



## Connecticut River Joint Commissions

### Executive Committee Meeting

Monday, November 21, 2016 – 2:00–4:00 P.M.

CRJC Offices, 10 Water St. Lebanon, NH

Present: Stephen Lembke, VT; Jim McClammer, NH; Jason Rasmussen, VT; Richard Walling, NH.

## Meeting Minutes

### 1. Approve September 19, 2016 EC Minutes\*

Comm. Rasmussen moved and Comm. Lembke seconded a motion to approve the minutes with 2 grammatical error corrections. Vote: Unanimous

### 2. October Financials

Discussed the accounts receivable from Vermont and New Hampshire. The Report was accepted. The statement of activities has to be corrected.

### 3. Conte partnership follow-up

Steve Lembke talked about Conte partnership and letter was not yet drafted to determine willingness of subcommittees to participate with the watershed on wheels he can have sites and dates for opportunity to support the Watershed on Wheels display. One or two people each day to help set up and walk the folks through the exhibit. Tara felt that 3 of the 5 may be interested in that. Andy French is willing to do Adopt-a-Habitat site as well by school for a section of river, marshland or a tributary. They would monitor and clean up of their areas. He also talked about creating panels with information about the CRJC. Once Steve Lembke has confirmed with Tara Bamford, he will draft a letter for Rick's signature to begin the partnership. Jason Rasmussen moved and Jim McClammer seconded a motion to approve the drafting of the letter to begin the Conte partnership activities.

4. Follow-up teleconference with Katie Kennedy of TNS re: the hydro model.

Comm. Rasmussen began the conversation about the follow up questions Katie Kennedy posed on the objectives that CRJC proposed for evaluation by the Hydro Model. She asked if there were any specific ones that CRJC is one that is very difficult. The peer review has been completed. She stated that she will have to consult with other experts on this issue. The Consultant who worked on the peer review will be one of those consulted.

Kennedy summarized the discussion as follows:

**Separate means objectives from fundamental objectives.** In the list of objectives provided by CRJC, there are several suggested means to ends. While the means can be valuable for developing management alternatives, it's important for us to get at our fundamental values in order to determine when and whether we've achieved success. It's also a transparent way to communicate value – to be clear about why we're at the table and what we're looking to achieve. Conflict in natural resource management often occurs because individuals or organizations go to the mat for objectives that aren't explicitly associated with their values. A simple way to determine whether you've found your fundamental objective is to continue to ask "why is that important" until you can answer "because it is." As an example, take the erosion issue: A commonly-stated objective in hydropower management is to minimize erosion. If we ask "why is it important to minimize erosion?" a common answer is "to minimize property loss." It almost feels silly to ask the next question, "why is it important to minimize property loss," because property is a fundamental value to most people. For more information and explanation about separating means from ends and other tips for objective-setting, [this is a good reference](#). Here are some fundamental objectives that I think we may have arrived at yesterday (the latter two came from the conversation about mercury, so may need to be further examined and adjusted):

- **Minimize property loss**
- **Minimize human exposure to mercury**
- **Maximize recreational opportunities**

2. Determine how you will measure your objectives. Again, this is a critical

component for determining success, because it is how we evaluate whether one management alternative is better or worse than another. While I and others can *help* you decide on measures, no one should *tell* you how to measure your objectives because only you can decide whether a measure adequately represents your values. Good measures are directly associated with stated objectives. Today we talked about measuring lateral bank loss (in some unit of linear measure per time) as a direct measure to evaluate property loss associated with erosion. Measures should also be operational, meaning that you can easily go out and measure or estimate it. For the latter two objectives above, measuring human exposure to mercury is quite difficult to operationalize, so it's likely we will need a proxy measure for this objective. Proxy measures are not ideal because they don't directly measure fundamental objectives, but we often need to strive for balance between these two qualities of good measures (being direct and operational), and proxy measures are one way to do this. A good proxy measure is supported by sound hypotheses or empirical data linking the proxy measure to the fundamental objective. In the case of mercury, I suggest first looking to the scientific literature and/or experts to determine these hypotheses and an associated proxy measure.

3. **Develop alternative management scenarios.** The sky is the limit when we begin to think about what management scenarios to evaluate. It is often helpful to first think about the simplest alternatives, examine how these are predicted to affect your objectives, and then develop additional alternatives based on what you observe. For now, the management scenarios that we will be looking at for certain are:

- **Status Quo (no change)**
- **Instantaneous Inflow = Outflow**

4. **Estimate the consequences of the scenarios on the objectives.** The TNC/UMass hydrological model can help with this to some degree - model output is time series data of *reservoir volume* (which can be converted to stage) and *reservoir outflow* (volume per time from the dam). Our task is to develop linkages among management scenarios and objectives; when the linkages are associated with reservoir *volume* or *outflow*, the hydrological model can be helpful, though not sufficient for evaluating

consequences. For example, some objectives may be related to flashiness, which is a measure of how much reservoir outflow or volume fluctuates. If we have some explicit relationships established between flashiness and stated objectives, we can use model output to calculate “flashiness” metric associated with each alternative, and then relate flashiness back to stated objectives to determine consequences of the alternatives on our objectives. Because of my ecology/biology background, I am working on the linkages to fish and mussels and their habitat; we will need to seek the advice of other experts to develop linkages to other objectives, such as lateral bank erosion. Because there is a direct relationship between reservoir outflow and power production and revenue (it’s a simple relationship), we also have those values, which can be helpful for examining trade-offs among other management objectives.

*Attached is the presentation that I gave in August for reference – the graphs demonstrate how a couple of flow-related calculated metrics can change (or not change) based on two different scenarios (the two stated above)? I’ve also attached a paper of similar methods that were used in a west coast system. The circumstances are a bit different, but the premise is the same – If you are interested, I suggest reading through this useful case study.*

5. **Review of last full meeting minutes** to be certain promised action items are moving forward. All items are in various stages on track.
6. **FERC – Status Report** The purchasing company is called Great River Hydro and the CEO Daniel Revers is a Tuck School Graduate. They appear to be modeling investment value of the cash streams. Comm. McClammer suggested we send letter with the book – Where the Great River Rises – to introduce him to CRJC. Comm. Rasmussen moved and Comm. Lembke seconded motion to have Jim McClammer draft a letter to the new owner of the CT River Dams. There will also be a need to have a response to the draft licensing which is due on December 1. There will be a stakeholder meeting soon after the issuance of the draft license. This is new territory, so wants or demands need to be made clear and it will affect the new economy of the state.
7. **CRJC Commissioner Re-Appointments and Recruiting** – Comm. Lembke reported

that there are currently 17 total Commissioners – 8 VT, 9NH.

Two are at-large members and there are openings in VT among statutory and 4 in NH of the statutory. He will bring this to the Commission meeting in December.

Membership orientation for new members should be conducted. President Walling appointed Comm. Lembke to head up an ad hoc committee including whoever he can recruit to help him on the recruiting committee.

Comm. Rasmussen reported that Rick Hopkins would be willing to serve, but he would probably drive in with the ANR Representative but requested mileage reimbursement. Unfortunately the budget doesn't currently allow for this expenditure. We will update the list of attendance to determine who remains active. Staff will send them the spreadsheet to Comm. Lembke for review.

8. **December Joint Commissions Meeting Agenda** will include Membership, Conte Project, Draft License Agreement, and CRJC's Objectives following discussion on the Hydro Model.

9. **Other Business**

CRJC-CRWC will resend letters to congressional delegation and incoming elected officials. We will contact the Welch aide on the licensing process. David and Rick proceed with reinitiating contact with government officials. Jason moved to redo letters and send it to them, Jim McClammer seconded.

Adjourn

Comm. Lembke moved and Comm. Rasmussen seconded a motion to adjourn at 4:15 P.M.

*Adopted: January 23, 2017*