

Continuing Education for Water Operators



Mariana Islands
Water Operator Association

August 12, 2014
Pacific Islands Club, Saipan

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Today's Agenda

- About Continuing Education
- Current Events: California Drought, El Nino
- Main Events: Public Relations for Utility Workers
- Association Business

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Continuing Education for Water Operators



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Is THIS training required?

➤ NO

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Why have continuing education?

- DEQ Regulations require certified operators to have 10 contact hours of continuing education per year (30 contact hours in 3 years) to maintain certification.
- DEQ is not required to offer training (and no longer offers training – no \$\$\$)
- Where would operators get training?

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Other training options

- Professional training provided by your employer (safety, pump maintenance, lab procedures, etc.)
- College classes
- Conferences or workshops by professional organizations or agencies
- Correspondence courses
- On-line opportunities

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NOT continuing education

- Meetings with DEQ or EPA
- Surveys or inspections by DEQ or EPA
- Reading journal articles or textbooks by yourself
- Googling water operator stuff on the internet

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When should training be offered?

- DEQ surveyed all certified operators
- Results
 - One 3 hour session every 3 months
 - In morning
 - On a Wednesday
- First session September 6, 2006

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2006 – 2008 (DEQ)

- September 6, 2006: Chlorination
- November 8, 2006: Using a Pump Curve
- February 7, 2007: Cross Connection
- May 9, 2007: Regulations - CCR, PNR
- August 8, 2007: Sizing Pressure Tanks
- November 26, 2007: PWS workshop
- February 20, 2008: Fluoridation
- May 2008: Process Controls (Robert Brokate)
- August 2008: Slow Sand Filters
- November 12, 2008: TCR and Control Valves

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2009 MIWOA

- March 25, 2009: Security and Filters
- May 13, 2009: Alt. Energy, CCR, Compliance
- August 5, 2009: Geology of Saipan, GWR
- October 9, 2009: GWR Workshop
- December 2, 2009: Valves, Spills, Walkerton

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2010 MIWOA

- February 3, 2010: Safety, Haz Materials
- May 5, 2010: BEH & DEQ, Cross Connections
- August 11, 2010: Waste Water Collection/Treatment
- November 3, 2010: Response to disease outbreak

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2011 MIWOA

- February 2011: Chemical Injection Pumps (HRWA)
- May 2011: Radiation, Radionuclide Rule
- July 2011: Utility Policies & Procedures; Standard Operating Procedures (HRWA)
- November 2011: Leak detection

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2012 MIWOA

- February 2012: Bottled Water; Reverse Osmosis; Bottle Sanitation
- May 2, 2012: Inspecting Tanks, Water Meters
- August 8, 2012: Wastewater membrane filtration (Lau Lau Golf Hotel)
- November 2012: Metering and measuring flow

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2013 MIWOA

- February: Corrosion Control for Pb & Cu
- May: Pipe for Water & Sewer
- September: Grease Traps
- December: Cook Islands Water System / Military RO / Calcium Hypochlorite

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2014 MIWOA

- February: West Virginia Chemical Spill
- May: TEEX Small Water System
- August: Public Relations by HRWA
- [September: TEEX Returing]
- November:

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THIS TRAINING IS FOR YOU!

We'll do what we can to make it
what YOU want it to be!

Mariana Islands
Water Operator Association

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Suggestions for training

- Possible topics for upcoming sessions:
 - Backflow prevention device testing
 - Rainwater
 - Local Water System
 - How Reverse Osmosis Works
 - Energy efficiency
 - Storm water and erosion control
 - Introduction to waste water treatment
 - Field trip
 - Cleaning and handling bottles
 - Leak detection

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Announcements

- Certificates from the May 2014 – TEEX classes are posted on the website.
- TEEX will back in September for a follow-up training

www.MarianasOperators.org

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CE Credit

- Make sure to sign-in and pay to get credit for class
- Certificates made from sign in list (and receipt book).
- Name – as it appears on sign-in sheet
- Note e-mail address change on sign-in sheet

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Current Events

California Drought

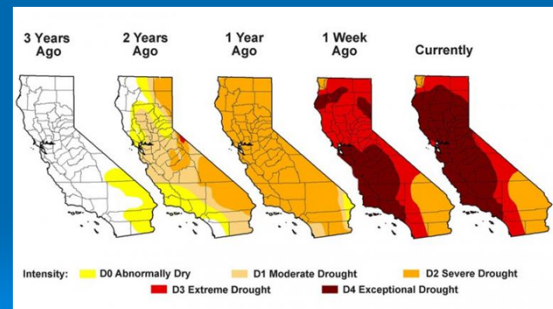
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Feb 5, 2014 CEU class

- Videos
 - Jan 17, 2014: California is in its worst drought in a century (CNN)
 - Jan 22, 2014: California calls for water conservation in response to drought (PBS News Hour)
 - Jan 31, 2014: California to cut off state supplied water (PBS News Hour)

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“Exceptional” drought



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NBC News

- August 1, 2014: California Drought Hits Driest Level
- <https://www.youtube.com/watch?v=9R3sQ9Qon64>

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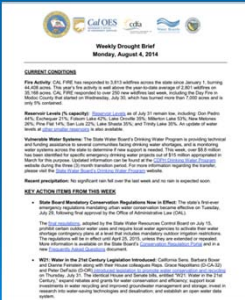
ca.gov/drought

- State of California has website dedicated to information about the drought.
- Issue a weekly drought brief



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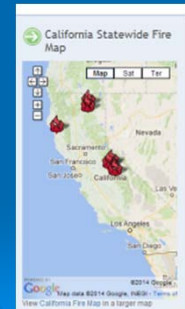
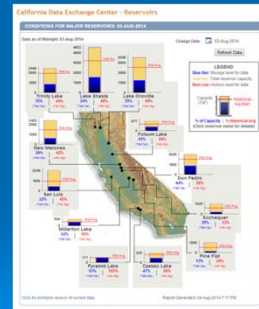
Weekly Drought Brief



- Current conditions
 - Lots of fires
 - Reservoirs low
 - Several communities facing water shortages
- Key Actions
 - Mandatory Conservation Regulations
 - Lots of conservation media campaigns

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Current Conditions



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Emergency Regulations

- 7/28/14 thru 4/25/15
 - Prohibits
 - Watering lawns with potable water that causes run-off.
 - Washing cars with hose without a shutoff nozzle
 - Applying potable water to driveways/sidewalks
 - Using potable water in un-recirculating fountains
 - \$500 fine
 - Urban water suppliers implement their contingency plans



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Santa Cruz, CA

- Toughest conservation rules in the state
 - Every residential property allotted 10 units (7,480 gal) per month at \$3/unit for all uses.
 - If over 10 units – cost is \$50/unit!
 - 92% complied in first month (May)
 - Bans on filling hot tubs & pools
 - Water use is 96 gal/cap [State ave is 196]
 - 94,000 residents; two "water cops" write violations
 - "Water School" [like Traffic School]

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Los Angeles, CA

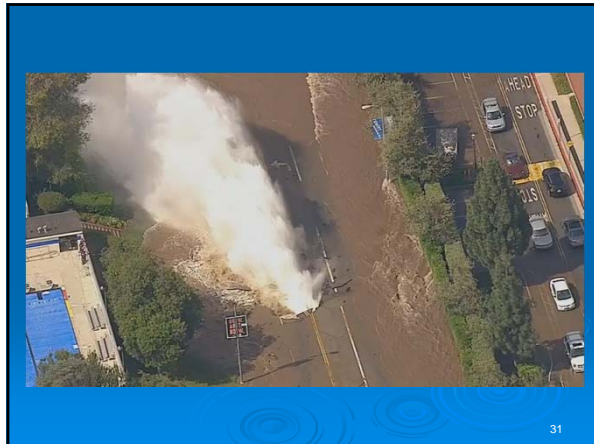
July 29, 2014
Water Main Break

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Water Main Break in LA

- Tuesday July 29, 2014: 93 year old water main burst under Sunset Boulevard.
- Explosion busted through several lanes of the street and sent a geyser of water in the air.
- Lost 35,000 gallons of water a minute.

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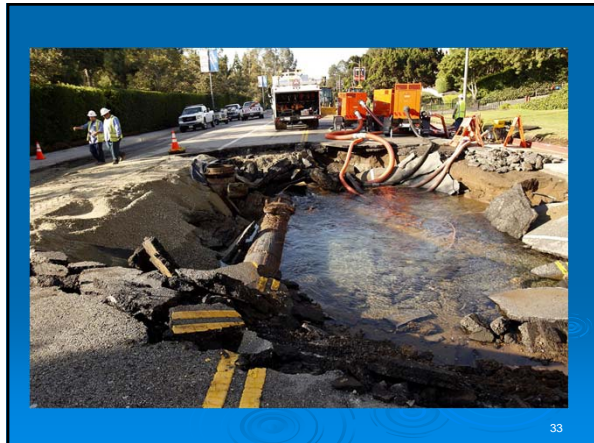


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Video

- [Water main break floods streets around UCLA by CNN, July 29, 2014](#)
- <https://www.youtube.com/watch?v=pKg-kePQfH4>

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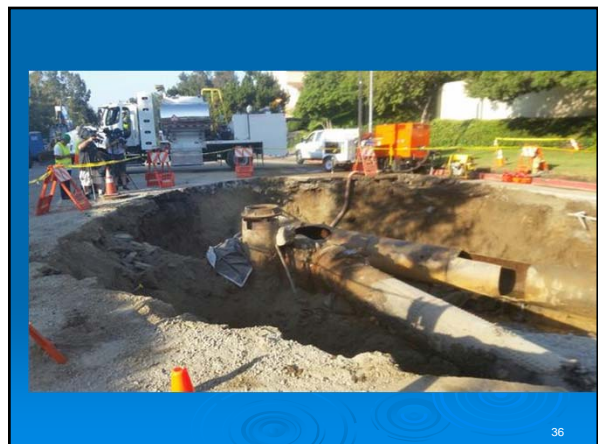
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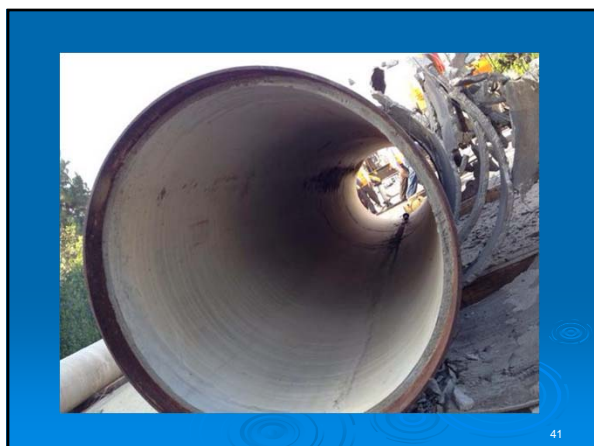
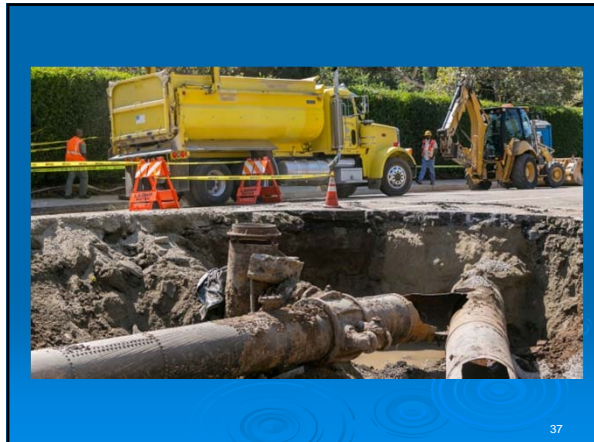
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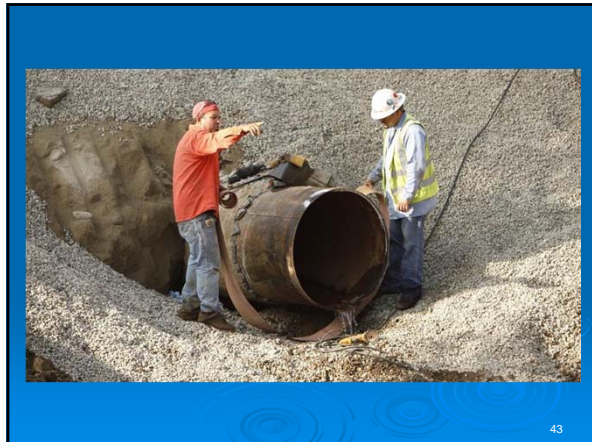


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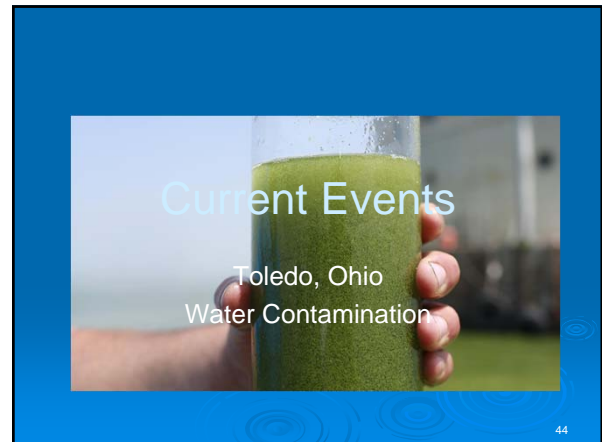


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Toledo, Ohio

- Saturday August 2, 2014
- Toxins discovered in a NW Ohio water treatment plant meant 500,000 people scrambling for drinking water
- Toxins = Microcystins from algae
- Boiling water not advised – it concentrates the toxins
- Monday August 4, 2014 mayor lifts ban

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ABC News Video

- <https://www.youtube.com/watch?v=b8dRDV268nA&list=UUBi2mrWuNuyYy4gbM6fU18Q>

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Current Events

Super El Nino?

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What is an El Nino?

- Unusually warm ocean temp in equatorial Pacific
- (La Nina unusually cold ocean temp in equatorial Pacific)
- http://biophysics.sbg.ac.at/atmo/el_nino.htm

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Video

- [El Nino – La Nina](#)
- https://www.youtube.com/watch?v=tyPq86yM_Ic

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Video

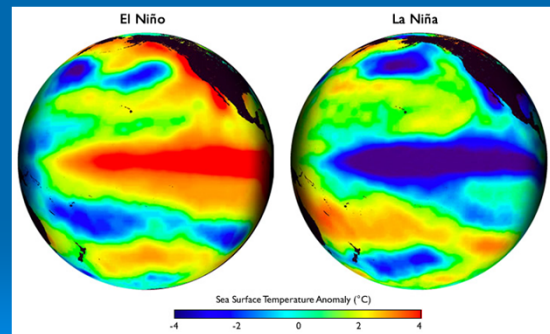
- [What is a Super El Nino? Weather Nation May 2014](#)
- <https://www.youtube.com/watch?v=SoPs6VxrKuY>

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Video

- El Nino 2014: What are the Odds?, Yale Climate Forum
- <https://www.youtube.com/watch?v=i9vQIsuhM8Q>

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End Current Events

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Break - 10 minutes



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Main Event

Public Relations for Utility
Workers

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Break - 10 minutes



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Association Business

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Board Member Terms

- Chair: Derek Chambers – May 2016
- Vice chair: Gary Byrd – May 2016
- Secretary: Larry Manacop – May 2016
- Treas: Cecilio Raiukiulipiy – May 2015

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Contact Information

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