>  Walt Stein 521 Dunn Circle Sparks, NV 89431 (877) 649-0095 JensenPrecast.com	<b>45</b>	<b>Porous Technologies, LLC</b>  Gregg Novick 8 Blue Moon Drive North Yarmouth, Maine 4097 (877) 271-9055 www.stormcrete.com
<b>34</b>	<b>SCI Consulting Group</b>  John Bliss 4745 Mangels Blvd. Fairfield, CA 94534 (707) 430-4300 www.sci-cg.com	<b>40/41</b>	<b>Oldcastle Precast, Inc.</b>  Michelle Dunlop 7921 Southpark Plaza, #200 Littleton, CO 80120 (800) 579-8819 www.oldcastlestormwater.com	<b>A</b>	<b>Angelus Block Co., Inc.</b>  David Quinn 3435 S. Riverside Ave. Rialto, CA 92316 (951) 328-9115 www.angeluspavingstones.com
<b>35</b>	<b>Campbell Scientific, Inc.</b>  Ron Goodrich 815 W 1800 N Logan, UT 84321 (435) 227-9000 www.campbellsci.com	<b>42</b>	<b>Belgard</b>  Jeff Bal 10714 Poplar Ave. Fontana, CA 92337 (909) 355-6422 www.belgardcommercial.com	<b>B</b>	<b>CBI Systems</b>  Ty Garmon 3120 Fannin Street Beaumont, TX 77701 (409) 554-8988 www.ms4web.com
<b>36</b>	<b>Coanda, Inc.</b>  Steve Esmond 3943 Irvine Blvd., #327 Irvine, CA 92602 (714) 389-2113 www.coanda.com	<b>43</b>	<b>Gullywasher Stormwater Filters</b>  Jed Pettey 5242 57th Ave. South Seattle, WA 98118 (858) 922-9001 www.gullywasher.com	<b>C</b>	<b>SmartCover Systems</b>  Gregory Quist 2067 Wineridge Pl., Suite E Escondido, CA 92029 (760) 420-7820 www.smartcoversystems.com
<b>37</b>	<b>LSC Environmental Products</b> (formerly Terra Novo, Inc.)  Amy Tyler 2183 Pennsylvania Avenue Apalachin, NY 13732 (607) 625-3050 www.lscenv.com	<b>44</b>	<b>Revel Environmental Manufacturing, Inc. (REM)</b>  Bob Marchant 2110 S. Grand Avenue Santa Ana, CA 92705 (714) 557-2676 www.remfilters.com	<b>D</b>	<b>Containment &amp; Filtration Solutions (CF-S)</b>  Mike Brasberger 6101 LongPrairie Rd., Ste. 744, #150 Flower Mound, TX 75028 (855) 646-9237 www.cf-s.co

### SUPER PREMIUM EXHIBITORS





# Advanced Treatment Control BMPs for Industrial Pollutants

**clara**® An industrial separator from StormwaterRx

**purus**® A polishing system from StormwaterRx

**aquip**® An enhanced filtration system from StormwaterRx

Learn more about StormwaterRx's industry remedies online at [stormwaterx.com/Products.aspx](http://stormwaterx.com/Products.aspx).

Contact: StormwaterRx LLC | (800) 680-3543 | [www.stormwaterx.com](http://www.stormwaterx.com)

Visit StormwaterRx at Booth #28

# Your Total Solutions Provider

N-12® Pipe



SaniTite® HP Pipe



HP Storm Pipe



StormTech® Chambers



Nyloplast® Structures



INSERTA TEE®



THE MOST **ADVANCED** NAME IN WATER MANAGEMENT SOLUTIONS™

[www.ads-pipe.com](http://www.ads-pipe.com)





JOIN US IN SAN DIEGO AT THE CASQA TWELFTH ANNUAL CONFERENCE  
SEPTEMBER 12-14, 2016

DOWNSTREAM SERVICES, INC. IS YOUR RESOURCE FOR STORMWATER  
EVOLUTION

VISIT BOOTH #15 TO LEARN ABOUT OUR SERVICES:

- 🏠 CERTIFIED STORMWATER MAINTENANCE AND COMPLIANCE
- 🔍 PIPELINE CONDITION ASSESSMENT
- 🔧 PIPELINE MAINTENANCE
- 🌊 PIPELINE REHABILITATION | UV CURED FIBERGLASS LINING
- 🛠 UNDERGROUND SERVICES
- 🔧 COLLECTION SYSTEM MAINTENANCE
- 🚑 24/7 EMERGENCY SERVICES
- 🔧 INSTRUMENTATION | PUMP STATION MAINTENANCE

[www.downstreamservices.com](http://www.downstreamservices.com)



Keeping *OUR* Waterways Clean



Stormwater Solutions to Keep California Waterways Clean

Runoff Reduction ♦ Trash Removal ♦ Treatment ♦ Reuse  
Low Impact Development ♦ Green Infrastructure

Contech Engineered Solutions LLC | [www.conteches.com](http://www.conteches.com) | 800.338.1122





BOOTH # 7

**UNITED STORM WATER INC.**  
*Protecting Our Water Resources*

[www.unitedstormwater.com](http://www.unitedstormwater.com)

## Turn-key Storm Water Management Services:

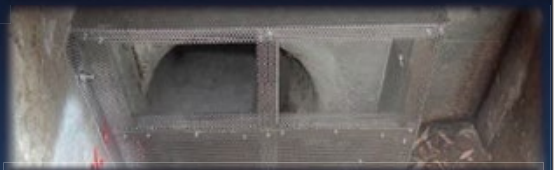
- ❖ Storm Drain & Sewer Maintenance
- ❖ Industrial Vacuum Services
- ❖ Trash Quantification & Reporting
- ❖ Connector Pipe Screens (CPS)
- ❖ Curb Inlet Screen Covers
  - Fixed & Manual Retractable Screens
  - Wing-Gate™ Automatic Retractable Screens (ARS)
- ❖ DrainPac™ Storm Drain Filter Inserts

**Full capture devices installed nationally!**

**Phone: (877) 71-STORM  
(877) 717-8676**



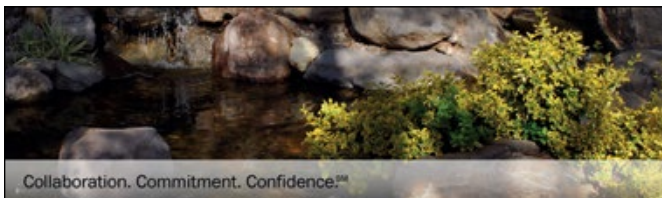
**Wing-Gate™** Automatic Retractable Screen – Opens automatically with rain



**Connector Pipe Screen**  
Certified Full Capture Device  
✓ Mosquito Abatement Approved



**DrainPac™** Filter Insert – Retains pollutants inside filter basket



Follow Us 

- Stormwater Program Management
- NPDES Permit Compliance
- Stormwater Infrastructure Design
- Stormwater Monitoring
- QSD/QSP Services

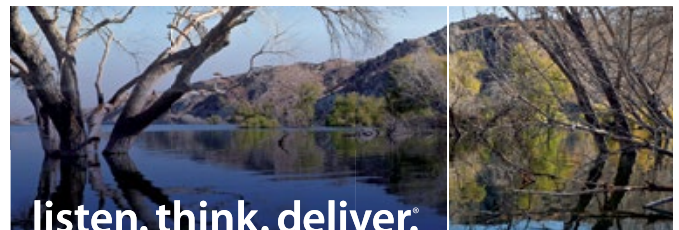


Lake Tahoe ■ Sacramento ■ Bay Area ■ Orange County ■ Reno



NCE is a multi-disciplinary engineering, science, planning and construction services firm who works collaboratively with our clients throughout California and Nevada. With the ability to integrate diverse disciplines our clients can be confident in the technically sound services NCE delivers.

For more information, visit [www.ncenet.com](http://www.ncenet.com)



*Developing Sustainable  
Stormwater Solutions for  
a Richer California Future*



**CDM  
Smith®**  
[cdmsmith.com](http://cdmsmith.com)

Carlsbad • Irvine • Los Angeles • Rancho Cucamonga  
Sacramento • San Francisco • Truckee • Walnut Creek





We can **provide** your project with:

- Site monitoring for both the Industrial General Permit and the Construction General Permit
- Erosion and Sediment Control Plan Development
- QSD services or SWPPP plans for risk level 1, 2, and 3 projects



[www.twininginc.com\stormwater](http://www.twininginc.com\stormwater)

Milas Smith, QSD/QSP, CPESC  
805.990.1288 (cell)  
msmith@twining.com



**50** 1966 2016

**Tt TETRA TECH**

## Clean, Safe Water for a Complex World

For the past 13 years *ENR* has ranked Tetra Tech #1 in water. Tetra Tech provides innovative, sustainable solutions for every phase of the water cycle, from source water protection to wastewater reuse.

[tetrattech.com](http://tetrattech.com) | 
 [f /tetrattech](https://www.facebook.com/tetrattech) | 
 [t /tetrattech](https://www.twitter.com/tetrattech)

**cleanwater**  
PROGRAM  
alameda county

Protecting **Alameda County**  
Creeks, Wetlands & the Bay

[cleanwaterprogram.org](http://cleanwaterprogram.org)



## PRIDE CONSTRUCTION ENGINEERING SERVICES

# STORMWATER & GRADING SPECIALIST

State of CA Certified Small-Business (Micro) | Certification ID # 2002669



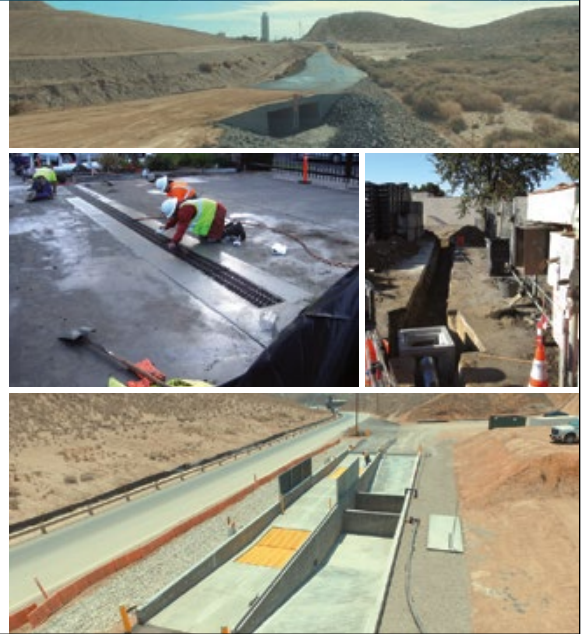
### INDUSTRIAL STORMWATER CONSTRUCTION SERVICES

- Catch basins, drop inlets/cisterns with pumps
- Piping – HDPE, PVC, CSP, CMP & RCP
- Underground filtration galleries
- Excavation of stormwater basins and perimeter channels
- Trench drains with filter inserts and outlet piping
- Install of various stormwater filters
- Concrete box culverts, diversion berms, spillways & channels

Earthwork including grading, trenching, shoring and more...

Misc. items such as truck washes, demolition and more....

Contact Todd St. Peter | [www.prideconstructionservices.com](http://www.prideconstructionservices.com)  
714-240-4983 | [todd.stpeter@prideconstructionservices.com](mailto:todd.stpeter@prideconstructionservices.com)  
General Contractor's License: Class A, License #976822



innovative strategies & cost effective solutions  
for sustainable environmental compliance

(866) 530-4980  
professional government services

Corporate Office: Mission Viejo, CA

[www.caaprofessionals.com](http://www.caaprofessionals.com)

**AECOM**

Built to deliver a better world

[www.aecom.com](http://www.aecom.com)

Protecting watersheds  
and improving  
communities through  
sustainable design







## ▶ WE SEE STORMWATER SOLUTIONS WHERE OTHERS DON'T. JUST ASK GOLDER.

Golder's California stormwater specialists have expertise in all phases of stormwater management and compliance. We draw on our experience to apply effective solutions during permitting and routine BMP maintenance and inspection services, and through development of BMP recommendations and treatment options. Golder achieves results that meet our clients' needs.

**Engineering Earth's Development, Preserving Earth's Integrity.**

### Golder Associates' California Offices:

Irvine

(714) 508-4400

Kristina Byrne, PE

Sacramento

(916) 786-2424

Mark Naugle, PE

Sunnyvale

(408) 220-9223

Tim Bauters, PhD, PE

Walnut Creek

(925) 956-4800

Brian Avon, PE

[solutions@golder.com](mailto:solutions@golder.com)

[www.golder.com](http://www.golder.com)



## FMF Pandion

**DELIVERING SOLUTIONS FROM COAST TO CREST**

FMF Pandion aims to provide its clients with a high quality, solution oriented, and quickly adaptable consultant to meet your project requirements. Our technical expertise is based on staying ahead of regulatory requirements, keeping up with recent scientific advancements, and a strong history of field experience. The FMF Pandion business model is built to provide the flexibility to bring the right people on board to support your project in a technically solid and cost effective manner.

### CALIFORNIA CERTIFICATIONS

- ✓ DVBE
- ✓ DBE
- ✓ SBE-Micro

### FEDERAL CERTIFICATIONS

- ✓ SDVOSB
- ✓ SDB

760.405.6805 | [www.fmfPandion.com](http://www.fmfPandion.com) | [admin@fmfpandion.com](mailto:admin@fmfpandion.com)

# Not All Stormwater Filters Can Make You Metal Compliant...



## Our Filters Do.

## Gullywasher®

**Stormwater Filters That Work**

**Metal Compliant • Affordable • Sustainable**

INTRODUCING



STORM PRISM  
**SP360**

MANAGING STORM WATER UNDERGROUND

## MAXIMUM FLEXIBILITY MINIMAL COMPLEXITY

The SP360 is Precon's new, unique Low Impact Development (LID) Retention Best Management Practices (BMP) for storm water management. The SP360 provides the engineer with a new tool to meet the goals of the Municipal Separate Storm Sewer System (MS4) for detention, retention, infiltration and harvesting of storm water.



THE SP360 CAN BE INSTALLED IN A SINGLE OR STACKED CONFIGURATION WITH DEEPS FROM 3' TO 13'

RETENTION

DETENTION

INFILTRATION

HARVESTING



[stormprism.com](http://stormprism.com) **800-882-3399**

## Join CASQA

CASQA is a non-profit professional member association dedicated to the advancement of stormwater quality management through collaboration, education, implementation guidance, regulatory review, and scientific assessment.

Regular or affiliate membership in CASQA is open to organizations and individuals in the stormwater field, whether holders of NPDES permits or not. If you are not currently a member, by joining now, you can receive substantial reductions on future CASQA annual conferences. Additional member benefits include exclusive access to the Bi-Weekly Update, Water Quality NewsFlash, Member Library, and Member Forum, as well as member discounts to online and downloadable products, and events. CASQA membership provides substantial benefits even if you are based outside California.



aquatic  
bioassay &  
consulting  
laboratories, inc



*'quality marine & freshwater biological services since 1988'*

- ◆ **Aquatic & Sediment Toxicology**
- ◆ **Watershed Assessments**
- ◆ **Coastal & Harbor Marine Sciences**
- ◆ **Taxonomic Services**



 aquatic bioassay & consulting laboratories, inc  
29 north olive ventura, ca 93001 (805) 643 5621





NOTES

*Thank you!*



We invite you to consider the many sponsorship, advertising, and exhibiting opportunities for the **2017 CASQA Conference** in our state capital.





## MARK YOUR CALENDARS FOR THE THIRTEENTH ANNUAL CONFERENCE

September 25-27, 2017 | Sacramento Convention Center | Hyatt Regency Sacramento, CA

© 2016 by Sacramento - Powered by Barberluck



**California Stormwater  
Quality Association**  
P.O. Box 2105  
Menlo Park, California  
94026-2105



GET THE NEW CASQA ANNUAL  
CONFERENCE MOBILE APP

