

I respectfully submit this testimony in opposition to HB 1259.

My lab at North Dakota State University has been testing wastewater for the COVID-19 virus since July 2020. We currently test wastewater from 22 cities in North Dakota at a frequency of 2-4 samples per week. The wastewater is collected from the wastewater stream at a wastewater treatment facility over a 24-hour period. We use about half a cup of wastewater in our analysis and from that we determine the amount of the virus per million gallons of wastewater at the facility. I would like to make the following points about testing municipal wastewater:

- The data produced is at the population level. When we test wastewater from the city of Bismarck, we can only say how much virus is being produced by the population of the city. We cannot say anything about individual-level infections
- Wastewater testing is a cost-effective approach to monitoring COVID-19 in cities. Testing a single wastewater sample is far cheaper than mass testing of individuals in a city.
- Wastewater data can help cities decide how and when to use limited resources. For example, in a city with a population of about 900, we were detecting relatively high levels of the virus back in November and early December, and there were also high numbers of clinical cases at that time. However, virus levels recently dropped to undetectable levels and there were no reported clinical cases. This city can use the absence of the COVID-19 virus in wastewater to inform a decision not to do enhanced testing in their community.

My lab has also been working with the Department of Corrections and Rehabilitation to test wastewater at the state penitentiary in Bismarck. We began daily testing of wastewater in early October. At the time we started testing, the state penitentiary had no cases of COVID-19. We detected the virus in wastewater days before they detected their first case. This ability to detect the virus in wastewater before it is clinically evident in a population is a useful feature of wastewater monitoring and it can be used to inform decisions about how to allocate resources. This has been used to great effect by the state penitentiary.