# Wastewater Sampling Results and Recommended Response Strategies

<table>
<thead>
<tr>
<th>Results Range Cycle Threshold Value (CTV)</th>
<th>Results Range (RNA Copies/L)</th>
<th>Transmission Potential</th>
<th>Occupant Risk Level</th>
<th>Recommended Response Strategy¹</th>
</tr>
</thead>
</table>
| Above 40 (Negative Test Result)        | < 2,000                       | N/A                     | No Risk Identified above expected for surrounding area | - No action required based on sampling results  
- Continue to practice social distancing, the use of face coverings, and enhanced hand hygiene and respiratory etiquette  
- Continue cleaning and disinfection of common touch surfaces |
| 39.99 to 37.50 (High Uncertainty)     | 2,001 to 20,000               | Unlikely Active Transmission | Low | Additional Actions Based on Sampling Results:  
- Increased surveillance  
- Voluntary testing of building occupants  
- Isolate building occupants testing positive until negative test results received  
- Enhanced cleaning and disinfection protocols |
| 37.40 to 32.59 (Moderate Uncertainty) | 20,001 to 200,000             | Potential Transmission | Moderate | Additional Actions Based on Sampling Results:  
- Increased surveillance  
- Non-voluntary targeted testing of 50% of building occupants using NJIT’s surveillance testing program  
- Isolate building occupants testing positive until negative test results received  
- Contact tracing of students testing positive  
- Enhanced cleaning and disinfection protocols |
| 32.58 to 29.11 (Low Uncertainty)     | 200,001 to 1,999,999          | Likely Transmission | High | Additional Actions Based on Sampling Results:  
- Increased surveillance  
- Quarantine all building occupants  
- Non-voluntary testing of all building occupants using St. Michaels student health services  
- Isolate all building occupants until negative test results received  
- Contact tracing of students testing positive  
- Enhanced cleaning and disinfection protocols |
| 29.10 to < 26.49 (Very Low Uncertainty) | 2,000,000 to > 20,000,000 | High Likelihood of Transmission | Extremely High | Additional Actions Based on Sampling Results:  
- Increased surveillance  
- Quarantine all building occupants  
- Non-voluntary testing all building occupants at the beginning and end of isolation period using St. Michaels student health services  
- Isolate all building occupants until negative test results received  
- Contact tracing of students testing positive  
- Enhanced cleaning and disinfection protocols |

1. The response strategies instituted will need to consider certain aspects of the building’s population including the past, current or ongoing isolation of known positive individuals within a particular residence hall.
Discussion of CT Score by Omega Environmental from 10/2 Week Ending Summary Report

The cycle threshold (Ct) refers to the number of cycles in an RT-PCR assay needed to amplify viral RNA to reach a detectable level. The Ct value can thus indicate the relative viral RNA level in a specimen (with lower Ct values reflective of higher viral levels).

Although some laboratories utilize different ranges, a common range utilized is 20 to 40.

Since the assessment of covid-19 in sewers is an ongoing developing project the following is intended as a guideline only.

For this investigation Omega is using the following ranges:

<table>
<thead>
<tr>
<th>CT Value</th>
<th>RNA/L</th>
<th>Occupant Risk</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;40</td>
<td>&lt;2,000</td>
<td>None Detected – No Risk identified above normal for the surrounding area.</td>
<td>No Action</td>
</tr>
<tr>
<td>39.99 – 37.5</td>
<td>2,001 – 20,000</td>
<td>Low</td>
<td>Voluntary COVID-19 Testing for occupants</td>
</tr>
<tr>
<td>37.4 – 32.59</td>
<td>20,001 – 200,000</td>
<td>Moderate</td>
<td>Non-Voluntary COVID-19 testing for 50% of dorm occupants</td>
</tr>
<tr>
<td>32.58 – 29.11</td>
<td>200,001 – 1,999,999</td>
<td>High</td>
<td>Non-Voluntary COVID-19 testing for all dorm occupants. Occupant isolation until test results are received.</td>
</tr>
<tr>
<td>29.1 – &lt;26.49</td>
<td>2,000,000 - &gt;20,000,000</td>
<td>Extremely High</td>
<td>Occupant isolation for a minimum of a week. Non-Voluntary COVID-19 testing for all dorm occupants at the start and end of the week</td>
</tr>
</tbody>
</table>

Please note, there is an inverse relationship between CT values and RNA/