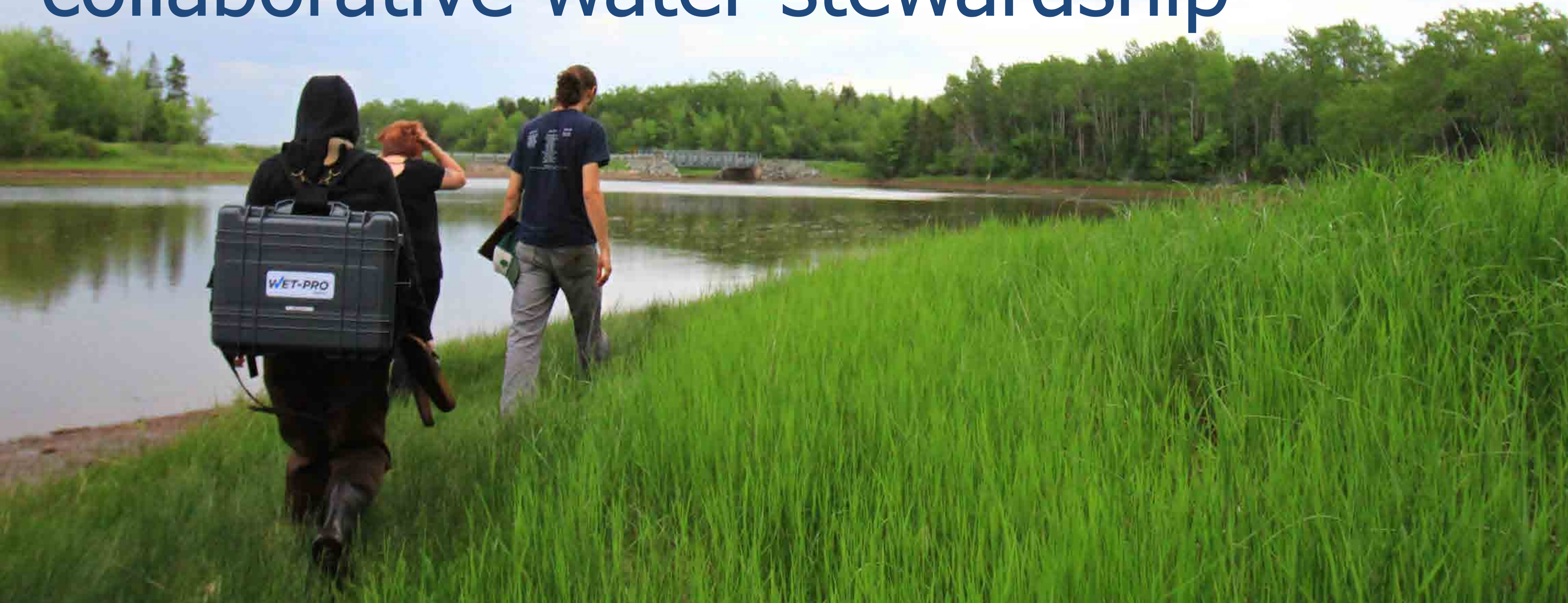


# DataStream

## Advancing data sharing for collaborative water stewardship



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Photo Credit: Atlantic Water Network

### INTRODUCTION

In the context of increasingly complex environmental issues, community-based monitoring initiatives are generating valuable information to track the health, changes and impacts on local aquatic ecosystems. Yet barriers to data sharing and reusability remain chronic issues that hamper the ability to leverage this information to its full potential.

DataStream is designed to address this challenge by providing an open access, online platform for sharing water quality data. Diverse monitoring groups can plug into DataStream's data management infrastructure to organize, store, visualize, and share their data. With a searchable database, contributors and other data users can access monitoring data collected by others across watersheds in a common data format.

### EVOLUTION AND GROWTH

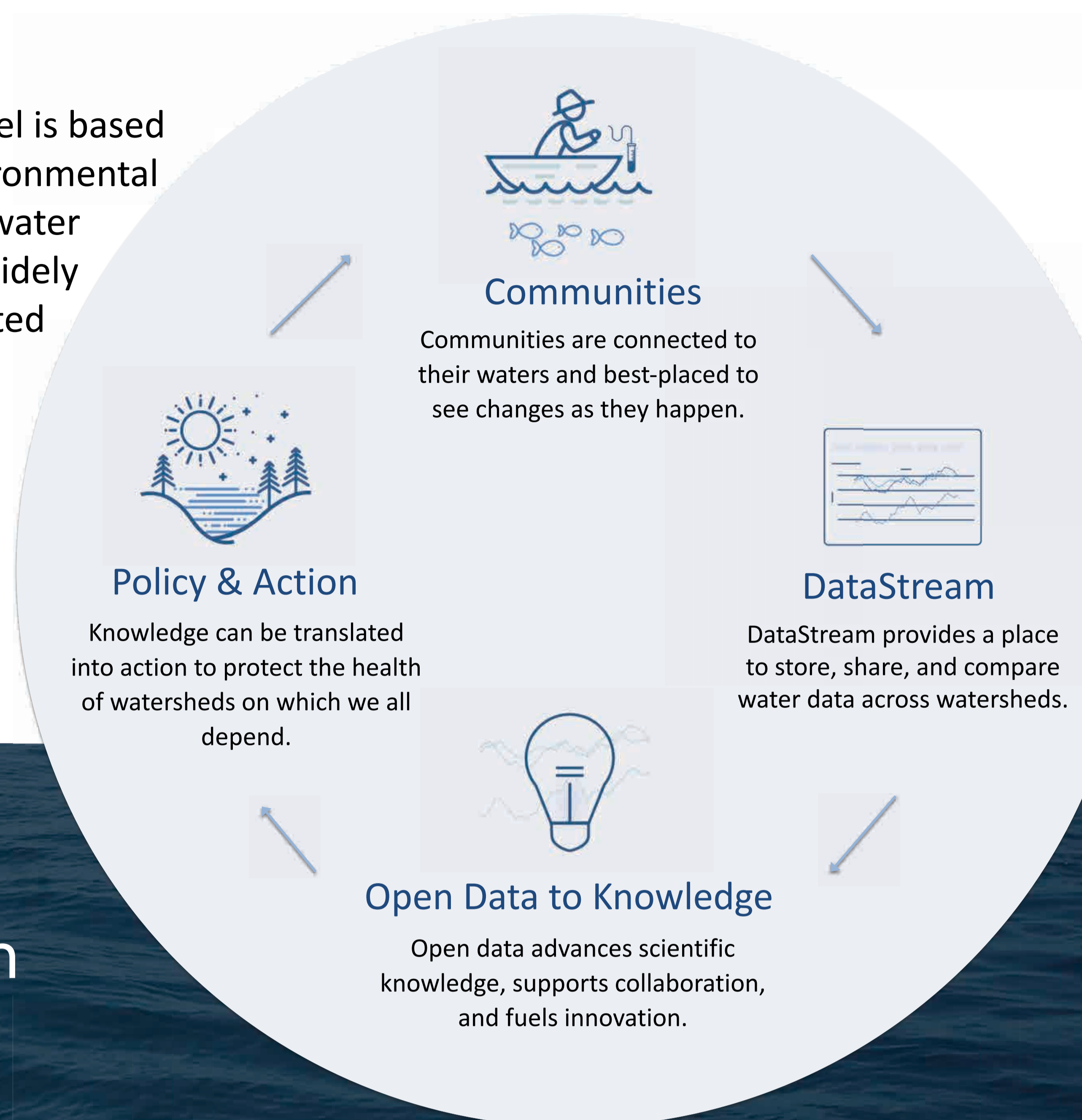
DataStream is led nationally by The Gordon Foundation and delivered in collaboration with regional monitoring networks. DataStream was first piloted in the Mackenzie Basin through a unique collaboration between The Gordon Foundation and the Government of the Northwest Territories, Mackenzie DataStream's Founding Partner. The success of DataStream throughout the Mackenzie Basin has allowed this model to be expanded to other regions including Atlantic Canada, in partnership with the Atlantic Water Network, and the Lake Winnipeg Basin, in partnership with the Lake Winnipeg Foundation (coming online 2019).

### DATA FOR DECISION-MAKING

DataStream was born from the recognition that, unlike ever before, data can be a powerful lever for shaping freshwater policy. DataStream is designed to be as accessible as possible, including to those without a scientific or technical background, while offering a scientifically robust system for data storage and management.

#### DataStream's data model

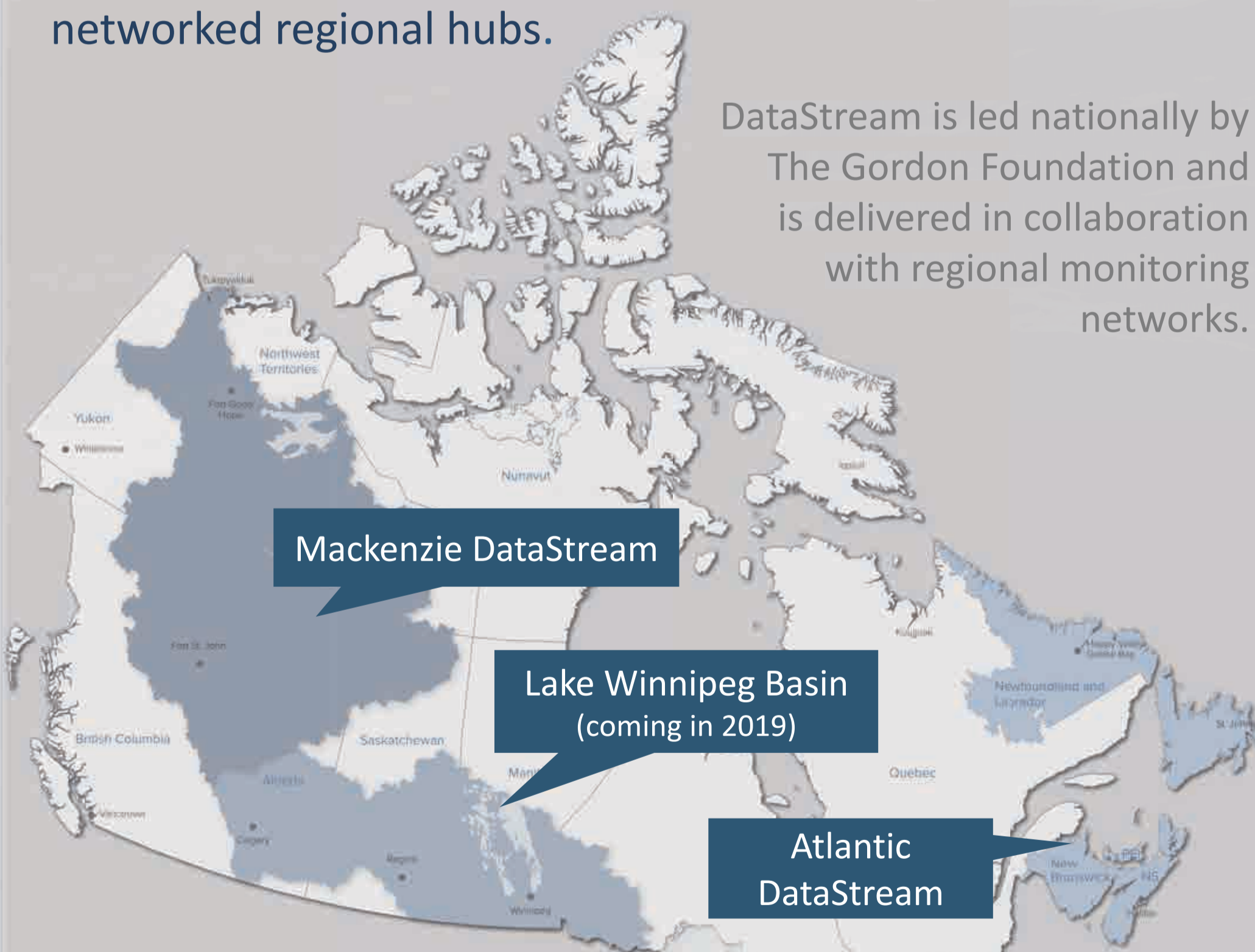
DataStream's comprehensive data model is based on standards developed by the US Environmental Protection Agency for the exchange of water quality data (WQX) – one of the most widely used standards in North America, adopted by 400+ entities in the US including federal, state and tribal governments. This data model facilitates enhanced search functionality on DataStream and contributes to greater standardization and (re)usability of water monitoring data.



## DataStream is an open-data platform for sharing and accessing information on freshwater health

DataStream officially launched in November 2016 in the Mackenzie River Basin and has since grown to include other partnership regions. Longer-term, the vision is to expand DataStream across Canada through networked regional hubs.

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#### Where we are at today:\*

\* Current as of September 2018

**47** Monitoring Groups  
**477,000+** Unique Observations  
**1573** Monitoring Locations

#### Where does the data come from?

We work with Indigenous Nations, community groups, researchers and governments that are collecting data through diverse monitoring initiatives. Those collecting the data maintain responsibility for, and control over, their monitoring activities.

#### What type of data is on DataStream?

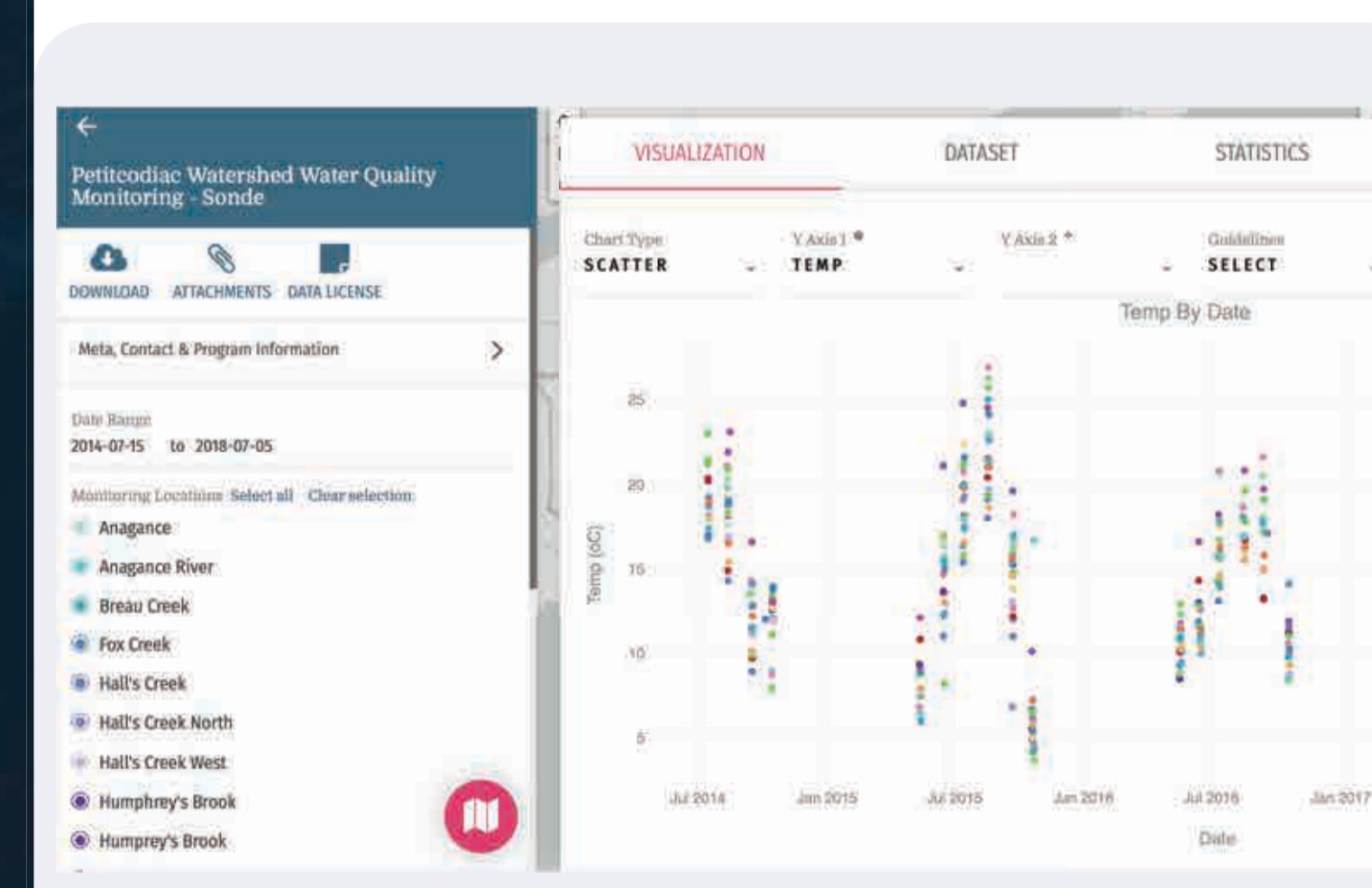
DataStream is built to accommodate a wide range of western scientific water quality data – including physical, chemical and biological characteristics, pesticides and hydrocarbons. These data are important in assessing aquatic ecosystem health.

#### Who owns the data?

A core principle of DataStream's Data Policy is that data contributors maintain complete ownership of their data. This means that contributors do not give up any intellectual property rights and will be fully credited for their work.

#### OPEN AND ACCESSIBLE

DataStream is **free to use** and is designed to make it easy for monitoring groups to organize, share, quality control, visualize, and download data.



Interactive data visualizations are easy to create and customize, and enable comparison between monitoring results and national CCME guidelines for aquatic ecosystem health.

[www.MackenzieDataStream.ca](http://www.MackenzieDataStream.ca)  
[www.AtlanticDataStream.ca](http://www.AtlanticDataStream.ca)