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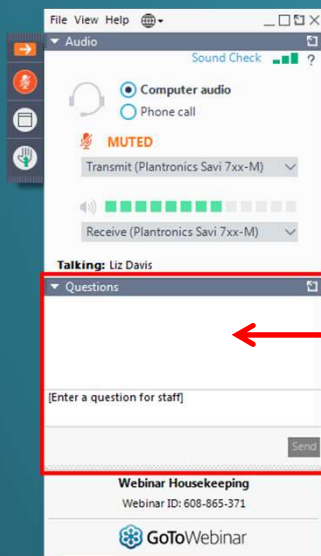
**Shelter-in-Place in Response to Coronavirus:
Approaches from Two Facilities**

Thursday April 9, 2020
1:00 – 2:00 PM ET

The Water Environment Federation logo and tagline are positioned in the bottom right corner of the teal background. The logo is a stylized white 'W', and the text 'Water Environment Federation' is in a bold, white, sans-serif font, with 'the water quality people' in a smaller, white, sans-serif font below it.

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How to Participate Today



- **Audio Modes**
 - Listen using Mic & Speakers
 - Or, select “Use Telephone” and dial the conference (please remember long distance phone charges apply).
- **Submit your questions using the Questions pane.**
- **A recording will be available for replay shortly after this webcast.**

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Today's Speakers



Gilad Cohen
CEO
IDE Americas



Ted Corrigan
Interim CEO and General Manager
Des Moines Water Works

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Des Moines Water Works COVID-19 Response

Ted Corrigan, P.E.

Interim CEO and General Manager

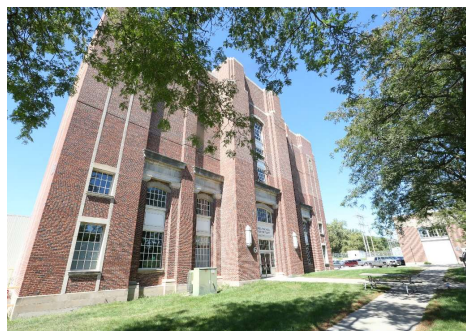
April 9, 2020: Water Environment Federation (WEF)

Des Moines
Water Works
Water You Can Trust for Life

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Background

- 3 treatment plants:
 - 2 conventional lime softening (75 & 25 mgd)
 - 1 dual membrane (10 mgd)
- Surface water and alluvial groundwater
- 50+ remote facilities; 1400 miles of pipe
- Controlled from a single Control Center



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Des Moines
Water Works
Water You Can Trust for Life

Background

- Average day:
47 million gallons
- Peak day:
96 million gallons
- Board-governed
- 210 employees
- Union represented



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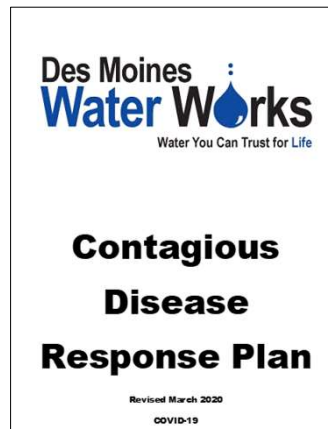
Background

- Regional water utility
- Retail and wholesale customers – more than 50% of water sold is wholesale
- More than 20 water supplies
- 500,000 customers (1/6 of Iowa's population)
- Most have no other source of supply

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Contagious Disease Response Plan

- Four-Phase Plan
 1. Awareness
 2. Limited Contact
 3. Isolation
 4. Worst Case
- Developed in 2009
- Updated March 2020



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Awareness – Early March

- Watching events unfold – tracking the spread
- Outside the United States
- Updating our plan
- Customer communication
- Internal staff communication



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Limited Contact – March 17

- Limit contact between employees
 - Meetings
 - Training
 - Work call
- Limit contact with customers
 - Suspended in-home customer service
 - Closed to walk-ins
 - Suspended terminations

Des Moines Water Works General Office Closed to Walk-in Customers



Effective March 17, 2020

Payment and customer service options:

- **Online Account:** Login to your online account to pay by credit card (\$2.75 convenience fee), recurring credit card, direct pay or electronic check.
- **Phone:** Please call (515) 283-8700, and a Customer Service Representative is available to assist you Monday-Friday from 7:30 am to 5:00 pm. Pay by credit card (\$2.75 convenience fee) or electronic check (no fee).
- **Drop Box:** Place bill stub and payment in the payment drop box located at 2201 George Flagg Parkway.
- **Mail:** Mail bill stub and payment to PO Box 9227, Des Moines, Iowa 50306-9227.
- **Pay Stations:** Customers may make monthly payment at most local HyVee and Wal-Mart stores. The pay station may charge a fee for this service; however, these fees are not collected by Des Moines Water Works.



Des Moines
Water Works
Water You Can Trust for Life

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Isolation – March 23

- Stockpiling chemicals and supplies
- Enhanced cleaning
- Work from home options
- Report from home implemented
- Restricted access
- Relocation
- Return to work restrictions
- Sequestering critical employees



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Sequestration

- 21 employees across 3 treatment plants for the first 2 weeks
- Week 3: 18 employees
- Week 4: 15 employees
- Week 5: 10 employees
- Food and lodging provided
- Work 12 hour shifts 7 days a week

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Sequestration



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Sequestration FAQ

- Camper logistics:
 - Rent, employee-owned, combination?
 - Employees per camper?
 - Camper assignments?

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Sequestration FAQ

- Camper logistics:
 - Water and sewer hook-ups?
 - Food supplies?
 - Off-hour amenities?
 - Cleaning at the 14-day changeover?

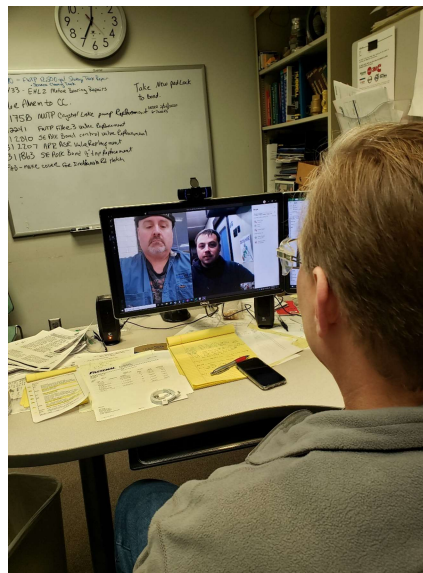


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Sequestration FAQ

- Staffing
 - Critical positions?
 - Operations
 - Maintenance
 - Support
 - Volunteers or mandatory?
 - Pay structure?
 - Sequestered
 - Not sequestered
 - Monitoring next crew to come in?



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Sequestration FAQ

- Lab samples?
- Chemical delivery?
- Contractors?
- Relocation of other functions off-site?
- Protocol for employees in “emergency status”?



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Sequestration FAQ

- Employee buy-in and morale?
- Regulatory relief?
 - TCR samples



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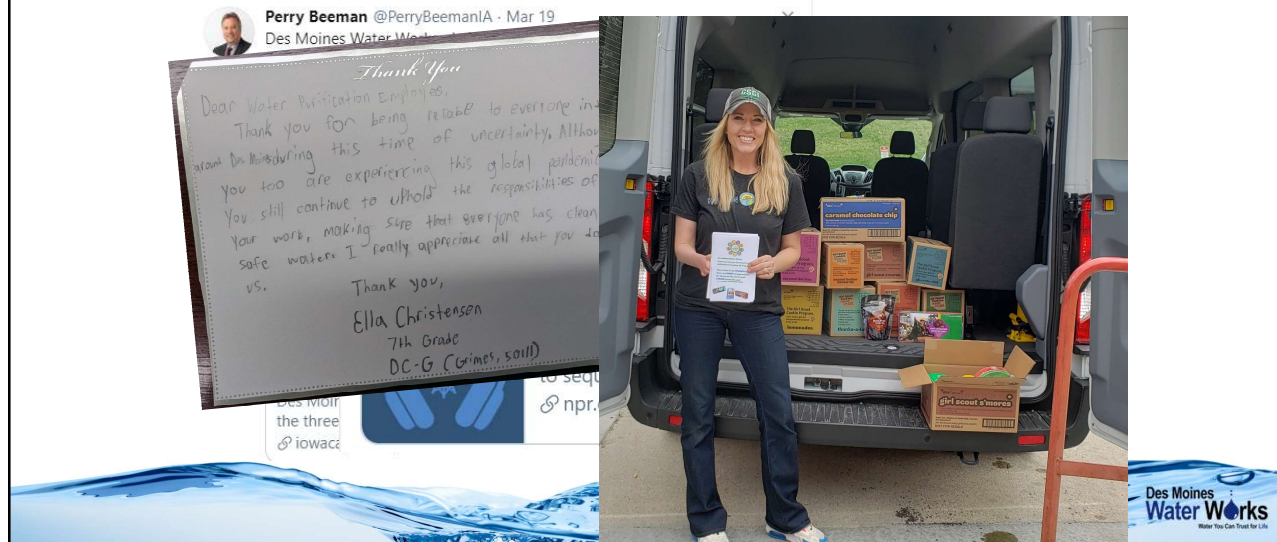
Sequestration FAQ

- Challenges?
 - Displaced functions
 - Winter maintenance
 - Capital projects



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Community Support – 'This is What it Takes'



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IDE Technologies: COVID-19 Response Plan

Claude 'Bud' Lewis Carlsbad
Desalination Plant

Gilad Cohen, CEO, IDE Americas | April 9, 2020





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Know your water partners: IDE Technologies



- Established in 1965
- Technology leaders in Desalination & Water Treatment in both membrane & thermal technologies
- Providing design, turnkey, O&M and development of Advanced Water Solutions
- More than 400 installations in over 40 countries
- Worldwide offices in Israel, US, China, India, Chile & Australia



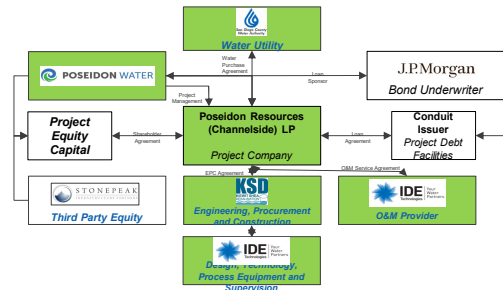
AlfaPartners.



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Claude 'Bud' Lewis Carlsbad Desalination Plant: Background

- › The Carlsbad Desalination Plant (“CDP”) is the largest seawater desalination plant in the US producing **50 million gallons of fresh water per day**
- › This supplies enough water for approximately **400,000 people**, or **10% of the potable water** distributed by the San Diego County Water Authority
- › CDP was developed as Public Private Partnership (PPP) project:
 - › Poseidon Water as the developer
 - › Consortium of Kiewit-Shea (KSD) as the general contractor
 - › IDE Technologies as designer and technology and process equipment provider
 - › Started as the operation and maintenance contractor in 2015



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COVID-19 Plant shelter-in-place Operation Plan

- › COVID-19 impact and initial CDC information first emerged in late February and early March
- › Working alongside the plant owner and developer, Poseidon Water, IDE took emergency action early on, with the goal of ensuring operation continuity and minimizing impact of the COVID-19 pandemic on water delivery
- › **We wanted to make sure the community and local, state and federal governments have one less thing to worry about**
- › On March 8, we implemented an “Essentials Only Policy,” limiting entrance onto the premises of CDP
- › On March 19, we implemented a full “COVID-19 Plant Shelter-in-Place Operation Plan,” ahead of California’s governor’s mandate, including:
 - › A crew of 10 volunteer employees for maintenance, operation and lab
 - › Sheltering inside the plant for 21 days to minimize any potential outside world physical contact
 - › Supported from the outside by managers and experts



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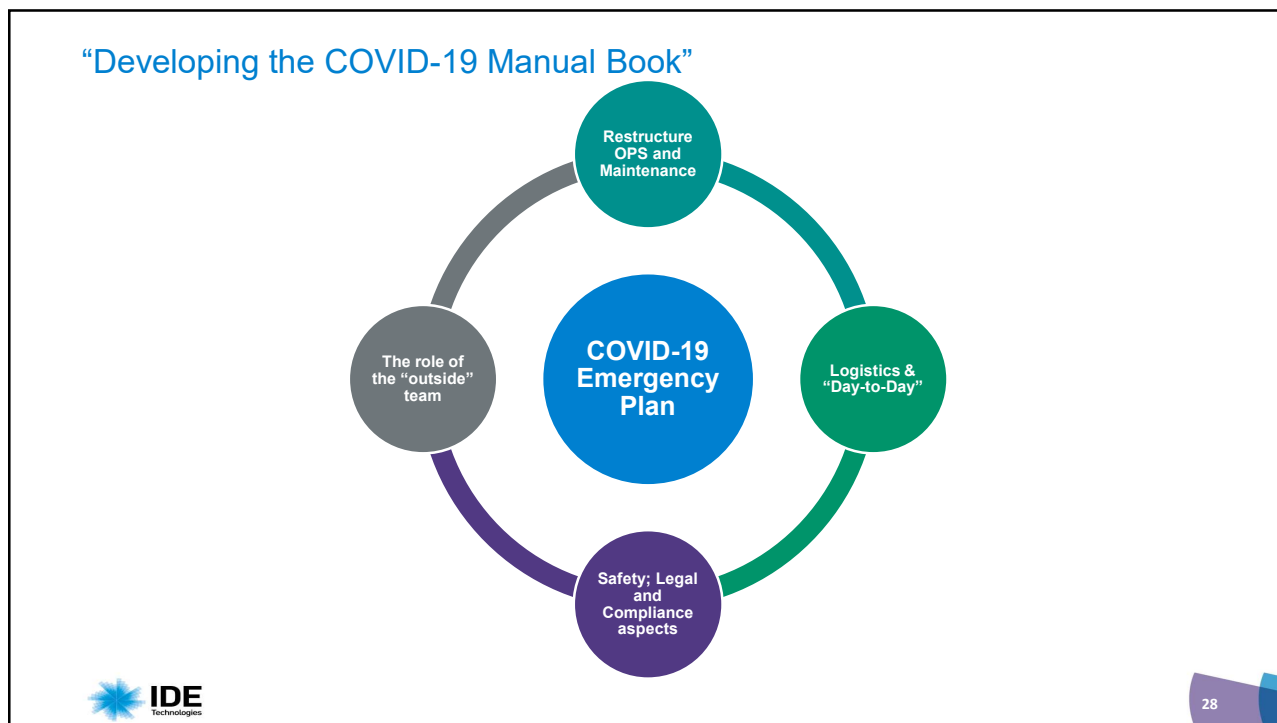
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Determining essential volunteer roles needed to keep plant running

- > CDP typically operates with about 40 IDE employees daily; three operators on shift; lab technicians and a large maintenance group
- > We defined what would be the key functions and determined we would need 10 volunteers to shelter-in-place at the plant across a variety of roles
- > IDE has every critical role on-site, including lab technician, operations team members and maintenance team
- > It was clear from the start that IDE's employees were willing to step up for the San Diego community during this time
- > Due to the willingness of many volunteers, 10 ultimately were randomly selected for the 21 day stay
- > It took IDE, Poseidon and the San Diego County Water Authority about 3 days to solidify the plan and prepare the plant for the volunteers to shelter-in-place

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Restructuring OPS and Maintenance Routines and Workplan



- › Shift structures:
 - › Routinely, the CDP uses 12-hour shifts with 3 operators
 - › We moved to 2 operators to a 12-hour shift, reducing assignment load
 - › Shifting more work to lab technician and maintenance support
- › Maintenance work:
 - › Minimal team on-site, including an electrician, mechanical technicians and general labor
 - › Redefining priorities and work plan
 - › 8-hour shifts and 4 hours on call as needed, 7 days a week
- › Lab:
 - › Continue supporting all monitoring requirements
 - › Assist with the operators sampling routine works
 - › 12-hour workdays, spread as needed
- › Outside monitor & support:
 - › Plant is continuously monitored by managers and chief operator from the outside
 - › Daily morning video meetings with the “inside” team to evaluate performance, workplan and team morale



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Logistics & “Day to Day”

- › 21 days on-site requires accommodation, food and other basic services
- › Each employee has their own RV for lodging in the plant’s parking lot supplied by the company.
- › The RVs are a quiet space for them to rest and recharge during down time
- › Food supply is managed through online shopping, with outside support by management as needed
- › Purchased and installed for their use, volunteers have access to washers and dryers, and also the use of the plant’s breakroom, cafeteria and showers
- › While they are unable to leave the plant, they have built a collegial community and free time is similar to ours
- › They’re video chatting, texting and calling their families and friends and binge-watching shows like the rest of us



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Safety; Legal and Compliance Aspects



- › Even under emergency conditions, it remains our priority to **NOT** compromise on safety. We insist and monitor that the team uses their time between shifts to rest
- › CDP is subject to many regulation and compliance aspects:
 - › The plan covers routine requirements; any modifications were designed collaboratively with the owner and regulators
 - › Reporting requirements remain the same and are being performed remotely by the “outside team”
 - › Pre-planned inspection by regulatory entities were addressed and postponed accordingly
- › Legal and contractual compliance:
 - › Agreement letters were exchanged to regulate the “new reality” with the owner and the county
 - › Employment rules were studied and addressed with the employees; we made all reasonable efforts to ensure everyone’s rights are maintained
 - › We remain adaptable and responsive to the continual change and unknowns
- › Communication is the key
 - › Daily and weekly communication in order to maintain transparency with employees; sync within management and corporate; Flow of information to owners; Keep the regulators in the loop



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The Role of the “Outside” Team



- › Standby team for replacing the “inside” team if needed
- › Remote monitoring and advice, as needed
 - › With access to various technologies, the volunteers’ colleagues and managers at IDE are providing support from their homes
 - › If one of the employees in the “inside” team has a question, our wider team is available on-demand to guide them
- › Working in the off-site warehouse as needed
- › Using the opportunity for the “bottom of the list”:
 - › Picking up on training plan gaps through remote training and e-learning
 - › Cross training between operations and maintenance
 - › Operations and maintenance policies updates



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Heartwarming Support From the Community

- › The greater San Diego community has also been kind enough to share hundreds of messages with words of encouragement and support to the volunteers
- › This has helped keep morale high for volunteers during their time at the plant and is greatly appreciated

Say Thanks to Desal Plant Operators!

Date: 03/17/2020

Name: Kaita

Community: Carlsbad

Age: 5

Message to the Carlsbad Desal Plant workers:



Thank!

Say Thanks to Desal Plant Operators!

Date: 04/01/2020

Name: Richard

Community: San Diego

Message to the Carlsbad Desal Plant workers:

Definitely heroes in my book.

Say Thanks to Desal Plant Operators!

Date: 03/17/2020

Name: Dylan

Community: Carlsbad

Age: 9

Message to the Carlsbad Desal Plant workers:

Thank you for keeping the water coming!!



Say Thanks to Desal Plant Operators!

Date: 04/01/2020

Name: Leonie Campbell

Community: Carmel Valley

Message to the Carlsbad Desal Plant workers:

Thank you for staying on the job and continuing to provide everyone with water!

You are part of the backbone of this country that no one considers until a crisis.

Thank you for your sacrifice!

Say Thanks to Desal Plant Operators!

Date: 03/17/2020

Name: Catton Hansen

Community: Scripps Ranch

Age: 6

Message to the Carlsbad Desal Plant workers:

Thank you for your hard work and staying at the plant so we have clean water.

From Catton




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What is the “Secret Sauce?”

- › First on the list is our employees who volunteered without questions or conditions to serve the cause
- › Second is great management teamwork – direct plant management, compliance, HR, finance and legal
 - › Working through the details together
 - › Confronting new dilemmas and challenges as they come
 - › Supporting each other as needed and beyond
- › Third is working as a team and communicating with the owner, the county and regulators
 - › Remarkable support, efficiency and level of cooperation from all sides
 - › Confronting any conflicts or complications together, as they arise
- › And finally, the community support, which provided a boost to everyone’s morale



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Looking at what's next for IDE's Desal Operations in California

- › On Thursday afternoon, a second 21-day cycle will begin:
 - › 10 fresh crew members will take over on-site
 - › As part of the transition, extensive cleaning and housekeeping are planned
 - › The team leaving the plant will have a few days off to reenergize and will be reengaged afterwards with a similar training and working plan on the outside
- › In parallel, IDE operates a second desalination plant in the City of Santa Barbara
 - › The plant is smaller in size, providing 3 million gallons of potable water per day
 - › However, the plant is significant in importance, producing about 30% of the city's drinking water
 - › While shelter-in-place is not an applicable option in Santa Barbara, team isolation measure are taken by deploying RVs on site as temporary offices and operation rooms



Charles Meyer Desalination Plant, Santa Barbara



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Q & A



Gilad Cohen

CEO

IDE Americas

giladc@ide-tech.com



Ted Corrigan

Interim CEO and General Manager

Des Moines Water Works

corrigan@dmww.com



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