# Recovery & Resilience

A C H I E V I N G SUSTAINABLE STORMWATER MANAGEMENT



CASQA 2021 Virtual Conference

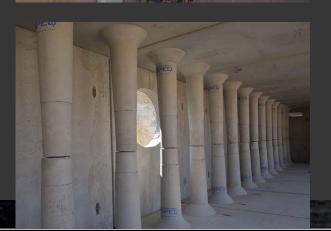
October 26-27, 2021





### MANAGING STORM WATER UNDERGROUND





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### CASQA 17th Annual Conference

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Theme image on cover / text pages: © gettyimages.com | Viaframe Previous page: CASQA Conference Platinum Stormwater Steward "Resilience is not bouncing back from adversity,
but bouncing through it." - LARAE QUY

Now, more than ever, resilience is vital as we deal with a changing climate and more extreme wildfires, floods and droughts, recovery from the COVID-19 pandemic, and shifting governmental priorities, among other issues. For stormwater management, there are so many necessary ingredients in the mix to attain sustainability—we need forward thinking policies, appropriate and achievable permits, environmentally sound solutions, sufficient funding, good science, public awareness and support, collaboration on improved solutions, and opportunities, like the CASQA conference, to share all our best ideas and lessons learned. CASQA is pleased to present two days of virtual training and discussion with stormwater practitioners and exhibitors from October 26–27, 2021, with this year's theme, *Recovery & Resilience: Achieving Sustainable Stormwater Management.* 

- TANYA BILEZIKJIAN AND SHARON GOSSELIN 2021 CONFERENCE CO-CHAIRS







Host Program Sponsor



### Conference Overview

The CASQA Annual Conference offers in-depth learning opportunities and discussions on a wide range of stormwater and water management topics, with a focus around the conference theme, "Recovery & Resilience: Achieving Sustainable Stormwater Management."

The live-streamed, interactive conference kicks off with a Plenary Session featuring the announcement of CASQA Awardees and a keynote address. This will be followed by concurrent technical sessions presented by leading stormwater practitioners. Attendees will also have multiple opportunities to network with fellow conference goers and explore the offerings in the Exhibit Hall.

### **Highlights**

- Two day conference: Tuesday 10/26 through Wednesday 10/27
- Multi-track technical presentations, panels, training workshops, and Q&A with the presenters
   will be live-streamed at the times shown in the conference agenda.
- All sessions will be recorded and available on-demand
  after the live event to conference registrants through the end of
  2021. This will provide registrants with the maximum flexibility and
  greater educational and professional development opportunities to
  view the live-stream as well as access to over 50 hours of recorded
  technical content.
- The virtual exhibit hall will provide attendees with the opportunity to interface with exhibitors and explore innovative goods, services, and ideas:
  - Attendees will be able to speak live one-to-one with a representative or make an appointment for a later date/time
  - Included will be an exhibitor-sponsored prize drawing for attendees who visit a set number of exhibit spaces



Conference registration includes on-demand access to recorded presentations through the end of 2021.

- Networking opportunities all registrants are welcome to join us virtually!
  - Welcome Reception, 10/25: This is a great way to break the ice before the official start of the conference
  - Open Networking Space and Café, 10/26–10/27: Feel free to join a virtual table with fellow conference goers anytime during the day, including lunch time
  - Coffee Talk with Water Board Staff: Catch up with State and Regional Water Board staff in the Café. See schedule on page 15.
  - Tuesday Evening Reception, 10/26: Socialize after a day of presentations with fellow conference attendees
  - Post-Conference Hangout, 10/27: Casual post-conference hangout with old and new acquaintances



### **Keynote Speaker**

Colin West, Founder and Executive Director – Clean Up the Lake Plenary Session Tuesday, October 26

Colin has a decade of experience as the owner, director, and executive producer of a film and television production company, and has managed overseas operations, including project logistics, documentation, and personnel from 5 to 30 people on set at a time. His content has aired on

networks such as Amazon Prime, ABC International, HULU, Virgin Media, in-flight entertainment programs, and more.

Colin brought together his expertise in multi-faceted project management and campaign development with his 10 years of experience as a SCUBA diver and certified PADI dive master and founded the environmental non-profit, Clean Up The Lake, to successfully tackle trash above and below the surface of Lake Tahoe.

5

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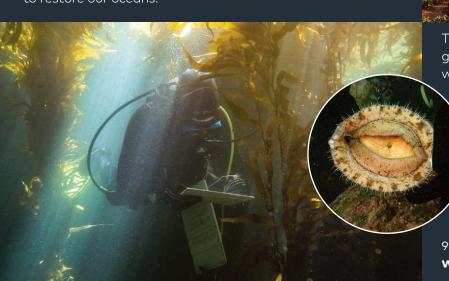
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### ENABLING A MORE SUSTAINABLE, RESILIENT, AND LIVEABLE WORLD

Wood scientists discovered an endangered white abalone during a biological survey in San Pedro Bay and helped recover the animal for conservation. This survey recorded the greatest biodiversity in the area to date. By helping our clients understand and track improvements in our natural systems, we can monitor the impacts of climate change while working to restore our oceans.



The need for change has never been greater — in our industries, in the way we treat our planet, and in how we live.

We are united by our mission to create a sustainable future as the world evolves to a cleaner planet. Our bold spirit drives us to lead the charge, our actions transform challenges into solutions, and our curiosity keeps us pushing, innovating,

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# Technical Program Overview

The 2021 Technical Program comprises the robust conference offerings listed below, in the thematic tracks that are detailed on the following page.



### Conference Tracks

#### **BMP Effectiveness**

This track will focus on advances in BMP effectiveness assessment, including special studies, innovative assessment methods, and lessons learned.

#### **Construction General Permit**

This track will focus on both the 2009 and the new 2021 draft CGP, and will include discussion of proven strategies to resolve construction stormwater challenges: innovative BMPs and controls; TMDL implementation; challenges and solutions to site management; implementing cost controls; resolving monitoring and sampling issues; and dealing with the challenges of linear underground and overhead projects.

#### **Funding**

This track will address stormwater program and infrastructure funding and financing, including asset management—both tracking for capitalization and schedule for replacing aging infrastructure, its role in full stormwater program integration, and funding and financing mechanisms that may be available to the regulated community.

#### **Industrial General Permit**

This track will highlight all things industrial, such as pollutant source assessments, exceedance response action levels, monitoring and reporting, Total Maximum Daily Loads (TMDLs), how municipalities are modifying their programs to implement SB205, and Clean Water Act citizen lawsuits.

### **Modeling and Tools**

This track will focus on modeling of all types, including hydrologic and water quality. Innovative tools and quantification methods and metrics will be presented, including how tools from other industries may be used in the stormwater arena.

### **Access the Online Agenda**

Click here for a detailed up-to-date hourly view of the program, speakers, and panelists.

VIEW AGENDA

### Monitoring, TMDLs, and Source Tracking

This track will highlight innovations in monitoring or monitoring programs, the science that goes into developing TMDLs and TMDL alternatives, the challenges of complying with TMDL-based requirements, and ways in which different parties to a TMDL can come together on implementation.

### **Municipal Program**

This track will focus on the challenges and solutions to implementing a municipal stormwater program for both Phase I and Phase II agencies and cover emerging issues for municipalities such as planning activities for permit compliance, post-fire stormwater management response, permanent post-construction BMPs, monitoring program challenges and unique solutions, and transient encampments.

#### Outreach, Engagement, and Education

This track will share experiences creating and implementing innovative stormwater outreach campaigns, building community to foster a sense of stewardship, using social media as an outreach tool, reaching school-age children with programs in/out of the classroom, and measuring effectiveness of outreach and education efforts.

### Regulatory

This track will provide a forum for updates from regulators, discussions of future policy and legislative initiatives, examples of innovative ways that regulatory obligations can be met, and updates from legal experts.

Follow the CASQA Conference on Social Media: #CASQAtogether





### Resiliency and Sustainability

This track will look at sustainable practices, legal requirements and barriers, opportunities for collaboration, and programs that connect stormwater and other environmental sectors. Important topics such as water supply, water rights, groundwater recharge, Sustainable Groundwater Management Act (SGMA planning, energy, watershed management, resiliency planning, and climate change will be discussed.

### Stormwater Capture, Use, and Green Infrastructure

This track will highlight examples of physical infrastructure for improving stormwater runoff quality, protecting natural channels from hydromodification, preventing flood impacts to property, recharging groundwater supplies, permanent post-construction BMPs, and harvesting rainwater. It will focus on pilot studies, design lessons learned, operation and maintenance challenges/solutions, and adaptability after installation.

#### **Trash**

This track will incorporate topics relevant to the Trash Amendments, such as full trash capture BMP implementation (Track 1), monitoring methods, reporting, and demonstrating compliance under Track 2. Related topics will include source identification, effective and sustainable solutions, data comparability, micro-debris, and relationships between trash and other potential pollutants.

### **True Source Control**

This track will incorporate information regarding the importance of true source control, and how it relates to sustainability and stormwater compliance. Additionally, examples of how to implement true source control, evaluate effectiveness, and considerations for permit compliance will be addressed.

### Thank You to Our Sponsors

CASQA would like to thank our many sponsors for supporting the 17th Annual Conference.

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TRACK SPONSORS



**BMP Effectiveness** 



TRACK: Construction General Permit



TRACK: Funding



TRACK: Industrial General Permit



TRACK: Modeling and Tools



TRACK: Monitoring, TMDLs, and Source Tracking



TRACK: Municipal Program



TRACK: Outreach, Engagement, and Education



TRACK: Regulatory



TRACK: Resiliency and Sustainability



TRACK: Stormwater Capture, Use, and Green Infrastructure



TRACK: Trash



TRACK: True Source Control



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### 2021 CASQA Awardees

The CASQA annual awards recognize outstanding projects, activities, and people in the stormwater management profession. To learn more about CASQA's 2021 awardees, look for the blue ribbons in the conference program.

Photos and illustrations courtesy of the respective awardee



### OUTSTANDING BMP IMPLEMENTATION PROJECT OR PROGRAM

LA SoFi Stadium – Lake and Advanced Water Polishing Treatment System

PACE Advanced Water Engineering

The centerpiece of SoFi Stadium, a 3.1 million square-foot facility and the home of two NFL football teams, is a multipurpose 5-acre lake which serves as the site's stormwater management system and includes state-of-the-art water conservation and recycling facilities, including the ability to combine reclaimed and stormwater discharge.





### OUTSTANDING BMP IMPLEMENTATION PROJECT OR PROGRAM

**Northside Stormwater Cistern** 

San Diego County Regional Airport Authority

This project makes a reality of the goal to develop new water sources to offset uses that rely unnecessarily on potable water. It captures stormwater runoff from 80 acres of airport property and will capture and reuse 16 million gallons annually, with plans to use 10 million gallons of the captured water to wash rental cars. The remaining 6 million gallons will be discharged to bioswales surrounding the rental car center.





### OUTSTANDING BMP IMPLEMENTATION PROJECT OR PROGRAM

Piru Stormwater Capture for Groundwater Recharge

Ventura County Public Works Agency Watershed Protection

This multi-benefit project combines water supply, water quality, and community outreach goals by modifying existing infrastructure of the county's storm drain system and United Water Conservation District's Piru Spreading Grounds to serve a new purpose.



Outfall and stormwater discharge onto Piru Spreading Grounds



Hydrodynamic separator removes pollutants

Photos and illustrations courtesy of the respective awardees



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

### Flows to Bay Website

City / County Association of Governments of San Mateo County

Redesigned and relaunched in 2020, the Flows to Bay website provides a hub of easily navigable information allowing the public to take actionable steps in preventing stormwater pollution with clear, concise content, appealing aesthetics, and interactive components. The revamp included updated design, quality content, and navigation improvements.



Newly designed website greatly increased the number of users, page views, and organic searches



Written content is translated for cultural groups in the diverse county



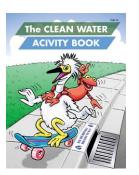
### OUTSTANDING STORMWATER NEWS, INFORMATION, OUTREACH, AND MEDIA PROJECT

Fred & Izzy Multi-Media Outreach Campaign

Alameda Countywide Clean Water Program

A comprehensive outreach campaign featuring puppet mascots Fred (a Red-Legged Frog) and Izzy (a Snowy Egret), promoting pollution prevention via videos, social media, exhibit booth, and promotional items.







Left to right: Fred & Izzy social media ad, activity book, and seed packet promotional giveaway



### OUTSTANDING STORMWATER RESEARCH PROJECT

### **Urban Runoff Mortality Syndrome**

NOAA Fisheries Northwest Regional Science Center University of Washington Tacoma Washington State University

From a possible universe of 2,000 chemicals, this study identified a culprit chemical for the first time—a commonly used preservative used to give tires longer life—as the reason for mortality of salmon in urban streams. It has implications for all salmon / steelhead habitat that receives urban runoff, which includes waterways in most of California's urban areas.



Urban stream filled with salmon (above); Map with critical habitat designations for West Coast salmon and steelhead (right)



Photos and illustrations courtesy of the respective awardees



### OUTSTANDING SUSTAINABLE STORMWATER PROJECT OR PROGRAM

Calm Before the Storm: San Mateo County Sustainable Streets Master Plan

City / County Association of Governments of San Mateo County

The San Mateo County Sustainable Streets Master Plan (SSMP) is a near, medium, and long-term climate adaptation and sustainable streets planning project. It combines goals and visions of the "Complete Streets" and "Green Streets" traditions to improve safety and comfort for road users while integrating green stormwater infrastructure with transportation improvements.



Community engagement poster



### OUTSTANDING SUSTAINABLE STORMWATER PROJECT OR PROGRAM

LA County's Safe Clean Water Program

Los Angeles County Flood Control District

The passage of Measure W represented a sea change in water quality planning in the LA Region which will provide over \$250 million annually to turn "placeholders" into actual implemented projects.



Sample project plan out of the approximately 100 projects



Browsable map of projects in their various stages as shown on the Safe Clean Water portal



Photos and illustrations courtesy of CASQA / Geoff Brosseau



CASQA is proud to honor Geoff
Brosseau with its most prestigious award
recognizing outstanding leadership within
CASQA and exceptional contributions to the
stormwater quality management profession

Geoff Brosseau

During Geoff Brosseau's 30-year career in stormwater, he has been an author, educator, leader, mentor, consultant, and Executive Director, specializing in stormwater quality on a regional, state, and national level.

As one of the early members of the California Stormwater Quality Task Force (1989), Geoff worked closely with staff from the State Water Resources Control Board on its development of the first-ever stormwater regulations and with local governments and businesses to help California comply with the municipal and industrial National Pollutant Discharge Elimination System (NPDES) stormwater mandates of the federal Clean Water Act.

Geoff was one of the primary authors of the original California BMP Handbooks (1993), volunteered many hours on Task Force projects, and chaired both the Industrial and Pesticides Subcommittees. The Task Force officially became CASQA in September 2002, and Geoff was selected as CASQA's first Executive Director in 2004. Over the next 17 years, Geoff established CASQA as the leading stormwater association in the country.

At the Regional level, from 1994 to 2021, Geoff also served as the Executive Director of the Bay Area Stormwater Management Agencies Association (BASMAA), a consortium of nine San Francisco Bay Area municipal stormwater programs.

At the national level, Geoff was a principal author of the "Urban Runoff Manual of Practice," and served in numerous water quality-related committees and nationwide forums.

Over the years, Geoff has been involved in many intraorganizational strategic planning efforts developed to address the scale and complexity of challenges facing stormwater quality management, including: Brake Pad Partnership; Pesticide-Related Toxicity Reduction Strategy; Clean Estuary Partnership; San Francisco Bay Area Integrated Regional Water Management Plan.

Geoff's body of work over 30 years is above and beyond what is expected of a CASQA Leadership Awardee.

Geoff's inherently collaborative approach, willingness to engage and listen, and exceptional technical skills are the foundation of his leadership style. He is highly regarded by the consulting, academic, non-profit and regulatory communities. Humility, perseverance, and stamina have allowed him to advance water quality nationwide.

The stormwater quality management community is indebted to Geoff's decades of service, commitment, and leadership.





Geoff speaking at the 2016 CASQA Annual Conference, San Diego (left); With the CASQA Board of Directors at the first Networking Event during the 2011 Annual Conference, Monterey (front right)

### Contributions to CASQA

Geoff was CASQA's first Executive Director. He helped build the organization piece by piece, policy and procedure by policy and procedure, and committee by committee. Over the last 17 years, Geoff established CASQA as the leading stormwater association in the country. Most notably in that time, CASQA has accomplished the following:



- Grown from less than 100 members (2002) to more than 1,800 members (2020)
- Created and hosted 16 annual conferences, including a very well-received virtual conference in 2020
- Started webcasting its quarterly meetings on-location, from all around the state in 2008
- Started converting its static, paper BMP handbooks into interactive, online subscription-based versions in 2009
- Developed and managed two major training and qualification programs for more than 7,000 stormwater quality professionals working at construction sites and industrial facilities throughout California
- Most importantly, CASQA has created and continues to practice a culture
  of constructiveness and collaboration within the regulated community and
  with regulators and non-governmental organizations that greatly facilitates
  CASQA's efforts to advance the practice of stormwater management

# OUTSTANDING SERVICE AWARDEES Congratulations to the 2021 CASQA Outstanding Service Awardees

- Dave Mercier, Michael Baker International
  - Outstanding service via the Construction Subcommittee (supporting the CGP Reissuance, public testimony, and CASQA's CGP Workshop)
- Fred Krieger, Individual
  - Outstanding service in leading CASQA's zinc petition
  - Outstanding service for the development of Water Quality NewsFlash
- Jeanette Huddleston, Sacramento County
  - Leading CASQA's public education initiative to increase awareness that stormwater is a resource
- Jenna Voss, Sacramento County
  - Leading CASQA's public education initiative to increase awareness that stormwater is a resource
- Jian Peng, County of Orange
  - Representing CASQA in the Ceriodaphnia special studies effort
- Jim Rasmus, Carollo Engineers
  - Development of a grant proposal to define the economic value of stormwater
- Joseph Draper, Fresno Metropolitan Water District
  - Development of a grant proposal to define the economic value of stormwater
- Kadi Whiteside, Southern California Edison
  - Outstanding service in leading CASQA's efforts on the Construction General Permit Reissuance
- Mark Lombos, Los Angeles County
  - Outstanding service and leadership as a Director
- Melanie Sotelo, CASC Engineering and Consulting, Inc.
  - Outstanding service in leading CASQA's efforts on the Construction General Permit Reissuance
- Richard Watson, Richard Watson & Associates, Inc.
  - Outstanding service in leading CASQA's zinc petition
- Sandy Mathews, Larry Walker Associates
  - Outstanding service via the Construction Subcommittee (supporting the CGP Reissuance, public testimony, and CASQA's CGP Workshop)
- Tanya Bilezikjian, Michael Baker International
  - Outstanding service via the Construction Subcommittee (supporting the CGP Reissuance, public testimony, and CASQA's CGP Workshop)

Wednesday, October 27

### **Coffee Talk with Water Board Staff**

Tuesday, October 26

Catch up with State and Regional Water Board staff who will be available to chat during the sessions listed below. (From the conference portal, go to Networking Events and click to join the Open Networking Space and Café. At the virtual event, click on one of the tables *inside* the Splash Café where Water Board staff will be.) Limited seats available per table on a first come, first served basis.

State Board - STORMS	(Session 1) 10:30	0 am - 11:00 am	Region 4	(Session 5)	9:00 am - 9:30 am
Regions 1 and 2	(Session 1) 11:00	0 am - 11:30 am	Region 2	(Session 6)	9:30 am – 10:00 am
Regions 8 and 9	(Session 2) 11:30	0 am - 12:00 pm	Regions 3 and 7	(Session 6)	10:00 am – 10:30 am
Region 5	(Session 2) 12:00	0 pm – 12:30 pm	State Board - STORMS	(Break)	10:30 am – 11:00 am
			State Board - IGP/CGP	(Session 7)	11:00 am - 11:30 am



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- Watershed Management
- Groundwater
- Agricultural Water Quality Management
- Water Resources Management



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### Monday and Tuesday, October 25-26

### **MONDAY**

5:00p-7:00p

WELCOME RECEPTION (Networking Events) All conference registrants are welcome to join us virtually! This is a great way to break the ice in a speed dating format before the official start of the conference.

### **TUESDAY**

8:00a-4:00p EXHIBIT HALL OPEN (Exhibit Hall) Enter the Exhibitor Prize Drawing by visiting at least 10 booths and filling out their virtual badge scans by 3:00 PM on Wednesday, October 27.

8:00a-4:00p OPEN NETWORKING SPACE AND CAFÉ (Networking Events) Feel free to join a virtual table with fellow conference goers anytime during the day, including lunch time.

8:00a-4:00p POSTER HALL (Poster Hall)

8:30a to 10:00a PLENARY SESSION (Main Hall) Welcome and Opening Remarks
 Amanda Carr
 Chair – CASQA Board of Directors
 Karen Cowan
 Executive Director – CASQA

CASQA Awards

Conference Scholarship Program: Karen Ashby Exhibitor 10-Year: Karen Ashby, Exhibitor Coordinator Outstanding Service: Karen Cowan Outstanding Stormwater Program and Projects: Amanda Carr

Leadership: Karen Cowan

Keynote

Colin West Founder and Executive Director – Clean Up the Lake (See bio on page 5)

10:00a-10:30a BREAK AND EXHIBITOR FOCUS (Exhibit Hall)

SESSION 1	TRACK: Stormwater Capture, Use, and Green Infrastructure	TRACK: Modeling and Tools	TRACK: Municipal Program	TRACK: Construction General Permit	TRACK: Industrial General Permit	TRACK: Monitoring, TMDLs, and Source Tracking
MODERATOR	Brian Currier Office of Water Programs at Sacramento State	Geremew Amenu Los Angeles County Public Works	Melanie Sotelo CASC Engineering and Consulting, Inc.	Erika Horn Reign Source	TJ Mothersbaugh WaterTectonics	Michelle Mattson Weston Solutions, Inc.
10:30a to 10:55a	2021 CASQA Awardee: Outstanding BMP Implementation Project or Program  Northside Stormwater Cistern  Richard Gilb San Diego County Regional Airport Authority	The Moving Target – Modeling of Climate Change and the Benefits of Los Angeles County Watershed Plans to Mitigate Impacts TJ Moon Los Angeles County Public Works	Pivoting to Virtual Training – Learning Through Adversity Sandy Mathews Larry Walker Associates, Inc.	Training Workshop (Sessions 1-2) Step by Step: A Guide to Developing a Sustainable Construction Stormwater Compliance Program From Our Favorite Agency Regulators  Speakers: Erika Hom	Training Workshop (Sessions 1-2) Industrial Subcommittee Training Workshop – TMDLs and Enforcement, Emerging Contaminants, True Source Control and Policy and Permitting  Speakers: Lauren Wallace-Misenti	Our Water Our World  Geoff Brosseau Executive Advisor CASQA Karen Cowan Executive Director CASQA
11:00a to 11:25a	2021 CASQA Awardee: Outstanding BMP Implementation Project or Program  Piru Stormwater Capture for Groundwater Recharge  Ewelina Mutkowska Ventura County Public Works Agency	Modeling Climate Change and Implications for Water Quality Management Within the Santa Margarita River Watershed Clint Boschen Tetra Tech	Phase II MS4 Effectiveness Assessment as a Permit Tool: Lessons Learned and a Look Ahead Rachel Warren Larry Walker Associates, Inc.	Reign Source Tom Browne Lahontan Regional Water Quality Control Board Alexandra Coblentz and Michael Godwin Central Coast Regional Water Quality Control Board Erica Ryan San Diego Regional Water Quality Control Board	KERAMIDA, Inc. Catherine Hawe, Wendy Linck, and Annalisa Kihara State Water Resources Control Board Pavlova Vitale Los Angeles Regional Water Quality Control Board Kacen Clapper Wood Richard Watson Richard Watson & Associates, Inc.	Starting at the Source – A Successful Process Used to Identify Key Sources of Legacy Stormwater Pollutants in the Santa Clara Valley  Lynne Scarpa EOA, Inc.

# Tuesday, October 26 (continued)

session 2	TRACK: Stormwater Capture, Use, and Green Infrastructure ROOM 1	TRACK: Modeling and Tools	TRACK: Municipal Program	TRACK: Construction General Permit	TRACK: Industrial General Permit	TRACK: Monitoring, TMDLs, and Source Tracking
MODERATOR	Brian Currier Office of Water Programs at Sacramento State	Geremew Amenu Los Angeles County Public Works	Rebekah Guill Riverside County Flood Control and Water Conservation District	Erika Horn KCM Group	TJ Mothersbaugh WaterTectonics	Steve Wolosoff CDM Smith
11:30a to 11:55a	2021 CASQA Awardee: Outstanding BMP Implementation Project or Program  LA SoFi Stadium Lake and Advanced Water Polishing Treatment System  Ron Rovansek PACE Advanced Water Engineering	A Representative Storm Event: Is it Time to Think Differently about Your Design Event?  Michael McMahon HDR	Stormwater Compliance as a Catalyst for Social and Environmental Equity Catherine Riihimaki 2NDNATURE Software	Training Workshop continued	Training Workshop continued	A Streamlined, One Water Approach to Addressing Constituents of Emerging Concern in Stormwater Jerry Diamond Tetra Tech
12:00p to 12:25p	Stormwater Management in the City of Los Angeles: The Stormwater Capture Parks Program Sam Sarkar Tetra Tech	Innovating Traditional Instrumentation for Effective BMP Flow Monitoring  Elizabeth Fassman-Beck Southern California Coastal Water Research Project	Building a Climate-Resilient Active Transportation Network in Vulnerable Communities Ana Tabuena Ruddy City of Los Angeles Department of Public Works			

### 12:25p-1:30p LUNCH BREAK (Networking Events) Feel free to join a virtual table with fellow conference goers while grabbing lunch.

SESSION 3	TRACK: Stormwater Capture, Use, and Green Infrastructure ROOM 1	TRACK: Modeling and Tools	TRACK: Trash	TRACK: Construction General Permit	TRACK: Industrial General Permit	TRACK: Monitoring, TMDLs, and Source Tracking
MODERATOR	Beatrice Musacchia Orange County Public Works	Michelle Hallack NV5	Jen Schmitz Clear Water Services, LLC	Sandy Mathews Larry Walker Associates, Inc.	Matthew Lentz GSI Environmental Inc.	Chris Crompton County of Orange
1:30p to 1:55p	Parking Lots: The Next Frontier for Stormwater BMPs Fernando Villaluna Los Angeles County Public Works	Enhancing the Performance of the Watershed Models by Integrating the Surface Water and Groundwater Models  Ali Tasdighi Michael Baker International	Big Trash Data: Using Artificial Intelligence to Make Trash Assessments Fast, Cost-Effective, and Reliable  Stephanie Zinn Fuscoe Engineering	Regulation for the Sake of Water Quality Tanya Bilezikjian Michael Baker International	Moving Back to Baseline Status: Case Studies for Cost-Effective Compliance Strategies Chris Hsu GSI Environmental Inc.	Panel PFAS: A Barrier to Maximizing Urban Stormwater Capture?  Panelists: Kevin O'Toole Orange County Water
2:00p to 2:25p	Using Tree Wells and Dispersion Areas as a More Natural Way to Meet Structural BMP Requirements in the County of San Diego René Vidales County of San Diego	Modeling a Post-Wildfire Watershed for Flooding Potential Angela Bacigalupa Weston Solutions, Inc.	Quantifying Riparian Zone Trash Using Remote Sensing Imagery and Machine Learning  Reed Davis GEO Jobe GIS Consulting, LLC	Sustainable BMPs – A Better Approach to Temporary Best Practices Andrew Price Michael Baker International	Five Years of IGP Non-Industrial Source Demonstrations: Best Practices and Lessons Learned  Maia Colyar Geosyntec Consultants, Inc.	District Wendy Linck and Annalisa Kihara State Water Resources Control Board Adeyemi Adeleye University of California, Irvine Daniel Apt Olaunu James Fortuna County of Orange

## Tuesday, October 26 (continued)

session 4	TRACK: Stormwater Capture, Use, and Green Infrastructure ROOM 1	TRACK: Modeling and Tools	TRACK: Trash	TRACK: Construction General Permit	TRACK: Industrial General Permit	TRACK: Monitoring, TMDLs, and Source Tracking ROOM 6
MODERATOR	Millicent Cowley-Crawford Woodard & Curran	Michelle Hallack NV5	Mireille Garcia San Diego Regional Water Quality Control Board	Sandy Mathews Larry Walker Associates, Inc.	Matthew Lentz GSI Environmental Inc.	Jian Peng County of Orange
2:30p to 2:55p	Creative Approach to MS4 Compliance Using a Public Park for Runoff Treatment, Retention, and Reuse  TJ Moon Los Angeles County Public Works	Shortening the Distance From Data to Decisions: (Relatively) Easy Data Accessibility and Usability With Microsoft Power Bl Joanna Wisniewska County of San Diego	Navigating Track 1 Implementation Planning Efforts for Compliance With the Statewide Trash Amendments  Teresa Lyndon D-Max Engineering, Inc.	Decision Flowcharts: Risk Assessment and Application Guidance for Passive Treatment Chemicals at Industrial / Construction Sites  John Heltzel Office of Water Programs at Sacramento State	Water Quality Based Corrective Actions: A Comprehensive Guide Elliott Ripley Ashworth Leininger Group	Improving MS4 Monitoring Programs: Assessing the Last 10 years of Monitoring Data in Orange County Ken Schiff Southern California Coastal Water Research Project
3:00p to 3:25p	A Park With Purpose: Improving Water Quality and Enhancing a Valued Community Space at Edward Vincent Jr. Park Brenda Ponton Woodard & Curran	Tracking Impervious Surface Treated: The Road to Reporting Recovery and Resilience Chad Praul Environmental Incentives	Out of the Cities, Into the Towns - Siting Small and Large Full Trash Capture Systems in Semi-Rural Areas  Caitlin Gilmore Schaff and Wheeler Consulting Civil Engineers	Potential Residual Designation for Commercial, Industrial, and Institutional Facilities in Two LA Watersheds  Elizabeth Sablad U.S., EPA Region 9	Compliance Options – A Watershed Approach Dave Mercier Michael Baker International	Bacteria Load Reduction: Quantifying the Effect of 20 Years of Program Implementation and Adaptive Management in South Orange County Cindy Rivers Orange County Public Works

3:25p-4:00p	BREAK AND EXHIBITOR FOCUS (Exhibit Hall)
4:00p-6:00p	TUESDAY EVENING RECEPTION (Networking Events) A unique opportunity to socialize with fellow conference attendees after a day of presentations.

### **Earn Professional Development Credits**

Professional Development Verification forms are available by clicking 'Continuing Education' in the menu bar of the CASQA 2021 Virtual Conference portal.

### 2021 Participating Organizations (pending approval of the conference program)

- Certified Erosion, Sediment and Stormwater Inspector (CESSWI)
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- Certified Professional in Storm Water Quality (CPSWQ)
- California Water Environment Association (CWEA)
- Minimum Continuing Legal Education (MCLE)
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LEARN MORE

# Wednesday, October 27

# WEDNESDAY 8:00a-8:30a EXHIBITOR FOCUS (Exhibit Hall) 8:00a-4:00p EXHIBIT HALL OPEN (Exhibit Hall) Enter the Exhibitor Prize Drawing by visiting at least 10 booths and filling out their virtual badge scans by 3:00 PM on Wednesday, October 27. 8:00a-4:00p OPEN NETWORKING SPACE AND CAFÉ (Networking Events) Feel free to join a virtual table with fellow conference goers anytime during the day, including lunch time. 8:00a-4:00p POSTER HALL (Poster Hall)

session 5	TRACK: Stormwater Capture, Use, and Green Infrastructure ROOM 1	TRACK: Modeling and Tools	TRACK: Municipal Program	TRACK: Construction General Permit	TRACK: Industrial General Permit	TRACK: Monitoring, TMDLs, and Source Tracking
MODERATOR	Brenda Ponton Woodard & Curran	Brian Laurenson Larry Walker Associates, Inc.	Shawnetta Grandberry City of Carlsbad	Melanie Sotelo CASC Engineering and Consulting, Inc.	Jonathan Meronek SCS Engineers	Kristina Hysler Wood
8:30a to 8:55a	San Fernando Valley Green Streets Project: The Potential for Drywell System Implementation for Groundwater Recharge Esther Woo LA Sanitation & Environment	The South Orange County Flow Ecology Study: Flow Ecology Approach for Watershed Prioritization Kris Taniguchi-Quan Southern California Coastal Water Research Project	Training Workshop (Sessions 5-7) From Development Planning to Post-Construction: A Municipal Perspective on Sustainable Construction Compliance  Speakers:	Panel Talking With the CGP Training Team  Panelists: Brandon Roosenboom State Water Resources Control Board Daniel Apt	Greenwaste and Recycling Facility Treats Storm Water Through Engineered Media Mix Craig Ziel Tetra Tech	
9:00a to 9:25a	LACPW Green Streets Standards and Guidelines Haris Harouny Los Angeles County Public Works		Shawnetta Grandberry Tim Carroll Scott Workman Nate Johnson Danny Goggin City of Carlsbad	Olaunu Sandy Mathews Larry Walker Associates Brian Currier Office of Water Programs at Sacramento State Dave Mercier Michael Baker International	Annual Reporting – The Devil Is in the Details (or Lack Thereof)  Jayme Dryden Ashworth Leininger Group	Progress Towards Efficient Storm-Borne Sediment Monitoring – Lessons Learned From the Marina del Rey Toxics TMDL Monitoring Program  Emiko Innes Los Angeles County Public Works



# Wednesday, October 27 (continued)

session 6	TRACK: Stormwater Capture, Use, and Green Infrastructure ROOM 1	TRACK: Modeling and Tools	TRACK: Municipal Program	TRACK: Construction General Permit	TRACK: Monitoring, TMDLs, and Source Tracking	TRACK: Resiliency and Sustainability
MODERATOR	Sahand Rastegarpour State Water Resources Control Board	Brian Laurenson Larry Walker Associates, Inc.	Shawnetta Grandberry City of Carlsbad	Kadi Whiteside Southern California Edison	Chris Stransky Wood	Lisa Skutecki Brown & Caldwell
9:30a to 9:55a	Zero to Hero: Leveraging Green Stormwater Infrastructure to Convert a Flood Control Basin to a Multi-Beneficial Regional Public Space Millicent Cowley-Crawford Woodard & Curran	Supporting Adaptive Compliance – Predicting Nutrient Reduction Benefits from Stream Restoration at the Site Scale to Promote Development of a Pay-for- Performance Program  Shannon Quigley-Raymond Tetra Tech	Training Workshop continued	Panel Ask the Regulators – Construction General Permit  Panelists: Brandon Roosenboom and Amy Kronson State Water Resources Control Board Rich Muhl	A Source Investigation Process to Investigate Sources of Bacteria Ryan Jensen County of San Diego	Green Streets Clean Water – Master Planning and Community Engagement Sheri McPherson County of San Diego
10:00a to 10:25a	Stormwater Harvesting for a Sustainable Future Alberto Grajeda Los Angeles County Public Works	Helping Clear Lake Recover: Development of a Stormwater Best Management Practices (BMP) Calculator To Assess Reductions in Sediment Phosphorous Loads to a Northern California Hyper- Eutrophic Natural Lake Lisa Sabin EOA, Inc.		Central Valley Regional Water Quality Control Board Erica Ryan San Diego Regional Water Quality Control Board	Finding the Trees Within the Forest; Using DNA Analysis To Prioritize Drainage Areas, a Microbial Source Investigation Within the Santa Ana River Watershed Abigail Suter Riverside County Flood Control and Water Conservation District	2021 CASQA Awardee: Outstanding Sustainable Stormwater Project or Program  Calm Before the Storm: San Mateo County Sustainable Streets Master Plan  Reid Bogert City / County Association of Governments of San Mateo County

### 10:25a-11:00a BREAK AND EXHIBITOR FOCUS (Exhibit Hall)

session 7	TRACK: Outreach, Engagement, and Education	TRACK: BMP Effectiveness	TRACK: Municipal Program	TRACK: Funding	TRACK: Industrial General Permit	TRACK: Resiliency and Sustainability
	R00M 1	R00M 2	R00M 3	R00M 4	R00M 5	R00M 6
MODERATOR	Bill Dean Poseidon Education	Ken Schiff Southern California Coastal Water Research Project	Shawnetta Grandberry City of Carlsbad	Morgan Shimabuku Pacific Institute	Laura Carpenter Brown and Caldwell	Lisa Skutecki Brown & Caldwell
11:00a to 11:25a	2021 CASQA Awardee: Outstanding Stormwater News, Information, Outreach, and Media Project  Flows to Bay Website  Paige Rosenberg SGA Marketing	Training Workshop (Sessions 7-8) Assessing BMP Effectiveness: What Do We Know and What Do We Want To Know? Speakers: Daniel Apt Olaunu	Training Workshop continued	Panel Co-Funding Stormwater Incentives Through "Stacked Incentives"  Panelists: Reid Bogert City / County Association of Governments of San Mateo County	Advanced Treatment for Industrial Stormwater Stacey Grosvenor Evoqua Water Technologies	Building Urban Stormwater Resiliency by Incorporating Global Climate Change Projections to Local Runoff Modeling Tyler Nodine 2NDNATURE Software
11:30a to 11:55a	2021 CASQA Awardee: Outstanding Stormwater News, Information, Outreach, and Media Project  Fred & Izzy: Multi-Media Outreach Campaign  Jim Scanlin Alameda Countywide Clean Water Program	Brian Currier Office of Water Programs at Sacramento State Gary Conley 2NDNature Alicia Gilbreath San Francisco Estuary Institute Elizabeth Fassman-Beck Southern California Coastal Water Research Project		Kyle Ramey Bay Area Water Supply and Conservation Agency Joni German San Diego County Water Authority Scott Norris County of San Diego	Overcoming the Challenges of Microplastics in Stormwater Sarah Mass Haley & Aldrich	Why Not! Repurposing Aging Sanitary Sewer Infrastructure for Stormwater Conveyance, Flood Control, Water Quality and Water Supply Benefits: City of Anaheim Case Study Paul Glenn GHD

11:55a-12:30p LUNCH BREAK (Networking Events) Feel free to join a virtual table with fellow conference goers while grabbing lunch.

# Wednesday, October 27 (continued)

SESSION 8	TRACK: Outreach, Engagement, and Education	TRACK: BMP Effectiveness	TRACK: Trash	TRACK: Funding	TRACK: Regulatory	TRACK: Resiliency and Sustainability
	R00M 1	R00M 2	R00M 3	R00M 4	R00M 5	R00M 6
MODERATOR	Melissa Dailey Port of San Diego	Ken Schiff Southern California Coastal Water Research Project	Elizabeth Zernik BSI EHS Services and Solutions	Maureen Kerner Office of Water Programs at Sacramento State	Karen Cowan CASQA	Sharon Gosselin County of Alameda
12:30p to 12:55p	Project Clean Water: A San Diego Stormwater Public Education and Behavior Change Campaign  Chelsea McGimpsey County of San Diego	Training Workshop continued	Source Controls and Full Capture Systems – Lessons Learned after a Decade of Trash Control Measure Implementation Chris Sommers EOA, Inc.	Transforming the Storm by Implementing a Stormwater Runoff Charge for San Francisco Will Logsdon San Francisco Public Utilities Commission	Methodology to Develop Site Specific Objectives for Zinc and Copper Based on the Biotic Ligand Model Chris Beegan State Water Resources Control Board	2021 CASQA Awarder Outstanding Sustainable Stormwater Project or Program  LA County's Safe Clean Water Program  Matthew Frary Los Angeles County Flood Control District
1:00p to 1:25p	Integrating Simple Web Apps for Public Outreach Sheri Dister Weston Solutions, Inc.		Taking Out the Trash — A Collaborative Effort Between the City of Richmond and Caltrans on Design, Funding, and Implementation of a Large Full Capture System  Vaikko Allen Contech Engineered Solutions	Developing a Regional Alternative Compliance System in Contra Costa County Amanda Booth City of San Pablo	2021 Update on the Proposed Urban Pesticides Provisions Sara Huber State Water Resources Control Board	Using Watershed Science to Build Consensus and Maximize Benefits of L.A. County's Safe Clean Water Program Bruce Reznik LA Waterkeeper
SESSION 9	TRACK: Outreach, Engagement, and Education	TRACK: BMP Effectiveness	TRACK: Stormwater Capture, Use, and Green Infrastructure	TRACK: Funding	TRACK: True Source Control	TRACK: Resiliency and Sustainability
	R00M 1	R00M 2	R00M 3	R00M 4	R00M 5	R00M 6
MODERATOR	Liz Smith City of Santa Barbara	Chris Ogaz CASC Engineering and Consulting, Inc	David Alderete Office of Water Programs at Sacramento State	Jerry Bradshaw SCI Consulting	Jim Scanlin Alameda Countywide Cleanwater Program	Stephanie Gaines County of San Diego David Pohl Burns & McDonnell
1:30p to 1:55p	It Takes a Village: How the State Water Board, Industry Professionals, and Next Generation Leaders Are Collaborating To Achieve True Source Control Through Education Patrick Kuga Michael Baker International	New Data-Driven Metrics for Evaluating BMP Performance  Elizabeth Fassman-Beck Southem California Coastal Water Research Project  Sediment TMDL BMP Effectiveness: A Streamlined Management Strategy  Colleen Hunt Stone Creek Environmental	Furthering CASQA's Vision Through Thoughtful Watershed Planning in Southern California  Bryant Alvarado Larry Walker Associates  Devil in the Details — Identifying BMPs for a "Reasonably Assured" Watershed Management Program  Richard Watson Richard Watson Richard Watson &	Panel Accounting Resilience and Sustainability – Needs and Approaches for Stormwater Program Financial Analyses  Panelists: Karen Ashby Larry Walker Associates Heidi Niggemeyer City of Salinas Amanda Magee and Nabiul Afrooz State Water Resources Control Board	The Effectiveness of Trash True Source Controls – Cost-Effective & Sustainable Solutions for Permit Compliance  Peter Schultze-Allen EOA, Inc.	Panel Advancing Stormwater Capture and Use – Building Resiliency and Progress in Regulations, Funding and Inter-Agency Collaboration  Panelists: TJ Moon Los Angeles County Public Works David Smith U.S. EPA, Region 9 Chris Beegan State Water Resources Control Board

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### Wednesday, October 27 (continued)

session 10	TRACK: Outreach, Engagement, and Education	TRACK: BMP Effectiveness	CASQA Collaboration and Integration	TRACK: Funding	TRACK: True Source Control	TRACK: Resiliency and Sustainability
MODERATOR	Barbara Silva City of Fremont	Chris Ogaz CASC Engineering and Consulting, Inc	Tanya Bilezikjian Michael Baker International	Maureen Kerner Office of Water Programs at Sacramento State	Richard Watson Richard Watson & Associates, Inc	Reid Bogert City / County Association of Governments of San Mateo County
3:00p to 3:25p	Bouncing Back Better: Stormwater Education During Covid-19 School Site Challenges Camille Sowinski BCK Programs, LLC	Field Evaluation of Phosphorus Removal in Stormwater Treatment Systems – What is the Data Really Telling Us? Jeremiah Lehman Contech	Panel California Water: Finding Common Ground  Panelists: Danielle Blacet Hyden Deputy Executive Director, California Municipal Utilities Acceptation (CMIA)	Caltrans Clean California Initiative Kenneth Johansson Caltrans	Training Workshop Implementing True Source Control  Speakers: Dave Tamayo County of Sacramento Peter Schultze-Allen	Panel Advancing Collaborative Approaches to Regional- Scale Stormwater Management  Panelists: Kelly Havens
3:30p to 3:55p	Stormwater Incentives Programs in CA: How Human-Centered Design Connects Municipalities to People  Daniella Gutierrez County of San Diego	SMC CLEAN – A Comprehensive Effort to Identify the Effectiveness of LID and Green Infrastructure BMPs  Daniel Apt Olaunu	Association (CMUA) Karen Cowan Executive Director, CASQA Adam Link Executive Director, California Association of Sanitation Agencies (CASA) Cindy Tuck Deputy Executive Director, Association of California Water Agencies (ACWA)		EOA, Inc. Derek Dolfie League of California Cities Sara Toyoda City of Indio	Geosyntec Consultants Merrill Taylor Craftwater Engineering Caroline Koch WaterNow Alliance Jeff Odefey American Rivers

3:55p-4:15p CLOSING REMARKS AND EXHIBITOR PRIZE DRAWING (Main Hall) Closing Remarks: Karen Cowan, CASQA Executive Director Exhibitor prize drawing\*: Winners will be announced by the Platinum Stormwater Steward, Precon Products. (\*You do not need to be present to win)

4:15p-6:00p POST-CONFERENCE HANGOUT (Networking Events) Casual post-conference hangout with old and new acquaintances

THANK YOU FOR JOINING US. See you next year, October 24-26, 2022, at the Palm Springs Convention Center!



### Friends of CASQA

Are you **#CASQAtogether**? Do you support the work of CASQA and our mission for sustainable

stormwater management? If so, we invite you to become a Friend of CASQA.

Friends of CASQA has been established to provide an avenue for individuals to show their support and contribute to our programs. As CASQA is a nonprofit organization, your \$100 contribution is tax deductible. We will include a year-to-date listing of our Friends of CASQA in the Annual Conference program and a calendar-year listing in the Annual Report.

Join your friends and colleagues who have already contributed. We are always grateful for the support of our stormwater community and look forward to welcoming you as a Friend of CASQA!

Learn more about who we are and what we do

### Details:

- \$100 (applies to the current calendar year)
- For individuals only; no organizations
- Names will be listed here:
  - CASQA website
  - CASQA Annual Conference Program (year-to-date)
  - CASQA Annual Report (calendar-year)

### Thank you to our current 2021 Friends of CASQA!

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	Rachael Keish	

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### Poster Presentations

CASQA is pleased to include a poster session at the conference, adapted to the online format.

### **Technical + Poster Presentation**

Using Tree Wells and Dispersion Areas as a More Natural Way to Meet Structural BMP Requirements in the County of San Diego René Vidales
County of San Diego

Why Not! Repurposing Aging Sanitary Sewer Infrastructure for Stormwater Conveyance, Flood Control, Water Quality and Water Supply Benefits: City of Anaheim Case Study Paul Glenn GHD

Green Streets Clean Water - Master Planning and Community Engagement Sheri McPherson County of San Diego

#### **Poster Presentation**

Copper, Zinc, and TSS Stormwater Contributions from Industrial and Non-Industrial Sources at IGP Facilities in Southern California Allison Gokbudak Michael Baker International

Simplified Weir Calculation for Circular Geometry Anthony Cotts Rick Engineering Company

Surface Water Quality After the Woolsey Fire in Southern California Sophia Barron Michael Baker International

A Novel but Practical Method to Find Polluted Areas in the Urban Stormwater System to Support Management Actions Lester McKee

San Francisco Estuary Institute

Los Angeles Stormwater Capture Parks Project: Evaluating Stormwater Capture Alternatives and Lessons Learned from Preliminary Design Christine Rice CDM Smith Defining and Communicating Organizational Success Through Performance Metrics Scott Martindale Southern California Coastal Water Research Project Authority

A Olesco Leadert Occurs ID and Abelevant

A Closer Look at Source ID and Abatement Vicki Kalkirtz City of San Diego

### **Scholarship Program Poster Presentation**

2021 Conference Scholarship Awardee: Guadalupe River Watershed Mercury TMDL Program Olivia Trevino Student Intern – Santa Clara Valley Water District







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### Conference Exhibitors

CASQA is proud to feature the following exhibitors. Note the virtual booths are open for browsing at any time. If you would like to interact directly with a booth representative, please refer to the Exhibit Hall hours below. You may also be able to book an appointment with an exhibitor representative at a time convenient for you.

### AbTech Industries

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#### CISEC. Inc.

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### California Stormwater Quality Assoc. (CASQA)

Karen Cowan 1201 N. Catalina Avenue #4227, Redondo Beach, CA 90277 (424) 241-2249 casqa.org



### CloudCompli

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### Ferguson Waterworks

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### **Exhibit Hall Hours**

### Tuesday, October 26

Exhibit Hall Open

Break and Exhibitor Focus 10:00 am – 10:30 am

Break and Exhibitor Focus 3:25 pm – 4:00 pm

### Wednesday, October 27

Exhibit Hall Open 8:00 am - 4:00 pm
Exhibitor Focus 8:00 am - 8:30 am
Break and Exhibitor Focus 10:25 am - 11:00 am
Break and Exhibitor Focus 2:35 pm - 3:00 pm

### Conference Exhibitors

### Filtrexx International

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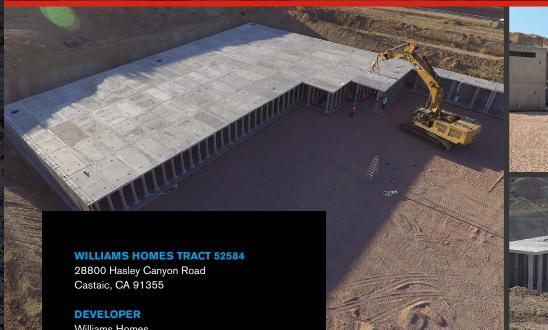
### **Exhibitor Prize Drawing**

To be entered into the Exhibitor Prize Drawing visit at least 10 booths and fill out their virtual badge scans by 3:00 PM on Wednesday, October 27. The live drawing will be held in the Main Hall at 3:55 PM that day.





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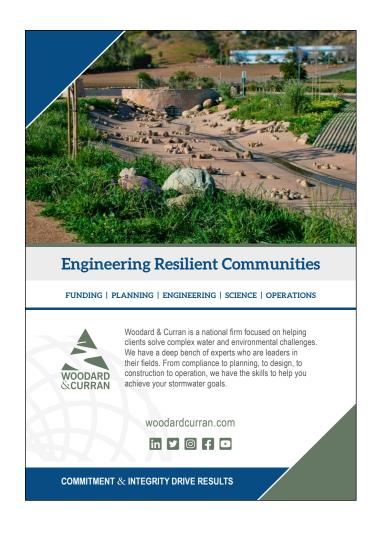
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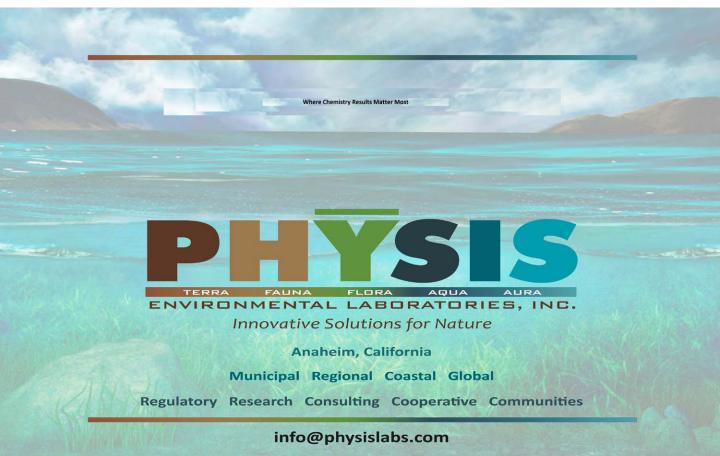
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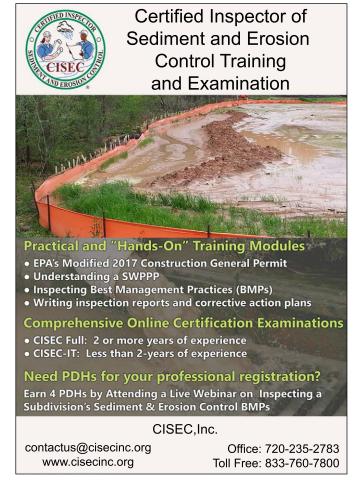


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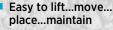
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CASQA is a non-profit professional member association dedicated to the advancement of stormwater quality management through collaboration, education, implementation guidance, regulatory review, and scientific assessment.

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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,

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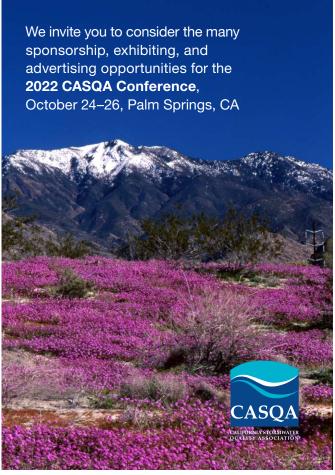
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## Mark Your Calendars

18th Annual CASQA Conference October 24–26, 2022 Palm Springs Convention Center





