

Meeting notes

Transboundary Gas Group

March 22, 2011

Okanogan Public Utility District Office,
Okanogan, WA

Introduction & Updates: Dan Millar (Canadian co-chair) announced that this will be his last meeting due to retirement plans.

Additions to agenda: Columbia River Bi-Op update was requested. No official update is available at this time since the issue is still under judicial review. A judicial decision is expected in early May (2011).

Presentations were provided on regulations and fish-spill exemptions for TDG (Total Dissolved Gas) for both Oregon and Washington (Susan Braley on behalf of Agnes Lut and Chad Brown). There are differences between the Washington and Oregon TDG standards and exemption (WA) or waivers (OR). Both use the 110% general criteria but the two jurisdictions differ on the subject of exemptions to the general standard. Also, Oregon is unique in having specific consideration of shallow water conditions (105% limit). Please refer to posted presentations for detailed information.

Trevor Oussorren (BCHydro) provided a presentation was provided on a field experiment conducted by BCHydro at the Ruskin Dam (Fraser River system – Hayward Lake/reservoir) that was initiated following a high TDG event and associated fish mortality related to a reservoir drawdown exercise in Feb/07. The findings of a study on Salmonid alevins (and similar) showed direct correlation between mortality and fish size, as well as mortality and supersaturation (air). Please see posted presentation fore details and contact James Bruce (James.Bruce@bchydro.com) for more info.

A presentation was provided by Hank Nelson (Avista) on methods to improve water quality conditions at Long Lake Dam. A pilot project was implemented to raise Dissolved Oxygen levels in water downstream of the dam using a Draft Tube aeration system. Pilot tests were designed to optimize DO while staying under 110% TDG. See posted presentation for details.

Kent Easthouse (USACoE) led a presentation on joint operations for Chief Joseph and Grand Coulee dams. This joint operations study follows recent completion of dam modifications to Chief Joseph dam (installation of spillway deflectors to reduce TDG loading), which should allow for more spill at Grand Coulee. The focus is optimizing spill at Chief Joseph in order to optimize generation and Grand Coulee.

Joint operations can reduce TDG in the Columbia River above and below Chief Joseph dam (with management objective of 110% saturation). Please see presentation for more details. Questions to the presentation pointed to concerns for some downstream utilities regarding addition spills from Chief Joseph dam that may be required to accommodate wind energy integration on the supply grid (USACoE is aware and currently considering this issue).

Kelvin Ketchum (BCHydro) provided a presentation on the Columbia River Treaty operations. Notes as follow:

- The treaty came into force in 1964 between the governments of the United States and Canada for the operation of three storage dams in BC for increased flow regulation on the Columbia and Kootenay rivers. The treaty requires specific operations under specified conditions but U.S.A. doesn't specifically control Canadian operations (Operations are collaborative).
- Mica Dam (BC) holds the largest storage in the Treaty dams but Grand Coulee Dam (WA) has largest generating capacity.
- 60 Year Treaty term, requires 10 years to terminate or change, thus 2014 is the earliest date to initiate intention to terminate/renegotiate.
- If the treaty isn't terminated, power generation and upstream benefit arrangement continues, but flood control benefit provisions end in 2024.

Treaty Priorities:

- Domestic and Consumptive uses (incl. irrigation & drinking water)
- Flood Control (rule curves)
- Firm Energy (reservoirs drafted a necessary to meet specified system firm energy requirements)
- Reservoir re-fill (July 31 target to maximize energy generation for subsequent year)
- Non-firm energy ("bonus" capacity - varies from year to year)

Other joint operation values not in CRT:

- unilateral flexibility under Treaty
- mutually beneficial agreements between Canada/US (e.g. fish protection)
- BCHydro Water Use Planning (with local communities/stakeholder)
- Columbia Basin Trust (community benefits)

Framework:

- Assured Operating Plan (6yrs ahead - used to calculate benefits)
- Detailed Operating Plan (completed year before AOP implementation -mutual agreement)
- Treaty Storage Regulations (TSR: Flood & Power - developed for current operating year using current hydrology information - actual and forecast runoff; called AER in U.S. - assured energy requirement).
- -TSR is run twice per year (provides base monthly storage targets)

- Mutual agreements to deviate from TSR (non power use agreements, shaping flows, weekly conference calls, etc.)

Disputes:

- Libby Dam reservoir operations (getting close to resolution).
- Treaty avoids lawyers (the treaty provides reference point - back to principles approach in dispute resolution).
- Permanent Engineering Board can assist in issue resolution
- IJC in background.

Coordinated Operations between Canada & U.S. are considered to provide greater certainty. Various aspects relating to the potential future of the treaty were also provided (refer to presentation for details).

Closing remarks: there was uncertainty regarding who would maintain the TGG membership list and chair the next meeting given Dan Millar's retirement from Environment Canada.

March 23, 2011 – An outdoor tour of the Enloe Dam was led by Nick Christoph (Okanagan PUD), as well as a visit to the proposed Shanker's Bend site on the Similkameen River (currently no action to move forward with this proposal, although site is considered good from a construction perspective).

Presentations:

Kim Johnson (USACoE) has provided access to the March 22, 2011 agenda and presentations, as follows:

<http://www.nwd-wc.usace.army.mil/tmt/wqnew/>

Look under "Meetings" for the "Transboundary Gas Group" heading and "2011" bullet.

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Revised: N/A