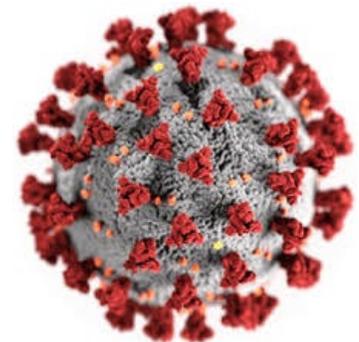


Water and the COVID-19 Pandemic

Impacts on Municipal Water Demand

HEATHER COOLEY, PETER H. GLEICK, SONALI ABRAHAM, WENJIA CAI

The sudden onset of the COVID-19 pandemic in early 2020 has imposed massive health and economic burdens on communities around the world. The full impact of the pandemic will not be tallied or understood for some time, after individual and governmental responses are implemented and evaluated. But no sector of society will be untouched, including the vitally important water sector.



This Issue Brief provides an early assessment of some of the critical impacts of the pandemic for municipal water demand. We find that stay-at-home orders and business shutdowns increased residential demand and decreased non-residential (i.e., commercial, industrial, and institutional) demand. The net effect of these changes varies from community to community, depending on the relative proportion of residential and non-residential water uses and the major economic sectors in the community.

Changes in demand have affected utility expenditures and revenue, customer water bills, water and wastewater operational conditions, and building water quality. Small systems are especially vulnerable to these impacts, as they have a smaller customer base to absorb revenue shortfalls and fewer operators. Some of these impacts will be short-lived, generally limited to the period when stay-at-home orders are in place and businesses closed. However, there could be longer-term impacts if, for example, unemployment remains high, people continue to work from home, or there are deeper changes to the economy. We do not yet know the extent or duration of these impacts. Immediate action is needed to ensure the safety of water during building reopening and improve the financial and operational resilience of utilities in the face of greater variability and uncertainty, and we offer recommendations on these issues in this Issue Brief.