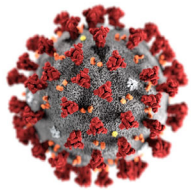


# Partnerships to Reduce the Impacts from COVID-19 on the Water Sector

WEBINAR SERIES: PART 2



The National Association of Clean Water Agencies

July 16, 2020 | 2:00 PM - 3:30 PM EST

50 | NACWA 

THANK YOU TO OUR ALL-CONFERENCE SPONSORS

## Clean Water Champions



**AECOM**



**GREELEY AND HANSEN**



**RAFTELIS**

The logo for xylem, with the word 'xylem' in a blue sans-serif font and the tagline 'Let's Solve Water' in a smaller blue font below it.

THANK YOU TO OUR ALL-CONFERENCE SPONSORS

## Clean Water Stewards

Beveridge  
& Diamond



**Brown** AND  
**Caldwell**

**CDM**  
**Smith**

**Jacobs**

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## Clean Water Protectors

AQUALAW

 BARNES &  
THORNBURG<sub>LLP</sub>

  
BLACK & VEATCH

HDR

 WAIDE  
TRIM



THANK YOU TO OUR ALL-CONFERENCE SPONSORS

## Clean Water Allies



## WEBINAR SERIES FEATURED SPEAKERS



**Yvonne Forrest**

Deputy Director  
Houston Water



**Leisa Thompson**

General Manager  
Metropolitan Council  
Environmental Services



**Cindy Wallis Lage**

Executive Director, President  
Black & Veatch



**Beverley Stinson**

Executive Vice President  
AECOM



**Thomas Brzezinski**

Chief Business  
Development Officer  
WadeTrim



**J. Anthony Beard**

Principal and Managing Member  
Concentric Municipal Advisors



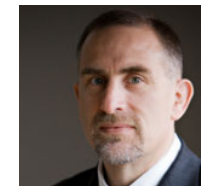
**Nadine Leslie**

Chief Executive Officer  
SUEZ



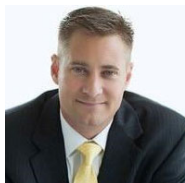
**Tanya McCoy**

Senior Vice President  
Arcadis



**Eric Rothstein**

Principal  
Galardi Rothstein Group



**Douglas Varner**

Senior Vice President  
CDM Smith



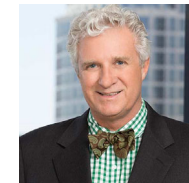
**Debra Coy**

Executive in Residence  
XPV Water Partners



**George Hawkins**

Founder & Executive Director  
Moonshot Missions



**Steve Straus**

President  
Glumac

Today's Featured Speakers



**Leisa Thompson**

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



**Douglas Varner**

Senior Vice President  
CDM Smith  
Fort Worth, TX



**Nadine Leslie**

Chief Executive Officer  
Suez  
Paramus, NJ



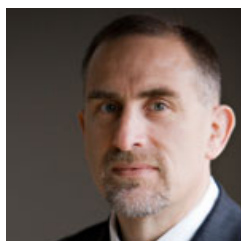
**Debra Coy**

Executive in Residence  
XPV Water Partners  
Clarksville, MD



**Beverley Stinson**

Executive Vice President  
AECOM  
Crownsville, MD



**Eric Rothstein**

Principal  
Galardi Rothstein Group  
Chicago, IL



**J. Anthony Beard**

Principal and Managing Member  
Concentric Municipal Advisors



## Leisa Thompson

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

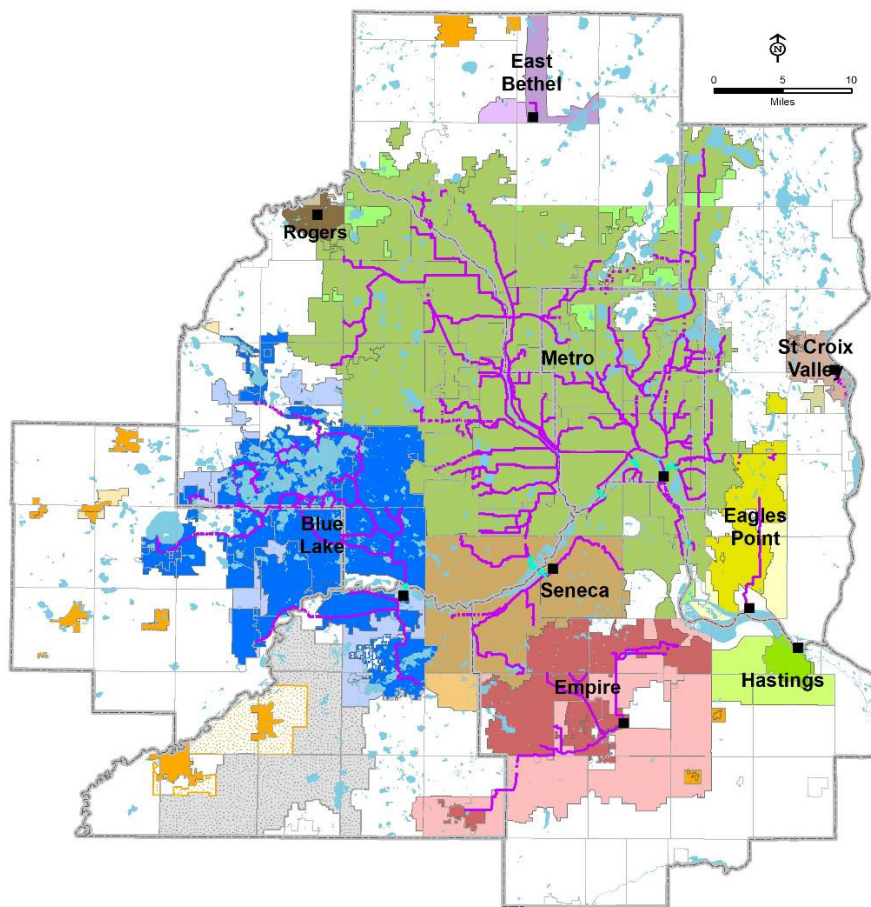


Leisa Thompson, General Manager  
Metropolitan Council Environmental Services

Partnerships to Reduce the Impacts from Covid-19 on the  
Water Sector: July 16, 2020



# 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)

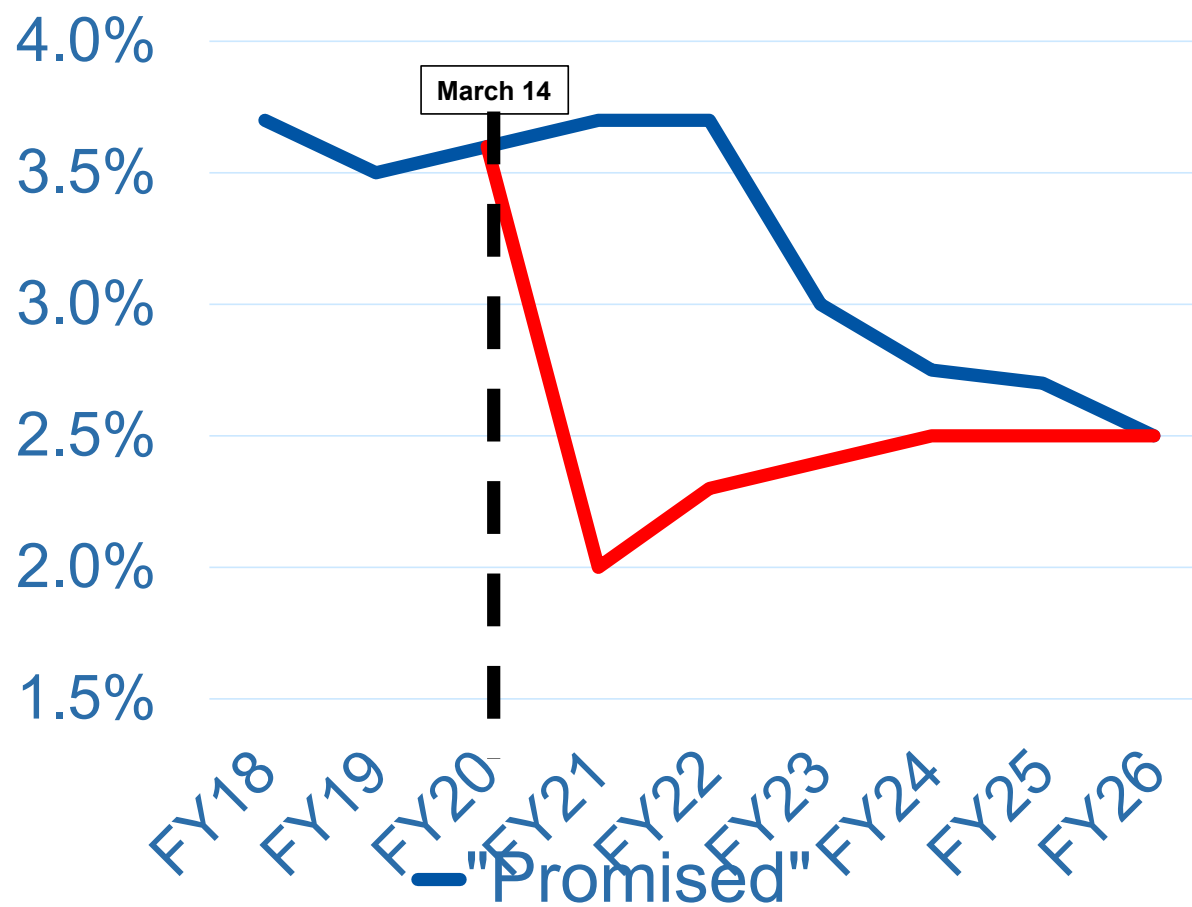
## OUR ORGANIZATION

600+ employees

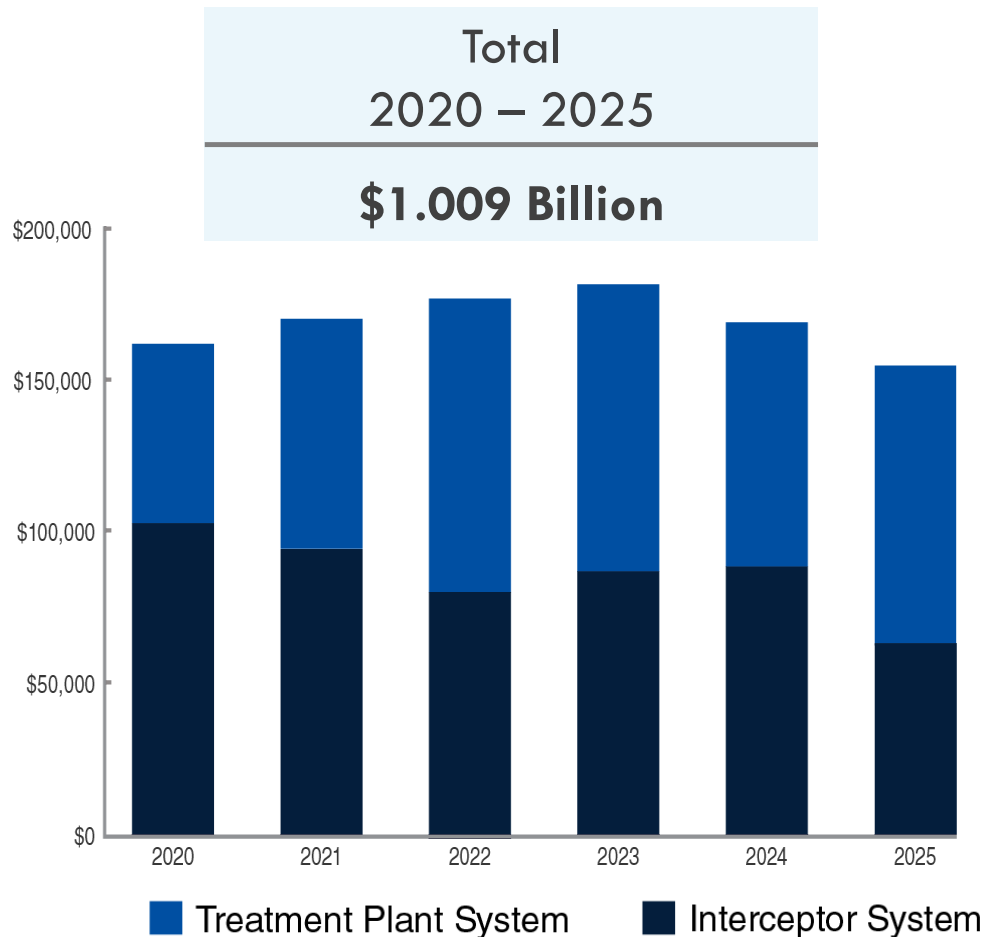
\$7 billion in valued assets

\$150 million / yr capital program

## Reserves Used to Reduce Municipal Wastewater Fee Increase by ~ 50% (FY21)



# Capital Program – “Full Steam Ahead”



- Worksite Screening
- Masks/Social Distancing
- Frequent Communications
- Symptom/Illness Reporting







**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





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

**SUEZ,**  
serving the public sector since 1869

**2<sup>ND</sup> LARGEST ENVIRONMENTAL  
SERVICES FIRM  
IN NORTH AMERICA**

**7,500**  
Employees

**67** Public-private  
partnerships

**\$2.5**  
Billion revenue

**15** Water  
Utilities

**6,000** Asset  
management  
contracts

**6.7** Million  
People served by  
water & wastewater  
operations

**160,000**  
Tons of waste recycled



# 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







## Debra Coy

Executive in Residence  
XPV Water Partners  
Clarksville, MD







# 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**.

### How has the pandemic affected the water sector's attitude to risk and innovation?

We are more risk adverse - risk is more frightening now

6%

We are reactive - executing crisis management solutions

30%

We are more willing to take risks and try new things

57%

No substantive permanent change once crisis is over

6%

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/>

## 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*



- 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

<http://www.bcrinc.com/>



## Douglas Varner

Senior Vice President  
CDM Smith  
Fort Worth, TX

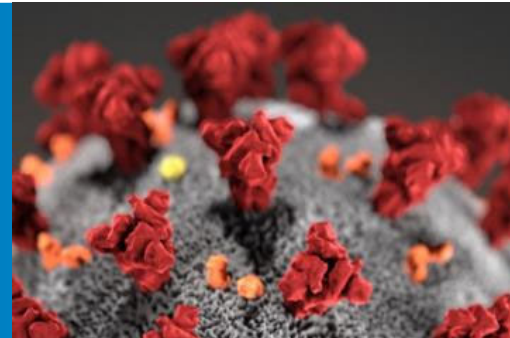


# COVID-19 IMPACTS

## on Water and Wastewater Consultants

Douglas Varner, PE

July 15, 2020



**CDM  
Smith®**

NACWA 

The Washington Post

DRINKING  
WATER

*utilities*

↓ 17%

\$14

billion

*financial impact*

CLEAN  
WATER

*utilities*

↓ 20%

\$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



# MARCH / 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16					
22	23					
29	30	31				

Initiated **Work from Home**  
(WFH) directive





# RTO

## FOUR phases of Return to Office (RTO)



### PHASE

0

- 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



# RTO

## PHASE

1

- 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

## PHASE

2

- 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

## PHASE

3

- 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.



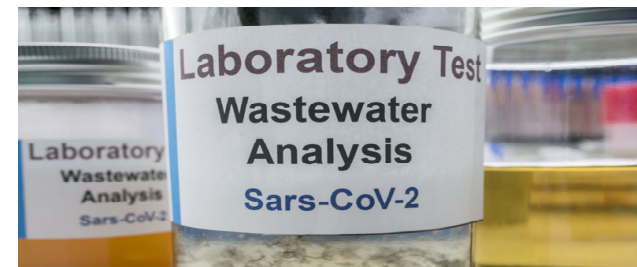




# Lessons Learned

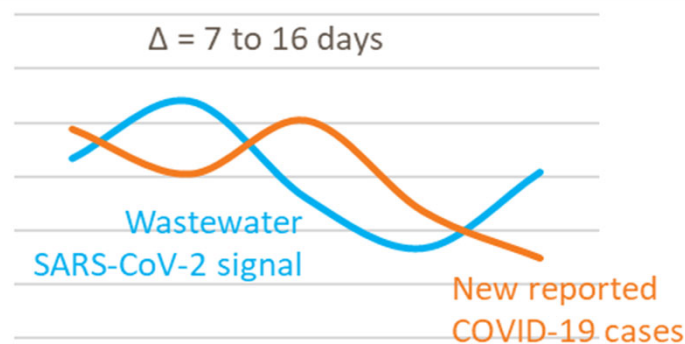
## Sell COVID-19-related projects.

- 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.*



Miyani et al. 2020. Under peer review at J Env Eng.  
Peccia et al. 2020. Preprint from MedRxiv.  
Randazzo et al. 2020. Water Research.



THANK YOU

**Douglas Varner, PE**

Sales Director | CDM Smith  
VarnerDL@cdmsmith.com





## Beverley Stinson

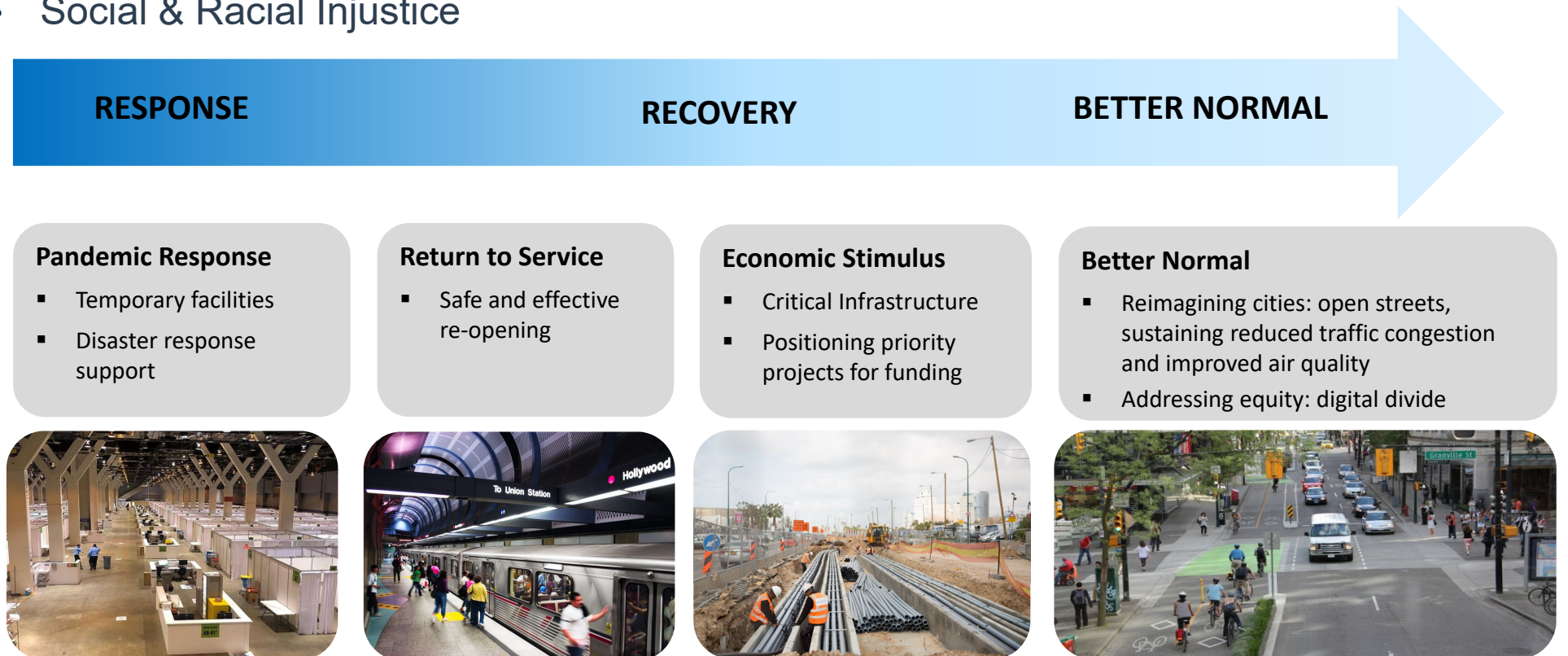
Executive Vice President  
AECOM  
Crownsville, MD



# Transformation & Elevation – Bold & Courageous Leadership

**Our industry is at the epicenter of solving our nations problems**

- Covid-19
- Social & Racial Injustice



# ECONOMIC HEALTH THROUGH PUBLIC HEALTH – WASTEWATER MONITORING FOR COVID-19

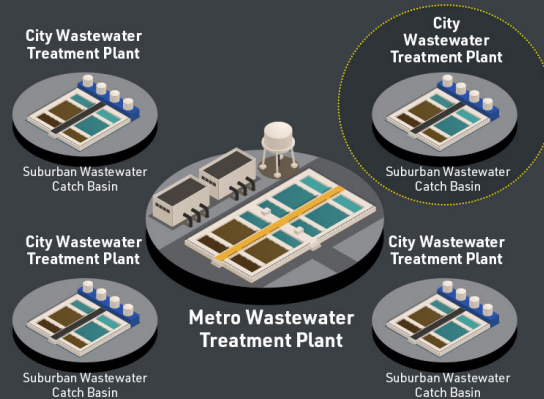
A Nationwide approach provides a cohesive and coordinated leading edge indicator

## ► NATIONAL/STATE



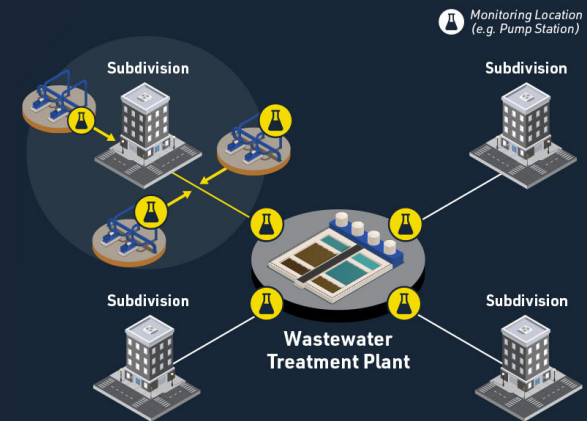
A phased approach can accelerate wastewater testing to promote confidence in reopening and provide up to 2 weeks of advance notification of virus reemergence.

## ► METROPOLITAN AREA



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

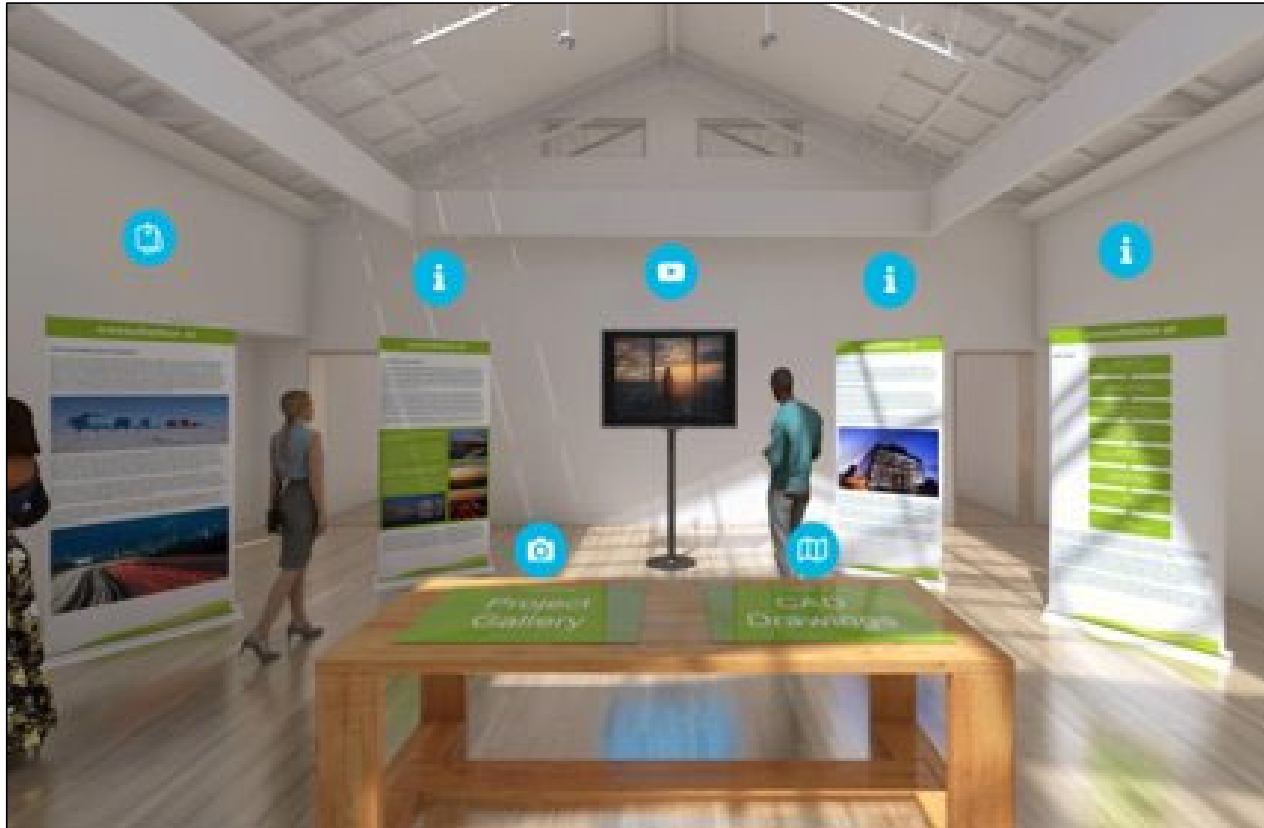
## ► CITY DISTRICT



*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](mailto:erothste@grg-ltd.com) | [jbeard@concentricma.com](mailto:jbeard@concentricma.com)

# Water Sector Strength

Water and Sewer Credits by System Size: Key Statistics					
	Very Large	Large	Medium	Small	Very Small
Annual Operating Revenues	More than \$150M	\$150M - \$75M	\$75M - \$25M	\$25M - \$5M	Below \$5M
Liquidity					
Available Reserves (\$000s)	190,681	80,942	34,946	9,414	1,684
Days cash on hand	451	514	456	470	438
Capital Structure					
Debt to Capitalization	47	32	31	35	44
Debt Service Coverage - All Debt	1.87	2.09	2.01	1.93	1.60
Concentration					
Top 10 customers as % of operating revenues	6.1	6.3	8.5	10.3	11.2
Top Customer as a % of operating revenue	1.7	1.6	2.3	3.0	3.4
Source: S&P Global Ratings, US Municipal Water and Sewer Utility Sector is Stable as Median Ratios Show Improved Finances, August 2019					

# Financing Strategies

	Potential Impact
1. Restore and Accelerate Advance Refunding	\$3 Billion Coupon Savings
2. Establish a Targeted Water Sector Liquidity Facility	\$100 Billion Liquidity Support
3. Expand State Revolving Fund Lending with Short-Term Loans	\$10 Billion Lending Support
4. Expand and Improve Access to Bank Qualified (BQ) Debt	\$30 Billion Lending Support
5. Establish a New Taxable, Interest-Subsidized, Infrastructure Bond (TIIB)	\$400 Billion Leverage Inv.

# 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](http://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](https://nacwa.org/join).