Pure Water San Diego
A 20-year Water Reuse Program to Provide a Local Drinking Water Supply

San Diego is the eighth largest city in the United States with a population of 1.3 million. With little rain and limited local water supplies, San Diego depends on importing 85 percent of its water from the Colorado River and Northern California. Rising imported water costs, population growth and ongoing drought threaten San Diego’s water reliability. To address these challenges, the City of San Diego is moving forward with Pure Water San Diego, a 20-year water reuse program to provide a local drinking water supply that is safe, reliable and cost-effective.

Pure Water San Diego uses proven technology to purify recycled water through membrane filtration, reverse osmosis and advanced oxidation with ultraviolet light and hydrogen peroxide. To confirm the viability and safety of the water purification process, the City conducted a demonstration project from 2009 to 2013. One million gallons of water were purified every day for a year at the City’s Advanced Water Purification Facility. More than 9,000 water quality tests and rigorous daily monitoring ensured no contaminants were present in the water and that recycled water can be purified and safely added to a reservoir. The California Department of Public Health (now the State Water Resources Control Board Division of Drinking Water Programs) and San Diego Water Board approved the water purification concept and confirmed the purified water meets all federal and state drinking water standards.

On November 18, 2014, the San Diego City Council voted unanimously to approve the advancement of Pure Water San Diego, which includes the City’s submittal of an application to the...
As I reflect back on the first eight months as president, I am humbled by the dedication and commitment of our many volunteers who provide a great service to our members.

We held our very popular annual tour at Stone Brewery this summer - thanks to Robert Knox for coordinating this great event. The tour was attended by 30+ eager CWEA members while our own, Board, artfully managed logistics. Many thanks to our resident expert, Leo Schempp, who gave us the behind the scenes tour of their wastewater facilities. This event was a great way for other members to network and get to know other members of CWEA.

We are working very hard planning our Annual Joint Vendor Fair along with the Southern Section Collections System Committee. More details to follow…make sure follow us on Eventbrite and Facebook.

And each quarter Lisa Knox patiently works with this motley crew of individuals to keep you informed of the activities of our section by preparing this fantastic newsletter. She is helping us as we work on our transition to an electronic newsletter in 2016.

Many thanks to our 2015 CWEA San Diego Section Board and all of our volunteers!

Sincerely,
LeeAnn Warchol, CWEA SDS President

“Thank you to everyone who makes CWEA such a great experience.”

THANKS TO OUR FISCAL YEAR 2015-16 SPONSORS!

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**GOT NEWS OR WANT TO SPONSOR?**  
Contact Lisa Knox at lknox@dudek.com to submit articles and receive sponsorship information.

### BEHIND THE SCENES AT STONE  
A look at Stone’s On Site Treatment Processes

The San Diego Section along with members from the Santa Ana River Basin Section (SARBS) were privileged to get a behind the scenes tour of Stone Brewery in Escondido. The Brewery treats its industrial process wastewater onsite. Sanitary wastewater is plumbed separately and is discharged to the City of Escondido sewer system. The onsite facility treats about 60,000 gallons per day. Wastewater generated during the brewing and bottling processes is held in an aerated equalization tank, then passes through aeration tanks and finally to the membrane bioreactor (MBR) tank. Activated sludge is returned from the MBR tanks to the aeration tanks. MBR permeate is fed to a reverse osmosis (RO) unit to produce water for use within the brewery (rinse water, boiler feed, cooling water, etc.). Waste activated sludge is dewatered using a centrifuge and hauled off site. The Brewery discharges RO concentrate to the City of Escondido sewer system. Treated industrial wastewater is sent to the City of Escondido’s ocean outfall.

The tour also included a tour of the brewery process and how the beer is made. And what tour would be complete without some samples!? Those that attended were able to enjoy samples of Stone’s fine tasting beer and an evening among professionals with appetizers to share.
U.S. Environmental Protection Agency to renew the modified permit for the Point Loma Wastewater Treatment Plant (Point Loma). Without the permit, the City would need to upgrade Point Loma to secondary treatment requirements, which would cost $1.8 billion, require overcoming extreme space constraints and would produce no new water. Investing in the Pure Water program and seeking federal legislation to allow San Diego to meet modified secondary standards will eliminate the need for the costly upgrades, enable the City to divert more water for recycling, and reduce ocean discharges.

An initial 15 MGD water purification facility is planned to be in operation by 2021. The long-term goal, producing 83 MGD (one-third of San Diego’s future drinking water supply), is planned to be reached by 2035. Pure Water will divert approximately 100 million gallons per day (MGD) of wastewater from Point Loma to three future advanced water purification facilities located at the North City Water Reclamation Plant, South Bay Water Reclamation Plant and a future Harbor Drive facility.

Free tours of the Advanced Water Purification Facility are available to members of the public. During the tour, participants get an up-close look at the water purification technology and have the opportunity to compare samples of purified, tap and recycled water. Please visit www.purewatersd.org to sign up for a tour or presentation and learn more about Pure Water San Diego.

- Article by Sarah Mojarro, Community Outreach Specialist, City of San Diego
The City of San Diego’s Metro Biosolids Center (MBC) opened its doors for the CWEA San Diego Section in June to tour its facility. The MBC is located on 39 acres adjacent to the Miramar Landfill and is the City’s state-of-the-art regional biosolids treatment facility. Biosolids are the nutrient-rich, processed organic material produced by the wastewater treatment process. The MBC facility began in 1998 and is an essential component of the region’s wastewater treatment system.

The MBC provides two treatment operations:

- Thickening and digestion of the raw solids (raw sludge) generated at the North City Water Reclamation Plant; and
- The dewatering of the wet biosolids from both the Point Loma Wastewater Treatment Plant and North City Water Reclamation Plant.

The facility produces dewatered biosolids that are approximately 30 percent solids and 70 percent water, the consistency of wet plaster.

Raw solids from the primary and secondary treatment processes at the North City Water Reclamation Plant are pumped to receiving tanks at MBC. Then they are passed through degritters to remove any material that could damage the processing equipment. The grit is removed, dried and disposed of off-site.

The raw solids are thickened in five centrifuges before being pumped into one of three anaerobic digesters. After digestion the organic solids are referred to as biosolids. From the anaerobic digesters, the biosolids are sent to a Digested Biosolids Storage Tank where they are mixed with biosolids from the Point Loma Wastewater Treatment Plant.

The mixed biosolids are piped to eight dewatering centrifuges that use centrifugal force to remove water from the biosolids. The liquid separated out of the biosolids (“centrate”) is returned to the sewer system for treatment at Point Loma. The dewatered biosolids are pumped into storage silos before being trucked off-site.

A graphic presented below depicts the biosolids process.

Biosolids may be used to promote growth of agricultural crops, to fertilize gardens and parks and to reclaim and replenish worn and nutrient-depleted land. Currently, biosolids are used as soil amendments, landfill, and landfill cover.

Odor control is an important part of the MBC process. Odor control “scrubbers” draw the foul air off the flow of wastewater. The foul air is drawn into the “scrubbers” where it passes through a bleach solution spray which neutralizes odor-causing sulfide compounds. The “scrubbed” air then passes through carbon filters which remove any additional foul air before being released into the atmosphere.

The Public Utilities Department was one of the first City departments to complete a comprehensive energy conservation plan. One of the key elements in the plan is cogeneration, the utilization of methane gas to power the largest City wastewater facilities. The Public Utilities Department has a long-term agreement with a private firm that uses methane generated by Metro Biosolids Center digesters and the Miramar Landfill to power both the Metro Biosolids Center and the North City Water Reclamation Plant.

Information provided by http://www.sandiego.gov/mwwd/facilities/metrobiosolids.shtml

- Article by Lisa Knox,
California Water Environment Association
Southern Section Collection Systems Committee
and the San Diego Section
invite you to their Fall 2015

COLLECTIONS WORKSHOP

Pipeline Cleaning Essentials

“Searching for Answers”
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Stormwater Regulation Effects on Collection Systems

City of San Diego
Sponsored by the City of San Diego
November 19, 2015
9192 Topaz Way, San Diego
Time: 7:30 a.m. to 3:30 p.m.

Attendee $45 (includes breakfast, lunch, and drinks)
Vendor $125 (includes table, 2 chairs, lunch - bring shade)
Rolling Stock $250/vehicle (includes table, 2 chairs, and lunch - bring shade)

Register at http://cweasds.eventbrite.com

For more information
Visit sscsc.org,
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or call Jim Aanderud
at 951-830-8310

Attendee $45 (includes breakfast, lunch, and drinks)
Vendor $125 (includes table, 2 chairs, lunch - bring shade)
Rolling Stock $250/vehicle (includes table, 2 chairs, and lunch - bring shade)

Register at http://cweasds.eventbrite.com
On March 21, a special event was held for the Wastewater Collection Division in celebration of the City of San Diego receiving the Large Collection System of the Year Award for 2014. The statewide award was presented to the Public Utilities Department by the California Water Environment Association (CWEA) in May. San Diego competed against 17 other agencies from around the state with waste-water systems of 500 miles or more of pipeline.

The Division's many recent accomplishments were highlighted during the lunchtime activity. The City has greatly reduced the number of sewer spills from a high in 2000 of 365 spills (an average of one a day) to 28 spills in 2014. All 3,000 miles of the Municipal Sewerage System were cleaned between 2001 and 2004, and a system-wide maintenance schedule was developed. Also, crews put great emphasis on addressing the two most common causes of blocked sewer lines: tree roots and grease buildup. In addition, the City is in the midst of a $585 million capital improvement program to complete necessary sewer system upgrades throughout San Diego.

Most Wastewater Collection Division staff members were present to enjoy the luncheon event. Those that spoke at the occasion included: Director of Public Utilities Halla Razak, Distribution & Collections Branch Assistant Director Stan Griffith, and Wastewater Collection Division Deputy Director Agnes Generoso, as well as CWEA State President Elect Garry Parker, CWEA State Past President Simon Watson, and CWEA San Diego Section Past Presidents Steve Jepsen and Denis Pollack.

CWEA presented the City with a certificate and plaque, as well as a flag that now flies in front of the Public Utilities’ Metropolitan Operations Center. San Diego previously won the state award in 1994, 1996, 20113, and 2012. Winning the award two out of three consecutive years (2012 and 2014) is unprecedented in the history of the awards program.
San Diego Section Sponsors

For more information on section sponsorship, please visit our website at www.cwea.org/sd
ATTENTION ALL LOCAL SECTION MEMBERS!

The Awards Program officially kicked off on July 1st.
For a list of local section awards and to download nomination forms please go to
http://www.cwea.org/mlr_member_awards.shtml
For questions, contact Steve Jepsen, CWEA Past President, at sjepsen@dudek.com
2015 UP COMING EVENTS

October
8th - TCP Training - City of SD Alvarado Training Facility
23rd - Wake up to Wastewater - Sea World

November
18th - Collections System Training & Vendor Fair

January
23rd - Annual Awards Banquet

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Stay Connected to Us!

The CWEA San Diego Section is now on Facebook and Twitter. Get the most up-to-date information on events, classes, and even submit photos for the photo contest!

We want your feedback!
Please send your thoughts to cweasds@gmail.com or call and share your thoughts by contacting LeeAnn Warchol, Section President at 760.268.8849

- Reduce, Reuse, and Recycle -
The Bullsheet is GOING GREEN!

We will be distributing the Bullsheet electronically beginning January 2016.

If you would prefer to receive a paper Bullsheet please email me at lknox@dudek.com and we will send a copy.
STUDENT AND YOUNG PROFESSIONAL HAPPY HOUR

On Wednesday, August 26, 2015, the CWEA Student and Young Professional (SYP) Committee hosted the first CWEA SYP Happy Hour event. The event gathered eleven young professionals and recent graduates at the Casa Sol Y Mar restaurant in the Del Mar Highlands Shopping Center near Sorrento Valley for margaritas, appetizers, and a fun casual opportunity to meet local young professionals. A variety of local firms were represented by impressive young engineers at the event, including KEH & Associates, Stetson Engineers, DN Tanks, RMC, RBF, and Dudek. It certainly appears that the future of the industry is in talented, capable, and innovative hands!

The SYP Committee is currently working on their next event! Stay tuned for the event invite through the usual CWEA email notifications. If you would like to be involved with the SYP Committee and help plan events, recruit members, and meet local young professionals contact local section SYP Chair Phil Giori (pgiori@dudek.com) to get involved!

Above Photo: 11 Student and Young Professional came out for our first happy hour event. Stay tuned for more events.

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**Bully Says:**

“You never do get quite used to the smell, do you...”