COVID-19 UTILITY AND WATER SECTOR ORGANIZATION IMPACT SURVEY (APRIL 17-22, 2020)
Overview: AWWA surveyed member utilities and other water sector organizations in the U.S. and Canada to gauge the impacts of COVID-19 and actions being taken to manage risk and plan for contingencies. The survey was conducted online. Each question provided an option of “unable to answer” in order to ensure results are as accurate as possible. All “unable to answer” responses have been removed from analysis. The results represent a snapshot of time of the survey period below.

Survey Period: April 17-22, 2020

Response Summary:
- Total Responses: 598
- Utility Responses: 546
  - Unique Utilities: 541
- Non-Utility Responses*: 52

Margin of Error: +/- 4% - Utilities
Confidence Level: 95%
Percentages may add up to more than 100% due to rounding

Key Takeaways:

- Most utilities are implementing CDC guidance for essential workers with 98% incorporating social distancing and increased disinfecting of workspaces and 78% either implemented or in the process of providing face coverings to workers
- 56% of utilities surveyed indicate they are currently seeing supply chain issues for PPE
  - A third of utilities are currently completely out of N95 masks and only 10% say they can restock as needed
  - While almost 80% of utilities have at least 2 weeks inventory of sanitizing products, only about 30% say they are able to restock
- A third of utilities are currently completely out of N95 masks and only 10% say they can restock as needed
- A third of utilities are currently completely out of N95 masks and only 10% say they can restock as needed
- Nearly a 75% of utilities surveyed say they are currently or anticipating reductions in revenue with about 25% saying they are already seeing these impacts
  - Over 40% of utilities that are experiencing or anticipating revenue generation issues predict that it is at least slightly likely to impact their ability to maintain current levels of service
  - About 40% of utilities have reduced maintenance/repair schedules and 30% are delaying capital construction
- Almost 30% of service providers surveyed are already seeing revenue loss with another 50% expecting soon; almost 70% have already implemented budgetary cutbacks

*Non-Utility includes consultants and manufacturer & related
EXECUTIVE SUMMARY

While water systems have responded quickly to the COVID-19 pandemic in order to ensure that essential operations will continue with no disruptions water service and to ensure public health, they are facing challenges in Personal Protective Equipment (PPE) supply chains and, if not already, are expecting to see reductions in revenue and other financial impacts.

Over half (56%) of utilities have indicated they are currently experiencing PPE supply chain distributions and another 23% are expecting to see it soon. Mirroring shortages seen in other essential sectors, N95 masks are difficult to find. A third of utilities say they are completely out and another 17% say they only have enough to last a week. Only 10% say they can restock as needed. Sanitizing products to disinfect workspaces and hand sanitizers are also affected. While over 80% of utilities say they have at least two-week supply, only 30% say they can currently restock these products. Other PPE products, such as protective eye wear and nitrile/latex gloves are not affected as much, and many utilities have sufficient inventory on hand and are able to restock.

Ninety-six percent of surveyed utilities have suspended water shut offs and they are taking other actions to assist, such as suspending late payment fees (71%) and even returning suspended accounts to service (35%). These actions help protect public health but can also lead to financial impacts and a loss of revenue. Nearly 75% of utilities surveyed say they are currently or anticipating reductions in revenue with about 25% saying they are already seeing reductions. For utilities that are currently or expecting revenue reductions, about 40% of them indicate that it is at least slightly likely that it could impact their ability to maintain current levels of service. Additionally, these financial impacts are resulting in changes to maintenance/repair schedules and capital construction. About 40% of utilities have already reduced maintenance/repair schedules, 30% are delaying capital construction, and 17% are suspending capital construction already in progress. Another 25% are anticipating having to reduce maintenance/repair schedules and 37% and 19% are anticipating delaying capital construction and suspending in progress construction, respectively.

Water systems also are facing and responding to additional challenges including incorporating social distancing and other CDC guidance for essential workers. Just about all utilities surveyed are incorporating social distancing and disinfecting workspaces regularly. Additionally, almost 80% have either implemented or working on implementing supplying face coverings for their on-site employees.

Other areas are currently not presenting major challenges. Supply chain for treatment chemicals remain relatively unaffected, with only 3% of surveyed utilities saying they are seeing issues. Nine percent indicated they are seeing issues with absenteeism and 71% of surveyed utilities are not anticipating absenteeism to effect continuity of operations.

For the service providers who provide critical support to the water sector, almost 30% of service providers surveyed are already seeing revenue loss with another 50% expecting soon. Many (68%) have had to respond to this by budgetary/spending reductions and another 26% are anticipating having to do so soon. Finally, 74% of service providers surveyed say they have already adjusted staffing protocols to adjust to the changing landscape.

1 The Financial Impact of the COVID-19 Crisis on U.S. Drinking Water Utilities. Raftelis, AWWA, AMWA, April 14, 2020
Virtually all utilities are trying to maintain social distance and are disinfecting and cleaning workspaces, a majority are promoting self-monitoring of symptoms and wearing a mask.

Q7. The CDC recently released guidance for safety practices for critical infrastructure workers who may have been exposed to COVID-19. Please indicate below what practices have been implemented at your utility.
U.S. utilities surveyed report two most pressing challenges are supply chain disruptions for PPE and need to separate workforce; however, revenue generation issues may soon it over 3 in 4 utilities.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?
Canadian utilities surveyed are more likely to report the need to separate workforce than those in the U.S., but they are also seeing PPE supply chain issues and coming revenue challenges.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?

- **Need to separate or distance workforce from support/contract service**: 83% currently, 5% anticipating within next month, 5% anticipating in month or more, 2% not anticipating.
- **Disruption in supply chain for Personnel Protective Equipment (PPE)**: 26% currently, 10% anticipating within next month, 14% anticipating in month or more, 2% not anticipating.
- **Impacts on field operations and/or treatment operations**: 38% currently, 12% anticipating within next month, 17% anticipating in month or more, 2% not anticipating.
- **Revenue generation/cash flow**: 27% currently, 22% anticipating within next month, 17% anticipating in month or more, 8% not anticipating.
- **Continuity of operations due to absenteeism**: 64% currently, 8% anticipating within next month, 8% anticipating in month or more, 2% not anticipating.
- **Disruption in supply chain for other materials besides treatment chemicals**: 52% currently, 26% anticipating within next month, 17% anticipating in month or more, 5% not anticipating.
- **Disruption in supply chain treatment chemicals**: 78% currently, 17% anticipating within next month, 17% anticipating in month or more, 2% not anticipating.
Disruption in PPE supply chains and revenue generation emerging as two most pressing challenges for utilities as other anticipated impacts see decline in same time period

Methodology Note: Change was calculated from identifying 209 respondents that answered in both surveys and weighting total responses from Survey 2 to utility size distribution in Survey 3. Then the percent change of both methods were averaged to get the numbers presented in this draft. The exact same question was asked in Surveys 2 and 3.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?
A third of utilities surveyed say they are currently completely out of N95 masks and/or elastomeric respirators. Inventory is higher for face shields/protective eye wear and gloves.
Less than 10% of utilities surveyed indicated they can restock N95 masks and/or elastomeric respirators and less than a third can get sanitizing products.

Q9. What is your current ability to restock Personal Protective Equipment (PPE) as needed?
Very large utilities are more likely to be reporting current or anticipated revenue generation issues as well as broader financial impacts including budget/spending reductions.

Q2: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19: Revenue generation/cash flow

Q16. Is COVID-19 currently or potentially presenting any budgetary, revenue, or spending reductions?
In less than a month, utilities currently experiencing financial impacts due to the COVID-19 pandemic increased between 15% and 19%, this represents nearly a doubling of surveyed utilities reporting financial impacts; conversely those not anticipating impacts declined.

Utilities *Currently* Experiencing Revenue and Other Financial Impacts

<table>
<thead>
<tr>
<th>March 25-30</th>
<th>April 17-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue, budget, or spending reductions</td>
<td>37%</td>
</tr>
<tr>
<td>Revenue generation/cash flow</td>
<td>19%</td>
</tr>
</tbody>
</table>

Utilities *Not Anticipating* Revenue and Other Financial Impacts

<table>
<thead>
<tr>
<th>March 25-30</th>
<th>April 17-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue, budget, or spending reductions</td>
<td>34%</td>
</tr>
<tr>
<td>Revenue generation/cash flow</td>
<td>31%</td>
</tr>
</tbody>
</table>

Methodology Note: Change was calculated from identifying 209 respondents that answered in both surveys and weighting total responses from Survey 2 (March 25-30) to utility size distribution in Survey 3 (April 17-22). Then the percent change of both methods were averaged to get the numbers presented in this draft. The exact same question was asked in Surveys 2 and 3.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?: Revenue generation/cash flow

Q16: Is COVID-19 currently or potentially presenting any budgetary, revenue, or spending reductions?
Over 40% of surveyed utilities that are experiencing or anticipating revenue generation issues predict that it is at least slightly likely to impact their ability to maintain current levels of service.

Q17: On a scale of zero (0) to five (5), with zero being extremely unlikely and five being extremely likely, how likely is it that your current or anticipated impacts to revenue will affect your ability to maintain the utility’s current level of service?

Revenue Impact on Ability to Maintain Current Level of Service

N=305
About 30% and 40% of utilities surveyed indicated that they are currently delaying capital construction and reducing maintenance/repair schedules, respectively.

Affects on Repair/Maintenance and Capital Construction

N=442 to 485

- Delay anticipated capital construction: 35% Currently in Place, 27% Currently in development, 10% Considering, 28% Currently no plans to develop
- Reduce anticipated maintenance and repair schedules: 34% Currently in Place, 17% Currently in development, 7% Considering, 42% Currently no plans to develop
- Suspending capital construction that was in progress: 64% Currently in Place, 15% Currently in development, 4% Considering, 17% Currently no plans to develop

Methodology Note: Change was calculated from identifying 209 respondents that answered in both surveys and weighting total responses from Survey 2 to utility size distribution in Survey 3. Then the percent change of both methods were averaged to get the numbers presented in this draft. The exact same question was asked in Surveys 2 and 3.

Q4a: Please indicate which of the below your organization has in place or is developing to manage risk/plan for contingencies due to COVID-19:
Holding public board meetings and lack of CEU options to keep operator licenses are the most common challenges to regulatory compliance.

**Current and Anticipated Challenges to Regulatory Compliance**

N=448 to 486

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Currently</th>
<th>Anticipating in the next month</th>
<th>Not anticipating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being able to hold required public board meetings</td>
<td>58%</td>
<td>4%</td>
<td>37%</td>
</tr>
<tr>
<td>Lack of options for operators to get CEUs to keep license current</td>
<td>33%</td>
<td>16%</td>
<td>51%</td>
</tr>
<tr>
<td>Access to sampling sites</td>
<td>25%</td>
<td>5%</td>
<td>71%</td>
</tr>
<tr>
<td>Delay of mandated repairs</td>
<td>10%</td>
<td>13%</td>
<td>77%</td>
</tr>
<tr>
<td>Reduced number of certified operators to meet required staffing rules</td>
<td>7%</td>
<td>7%</td>
<td>86%</td>
</tr>
<tr>
<td>Limitations of lab capacity</td>
<td>3%</td>
<td>7%</td>
<td>90%</td>
</tr>
<tr>
<td>Ability for labs to process samples</td>
<td>3%</td>
<td>5%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Q15: Which of the following challenges to regulatory compliance is your organization currently experiencing or anticipating in the next month?
Nearly all U.S. utilities surveyed have plans in place to ensure essential operations for employees who can’t work from home and more than 80% have incorporated polices to allow for social distancing.
Canadian utilities surveyed taking many steps to manage risk and plan for contingencies during the COVID-19 pandemic

Q4a: Please indicate which of the below your organization has in place or is developing to manage risk/plan for contingencies due to COVID-19:

- Plans to continue essential operations for field and/or plant employees and others who can't work from home
- Shift change or other policies revised to incorporate social distancing
- Work from home/telework policy for non-field employees
- Travel restrictions
- Business Continuity Plan
- Mutual aid or collaboration with nearby utilities
- Plan for operators/essential plant workers to live on-site if needed
- Utilize alternative water supplies

Canada - Actions Taken to Manage Risk and Plan for Contingencies
N=39 to 43

- Currently in Place
- Currently in development
- Considering
- Currently no plans to develop
Utilities are taking many steps to assist customers affected by the economic fallout of COVID-19 with over 90% suspending shut-offs

<table>
<thead>
<tr>
<th>Type of Assistance (n=454)</th>
<th>% Currently Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Suspending customer water shut-offs</td>
<td>96%</td>
</tr>
<tr>
<td>2  Suspending late payment fees</td>
<td>71%</td>
</tr>
<tr>
<td>3  Flexible payment plans</td>
<td>63%</td>
</tr>
<tr>
<td>4  Returning suspended accounts to service</td>
<td>35%</td>
</tr>
<tr>
<td>5  Establishing interest free payment plans</td>
<td>32%</td>
</tr>
<tr>
<td>6  Deferring payments</td>
<td>26%</td>
</tr>
<tr>
<td>7  Waiving Service Fees</td>
<td>18%</td>
</tr>
<tr>
<td>8  Continuation of existing utility managed customer assistance program with no changes</td>
<td>17%</td>
</tr>
<tr>
<td>9  Continuation of existing external customer assistance program with no changes</td>
<td>12%</td>
</tr>
<tr>
<td>10 Expanding or modifying utility managed customer assistance program</td>
<td>7%</td>
</tr>
<tr>
<td>11 Creating new customer assistance program</td>
<td>6%</td>
</tr>
<tr>
<td>12 Rate reductions/billing assistance rate</td>
<td>5%</td>
</tr>
<tr>
<td>13 Expanding or modifying external customer assistance program</td>
<td>5%</td>
</tr>
<tr>
<td>14 Bill credits or bill forgiveness</td>
<td>4%</td>
</tr>
</tbody>
</table>

Q5a: What steps are your utility currently taking to assist customers affected by the economic fallout created by the COVID-19 pandemic? (select all that apply)
Utilities are communicating various messages to their customers about the safety of drinking water and other public health messages.

<table>
<thead>
<tr>
<th>Message</th>
<th>% Currently Communicating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Safety of drinking water</td>
<td>84%</td>
</tr>
<tr>
<td>2 Slow the spread of coronavirus by washing hands</td>
<td>56%</td>
</tr>
<tr>
<td>3 Social distancing reminders</td>
<td>53%</td>
</tr>
<tr>
<td>4 Continuation of normal utility service updates</td>
<td>52%</td>
</tr>
<tr>
<td>5 What can and cannot be flushed</td>
<td>50%</td>
</tr>
<tr>
<td>6 Appreciation of essential workers in the water sector or staff highlights</td>
<td>38%</td>
</tr>
<tr>
<td>7 Options for customers affected by economic fallout</td>
<td>34%</td>
</tr>
<tr>
<td>8 CEO/GM message to customers</td>
<td>22%</td>
</tr>
<tr>
<td>9 Education activities for students at home</td>
<td>6%</td>
</tr>
</tbody>
</table>
SERVICE PROVIDERS
CONSULTANTS, MANUFACTURERS, DISTRIBUTORS, REPRESENTATIVES, ETC.
Almost 30% of Service Providers surveyed say they are currently seeing revenue reductions and over 60% say it’s presenting some sort of financial impact.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?

Q16: Is COVID-19 currently or potentially presenting any budgetary, revenue, or spending reductions?
Service providers are taking action to address the financial impacts of COVID-19 with over 2/3\textsuperscript{rd} already making spending cuts and adjusting staffing protocols.

![Bar chart showing actions taken to address financial impacts]

**Actions Taken to Address Financial Impacts**

- **Budgetary/spending restrictions or cutbacks**
  - Currently in Place: 68% (N=52)
  - Currently in development: 4%
  - Considering: 22%
  - Currently no plans to develop: 6%

- **Adjusting staffing protocols**
  - Currently in Place: 74%
  - Currently in development: 8%
  - Considering: 14%
  - Currently no plans to develop: 4%

Q4b: Please indicate which of the below your organization has in place or is developing to manage risk/plan for contingencies due to COVID-19:
Beyond the loss of revenue, the most common challenges for the Server Providers surveyed include the need to separate workforce, impacts on field operations, and PPE supply.

Q3: Which challenges to sustaining business operations are your organization currently experiencing or anticipating due to COVID-19?

Service Providers – Current and Anticipated Challenges

- Need to separate or distance workforce from support/contract service: 21% currently, 21% anticipating within next month, 53% anticipating in month or more, 5% not anticipating.
- Impacts on field operations and/or treatment operations: 39% currently, 18% anticipating within next month, 11% anticipating in month or more, 9% not anticipating.
- Disruption in supply chain for PPE: 30% currently, 30% anticipating within next month, 30% anticipating in month or more, 10% not anticipating.
- Continuity of operations due to absenteeism: 61% currently, 13% anticipating within next month, 13% anticipating in month or more, 2% not anticipating.
- Disruption in supply chain for other materials besides treatment chemicals: 44% currently, 22% anticipating within next month, 13% anticipating in month or more, 13% not anticipating.

N=38 to 46
Just about all Service Providers surveyed have work at home policies in place and over 90% have a plan in place or being developed to ensure continuation of necessary field operations.

**Actions Taken to Manage Risk and Plan for Contingencies**

- **Work from home/telework policy for non-field employees N=50**: 98% Currently in Place, 2% Currently in development
- **Travel restrictions N=52**: 90% Currently in Place, 6% Currently in development, 2% Currently no plans to develop
- **Continuation of necessary field service operations or maintaining emergency services (e.g. equipment repair/service) N=43**: 84% Currently in Place, 8% Currently in development, 2% Currently no plans to develop
- **Business Continuity Plan N=51**: 80% Currently in Place, 10% Currently in development, 2% Currently no plans to develop
- **Adjusting workflow/shift rotations to accommodate social distancing N=48**: 67% Currently in Place, 19% Currently in development, 10% Currently no plans to develop
- **Alternate supply chain options N=41**: 32% Currently in Place, 24% Currently in development, 17% Currently no plans to develop

Q4b: Please indicate which of the below your organization has in place or is developing to manage risk/plan for contingencies due to COVID-19: