Partnerships to Reduce the Impacts from COVID-19 on the Water Sector

WEBINAR SERIES: PART 2

The National Association of Clean Water Agencies
July 16, 2020 | 2:00 PM - 3:30 PM EST
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Clean Water Champions

AECOM

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Let’s Solve Water

Reducing the Impacts from COVID-19: Part 2
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Clean Water Stewards

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Clean Water Protectors

AQUA LAW

BARNES & THORNBURG LLP

BLACK & VEATCH

HDR

WADE TRIM

Reducing the Impacts from COVID-19: Part 2
Today's Featured Speakers

Leisa Thompson
NACWA Board Member
General Manager
Metropolitan Council
Environmental Services
Saint Paul, MN

Nadine Leslie
Chief Executive Officer
Suez
Paramus, NJ

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Executive in Residence
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Principal
Galardi Rothstein Group
Chicago, IL

J. Anthony Beard
Principal and Managing Member
Concentric Municipal Advisors

Reducing the Impacts from COVID-19: Part 2
Reducing the Impacts from COVID-19: Part 2

Leisa Thompson
NACWA Board Member
General Manager
Metropolitan Council Environmental Services
Saint Paul, MN
Environmental Services – Minnesota

WHO WE SERVE
7-county Twin Cities Metro Area
110 communities
2,700,000+ people

OUR FACILITIES
9 wastewater treatment plants
640 miles of interceptors
250 million gallons per day (avg)

OUR ORGANIZATION
600+ employees
$7 billion in valued assets
$150 million / yr capital program

MCES Serves ~50% of the State’s Population
Reserves Used to Reduce Municipal Wastewater Fee Increase by ~ 50% (FY21)

- March 14

FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26

- "Promised"
Capital Program – “Full Steam Ahead”

Total
2020 – 2025
$1.009 Billion

- Worksite Screening
- Masks/Social Distancing
- Frequent Communications
- Symptom/Illness Reporting
Reducing the Impacts from COVID-19: Part 2

Nadine Leslie
Chief Executive Officer
Suez
Paramus, NJ
NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES

Partnerships to reduce the impacts from COVID-19 on the water sector

Nadine Leslie
CEO, SUEZ North America
SUEZ, serving the public sector since 1869

2ND LARGEST ENVIRONMENTAL SERVICES FIRM IN NORTH AMERICA

- 7,500 Employees
- 15 Water Utilities
- 67 Public-private partnerships
- 6,000 Asset management contracts
- $2.5 Billion revenue
- 6.7 Million People served by water & wastewater operations
- 160,000 Tons of waste recycled

Partnerships to reduce the impacts of COVID-19 on the Water Sector
Our response to COVID-19 crisis

THREE MAIN GOALS:

- EMPLOYEE HEALTH AND SAFETY
- BUSINESS CONTINUITY
- FINANCIAL SUSTAINABILITY

- Protect Our Essential Workers
- Embrace the Digital World
- Resilient Solutions for Continuing Service for Customers
- Prepare for Worst Case Scenario
Technological & financial solutions for communities

- **PURIFICATION AND DISTRIBUTION OF DRINKING WATER**
- **TREATMENT AND RECYCLING OF WASTEWATER**
- **COMPREHENSIVE SET OF CHEMICAL, EQUIPMENT AND DIGITAL ENABLED SOLUTIONS TO HELP INDUSTRIES/ MUNICIPALITIES SOLVE THEIR TOUGHEST WATER, WASTEWATER AND PROCESS CHALLENGES.**
- **MANAGEMENT OF NETWORK ASSETS, CUSTOMER RELATIONS**
- **SHAPING A SUSTAINABLE ENVIRONMENT, NOW**
  - Protection of natural resources (Air, Water and Soil)
SUEZ,  
global expertise, local applications

A FULL RANGE OF PARTNERSHIPS TO MEET ALL REQUIREMENTS

⇒ Regardless of the challenge facing towns or cities — environmental transition, sustainable water management, production of renewable energy from waste, etc. — a large range of contractual models to suit all needs.

⇒ We can provide consulting and engineering services, deploy digital solutions to optimize the performance of water and waste departments, or form long-term partnerships including investments.

⇒ Contractual innovation, combined with technological, societal and digital innovation, is our trademark.
NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES

Partnerships to reduce the impacts from COVID-19 on the water sector

Nadine Leslie
CEO, SUEZ North America
Reducing the Impacts from COVID-19: Part 2
Partnerships to Reduce Impacts From COVID-19 on the Water Sector

JULY 16, 2020

Make a difference in water
Investing in the future of water

• **XPV Water Partners** is the largest water-focused investment fund in North America, managing over $400M in capital from global institutional investors.

• We invest in and work closely with entrepreneurial companies that are bringing **innovative technologies and business models** to the water sector.

• Many of these solutions are focused on the mission of providing **affordable and sustainable** clean water for all.

• Now, with utilities facing new **financial, operating, and workforce challenges** as a result of the pandemic, the need for new solutions is more urgent.

• Respondents to a recent online poll on a webinar hosted by **Global Water Intelligence** suggested that the water sector has become **more willing to take risks and try new things** as a result of COVID-19.

• XPV is proud to share stories of how its companies are helping their clients to **reduce the impacts of COVID-19**.

Source: Global Water Intelligence
Free trials, social media collaboration, rapid COVID tests

- Created a COVID-19 Relief Program, to make remote sewer asset monitoring available to utilities at no charge
- Program launched to help with new pipe blockages and ragged pumps caused in part by toilet paper shortages
- Offers 3-5 units installed for high risk, critical locations requiring frequent spill monitoring, with no fees for up to six months
- Offers reliable, real-time, continuous data and alarms
- Reduces need for high frequency cleaning and manual monitoring
- The program has been continued, though supplies are now limited as units have been deployed
  https://smartcoversystems.com/

- Started Water Action Platform as What’s App chat forum to share learning and best practices in response to COVID-19
- Started as 10 utilities sharing experiences, expanded to over 100 utilities in ten days
- Membership now includes ~750 people from ~400 organizations across 64 countries
- The group offers bi-weekly webinars that provide a platform for global collaboration and coordinated action based on shared knowledge
- Meanwhile, Isle Utilities continues to offer its regional TAG meetings virtually instead of in person, including new TAG groups on resiliency and PFAS
  https://www.wateractionplatform.com/

- Used its specialized microbial testing expertise and manufacturing capabilities to pivot quickly to offer precise, high volume testing for COVID-19
- Now producing 500,000 clinical COVID-19 tests per week for the Canadian government and ramping up to support other public health agencies
- Also offers new solutions to quickly and accurately test for the presence of SARS CoV-2 virus on surfaces, or in air or wastewater
- This test can be applied to nearly any surface that humans come in contact with, allowing users to know within two hours if the virus was detected
  https://environment.luminultra.com/

https://smartcoversystems.com/
https://www.wateractionplatform.com/
https://environment.luminultra.com/
Workforce & operations support, data management, risk management

- Providing non-hazardous, supplemental carbon for biological nutrient removal
- Proactive supply chain management meant no missed deliveries due to COVID – including at NYDEP, which uses over 400,000 gallons/month in six treatment plants
- “Nitrack” automated system puts optimization on remote control – recent remotely managed startup of new system in Sarasota FL; tune-ups and further operational optimization all done remotely
- Also offers rapid BOD response for changing WWTP conditions – eg Disney World shutdown impact at Reedy Creek plant in FL

https://www.microc.com/

- Water data managed securely in the cloud
- Client utilities were better able to access & operate mission critical systems during office closures and WFH than those with on-premise systems
- Seamless operation of world’s largest hydrologic monitoring system – 16,500 real time gauges at US Geological Survey
- Electronic inspection, data collection, and reporting monitors FOG compliance more efficiently as restaurants reopen
- Electronic reporting of industrial pretreatment offers utilities better inflow intelligence during period of relaxed enforcement

https://aquaticinformatics.com/  
**Aquatic Informatics was acquired by the Danaher Water Platform on July 14, 2020**

http://www.bcrinc.com/

- Cost-effective, EPA approved biosolids treatment for pathogen removal
- While not a primary route to infection, concerns have been raised about the presence of virus in untreated sewage
- Testing completed in April demonstrated that BCR’s CleanB chlorine dioxide technology for sludge disinfection kills 99.9% of poliovirus, which is harder to kill than SARS COV-2
- BCR now offering mobile CleanB treatment units that can be rapidly deployed to areas with infection concerns, or larger units for permanent installation
COVID-19 IMPACTS on Water and Wastewater Consultants

Douglas Varner, PE

July 15, 2020
Over 700 U.S. cities have halted plans to repair roads and make other key investments in critical infrastructure, as governments have been unwilling to authorize such a cash infusion, forcing many cities to take drastic steps to balance their budgets for fiscal 2021, which for many governments begins on July 1.

Cities have already predicted they would need about $5 billion to help cover the massive, unanticipated declines in tax revenue and other costs incurred from the pandemic, which has shuttered businesses and left millions of Americans out of work. But officials have been unwilling to authorize such a cash infusion, forcing many cities to take drastic steps to balance their budgets for fiscal 2021, which for many governments begins on July 1.

**DRINKING WATER utilities**

$14 billion financial impact

**CLEAN WATER utilities**

$13 billion financial impact
Agenda

Work from Home (WFH) & Return to Office (RTO)

Challenges for the Water & Wastewater Consultants

Innovations to Stay Connected

Lessons Learned
Initiated **Work from Home (WFH)** directive
COVID committees gather **all orders from State, County and City**

Work with **Property Management** – change from MERV 10 to MERV 13 Air Filters

Enhanced sanitation and office cleaning – mandatory flat surfaces and doorknobs, removing trashcan liners nightly and new mop heads nightly
Employees in office only if absolutely mandatory

- 50% maximum office capacity
- Business Technology group developed a reservation ticket system email, similar to online restaurant reservations
- Face covers required in common areas
- 6-foot distancing mandated

At least 30 days after rollout of Phase 1 to ensure employee safety

- Controlled occupancy of employees that choose to RTO
- Must demonstrate sustainable practices to accommodate higher occupancy levels

Restoration to full occupancy

- Vaccine or other mitigation measure widely available
Internal Challenges for Consultants

- Educating CDM Smith staff – *Intranet site*
- Home wi-fi/printing,copying
- “Welcome to the Webcam”
  – *Training by Decker Communications*
- Virtual interviews
  - March 19, 2020 – Firm’s first virtual interview
  - Developed Lessons Learned
- Hiring/onboarding new employees
  - Hires after March 16, 2020, have not reported to an office
  - Spring 2020 graduates struggling to find community
- Home environment – *part-time teacher, childcare, dogs barking and adolescent refereeing*
Getting Innovative to Stay Connected

**Internally at CDM Smith:**
- Virtual Office Happy Hours
- Group text threads/Microsoft Teams chats
- Internal project meetings at local parks
- Outdoor Community Service

**Externally with Clients:**
- Virtual Office Happy Hours
- Outside activities – golf, mountain climbing, fishing
- Weekly Webinars with CEUs for clients
Lessons Learned

Do we really need all the space we have leased?

Clients are struggling with the same WFH conditions.

Developing a sense of community and family is more important than ever.
Lessons Learned

Sell COVID-19-related projects.

- Utilized internal R&D funding
  - Partnered with GLWA and Michigan State
  - Field test kit pilot with Brown Univ
- Ontario, Canada
  - Multiple utilities & Ontario Tech

Using water-based epidemiology, it is possible to detect COVID-19 seven to 16 days faster as compared to diagnostic testing.

It is possible to detect COVID-19 at least 7 days faster as compared to testing individuals.

Randazzo et al. 2020. Water Research
Reducing the Impacts from COVID-19: Part 2

Beverley Stinson
Executive Vice President
AECOM
Crownsville, MD
Transformation & Elevation – Bold & Courageous Leadership

Our industry is at the epicenter of solving our nations problems

- Covid-19
- Social & Racial Injustice

**RESPONSE**

- Pandemic Response
  - Temporary facilities
  - Disaster response support

**RECOVERY**

- Return to Service
  - Safe and effective re-opening

- Economic Stimulus
  - Critical Infrastructure
  - Positioning priority projects for funding

**BETTER NORMAL**

- Better Normal
  - Reimagining cities: open streets, sustaining reduced traffic congestion and improved air quality
  - Addressing equity: digital divide
ECONOMIC HEALTH THROUGH PUBLIC HEALTH – WASTEWATER MONITORING FOR COVID-19

A Nationwide approach provides a cohesive and coordinated leading edge indicator

A phased approach can accelerate wastewater testing to promote confidence in reopening and provide up to 2 weeks of advance notification of virus reemergence.

Monitoring at multiple WWTPs in small, medium and large metropolitan and suburban areas allows for localized identification of infection.

Sampling in sequentially smaller subsections of the sewage collection system can help to identify local infection hotspots.
TRANSFORMING HOW WE WORK – REMOTE BUT NOT DISTANT

Opportunity to communicate more effectively with our communities

- Further Apart but Closer Together
  - “Flattened” our Organization
  - Constant Communication
  - Accessible and Transparent

- Hackathons
  - Greater Engagement & Creativity
  - Clients and Industry Thought Leaders

- Zoom Workshops
  - “Tea time” technical sessions

- Virtual Public Meetings
  - Personal interaction
  - Digital response
TRANSFORMING HOW WE WORK - REVERSE MENTORING

Think with Wisdom, Speak with Kindness, Act with Love

- Reverse Mentoring
  - What is it like to be you?
  - How can I do better?
  - What would you like to see us do differently?

- We are on a journey together
Eric Rothstein
Principal
Galardi Rothstein Group
Chicago, IL

J. Anthony Beard
Principal and Managing Member
Concentric Municipal Advisors
Atlanta, GA
National Association of Clean Water Agencies
Partnerships to Reduce the Impacts from COVID-19 on the Water Sector

Funding and Financing Strategies to Address Coronavirus Impact

Eric P. Rothstein, Principal, Galardi Rothstein Group
Jim Beard, Principal, Concentric Municipal Advisors
July 16, 2020

E-mails: erothste@grg-ltd.com | jbeard@concentricma.com
# Water Sector Strength

## Water and Sewer Credits by System Size: Key Statistics

<table>
<thead>
<tr>
<th></th>
<th>Very Large</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Very Small</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Operating Revenues</strong></td>
<td>More than $150M</td>
<td>$150M - $75M</td>
<td>$75M - $25M</td>
<td>$25M - $5M</td>
<td>Below $5M</td>
</tr>
<tr>
<td><strong>Liquidity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available Reserves ($000s)</td>
<td>190,681</td>
<td>80,942</td>
<td>34,946</td>
<td>9,414</td>
<td>1,684</td>
</tr>
<tr>
<td>Days cash on hand</td>
<td>451</td>
<td>514</td>
<td>456</td>
<td>470</td>
<td>438</td>
</tr>
<tr>
<td><strong>Capital Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt to Capitalization</td>
<td>47</td>
<td>32</td>
<td>31</td>
<td>35</td>
<td>44</td>
</tr>
<tr>
<td>Debt Service Coverage - All Debt</td>
<td>1.87</td>
<td>2.09</td>
<td>2.01</td>
<td>1.93</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top 10 customers as % of operating revenues</td>
<td>6.1</td>
<td>6.3</td>
<td>8.5</td>
<td>10.3</td>
<td>11.2</td>
</tr>
<tr>
<td>Top Customer as a % of operating revenue</td>
<td>1.7</td>
<td>1.6</td>
<td>2.3</td>
<td>3.0</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: S&P Global Ratings, US Municipal Water and Sewer Utility Sector is Stable as Median Ratios Show Improved Finances, August 2019
## Financing Strategies

<table>
<thead>
<tr>
<th>1. Restore and Accelerate Advance Refunding</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$3 Billion</td>
</tr>
<tr>
<td></td>
<td>Coupon Savings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Establish a Targeted Water Sector Liquidity Facility</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$100 Billion</td>
</tr>
<tr>
<td></td>
<td>Liquidity Support</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>3. Expand State Revolving Fund Lending with Short-Term Loans</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$10 Billion</td>
</tr>
<tr>
<td></td>
<td>Lending Support</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>4. Expand and Improve Access to Bank Qualified (BQ) Debt</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$30 Billion</td>
</tr>
<tr>
<td></td>
<td>Lending Support</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>5. Establish a New Taxable, Interest-Subsidized, Infrastructure Bond (TIIB)</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$400 Billion</td>
</tr>
<tr>
<td></td>
<td>Leverage Inv.</td>
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</table>
Disclosure

- Galardi Rothstein Group (GRG) and Concentric Municipal Advisors (CMA) are Registered Municipal Advisors within the meaning as defined in Section 15B (e) of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder (Municipal Advisor Rule).
- However, neither GRG nor CMA are acting as a Municipal Advisors during this webinar, and the opinions or views contained herein are not intended to be, and do not constitute “advice” within the meaning of the Municipal Advisor Rule.
- This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation.
Q & A
UPCOMING 2020

Conferences & Events

Partnerships to Reduce the Impacts from COVID-19 on the Water Sector
Webinar: Part 3
July 28, 2020 | 2:00 PM – 3:30 PM EST

Hot Topics in Clean Water Law
Webinar: Part 3
September 16, 2020 | 2:00 PM – 3:30 PM EST

Learn More and Register at www.nacwa.org/events
NACWA’s strength is in our members.

NACWA is the nation’s recognized leader in clean water advocacy for public utilities, made possible through the collective voice of our members.

Experience the value in membership through...

- Legislative, regulatory, legal, and communications information and analysis.
- Peer-to-peer resources exchange and support.
- Interactive webinars and events.
- Recognition for your clean water utility’s achievements through our national awards programs.

Learn more at nacwa.org/join.