

STATEMENT OF WORK

1. TITLE

Wastewater Surveillance for SARS-CoV-2 in the Province of Saskatchewan

2. Scope

2.1. Introduction

SARS-CoV-2 is a novel virus that has impacted public health systems around the world. Current research has suggested that wastewater surveillance for SARS-CoV-2 can be used as an early warning system for predicting cases in the community prior to cases being reported to public health. There is a need to further expand this work across Canada and to develop a national wastewater surveillance system.

2.2. Objectives of Requirement

The objective is to sample and test wastewater samples from wastewater treatment plants in Saskatoon, Prince Albert, North Battleford and from five First Nations communities in the province of Saskatchewan.

The specific objectives of this requirement are:

1. Participate in an inter-laboratory study to compare sampling methods and laboratory testing methods for SARS-CoV-2 in wastewater across Canada;
2. Perform grab or composite sampling of wastewater;
3. Test samples for SARS-CoV-2 using the following steps:
 - Viral concentration,
 - RNA extraction, and
 - Molecular detection
4. Provide local municipality or Tribal Council, provincial public health and PHAC with weekly test results in a specified format.

2.3 Background and Specific Scope of the Requirement

Throughout the Public Health Agency of Canada (PHAC) COVID-19 response, there has been a need to provide data and information that can inform public health decision making. In response to the need for early SARS-CoV-2 detection, there is an opportunity to establish a novel public health surveillance program that can provide this intelligence. Wastewater surveillance has garnered interest across the globe as an early SARS-CoV-2 detection system. In Canada, many of the building blocks for this novel surveillance system already exist. Furthermore a wastewater surveillance system can be used to address other public health concerns such as antimicrobial resistance, opioid use and other.

For SARS-CoV-2, it is critical to be able to identify the presence of asymptomatic persons in a community to afford early warning of outbreaks. This allows health managers to plan for surges in case load as well as implement quarantines, which is possible in smaller isolated

communities. Even a few days of early warning in communities can be critical to the success of isolation and preparedness.

This work will provide baseline sampling and laboratory methods for SARS-CoV-2 in wastewater and provide baseline data in communities across Canada. These results will then help inform a strategy for a national wastewater surveillance system to inform and support Canadian-specific risk assessment and policy development (through baseline data reports) related to SARS-CoV-2. These data will be integrated to clinical human data from the same geographic regions to better understand risks to Canadians. Since wastewater surveillance can be used as an indicator of increasing cases or outbreaks in a community, it provides valuable lead time that can be used to time public health decisions and preparedness.

3. Requirements

3.1 Tasks, Activities, Deliverables and Milestones

In consultation with representatives of the National Microbiology Laboratory and other project collaborators, the Contractor must:

Tasks and Activities:

- Sample and test wastewater every week for a maximum of 720 samples for the duration of this contract with guidance as requested by PHAC on sampling techniques, equipment, and sampling location and engagement with the wastewater treatment plants, First Nation communities and public health authorities.
- Analyse wastewater samples for SARS-CoV-2 using laboratory testing procedures for SARS-CoV-2 which comprise of three major steps: 1) viral concentration, 2) RNA extraction, and 3) molecular detection.
- Testing results must be provided in an excel format.
- Wastewater samples will be shipped to PHAC, National Microbiology Laboratory (NML) as directed by NML and at an agreed upon frequency and instructions will be provided for shipping to the following shipping address:

National Microbiology Laboratory
Public Health Agency of Canada
1015 Arlington Street
Winnipeg, MB R3E 3R2
Attn: Chand Mangat
Tel.: (204) 789-5000

Deliverables and Milestones:

- Provide weekly sample test results (up to 720 wastewater samples) to the Project Authority on or before March 31, 2023.

3.2 Method and Source of Acceptance

The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

3.5 Reporting Requirements:

The Contractor must provide an update during weekly working group teleconference lead by PHAC on the progress of the project and discuss any issues and/or delays that may impact the delivery of the services.

3.6 Project Management Control Procedures

The NML, Project Authority is responsible for all matters concerning the content of the work under this contract. Changes to the contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of, or outside the scope of the Contract without written approval outlines through a Contract Amendment.

4. Additional Information

4.1 Canada's Obligations

The Project Authority will:

- Provide guidance and support for sampling and laboratory methods;
- Lead weekly working group teleconferences, as required; and
- Provide epidemiological guidance of the interpretation of results from wastewater surveillance.

4.2 Contractor's Obligations

The Contractor must:

- keep detailed records related to the collection of the wastewater samples for possible review and consultation.
- provide short term storage of the wastewater samples prior to shipping to the NML.
- must use its own equipment for the performance of this Statement of Work.

4.3 Location of Work, Work site and Delivery Point

The Contractor will use its own laboratory facilities in the performance of the work where accreditation has been designated.

Due to existing workload and deadlines, all personnel assigned to this contract must be ready to work in close and frequent contact with the PHAC Representative and other agency personnel.

4.4 Language of Work

All work and deliverables will be conducted in English.