



Pêches et Océans
Canada

Fisheries and Oceans
Canada



CHS web services.

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Success of Web services for water levels

- One service, many clients
- Development is minimal
- Support one pipe instead of many custom solutions
- Modifications can be done to the infrastructure without any impact on the service

The screenshot shows the Fisheries and Oceans Canada website. The page title is "Three web services providing access to official water level data". The page is organized into a sidebar on the left and a main content area on the right. The sidebar contains a navigation menu with categories like "On the water", "Marine Conditions", "Tides, Currents, and Water Levels", "General Information", "Data Available", "Index of Sites", "Glossary", "Water Level at Your Fingertips!", "Vertical Control Benchmarks", "Sites of Interest", and "Frequently Asked Questions". The main content area has a sub-header "Technical specifications for accessing these services" and a description of the services provided by the Canadian Hydrographic Service (CHS). It lists three services: predictions, observations, and forecasting/interpolation (SPINE). The page also includes sections for "Access and restrictions" and "Data".

Government of Canada / Gouvernement du Canada | Canada.gc.ca | Services | Departments | Français

Fisheries and Oceans Canada

Canada

On the water | Fisheries | Science and Research | Ecosystems | Species | Aquaculture | Regions

On the water

Marine Conditions

Tides, Currents, and Water Levels

General Information

- Tides and Currents
- History
- Vertical Datums
- Phenomena

Data Available

- Predictions
- Observations
- Oceanic Forecast
- Archives
- Web Services

Index of Sites

- Glossary
- Water Level at Your Fingertips!
- Vertical Control Benchmarks
- Sites of Interest
- Frequently Asked Questions

Three web services providing access to official water level data

Technical specifications for accessing these services

This document provides the technical specifications for accessing three web-based water level services: predictions, observations and forecasting. To access these services, you must request a username and password from the Canadian Hydrographic Service at chsinfo@dfo-mpo.gc.ca.

Description

The Canadian Hydrographic Service (CHS) has developed three web-based water level services, and they are available free of charge under [licence](#). Specifically, these three web services provide access to water level predictions, water level observations, and SPINE (Service de Prévision et d'Interpolation des Niveaux d'Eau), a water level forecasting and interpolation system.

1. The **predictions** web service gives access to coastal water-level predictions for all of Canada. These predictions are published annually and are similar to what is published in the Canadian Tide and Current Tables.
2. The **observations** web service gives access to real-time water level observations made by the network of permanent water level recorders on the St. Lawrence between Montreal and the Magdalen Islands. Other network stations across the country will be added over time. When available, recorded observation data for the past 12 months can be accessed.
3. The **forecasting and interpolation** web service (commonly called SPINE) is a system used to forecast water levels at a specific time and position up to 30 days in advance for the St. Lawrence ship channel between the Port of Montreal and Saint-Joseph-de-la-Rive. This system is based, in part, on water level forecasts derived from a hydrodynamic model that takes various weather conditions into account and, in part, on real-time observations made by the network of permanent water level recorders. To increase their accuracy, digital model forecasts are adjusted according to water level observations for the entire area. A precision matrix is also provided for forecast data.

To access these web services, simply follow the steps described in these [technical specifications](#).

Access and restrictions

Please take a moment to read through the [licence](#).

Data

All three web services use SOAP and XML as their communication protocol and the English language for method calling and data exchange. Each service has an XML description readable in WSDL (i.e. <https://ws-shc.gc.dfo-mpo.gc.ca/predictions?wsdl>). This description is useful for automatically generating code (with tools such as WSDL2Java from Apache Axis) to communicate with the services.



Clients

- Dredging
- St-Lawrence Global Observatory
- Civil protection
- Ports
- Enav partners (OMC International)
- Coast Guard
- ...



Case study: Civil protection

Publié le 14 avril 2014 à 00h00 | Mis à jour à 08h30

Laval craint des inondations



Le niveau élevé de la rivière des Mille-Îles inquiète les riverains.

PHOTO: ROBERT SKINNER, LA PRESSE

After:

- Specification to access the service
- The client grab the information he wants, no CHS intervention needed
- Dynamic link
- Secure transfers



BUSINESS

COMMUNITY

CRUISES



2013/11/27 - Tariffs modified as of February 1, 2014 [Read on](#)



3D Video

WATER LEVEL :

2014/04/07 09:20 **.71 M/ 02'04"**

relative to chart datum

[Check the water levels map](#)

ARRIVALS AND DEPARTURES

[Check the Port's vessel traffic](#)

[Check vessel traffic on the St. Lawrence River](#)

OUR PUBLICATIONS

PORT
INFO

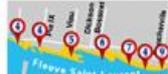
LOGBOOK

WEATHER



Check
Montreal's
weather forecast
[Environment Canada](#)

MAP OF THE PORT



Map of the Port
with vessels in
real time

NEWS

Mozambican MiGs stuck in Germany
[Suite](#)

2014/04/07

HHLA brings forward parking space expansion at Container Terminal



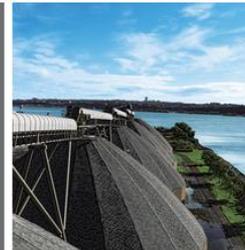
ECONOMIC HUB

The Port of Québec is positioned as a strategic connector to international markets as it maintains business relations with over 300 ports and 60 countries. The value of cargo that passes through Québec exceeds 20 billion dollars per year.



SUSTAINABLE DEVELOPMENT

The Port and Québec City are a leading couple where municipal urban and commercial spaces are concerned. As a good corporate and urban citizen, the Québec Port Authority takes a partnership-oriented approach with the community and to further integrate the principles of sustainable development in all its activities.



MARINE TRAFFIC MAP

The Port of Québec welcomes each year over 1 400 ships from all over the globe. Today, the Port of Québec has captured a special place in this highly competitive international industry. Check maritime traffic in Port with our new live traffic map to see the ships currently in Port.

CLIMATIC CONDITIONS

Last Received Data :
2014/04/07 at 08:04

LOCAL HOUR

QUÉBEC
8:54:11

TIDES

MONTANTE



NEXT TIDE

HAUTE
12:45

BASSE
20:42

WEATHER

MONDAY 7 APRIL
CURRENT TEMPERATURE
0C

Partly Cloudy Day
MAX / 4 MIN / -2
Sunrise 06:15 AM Sunset 07:22 PM

TUESDAY 8 APRIL
Raining
MAX / 3 MIN / 2
Sunrise 06:11 AM Sunset 07:22 PM

WIND

**W 2 km/h
(1 kts)**

HUMIDITY
82%

PRESSURE
102.1kPa

WATER TEMPERATURE

0.4C (32.8F)

LATEST NEWS

01/13/2014
ADVISORY COMMITTEE TO...
John R. Foster will chair the advisory committee whose mandate is to recommend to the Port the best way to ensure the harmonious visual integration of the two domes of the new wood pellet terminal in Anse au Foulon...

01/08/2014
TRUE SUCCESS FOR THE...
Over 200 people gathered today for the 2014 edition of the Gold-Headed Cane held at Port of Québec cruise terminal...



Port of Québec
@PortQuebec
Belle innovation pour l'industrie maritime !
[#BelleInnovation](#) pour l'industrie maritime... via @e_video
[Show Summary](#)



Conclusion

- Standards and services are in development now and Canadian Hydrographic Service is part of it.
- The marine community must get involve so we will are relevant services that are inline with the needs.
- Technology and especially broadband will completely change the way we exchange data.
- From Static to Dynamic information