Per and Polyfluoroalkyl Substances (PFAS) Assessment at the Penticton Airport and Neighbouring Penticton Indian Band Lands 2024-2025

May 22, 2025

Overview

- Work Completed in 2024-2025
- Drinking Water Well Results
- Soil, Groundwater, and Surface Water Results on PIB Land East of the Airport Boundary
- Questions Regarding the Investigation
- Next Steps
- Questions

Work Completed in 2024-2025

- 6 boreholes at 3 locations on PIB lands east of the Airport
- 4 boreholes at 3 locations within the Airport boundary
- 3 rounds of groundwater monitoring and sampling
- 3 surface water samples from oxbow lakes and 5 samples from the Okanagan River Channel
- Water supply well sampling



Drinking Water Results

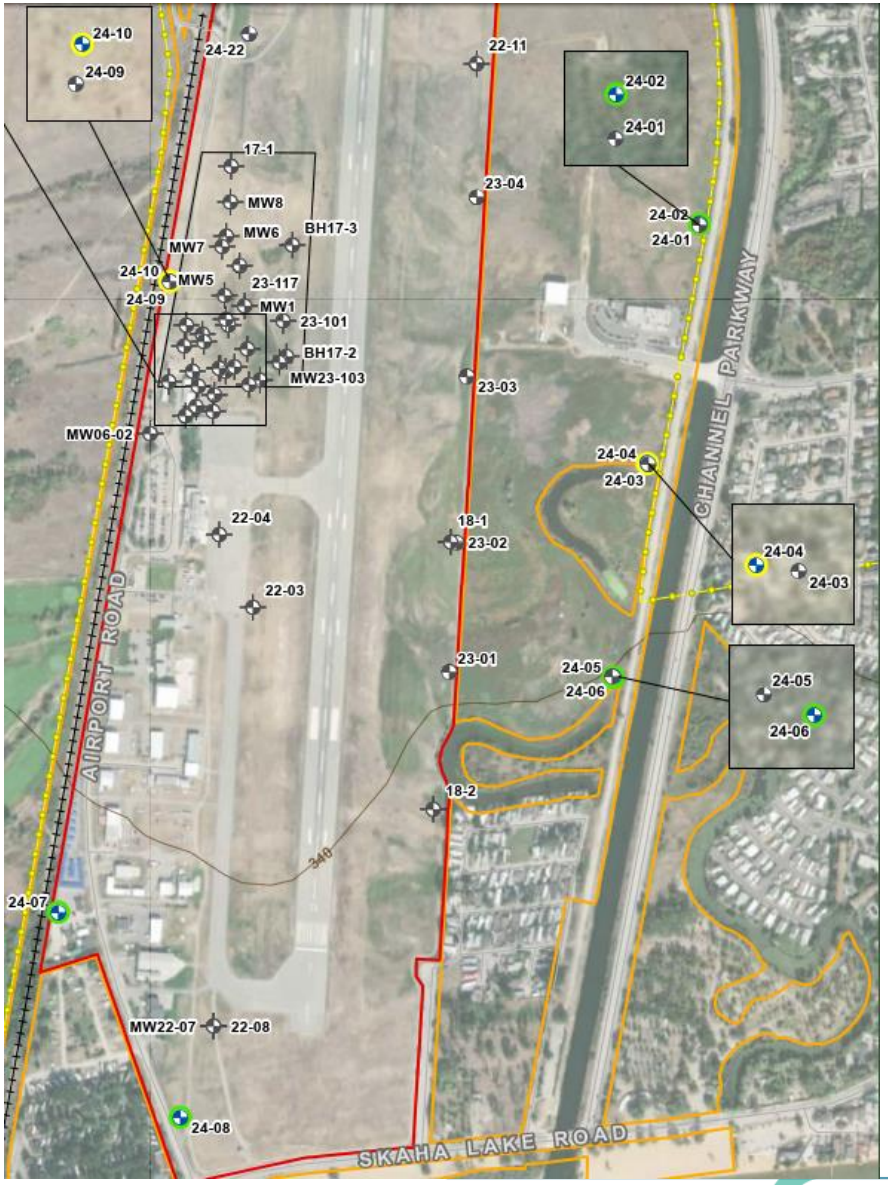
Three PIB drinking water supply wells and one irrigation supply well were sampled outside the southeast and southwest portions of the Airport, as well as the water supply well for the Airport.

There were no PFAS detected in samples from the water supply wells and therefore the drinking water met the Health Canada PFAS objective for drinking water.

Location	Sample Date	Detectable PFAS Compounds	Sum of 25 PFAS Analysis (µg/L)
Health Canada PFAS objective Value			0.03
Airport Pump House	Feb 4, 2025	None	0
Well 1028	Feb 4, 2025	None	0
Well 2051	Feb 4, 2025	None	0
Well 6383	Jan 30, 2025	None	0
Well 6492	Jan 30, 2025	None	0

Soil Results

- PFAS were detected in soil samples east of the Airport boundary
- PFOS was above the CCME guideline in one sample east of the Airport (0.5-1.0 m) and in one sample at the west airport boundary (0-0.5 m)

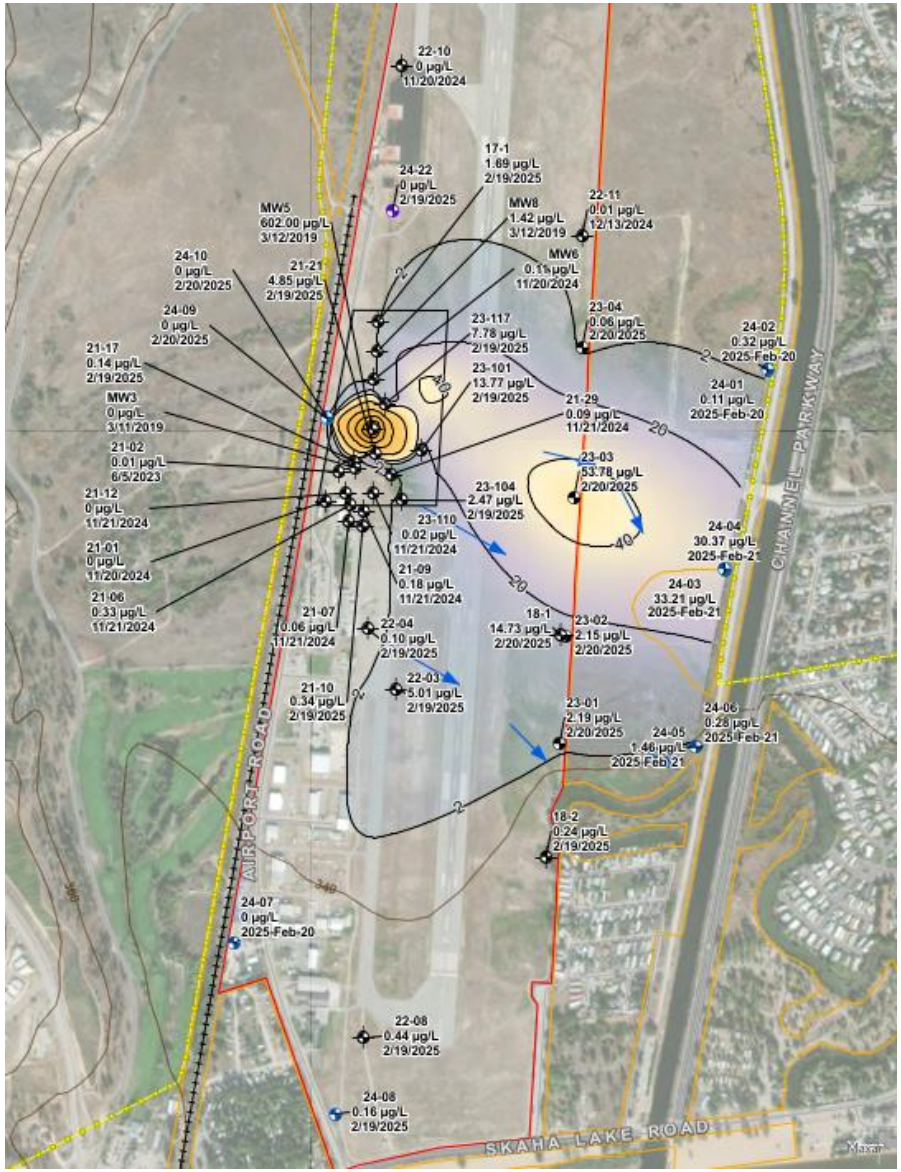


Green –PFAS concentrations **less than** HC Screening values and CCME Guidelines

Yellow – Concentrations are **greater than** CCME Human Health guideline AND **less than** CCME Ecological Health Guideline

Orange – Concentrations are **greater than** CCME Human Health guideline AND **greater than** CCME Ecological Health Guideline

Groundwater Results



- Shallow groundwater flow direction was consistent between 3 monitoring events
- PFAS exceeded the Health Canada PFAS objective for drinking water in shallow groundwater samples from all wells on PIB lands and at the southwest Airport boundary
- No PFAS were detected in the 2 wells on the west Airport boundary

Surface Water Results

- PFAS were detected above the HC PFAS objective for drinking water in samples from all three oxbow lakes. Concentrations in the two oxbows west of the Okanagan River Channel were higher than in the reference oxbow location east of the Okanagan River Channel.
- For surface water samples collected from the Okanagan River Channel, no PFAS were detected in the samples upstream of the Airport. PFAS were detected in the samples downstream of the Airport. Concentrations of all samples were below the HC PFAS objective for drinking water.

Green – Concentrations are **less than** ECCC Federal Guidelines and **less than** the HC PFAS objective for drinking water

Yellow – Concentrations are **less than** ECCC Guidelines for Surface Water but **greater than** the HC PFAS objective for drinking water

Orange – Concentrations are **greater than** ECCC Guidelines for Surface Water and **greater than** the HC PFAS objective for drinking water



Questions regarding the investigation

Proposed Next Steps

1. Continuation of groundwater and surface water sampling programs
2. Information gathering for a questionnaire on PIB's current land and water use
3. Grid sampling of surface soils on east and west sides of the Airport
4. Drinking water supply well Sampling
5. Deep aquifer assessment

The purpose of these steps is to determine where PFAS is and how it might be moving so we can understand the impacts to human health and the environment

Questions?