Beaver Management Task Force Meeting
July 20, 2011
Best Western Midway Hotel
Wausau, WI

Meeting Minutes

Task Force Members in Attendance: John Olson (WDNR - WM), Richard Clark (Wisconsin Trappers Association WTA), Ralph Fritsch (Wisconsin Wildlife Federation), Todd Nass (WDNR), Jonathan Gilbert (GLIFWC), Robert Rolley (WDNR - Research), Brian Stemper (USFWS), Dave Swanson (WDNR – Law Enforcement), Sue Reneike (USFS), Bob Manwell (WDNR), Steve Avelallemant (WDNR – FM), Bob Willging (USDA – WS), Lacey Hill (Bad River NRD), Bob Obma (Trout Unlimited), Brad Koele (WDNR – WM), Shawn Rossler (WDNR – WM), John Gillen (WDNR – Forestry Management), Kurt Waterstradt (USFWS), Jim Ruwaldt (WWA/WWA), Heather Stricker (Forest Co. Potawatomi), Bill Vander Zouwen (WDNR – WM), Debbie Beyer (UW Extension) – Pat Smith (County Forest), Brad Roust (County Forest), and Dan Eklund (USFS) – in audience.

Welcome and Logistics - John Olson

John Olson, Furbearer Specialist for the Wisconsin Department of Natural Resources (WDNR) welcomed all participants and covered logistics related to building layout and refreshments.

Task Force Objective, Role, Charge, Final Product – Bill Vander Zouwen

Bill Vander Zouwen, Wildlife Management Section Chief with the WDNR, covered the charge of the Beaver Management Task Force – "Develop an updated Wisconsin beaver management plan that uses the latest available peer-reviewed science in combination with in-depth citizen input, and strives for reasonable balance, protects core beaver populations, address conflict, supports aggressive damage control, recommends solutions and identifies future goals." The WDNR needs the help of all task force participants as well as the public to make a new comprehensive plan. WDNR management will develop a management plan with the VOIGT task force using recommendations developed by the Beaver Task Force.

Beaver Task Force representatives need to consider themselves as an advisory task force as the group does not make the final product or decisions. Policy Team and upper WDNR management want to honor what is covered, but not all recommendations will be in the final plan. The final decisions will be up to the wildlife policy team and the Natural Resources Board.

- Plan will cover these general topics:
1) What is the ecology of the species?; 2) What is the species history in Wisconsin?; 3) What are the management goals over the next 10 years?; 4) What are the issues?; 5) What are the objectives?; 6) What do we hope to accomplish?; 7) Research and information to be completed over the next 10 years.; 8) Literature Cited.

***During the fall of 2011, a series of public meetings will be held around the state as a way to hear from interested citizens.

***A survey will be assembled related to beaver management issues. This survey will be made available at public meetings as well as on a website devoted to the management plan rewrite process.

Introduction of Task Force Members, Representation, Issues and Concerns - Deb Beyer – UW Extension

Deb Beyer was introduced by Bill Vander Zouwen. Deb has a background in natural resources, is independent of DNR, and has no invested interest in the final outcome. She wants a fair, clear, and transparent process. Debs has a Masters degree in Education, has served as a chief naturalist for WDNR State Parks, and has nine years of meeting facilitation experience.

Following introduction, Deb established the next 2 hours would be used to cover introductions of participants, ground rules for the meeting, followed by a round robin session on beaver management issues.

Planned outcomes for the meeting

- Get familiar with each other; Start list of beaver management issues; Gain familiarity with beaver information (data and research); Draft a time line of process, and establish next meeting date.

List of ground rules for the group, developed by the group

- Be respectful; No formal breaks; Speak loudly and clearly; Wait for acknowledgement from facilitator before speaking or making a comment; Keep comments short and to the point (honor time limits); Reaching consensus – will try to reach consensus on issues. Definition of "Consensus" - Agreement that everyone can live with the decision, buts it's not necessarily the best option or recommendation for every representative. Task Force will strive for 100% consensus, but will acknowledge and capture when consensus is not reached; Majority recommendations will be documented as well as other thoughts; Turn cell phones off; Strive for consensus, when consensus is not met, decision will be made at a higher level; List of options, where consensus could not be reached, can be presented to the public for additional insight; Any task force member that can't attend the meeting needs to have someone attend on their behalf.

Jonathan Gilbert - Made clear his role on the task force. He is an employee, and does not make the final decisions for the tribes. He does his best to bring tribal issues forward, but can not agree or come to consensus for them. Tribes may have there own thoughts on things. Other representatives should not be confused on his role on the Beaver Task Force. Consultation process with tribes will occur at sometime and tribes will have their time to weigh in on things. Jon G. will do his best to represent the tribal perspective.

Deb started exercise to raise issues related to Beaver Management. Representatives were able to raise three issues. Issues were divided into seven categories, see below. Audio recording are available to reference who mentioned specific issues.

Policies and regulations

1) Ability to change season length
2) Mississippi River management
3) Keep it simple
4) Maintain flexibility of landowners and managers to control beaver
5) Wildlife management plays a small role in beaver management, and fisheries management seeks little input of management decisions.
6) Anything done in task forces does not interfere with treaty rights.

7) Spring and or fall, changing season dates.
8) What is the extent of beaver control related to other issues?
9) User conflicts (contract control versus citizen harvest).
10) Better monitoring of beaver harvest (season)
11) Watershed approach – what classification for beaver control
12) Goal for beaver population
13) Ensure plan is applied evenly to public and private lands.
14) Accountability and control of population once the plan is in place (how often is the population monitored? Emergency rules? What options are available to follow the plan?)
15) Cost of doing beaver management (surveys, damage control, etc.) – cost continues to go up – need to set priorities or find additional funding.

Beaver Species Interactions

1) Beaver impacts to cold water resources
2) Beaver and trout do not coexist
3) Beaver and trout are mutually exclusive
4) Consider positive and negative impacts of beaver
5) Beaver impacts on all species.
6) Concern of beaver harvest on otter populations
7) Waterfowl and other species benefit of beaver
8) Overharvest affects on other species
9) Beaver impacts on wild rice
10) Positive and negative impact of beaver from an ecosystem perspective

Beaver habitat relationships

1) Loss of wetlands due to low beaver numbers
2) Declining aspen acres statewide means less resources for beaver. Aspen is a huge benefit to lots of wildlife, including beaver.
3) Historical wetland acres – "pre white settlement", What is historical? Potential wetland resource provided by beaver before fur trade.
4) Zero tolerance for beaver in coldwater trout streams.
5) Beaver restore wetlands for free.

Research and Monitoring –

1) Lack of new research
2) Beaver and climate change mitigation (water retention)
3) What is the status of the beaver population?
4) Fair and accurate science based evaluation of Wildlife Services beaver control programs.
5) Causes of decline of beaver numbers.
6) Climate change impacts on beaver
7) Improve accuracy of public harvest.
8) Impact of large predators on beaver populations
9) 2011 beaver survey should be integrated into any population discussions.
10) Cost-benefit analysis of beaver and trout – economics – trout stamps, beaver pelts, both sides of the fence (benefits of beaver to being in a location and benefits of beaver not being in a location).

Education, Communication and Outreach –

1) Public tolerance and education

2) Communication when dams are removed
3) Wetland loss due to beaver removal is a misnomer

Values –

1) Cultural values of beaver considered
2) Balancing the needs between user groups (trout versus trappers)
3) Species and habitat diversity versus economics
4) Beauty of Beaver – identify characteristics

Impacts on infrastructure –

1) Beaver damage

Robert – we don't have an economist in the group. Task Force will not be able to determine economic cost-benefits with the current expertise in the room.

Lunch Break

History of beaver management in Wisconsin – John Olson

John Olson gave a brief presentation on the history of beaver in Wisconsin. Handouts summarizing the major events related to beaver was made available as well as a 2-page summary of the 1990 Beaver Management Plan. Prior to European settlement beaver were found statewide, probably at a low density. Most forested areas in state were comprised of pine/maple stands and aspen was scarce. European settlement was characterized by intensive logging, changing habitats, and no controls on beaver (i.e. no season or regulated take).

In the mid-1930's beaver registration began and remained mandatory until 1983, when furbearer/beaver questionnaires replaced mandatory registration. Today, beaver helicopter surveys are used to determine beaver populations in zones A and B, while population estimates in the southern portions of the state are extrapolated based on information collected through the beaver questionnaire. .

1990 Beaver Management Plan - planning team in the late 80's came up with a management plan in 1990.

Management actions before the plan

- Trapping Seasons; No bag limit; Snares legal; Removal of beaver dams; Contracts and permits; Removal of beaver dams; Subsides; Landowner Hunting and Trapping Privileges; USDA – Wildlife Services; Aerial surveys of trout streams; Trapper Questionnaire 1983-84 (dropped registration); Fur Buyer Questionnaire

1990 Plan Highlights

- Beaver Management Zones ; Regional Population Estimates; Trapper Subsidies; Water Bank; Negative Habitat Management; Stream Specific Control; County Cost Share; Funding Options; Education; Beaver Damage Guidelines

Today it appears beaver populations are decreasing in zones A and B. The beaver population is increasing in zone D, while populations are somewhat stable in Zone C.

User Concerns Today

- Damage control necessary; Priority trout waters free flowing; Wetland Community Concerns; Beaver Decline; Forest and wetland stability

***Bill Vander Zouwen – get some of the cultural values in the plan – pre European.

Beaver/Trout Management Overview – Steve Avelallemant

Steve Avelallemant, regional fisheries coordinator for the northern region of the WDNR, presented the history of beaver management from a fisheries management perspective. Below is a chronology of fisheries and beaver management in WI.

In 1960, the Wisconsin Conservation Department published "Beaver, Trout, Forest Relationships" which identified the problems for trout that are still valid including: warmer water in summer; colder water in winter; blocked migrations (especially important when spawning areas are limited); siltation; loss of stream channel.

Starting in 1979, fisheries management began special efforts to control beaver which included: aerial beaver dam counts on Class I and II trout streams; special beaver trapping seasons (several weeks before regular season); $50,000 in ORAP Habitat funds through Fisheries to remove beaver dams and monitor changes in Antigo, Marinette and Park Falls Areas. A comprehensive evaluation of special effort in 1979-1981 found: increases in beaver dams on many streams despite removals, beaver harvest through trapping efforts increased by 150%, and recommendations were to: expand control efforts (seasons, subsidies, contracts); conduct research on beaver control/trout responses – launched Fisheries Research Study by Ed Avery 1982-2000; management of vegetation to discourage beaver was encouraged. A Beaver/Trout Work Group met in 1983 and agreed to: expand and liberalize season (Oct 22- |April 30 in North) in special trapping areas bounded by roads; subsidized beaver contracts in special trapping areas only ((Oct 22- Dec 2 (North), $20/beaver >30" nose to tail, trapper retains, and April 1 – Sept 30, $10/beaver of any size, no payment if trapper keeps)); no shooting of beaver; $112,000 of Fisheries funding; 1983-85 evaluation period.

In 1985, Fisheries Management's evaluation included the recommendation of a subsidy program due to an overall increase in beaver dams in NWD, NCD and LMD (except in areas with additional LTE hired trappers working to get the "last few"). Program plan allowed: districts to issue specific watershed trapping contracts after May; use of Trout Stamp funds for beaver control work; use of shooting and snares for control work (recommended); and removal of beaver lodges. Tony Renalde, helped to establish USDA – Wildlife Service beaver control efforts. The APHIS beaver control program began in 1988, details included: Congressional appropriation of $100,000 annually (Reps Ourada and Volk); Fisheries shift $112,000 annually from subsidy contracts utilizing Trout Stamp funds; Stream specific removal effort of all beaver and beaver dams; BDCA (Beaver Damage Control Areas) also started by Wildlife Management; Started in Nicolet National Forest (Tony Rinaldi) and Woodruff Area of NCD; Expanded over time to currently just over 1500 miles of trout stream; Originally all Class I and II trout streams. Now a small percentage of Class III streams as have tried to take a watershed approach in areas of high density of trout water.

Today, APHIS beaver removal is still the primary removal effort for Fisheries and funded at approximately $118,000 annually (Trout Stamp). Individual Fisheries Teams still use Trout Stamp funds for in-house removal efforts in addition to or to augment APHIS control work. Funding for beaver control work is problematic; Fisheries goal is still zero beaver on targeted waters (that still is in direct opposition to programs and interests which favor beaver). Fisheries

management still has beaver problems on some watersheds in all areas of north although more pronounced in western side (i.e. Sawyer County: Pre-condition – Wisconsin Trout Waters (1980 publication); Data – Baseline Wadeable Streams Monitoring; Results – 20% of streams no longer contain trout, 40% have lost trout at one or more stations, all of these on streams without beaver control efforts). Fisheries still have an area to expand in the western region. In the eastern side, don't see a need for huge expansion of beaver control efforts.

Where do you guys actually work on beaver? Work is conducted in twenty-four counties mostly in the northern region, but also South Central Region and North East Region. All work is done pretty much north of HWY 29. Broke it out by miles of stream per county. Dug out trout stream book from 1980, offer that list of streams and trout stream classification is as close as we can get to historical streams (really hit high point in mid to late 80s).

There is one county at 4% (low) and one county at 90% (high). Roughly between 10-50% of counties stream managed for beaver control, 27% average across the north.

Beaver Population Status in Wisconsin – Robert Rolley

Robert Rolley, Research Scientist with the WDNR, presented background information on the two surveys used to evaluated beaver populations in WI: the aerial quadrat survey and the beaver trapper questionnaire.

Aerial Survey – Developed by Bruce Kohn and Ashbrenner to survey the northern 1/3 of the state every 3 years, and has been conducted six times since developed. Survey is scheduled again for this fall. The survey covers 85 quadrats (42 randomly selected blocks from zone A and 43 randomly selected blocks from zone B); mean area of each block is 5.5 sq. miles, so roughly 2% of total area of northern WI is covered. The surveys are flown in late October-mid November, entire block is flown whether water or forest cover. Originally, Bruce K. found a lot of colonies off of streams; this survey was designed to pick them up. Efforts to find active colonies included areas with obvious log maintenance and new cuttings. Robert discussed the distribution of blocks with map. Estimates on the number of beavers, used an estimate detection rate of 81%, which comes from Canadian research and ground truthing in WI. About a 50% population decline from 1992-2008, approximately 3.5 percent population decline per year. Zone A, northwestern, estimated decline was 2.4 percent per year. Northeast WI, Zone B, rate of decline was much steeper, 4.6% decrease per year, nearly significant decline per year.

Beaver trapper questionnaire – conducted annually since late 80's – questionnaire is sent to 6000 individuals who purchased either a trapping or conservation patron license. Over the last 20 years, there has been a significant change in the number of folks trapping beavers. Estimated number of people trapping peaked in 2004 at 4,500 and has dropped the last 4 or 5 years to below 2,500. An average of roughly 20,000 beaver were harvested in the early 90's, with peak of 60,000 in mid-1990's, another slight decrease and peak in the mid 2000's. Found a strong correlation between number of beaver harvested and number of beaver trappers. A graph was presented showing beaver pelt price (low in 90's with peak in mid-90's; over $20 in mid-2000's). The 2010 data will not be available until end of July. Also had a pretty weak correlation between pelt prices and number of beaver harvested (some relationship when pelt prices low, but little impact when prices go up). WI has 4 beaver trapping zones, and questionnaire asks of where trapping occurs. Estimate beaver harvest by zone, about half from zone A in first decade, 25 percent from B and C. Harvest in zone A has decreased 50%, with smaller declines in zones B and C, harvest in D has remained stable. Number of folks trapping in zone A has remained stable. There has been a 30% decline in zones B and C. Trapping effort (trap nights) has decline

significantly in zone A (60%) with smaller declines in zones B and C. Opinions of trappers on status (compared to the previous year) – in zone A, the proportion of trappers reporting a decline has increased substantially. The 2006-07 questionnaire found a majority of trappers reported populations decreasing. Zone B and C – trapper opinions indicated populations are stable. Zone D – sample sizes are smaller, overall majority of trappers saying populations are stable, indicating more stability in zone D than other parts of the state.

Conclusions – estimates of the number of beavers colonies has declined, beaver harvest correlated with number of trappers, statewide beaver harvest has declined 50 percent. During last 8 years, percent of trappers reporting population decline has increased.

USDA – APHIS – Wildlife Services Beaver Control Program – Bob Willging filling in for Jason Suckow

Bob Willging, District Supervisor with APHIS Wildlife Services, Rhinelander, presented information on USDA-Wildlife Services beaver control program's history. Ninety percent of beaver control is in the northern district, and is only one small component of beaver management in the state. The program developed due to mounting beaver damage concerns in 1980's, Rhinelander district started in 1988, as a component of 1990 beaver mgmt plan. The control work is conducted under direction of the beaver management plan. WS partners with the WDNR, USFS, Sokaogon Chippewa Community, Forest County Potawatomi, Wisconsin CO., and WI Townships to conduct control work and are in WI at the request of cooperators. Focus is resource protection. Specialized resource protection. Don't want to eradicate or reduce, but to protect resources the cooperators have asked them to protect. Resources that WS works to protect include: trout habitat, roads and bridges, forest resources, WDNR impoundments, wild rice lakes, and other sensitive habitats.

Beaver removal is accomplished with the use of body-grip traps, foothold traps, snares, and shooting. The mission is to keep streams in a completely free flowing condition. Dam removal – dams are removed when they are causing damage. Currently remove 90% of dams by hand, big dams removed with the aid of explosives. Because of earlier efforts, now only removing dams put in by colonizing pair, which are much smaller.

Administration Policy – require a written landowner agreement authorizing the control work; place trap warning signs; and respect private trappers. If private trappers are present – will not trap. They encourage use of their 800 number to report APHIS trappers not abiding by this rule. Avoidance techniques are use to minimize incidental take. They have a record keeping system that includes serious detail of what is caught and when and includes time spent on a property. They conduct direct supervision; ongoing training (water craft training, agency training, firearm, chemical immobilization training). Promote non-target avoidance through training and recording more information on otter catches to reduce incidental take. Also, do a lot of NEPA compliance. NWRC – tied into research, and focus on wildlife damage research, nationwide.

Summary – WS has removed around 1,000 beaver annually since 1988. Take was 1300-1500 beaver in 80's and really hasn't changes since that time. All streams are in a maintenance phase, take has stayed the same. WS maintains 1,500 miles of streams for WDNR and USFS in free flowing condition. Initial cost of treatment was $1,500-2,000 per mile. Maintenance cost – $250-300 per mile. In 2010, 866 beaver taken, and represented 1.3 % of the population based on the 2008 aerial survey.

Map of WS streams – treated versus non-treated, concentration of treated streams in northeastern WI out of 10,000 miles of trout streams statewide. Road/Highway protection – cooperates with 11 counties, receive about 200 complaints annually Wild rice lake protection – requires specific water levels to properly germinate in spring, work on 23 lakes to maintain stands. Impoundment/Sensitive habitats – site specific work, in lowland habitats for rare plants such as orchids, average removal of about 100 beaver annually. Timber flooding – listed as sites, so unable to tease out of the system.

Fur and castor salvage – done in spring and fall. Process includes putting out for bids by fur buyers, also do a bidding process for castor, some money from sales goes back into program, and over the past two years, $1250.00 has been donated to the Future Trappers of Wisconsin Camp. Plan is to use these monies for trapper education resources.

Overview of Beaver and Trout Stream Research Available – Matt Mitro and Robert Rolley

Matt Mitro, Fisheries researcher with Integrated Science Services, gave an overview of research currently available related to beaver, trout, and coldwater systems. Matt started his position in 2003, replacing Ed Avery.

In 1983, Ed Avery compiled a bibliography of related research that has not been updated since. Fisheries research will work on incorporating recent fisheries and beaver related research.

Recent peer-reviewed research has focused on high gradient streams. Two reports significant to Wisconsin are now available as published reports. Reports have been converted to a .pdf format and can be sent upon request.

Results from Ed Avery report published in 2003. Started by removing 500 beaver dams and removed an additional 200 beaver dams. Looked at how removal impacted trout. Water temperature results collected 4 years after, and 18 years after, found significant results related to a change in water temperature (lower).

Higher gradient trout streams - removing beaver dams had more of an impact on these streams. Saw significant improvement of trout numbers after removal. Research looked at entire fish population, not just trout. Saw improvement in trout and skulpin numbers, while tolerant fish species numbers went down.

- Another reference - Transaction of American Fisheries Society 1994 – Implications for brook trout habitat

Abstract doesn't accurately reflect the results of the paper. Some conclusions:

1) Found heterogeneity in beaver dam removal.
2) Thermal affects of beaver dam removal is highly site dependent.
3) Dam removal not effective in decreasing down stream temperatures.
4) Some systems had no impact, others had significant impacts.

- Thermal impact to trout in regard to climate change.

Collected temperature data from June to August and calculated daily temperature over the time period. Pick out maximum temperature observed. For short durations, trout can handle higher

temperatures, but need thermal refuge at night. Without thermal refuge, trout do not survive. Not a lot of longer term data available in WI, have shown some changes in the stream temperatures.

1992 – 2010 – Short durations time period, over time period line is flat, over longer time period seeing an increase in the temperature of streams. UW climate researchers are saying we have higher night time temperatures. Recognizing the climate is changing in regard to temperature. Dams could cause an increase in the thermal effects.

Ask Creek in Richland CO – has been active beaver management in the past few years. Dams were removed. Undergrad looked at brown trout, and actively moved them to a down stream location. Found some of the fish actually moved through the dam system – could also be a site specific area. This was during spawning season when fish were actively moving.

Chapter on climate effects on coldwater fish. Looking at climate influence on fish distributions throughout the state. Model suggests we see dramatic decreases in brown and brook trout throughout the state. Some streams that are resilient, these are the streams that we want to protect. Borderline streams are lest resilient to higher temperature and may not want to spend additional funds to manage these creeks.

How do you define resiliency – carved state up into sections – identify water shed, used GIS data to look at geology and land use as well as looked a presence/absence. The model is currently being updated.

Effects of Beavers on Ecosystems – Robert Rolley – Review by Baker and Hill 2003

Robert Rolley presented a summary of Chapter 15, Beaver, from Wild Mammals of North America - Baker and Hill 2003. Chapter discusses the beaver as a keystone species (handout). Key points from the chapter were summaried. See handout for more information.

Beaver Dam Effects:
-List from paper; Effects on Ecological Processes; Effects on Vegetation; Effects on Invertebrates; Effects on Fish; Effects on Reptiles and Amphibians; Effects on Birds; Effects on Mammals

Public Listening Sessions – Bill Vander Zouwen and Deb Beyer

BV - We thought it was very valuable to hear from folks that were not part of the task force. Some public meetings have been scheduled, with the goal of gathering local issues, provide information via a webinar, and on the website.

JO – Those that presented today will build a poster to be used as at the informational public meeting. Authors or substitute would be at meeting to answer questions from the public. Goal is to collect concerns of folks.

List Meeting Dates: 4 total

Strategic location so there are close to the center of the management zone. Want to encourage participation from zone D. Session to start at 6, open house for ½ hour, short presentations, done by 7:30/8:00.

Suggestion to have zone B meeting in Crandon, agreed to review and see if this is the best location.

BV – Urged representatives to get the word out about the meetings. News releases don't always find there way to everyone.

Group would like to review and edit survey before it goes out.

Steve A. - Web based survey has more activity than public meetings – need to spend time on this option.

BV – It's valuable to go beyond issues. Not going to do this again before we address issues. Would be good to hear ideas before the next set of recommendations are established.

NEXT MEETING DECEMBER 14th

Meeting Adjourned 3:45 PM