

So you want to streamline network operations and keep your data users happy?

The series of CSA R100 standards can help improve your monitoring network and increase data user satisfaction.

The series of CSA R100 National Standards



CSA R100:20

Canadian metadata standard for hydrometeorological monitoring stations



CSA R101:22

Automated hydrometeorological monitoring stations: site selection, instrument installation, and instrument maintenance



CSA R102:22

Data qualification for Canadian automated hydrometeorological monitoring stations



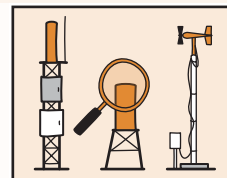
CSA R103:23

Protocols for sharing automated hydrometeorological monitoring stations data and metadata



Problem

What do I need to consider as I improve decaying infrastructure at my stations?



How do I improve the quality of the data collected by my network?



What should I consider if I add a new sensor or want to measure a new parameter?



How do I inform users what data is collected and how it's collected?



How does my data compare with other networks? How can I share my data with other networks?



How the Standards Can Help



R101:22

Use siting guidelines to help with infrastructure design, identifying sensor requirements, and instrument placement.



R101:22

Evaluate sensor siting and data qualification.



R102:22



R101:22

Use siting guidelines to help with sensor placement and instrument selection.



R102:22



R100:20

Learn how to report on parameters collected.



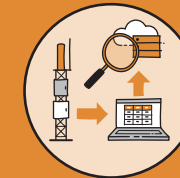
R102:22

Learn about data qualification and transmission.



R103:23

Benefits of using the standards



Assess the strengths and weaknesses of your setup.



Understand the limitations of your data.



Ensure comparability and interoperability of data.

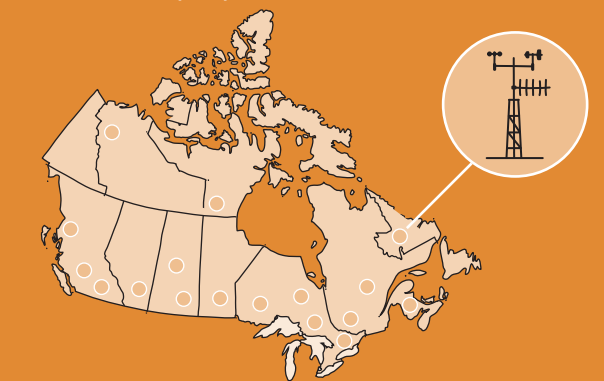


Enable the sharing of best practices between networks.

Why are the standards important?

In Canada, the national source for weather and climate information is Environment and Climate Change Canada (ECCC). In addition to ECCC's extensive network of monitoring stations, there are potentially thousands of additional stations collecting useful information.

Using these standards will increase the quality of your data and make it more widely accessible--improving local knowledge on climate, and helping Canadians prepare for the future.



So you want to improve your weather monitoring network?

The series of CSA R100 standards can help you make operational efficiencies.

The series of CSA R100 National Standards



CSA R100:20

Canadian metadata standard for hydrometeorological monitoring stations



CSA R101:22

Automated hydrometeorological monitoring stations: site selection, instrument installation, and instrument maintenance



CSA R102:22

Data qualification for Canadian automated hydrometeorological monitoring stations

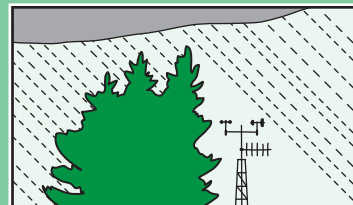


CSA R103:23

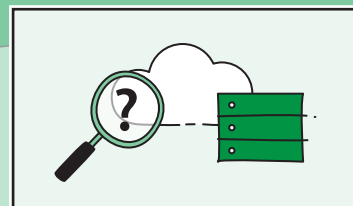
Protocols for sharing automated hydrometeorological monitoring stations data and metadata



Problem



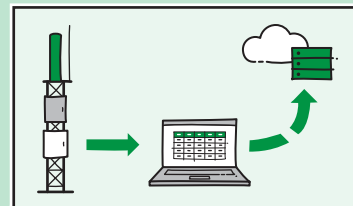
Data needs to be more accurate.



Data needs to be more discoverable.



User needs are not being met.



Data needs to be more accessible.



How the Standards Can Help



R101:22

Learn about requirements and recommendations for selecting monitoring station sites, and guidance for installing and maintaining automated instrumentation.



R100:20

Learn best practices for publishing metadata publicly at a central repository.



R100:20

Improve user understanding of site limitations. Determine which instruments are needed.



R101:22

Look at representation and siting guidelines for data collected around the station.



R102:22

Assess and quantify factors contributing to the quality of hydrometeorological data.



R103:23

Consider data sharing policies and agreements; reporting formats; data validation; data transparency and more.

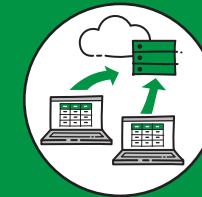
Benefits of using the standards



Save costs by optimizing your current network.



Improve the discoverability of your data.



Enhance your current network.

Why are the standards important?

In Canada, the national source for weather and climate information is Environment and Climate Change Canada (ECCC). In addition to ECCC's extensive network of monitoring stations, there are potentially thousands of additional stations collecting useful information.

Using these standards will increase the quality of your data and make it more widely accessible--improving local knowledge on climate, and helping Canadians prepare for the future.



So you want to monitor the weather?

The series of CSA R100 standards will guide you through the process of setting up a monitoring system.

The series of CSA R100 National Standards



CSA R100:20

Canadian metadata standard for hydrometeorological monitoring stations



CSA R101:22

Automated hydrometeorological monitoring stations: site selection, instrument installation, and instrument maintenance



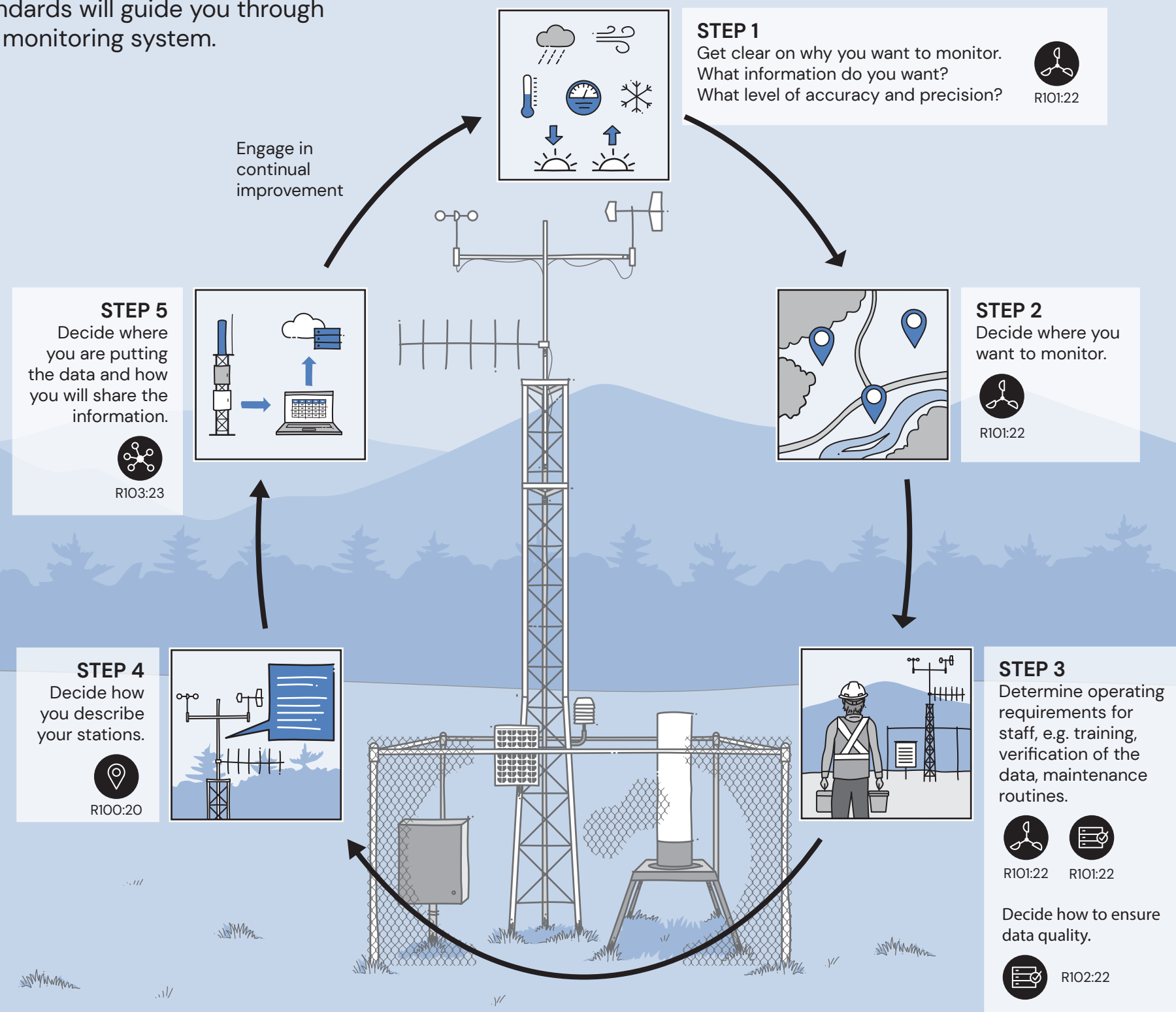
CSA R102:22

Data qualification for Canadian automated hydrometeorological monitoring stations

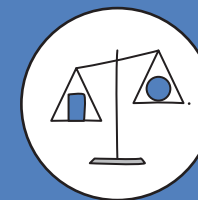


CSA R103:23

Protocols for sharing automated hydrometeorological monitoring stations data and metadata



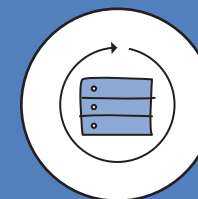
Benefits of using the standards



Avoid pitfalls and tradeoffs such as station siting that is good for one sensor but not ideal for another sensor.



Know when training is relevant for your staff.

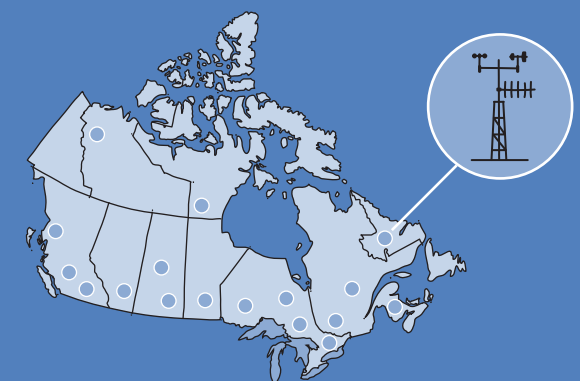


Build in redundancies during maintenance as a buffer against network failures.

Why are the standards important?

In Canada, the national source for weather and climate information is Environment and Climate Change Canada (ECCC). In addition to ECCC's extensive network of monitoring stations, there are potentially thousands of additional stations collecting useful information.

Using these standards will increase the quality of your data and make it more widely accessible--improving local knowledge on climate, and helping Canadians prepare for the future.



So you want to implement a new network?

The series of CSA R100 standards can help expand your data's potential.

The series of CSA R100 National Standards



CSA R100:20

Canadian metadata standard for hydrometeorological monitoring stations



CSA R101:22

Automated hydrometeorological monitoring stations: site selection, instrument installation, and instrument maintenance



CSA R102:22

Data qualification for Canadian automated hydrometeorological monitoring stations



CSA R103:23

Protocols for sharing automated hydrometeorological monitoring stations data and metadata

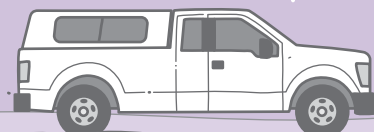
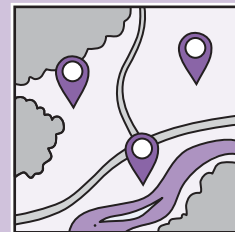


TECHNICIAN

STEP 1

Decide where to put your station and what instrumentation to use.

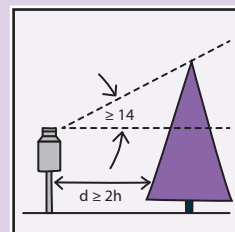
R102:22



STEP 2

Decide how to set up each station to get accurate, representative observations.

R101:22



STEP 3

Collect appropriate metadata to describe how the station is set up.

R100:20



Data ingest into the enterprise database



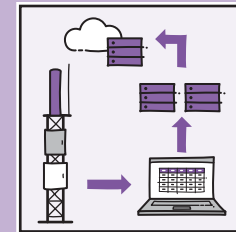
DATA MANAGER

STEP 1

Decide how you will store and track metadata based on the information being collected.



R100:20

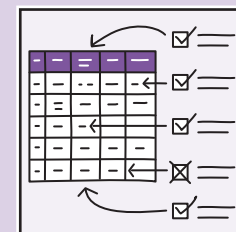


STEP 2

Decide how you will assess the quality of the data coming from the station(s).



R102:22

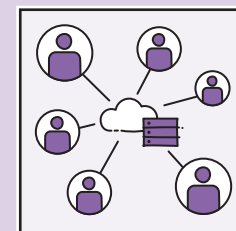


STEP 3

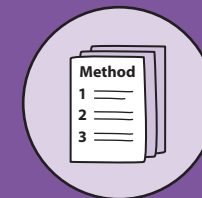
Decide how you will manage and share data with the user community.



R103:23



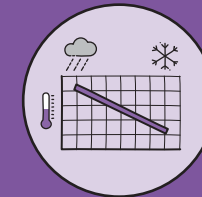
Benefits of using the standards



Ensure consistent methods for problem solving to keep operations manageable.



Collect comparable data for greater understanding about local differences in climate.



Collect representative data to ensure the data is accurate for the requirements.

Why are the standards important?

In Canada, the national source for weather and climate information is Environment and Climate Change Canada (ECCC). In addition to ECCC's extensive network of monitoring stations, there are potentially thousands of additional stations collecting useful information.

Using these standards will increase the quality of your data and make it more widely accessible--improving local knowledge on climate, and helping Canadians prepare for the future.

