

#### Welcome! Operations Basics Operations Plans

**RCAC 2020 Online Training Series** 



Having Audio or Tools difficulties?

Click on the Purple Flower and change your viewing format.

It may help!









# **Operations Plans**



FIND THESE WORDS Certification Checklist

Components Coliform Cfr Disinfection Drinkingwater Epa Flushing Inspection Lpa Monitoring Notification Plan Residual Rtcr Seasonal Shutdown Startup



This Workshop is sponsored by the **Sacramento River Funding** Area Disadvantaged **Community Involvement** Program, a grant funded program supported by the **California Department of** Water Resources' Integrated **Regional Water Management Program** 

For more information on the DWR DACI-Program go to: <u>https://water.ca.gov/Work-With-Us/Grants-And-Loans/IRWM-Grant-Programs/Proposition-1/DAC-Involvement-Program</u>



#### Sacramento River Funding Area Disadvantage Community Involvement Program

#### The goals of the SRFA-DACI-Program:

- 1. Engage DAC organizations, water purveyors and stakeholders in IRWM
- 2. Identify the water and wastewater management needs of DACs
- 3. Develop strategies and solutions for DAC water management needs.



This Workshop was developed to address key needs that have been identified for DAC communities and/or water providers in this region.

For questions on the SRFA DACIP Program and how to engage with your IRWM please contact: JoAnna Lessard (<u>joanna.Lessard@fishsciences.net</u>) or Katie Burdick (<u>katie@burdico.net</u>)



### **Your Moderator Today**



Kevin Baughman RDS - Environmental <u>kbaughman@rcac.org</u> (775) 386-5624

From Oklahoma -10 years Navy Enlisted Electrician (started 1982) (NAVY???? - wanted to see the sea) California Grade III WTPO and DSO started 1992 Hawaii Grade IV WTPO and DSO, Started RCAC Circuit riding 2004! Nevada Grade IV WTPO and DSO since 2015. Tribal Circuit rider 2019



#### **Rural Community Assistance Partnership**





#### **RCAC Programs**

- Affordable housing
- Community facilities
- Water and wastewater infrastructure financing (Loan Fund)
- Classroom and online training
- On-site technical assistance
- Median Household Income (MHI) surveys



#### Performance Assessment Rating Tool (PART)

- 4 to 6 weeks from today
- Email w/ today's workshop in subject line
- 3 questions 3 minutes maximum
- How did you use the information that was presented today?
- Funders are looking for positive changes
- Help us continue these free workshops!



#### Where is my Certificate For Contact Hours?

- Certificates for training hours can be downloaded and self-printed
- Login http://www.events.rcac.org/rcac/Calendar.asp
- From the "view my profile" page, click history and certificates
- From the registration portal, click "View Certificate"
  Certificates for <u>online</u> training hours will not be mailed
- Certificates are not available until 48 hours after the completion of the class.





# Questions?



# Text your questions and comments anytime during the session



#### And now for something completely different!

#### Notice in our new brochure....

- IMPORTANT: Failure to attend three online workshops for which you reserved a seat (and did not cancel) in any sixmonth period will disqualify you from attending online workshops in the following six-month period.
- PLEASE CANCEL A MINIMUM OF 24 HOURS IN ADVANCE TO ALLOW OTHERS TO ATTEND THE TRAINING.



#### Your Presenter Today...



# Rural Development Specialist

rpage@rcac.org





# **Poll Time!** Who's in the room today?



#### **Operations Basics Online Learning Objectives**

- Provide the water system Operator with a working knowledge of the content and development of an Operations Plan
- Improve compliance with regulations
- Provide safer water in your water system



### **Operations Plans**

- Operations Plans establish a baseline of the basic tasks necessary to run a compliant and reliable water system.
- Operations Plans are a training tool for new personnel
- Operations Plans establish standards of performance for the system operator(s).





#### **Operations Plan Poll**

Does your system have a current operations plan?



# Today's Agenda

- Pandemic Preparations
- Elements of an Operations Plan
  - System Description
  - Routine Operational Procedures
  - Monitoring and Reporting
  - Response to Violations
  - Customer Complaint Log
  - Emergency Operations
- Post-Test
- Additional Resources



## **Pandemic Preparation**

- Update ERP's
- Staffing Shortages & Staggering Shifts
- Product Deliveries Protocol
- Telework Who and How
- PPE and Chemical Inventories
- All Staff Trainings
- Unpaid Bills Management/No Shut-Off
- <u>https://www.epa.gov/coronavirus</u>



# Today's Agenda

Pandemic Preparations

#### Elements of an Operations Plan

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#### https://www.waterboards.ca.gov/drinking\_water/c ertlic/drinkingwater/TMFOperationsPlan.html

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t	Notice! COVID-19 and Water f co-day work protecting public h participation. Please follow our	Boards Meetings - The COVID-19 ealth, safety, and the environm website or subscribe to an app	emergency has r ent. Staff are deve licable Lyris list fo	esulted in the cancella eloping solutions to all or your area of interest	ation of recent meet low for upcoming b for further updates.	ings of the Water E pard meetings to p	Boards. The Wa proceed with op	ter Boards are conti oportunities for rem	nuing day- 🗙 ote	
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	CALIFORNIA WATER BOARDS State Water Resources Control Ibard	Board	Programs	Drinking Water	Water Quality	لم Water Rights	Notices	Water Boards	Q Search	
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	Upcoming Events					California G	overnor		$\frown$	

FY 2020-21 Environmental Laboratory Accreditation Program Fees Stakeholder Meeting March 30, 2020 Program Page

Public Meeting: Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion (Sacramento) April 1, 2020 Notice | Aviso | Program Page

#### Board Meeting April 7, 2020

Board Workshop April 8, 2020

Online Webinar: Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion April 9, 2020 Notice | Aviso | Program Page Public Meeting: Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion (San Diego) April 14, 2020 Notice | Aviso | Program Page

2020 Meeting Calendar

Meeting broadcasts





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Board Chair

Visit the Secretary's page

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### **System Description**

- Brief description of system including:
  - Source(s)
  - Storage
  - Treatment
  - # of connections
  - Personnel



CIO <sub>2</sub> Otay Lake	CIO <sub>2</sub> Chlorine	Floc/Sed Bas Floc/Sed Bas Floc/Sed Bas	sin #3 sin #2 Sin #1	Chlorine Caustic Ammonia Clearwells		
CWA Otay Lake, 1919 Storage 49,510 AF Draft Capacity: 56 MGD Spillway: 484.7' Intake valves 36" # 1 410.2' # 2 420.2' # 3 431.2' # 4 442.2' # 5 453.2' # 6 464 2'	Raw Water PumpStation, 19884 Pumps –#19 MGD#214 MGD#314 MGD VFD#414 MGD VFD#414 MGD VFDChlorine Dioxide Contactor 2010425,000 gal capacityJet Mix – One PumpMix Energy 750 G	Flocculation Basins #1 & 2, 1988 4 Basins, 2 Stages 2 Compartments/Stage 8 Compartment s 26' x 26' Depth 13.75' Detention time: 20 min / Stage @ 40 MGD 8 Mixers / Two Speed HP 2 Mix Energy: Stage 1 50 to 25G Stage 2 25 to 12.4G	Flocculation Basins #3, 2010 1 Basins, 3 Stages 2 Compartments/Stage 6 Compartment s 26' x 26' Depth 13.75' Detention time: 10 min / Stage @ 40 MGD 6 Mixers VFD speed control Mix Energy: Stage 1 70 to 35G Stage 2 50 to 25G Stage 3 35 to 10G	Filters#1-8, 1978 rehab 2010#9-16, 1988 rehab 201016 FiltersArea (each filter) 264 ft²Flow rate 6 gal/min/ft²Media:GAC 27.5"effective size 1.0uniformity <1.5specific gravity 1.6-1.7Sand 12"effective size 0.6	Clearwells, 2005 Two clearwells 6.6 MG each 172' diameter 37' high	
CWA Connection SD #7 & #20	1200 gpm 10 HP Rapid Mix, 1988 Jet Mix – One Pump Mix Energy 750 G 1200 gpm 10 HP	Sedimentation Basins #1 & 2, 1988 4 Basins each 21' x 156' each 14' depth Detention time: 60 min @ 40 MGD Loading 1.7 gpm/ft <sup>2</sup> Traveling Bridge	Sedimentation Basins #3, 2010 2 Basins 21' x 156' each 14' depth Detention time: 60 min @ 40 MGD Loading 0.4 gpm/ft <sup>2</sup> Superscrapper	uniformity <1.5 specific gravity 2.60- 2.70 Pumped Backwash Filter-to-waste Surface Wash Backwash rate: 17 to 21 gal/ft <sup>2</sup> /min	sed August 2013	

### **System Description**





### **System Description**

- Personnel
  - Table of organization (top to bottom)
  - Names
  - Contact #
  - Certifications





#### Section 1 – Operating Personnel

Position / Name	Cert #	Grade	Renewal	Contact Info	]
Deputy Director				Cell: 555-1212	]
Water Treatment Plant Superintendent				Cell: 555-1212	
Senior Water Operations Supervisor <sup>1.2.5.</sup>	1234567	T5	11/1/19	Cell: 555-1212	1-
Water Operations Supervisor <sup>1.5.</sup>	1234567	T5	3/1/19	Cell: 555-1212	1
Water Plant Operator 1.3.	1234567	T5	3/1/19	Cell: 555-1212	1
Water Plant Operator <sup>1.3.</sup> Vacant	1234567			Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T4	3/1/18	Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T4	7/1/20	Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T4	6/1/20	Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T3	3/1/18	Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T3	7/1/20	Cell: 555-1212	-
Water Plant Operator <sup>1.3.</sup>	1234567	T2	4/1/20	Cell: 555-1212	-
Water System Technical Supervisor <sup>1.</sup>	1234567			Cell: 555-1212	-
Water System Technician IV <sup>1</sup>	1234567		11/1/10	Cell: 555-1212	1
Water System Technician III <sup>1.</sup>		D2	7/1/20		
Water System Technician III <sup>1.</sup>	1234567			Cell: 555-1212	-
Water System Technician III <sup>1.</sup>	1234567	D2	11/1/20	Cell: 555-1212	-
Instrumentation & Control Technician <sup>1</sup>				Cell: 555-1212	-

Notes:

- 1. Personnel assigned to Otay Water Treatment Plant
- 3. Shift Operator per §63750.70

- 2. Chief Operator per §63750.25
- 5. On-call Supervisors (WOS and SWOS)

### **Break Time!**



"When a person assumes a public trust, they should consider themselves as public property."

-Thomas Jefferson



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- What do you need to do to run the system?
  - Daily
  - Weekly
  - Monthly
  - Annually
  - As needed





- Visual Inspection of Well (Daily):
  - Check for leaks, openings, lubricants, electrical hazards & chemical hazards
  - Check pump for proper operation
  - Record any problems in the log book





- Visual Inspection of Storage Tanks (Daily):
  - Check for leaks or damage
  - Check system pressure
  - Record any problems in the log book
  - Schedule cleaning of tanks as needed (semi-annual, annual bi-annual)



- Visual inspection of Chlorination System (Daily):
  - Check pump for proper operation
  - Inspect hypochlorite levels, chemical storage
  - Record any problems in the log book





- Chlorine residual test (Daily):
  - Test and record POE chlorine residual
  - Establish acceptable range of residual
  - Respond to deficiencies
  - Record any problems in the log book



- Gauges & Meters (Daily):
  - Inspect for leaks and proper function
  - Repair or replace if necessary
  - Record any problems in the log book





- Exercising Valves (Annually):
  - Inspect valves for leaks and proper function
  - Establish schedule for exercising valves
  - Record actions in the log book





- Distribution facilities (Annually):
  - Inspect system for leaks
  - Establish schedule for flushing
  - Record actions in the log book







#### Quiz Daily Operational Procedures



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# **Monitoring & Reporting**

#### **Bacteriological Monitoring**

- Weekly / Monthly
- Use approved site sample plan
- If sample is positive, notify DDW / LPA
- Take repeat samples
- Minimum of 5 routine samples in the month following a positive





# **Monitoring & Reporting**

#### **Chemical Monitoring**

- Monthly/Quarterly/ Annually
- Follow approved sampling schedule
- Submit results to DDW / LPA
- Keep results on file for a minimum of 10 years
- Keep variance and exemptions for 5 years



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### **Response to Violations**

#### **Public notification**

- Required when system does not meet all provisions of SDWA
- Notification given as detailed in "Emergency Notification Procedure"
- Must notify DDW / LPA prior to issuing notice
- Copy of notice sent to DDW/LPA
- Include in CCR



#### **Response to Violations**

#### **Public notification templates**

#### https://www.waterboards.ca.gov/drinking\_water/certlic/d rinkingwater/Notices.shtml

[TEMPLATE REVISION: 12/08/14]

Date:

#### **BOIL WATER NOTICE**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

#### **BOIL YOUR WATER BEFORE USING**

Failure to follow this advisory could result in stomach or intestinal illness.

Due to the recent event [e.g., water outage, power outage, flood, fire, earthquake or other emergency situation], the State Water Resources Control Board, Division of Drinking Water in conjunction with the [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

**DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, **let it boil for one (1) minute,** and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water. [or This is the preferred method to assure that the water is safe to drink.]



Optional alternative to include for prolonged situations where it fits.

### **Response to Violations**

- Public Notification: Know your deadlines!
  - Tier 1 24 hours
  - Tier 2 30 days
  - Tier 3 CCR
- Consult with DDW /LPA BEFORE you issue a notice
- Plan how to distribute notices; make this part of your Operations Plan



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### **Customer Complaint Log**

#### **Customer Compliant Procedures**

 Record in complaint log (name, address, nature of the problem) GB

- Investigate complaint
- Verify or dismiss the complaint
- Record steps taken to correct the problem
- Notify complainant of action taken
- Keep complaint records with action taken for five years



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#### **Camp Fire, Paradise, November 2018**

### **Emergency Operational Practices**

#### What can happen?

- Plan for credible emergencies:
  - Power outage
  - Earthquake
  - Fire
  - Flood
  - Pandemic
- What are the consequences of these events? How will you





### **Emergency Operational Practices**

#### What's on hand?

- Wrenches, leak clamps, replacement part(s)
- Records: protection, storage, and backup
- In-house capabilities
- Staffing Requirements
- Notifications
- Contingency Planning





### **Post-Session Quiz**





#### Resources

- California Drinking Water Regulations <u>https://www.waterboards.ca.gov/drinking</u> <u>water/certlic/drinkingwater/Lawbook.ht</u> <u>ml</u>
- Water Board web site

<u>https://www.waterboards.ca.gov/drinking</u> <u>water/certlic/drinkingwater/publicwaters</u> <u>ystems.html</u>



### **Session Evaluation**

- Go to file, click on "close or leave session"
- Evaluation automatically pops up
- If it does not, one will be e-mailed to you within 24 hours
- We need these for your contact hours!



#### Rodney Page rpage@rcac.org



Kevin Baughman kbaughman@rcac.org

# Thank you for attending!