

**AGREEMENT
IN REGARDS TO THE**

**MANAGEMENT OF METEOROLOGICAL NETWORKS
IN THE PROVINCE OF BRITISH COLUMBIA**

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA, as
represented by the Minister of Environment and
Climate Change Strategy (“ENV”)

HER MAJESTY THE QUEEN IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA, as
represented by the Minister of Agriculture (“AGRI”)

HER MAJESTY THE QUEEN IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA, as
represented by the Minister of Forests, Lands, Natural
Resource Operations and Rural Development (“FLNR”)

HER MAJESTY THE QUEEN IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA, as represented
by the Minister of Transportation and Infrastructure (“TRAN”)

(collectively - the “Province”)

AND:

British Columbia Hydro and Power Authority (“BC
Hydro”)

AND:

Rio Tinto Inc. (“Rio Tinto”)

AND:

Metro Vancouver (“MVRD”)

AND:



Agreement on Management of Meteorological Networks in British Columbia

Capital Regional District (“CRD”)



Making a difference...together

AND:

Pacific Climate Impacts Consortium
 (“PCIC”)



(Each a “**Party**” and
collectively, the “**Parties**”)

WHEREAS each Party to this Agreement manages, operates and maintains independent Meteorological Data collection and data management systems, data archives, reporting systems and websites in the Province of British Columbia (“B.C.”) as follows:

- ENV maintains Networks of Weather Stations and hydrometric stations for river forecasting and air quality monitoring to ensure public safety.
- FLNR maintains Networks of Weather Stations
 - in support of fire management activities including wildfire preparedness and suppression for public safety and resource protection, and
 - for research to support an innovative, competitive and sustainable forest industry.
- TRAN maintains a Network of Weather Stations for avalanche forecasting and winter highway maintenance and seasonal strength loss programs to ensure public safety and maintaining provincial infrastructure.
- AGRI assists and adds value to data collected by private and public Networks to assist agricultural users to ensure sustainable use of resources.
- BC Hydro maintains a Network of hydrometric and Weather Stations to monitor and forecast flow for hydro-generation and flood control to ensure sustainable use of resources.
- Rio Tinto maintains a Network of Weather Stations to monitor and forecast flow for hydro generation and flood control to ensure sustainable use of resources.
- MVRD maintains Networks of hydrometric and Weather Stations to support water and air quality monitoring activities in the Greater Vancouver and Fraser Valley Regional Districts.
- CRD maintains a Network of hydrometric and Weather Stations to support water management activities.

Agreement on Management of Meteorological Networks in British Columbia

- PCIC quantifies the impacts of climate change and variability on the physical environment in the Pacific and Yukon region of North America to ensure that adaptation policies use good quality scientific information for decisions. PCIC acts as a Meteorological Data aggregator for the Parties and maintains a publicly accessible dataset of current and historical meteorological data.

And WHEREAS each Party to this Agreement agrees and understands that:

- It shares a common interest in meteorological monitoring and environmental quality management, dissemination of environmental information, and promoting science-based decisions.
- Its respective mandate can be fulfilled more effectively through the exchange of Meteorological Data and associated Meta Data and sharing of information, methods and procedures, experience, expertise and knowledge of meteorological observations and Network operations. Collaboration between Network operators will optimize the value of existing data and Networks, by:
 - Increasing the availability and effectiveness of Meteorological Data and information through a shared meteorological resource in B.C.;
 - Improving and adding value to available sources of Climate Data in B.C. and Canada;
 - Identifying and addressing spatial gaps in the meteorological Network coverage;
 - Addressing risks of error or misunderstanding of the impacts of climate change and climate variability; and
 - Creating a Climate Data set to enhance understanding of the scope of climate change and climate variability within B.C.

And WHEREAS all Parties acknowledge that:

- The non-public sector parties to this Agreement, Rio Tinto and BC Hydro, are going beyond their functional mandates to participate in data sharing and the creation of a Provincial Climate Data Set to create a long term public benefit.
- It is in the public interest to use data sharing and open data concepts to ensure access to information, tools and data.

And WHEREAS in addition, Environment and Climate Change Canada (“ECCC”), who is not a party to this Agreement:

- Through the Atmospheric Monitoring and Data Services and the National Hydrological Services, maintains observation Networks that meet its mandate that includes climate monitoring, public safety and sustainable use of resources.

Agreement on Management of Meteorological Networks in British Columbia

- Is the primary source of climate change data for Canada and recognizes the important role that more localized/regional Networks have to supplement Meteorological Data (and Climate Data) and assist in decision making on a provincial scale.
- ECCC is pursuing consistent access to annotated data through a Network of Networks data sharing agreement separate from, but associated with the combined Parties defined in this agreement.
- Is initiating the Canadian Centre for Climate Services to provide access to authoritative climate information to help users make decisions to adapt to climate change.

NOW THEREFORE, for the good and valuable consideration, the receipt of which is acknowledged by the Parties, the Parties agree as follows:

SECTION 1 – DEFINITIONS

Where used in this agreement,

- 1.1 **Administrators Committee** – means a committee with individuals representing each of the Parties as described in Appendix A of the Agreement that meets to set strategic direction of the Climate Related Monitoring Program.
- 1.2 **Associated Agencies** – means any organization, research group or private operator that can and will contribute Meteorological Data to the Provincial Climate Data Set without being a full Party to this Agreement. Representatives of Associated Agencies are welcome to contribute to committee discussions as non-voting members of those committees.
- 1.3 **Climate Data** – means any data derived or summarized from Meteorological Data which may be used to inform decision makers and the public about significant changes and trends in seasonal, annual, or longer statistical meteorological patterns in the province.
- 1.4 **Climate Related Monitoring Program** or **CRMP** – means the coordinating program for the implementation and management of a Provincial Climate Data Set. This B.C. Government program facilitates all the purposes as outlined in Section 2 in this agreement
- 1.5 **Climate Networks Coordinator** – means an ENV position responsible for the administration and operation of this Agreement and the Climate Related Monitoring Program for the Province. This role involves promoting the work of the CRMP, and facilitating communications between Networks and between the Coordinators Committee, Administrators Committee and the Technical Committee with the overarching goal of improving Meteorological Data and Network operations in B.C.

Agreement on Management of Meteorological Networks in British Columbia

- 1.6 **Composite Material** – means Material which is produced by a Party independently of any other Party and which includes Incorporated Material.
- 1.7 **Coordinators Committee** – means a committee with individuals representing each of the Parties as described in Appendix A of the Agreement that meets to make operational decisions and follows direction from the Administrators Committee.
- 1.8 **Incorporated Material** – means any Source Material of a Party which another Party incorporates or embeds into Composite Material.
- 1.9 **Materials** – means any reports, records, findings, data, specifications, drawings, products, summaries or climate information created as a result of this Agreement, including;
- findings based on technical expertise and acquisition practices
 - Meteorological Data;
 - Meta Data;
 - the Provincial Climate Data Set; and,
 - Primary Controlled Data.
- In this agreement Materials can be further defined as Composite Material, Incorporated Material, or Source Material (Sections 1.6, 1.8 or 1.16 respectively).
- 1.10 **Meta Data** – means information about the configuration, operation and location of Weather Stations or Networks.
- 1.11 **Meteorological Data**– means any meteorological observations (or meteorological parameters from hydrometric stations) from meteorological observing platforms (Weather Stations) which can potentially be transmitted.
- 1.12 **Network**– means a collection of meteorological observing platforms that report Meteorological Data.
- 1.13 **Network of Networks** – means combining Meteorological Data from multiple agencies and Network operators to supplement existing data (where data context and content from the contributing Party/Associated Agency is well understood).
- 1.14 **Primary Controlled Data** – means Meteorological Data which has undergone an initial level of quality control screening.
- 1.15 **Provincial Climate Data Set** or **PCDS**– means an updated suite of information products and data based on Meteorological Data from B.C. that is constructed, maintained and made publicly available by PCIC

Agreement on Management of Meteorological Networks in British Columbia

- 1.16 **Source Material** – means Material that is obtained, collected, developed or produced by a Party independently of any other Party.
- 1.17 **Standard Operation Procedures** – means any procedures that a Party incorporates as a normal process in the management and day-to-day use of its Network.
- 1.18 **Technical Committee** - means a committee with individuals representing each of the Parties as described in Appendix A of the Agreement that meets to discuss technical issues, make operational recommendations and follows direction from the Coordinators and/or Administrators Committee
- 1.19 **Weather Station** – means a location where standard meteorological or hydrometeorological observations are made – either electronically or manually.

SECTION 2 - PURPOSE

The purposes of this Agreement are to:

- 2.1 Improve public access to weather and climate information collected by meteorological Network operators in B.C.
- 2.2 Improve sharing and understanding of Meteorological and Climate Data, improve efficiencies and harmonization between Parties with respect to Network operations, and improve the use of the meteorological resource resulting in the improved understanding of climate change in B.C. through the use of operational data.
- 2.3 Establish terms of collaboration for meteorological network operators in B.C.
- 2.4 Support the continued development and maintenance of a Provincial Climate Data Set housed at PCIC.
- 2.5 Facilitate planning, harmonization and co-operation between the Parties in relation to:
- Weather Station location(s) and configuration(s);
 - Transmission and documentation of Meteorological Data and Meta Data; and
 - Exchange and use of Material in accordance with each Party's respective abilities.
- 2.6 Improve data interpretation consistency by ensuring that interpretation and analysis of CRMP products are transparent and open.

Agreement on Management of Meteorological Networks in British Columbia

SECTION 3 - ROLES AND RESPONSIBILITIES

- 3.1 Each Party will:
- 3.1.1 Share the Meteorological Data and Materials from the Weather Stations operated by the Party and share Meta Data about the Networks located in B.C. and - if feasible – to make that data available under open data policies.
 - 3.1.2 Use and apply recognized Network operating and management standards whenever reasonably possible.
 - 3.1.3 Exchange information and Materials on each party’s respective existing and future Weather Stations.
 - 3.1.4 Notify the other Parties in writing as soon as reasonably possible if, due to extenuating circumstances, a Party cannot meet the general terms and conditions of cooperation contained in this Agreement.
 - 3.1.5 Wherever reasonably possible, adapt common Standard Operation Procedures to increase quality of data and support development of the Networks and Materials.
 - 3.1.6 Whenever possible and reasonable, to harmonize Network operation(s) by defining relevant standards and protocols to coordinate operations carried out under the Agreement.
 - 3.1.7 Acquire and use the Material in a manner that respects the scientific value of the Material and the legal rights of Parties and Associated Agencies.
 - 3.1.8 Participate with appropriate representation (dependent on the size of the Network and its operations) in each of the committees defined in Schedule A.
 - 3.1.9 Retain responsibility to maintain a Party’s respective Network and ensure the integrity and security of its Weather Stations, data polling, databases and reporting systems.
 - 3.1.10 Provide reciprocal credit and recognition to Parties who provide Source Material by indicating on websites, in publications, and, where otherwise warranted, acknowledgment identifying of the providing Party or Parties. For the purposes of providing reciprocal credit under this section, if a Party (the “First Party”)
 - a) specifies a particular logo of the First Party to be used by another Party (the “Second Party”) for the purposes of acknowledging the contribution of the First Party and

Agreement on Management of Meteorological Networks in British Columbia

- b) provides express written permission to the Second Party to use the specified logo for the purposes of acknowledging the contribution of the First Party,

the Second Party will include the First Party's specified logo when acknowledging contribution of the First Party.

- 3.1.11 Encourage participation on the Administrators Committee, Coordinators Committee and Technical Committee from other Network operating agencies, either as an Associated Agency or as a full Party to the Agreement.
- 3.2 In addition, ENV will be responsible for:
 - 3.2.1 Fulfilling the role of the Climate Network Coordinator to support the work requirements resulting from this Agreement.
 - 3.2.2 Managing BC Government funds specifically acquired by ENV for the purposes of acquiring and improving equipment that supports Weather Station augmentation, including existing Networks operated by the Parties, and the goals of improving Climate Monitoring under the Agreement. This does not include those funds acquired specifically by Parties for internal operations improvement projects.
- 3.3 In addition, PCIC will be responsible for:
 - 3.3.1 Ensuring that the Provincial Climate Data Set is maintained, refreshed with current information and made publicly available
 - 3.3.2 Producing publicly available reports and summaries based on the Provincial Climate Data Set that deepens the understanding of climate variability in British Columbia.
 - 3.3.3 Providing the complete Provincial Climate Data Set back to ENV should it be unable to continue as a Party under this Agreement.
- 3.4 The roles and responsibilities of the Administrators Committee, Coordinators Committee, and Technical Committee are described in Schedule A of this Agreement.

Agreement on Management of Meteorological Networks in British Columbia

SECTION 4 – MATERIALS AND INTELLECTUAL PROPERTY

- 4.1 The Parties agree that:
- 4.1.1 Each Party owns all intellectual property, including copyright, in its own Source Material, other than intellectual property in Source Material which is owned by a third party (who has not entered into this Agreement); and
 - 4.1.2 A Party that produces Composite Material exclusively owns all intellectual property, including copyright, in the Composite Material, other than any Material which is Incorporated Material.
- 4.2 This Agreement recognizes that Source Materials or Composite Materials available through open data policies can be freely shared.
- 4.3 For Source Material not shared through open data policies and being shared under this Agreement by a Party (the “**Sharing Party**”), the Sharing Party grants to each other Party and any subsequent Party to this Agreement, to the extent that the Sharing Party has the power to grant rights to use the Source Material, a non-exclusive, perpetual, irrevocable, royalty-free, worldwide licence to exercise, in respect of that Source Material, the rights set out in the *Copyright Act* (Canada), including the right to use, reproduce, modify, publish and distribute that Source Material. The grant of licence under this section is made by the Sharing Party at no cost.
- 4.4 Each Party irrevocably waives in the other Parties’ favour any moral rights which a Party may have in the Materials. Upon the request of the Coordinators Committee, a Party must deliver to the Coordinators Committee documents satisfactory to the Coordinators Committee to reflect this waiver. To the extent employees or subcontractors of a Party, or the employees of a subcontractor, have any moral rights in Material, each Party agrees to use its reasonable best efforts to obtain a waiver of such moral rights.
- 4.5 Where appropriate, a Party that uses or publishes Material produced by another Party will explicitly identify the other Party as the originator of the Material.
- 4.6 The Provincial Climate Data Set and Materials generally known to the public will be made publicly available without charge.

SECTION 5 - PERFORMANCE MEASURES AND EVALUATION

- 5.1 Annual priorities developed by each committee will be logged and tracked during the term of the Agreement by the Climate Network Coordinator.
- 5.2 Annual progress reports from each committee will be shared through the Climate

Agreement on Management of Meteorological Networks in British Columbia

Network Coordinator with all Parties and Associated Agencies.

- 5.3 The Administrators Committee will meet annually to review the past year's progress and review and set goals and objectives for the year.
- 5.4 The Coordinators Committee will meet face to face twice annually AND on a set schedule (monthly via teleconference) to work through set priorities, implement changes and report on progress.
- 5.5 The Technical Committee will meet face to face once annually AND on a set schedule (quarterly via teleconference) to work through set priorities, implement changes and report on progress.

SECTION 6 - FINANCIAL ARRANGEMENTS

- 6.1 With the exception of access to the Provincial Climate Data Set and Materials generally known to the public, nothing in Section 4 prohibits the charging of fees to cover the costs of information retrieval and processing of requests for Materials from individuals or organizations not Party to this Agreement.

SECTION 7 – STATEMENTS AND RECORDS

- 7.1 Each Party will notify the other Parties – with reasonable notice - of any planned changes that may impact Meteorological Data collection and reporting.

SECTION 8 - CONFIDENTIALITY

- 8.1 This Agreement is subject to the *Freedom of Information and Protection Privacy Act of British Columbia*.
- 8.2 Subject to any law requiring a Party to disclose information in its possession, including the *Freedom of Information and Protection of Privacy Act*, the Parties will treat as confidential all information or Materials which are clearly marked as confidential or proprietary.

SECTION 9 - DISPUTE RESOLUTION

- 9.1 The Parties agree to use all reasonable efforts to resolve a dispute amicably.
- 9.2 Unresolved disputes between specific Parties at the Coordinators Committee or Technical Committee will first be referred to the Climate Networks Coordinator for further

Agreement on Management of Meteorological Networks in British Columbia

discussion and clarification. If the dispute cannot be resolved, then it will be elevated to a Network Administrator Committee representative of the Parties in dispute for a decision.

SECTION 10 – TERM, EXTENSION, MODIFICATION OR TERMINATION

- 10.1 This Agreement is effective as of the date of April 1, 2018 and expires on March 31, 2026 unless all Parties withdraw from the Agreement under Section 10.3.
- 10.2 This Agreement may be amended at any time with the written consent of all the Parties by their respective representatives from the Administrator’s Committee. With the exception of extensions to the Agreement, a notice of proposed amendments is required three (3) months prior to any formalized discussion of proposed changes to the Agreement.
- 10.3 A Party may, by giving to the other parties at least six (6) months written notice of its intent to withdraw, withdraw from this Agreement. Upon withdrawal from this Agreement, any equipment loaned to a Party for use in its Network shall be returned to the Party that owns the equipment.
- 10.4 The Parties agree that should a Party withdraw from this Agreement:
- 10.4.1 The remaining Parties and the withdrawing Party may continue to use the Material exchanged under this Agreement up to the withdrawing Party’s official withdrawal date; and,
- 10.4.2 As of the date of withdrawal, the Party exercising its right of withdrawal shall cease to provide and receive Material under this Agreement.
- 10.5 The Parties agree that an Associated Agency may become a Party to this Agreement only after a recommendation is provided by the Administrator’s Committee in consultation with the Coordinator’s Committee.
- 10.6 In the case where PCIC can no longer remain a Party to this agreement, PCIC will work with the Province to plan and implement a transfer the Provincial Climate Data Set back to the Province (or a designated 3rd party) in its entirety. All Parties acknowledge that this may take longer than the six (6) month notice of withdrawal outlined in Section 10.3.
- 10.7 This Agreement does not terminate or amend any agreements in force on related subjects that bind any two or more Parties.
- 10.8 A Party that wishes to carry out specific, joint or bilateral projects with another Party or Associated Agency may do so by specifying the terms and conditions of such collaborations through the exchange of letters or a Memorandum of Understanding between the interested Parties and/or Associated Agencies.

Agreement on Management of Meteorological Networks in British Columbia

- 10.9 This Agreement may be executed and delivered in one or more counterparts, which may be delivered by email transmission in PDF or similar secure format, and each executed and delivered counterpart will be deemed an original and all counterparts will together constitute one and the same document.

SECTION 11 – LEGALITY

- 11.1 This Agreement constitutes an administrative agreement and, with the exception of Sections 4 and 8 inclusive, is not intended to create legally enforceable obligations. It is an expression of the shared intent of the Parties on how to work together to accomplish a common goal. This Agreement is entered into solely for the purposes of sharing data, information and in-kind or operational resources to enable more effective management, dissemination and reporting of environmental data by all Parties.

SECTION 12 – LIABILITY AND INSURANCE

- 12.1 Each Party will maintain, at its own expense, all necessary insurance relating to its respective responsibilities in concordance with the Agreement and that Party's internal policies.
- 12.2 With respect to Materials, the Parties make no warranties or representations, express or implied to any other Party as to the accuracy and the suitability of the Material for any intended use of it by any Party. No Party shall be liable to any other Party for loss, damage, or costs incurred directly or indirectly from a Party's reliance on the Material.

SECTION 13 - MISCELLANEOUS

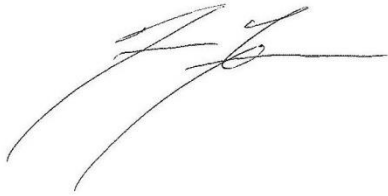
- 13.1 Nothing in this Agreement is intended to replace or amend obligations of the Parties that they are bound or obligated by law to perform.
- 13.2 In this Agreement, singular terms include the plural term and vice versa.

**Agreement on Management of
Meteorological Networks in British Columbia**

SECTION 14 - SIGNATORIES

The following Parties confirm their understanding and acceptance of the terms and conditions of this Agreement:

On behalf of the **Ministry of Environment and Climate Change Strategy**



Mark Zacharias, Deputy Minister

March 8, 2018

Date

On behalf of the **Ministry of Agriculture**



Wes Shoemaker, Deputy Minister

February 28, 2018

Date

On behalf of the **Ministry of Forests, Lands and Natural Resource Operations, and Rural Development**



Tim Sheldan, Deputy Minister,

18.01.22

Date

**Agreement on Management of
Meteorological Networks in British Columbia**

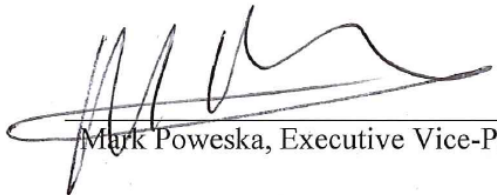
On behalf of the **Ministry of Transportation and Infrastructure**



Grant Main, Deputy Minister,

Feb 13/18,
Date

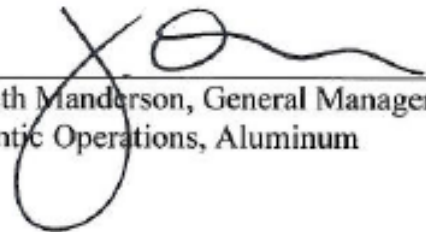
On behalf of **BC Hydro**



Mark Poweska, Executive Vice-President Operations

JAN. 30/2018
Date

On behalf of **Rio Tinto**



Gareth Manderson, General Manager – British Columbia Works,
Atlantic Operations, Aluminum

3 Feb '18
Date

On behalf of **Metro Vancouver Regional District**

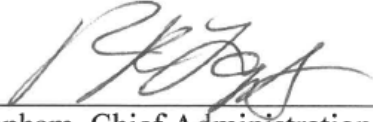


Carol Mason, Commissioner/Chief Administrative Officer

January 19, 2018
Date

**Agreement on Management of
Meteorological Networks in British Columbia**

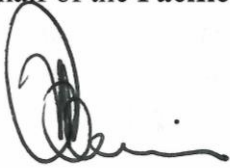
On behalf of the **Capital Regional District**



Robert Lapham, Chief Administration Officer

JAN 29, 2018
Date

On behalf of the **Pacific Climate Impacts Consortium**



Francis Zwiers, Director, President and CEO

9 January 2018
Date