

CASQA 2020: envision the future



CASQA 2020 *Virtual* Conference

September 15–16, 2020

Program

www.casqa.org



Improving the quality of California waters is our passion



Watershed Management • TMDLs • Source Tracking • Engineering • Modeling



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Contents

- 3 Introduction
- 4 Conference Overview
- 6 Technical Program Overview
- 7 Conference Tracks
- 9 Conference Sponsors and Exhibitors
- 10 2020 CASQA Awardees
- 13 Monday and Tuesday, September 14–15
 - Welcome Reception
 - Plenary Session
 - Technical Program
 - Tuesday Evening Reception
- 16 Wednesday, September 16
 - Technical Program
- 20 Poster Presentations
- 22 Conference Exhibitors
- 24 2020 CASQA Conference Subcommittee

“Vision without action is merely a dream.

Action without vision just passes the time.

Vision with action can change the world.”

JOEL A. BARKER

Leadership is one of the core components of who we are as CASQA.

Therefore, CASQA has opted to lead through these challenges by providing certainty in these uncertain times. Part of CASQA’s mission is to educate, and this *virtual platform* will maximize access and opportunities for learning together in 2020. We have developed an outstanding conference experience, albeit a new one, by migrating our typical conference components into an interactive online environment. The conference includes the exceptional content and program that we are known for, a showcase for sponsors and exhibitors, as well as networking opportunities. We are excited to introduce our innovative new format. As always, we are **#CASQAtogether**.

CASQA’s Vision Statement recognizes Sustainable Stormwater Management as a vital component of California’s water resources.

Stewardship of our stormwater resources must balance human and ecological needs including protecting water quality, enhancing and restoring waterways, and providing an additional source for water supply. With this in mind, we ask you to **envision the future** of stormwater. In the conference, we will explore ways to incorporate sustainable solutions for our water quality challenges, integrate the best science and technologies to ensure future generations can enjoy our waters, provide equity by engaging in all communities, drive consensus building with multi-benefit solutions, and explore funding for the future we envision.



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, “CASQA 2020: envision the future.”

The live-streamed, interactive conference kicks off with a Plenary Session featuring the announcement of CASQA Awardees and a key-note address (see sidebar). This will be followed by concurrent technical presentations, training workshops, panels, forums, and roundtable discussions by leading stormwater practitioners. Attendees can also visit the Exhibit Hall to interface with exhibitors while exploring goods, services, and innovative ideas, and connect with fellow attendees through the virtual networking events.



Conference registration includes on-demand access to recorded presentations through the end of 2020.

Keynote Speaker



Congressman Scott Peters
Plenary Session
Tuesday, September 15

Congressman Scott Peters serves California's 52nd Congressional district, which includes the cities of Coronado, Poway, and most of northern San Diego.

First elected in 2012, he currently serves on the House Committee on the Budget and the House Energy and Commerce Committee, where he advocates for investment in basic scientific research, supports the military's goals to enhance their energy security, and fights for commonsense healthcare reforms that work for families and small business owners.

Scott Peters is a civic leader who has made improving the quality of life in San Diego his life's work. As a Member of Congress, Scott's emphasis has been promoting and expanding San Diego's innovation ecosystem, advocating for San Diego's pivotal role as a partner in the national defense, and making government work again. Ranked the 4th most independent Democrat in Congress by the National Journal, Scott Peters understands that business problems have bipartisan solutions, and is never afraid to work across party lines to build consensus and get things done.

Congressman Peters has a long history of championing innovative solutions to water resource challenges in San Diego County. He will provide a lawmaker's perspective on advancing stormwater as a resource and providing federal funding for stormwater infrastructure in California.

Highlights

- **Two day conference – September 15 and 16, 2020**
- **Live-streamed presentations** including Q&A with the presenters
- **All presentations available on-demand** to conference registrants after the live event through the end of 2020, providing the maximum flexibility to view the live stream as well as access the recorded content later
- **Virtual Exhibit Hall**
 - Attendees can 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
- **Networking opportunities** – all registrants are welcome to join us
 - **Welcome Reception**
Monday, September 14, 5:00 p.m. – 7:00 p.m.
Please join us for the Welcome Reception. This is a great way to break the ice in a speed-dating format before the official start of the conference.
 - **Tuesday Evening Reception**
Tuesday, September 15, 5:00 p.m. – 7:00 p.m.
This is a unique opportunity to socialize after a day of presentations and enjoy stormwater-themed games with fellow conference attendees.

Conference Portal Access

Be on the lookout for an email with log-in instructions to enter the conference event portal. (Be sure to check your junk mailbox.)

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Technical Program Overview

The 2020 Technical Program comprises nine conference thematic technical presentation and discussion sessions with 88 oral presentations, 13 panels, 2 forums, 1 roundtable, 4 training workshops, and a poster session in the 14 tracks listed on the following page.

The City of San Diego is the CASQA
Conference Host Program Sponsor.
Pictured: San Diego skyline at night.

CASQA Awardees The mission of the CASQA Awards Program is to advance the stormwater quality management profession by identifying and recognizing exemplary leadership, outstanding projects, activities, and contributions to the field of stormwater quality management. This track will include presentations from CASQA Awardees.

Construction and Post-Fire Response

This track will focus on proven strategies to resolve construction issues: innovative best management practices (BMPs) and controls; challenges and solutions to site management; implementing cost controls; resolving monitoring and sampling issues; and dealing with the challenges of linear utilities and overhead best management programs. Additionally, this track will explore innovative post-wildfire response using techniques in assessment, aerial mapping, outreach, mitigation, funding, contracting, and monitoring.

Data Management, GIS/GIS Tools,

and Modeling This track will focus on data management and visualization, stormwater geographic information systems (GIS), data collection tracking, advances in watershed planning and modeling. It will focus on the future and how tools from other industries may be used in the stormwater arena.

Emerging Contaminants This track focuses on emerging contaminants: what we know or don't know or need to learn, upcoming regulatory changes that may impact the stormwater community, and new advances in science that allow us to measure or characterize both human and environmental risk related to emerging contaminants.

Equity This panel will focus on how we identify the connections between the business of water management and its direct and indirect impact on vulnerable communities. Included will be discussions of current programs, lessons learned, and how to bring equity considerations into all aspects of our work in the stormwater communities.

Access the Online Agenda

For further details, the [online conference agenda](#) provides an up-to-date hourly view of the program, speakers, and panelists.

Funding and Financing This track will address stormwater program infrastructure funding and financing, both public and private, and asset management. Integration of stormwater needs into existing funding and financing mechanisms, such as capitalization and scheduling for replacing aging infrastructure, will be a focus.

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

Legislation, Policy, Permitting, Legal

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.

Monitoring and TMDL Implementation

This track will highlight two topics that are closely related, monitoring and TMDL implementation. Innovations in monitoring methods and monitoring program development will be explored for a range of monitoring situations, including TMDL compliance monitoring. The track will also explore the science that goes into developing TMDLs and TMDL alternatives, the challenges of complying with TMDL-based requirements, and ways in which parties to a TMDL can come together to work on implementation.

Municipal Program Implementation

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 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.

Resiliency and Sustainability This track will look at sustainable practices, legal requirements, 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 Infrastructure and Natural Waterways 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, 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.

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A scenic landscape photograph of a river or lake with mountains in the background. A wooden dock with a small building and a person in a boat are visible in the foreground. The image is overlaid with a semi-transparent dark blue rectangle on the right side, which contains the Wood logo and text.

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TRACK SPONSORS

Track: Equity



Track: Legislation, Policy,
Permitting, Legal



Track: Monitoring and
TMDL Implementation



Track: Municipal Program
Implementation



Track: Outreach and Education



Track: Stormwater Infrastructure
and Natural Waterways



Exhibitors (for more information, see [page 22](#))

- AbTech Industries
- ADS/BaySaver
- Bio Clean
- Citygreen
- City of San Diego
(Host Program Sponsor)
- CleanWay Environmental Partners, Inc.
- Clear Water Services, LLC
- CloudCompli
- Contech Engineered Solutions, LLC
- Downstream Services, Inc.
- EnviroPod
- Filtrexx International
- Frog Creek Partners
- Frog Environmental
- Jensen Water Resources
- METER Group, Inc.
- Oldcastle Infrastructure
- PACE Advanced Water Engineering
- Porous Technologies, LLC
- Revel Environmental Manufacturing, Inc.
- SCI Consulting Group
- StormTrap
- Stormwater Biochar, LLC
- StormwaterRx LLC
- United Storm Water, Inc.
- WaterTectonics
- Advanced Media Works, Inc.

Congratulations to the 2020 CASQA Awardees

The CASQA annual awards recognize outstanding projects, activities, and people in the stormwater management profession. To learn more about CASQA's 2020 awardees, look for the blue ribbons in the conference program.

Photos and illustrations courtesy of the respective awardees

OUTSTANDING BMP IMPLEMENTATION PROJECT OR PROGRAM

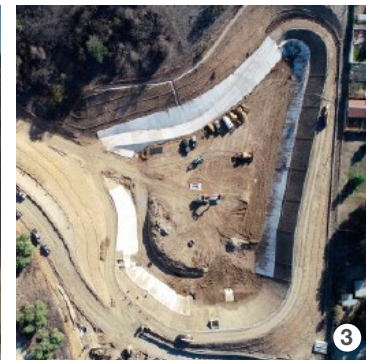
Brasada Estates Project

Brasada Homes Land, LLC

The Brasada Estates Project is a 273-acre residential and open space development located in the foothills of the San Gabriel Mountains in San Dimas, California. As an active construction site that recently completed the mass grading phase, it is being recognized for its outstanding temporary stormwater BMP implementation. This Risk Level 2 Project commenced its grading phase in April 2017, facing what would be the two rainiest seasons of the decade. The most intense challenge was realized during the period from December 2018 to the beginning of March 2019, when 20 inches of rain fell over a period of just three months. Protecting sensitive environmental areas was a major goal of the Project and 160 acres of land will remain as permanent open space and habitat conservation area after completion.



1. Rainfall retention on site through micro-retention basins
2. Erosion control blankets and fiber roll deployed on a series of steep, stepped slopes
3. Aerial view – Drones were used early on to identify potential sources of pollutants



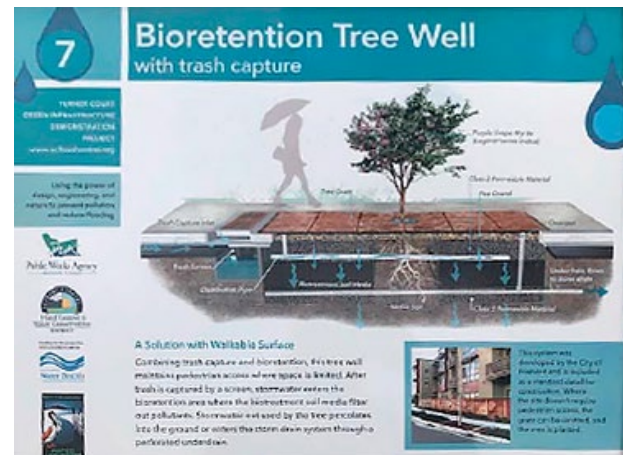
OUTSTANDING BMP IMPLEMENTATION PROJECT OR PROGRAM

Turner Court LID Implementation and Demonstration Project

Alameda County Flood Control and Water Conservation District

The project is a demonstration and educational showcase for low-impact development (LID) – green infrastructure (GI) stormwater treatment facilities. The site is also a Bay Friendly-Rated project that incorporates Bay Friendly landscaping and site development features that reduce water usage and stormwater runoff, reduce waste to landfills, nurture soils to create drought resistant landscapes suited to the local environment, protect water and air quality by minimizing the use of synthetic pesticides, and reduce the use of fertilizers. The purpose of the project was to retrofit the two existing parking lots and add different, innovative types of LID features for demonstration and educational purposes to the community and contractors.

1. Educational sign developed for bioretention tree well feature
2. Newly-constructed bioretention area
3. Newly-installed rainwater harvest tank



1

The 2020 CASQA Awardees (continued)

Photos and illustrations courtesy of the respective awardees

OUTSTANDING SUSTAINABLE STORMWATER PROJECT OR PROGRAM

Living Arroyos

City of Livermore, City of Pleasanton, Livermore Area Recreation & Park District and Zone 7 Water Agency

Living Arroyos is a multi-agency partnership created in 2013 to enhance and maintain the Tri-Valley's urban streams and streamside habitats. Living Arroyos' partner members are Zone 7 Water Agency (Zone 7), the City of Livermore, City of Pleasanton, and Livermore Area Recreation and Park District (LARPD). The Living Arroyos program is unique because it goes beyond the once or twice a year creek clean-up events that have been traditionally used to involve the public in stream-related issues. The program aims to create "watershed ambassadors" who are connected to the arroyos in their own backyards and have a greater understanding of local water management issues that impact local streams. Watershed ambassadors are nurtured through three programs that are under the umbrella of Living Arroyos: • Internship Program • Volunteer Workdays • Adopt a Creek Spot Program



1. Young people volunteer for the Living Arroyos program
2. Adopt a Creek Spot "Love Your Creeks" Clean-Up event in February, 2020
3. Living Arroyos celebrated its 100th Volunteer Workday on April 20, 2019

OUTSTANDING SUSTAINABLE STORMWATER PROJECT OR PROGRAM

Green Infrastructure Grant Program

San Francisco Public Utilities Commission

The San Francisco Public Utilities Commission's (SFPUC) Green Infrastructure (GI) Grant Program is designed to encourage San Francisco property owners to design, build, and maintain performance-based green stormwater infrastructure. GI features can include permeable pavement, rainwater harvesting, rain gardens and vegetated roofs. The program is part of the SFPUC's goal to remove 1B gallons of stormwater by 2050 through GI. The program was launched in February 2019 and is ongoing.

- \$6.4M in funding was made available for first 2 years
- The maximum grant award is \$765,000 per acre of impervious surface managed, up to \$2 million per site.



1. Pilot project, RL Stevenson Elementary Stormwater Schoolyard
2. Educational signage explains the function of permeable pavement at the schoolyard
3. SFPUC Green Infrastructure Grant Program Guidebook

OUTSTANDING SERVICE AWARDEES

Congratulations to the 2020 CASQA Outstanding Service Awardees

*Daniel Apt
Lisa Austin
Tanya Bilezikjian*

*Brian Currier
Sharon Gosselin
Kristina Hysler*

*Lisa Skutecki
Dave Tamayo
Matt Yeager*



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Monday and Tuesday, September 14–15

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

8:45a
to
10:00a

PLENARY SESSION (Main Hall)

- **WELCOME AND OPENING REMARKS:**
Amanda Carr, Chair – CASQA Board of Directors
- **HOST PROGRAM WELCOME:**
Kris McFadden, Director - City of San Diego
Transportation & Storm Water Department

- **OUTSTANDING SERVICE AWARDS**
ANNOUNCEMENT: Amanda Carr
- **CONFERENCE SCHOLARSHIP PROGRAM AWARD**
ANNOUNCEMENT: Amanda Carr
- **EXHIBITOR 15-YEAR AWARDS ANNOUNCEMENT:**
Karen Ashby, Exhibitor Coordinator

- **CASQA AWARDS ANNOUNCEMENT:** 
Jamison Crosby, Chair –
CASQA Awards Committee
- **KEYNOTE ADDRESS:**
(Introduction by Amanda Carr)
Congressman Scott Peters

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

10:00a–5:00p **EXHIBIT HALL OPEN** (Exhibit Hall) Enter the Exhibitor Prize Drawing by visiting at least 10 booths and filling out their virtual badge scans by 4:00 PM on Wednesday, September 16.

10:00a–5:00p **POSTER SESSION** (Poster Hall)

SESSION 1	Track: Construction and Post-Fire Response	Track: Outreach and Education	Track: Funding and Financing	Track: Trash	Track: Municipal Program Implementation	Track: Stormwater Infrastructure and Natural Waterways	Track: CASQA Awardees
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
10:30a to 11:00a	<p>Panel (90 minutes) Talking With the Regulators – Construction General Permit</p> <p><i>Moderator:</i> Sandy Mathews Larry Walker Associates</p> <p><i>Speakers / Panelists:</i> Amy Kronson State Water Resources Control Board Brandon Roosenboom State Water Resources Control Board Rich Muhl Central Valley Regional Water Quality Control Board Erica Ryan San Diego Regional Water Quality Control Board</p>	<p>Integrating Community Based Social Marketing Into Public Education and Outreach: Lessons Learned Through Iterative Review</p> <p><i>Andrew McGuire</i> County of Orange</p>	<p>Panel (90 minutes) Strategic Funding Requests & Negotiations: Winning General Fund & Grant Allocations</p> <p><i>Moderator:</i> Jason Drew NCE</p> <p><i>Speakers / Panelists:</i> Todd Snyder County of San Diego Amanda Booth City of San Pablo Matt O'Malley San Diego Coastkeeper David Smith U.S. EPA, Region 9 Megan Tosney State Water Resources Control Board</p>	<p>Panel (90 minutes) Choose Your Own (Trash Reduction) Adventure – The Costs and Benefits of Stormwater Trash Controls: A New CASQA Guidance Document</p> <p><i>Moderator</i> Chris Sommers EOA, Inc.</p> <p><i>Speakers / Panelists:</i> Lisa Duba Gigantic Idea Studio Peter Schultze-Allen EOA, Inc. Julie Choun City of Sunnyvale Ben Livsey City of Oakland Thuan Nguyen County of Los Angeles Caitlin Gilmore Schaff & Wheeler</p>	<p>Systems Approach to Multi-Benefit Stormwater Management in an Urbanized Setting</p> <p><i>TJ Moon</i> Los Angeles County</p>	<p>Caruthers Park Stormwater and Urban Runoff Capture Project: Achieving Stormwater Harvest and Use Water Quality Compliance in Los Angeles County</p> <p><i>Chris Jansen</i> Tetra Tech, Inc.</p>	<p>2018 CASQA Awardee: Outstanding Commercial Stormwater BMP Implementation Project: Urban Low Impact Development Best Management Practice Commercial Site Retrofit Project</p> <p><i>Rick Sidor</i> CASC Engineering and Consulting</p>
11:00a to 11:30a		<p>Drifting in the South Pacific: An Opportunity for Students in American Samoa to Envision Their Future in Stormwater Monitoring</p> <p><i>Alex Messina</i> Wood Environment & Infrastructure Solutions</p>			<p>Performance Measures for Annual WQIP Reporting: Good Metrics Increase Focus, Credit and Tracking</p> <p><i>Chad Praul</i> Environmental Incentives</p>	<p>Can Laboratory Column Studies Really Predict Field-Scale BMP Performance? A Comparison of 10 Years of Field-Scale Performance Data With Original Bench-Scale Test Results</p> <p><i>Bob Pitt</i> University of Alabama</p>	<p>2020 CASQA Awardee: Outstanding BMP Implementation Project or Program: Brasada Estates Project</p> <p><i>Chris Sidor</i> CASC Engineering and Consulting</p>
11:30a to 12:00p		<p>Rising Waters: University-Agency Partnerships for Innovative Water Quality Solutions</p> <p><i>Claudia Luke</i> Sonoma State University, Center for Environmental Inquiry</p>			<p>The Future of Santa Cruz County Stormwater: Strategic Planning in the Cloud</p> <p><i>Chloe Hoke</i> 2NDNATURE</p>	<p>Nature-Based Strategies for the El Dorado Regional Stormwater Facility</p> <p><i>Oliver Galang</i> Craftwater Engineering, Inc.</p>	<p>2020 CASQA Awardee: Outstanding BMP Implementation Project or Program: Turner Court LID Implementation and Demonstration Project</p> <p><i>Analette Ochoa</i> WRECO</p>

12:00p–1:30p **LUNCH BREAK**

SESSION 2	Track: Construction and Post-Fire Response	Track: Outreach and Education	Track: Funding and Financing	Track: Trash	Track: Municipal Program Implementation	Track: Stormwater Infrastructure and Natural Waterways	Track: CASQA Awardees
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
1:30p to 2:00p	<p>Stormwater Discharge Sampling on LUP Projects: Solutions for Effective Sheet Flow Sampling</p> <p><i>Joseph McCadden</i> ETIC</p>	<p>Training Workshop (2 hours) Showcasing Innovative Outreach and Education Efforts in the Virtual World</p> <p>Moderators: <i>Jeanette Huddleston</i> County of Sacramento Department of Water Resources</p>	<p>Panel (60 minutes) Envision the Future – Funding is the Fuel to Get Us There</p> <p>Moderator: <i>Richard Watson</i> Richard Watson & Associates, Inc.</p> <p>Speakers / Panelists: <i>Matt Frary</i> Los Angeles County <i>Jim Barse</i> City of Alameda <i>Drew Kleis</i> City of San Diego <i>Jerry Bradshaw</i> SCI Consulting Group</p>	<p>Let's Talk More Trash: The Results from Phase II of a Scalable Trash Capture Study</p> <p><i>Jim Harry</i> City of San Diego</p>	<p>Training Workshop (2 hours) Moving the Needle – An Interactive Workshop on How to Make Your Stormwater Program Politically Relevant</p> <p>Moderator: <i>Jason Drew</i> NCE</p> <p>Speakers / Panelists: <i>Jamison Crosby</i>, County of Napa <i>Mike Carlson</i> and <i>Jason Drew</i> NCE</p>	<p>Hidden Green Infrastructure: Reclaiming a Lost Infiltration Basin in the City of Torrance</p> <p><i>Steven Bell</i> CWE</p>	<p>2020 CASQA Awardee: Outstanding Sustainable Stormwater Project or Program: Living Arroyos</p> <p>Speaker: <i>Steven Aguiar</i> City of Livermore</p>
2:00p to 2:30p	<p>Developing a Risk Assessment for a Linear Utility Construction Project: Making the Best Decisions for CGP Compliance and Water Quality</p> <p><i>Kadi Whiteside</i> Southern California Edison</p>	<p><i>Jennifer Kaiser</i> Vallejo Flood & Wastewater District</p> <p>Speakers / Panelists: <i>Mary Kelly</i> and <i>Kristina Hysler</i> Wood Environment & Infrastructure Solutions</p> <p><i>Amy Wilson</i> BCK Programs, <i>Drew Larsen</i> 6th Grade Student</p> <p><i>Suzi Senna</i> SGA Marketing, <i>Reid Bogert</i> City/County Association of Governments of San Mateo County</p> <p><i>James Sanderson</i> Visual Communications, <i>Lisa Skutecki</i> Brown and Caldwell</p>		<p>Multi-Benefit Treatment System Sizing Procedure for Full-Capture Trash Compliance</p> <p><i>Brian Currier</i> Office of Water Programs at Sacramento State</p>		<p>Beyond Design Storms: Sizing Stormwater BMPs to Maximize Multiple Benefits in Los Angeles County</p> <p><i>TJ Moon</i> Los Angeles County</p>	
SESSION 3	Track: Construction and Post-Fire Response	Track: Outreach and Education	Track: Funding and Financing	Track: Trash	Track: Municipal Program Implementation	Track: Stormwater Infrastructure and Natural Waterways	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
2:35p to 3:05p	<p>Using Construction Storm Water as a Resource – What We Learned From the 2019-2020 Rainy Season</p> <p><i>Kelly Doyle</i> Rick Engineering Company</p>	<p>Training Workshop (2 hours) – continued</p>	<p>Economics of Stormwater Capture and Its Multiple Benefits</p> <p><i>Sarah Diringier</i> Pacific Institute</p>	<p>Envisioning No Trash and No Mosquitoes – Working Together for a Better Tomorrow</p> <p><i>Jennifer Henke</i> Mosquito and Vector Control Association of California</p>	<p>Training Workshop (2 hours) – continued</p>	<p>Los Peñasquitos Lagoon Restoration: Restoring Natural Processes to Address Multiple Objectives of Water Quality, Water Resource, Restoration and Flood Management</p> <p><i>David Pohl</i> Burns & McDonnell</p>	<p>Evaluating Potential Methods to Quantify Stormwater Capture</p> <p><i>Sahand Rastegarpour</i> State Water Resources Control Board</p>
3:05p to 3:35p	<p>Caltrans' New Water Pollution Control Manager Certification Requirements</p> <p><i>Hamid Hakim</i> Caltrans</p>		<p>Leveraging Federal Stimulus to Fund Stormwater Infrastructure Projects: Lessons Learned from ARRA Stimulus of 2009</p> <p><i>Hawkeye Sheene</i> Sheene Consulting</p>	<p>Out of the Box Approach and Paradigm Shift to the Trash Policy</p> <p><i>Douglas Dowden</i> Independent Consultant</p>		<p>Spruce Street Channel: Lessons for Coordinating Wetland Permitting, Design, Grants, and Property Lines</p> <p><i>Elisa Marrone</i> City of Escondido</p>	<p>Empowering Decision-Making for Watershed Management – Launch of the Los Angeles County Watershed Management Modeling System (WMMS)</p> <p><i>TJ Moon</i> Los Angeles County</p>
3:35p–4:00p	BREAK AND EXHIBITOR FOCUS (Exhibit Hall)						

SESSION 4	Track: Construction and Post-Fire Response	Track: Equity	Track: Funding and Financing	Track: Trash	Track: Municipal Program Implementation	Track: Industrial	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
4:00p to 4:30p	Forum (60 minutes) CGP ToR Collaboration – Construction General Permit Training <i>Moderator:</i> Daniel Apt Olaunu <i>Speakers / Panelists:</i> Kadi Whiteside Southern California Edison Brandon Roosenboom State Water Resources Control Board Jarrod Gibbon Riverside County Transportation and Land Management Agency Peter Thorne HydroCompliance	Panel (60 minutes) <i>Moderator:</i> Rosey Jencks Brown and Caldwell <i>Speakers / Panelists:</i> Adel Hagekhalil City of Los Angeles Bureau of Street Services (StreetsLA) Katy Lackey US Water Alliance Rosey Jencks Brown and Caldwell	Alternative Procurement Guidebook to Help Permittees With CBP3s and Pay-for-Performance Contracts <i>Chad Praul</i> Environmental Incentives	Panel (60 minutes) Zeroing Stormwater Trash: Advances in Technology for Program Success <i>Moderator:</i> Stephanie Castle Zinn Fuscoe Engineering <i>Speakers / Panelists:</i> Stephanie Castle Zinn Fuscoe Engineering Chris Sommers EOA, Inc. Gary Conley 2NDNATURE Walter Yu Caltrans Francesca de León Wood Environment & Infrastructure Solutions	Panel (60 minutes) K-12 and Community College Upcoming Regulation: What You Need to Know! <i>Moderator:</i> Rachael Keish Keish Environmental, PC <i>Speakers / Panelists:</i> Paul Levy State Water Resources Control Board Ian Padilla The Coalition for Adequate School Housing (CASH) Rachael Keish Keish Environmental, PC	Scalable Active and Passive Treatment Solutions to Address TMDLs <i>Nathan Holloway</i> Clear Water Services, LLC	Using Leading-Edge Deep-Sea Survey Technique to Validate the Sediment Transport Model in the Dominguez Channel Estuary <i>Frank Cheng</i> Los Angeles County
4:30p to 5:00p			Breaking the Bank: Developing a Sustainable Stormwater Funding Strategy <i>Bethany Bezak</i> City of San Diego			The Value of Stormwater Pilot Testing as a Decision-Making Tool for Facility Managers, Consultants and Suppliers <i>Chris Fromme</i> StormwaterRx LLC	Do Urban Trees Count? The Role of Trees in Urban Hydrology <i>Tan Zi</i> San Francisco Estuary Institute

5:00p–7:00p TUESDAY EVENING RECEPTION (Networking Events) A unique opportunity to socialize after a day of presentations and enjoy stormwater-themed games with fellow conference attendees.

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WEDNESDAY

8:00a–8:30a EXHIBITOR FOCUS (Exhibit Hall)

8:00a–5:00p EXHIBIT HALL OPEN (Exhibit Hall) Enter the Exhibitor Prize Drawing by visiting at least 10 booths and filling out their virtual badge scans by 4:00 PM on Wednesday, September 16.

8:00a–5:00p POSTER SESSION (Poster Hall)

SESSION 5	Track: Construction and Post-Fire Response ROOM 1	Track: Monitoring and TMDL Implementation ROOM 2	Track: Industrial ROOM 3	Track: Resiliency and Sustainability ROOM 4	Track: Municipal Program Implementation ROOM 5	Track: Stormwater Infrastructure and Natural Waterways ROOM 6	Track: Data Management, GIS / GIS Tools, and Modeling ROOM 7
8:30a to 9:00a	Panel (90 minutes) Envisioning the Future of Post-Fire Response and Funding <i>Moderator:</i> Mike Harding Independent Environmental Consultant	Panel (90 minutes) The California Water Quality Monitoring Council – Better Science by Collaboration <i>Moderator:</i> Grant Sharp County of Orange	Vendor Roundtable (90 minutes) Advanced Treatment for Industrial Stormwater <i>Moderator:</i> Sean Porter Apex	Panel (90 minutes) Stormwater Harvesting in California: A Panel of Experts Discuss their Experiences, Challenges and the Path Forward <i>Moderators:</i> Chad Helmle Craftwater Engineering, Inc. David Pohl Burns & McDonnell	Innovative Project Delivery Practices Successfully Pioneered by the Los Angeles Green Stormwater Infrastructure Program <i>Ken Susilo</i> Geosyntec Consultants, Inc.	Merced Avenue Greenway Project: A Model for Future Greener Urban Street <i>Nate Schreiner</i> Tetra Tech, Inc.	Building a Living Model – Quantifying Stormwater Capture and Pollutant Load Reduction Directly from a Water Quality Asset Inventory <i>Eric Rademacher</i> County of Orange
9:00a to 9:30a	<i>Speakers / Panelists:</i> Miguel Parames and Kathleen Harrison, Geosyntec Consultants, Inc. Robert Leeper Leeper Aerial Ivan Holler City of Murrieta Mike Harding Independent Environmental Consultant	<i>Speakers / Panelists:</i> Nicholas Martorano, Paul Hann, Anna Holder, and Karen Black State Water Resources Control Board Eric Stein Southern California Coastal Water Research Project Dalia Fadl City of Rancho Cordova Kaitlyn Kalua, California Coastkeeper Alliance Alisha Wenzel Central Valley Regional Water Quality Control Board	<i>Speakers / Panelists:</i> Stacey Grosvenor Evoqua Water Technologies Kristine Sommer Clear Water Services Matt Mahoney Clear Creek Systems	<i>Speakers / Panelists:</i> Mike Thornton San Elijo Joint Power Authority Paul Alva, Los Angeles County Kristen Ruffell Los Angeles County Sanitation Districts Stephanie Gaines County of San Diego Matt O'Malley San Diego Coastkeeper Christopher Beegan State Water Resources Control Board	BMP Information for Private Property Rebates and Incentives Programs In Southern California <i>Jamie Milani</i> County of San Diego	Green Streets in San Diego – A Virtual Tour of Completed Green Streets Projects in the San Diego Region <i>Shavger Rekani</i> Rick Engineering Company	Adaptive Management of Municipal Street Sweeping and Catch Basin Cleaning Operations in the Digital Age <i>Bethany Bezak</i> City of San Diego
9:30a to 10:00a					The Win-Win-Win Scenario for Paso Robles' Stormwater Program, Regulators, and Developers. Off-Site Alternative Compliance Plan and Stormwater Project Financing on the Central Coast <i>David LaCaro</i> City of El Paso de Robles	Unincorporated Los Angeles County Green Streets Master Plan: Evaluating Green Street Alternatives and Lessons Learned From Preliminary Design <i>Russ Vadenais</i> CDM Smith	Going Digital: Utilizing Technology to Prioritize and Cost Effectively Maintain Stormwater Infrastructure <i>Bethany Bezak</i> City of San Diego

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

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SESSION 6	Track: Construction and Post-Fire Response	Track: Monitoring and TMDL Implementation	Track: Industrial	Track: Resiliency and Sustainability	Track: Municipal Program Implementation	Track: Legislation, Policy, Permitting, Legal	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
10:30a to 11:00a	Panel (60 minutes) Changing the Paradigm of Stormwater Management and Compliance on Construction Sites – Removing the Stigma Through Teamwork <i>Moderator:</i> Erika Horn KCM Group	A Watershed Event for the Middle Santa Ana River Watershed: Quantitatively Parsing Fecal Bacteria Loads Between MS4 and Non-MS4 Sources <i>Steven Wolosoff</i> <i>CDM Smith</i>	Structural BMP Implementation and Bypass: How Big Does My Capture and Treat System Need to Be and Do I Still Have to Sample Bypass to Comply With the IGP? <i>David Renfrew</i> <i>NV5, Inc.</i>	Protecting Groundwater from Impacts Associated with Enhanced Infiltration of Urban Runoff – Thoughts and Ideas <i>Christopher Beegan</i> <i>State Water Resources Control Board</i>	Envisioning the Future of BMP Inventory Management and Inspection Programs <i>Cynthia Mallett</i> <i>City of San Clemente</i>	Forum (90 minutes) Regulatory Update <i>Moderator:</i> Chris Crompton County of Orange <i>Speakers / Panelists:</i> Thomas Mumley San Francisco Bay Regional Water Quality Control Board David Smith U.S. EPA, Region 9 Karen Mogus State Water Resources Control Board Ivar Ridgeway Los Angeles Regional Water Quality Control Board	Development of a System to Track and Visualize the Benefits of Green Infrastructure in San Mateo County <i>Matthew Fabry</i> <i>City/County Association of Governments of San Mateo County</i>
11:00a to 11:30a	<i>Speakers / Panelists:</i> Chris Nichols Pardee Homes Douglas Dowden Independent Consultant Kim Aldrich Lennar	So Cal Stormwater Monitoring Coalition's Vision for the Future: The 2020-2024 Research Agenda <i>Kenneth Schiff</i> <i>Southern California Coastal Water Research Project (SCCWRP)</i>	Onsite Compliance Options – Is Storm Water Infiltration Right for Your Facility? <i>Ron Hayes</i> <i>KERAMIDA, Inc.</i>	Santa Monica Sustainable Water Infrastructure Project Advanced Water Treatment Facility <i>Jacob Peterson</i> <i>PACE Advanced Water Engineering</i>	Reducing Flood Risk Through Channel Maintenance – Developing a Proactive and Responsive Maintenance Approach <i>Maggie McCormick</i> <i>City of San Diego</i>		Assessing the Accuracy of Infiltration Measurements Using Finite Element Analysis <i>Nicholas Tecca</i> <i>University of Minnesota</i>
11:30a to 12:00p	Constructability Challenges With Structural BMPs – Goldentop Rd. Water Quality Project <i>Amanda Parra</i> <i>County of San Diego</i>	Using a Risk Based Approach to address Bacteria Challenge and Attain TMDL Compliance <i>Paul Hartman</i> <i>Larry Walker Associates</i>	Navigating SB 205 to Keep Your Business License Intact <i>Jayme Dryden</i> <i>Ashworth Leininger Group</i>	Sustainable Planning for Climate Change Resiliency – Assessing the Benefits of Green Streets to Mitigate Future Stormwater Impacts <i>John Riverson</i> <i>Paradigm Environmental</i>	Development of a Green Street LID Selection and Design Guidance Manual <i>Duong Do</i> <i>PACE Advanced Water Engineering</i>		Model My Watershed: A Web-Based BMP Planning Web Application for Automated Modeling and Decision Support <i>Steve Skripnik</i> <i>LimnoTech</i>
12:00p–1:30p	LUNCH BREAK						

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SESSION 7	Track: Construction and Post-Fire Response	Track: Monitoring and TMDL Implementation	Track: Industrial	Track: Resiliency and Sustainability	Track: Municipal Program Implementation	Track: Legislation, Policy, Permitting, Legal	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
1:30p to 2:00p	<p>Use of Remote Sensing Technologies to Monitor Revegetation at Remote Construction Sites and Wildfire Burn Areas</p> <p><i>Melissa Christie NV5, Inc.</i></p>	<p>San Luis Rey Wet Weather Bacteria Source Identification Study, Phases I and II</p> <p><i>Neil Searing County of San Diego</i></p>	<p>Utilizing Stormwater Basins to Satisfy Permit Requirements</p> <p><i>Michael Cullinane SWT Engineering</i></p>	<p>Building the Stormwater Harvesting Roadmap in San Diego</p> <p><i>Chad Helmle Craftwater Engineering, Inc.</i></p>	<p>Training Workshop (2 hours) Sustainable Streets Master Planning Workshop – Integrating Stormwater into Transportation Investments</p> <p><i>Moderator: Matthew Fabry City/County Association of Governments of San Mateo County</i></p> <p><i>Speakers / Panelists: Matthew Fabry and Reid Bogert City/County Association of Governments of San Mateo County John Riverson and Steve Carter Paradigm Environmental Scott Durbin Lotus Water</i></p>	<p>Panel (60 minutes) The State and Future of Stormwater, a National Perspective</p> <p><i>Moderator: Scott Taylor National Municipal Stormwater Alliance</i></p> <p><i>Speakers / Panelists: Seth Brown National Municipal Stormwater Alliance Geoff Brosseau CASQA Scott Taylor National Municipal Stormwater Alliance</i></p>	<p>What Stormwater Programs Can Learn From the Covid-19 Pandemic</p> <p><i>Gary Conley 2NDNATURE</i></p>
2:00p to 2:30p	<p>Water Quality of Coastal Watersheds Following the Woolsey Wildfire: Surface Water Quality of Pollutants of Concern Before and After Fire, and Mitigating the Impact of Wildfires Through Stormwater Management Techniques</p> <p><i>Sophia Barron Michael Baker International</i></p>	<p>Use of Advanced Analytical Tools to Identify Dry Weather MS4 Flow Sources in South Orange County</p> <p><i>Jared Ervin Geosyntec Consultants, Inc.</i></p>	<p>IGP Case Studies on Treatment and Treatment Avoidance</p> <p><i>Adam Questad Geosyntec Consultants, Inc.</i></p>				<p>Development of a Stream Restoration and Protection Prioritization Tool</p> <p><i>Vicki Kalkirtz City of San Diego</i></p>



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SESSION 8	Track: Emerging Contaminants	Track: Monitoring and TMDL Implementation	Track: Industrial	Track: Resiliency and Sustainability	Track: Municipal Program Implementation	Track: Outreach and Education	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
2:35p to 3:05p	Training Workshop (2 hours) PFAS in Stormwater: What We've Learned and the Path Forward <i>Moderator:</i> <i>Elisabeth Hawley</i> <i>Geosyntec Consultants, Inc.</i> <i>Speakers / Panelists:</i> <i>Brandon Steets</i> <i>Geosyntec Consultants, Inc.</i> <i>Michelle Mattson and Lisa Kammer</i> <i>Weston Solutions, Inc.</i> <i>Mehak Gupta</i> <i>NV5, Inc.</i>	No Smoking Gun? How Do We Address Chronic but Low-Level Fecal Contamination? (A Case Study) <i>Yizhen (Stella) Shao</i> <i>GSI Environmental Inc.</i>	Using IGP Enforcement Trends to Steer Clear of Violations <i>Elliott Ripley</i> <i>Ashworth Leininger Group</i>	Port of Long Beach Recycled Water and Stormwater Harvesting Feasibility Study – Conserving Potable Water and Protecting Water Quality <i>Ed Othmer</i> <i>Stantec</i>	Training Workshop (2 hours) – continued	Engagement for People's Sake – Phasing and Dynamic Outreach for Sustainable Street Master Planning in San Mateo County <i>Reid Bogert</i> <i>City/County Association of Governments of San Mateo County</i>	ArcGIS Online Tools for Virtually Communicating, Collaborating and Managing Data for Watershed Management Planning <i>Tony Howze</i> <i>PACE Advanced Water Engineering</i>
3:05p to 3:35p		Stormwater Monitoring in the Time of COVID-19. Case Study of Adaptation, Communication, and Project Execution in Uncertain Times <i>Jeremy Burns</i> <i>Wood Environment & Infrastructure Solutions</i>	Industrial Facilities Research and MS4 Review <i>Christine Tolchin</i> <i>County of San Diego</i>	Optimizing Best Management Practices and Sustainability with an Integrated Drainage Plan – County of San Diego, California <i>Stephanie Shamblyn Gray</i> <i>HDR, Inc</i>			The Future of City Inspections Using Mobile GIS and Smart Form Surveys <i>Joyce Goode</i> <i>CASC Engineering and Consulting</i>

3:35p–4:00p BREAK AND EXHIBITOR FOCUS (Exhibit Hall)

SESSION 9	Track: Emerging Contaminants	Track: Monitoring and TMDL Implementation	Track: Industrial	Track: Resiliency and Sustainability	Track: Stormwater Infrastructure and Natural Waterways	Track: Outreach and Education	Track: Data Management, GIS / GIS Tools, and Modeling
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7
4:00p to 4:30p	Training Workshop (2 hours) – continued	PCBs TMDL Load Reduction Accounting for Source Control Measures <i>Lisa Austin</i> <i>Geosyntec Consultants, Inc.</i>	Water Balance Modeling to Demonstrate On-Site Compliance Option Criteria <i>Mehran Ebrahimi</i> <i>GSI Environmental Inc.</i>	Panel (60 minutes) Collaboration Between Water, Wastewater and Stormwater Agencies to Support Watershed-Based Approaches in South Orange County <i>Moderator:</i> <i>Aaron Poresky</i> <i>Geosyntec Consultants, Inc.</i> <i>Speakers / Panelists:</i> <i>Norris Brandt</i> <i>San Juan Basin Authority</i> <i>Drew Atwater</i> <i>Moulton Niguel Water District</i> <i>Amber Baylor</i> <i>South Orange County Wastewater Authority</i> <i>Grant Sharp</i> <i>County of Orange</i>	Tijuana River Valley Needs and Opportunities Assessment: Strategies to Improve Water Quality <i>Alex Yescas</i> <i>HDR, Inc.</i>	Envisioning & Implementing the Future of Stormwater Engagement – In Real Time <i>Atley Keller</i> <i>Local Government Commission</i>	Digital Transformation is Revolutionizing Stormwater Programs: How to Be Ready for Changes Ahead <i>Michelle Tanner</i> <i>2NDNATURE</i>
4:30p to 5:00p		Southern California Wildfire, Harmful Algal Bloom, and Fish Kill in Lake Elsinore, CA <i>Chris Stransky</i> <i>Wood Environment & Infrastructure Solutions</i>	Don't Forget to Update Your Level 2 ERA Technical Report <i>Matt Hillyard</i> <i>GSI Environmental Inc.</i>		Advantages of an Erosion Potential Hydromodification Management Standard <i>Judd Goodman</i> <i>Geosyntec Consultants, Inc.</i>	Improving Septic System Maintenance Through Audience Research <i>Joey Schmitt</i> <i>Action Research</i>	No Quarantine for Cooperation – Reasonable Assurance Analysis for Stormwater Management Planning in the Santa Clara Valley <i>Chris Sommers</i> <i>EOA, Inc.</i>

5:05p EXHIBITOR PRIZE DRAWING (Main Hall)

THANK YOU FOR JOINING US. See You October 25–27, 2021 at the Sacramento Convention Center!

Poster Presentations

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

Oral Presentation + Poster Presentation

Stormwater Discharge Sampling on LUP Projects: Solutions for Effective Sheet Flow Sampling
Joseph McCadden, ETIC

Water Quality of Coastal Watersheds Following the Woolsey Wildfire: Surface Water Quality of Pollutants of Concern Before and After Fire, and Mitigating the Impact of Wildfires Through Stormwater Management Techniques
Sophia Barron, Michael Baker International


Structural BMP Implementation and Bypass: How Big Does My Capture and Treat System Need to Be and Do I Still Have to Sample Bypass to Comply With the IGP?
David Renfrew, NV5, Inc.

Industrial Facilities Research and MS4 Review
Christine Tolchin, County of San Diego

Green Streets in San Diego - A Virtual Tour of Completed Green Streets Projects in the San Diego Region
Shavger Rekani, Rick Engineering Company

Unincorporated Los Angeles County Green Streets Master Plan: Evaluating Green Street Alternatives and Lessons Learned From Preliminary Design
Russ Vadenais, CDM Smith

Poster Presentation

 **2020 CASQA Awardee: Outstanding Sustainable Stormwater Project or Program:** San Francisco Public Utilities Commission Green Infrastructure Grant Program
Sarah Bloom, San Francisco Public Utilities Commission

Proposition 50 Chollas Creek Runoff Reduction and Groundwater Recharge BMPs in the San Diego Bay Watershed: Operation and Maintenance Challenges and Solutions, and Lessons Learned from the Porous Asphalt and Bioswale BMP Pilot Study
Jeanne BenVau, Michael Baker International

A Study to Identify the Most Suitable Remote Sensing Technology to Estimate Urban Irrigation and Assess the Conservation Potential for Southern California
Mehak Gupta, NV5, Inc.

Integrated Strategies to Reducing RV Waste Disposal Pollution
Joey Schmitt, Action Research

A Community Based Social Marketing Approach to Changing Stormwater Behavior in San Diego
Chelsea McGimpsey, County of San Diego

GIS Applications in Sustainable Stormwater Management
Michelle Hallack, NV5, Inc.

Using Emotional Connections With Audiences to Create a Successful Digital Marketing Campaign
Angie Lee, SGA Marketing

Where's My BMP and Where Do I Click? Using Online Tools for Property Owners in Annual O&M Verification of Structural BMPs
Gladys Gonzalez, County of San Diego

An Environmentally Relevant Approach for Stormwater Toxicity Testing Compliance Monitoring
Chris Stransky, Wood Environment & Infrastructure

Tools of the Trade and Making the Call During the Wet Weather Season
Garth Engelhorn, NV5, Inc.

Scholarship Program Poster Presentation

2020 CASQA Conference Scholarship Awardee: City of Palo Alto Stormwater Measures Rebate Program Revitalization
Avery Morgan, Intern at City of Palo Alto



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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!

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Details:

- \$100 (applies to the current calendar year)
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 - CASQA Annual Conference Program (year-to-date)
 - CASQA Annual Report (calendar-year)

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Exhibit Hall Hours

Tuesday, September 15

Exhibit Hall Open	10:00 am – 5:00 pm
Break and Exhibitor Focus	10:00 am – 10:30 am
Break and Exhibitor Focus	3:35 pm – 4:00 pm

Wednesday, September 16

Exhibit Hall Open	8:00 am – 5:00 pm
Break and Exhibitor Focus	10:00 am – 10:30 am
Break and Exhibitor Focus	3:35 pm – 4:00 pm

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Exhibitor Prize Drawing

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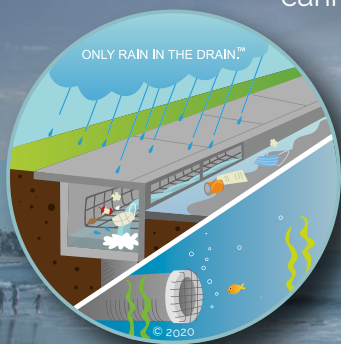
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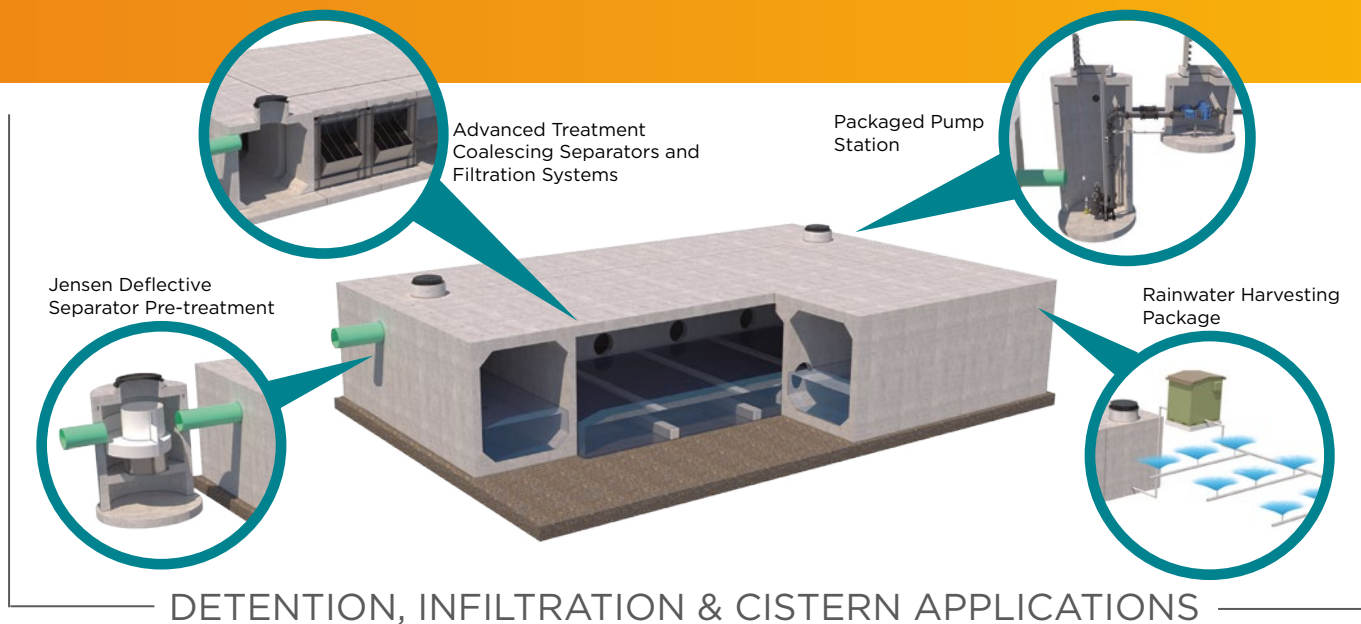


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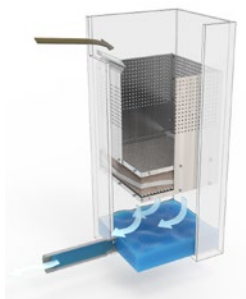
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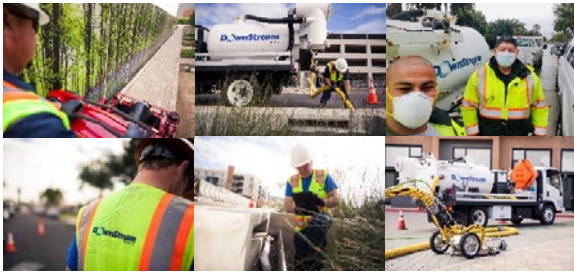


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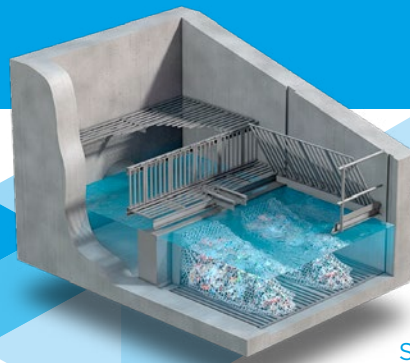
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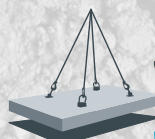


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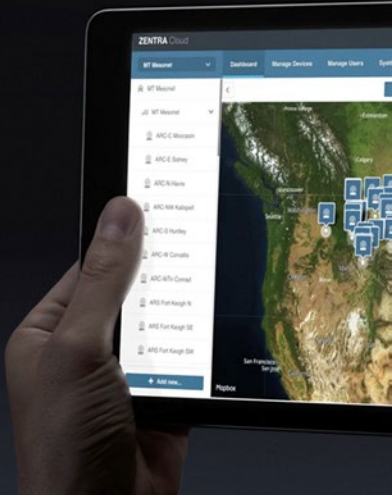
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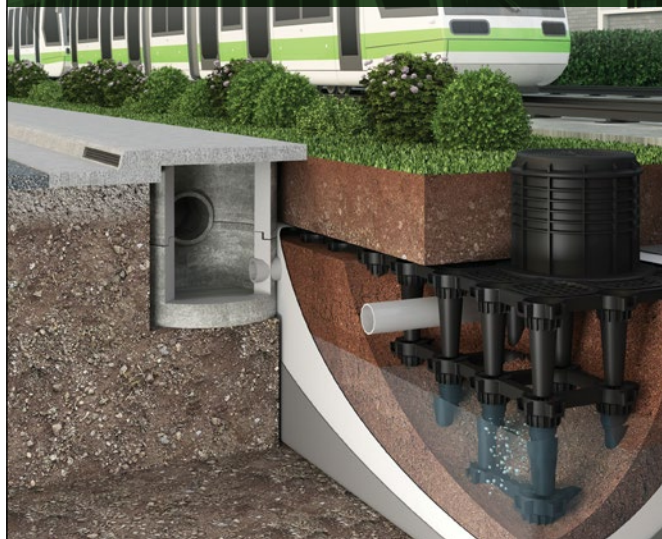
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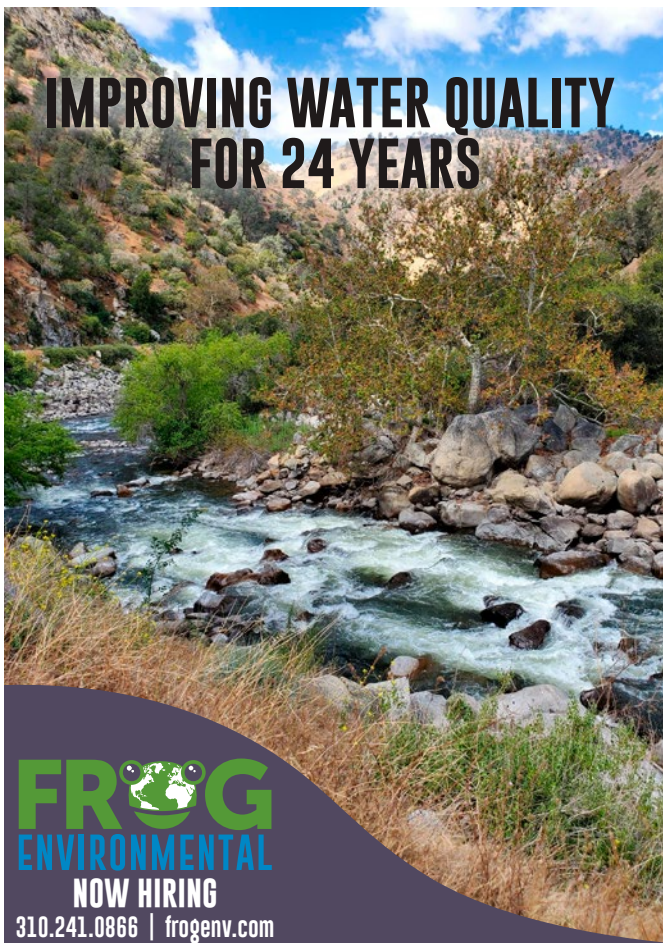


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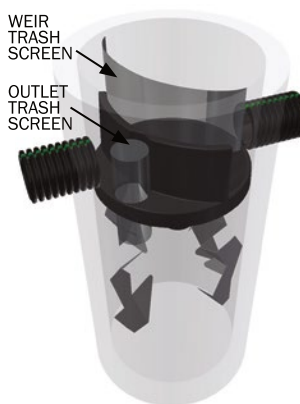
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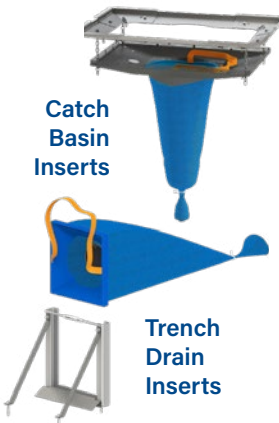



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