

[Air Quality Report](#)

[Biosolids Report](#)

[Collections Report](#)

[Energy Report](#)

[Water Issues Report](#)

[Pretreatment Report](#)

[Cyber Security Report](#)

[Meeting Schedule](#)

[Announcements](#)

New members



SCAP STAFF

Steve Jepsen, Executive Director
sjepsen@scap1.org

Pam Merriam, Administrator
pmerriam@scap1.org

John Pastore, Executive Director Emeritus
jpastore@scap1.org

Ray Miller, Founder/Executive Director Emeritus
rmiller@scap1.org

Southern California Alliance of Publicly Owned Treatment Works
P.O. Box 231565
Encinitas, CA 92024-1565
Ph. (760) 479-4880
Fax (760) 479-4881

[Executive Director's Message](#)

SCAP Director named Emerging Leader

Show me the money

Make your concrete last 2000 years



[John Minkel named Emerging Leader](#)

Congratulations to John Minkel, SCAP Director representing Ventura County, for being recognized by CWEA as an Emerging Leader! The Summer 2017 issue of *Wastewater Professional* recognized seven water professionals for their outstanding contributions to our profession and their communities. John is the Utilities Superintendent for the City of Thousand Oaks. He is a Grade V operator and has a MBA. His work approach includes giving recognition where it is due and helping the people in the field who are doing the "heavy lifting".

[Show me the money](#)

[Water Funding Website](#)

The EPA has launched a [Water Finance Clearinghouse](#) website. They initially had such an overwhelming response the website crashed. This has been resolved and the site is now functioning.

The Clearinghouse allows you to search a database with more than \$10 billion in water funding sources and over 600 resources to support local water infrastructure projects. The Clearinghouse helps financing get where it is needed most by offering up-to-date finance information with the click of a button.

To learn more about the Clearinghouse, webinars on how to use the Clearinghouse will be provided on August 18th, 24th and 31st.

All webinars will be held 2:00 – 3:00 p.m. Eastern Time (11:00 a.m. to 12:00 p.m. Pacific Time) You can register for a webinar at:

<https://register.gotowebinar.com/rt/4533646364837520386>

For more information on the Clearinghouse, visit:

<https://www.epa.gov/waterfinancecenter/water-finance-clearinghouse>

[EPA WIFIA funding projects in California](#)

Two southern California water agencies, the City of San Diego and OCSD, are among 12 agencies nationwide invited by the U.S. Environmental Protection Agency (EPA) to complete a final application for [Water Infrastructure Finance and Innovation Act](#) (WIFIA) loans. These potential applicants were selected from a group of projects that represent large and small communities from across the United States that submitted letters of interest to EPA in April 2017.

In FY 2017, the WIFIA program received \$25 million in funding, including [an additional \\$8 million](#) in the Consolidated Appropriations Act of 2017 that the President signed into law in May. This year's projects will also leverage more than \$1 billion in private capital and other funding sources, including EPA's State Revolving Fund (SRF) loans, to help finance a total of \$5.1 billion in water infrastructure investments. The selected projects demonstrate the broad range of project types that the WIFIA program can finance including wastewater, drinking water, stormwater, and water recycling projects.

EPA received [43 letters of interest](#) from both public and private entities in response to the 2017 WIFIA [Notice of Funding Availability](#) (NOFA). After a robust, statutorily required review process, the WIFIA Selection Committee chose [12 prospective borrowers projects](#) to submit applications for loans.

1. **City of San Diego** - [Pure Water San Diego](#). \$492 million
2. **Orange County Water District** - [Groundwater Replenishment System Final Expansion](#). \$124 million
3. San Francisco Public Utilities Commission - [Southeast Water Pollution Control Plant Biosolids Digester Facilities Project](#). \$625 million
4. City of Morro Bay - [Water Reclamation Facility Project](#). (Small Community) \$82 million
5. Metropolitan St. Louis Sewer District - [Deer Creek Sanitary Tunnel and Sanitary Relief](#). \$43 million
6. City of Omaha - [Saddle Creek Combined Sewer Overflow Retention Treatment Basin](#). \$55 million
7. Miami-Dade County - [Ocean Outfall Discharge Reduction and Resiliency Enhancement Project](#). \$79 million
8. Indiana Finance Authority - [Indiana Finance Authority FY 2017](#). \$436 million
9. King County, Washington - [Georgetown Wet Weather Treatment Station](#). \$129 million
10. Baltimore City Department of Public Works - [Comprehensive Infrastructure Repair, Rehabilitation and Replacement Program](#). \$200 million
11. Maine Water Company - [Saco River Water Treatment Facility](#). (Private) \$25 million
12. City of Oak Ridge, Tennessee - [Water Treatment Plant Design and Construction](#). \$22 million

The Water Infrastructure Finance and Innovation Act established by Congress in 2014 requires EPA to follow [a selection framework](#) that includes an assessment of letters of interest by performing an eligibility screening, a preliminary creditworthiness assessment, and an evaluation of the selection criteria. The WIFIA program selection criteria and respective weights are available in the [WIFIA Handbook](#) (Appendix C, page 53).

[Making Concrete Last](#)

Are you tired of replacing or rehabilitating your concrete structures? Seems like collection system owners are constantly chasing deteriorating concrete manholes and pump station wet wells. SCAP has an easy solution for you. Hire the Romans! Well it is not that easy; you need to hire Romans that are 2,000 years old because they used to know how to make long lasting concrete, but the formula was lost.

Tuff is a very strong natural cemented volcanic ash deposit commonly found in the area around Rome. It is believed that the ancient Roman builders observed the naturally occurring cemented volcanic ash and aimed to replicate the phenomenon by mixing volcanic ash, lime, seawater and chunks of volcanic rock for aggregate to make their concrete structures.

The mixture of volcanic ash, seawater and lime creates a pozzolanic reaction, named after the city of Pozzuoli in Naples, Italy. Marie Jackson from the University of Utah has been leading a study on the long lasting Roman concrete. In samples of early Roman concrete, Jackson and her colleagues found phillpsite and aluminous tobermorite. Tobermorite is a rare interlocking mineral with plate shaped crystals. The interlocking plates form over time as components of the volcanic ash dissolve making the concrete stronger over time. Tobermorite is very difficult to make, modern laboratories can make it in small quantities with very high temperatures. No one has been able to make tobermorite at a 70 degree F range except for the ancient Romans.

So why are we not making Roman type concrete today? The formula was lost and the specific type of volcanic ash and volcanic rock used are unique to the areas of the ancient Romans. Jackson is working with geotechnical engineers to develop a replacement formula using materials from the western United States and seawater collected from the Berkeley Marina in California. A full copy of the study can be found [here](#).

[Inaugural Cyber Security Committee Meeting](#)

The first Cyber Security Committee meeting is scheduled for Tuesday, September 19th. Keep an eye out for the meeting announcement and agenda. The new Cyper Security Committee will be chaired by David Malm, Deputy Manager of Integrated Systems Services for IEUA, and co-chaired by Robert Coromina, Director of Administrative Services for VVWRA. If you are interested in joining the committee, please email your contact information to sjepesen@scap1.org.

Flush with confidence,



Steve Jepsen, Executive Director



Donut Derelicts Car Show in Huntington Beach - Ralph Palomares

AIR QUALITY COMMITTEE REPORT

David Rothbart, Chair
drothbart@lacsdsd.org

Jim Marchese, Vice Chair
jim.marchese@lacity.org

Terry Ahn, Vice Chair
tahn@ocsd.com

Note: The next Air Quality Committee meeting is scheduled for **Tuesday, September 5** from 10:00 a.m. to 12:00 noon at the offices of the Los Angeles County Sanitation Districts. All SCAP members are invited to attend.

[Cap & Trade - Assembly Bills 398 and 617](#) by David Rothbart, Chair - LACSD

On July 17th Assembly Bills [398](#) and [617](#) were passed by the Assembly and Senate. The primary purpose of AB 398 was to extend the cap-and-trade program from 2020 to 2030 by a two-thirds super majority to avoid a Proposition 26 legal challenge. The legislation, with encouragement from Governor Brown, brought odd bedfellows together (e.g., energy and oil companies, Natural Resources Defense Council, Environmental Defense Fund, and American Lung Association). Previously, industry objected to cap-and-trade due to cost ramifications and environmentalists objected because the program allowed industry to obtain allowances to pollute. On the surface, it seems implausible that these groups would support the cap-and-trade program, but the following outlines some of the issues that influenced the legislative process:

- As of January, \$800 million of cap-and-trade funds have been spent on high-speed rail. It is estimated that the first segment of the railroad will need \$5.3 billion in committed cap-and-trade funds, plus another \$5.2 billion borrowed against future cap-and-trade revenues. Without the extension of the cap-and-trade program, the viability of high-speed rail would be in question.
- Governor Brown threatened to cut greenhouse gas emissions through command-and-control regulations, if AB 398 failed to extend the cap-and-trade program. The Governor indicated that command-and-control would be more costly and burdensome.
- AB 398 includes tax breaks for a number of industries, including manufacturing and agricultural businesses. It also repeals the fire prevention fee, which Republicans have long opposed.
- AB 398 contains a specific provision that prohibits CARB and local air districts from directly regulating carbon emissions by sources that are also subject to the cap-and-trade program.
- On July 17th the legislature also passed a constitutional amendment ([ACA-1 Greenhouse Gas Reduction Reserve Fund](#)) that should give Republicans more say in how the state spends money received from selling allowances.
- AB 617 was introduced as a companion bill to AB 398 that mandates a number of new programs in response to concerns about the disproportionate air quality burdens faced by disadvantaged communities. This legislation focuses on a comprehensive, integrated suite of actions to reduce community level health impacts from criteria pollutant and toxic air contaminants, while also increasing criminal and civil penalties against those who violate air pollution laws. In other words, many environmental justice concerns were addressed by this legislation. The following article provides an excellent summary of AB 617: Click [HERE](#).

While many Californians are willing to accept higher energy and fuel costs to reduce greenhouse gas emissions, we generally ignore the impact of the horse-trading required to pass controversial programs. This reality is illustrated by the Natural Resources Defense Council's statement that cap-and-trade concessions to industry were "bitter pills" but accepted AB 617 as an important gain for environmental justice.

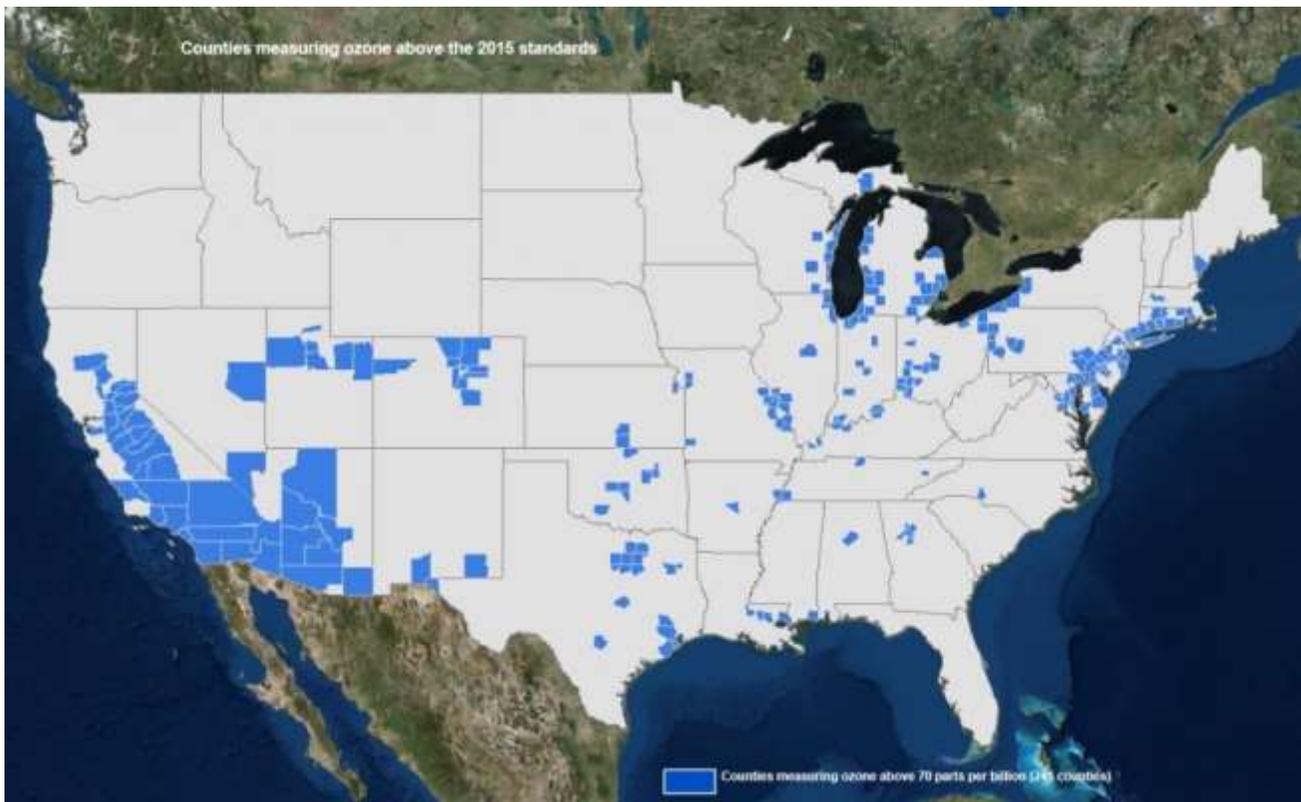
[Ozone Standards Implementation Act of 2017](#) by David Rothbart, Chair – LACSD

On July 18th the House of Representatives passed the [Ozone Standards Implementation Act of 2017](#). Sponsored by Representative Pete Olson (R-Texas), H.R. 806 passed the House on a 229-199 vote and would give the Environmental Protection Agency an extra eight years to determine which areas of the country do not meet the 70 parts per billion ozone standard set in 2015 (see image below).

The bill would also extend from every five years to every ten years the requirement for the EPA to review and, if necessary, update the national ambient air quality standards for ozone and other pollutants. It also would allow the EPA to consider technical feasibility of pollution controls when setting new national pollution standards. Currently, only risk considerations enter into the setting of the health standards.

Similar legislation is advancing in the Senate, but the slim Republican majority makes it difficult to overcome the 60-vote hurdle for ending a likely Democrat-led filibuster.

While this legislation would reduce the future burden of the 2015 ozone standard nationally, SCAQMD and SJVAPCD already face a tremendous challenge in achieving the 75 parts per billion ozone standard set in 2008 (e.g., the program outlined in the 2016 SCAQMD Ozone AQMP).



BIOSOLIDS COMMITTEE REPORT

Tom Meregillano, Co-Chair

TMeregillano@ocsd.org

Christina Jones, Co-Chair

Christina.jones@lacity.org

Note: The next Biosolids Committee meeting is scheduled for **Monday, September 11** from 9:00 a.m. to 11:30 a.m. at Anaergia's Rialto Bioenergy Facility. This is a great opportunity to see a biogas energy facility in person. Look for the meeting announcement and agenda or email pmerriam@scap1.org for more information.

[New Biosolids Facility Search Feature - EPA's Enforcement and Compliance History Online \(ECHO\) Website](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source, CASA/EPA)

On August 3, 2017, EPA hosted a webinar to solicit comments on their new Biosolids Facility Search feature on their [ECHO](#) website, which provides integrated compliance and enforcements data for over 800,000 regulated facilities. The webinar included the following:

- Brief overview of the biosolids program
- ECHO's biosolids facility search
- How to use the ECHO biosolids search
- Questions and comments

The new ECHO Biosolids Facility Search allows for customized search, sort, and download of biosolids data for the first time. The new feature will be available within a couple of months to the public and centralizes biosolids program data in an easy-to-use search tool.

[SB 1383: SLCP Reduction Implementation – Stakeholder Workshops](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District

CalRecycle is hosting stakeholder workshops in August to discuss the SB 1383 implementation process. They will introduce regulatory concepts related to reporting and enforcement and will be soliciting for stakeholder input and questions. The southern California workshop will be August 31, 2017 at the City Council Chambers in Riverside, California. SCAP representatives will be attending.

[Renewable Information Number Value Issue Food Waste Co-Digestion](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source, CASA)

CASA has been actively working with EPA to resolve an issue regarding the Renewable Fuel Standard (RFS) program concerning co-digestion. EPA revised their regulations in 2014 to better define the classifications of Renewable Information Numbers (RIN) which are financial incentives for producing renewable transportation fuel. In the regulation, EPA determined that POTWs producing transportation fuel from methane generated during anaerobic digestion of sewage sludge would be awarded the highest value RIN (D3). They provided the same outcome for landfills, dairy digesters, and separated Municipal Solid Waste (MSW) digesters, so all receive the D3 RIN value. At issue now is whether that same classification will apply to POTWs who co-digest food waste with their sewage sludge.

Early indications seem to be that EPA would devalue the RIN for the food waste portion of methane used to produce the transportation fuel to a D5 value (roughly \$1.00 for D5 versus \$2.80 for a D3). CASA and other associations (NACWA, WE&RF, WRF, and WEF) continue to work with EPA on this matter.

[Fire Reclamation Project Utilizing Biosolids](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source, CASA)

CASA continues to seek funding for the Fire Reclamation Project that will utilize biosolids on fire ravaged land as a demonstration project to the Water Environment & Reuse Foundation. The project proposal can be accessed at <http://casaweb.org/wp-content/uploads/2017/07/CASA-WERF-2017-Unsolicited-Research-Program1.pdf> For more details contact, Greg Kester at gkester@casaweb.org

[Water Environment Federation – Land Application of Biosolids: Human Health Risk Assessment Related to Microconstituents Fact Sheet](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source, CASA/WEF)

WEF's has released a fact sheet on the human health risk assessment of microconstituents in biosolids and can be accessed at the following link: <https://www.wef.org/globalassets/assets-wef/3---resources/topics/a-n/biosolids/technical-resources/wef-fact-sheet-microconstituents-v11-jul-2017.pdf>

[2017 California Bioresources Alliance Symposium “Building California’s Sustainable Bioresource Economy”](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source CASA/EPA)

2017 Annual California Bioresources Alliance Symposium will be held on November 1st and 2nd in Sacramento at the Ziggart Building, 707 3rd Street in West Sacramento. There is no charge this year but registration is required. Sessions will include discussion of building healthy soils, implementation of SB 1383, building markets, and many other timely topics.

[CASA/CWEA Joint Biosolids and Renewable Energy Innovative Technology Seminars - Save the Date](#) by Tom Meregillano, Co-Chair – Orange County Sanitation District (Source CASA/CWEA)

CASA and the California Water Environment Association are hosting two Biosolids and Renewable Energy Innovative Technology seminars. The focus of the seminars will be on successful and innovative management practices and technology for biosolids, renewable energy production and utilization, and climate change mitigation. The dates and locations of the seminars are:

- Tuesday, November 14, 2017 from 8:30 am – 4:00 pm; HS Lordships, 199 Seawall Drive, Berkeley, CA 94710
- Wednesday, November 15, 2017 from 8:30 am – 4:00 pm; Doheny Beach Lounge, Student Center, University of California – Irvine. A 311 W. Peltason Drive, Irvine, CA 92697

Registration information will be coming soon, along with the agenda. For more information, contact Greg Kester, CASA Director of Renewable Resource Programs at gkester@casaweb.org.

COLLECTIONS COMMITTEE REPORT

Ralph Palomares, Chair
RPalomares@etwd.com

Dindo Carrillo, Vice Chair
dcarrillo@ocsd.com

Happy Summer to all the SCAP Members! - By Ralph Palomares, Chair, El Toro Water District

Well we had our second SCAP Collections Committee meeting of the year up north at the Goleta Sanitary District on July 20th and we had some very good presentations.

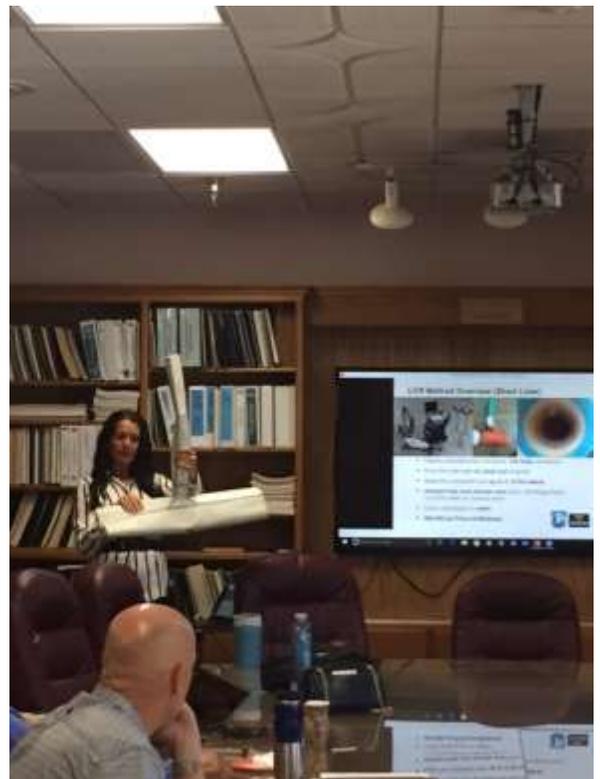
The Baker Corp guys provided an informative presentation on bypass pumping and why it’s so important to be ready in case of a power failure, system failure or natural disaster. If you own bypass pump trailers, they should always be ready at all times. In case you don’t have any by-pass pumps you should have agreement in place with a reputable bypass rental company with a written response plan for a variety of scenarios that may occur in your system. Even if you do own your own bypass equipment, it is a good idea to have such an agreement in place as a backup. Another practice commonly used is a mutual aid agreement with your neighboring agency to use their bypass pumps and emergency response equipment in the event of an emergency. You don’t want to tell the regional water board you didn’t have any bypass pumps or at least have a plan to borrow another agencies pumps in the event you should need them.

Craig Murray, SCAP Director and General Manager of Carpinteria Sanitary District, and Michelle Beason, of National Plant Services provided an interesting presentation on trenchless lateral rehabilitation. Carpinteria is one of the few Districts who have responsibility for the lower lateral. Small spills from laterals, usually caused by roots, have been plaguing the District for years. The District used historical problem lateral data to prioritize streets for lateral rehab and used a creative Google Earth KMZ file approach for electronic bidding.

National Plant Services won the bid and performed trenchless Cured-in-Place-Pipe (CIPP) rehabilitation on 43 laterals. Michelle Beason of National Plant Services completed the second half of the presentation with a detailed step-by-step explanation with photographs and videos of the lateral rehabilitation process. The laterals were lined from the main and the rehab included a full circumference mainline connection segment for a long lasting watertight lateral to main connection. Using the Trelleborg system, no cleanout or excavation was required.

This kind of proactive approach to completing long-term solutions to nagging collection system problems is one of the reasons Carpinteria Sanitary District was awarded Small Collection System of the Year by CWEA.

Closing out the Collections Committee meeting, Mike Burkhard with Reline America provided an overview and got into the details of UV cured CIPP.



Michelle Beason, PE from National Plant Services

On another note, I was in Hawaii in July and I visited the Sand Island wastewater treatment plant. If you want to be a treatment plant operator this is the place to do it! Palm trees, trade winds, good food and just plain paradise all in one. Talk about an I&I reduction, a few years back their daily flow was approximately 182 MGD. After they did some slip lining their flow dropped to approximately 77 MGD. The reduction in flow has cut their electrical bill considerably. A big thank you to the Hawaiians and Jon Baker, Plant Supervisor, for the info and showing me the plant.

Also, a big thank you to El Toro Water District for allowing me the time to Chair the SCAP Collections Committee.

ENERGY MANAGEMENT COMMITTEE REPORT

Pietro Cambiaso, Chair
Pcambias@ieua.org

Ray Bennett, Vice Chair
Bennett@irwd.com

[Governor Brown Signs Landmark Climate Change Legislation](#) – From Ray Bennett, Vice-Chair (IRWD Source: Caroline Aoyagi-Stom, Inside Edison)

California continues to lead the country in the fight against global warming with [Gov. Jerry Brown's recent signing of Assembly Bill 398](#), a landmark climate change bill. The bill extends the expiration of the state's successful cap-and-trade program to 2030. The original program, which was signed into law five years ago by then-Gov. Arnold Schwarzenegger, was set to expire in 2020.

Pedro Pizarro, president and CEO of Edison International who attended the bill's signing on Tuesday in San Francisco, had encouraged legislators earlier to approve the legislation extending cap and trade.

"It is helping our state meet its target of reducing greenhouse gas emissions to 1990 levels by 2020. And, it will put us on a path to reach the additional target of at least 40 percent below 1990 levels by 2030," Pizarro said in a [July 12 op-ed piece in the Sacramento Bee](#) co-authored with PG&E and SDG&E.

Cap and trade is one of California's key programs for reducing greenhouse gas emissions and a key part of Edison International's strategic business focus. The program sets a cap on emissions from facilities covered by cap and trade. Companies can either cut their emissions, or they can trade or buy emissions permits through an auction. Each year of the program, the cap and number of permits is lowered, helping reduce overall emissions.

Cap and trade also grants electric utilities emissions allowances that are sold in the market, generating proceeds that are returned to customers as a California Climate Credit on their bill. Money raised from the program is also used to fund clean-energy projects.

"Edison believes this joint cap-and-trade proposal is necessary to meet California's aggressive climate goals and includes critical protections for our customers, the disadvantaged communities we serve and the environment," said Pizarro.

WATER ISSUES COMMITTEE REPORT

Al Javier, Chair

javiera@emwd.org

Lyndy Lewis, Vice Chair

Lewis@irwd.com

Science Advisory Panel for CECs in Recycled Water – by Lyndy Lewis, Vice Chair - IRWD

In June 2017, the State Water Resources Control Board's Science Advisory Panel for Constituents/Chemicals of Emerging Concern (CECs) in Recycled Water was officially reconvened. The first panel meeting, that included public sessions, was held July 19th – 21st at the Southern California Coastal Water Research Project (SCCWRP). The last time the "blue ribbon" panel convened in 2010, the panel was asked to address the following questions:

- What are the appropriate constituents to be monitored in recycled water, and what are the applicable monitoring methods and detection limits?
- What toxicological information is available for these constituents?
- Would the constituent list change based on level of treatment? If so, how?
- What are the possible indicators (i.e. surrogates) that represent a suite of CECs?
- What levels of CECs should trigger enhanced monitoring in recycled, ground or surface waters?

The panels recommendations were published in 2010 and served as the basis for CEC monitoring requirements for groundwater recharge reuse, surface and subsurface application, that was adopted into the 2013 Recycled Water Policy. The same 2010 panelists have been reconvened to incorporate the latest science and update the recommendations they provided in 2010. Additionally, their scope has been expanded to include:

- Consider what additional monitoring for CECs, if any, is needed for recycled water used for surface water augmentation.
- Evaluate the potential human health risks associated with the use of recycled water for all uses allowed under Title 22 (e.g. crop irrigation), excluding ingestion of food crops as route of exposure.
- Provide research recommendations for antibiotic-resistant bacteria and antibiotic resistance genes related to human health potentially impacted by recycled water applications allowed under Title 22 and for surface water augmentation.

They will also will be looking to update their CEC framework including:

- selecting relevant CECs
- on-ramps and off-ramps for known CECs
- how to address the "unknowns"
- the level of conservatism used in the evaluation process.

The panel expects to release a draft report of their recommendations for public comment in December, with a 30-day public comment period to begin sometime in January 2018. You can find copies of the presentations given at the July 2017 panel meeting at: <http://sccwrp.org/ResearchAreas/Contaminants/RecycledWaterAdvisoryPanel.aspx>.

State Water Resources Control Board’s Bacteria and Variance Policy – by Lyndy Lewis, Vice Chair - IRWD

The State Water Resources Control Board (Board) is proposing to update the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries and for Ocean Water with Bacteria Provisions and a Variance Policy. The US EPA issued recommended Recreational Water Criteria in 2012, and the Board now seeks to adopt criteria to be consistent with the federal recommendations. The proposed Bacteria provisions include providing a limited water contact recreation (LREC-1) beneficial use definition, the following water quality objectives in the table below, implementation provisions with method for addressing natural sources of bacteria, suspension of the REC-1 use during high flows and/or during a specific season, and pointing to existing federal guidance and tools for water quality standards variance that would apply to any applicable constituent, not just bacteria.

Proposed REC-1 Bacteria Water Quality Objectives

Applicable Waters	Objective Elements	Estimated Illness Rate (NGI): 32 per 1,000 primary contact recreators	
		Magnitude	
	Indicator	GM (cfu/100 mL)	STV (cfu/100 mL)
All waters, except Lake Tahoe, where the salinity is less than 10 ppt 95 percent or more of the time	<i>E. coli</i>	100	320
Lake Tahoe*	<i>E. coli</i>	17*	55*
All waters, where the salinity is equal to or greater than 10 ppt 95 percent or more of the time	Enterococci	30	110
*Lake Tahoe objectives are based on an estimated illness rate of 1 per 10,000 water contact recreators.			
The waterbody GM shall not be greater than the applicable GM magnitude in any six-week interval, calculated weekly. The applicable STV shall not be exceeded more than 10 percent of the time, calculated monthly.			
NGI = National Epidemiological and Environmental Assessment of Recreational Water Gastrointestinal illness rate			
GM = geometric mean			
STV = statistical threshold value		mL = milliliters	
cfu = colony forming units		ppt = parts per thousand	

It was noted that these bacteria water quality objectives would not affect POTWs effluent limits for recycled water, as Title 22 sets more stringent limits than the ones being proposed. Board staff held a Staff Workshop in July 10th, and a Public Hearing August 1st. The public comment period ends on August 16th, 2017 and the policy will go before the Board for adoption at its December 5th, 2017 meeting. More information can be found on the State Board’s Bacteria Objectives program page: <http://www.waterboards.ca.gov/bacterialobjectives/>.

WASTEWATER PRETREATMENT COMMITTEE REPORT

Mark Kawamoto, Chair

MKawamoto@ocsd.com

Larry Smith, Vice Chair

LSmith@lacsdsd.org

[SCAP Working with CWEA on the next P3S Conference](#) by Steve Jepsen - SCAP

CWEA will be holding their 2018 Pretreatment Pollution Prevention Stormwater (P3S) conference at the Riverside Convention Center on February 12th – 14th. SCAP is looking forward to collaborating with CWEA on several sessions and special events. Please reach out to our Pretreatment Committee chairs with ideas or requests.

[WEF Source Control Workshop](#) by Steve Jepsen – SCAP

[Source Control and the Transformation of Your WRRF Into a SWTF: Integrating DPR Into the Water Resource](#)

This WEF workshop will be led by leading utility, university, and consulting experts in the fields of wastewater pretreatment programs, source control, and wastewater treatment. It will provide attendees information on how to develop and structure pre-treatment and source control programs for DPR and IPR and provide for a discussion forum on these subjects. The workshop will also provide learners a clear understanding on the links and continuity between SWTF design and operation and AWWPF design and operation. Exercises and interactive sessions are designed to enable learners to implement ideas and receive feedback and recommendations from their peers as well as the authors of the guidance manual developed for SWTF operation.

To learn more click [here](#)

CYBER SECURITY COMMITTEE REPORT

David Malm, Chair

dmalm@ieua.org

Robert Coromina, Vice Chair

rcoromina@vwwra.com

[Inaugural Cyber Security Committee Meeting](#)

The first Cyber Security Committee meeting is scheduled for Tuesday, September 19th at IEUA. Keep an eye out for the meeting announcement and agenda. The new Cyber Security Committee will be chaired by David Malm, Deputy Manager of Integrated Systems Services for IEUA, and co-chaired by Robert Coromina, Director of Administrative Services for VWWRA. If you are interested in joining the committee, please email your contact information to sjepsen@scap1.org.

[Steps to Cyber Security](#) - by Marty Edwards, Managing Director - Automation Federation



With the ever-increasing drumbeat of cyber-attack pounding louder and louder in the background, organizations utilizing automation systems of any kind need to take proactive, defensive steps immediately to avoid significant business disruption and lost revenue.

Normally, I would be preaching the gospel of the NIST Cybersecurity Framework, the foundational elements set forth in the ISA/IEC 62443 standard, and the virtues of a sound risk assessment methodology. Although these methods have significant merit and need to be part of a comprehensive cybersecurity strategy, they simply take time to implement – in fact, many companies just beginning their cybersecurity journey don't know where to start.

Search no more. Start here.

With advanced intrusion campaigns such as [“CRASH OVERRIDE”](#) in the Ukraine, rising numbers of attacks against critical infrastructure companies in the United States, and ransomware now becoming a household word globally, organizations must take priority action immediately to prepare for the inevitable. You will be attacked or infected... it is only a matter of time – and only by acting now can you minimize the resulting damage and reduce the spread of infection.

Almost every risk assessment or forensics review of an incident that I have ever seen in my career points to a common theme – lack of understanding of what systems are important, and proper network segmentation of these mission critical Operational Technology (OT) systems from other enterprise systems such as corporate Information Technology (IT) systems.

I urge companies to find out:

- *What are your most important business, and therefore, system functions?*
- *Where are these so called “Crown Jewels”?*

Once you have identified that system or systems (it should be a small number), you need to protect them – and fast.

Step One: Disaster Recovery

For these critical systems, make absolutely sure that you have implemented a disaster recovery plan, including critical hardware spares. Most importantly, be sure that you have recent, relevant, functional backups of the entire system, including operating systems (OS), application software, engineering and configuration files, etc. All backups should be kept “off the network,” meaning don't just copy them up to a file server and forget about them. Recent ransomware attacks have spread automatically across networks and many organizations have found out about those interconnections the hard way once their only backups got encrypted and held for ransom, too. Until you have a systematic process in place to perform and test these backups, by performing a full restore once in a while from offline media, and ensuring their functionality - do not pass go, do not collect \$200.

Step Two: Network Segmentation

Now, this might not be as easy as it sounds, and will require some – perhaps extensive – re-engineering of your networks, but I did it over 15 years ago in the pulp and paper industry simply by grouping equipment in logical groups by plant area, function and vendor. DCS Vendor A equipment all goes on this network. Paper machine

automation systems all go on this other network. PLC maintenance and configuration equipment all goes on yet another network... you get the picture.

With the help of your vendors, map out the required data flows between or out of these networks, and keep those data flows to an absolute minimum. In fact, your network design should consider what data needs to go where, so tweak the design if necessary. Bring your new networks together at a common demarcation point using firewalls (the so called “De-Militarized Zone – or DMZ.”) For the most critical of systems, consider using fiber optics and physics based unidirectional gateway devices to ensure that information can only flow one way, and would be intruders are guaranteed not to have an access path through the network connection. Most importantly, log the data that crosses these network boundaries (including refused connections) and review the logs routinely for anomalies.

With your networks appropriately separated into manageable and appropriately connected parts (what ISA/IEC 62443 calls “Zones and Conduits,”) you can begin to systematically implement other cybersecurity improvements, such as vulnerability and patch management. Having like devices and systems grouped logically in this way will allow you to make changes more quickly, without the added complexity and risk of affecting the operation of other formerly connected systems that are now on their own network.

At this point, I recommend against allowing any kind of remote access into these networks or systems. If it is important enough to fall into the “Crown Jewels” category, it is important enough to call someone to walk over to a dedicated terminal to make required changes at 2 a.m. Why are you making changes at 2 a.m., anyway? Over time, as your cybersecurity plan matures, you can implement remote access systems utilizing two-factor authentication. These systems are activated by authorized and trained personnel, only when needed, and all connections are monitored, recorded, and logged for forensics purposes.

The Bottom Line

These initial two steps, if taken now, will significantly lower your risk from an external network based cyber-attack. Yes, there are many more steps to take in an overall cybersecurity strategy, and other threats to address, such as insiders. However, by taking these steps first, you will have accomplished what many have not and begun your journey down the pathway of sound cybersecurity management.

For additional resources, see the cybersecurity resources page at [Automation Federation website](#).

For additional information, training, and resources see [ISA/IEC 62443](#).



MEETING SCHEDULE

August/September Meetings/Workshops/Conferences:

- **CASA Annual Conference:** August 22-24, San Diego, CA
- **SCAP Air Committee Meeting:** September 5, 10:00 a.m. to 12:00 p.m., LACSD
- **SCAP Biosolids Committee Meeting:** September 11, 9:00 a.m. to 11:30 a.m., Anaergia, Rialto
- **SCAP *Inaugural* Cyber Security Committee Meeting:** September 19 , IEUA

Non Sequitur

“Good leaders must communicate vision clearly, creatively, and continually. However, the vision doesn’t come alive until the leader models it.”

- - - John C. Maxwell



Please Support our SCAP Associate Members

