

**Lake Champlain Basin Program
Technical Advisory Committee Meeting
Wednesday, September 1, 2010**

Final Meeting Summary

I. EXECUTIVE SESSION – Closed to Public

- a. Review and approval of the Rock River Targeted Watershed Initiative Record of Decision
- b. Exit Executive Session: Motion to accept ROD as is by Mike W., Neil K. second, abstain: Breck; all in favor.

II. Updates and Announcements (Open to Public)

- a. Around the table updates from each TAC member.
- b. VT Water Center has RFP out (similar funding is available in NY), requiring 2:1 match/in-kind. Water Center funds are USGS sourced. This is for research or E&O funding. RFP is for about \$200,000, Water Center has grants available for \$30-40,000.
- c. Richard Lauzier hosted a field day (8/26) to highlight the work he's been doing on green buffers project. Farmers in the region shared the work they've been doing.
- d. Two projects sited on the west side of Missisquoi Bay and a side tributary of the Pike R. are specifically working with farmers to bring money to region for farm improvements
- e. A project was presented to the Climate Change Center in Montreal focusing on Rock River management in Québec, including \$500,000 for SGAs, LiDAR work, and more. May do a workshop on river corridor management, specifically on Rock River. Will include wetland restoration projects.
- f. Suggestion for an off-site meeting in NY, possibly in November meeting? Would likely be in Champlain canal region. Eric H would like to coordinate a meeting in NY and in QC each year; these will likely occur in the spring.
- g. VT ANR is revising their VT State watershed management planning, and basin plans. Launching stakeholder process about what does basin planning do or not do and identify ways to make them better and more useful to stakeholders. Will likely be in a November timeframe.
- h. EPSCoR NSF proposal due Oct 15th – 5 year research proposal on climate change and water. Jon Erickson & co-applicants have held several stakeholder meetings to identify appropriate directions to go with this and decided to focus on Lake Champlain basin. Will hopefully provide more E&O money, integrated assessment model for the Basin.
- i. Asian clam confirmed in Lake George, surveys indicate that this is likely a localized population at the south end of the lake.
- j. NYS DEC fisheries personnel held public meetings to review overland baitfish transport law. Transport law may be changed to allow baitfish to be transported overland within same water body.

III. Summary of Previous TAC Meeting

- a. Review and approval of minutes from June 2nd TAC meeting.
- b. Motion to approve as amended by Mike W., Doug F. second, all in favor.

IV. Lake Champlain Basin Program Update, *Bill Howland*

- a. OFA update: signing postponed to October/November
- b. June Steering Committee update – FY10 budget was approved at the June meeting; Bill provided an overview of the FY10 technical budget
 - i. Eric H. will circulate FY10 Budget Task Descriptions to TAC
- c. FY09 Climate Change RFP – was not awarded and will be combined with FY10 \$100,000 to release one larger RFP in FY10, following similar objectives
- d. TAC Operations
 - i. Moving toward more subcommittee meetings to address all of the requirements of the FY10 budget
 - ii. Conflict of Interest Guidelines will be revised in the next month and reviewed/approved by Steering Committee
- e. TAC membership term appointments
 - i. Bill provided an overview of the 3-year appointments; feedback included reviewing attendance of current TAC members and incorporating attendance rate into the renewal period.

V. FY11 Budget Discussion

- a. TAC will identify and discuss emerging issues of concern to prioritize for budgeting
- b. Breck would like to develop a cleaner mechanism to identify TAC project proposals to separate ideas for projects from individual project needs
 - i. Pre-proposal process probably won't work in this system
 - ii. After discussion TAC agreed that project ideas should be submitted anonymously, with low, medium, high funding levels rather than actual dollar amounts. Project summaries would articulate strategic rationale for the project tied to OFA priorities, with minimal tactical-level details. The proposal could state whether the project could/should be done by a specific organization. This sole-source suggestion can be considered during the budget approval process. Proposals will need to be separate from implementation projects that fall under the responsibility of the three jurisdictions. Technical project ideas could also be solicited from public meetings (i.e. CAC meetings). Proposals could also be submitted under categories, such as annual monitoring, research or implementation.

VI. Ideas that the TAC generated from their discussion:

- a. Phosphorus
 - i. effect of nitrogen on blooms
 - ii. Hydrodynamics of Missisquoi Bay
 - iii. annually tilled land as a significant contributor of nutrient loadings; examine no-till alternatives, larger-scale demonstration and evaluation projects on corn land in Basin and how to integrate into manure management system
 - iv. Need for demonstration evaluation and assessment to focus remediation efforts on farmlands

- b. Aquatic nuisance species
 - i. General improvement in detection & management
 - ii. Evaluate current AIS monitoring programs in Basin and identify gaps for possible threats
- c. Climate change
 - i. encourage budget items to incorporate climate change research/impacts etc to each budget item, and add \$ where possible
- d. Implementation
 - i. Projects should incorporate time-lag of response from implementation action
 - ii. Ecosystem effects of climate change, i.e. changes in water temperature on fish recruitment, plant growth, management considerations/recommendations as a result of these predictions
- e. Energy issue
 - i. biofuels, impact on farmland and woodland conversion, driven at farm level, including potential for increase in sedimentation, P transport, higher runoff, Drilling also has these issues, carbon sequestration initiatives – impacts on the landscape, correlation to P transport, etc in watershed
- f. Economic issues
 - i. what may happen to Basin as tourism might increase with increases in summer temps – i.e. increased number of people trying to access the Lake & water resources
 - ii. what are the economic value of implementing actions now, what is the economic cost of not implementing actions
- g. Fish & Wildlife
 - i. Biodiversity
 - ii. alternative sea lamprey control
- h. Toxics & Human Health
 - i. Moriah mine – pumping water out of lake into mine, acid mine leachate issues
 - ii. Michigan passed policy to not export water out of the great lakes basin (great lakes compact). Can VT, NY QC agree to not export water out of the Lake Champlain basin
 - iii. Next generation organic wastewater contaminants – what is basin-wide distribution or potential impact
 - iv. generate list of indicator-type organic contaminants
 - v. alternative technologies employed to retrofit our existing infrastructure (wastewater treatment plants), including any existing development or new development, including pretreatment of septic systems
- i. Measuring & Monitoring
 - i. measuring progress & assessing status of indicators. Need a mechanism to evaluate the success of the projects that are identified in OFA. Need to define acceptable levels in an adaptive management framework. Investment in data collection and assessment to make this work
 - ii. biodiversity
 - iii. nearshore littoral zone communities
 - iv. improved understanding of hydrodynamics of sub-basins & water interchange among sub basins
- j. E&O initiatives

- i. training town managers & DPW crews on roadside ditch management, and farmers/farm workers on ditch maintenance
- ii. demonstration projects – LID techniques, green infrastructure community scale, tie environmental and economic benefits together, create vision for what new sewer systems can be, identify funding opportunities

VII. Workplan reviews for 2010 field season

- a. Little Chazy monitoring (SUNY Plattsburgh)
 - i. Project summary: The project seeks funds to sustain hydrologic and water quality monitoring for one year in the Little Chazy River (LCR) watershed. These data are integral to a larger effort to develop predictive models for assessing the spatial and temporal variability in nutrient loads in relation to land-use using the Soil and Water Assessment Tool (SWAT) model.
 - ii. TAC comments:
 - 1. accuracy of True Track stage sensors that may be insufficient for high flow events.
 - 2. Really high flow events may be lost (but only two in the history of this project), but in past the high-water mark was mapped to estimate flow.
 - iii. Motion to approve workplan as submitted by Doug F., Ed S. second, all in favor, Dave F. abstain.
- b. Wetlands restoration (USFWS/Intervale Foundation)
 - i. Project summary: The USFWS and The Intervale Conservation Nursery designed this monitoring study to assess how tree health is related to plant species, plant protection (tree tubes and brush mats), nursery provider, tree planter, planting technique, and plant origin. This research addresses this gap in knowledge by developing and testing a standardized monitoring protocol that will help ensure that riparian restoration work effectively replaces the loss of natural plant communities.
 - ii. TAC comments:
 - 1. Workplan needs more details regarding what the project will actually be measuring
 - 2. Laura M. explained some of the methods – we don't know why trees survive and die, and we should know because a lot of money is spent on these projects. Right now, it's hard to establish water quality benefits because trees haven't been there long enough.
 - 3. Need a better sense of what about the trees is monitored. Who will be trained to do this work? Generally need more details.
 - iii. Doug F. moves to table pending further information. Neil K. seconds. All approve.
- c. Illicit Discharge Detection and Elimination (VT DEC/Stone Environmental)
 - i. Note: Only Phase 2 of this project had been submitted to TAC prior to the meeting. A description of Phase 1 was circulated at the outset of this discussion.
 - ii. Project has 2 phases – Phase 1 compiles base map, follow up in field, meet with municipalities to review questions about systems. Phase 2, Stone environmental will identify problematic outfalls, identify drinking water and waste water leaks into the system. Stone will have follow-up to eliminate discharges.

- iii. TAC comments:
 - 1. Have already located and are correcting some discharges. Should more clearly state that they are estimating P mass export.
 - Samples are taken at low-flow and assume that loads found are constant.
 - 2. Recommend presentation to group to show detail of the project.
 - 3. The deliverables of this project will be useful to the towns
- iv. Breck suggests to table the vote until October. Eric Howe will incorporate suggestions and circulate to TAC and Jim.
- d. Flow-gage monitoring (USGS/VT DEC)
 - i. Project goals:
 - 1. Develop high flow estimates using indirect methods for six streams in the FMP suite for initial development of high-end rating curves.
 - 2. Obtain multiple, high-flow discharge measurements for the study streams using direct measurement methods, in collaboration with the USGS.
 - 3. Develop new rating curves that employ the higher discharge rating curve. Assess the error introduced by extrapolation of rating curves based on low to moderate stage and flow measurements to higher storm flows, through comparisons to high flow measured directly by the USGS.
 - 4. Compare the continuous stage estimates from high-accuracy monitoring equipment routinely used by the USGS for long-term monitoring installations, to inexpensive pressure transducers widely used for short-term research installations and used in the FMP campaigns.
 - 5. Compare daily mean flow records computed independently by UVM using the low cost instrumentation and record processing techniques to daily mean flow records computed by the USGS using higher cost instrumentation and standardized USGS techniques.
 - 6. Reanalyze the 2006-2008 FMP data for the six study streams to assess how the addition of more accurate high flow data in the rating curves affects the interpretation of runoff dynamics, runoff volumes, and runoff:rainfall volumes.
 - ii. TAC comments:
 - 1. Mike W. explains history of TAC on this project. Outcomes have been unclear through the process, but it should be useful to municipalities.
 - 2. Please clarify the “indirect method” in the revised workplan.
 - 3. This project is only evaluating one method. What if it doesn’t provide sufficient accuracy? Other options should be explored. Is there any adaptive process that can help change the method as the project progresses?
 - 4. Project is comparing Hobo & True Track, and USGS but this project shouldn’t just compare instruments. Could compare to other methods (tracer), but the project has focused on stage, discharge, and extrapolation. Looking for assurance that method works well enough. If that doesn’t work, we’d like to know a best method that does work. That should be the outcome. Project could recommend changes to methods to get a better result. Communities would like to see cost-benefit analysis, but SC did not ask for this outcome. Breck indicated that the final report could list other options and costs (but not outcomes).

5. Two suggested changes: Include evaluation of other methods and refined Deliverable 6 to provide information to communities about how to use a new low-cost monitoring plan, and to provide a comparison to current USGS monitoring methods to illustrate how accurate the low-cost option is.
 6. Fred D. thinks the Steering Committee was ill-advised to recommend this project.
 7. Overall, TAC felt that the directive from the Steering Committee was unclear about what they were looking for in this project (this project description did not go through the TAC budget process). TAC agreed to review the project based on the technical merit, not whether or not they felt the project was a priority.
- iii. Motion to approve if the following amendments were made to the workplan by Doug F., Fred D. second, all approve; Breck B., Mike W., Laura M., Neil K., Eric S. abstain.:
 1. Include evaluation of other methods
 2. Refine Deliverable 6 to provide information to communities about how to use a new low-cost monitoring plan, and to provide a comparison to current USGS monitoring methods to illustrate how accurate the low-cost option is.
- e. USGS stream gages in St. Albans
 - i. Project summary: will construct and operate new continuous record, real-time streamflow stations on Stevens Brook and Mill River while maintaining and operating the existing gage on Stevens Brook for the period July 2010 to September 30, 2011. The relation (rating) between river stage and streamflow will be developed for the stations by making a series of discrete measurements of streamflow over a range in flow conditions. The rating will then be used to convert river stage to streamflow.
 - ii. Doug F. motions to approve workplan as submitted, Ed S. second. All in favor. Neil K., Laura M., Eric S., Breck B. abstain.
- f. Roadside Drainage Network (UVM)
 - i. Project summary: We propose to conduct an assessment of the road network within the Winooski River watershed of the Lake Champlain basin. Our approach includes three important elements: measurements of runoff and pollutant (sediment and phosphorus) loads at selected road segments using both automated and synoptic grab sampling techniques; surveys of the road network to document a typology of hydrologic impacts of road drainage and the topographic, geologic, and management context in which they occur, and extrapolation of these findings to the watershed scale using a GIS-based model. We will develop a framework that could be implemented throughout the basin to assess the contribution of road drainage to impairing water quality.
 - ii. TAC comments:
 1. Some concern about building weirs in road culverts – will this exacerbate erosion? Are weirs necessary, can we measure from the culvert?
Recommend consideration of open-culvert gaging.
 - iii. Motion to approve pending TAC suggestions by Mike W., Ed S. second, all approve.
- g. Skidder bridge project (VT)

- i. This project has three separate elements:
 1. Start a Portable Skidder Bridge Free Loan and Education Program in the New York State Lake Champlain Basin to be administered by the Greater Adirondack Resource Conservation and Development Council
 2. Implement a Technical Assistance Program for loggers participating in the Vermont Portable Skidder Bridge Rental Program within the Vermont Lake Champlain Basin administered by Natural Resources Conservation Districts
 3. Continue the Portable Skidder Bridge Free Loan and Education Program in the Vermont Lake Champlain Basin administered by Northern Vermont Resource Conservation and Development Council.
- ii. TAC Comments:
 1. Deliverable 3 – would like a complete final report on project and project success. Budget should explain match better.
 2. Identify how many bridges currently exist in Vermont & NY for proper evaluation of project success.
 3. Track frequency of bridge unavailability when requested. May highlight seasonal demands.
 4. Include more detail regarding bridge tracking and reporting, such as, duration of bridge use, estimates acres of logged, etc. to help understand how much we reduced impacts.
- iii. Mike W. moves to approve with changes, Doug F. seconds. All approve. Vic abstains.

VIII. Adjourn

Attendance:

TAC: Breck B., Neil K., Jon E., Laura D., John K., Fred D., Doug F., Mike W., Eric S., Laura Medalie (for Jamie Shanley), Martin Mimeault, Kip Potter, Ed Snizek, Vic Putman, Dave Franzi, Deb Perry, Marilyn S.

LCBP Staff: Bill H., Eric H., Nicole G., Michaela Stickney (VT ANR)

Guests: David Borthwick-Leslie