

Community Engagement in Columbia Basin Hydro Operations

An Overview of Current Practices

August 2015

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Background and Purpose of this Research

In 2011, Columbia Basin Trust (CBT) began a multi-year process to:

1. Raise awareness and understanding of the Columbia River Treaty's (CRT) past, present and future among Basin residents through educational tools and products about the CRT.
2. Develop the capacity of residents to engage in discussions related to any potential review of the CRT.
3. Provide advice on meaningful consultation to the federal and provincial governments, as well as communicate provincial information about the CRT back to residents.
4. Establish and continue meaningful partnerships with a variety of regional, federal, provincial, First Nations and transboundary agencies around the CRT.

Through 2011/12 CBT, together with the Columbia River Treaty Local Governments' Committee (LG Committee) hosted a series of information sessions across the Columbia Basin¹ and in 2012 the Province of BC launched its review of the CRT, with several rounds of community consultations during 2012-2013. These discussions revealed three issues related to knowledge of and citizen² engagement in Columbia Basin hydro operations:

1. Basin residents and local governments have expressed a need to be more effectively engaged in Columbia River system planning and operations.
2. Basin residents expressed that they lack an understanding of how Columbia River system works, how it is managed and how decisions are arrived at.
3. There is a lack of knowledge sharing and knowledge management with respect to the Columbia River system as a whole (in Canada and the United States) and the management of operations therein.

CBT, together with the LG Committee, conducted this research to determine:

1. What mechanisms have been used in the past, and are in place now to inform, consult and engage with Basin residents and local governments on Columbia River system operations?
2. Are residents and local governments making use of the current mechanisms? Why or why not? What are the strengths and weaknesses of different modalities?

This document provides an overview of engagement practices used by hydro operators in the Columbia Basin. The focus is on operators within the Canadian portion of the Basin. Limited information on operators in the U.S. portion of the Basin is included.

CBT and the LG Committee have both heard concerns from Basin citizens about the lack of a trans-boundary cross-agency, multi-stakeholder framework for engaging on planning and decisions impacting trans-boundary hydro operations. This topic is beyond the scope of this report.

¹ Unless noted otherwise, Columbia Basin refers only to the Canadian portion of the Basin.

² Citizen is a collective term referring to all audience segments: public, government, communities and sector-based stakeholders.

Research Methodology and Limitations

This research provides a snapshot of engagement practices regarding hydro operations in the Columbia River Basin. The majority of examples are Canadian and are initiated by BC Hydro. Other relevant Canadian and American examples of engagement practices are included in order to inform thinking and provide a broader perspective.

Phone interviews,³ web-based research and a literature review were used to determine current practices and agency preferences. This document focuses on citizen engagement on hydroelectric operations, and thus does not include a summary of CBT's CRT engagement and education actions or the Provincial CRT consultative process to inform the future of the CRT.

Input on preferences and effectiveness of alternative mechanisms is based on anecdotal evidence and limited metrics (e.g. meeting attendance, email subscribers, calls to the "1-800" line). No formal evaluation of current practices has been conducted to determine Basin-wide informational needs, preferences, etc. Input on new, additional information desired by local governments came from self-selected local government representatives at March 13, 2013 information session. There was no quantitative polling of Basin residents to determine their awareness of current information and engagement opportunities, or their preferences.

The majority of the information was collected before May 2013. Minor updates have been added.

KEY FINDINGS: Current Citizen & Stakeholder Engagement Practices

This section provides an executive summary of current citizen engagement practices by Canadian Columbia Basin hydro operators.

Policy, Legal and Institutional Frameworks

1. Citizen engagement regarding hydro operations is in accordance with applicable and existing legal and policy frameworks, which prescribe and influence citizen engagement actions. B.C.'s Provincial Environmental Assessment Acts prescribes how engagement will occur during development of a new power project and B.C.'s Guidelines for Water Use Planning (WUP) define how WUP engagement will occur.
2. There are a limited number of legal, policy and institutional frameworks requiring and/or guiding citizen engagement in hydro operations in BC, or specifically in the Canadian Columbia Basin. There is no Basin-based, cross-agency institutional policy that defines how engagement on hydro operations will occur in the Basin in the absence of any legal or policy framework.
3. With multiple hydroelectric owners in the Canadian Columbia Basin and in the absence of an institutionalized approach to citizen engagement, no single agency has a clear mandate to build

³ Phone interviews were conducted with BC Hydro, Columbia Power Corporation (CPC), International Joint Commission (IJC) Kootenay Lake Board of Control, Northwest Power and Conservation Council, U.S. Army Corps of Engineers and Transalta.

overall system awareness or coordinate communications to ensure information needs are being met.

4. In the Canadian portion of the Columbia Basin there does not appear to be a formalized or institutionalized approach to knowledge management on citizen engagement for hydroelectric planning and operations including formal documentation, review and evaluation of the effectiveness of engagement actions. This results in knowledge management gaps and missed learning opportunities to improve engagement in the future. In contrast, the U.S. Army Corps of Engineers conducts an After Action Report to review and evaluate engagement actions in significant years (i.e. following a period of increased flood risk).
5. CBT has taken initiatives to build overall awareness of the Columbia River system, the Columbia River Treaty and hydro operations in the Canadian portion of the Columbia Basin. See www.cbt.org/powerandwater and www.cbt.org/crt. BC Hydro staff members have made significant contributions on many of these CBT initiatives.

Columbia River Treaty

6. The current CRT, including the implementation process, does not require citizen input into hydroelectric operations under the CRT. The Assured Operating Plan (AOP) process is prescribed based on the CRT requirement of reservoir operations for flood control and optimal power in both countries. Detailed Operating Plans (DOP) and Supplemental Operating Agreements (SOA) can, and do, include consideration for other interests as defined in other planning processes such as Water Use Plans in B.C. and Biological Opinions for endangered species recovery in the U.S.
7. These CRT plans and agreements form the basis for Columbia basin reservoir operations (water levels and discharges), which are key areas of interest for citizens. The level of detailed technical information considered in the AOPs, DOPs and SOAs is currently a structural barrier to stakeholder and general public understanding of CRT plans, agreements and operations. Citizens also point to limited documentation about how these plans and agreements are reached as a barrier to their understanding. Currently there are differing expectations between Basin citizens and BC Hydro about the appropriate level of citizen engagement in the CRT processes.
8. The ongoing [Provincial CRT Review](#) provides an important opportunity and impetus to explore issues and operations that influence a range of social, economic and environmental values expressed by citizens. During this Review, the BC Review Team, which included BC Hydro staff, undertook a number of initiatives to strengthen overall awareness of the Columbia River system, the CRT and hydro operations in the Canadian portion of the Columbia Basin, and to seek input on the values held by Columbia Basin citizens.
9. The CRT Review has also been an opportunity to examine current citizen engagement in hydroelectric planning and operations in the Columbia Basin and explore how engagement can be strengthened to better involve citizens in CRT related decisions. The creation of the Columbia Basin Regional Advisory Committee⁴ in 2014, an outcome of the Treaty Review process, is

⁴ blog.gov.bc.ca/columbiarivertreaty/regional-advisory-committee

designed to continue to secure input on the future of the Treaty and address identified gaps in citizen engagement opportunities.

Planning Processes

10. There are exemplary models of BC Hydro-led shared-decision making planning processes such as BC Hydro's engagements on regional Water Use Plans (WUPs) for Duncan Dam and the Columbia River as well as the 2011 renegotiation of the Non-Treaty Storage Agreement⁵. These processes, involving multi-stakeholder committees, are well-documented and appear to have been effective in influencing decisions. BC Hydro has communicated about the implementation of these processes via many venues. However, citizens want more direct, ongoing engagement following these processes.
11. New generation facilities (e.g. Waneta Expansion Project, Revelstoke Unit 5, Mica Unit 5/6) result in significant engagement in accordance with legal and policy frameworks (e.g. environmental assessment acts for new facilities). The engagement in these processes is focused regionally on those in proximity to the project or affected by the impacts of the project. Known stakeholders are the primary recipients of these engagement actions combined with broader communication activities.
12. The level of engagement activity by hydro operators varies greatly from year-to-year depending on whether one or more of these significant planning processes is occurring.

Operations

13. Engagement actions by hydro-operators regarding annual operations vary depending on whether it's a *typical year* or a *significant year* in terms of water levels. A significant year occurs when there is an increased likelihood of flooding (e.g. high water year in spring 2012) or very dry conditions, or changes to water levels to accommodate other situations (i.e. the Mica dam maintenance in 2014).

In a significant year engagement increases and is focused regionally on citizens who are likely to be impacted. Known stakeholders are the primary recipients of these engagement actions

In a typical year, known stakeholders are the primary audience for engagement actions.

14. Each spring BC Hydro hosts widely-publicized, face-to-face meetings across the Basin to discuss operations. These meetings provide an opportunity for residents and others to learn about hydro operations and share their perspectives on the forecast operations for the summer based on CRT, WUP and other planning process requirements. Participants are invited to bring issues forward at these meetings.

⁵ A WUP has not been prepared for the Kootenay River because the Libby Dam, which regulates the flows on the majority of this river, is in the U.S. and is not subject to B.C. water licensing requirements, and the Comptroller has not required a WUP for the facilities in B.C. downstream of Kootenay Lake.

15. Information-sharing by hydro operators is often focused on reservoir and river water levels: when they will change and by how much. Print ads, websites and email updates ensure general information is widely available. FortisBC uses regionally-based social media platforms to reach stakeholders. Reasons for unusual changes in water levels are not always provided.

Although there is detailed information about water levels available through Basin-based hydro operators (e.g. BC Hydro and FortisBC) residents and local governments want readily accessible information on water levels provided in appropriate formats so they can understand the relevance of water levels and hydro operations to their community, be aware of forecast accuracy and be informed about why unusual water levels are being forecast or implemented.

The coordinated communications response by the Canadian and U.S. Entities during the high water event in the spring of 2012 illustrates the ability of the agencies and local governments to work together when necessary, even in the absence of an ongoing trans-boundary citizen engagement framework, which is called for by some Basin citizens.

Reservoir-Based Citizen Groups

16. In the Basin, the newly-formed (2012) Friends of Kootenay Lake, which Fortis BC and BC Hydro participate in, is the only known Canadian example of a reservoir-based, community-level stewardship group. In the U.S. portion of the Columbia Basin, there are many local reservoir associations that provide information about water levels, fishing, recreation and other related issues.

Overview: Columbia River Hydro System Citizen Engagement Practices

INTERNATIONAL JOINT COMMISSION (IJC) KOOTENAY LAKE BOARD OF CONTROL

On November 11, 1938 the International Joint Commission granted an [Order of Approval](#) to the West Kootenay Power and Light Company to operate Corra Linn Dam to store six feet of water in Kootenay Lake and also to excavate the outlet of the lake at Grohman Narrows. The Order stipulated that the works be operated subject to a number of conditions, and established the International Kootenay Lake Board of Control to supervise the construction and subsequent operation of the works.⁶

The IJC Kootenay Lake Board of Control hosts a public meeting annually in the Columbia Basin, alternating between Canadian and U.S. locations, to review operations and FortisBC's compliance with the 1938 IJC Kootenay Lake Order, which spells out target maximum levels for Kootenay Lake or Nelson.

Print ads inviting citizens to the public meetings are placed in Creston and Nelson newspapers. Email notices are sent to an existing list of known stakeholders. Attendance is typically 30 to 40 known stakeholders. Very few members of the public attend. Attendance is higher when there is a significant event related to water levels.

⁶ ijc.org/en/_/iklbc/Mandate

COLUMBIA RIVER TREATY

Assured Operating Plans, Detailed Operating Plans and Supplemental Operations Agreements

Under the Columbia River Treaty (CRT) the Canadian and the U.S. “Entities” (BC Hydro, U.S. Army Corps of Engineers and Bonneville Power Authority - BPA) are required to jointly prepare Assured Operating Plans (AOP) that define operating rules and downstream power benefits up to six years in advance of implementation, based on the process prescribed in the CRT requiring reservoir operations for flood control and optimal power in both countries. Closer to implementation, the Entities prepare joint Detailed Operating Plans (DOP) based on updated data, in accordance with the AOP. These plans determine water levels and power generation and are the foundation for CRT operations. In every year since the mid-1990’s, the CRT Operating Committee, which includes representation from the Canadian and U.S. Entities has signed at least one Supplemental Operating Agreement to improve fisheries flows on both sides of the border as per requirements determined in other planning processes (i.e. Water Use Plans in B.C and Biological Opinions for endangered species recovery in the U.S.).

The Entities prepare a joint annual report for the [Permanent Engineering Board](#) (PEB) in October of each year. The report tracks implementation of the CRT. The U.S. State Department and Canada’s Department of Foreign Affairs and International Trade (DFAIT) receive the annual report from PEB and the reports are posted on the [PEB website](#).

These plans are developed based on the prescribed principles and procedures set out in the CRT. Neither Entity is required to nor do they seek public or stakeholder input into the development of the AOPs or DOPs. The USACE reviews the DOP each spring and fall with fisheries stakeholders. Any local inquiries about the plans are directed to the appropriate Entity (i.e. Canadian inquiries go to BC Hydro, U.S. inquiries go to U.S. Entities).

CRT operating plans form the basis for Columbia basin reservoir operations (water levels and discharges), which are key areas of interest for citizens. The level of detailed technical information considered in the AOPs, DOPs and SOAs is currently a structural barrier to stakeholder and general public understanding of CRT plans, agreements and operations. Citizens also point to limited documentation about how these plans and agreements are reached as a barrier to their understanding. Currently there are differing expectations between Basin citizens and BC Hydro about the appropriate level of citizen engagement in the CRT processes.

Libby Coordination Agreement

Operations at Libby Dam in Montana impact flows and water levels on the Kootenay River system, including Kootenay Lake. Unlike the CRT dams in Canada, where management is coordinated through the CRT operating plans as described above, the Libby Dam is managed by the U.S. Army Corps of Engineers, with input from BC Hydro. In some cases, since 1993 when the U.S. Army Corps of Engineers changed operations at Libby Dam to meet requirements for U.S. fisheries flows, the operation of Libby Dam, has not always aligned with the interests of BC Hydro or the residents of the Canadian portion of the system.

Since 2000, Libby Dam has operated under the terms of the Libby Coordination Agreement. This agreement resolved an initial Canadian dispute around the U.S. operations of Libby Dam to benefit white sturgeon, bull trout, and salmon in the U.S., with a loss of power generation in BC. The agreement

provides a mechanism by which BC is able to self-compensate for its lost power generation due to the changes in operations of Libby Dam.

This coordination agreement was developed primarily through a series of conference calls involving a limited number of stakeholders, plus the Canadian and U.S. Entities. There was no public or broad-based stakeholder process.

WATER LICENSES

All hydroelectric facilities in BC are operated in accordance with a water license issued under the *Water Act* by the Water Comptroller in the BC Ministry of Forests, Lands and Natural Resource Operations. These water licenses do not prescribe engagement requirements for facility operations.

BC HYDRO

PLANNING⁷

Water Use Plans (WUPs)

The development of water use plans (WUPs) for power and other water control facilities is carried out as part of the licensing procedures of the B.C. Water Act. The Comptroller of Water Rights (the “Comptroller”) may require a WUP as a condition of a new water licence, as part of a review of an existing licence (e.g. due to an application for a licence amendment or for an additional licence for the facility), or in response to a perceived water use conflict.

A WUP is a technical document that defines the detailed operating parameters to be used by facility managers in their day-to-day decisions. Plans are intended to clarify how rights to provincial water resources should be exercised, and to take account of the multiple uses for those resources. The purpose of a Water Use Planning process is to develop recommendations defining a preferred operating strategy using a multi-stakeholder consultative process.⁸

From 2001 to 2004 BC Hydro developed WUPs for the Duncan Dam and the Columbia River. A WUP has not been prepared for the Kootenay River because the Libby Dam, which regulates the flows on the majority of this river, is in the U.S. and is not subject to B.C. water licensing requirements, and the Comptroller has not required a WUP for the facilities in B.C. downstream of Kootenay Lake.

In both the Duncan and Columbia WUPs the consultative process followed BC’s [Water User Plan Guidelines](#). A multi-stakeholder consultative committee (CC), which included First Nations, was formed to develop the WUPs. Water Use Plan study results, progress reports, and consultant reports are [online](#) posted on [bchydro.com](#).

Both CCs used a structured decision-making process based on agreed-to objectives for each WUP. The

⁷ Though not specific to the Columbia River, a critical planning process for BC Hydro is the [Integrated Resource Plan](#) (IRP). The IRP is a 20-year plan that describes how BC Hydro proposes to meet future growth in demand for electricity through energy conservation and clean energy generation.

⁸ [BC Water Use Plan Guidelines](#)

CC then developed performance measures for the objectives. The CC then developed alternatives to address the objectives. The modelling process provided the CC with a description of the consequences for each alternative based on the performance measures. Following the public process BC Hydro prepared final WUPs which were approved and are monitored by the BC Water Comptroller.

Duncan Dam WUP

The [Duncan Dam Water User Plan Consultative Committee](#) (CC) started with 15 members: three took observer status, 12 remained active. The CC met eight times in addition to numerous technical subcommittee meetings. Two public info sessions/open houses were held. The Committee came to consensus decisions that included the adoption of several reservoir operating constraints.

Columbia River WUP

The [Columbia River Water Use Plan Consultative Committee](#) (CC) started with 35 members: some took observer status, and new members joined. Thirty-nine members actively completed the WUP. The CC held seven meetings and was supported by numerous technical subcommittee meetings.

In addition to following BC's WUP Guidelines and complying with the Columbia River Treaty operating requirements, the CC was directed by the province to remain within a cost cap and recognize the government position that the Columbia is a working river with natural heritage and recreation values.

The Columbia River CC debated the provincially-imposed cost cap and came up with four agreements that would recognize legal and financial bounds but not eliminate alternatives from consideration. The CC discussed various reservoir operating constraints. For various reasons (including cost, CRT constraints, expiration of the NTSA, proposed mutually-exclusive constraints, etc.), the CC eventually recommended only one "hard constraint" (Revelstoke minimum discharge) plus a suite of "soft constraints" that BC Hydro operators were to give their best efforts to achieve. In the end there were some data gaps due to time and resource limits, which were addressed through Information and management plans recommended by the CC. While the CC unanimously supported the recommendations for operational changes, monitoring, physical works and review periods, some support was conditional upon addressing other issues.

WUP Monitoring

The Columbia River WUP process recommended many monitoring and physical works projects. This was also the case in the other 22 WUPs BC Hydro has completed across the Province. Depending on the complexity and uncertainty associated with the recommended studies and physical works, each CC selected from four options:

- Receive annual updates through mail/email;
- Establish a monitoring committee;
- Undertake an interim review of the monitoring results; and
- Wait until all the studies are complete and the WUP is reviewed.

Seven of the 23 WUPs across the province recommended a monitoring committee⁹. Where monitoring

⁹ Monitoring Committees were recommended for the following WUPs: Alouette, Ash, Bridge, Coquitlam, Campbell, Stave/Ruskin and Wahleach. The Cheakamus CC did not recommend a monitoring committee but following input from First Nations, agencies and public stakeholders, a monitoring committee was formed in September 2006.

committees do exist, the CCs often made recommendations on who should participate, the committee mandate, meeting frequency, scope, etc. Monitoring committee meetings are focussed on monitoring study methodologies, results and recommendations for modifications to the studies. The Columbia River and Duncan CCs did not recommend establishing monitoring committees.

In the Columbia, a [newsletter that summarizes progress to-date](#), results, and planned work for the upcoming summer field season is distributed each spring. WUPs are discussed at annual BC Hydro operations update meetings. The terms of reference for monitoring studies and physical works are circulated to CC members.

For the Columbia River WUP, interest-specific oversight committees were established to support some physical works. These include debris management committees for Arrow Lakes Reservoir and Kinbasket Reservoir (both Golden and Valemount) and a wildlife enhancement project committee for the Upper Arrow Lakes Reservoir.

In April 2014 a [5-year interim review of the Columbia WUP soft constraint targets](#) on Arrow Lakes Reservoir was conducted.

Non-Treaty Storage Agreement (NTSA)¹⁰

The [Non-Treaty Storage Agreement](#) (NTSA) is a commercial agreement between BC Hydro and Bonneville Power Administration (BPA) regarding the management of reservoir and power plant operations on the Columbia River in Canada and the United States. The original NTSA was signed in 1984 and the most recent NTSA agreement was signed in 2012.

An engagement process to support the renegotiation of the NTSA concluded in 2011. During this process, BC Hydro engaged with interested stakeholders, local governments and First Nations on the potential impacts of various operating scenarios considered for non-treaty storage. The NTSA Stakeholder Forum was convened and members were asked to provide feedback and input associated with potential social and environmental effects as they relate to operating scenarios under consideration. BC Hydro advertised then selected the 17 members of the Stakeholder Forum¹¹ to be representative of all locations and interest areas in the Columbia Basin.¹² The terms of reference defined the roles and responsibility of forum members, which were tasked to:

- review non-treaty storage options developed by BC Hydro;
- review environmental assessment results;
- help identify and articulate the potential pros and cons across the range of non-treaty storage options; and
- review and sign-off on the final Stakeholder Forum Engagement Report.

The forum met three times: October 26 – 27, 2010 in Castlegar, November 24 – 25, 2010 in Revelstoke, and June 1, 2011 in Nakusp. Each session provided an overview of options, a chance to discuss

¹⁰ BC Hydro designed and built Mica Dam to store more water than was required under the CRT. As a result, an additional five-million acre feet (MAF) of usable water storage is available at Mica Dam. This extra storage is referred to as “Non-Treaty Storage.”

¹¹ See NTSA Stakeholder Forum, Appendix A for forum member list.

¹² NTSA Stakeholder Forum Report, 2011. *Non-Treaty Storage Agreement Engagement Process*. Compass Resource Management.

performance measure results and methodologies, as well as an opportunity for dialogue between forum members and BC Hydro project team staff. Unlike the Water Use Planning processes, which were shared-decision making models, the NTSA process encouraged participants to provide input to BC Hydro “in a more unconstrained manner from the perspective of each given interest. That said, participants were always encouraged to provide feedback recognizing the inherent linkages of interests across the Basin.”¹³

A parallel process for consultation with First Nations on the NTSA was implemented and included a series of meetings with First Nations asserting traditional territory in the Canadian portion of the Basin. The primary objectives of the First Nations consultation were to:

- provide appropriate and relevant information related to NTSA scenarios and impacts;
- receive input on potential social and environmental impacts of the potential scenarios; and
- establish where First Nation interests are potentially impacted; identify possible strategies for avoidance and mitigation.¹⁴

There was no process to seek broad public input. The NTSA was discussed at the annual spring BC Hydro public operations meeting in 2011 and subsequent years.

Capacity Additions at Existing Facilities

BC Hydro has conducted significant public engagement before projects to install additional generation capacity at existing Columbia facilities (e.g. Revelstoke Unit 5, Mica Units 5 and 6). The engagement occurred in accordance with legal and policy frameworks (i.e. Environmental Assessment Acts for new generation projects) and included broader public communication activities and targeted engagement activities focused on stakeholders in proximity to the project or affected by the project. In addition, BC Hydro convened consultative committees to provide input into the environmental assessment. Government elected officials, government agencies, not for profit groups, businesses, and the public were invited to join these committees. The committees reviewed project information, helped identify project effects, and recommended mitigation measures to address these effects.

OPERATIONS

Columbia Operations Fisheries Advisory Committee (COFAC)

Established in 1994 by BC Hydro, this consensus-based committee meets three times a year to exchange information related to coordinating activities related to Columbia River hydro operations in Canada and associated fisheries issues. COFAC membership includes: DFO, Province of BC, Teck Metals Ltd., Columbia Power Corporation (CPC), FortisBC Inc., BC Hydro, Canadian Columbia River Inter-tribal Fisheries Commission and Okanagan Nation Alliance. Members provide recommendations on project operations, fish habitat management, fisheries and areas for further research or study. Community-level fisheries stakeholders and others are not involved.

¹³ Non-Treaty Storage Agreement Engagement Process. 2011. *NTSA Stakeholder Forum Engagement Report*

¹⁴ BC Hydro Aboriginal Relations and Negotiations Group. 2008. *First Nations Preliminary Consultation Report*.

Annual Engagement

Each spring BC Hydro hosts approximately 10 face-to-face meetings/open houses in communities across the Columbia Basin to provide: information on planned operations of CRT and other facilities operated in coordinated manners; an update on BC Hydro activities; a chance for BC Hydro to listen to and learn from the concerns of stakeholders, First Nations and residents. In some communities, separate meetings are held with local governments. These meetings are hosted by BC Hydro community relations staff, with the involvement of appropriate technical personnel.

BC Hydro continues to adjust these meetings to best meet local needs. For example, the meetings were changed to an open house format in Revelstoke, Nakusp, and Castlegar and the format of presentation materials was changed in response to stakeholder feedback to increase participation. BC Hydro has also started hosting periodic conference calls to provide operations updates.

Notice of upcoming meetings is advertised in local print and radio media; email notices are sent to BC Hydro regional distribution lists (about 200 subscribers) and local elected officials. Attendance varies: in high water years in some communities up to 50 people may attend a single event. In a typical year where there are no significant conditions, attendance may be quite low.

In addition to annual face-to-face meetings/open houses, BC Hydro uses a wide range of tactics to inform stakeholders about operations and water levels:

- BC Hydro's toll-free reservoir information line (**1-877-924-2444**) provides up-to-date reservoir elevation and river flow information. The recording that provides current reservoir water levels, flows, and Hugh Keenleyside dam deck access, is updated every Monday, Wednesday and Friday.
- [Near real-time reservoir level information](#)
- Regular reservoir email updates (about 200 subscribers) with short-term reservoir level forecasts distributed weekly throughout the summer and bi-weekly in the winter¹⁵;
- Bi-annual [Columbia Operations Update](#) newsletter that explains CRT and other agreements, system and facility operations, and reservoir water level information - this newsletter is distributed to elected officials, known stakeholders, and posted on the website; and
- [Regional annual reports](#), distributed every fall to local government, the media and stakeholders. These reports are also available on bchydro.com.

BC Hydro also has Community Relations representatives in the Columbia basin located in Castlegar, Cranbrook and Revelstoke. Representatives provide information about local operations, projects and issues to local government, stakeholders and the community. BC Hydro encourages the public to call, email or visit at any time if they have any questions or concerns.

Significant Event - 2012 Increased Flood Risk

In 2012 there was an increased likelihood of flooding throughout the system. Surcharging (i.e. exceeding the normal elevation) Kooacanusa Reservoir by up to two feet would reduce flood risk along the rest of

¹⁵ Subscribe at dayle.hopp@bchydro.com

the system and on Kootenay Lake in particular, but create flood-related impacts along Kooconusa Reservoir in Canada and the U.S.

BC Hydro and the USACE jointly explored trade-offs, sought input from local elected officials and First Nations upstream and downstream of Libby Dam. Over a matter of days, several joint phone calls and email exchanges took place to inform and involve local government stakeholders. The Corps, with encouragement from BC Hydro, and influenced by information-sharing amongst key stakeholders, identified and discussed trade-offs, then made the decision to surcharge Libby Reservoir.

During this period BC Hydro proactively initiated or supported a range of activities to support the discussions including: updates to its reservoir information phone line; daily email updates to local governments, agencies and First Nation contacts; issuing 20 advisories and sharing newsletters; sharing USACE updates with BC Hydro contact lists; participating in daily SE BC emergency coordination calls; organizing conference calls for local elected officials; providing special notification on flood control in the Columbia Basin; contacting all local emergency planners to discuss concerns (week of July 9) and maintaining regular contact; providing all local emergency planners with high-flow mapping; speaking with local elected officials on a regular basis to gather information to minimize any impacts and taking part in numerous one-on-one communications with regional stakeholders. As well, BC Hydro staff visited key sites of public concern (i.e. Castlegar sewage lagoons, Twin Rivers park in Castlegar, Whispering Pines trailer park in Genelle) on a regular basis to monitor impacts.

COLUMBIA POWER

The primary mandate of [Columbia Power](#) is to undertake power project investments as the agent of the Province in partnership with CBT. Columbia Power's generating projects at Hugh L. Keenleyside, Brilliant and Waneta Dams are subject to BC's *Environmental Assessment Act*. Columbia Power complies with the public engagement requirements of the Act during the permitting phase. Prior to the permitting phase, Columbia Power hosts public open houses, and meets one-on-one with known stakeholders, First Nations, unions, local governments, MLAs, etc. This early engagement helps Columbia Power identify local issues and preferences and enables Columbia Power to respond proactively.

When a new project is approved, Columbia Power establishes a multi-stakeholder Community Impact Management Committee (CIMC) that meets monthly. CIMC members are expected to bring issues forward and report back to their constituents on progress. During project construction Columbia Power typically issues quarterly updates and milestone announcements via local media (e.g. news releases and paid ads).

When Columbia Power engaged in a strategic planning process to explore potential new projects it used public open houses in key communities, plus one-on-one discussions with known stakeholders and First Nations, as the primary engagement tools. Columbia Power relies on its website to share relevant info with residents. As of 2013 it did not use social media or online engagement tools.

FORTIS BC

FortisBC operates the Corra Linn, Lower Bonnington, South Slokan and Upper Bonnington Dams on the Kootenay River between Nelson and Castlegar. FortisBC decisions regarding its operations are guided by

the 1938 International Joint Commission (IJC) [Order of Approval](#), as well as the terms of the Canal Plant Agreement with BC Hydro.

FortisBC is a key regional provider of information related to Kootenay Lake levels through lake level information posted weekly in the Nelson Star. [Online water level information](#), which is user-friendly, is updated hourly and a toll-free number (1-866-436-7847) is also available. In June 2012, during a period of increased flood risk, approximately 30 calls were received on the toll-free number: about half of those related to water levels.

Stakeholders can subscribe to an email and automated call-out list and be [notified of unusual changes in lake levels](#). Social media is used to provide timely information during significant events. The primary audience for all of this information is the public. Under normal circumstances no additional communications are aimed at local governments.

During times of increased flood risk, FortisBC may phone known stakeholders including the Lower Kootenay Band, homeowners who have been flooded in the past, and the Provincial Ministry of Transportation and Highways. FortisBC also communicates with the USACE and Regional Districts. If flooding occurs, FortisBC attempts to photo-document conditions through site visits and shares that information with the International Joint Commission (IJC) Kootenay Lake Board of Control.

COLUMBIA BASIN REGIONAL ADVISORY COMMITTEE

In 2014, the Ministry of Energy and Mines, the Columbia River Treaty Local Governments' Committee and BC Hydro jointly established the [Columbia Basin Regional Advisory Committee](#). This committee was designed to continue the open engagement that took place during the initial phases of the Columbia River Treaty Review and enhance engagement in hydro operations. A diverse, Basin-wide group of 32 individuals representing a broad range of perspectives, interests and geography, including First Nations, will help inform hydroelectric operations in the Columbia Basin and potential future improvements to the Columbia River Treaty. BC Hydro established a Peace-Williston Advisory Committee¹⁶ in 1989 which provided some guidance to the creation of CBRAC.

U.S. ARMY CORPS OF ENGINEERS (USACE)

In a typical year, the USACE meets with fisheries stakeholders—tribes, fish agencies and known stakeholders—each spring to provide information on planned operations and expected impacts on ecosystems, fisheries, etc., and to discuss where there may be operational flexibility to meet fish objectives. The group reconvenes each fall to assess how operations occurred and to provide input on potential operational adjustments for next season. This group may be consulted as needed on other fish-related agreements and planning decisions.

The USACE attends annual BC Hydro Operations meetings held in the Kootenay River Basin and participates in meetings with local governments and the media, scheduled as part of BC Hydro's annual operations meetings.

¹⁶ The Peace Williston Advisory Committee (PWAC) is a conduit for two way information exchange between stakeholders and BC Hydro regarding the operation of the W.A.C. Bennett Dam and Williston Reservoir. Local issues are the primary focus of the committee, which operates at a strategic level and does not review individual management decisions.

Hurricane Katrina, Super Storm Sandy and recent floods on the Mississippi have focused USACE attention on how it communicates with key stakeholders in significant years where there is an increased flood risk. The frequency of all actions increases as the risk of flood increases. The USACE now provides information on flood-risk online, via news releases and email. Meetings with the public, stakeholders and emergency planners are also part of the USACE flood response.

The USACE implements an After Action Report to review and evaluate the effectiveness of its actions.

RESERVOIR-BASED CITIZEN GROUPS

In Canada, [Friends of Kootenay Lake](#) is a newly-formed (2012) Canadian stewardship group “dedicated to protecting the fish and wildlife habitat of Kootenay Lake while supporting economic, recreation and traditional uses.” In the U.S. portion of the Basin there are many examples of place-based citizens’ groups and partnerships that have formed around reservoirs, including: [Lake Roosevelt Forum](#), [Friends of Brownlee Reservoir](#), [Dworshak Reservoir Association](#) and [Willamette Riverkeeper](#). While hydro operations and lake levels are one part of a broader focus, each of these groups provide a community-level, place-based “window” to provide information to, and receive input from, local residents related to hydro operations.