



## COMPENDIUM OF CANADA'S ENGAGEMENT IN INTERNATIONAL ENVIRONMENTAL AGREEMENTS AND INSTRUMENTS

### *Memorandum of Understanding between the U.S. Geological Survey of the Department of the Interior of the Government of the United States of America and the Department of the Environment of the Government of Canada Concerning Cooperation in the Earth Sciences*

**SUBJECT CATEGORY:**  
Environmental Cooperation

**TYPE OF AGREEMENT / INSTRUMENT:**  
Canada – United States

**FORM:**  
Memorandum of Understanding

**STATUS:**  
• Signed May 30 2008  
• Entry into force in Canada May 30 2008  
• Ongoing review of MOU at least once every three years

**LEAD & PARTNER DEPARTMENTS:**  
Environment and Climate Change Canada

#### **FOR FURTHER INFORMATION:**

**Web Links:**  
• [ECCC Water Survey of Canada](#)  
• [US Geological Survey](#)

**Contacts:**  
[ECCC Inquiry Centre](#)

**COMPENDIUM EDITION:**  
January 2020

#### **PLAIN LANGUAGE SUMMARY**

This agreement between Canada and the United States centers on cooperation between the two countries as it relates to earth sciences, which includes but is not limited to biology, geography, water science, etc. This agreement is important to Canada due to the shared geographical boundary between Canada and the United States; since both countries share jurisdiction for natural resources such as rivers and lakes, it is important to work together in areas that can improve the state of knowledge on earth sciences and improve environmental monitoring (particularly water quantity and quality) for the benefit of citizens. By having a formal agreement, Canada and the US have developed formal exchanges of scientific and technological information as well as invested in shared-facilities.

#### **OBJECTIVE**

The objective of this agreement is to pursue scientific and technical cooperation in the earth sciences through the exchange of technical and scientific information, knowledge and capabilities of the U.S. Geological Survey (USGS) and Environment and Climate Change Canada (ECCC).

#### **KEY ELEMENTS**

Areas of cooperation may include, but are not limited to:

1. Water sciences and other hydrologic investigations that include, but are not limited to the understanding of quantity and quality of surface water, ground water and sediment transport;
2. Earth-science investigations, including hazards, resources and the environment;
3. Biology, biological investigations and technical developments;
4. Geographic and geospatial analysis and investigations;
5. Information systems; and
6. Other forms of earth sciences-related cooperative activities as may be mutually decided between the Participants.

## **EXPECTED RESULTS**

Data collection, exchange, analysis, modeling, reporting and publication of related data, information, and products;

Instrumentation, equipment, and modeling applications, including research and development, testing and evaluation, calibration and maintenance, exchange, procurement, performance and procedural standards and training;

Membership on management and technical committees, working groups, etc. of each Participant, and visits to facilitate mutual program deliverables; and

Joint studies and publications; joint sharing of equipment, facilities and logistics; and

Other forms of cooperation that may be identified by the Participants.

## **CANADA'S INVOLVEMENT**

This agreement is important to Canada because on continental North America, the US and Canada share much within the earth sciences, and benefit by working together in areas such as training, instrument research and testing, and data and information systems, all of which result in better science and monitoring of environmental parameters (in particular water quantity and quality) for citizens and users.

This agreement is implemented in Canada through the use of Project Annexes which outline specific activities to be carried out by the Participants (see below). Since signing the MOU in May, 2008 the two agencies have met quarterly by phone via the Technical Advisory Committee, co-chaired by the National Directors of each country's hydrometric monitoring programs.

## **RESULTS / PROGRESS**

### **Activities**

Since signing the MOU, there has been ongoing collaboration between scientists and technologists in both agencies, the joint work has been formalized with the development and signing of six Project Annexes (see Results below).

Activities continue in other areas, such as:

- Joint monitoring of international rivers and lakes (e.g., Niagara Falls);

- Harmonization of water-related spatial datasets (e.g., watershed boundaries) along the Canada-US border;
- Development of remote-sensing-based methods for estimating stream flow;
- Cableway Safety Training.

The focus of EC's collaboration to date has been primarily on hydrometric monitoring, but future collaboration could include water quality and ecosystem monitoring.

### **Reports**

The MOU has resulted in excellent progress in the area of hydrometric monitoring. To date there have been six Annexes developed and signed under the MOU:

1. Provision of Scientific and Technical Training;
2. Development of Field Monitoring technologies, Methodologies and Ancillary Tools;
3. Provision of Laboratory Testing of Hydrometric Velocity Instruments;
4. Data and Information Systems Collaboration.
5. Provision of Cableway Safety Training at Sites Throughout Canada
6. Geospatial data and systems collaboration

### **Results**

Two major Technical Exchanges (Reston, Virginia in May 2008, and Burlington, Ontario in February 2011) have served to bring together water quality, hydrology and hydrometric monitoring experts from both countries.

Implementation of new hydroacoustic technologies for measuring water quantity variables (e.g., water velocity) has accelerated as a result of joint development efforts.

Specific results of activities in the various areas of cooperation identified in this agreement are articulated in separate jointly approved project annexes.

Workplans under each annex were updated in 2016-17. A very successful technical exchange meeting was held in Reston (VA) in February 2017.

The most recent technical exchange meeting was held in Gatineau in September 2019.

Two annexes (Cableway training and Laboratory testing of instruments) have been updated and signed in 2019-20.