Outcomes of Brule River Watershed Roundtable II

TO: Board of Directors, Brule River Preservation
Participants, Brule River Watershed Roundtable II

FROM: Caroline Marshall, Secretary, BRP

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"By all odds, the Brule remains a pristine resource," Dave Zentner opined in framing the agenda for the over two dozen individuals who participated in the second Brule River Watershed Roundtable October 29th at the Lake Nebagamon auditorium. "While many assets are in big trouble, the Brule has good biodiversity and water quality. But how do we, as stewards, assure that our children and grandchildren will know it as we do?" Or as Carl Meyer went on to phrase it, "How do we hold back change?" And how do we determine what is propelling the change we see, as others went on to ask? Is it the result of natural cycles? Global warming? Human impact? Is it possible even to know? And how do we adapt?

As soon became clear, addressing these questions and managing "the intelligent tinkering" that will insure the Brule watershed's continued health is "easier said than done," as Zentner pointed out. "The institutional setting is complex; agencies and organizations have big areas of responsibility and often have trouble communicating." With Ruth Oppedahl of the Natural Resources Foundation facilitating, however, participants (listed in an appendix) began speaking to that challenge.

Building a Common Knowledge Base

All agreed that a common base of knowledge is essential to the drafting of complementary or collaborative plans and research activities. And they described a number of mapping and data gathering efforts that are now underway, building such a base. Among them:

- ***Assessing Lake Superior basin wetlands***. Concerned about the impacts of land use on water quality, Douglas County and its partners (among them, UW-Superior's Lake Superior Research Institute) have been assessing the south shore's wetlands and looking at forests to see where there are large open areas. The effort, part of the "Slow the Flow" initiative to increase land cover and reduce the volume and velocity of runoff, is currently studying "sub watersheds," Sue O'Halloran reported. (A one-year grant ends in December; UW-LSRI is seeking funds for at least another year.) Douglas County wants to know where it can get "the most bang for its buck" – whether in restoring stream banks or wetlands. Christine Ostern noted that the county is now in the fifth year of a 10-year plan, and in preparing to do a new one needs help with such "prioritizing" questions. (Current priorities include protecting surface and ground water and monitoring invasives.)

- ***Mapping protected areas***. Brule River Preservation has received a grant from the Bock Foundation to create a Brule River Conservation Registry. On BRP's behalf Mike Gardner and

Brye Johnson of Northflow will gather information on conservation practices in Wisconsin state natural areas, the Brule-St.Croix Legacy Forest, and other easements, creating an online map to display the types and distribution of practices. Mike said it would be available at a new website – brulerivercoalition.org – and ready for demonstration at the next roundtable.

- ***Extending a survey of the watershed's vegetative cover initiated in the 19th century.*** Paul Hlina presented two maps that offered stark evidence of the changes wrought by logging and other activities as he described an effort he is spearheading to update surveys undertaken in 1948 and 1962. The first map detailed what was found in the first public land survey of 1852-1856, while the second showed the status of vegetation as it was sampled over the years 1932-1943. Together they portray the drastic shrinkage of the pine forest and barrens (where water comes from, as he pointed out) that had characterized the watershed in the 19th century, and the subsequent influx of maple and aspen, willow and alder, that followed the logging and clearing of land for farming.

  The Lake Superior Research Institute and State Herbarium in Madison are collaborating on the project, seeking funding from the Wisconsin Coastal Management Program. (They must raise a match of $100,000.) In sampling aquatic plants, bank flora, and vegetative cover for each separate forest, wetland, and barren community (and assessing their condition), researchers will establish permanent "plots" to which they can return, and create maps comparing land cover types in the four major time periods, among other things. UW-Madison will manage the database, which Hlina estimated another 100 institutions will access by way of the web site. (Ruth Oppedahl suggested coordinating survey work and findings with Lyme-St. Croix Legacy forest easement planning process, as well.)

  A third of the watershed's surviving cedar swamps are on the Brule, Hlina noted, thanks to their protected status. He went on to point out that it is in the understory where change is first registered. Looking to plants – their quality and quantity - to assess the health of wetlands is thus crucial; "it's the little ones that are the core of protection – they're the canaries in the coal mine."

- ***Inventorying agencies and organizations' plans for the watershed.*** West Wisconsin Land Trust has received funding from the Mott and Duluth-Superior Community Foundations to produce "a roadmap for conservation planning," Jane Anklam reported. It will catalog information on who is doing what in the "eco region." She reminded everyone that "agencies generally have specific missions whereas conservation organizations can approach things more holistically."

- ***Monitoring the Brule's water temperature***. At Brule River Preservation's behest and with input from the DNR, Mike Gardner and Brye Johnson have installed 10 water temperature monitoring stations on the upper Brule to provide a continuous flow of what Paul Pisczek has termed "foundational" data (since water temperature drives biologic process and influences the distribution of aquatic life). BRP and Northflow will distribute the findings annually.

- ***Monitoring aquatic and vegetative invasive species***. Brule River Preservation, the River Alliance, and Douglas County AIS collaborated in hosting three events to train and engage volunteers in looking for the presence of invasive species on the Brule (through Project RED,

short for Riverine Early Detectors). A trip to investigate cattail colonies on Big Lake proved inconclusive as the samples were deemed likely a hybrid of native and invasive. Only yellow iris was proposed as an invasive species when volunteers later gathered to perform a scan of longer stretches of the river.

- ***Tracking changes in the State Forest.*** Dave Schulz said the Brule River State Forest (by far the biggest land mass in the watershed) maintains "permanent test spots," where rangers monitor growth and species composition. The program was launched 10 years ago.

Areas of Immediate Concern

Despite this range of knowledge-gathering activity it was clear that anxiety remains high when the discussion turned to what it means to "take a watershed perspective," and the challenges of trying to take such an all-encompassing view. Two areas in particular generated lively discussion.

- ***Sedimentation.*** As a concern identified by the first roundtable, the question of whether the Brule is experiencing increased sedimentation elicited a barrage of big questions, set off by Bob Bank's describing a trip taken from Stone's Bridge in July in the company of Faith Fitzgerald, a research hydrologist with the USGS. Bob said they had visited MacDougall Springs, where he could remember clear water five or six feet deep but where it is now only inches. Faith suggested the change could be the result of natural cycles or forestry activities on barrens that were formerly clear, but that research on "spring seeps" would be useful in any case.

  Dave Schulz pointed out that the watershed is just beginning to recover from the "destructive practices of 120 years ago," whose "burning and clear-cutting created the aspen-dominated forest we have today" and that "forest management is now a lot different." Nevertheless, the larger question of forestry practices prompted people to ask: What type of forest optimizes water quality and quantity? Are certain types better? Indeed, what is the function of certain types of forest?

  Sue O'Halloran said Sandy Verry of the U. S. Forest Service has done research indicating that coniferous forests "desynchronize snow melt," whereas the "shift to aspen accelerates it," producing runoff. And Matt Dalman described work the Nature Conservancy is doing near Caroline Lake with the Northern Institute of Applied Science, looking at how the functions of white pine and fir-spruce forests might be restored without actually restoring such forests – an element of the TNC's work on climate change work. He said they are asking "What surrogate species might serve the same function?"

  As the discussion wound up, Mike Gardner pointed out that "you can't improve something you can't measure; it may be that the amount of sedimentation in the Brule hasn't changed - it's just moving around." He and Brye Johnson had just attended a workshop on sedimentation and plan to do some "pinning" in the Brule to begin to try to answer that question.

- ***Carrying capacity.*** A host of questions were also generated when the group turned to another concern - human use, and the impact of what Frank Pratt called "the human watershed" - on the

river. Is recreation causing increased sedimentation? Some suggested that greater numbers of kayakers pose a threat, stirring up sediment as they appear to do, and nosing their way into areas inaccessible to canoers. Lynne Rogers observed that more people seem to be leaving their vessels (perhaps to answer the call of nature), in the process trampling fragile vegetation and disturbing riverbanks.

Bill Rogers spoke of how the Au Sable in Michigan "determined its capacity and now places limits." But Dave Schulz responded that Wisconsin's public use doctrine doesn't allow for limits so the DNR takes an alternative approach - educating for responsible use. He described the "blend" he seeks to achieve with the State Forest in balancing work to produce forest product ("managing the ecosystem by mimicking nature as much as possible") with public interests and access. River behavior and conformance with no glass and other regulations have improved immeasurably in the past decade, he reported, thanks to the landing host program launched with funds from BRP and other efforts to educate the public. In fact, the DNR "actually had trouble finding people to ticket in 2014" for not securing loose plastic bottles and such.

Still, it was agreed that usage data, perhaps starting with figures from the canoe rental, would be good to have as another piece of the puzzle (although Frank Pratt advised that they can be hard to get; the National Park Service will not share those it collects with the Namekagon River partnership, a source of some friction). Caroline Marshall proposed the idea of revisiting the records of a Citizens Task Force that convened for two years in the early 70's to address questions of access and impact, as well; her father and Bob Bank's dad both served on it.

The Process Going Forward

More knowledge-gathering is obviously crucial, everyone agreed. But as Bob Fitzwilliam cautioned, "There are now many knowledge bases, all working at different levels." He stressed the need for (a) integration, perhaps through study groups that combine a number of agency and academic perspectives; and for (b) recognizing that "the development of further knowledge will depend on defining problems."

Others urged that efforts focus not just on historic perspectives. "That won't help us deal with accelerating change," Jane Anklam lamented, reminding everyone that Hayward had experienced *two* "200-year" floods this year. That led Dave Zenter to pose an initial question study groups should consider: What do we already know and how can we apply it?

It was said the Brule River Coalition should function as a "framing" entity in overseeing this activity, capturing issues as they come up, hosting research summits and meetings to track and update activity, and formulating action agendas on their basis. (Mike Gardner said BRP and Northflow will apply in December for $10,000 from the DNR to formalize the Coalition's purposes and processes.) Frank Pratt offered the Namekagon River Partnership as a possible model (at least for the study groups), in that it meets monthly.

In the course of the morning other models (places to "pirate good ideas," as Michele Wheeler characterized them) and resources were also mentioned. They included:

- ***Models.***

  Friends of the White River, a 10-year old group similar to the Namekagon River Partnership, which was said to be instrumental not only in drafting a management plan for the White River (by serving as an advisory committee) but also in securing an additional six miles of public shoreline. A member of Trout Unlimited as well as the Friends, Bill Heart outlined the proposal he wrote, prompting the Bayfield Regional Conservancy to get involved until DNR funds are available.

  The St. Croix-Eau Claire Rivers Project, also a model for citizen involvement in DNR planning; in fact, it served as a DNR pilot program, Christine Ostern reported.

  Summits presenting research on both the St. Louis and St. Croix Rivers. (Neither asked the follow-up question of "now what?" however, or resulted in an action agenda.)

- ***Resources.***

  The Lake Superior Binational Forum, which brings a range of organizations and vested interests together, and can help find resources and make connections, according to Michele Wheeler (who serves as DNR liaison to - and coordinator for - the program).

  The River Alliance, which offers capacity building, strategic planning, and other forms of technical assistance. Allison Werner serves as Director for Local Groups.

  Nature Conservancy funding in support of climate change study. If those involved with the Brule watershed proposed a project that was a good fit with TNC guidelines, that source might be available, according to Matt Dalman. He said Nick Miller, their "science guy," is looking at wetlands.

"We're really making progress when we take the watershed approach," Frank Pratt suggested. But what will success look like? "I'd say it will be things happening that wouldn't otherwise happen," Bob Fitzwilliam offered, like having hearings and fully engaging people in planning cycles. Success of that significance will take "consideration and respect for what we are all thinking and learning," as Lynne Rogers pointed out, not to mention robust efforts to share, communicate, engage in dialog, retain a holistic perspective, and remain "a big tent that holds everyone in it," as Ruth Oppedahl put it.

Next Steps

In his concluding remarks Dave Zentner proposed that "the timing is right; this is meant to happen." A half dozen volunteered to serve on a Steering Committee, whose first order of business will be to "put a calendar on it," as Dave said, and determine working/study groups. Meanwhile, several ideas were suggested for immediate action.

Immediate Opportunities

- Ken Lundberg spoke of the need to avert a potential "disaster:" an abandoned railway trestle across Nebagamon Creek is about to give way, he said, and should it do so, it will plug the culvert that allows creek water to enter the Brule.

- Christine Ostern encouraged people to spread word of a USDA program. The Natural Resources Conservation Service has $2 million available for the 2014-2016 period to assist landowners with conservation practices, particularly runoff control. To qualify they must produce at least $1000 in revenue from land-based activity. Gary Haughn, in the Ashland Service Center office, is the contact.

- Paul Hlina is looking for six volunteers to work in a "bio blitz" with an estimable group of expert botanists on the vegetation survey. Under expert direction they will catalog everything they see, which in turn will be entered into the survey database. "It's a chance to be a citizen scientist and contribute to professional databases," Hlina said. He also urged people to consider making a gift toward the $100,000 match they must off to obtain Coastal Management Program funds.

Roundtable participants

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