SARS-CoV-2
WASTEWATER TESTING REPORT

January 22, 2021
Account: Town of Big Sky
Result Summary: Influent Sample - Detected

Sample 1: WWTP Influent

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Estimated Genomes per Liter</th>
<th>Call</th>
<th>Average N1:</th>
<th>Average N2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influent 1 N1</td>
<td>184696</td>
<td>Positive</td>
<td>184696</td>
<td>184696</td>
</tr>
<tr>
<td>Influent 2 N1</td>
<td>239726</td>
<td>Positive</td>
<td>239726</td>
<td>239726</td>
</tr>
<tr>
<td>Influent 1 N2</td>
<td>99316</td>
<td>Positive</td>
<td>99316</td>
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<tr>
<td>Influent 2 N2</td>
<td>70063</td>
<td>Positive</td>
<td>70063</td>
<td>70063</td>
</tr>
</tbody>
</table>

Sample Descriptions
Sample 1 – A composite sample of wastewater inflow to the wastewater treatment plant was captured over 24 hours on 1/20/2021. Two 40mL sub-samples were taken from the composite and processed in parallel, referred to as Influent 1 and Influent 2 in the table above.

Test Information
Each sample was tested for the presence of two nucleocapsid genes present in SARS-CoV2, N1 and N2. Signal from the test was plotted against a standard curve made of known copy numbers of N1 and N2 to quantify genomes per liter.

Interpretation
Signal for the presence of virus was consistently observed in Influent samples (Ct < 40 using CDC qPCR assay). Based on our experience with wastewater testing, this is strong evidence of virus in wastewater. Measured concentration of virus in wastewater was lower than the previous week.

Relevant text from CDC guidelines:

"...a specimen is considered positive for 2019-nCoV if all 2019-nCoV marker (N1, N2) cycle threshold growth curves cross the threshold line within 40.00 cycles (< 40.00 Ct)."

"When all controls exhibit the expected performance and the cycle threshold growth curve for any one marker (N1 or N2 but not both markers) crosses the threshold line within 40.00 cycles (< 40.00 Ct) the result is inconclusive."

Wastewater surveillance for SARS-CoV2 is novel and a developing technology, so results must be taken with consideration. Virus levels may fluctuate due to flow rates, flow volumes, and other factors. Absence of viral signal may not mean complete absence of virus in the community, although presence of viral signal certainly means presence of virus in the community at the time of sampling. Comparisons among sampling sites (e.g. between municipalities) is not recommended. Archer Biologicals, LLC is not responsible for misinterpretation of the presented data. For more information, visit our website: www.archerbiologicals.com/wastewatersurveillance

300 North Wilson Avenue
Medical Arts Building, Suite D
Bozeman, MT 59715

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Medical Arts Building, Suite D
Bozeman, MT 59715

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