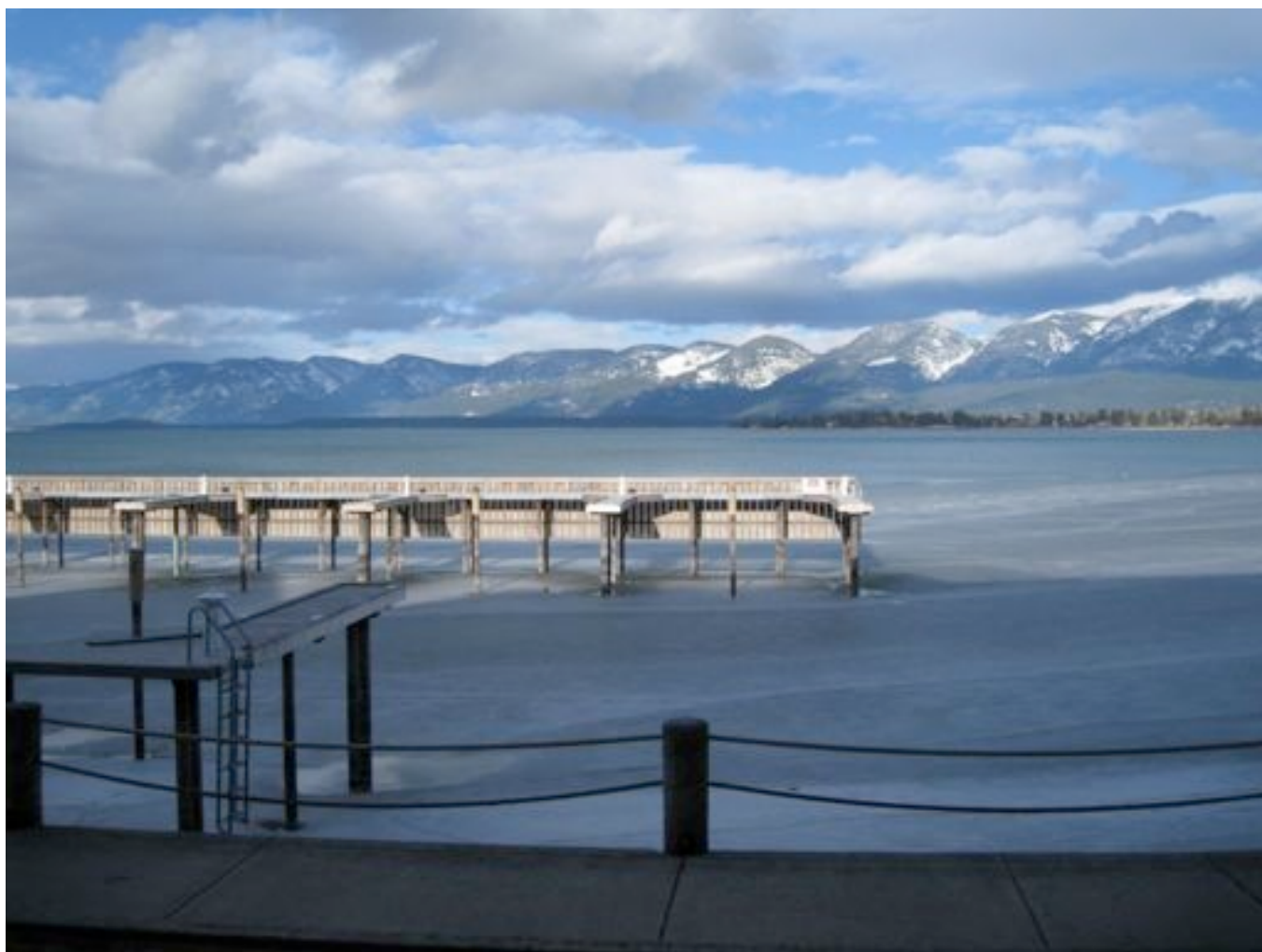




Crown Managers Partnership 2011 Forum Summary



**Polson, Montana
March 14-16, 2011**

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1.0 Presentation Summary

The 11th annual Crown Managers Forum was held in Polson, Montana on March 14th-16th, 2011. The forum focused was focused on the theme of aquatic invasive species (AIS). As in previous years, the forum is an opportunity for land resource managers and the public to come together to share management strategies and discuss opportunities for cross border collaboration on resource management issues.

Presentations were focused on key aquatic invasive species that are relevant to the Crown of the Continent (COC), potential management strategies and tools that are being used outside of the COC that may be relevant to addressing AIS inside the COC and case studies of AIS in the COC. There were also presentations that looked at the economic implications and legislative responses to AIS.

Eileen Ryce introduced the forum participants to AIS with a presentation titled “Don’t Move a Mussel, the aquatic invasive species challenge. Some key highlights of Eileen’s’ presentation include:

Aquatic invasive species (AIS) are non-native plants, animals or pathogens that are resilient, reproduce rapidly, lack predators in ecosystems where they colonize, and can out-compete native species. AIS threaten economic integrity and ecological stability adversely impacting the abundance and diversity of native species. AIS impact nearly half the T&E species in the United States, and costs \$1.4 trillion globally. Once introduced, most AIS are virtually impossible to eradicate. AIS can be introduced from ballast water, fish farms, aquaria dumping, intentional acts, baitfish release, aquatic hitchhikers, field workers, fire fighters, gardening or other animals. Priority species include: zebra/quagga mussels, EWM and other AIS plants, asian carp, VHS virus, New Zealand mud snails, and illegal fish introductions. In particular, great concern about zebra and quagga mussels due to the fact that these AIS (1) are filter feeders (each one filters a liter of water per day) reducing nutrients for native fish populations; (2) increase toxic algal blooms; (3) reduce the quality of fish habitat and spawning areas; (4) cause bird populations to decline; and (5) cause adverse impacts to hydropower, agriculture, property values and local tax base, recreation, etc.

Ryce discussed existing regulations governing AIS in Montana, including the AIS of 2009 which (1) created an AIS account; (2) allowed for cooperative agreements; (3) enabled rule making; (4) permitted the creation of management areas; and (5) established penalties for transport.

AIS prevention strategies recommended by Ryce include: Agency awareness, public awareness, importation evaluations, hatchery inspections, border and boat ramp interceptions.

Doug Jensen’s presentation was titled “Don't Give AIS the Crown: Lessons from the Great Lakes” here are some key highlights from Doug’s presentation:

Approximately 14 people million move their boats around the United States annually, with the potential to spread AIS, dump live bait and disperse contaminated water. Two decades of research conducted by the Minnesota Sea Grant showed that without information boaters would do nothing. If information is properly conveyed to boaters showing them what to do, the majority of boaters will behave responsibly. Three goals were identified: prevent introduction of new AIS, prevent spread of existing AIS w/in Minnesota and reduce impacts caused by AIS.

Program elements included prevention using inspections and risk assessment, but emphasis was on education being the key factor; early detection and rapid response using monitoring and inspection reporting; research; policy and enforcement including penalties for violators and coordination of efforts.

Challenges to the program that were identified included funding, prioritizing outreach, moving beyond brochures, reducing the use of confusing terms in the outreach products, avoiding politicizing the issues and avoiding myths and fallacies (i.e. AIS is a natural thing, my actions won't help, AIS are everywhere already, they're not in my backyard).

Doug gave several recommendations including:

- Use existing tools and amend as needed (i.e. Stop Aquatic Hitchhikers Campaign)
- Strategically address each pathway
- Use guidelines that target each audience
- Form partnerships
- Demonstrate effectiveness at prevention/containment
- Evaluate program effectiveness
- Use most effective multi-media tools
- Focus on high use waters and prioritize
- Involve the legislature
- Dedicate funding for prevention, inspection, research, policy and enforcement
- Make transport of AIS and contaminated water illegal
- Promote the AIS issue via web, newsletters, billboard, signage, media buys, etc.
- Co-produce and distribute education materials
- Provide watercraft inspection volunteer training
- Develop Volunteer monitoring program
- Sponsor events
- Engage potential partners

“Vampires in the Basement: Lessons about caribou, biodiversity, and ecological restoration from the wise fishes of Alberta’s Mountain Parks” Travis Ripley/Mike Sullivan

Species at risk usually mean systems at risk. Ecosystem changes may be irreversible, and we may need to appreciate change. An example of this can be seen when looking at Alberta walleye. These fish have slow growth, low productivity and are easily overharvested. Overharvesting caused the fishery to crash, and restocking cannot reverse the harm done – stocking at 116 lakes for over 80 years and only 5 are self-sustaining due to complex predator-prey interactions. Once the food web is altered, the system is no longer able to sustain walleye. This is compounded by an increase in the population of pelicans and cormorants. Once the ecosystem has changed, perhaps irreversibly, can a single species be restored? Should it be restored? When do managers decide to accept and appreciate an altered system? Money is not infinite, so we must decide upon the best way to spend it.

Progress Toward Control of Eurasian water milfoil and an invasive hybrid milfoil in Coeur D’Alene Lake by the Coeur d’Alene Tribe, David Lamb

Coeur d’Alene tribes conducted Eurasian water milfoil (EWM) surveys and from 2006-2009 undertook EWM control projects utilizing integrated pest management principles. Their main goal was eradication but treatments during this period targeted only densest milfoil growth areas.

Treatments included annual programs using diver suction, diver hand pulling, bottom barriers, herbicide application, rake surveys, GIS mapping of milfoil distribution and public awareness.

Observations of differences in milfoil appearance led to the identification (through DNA testing) of hybrid milfoil and testing indicated somewhat lower susceptibility of hybrid to herbicide. They also found upstream infestations, which identified the need to address the sources of plant fragments and adjustments were needed in treatment protocols (especially herbicide application) to address lower than expected efficacies.

Project work has reduced or temporarily eliminated dense growths of milfoil in specific areas. However the program has not kept up with growth and milfoil has spread and re-infested treated areas. They have had to downgrade project goal from “eradication” to “control.” They will likely have to rely on herbicides in future but need to find formulation that is effective and still protective of water quality (i.e. does not introduce algal nutrients into system).

Herbicide trial treatments (some in containments) are being proposed for 2011 to answer remaining questions on water movement, optimum herbicide formulation, the minimum dosage needed to be effective and not effecting water quality. They are also looking at possible weevil bio-control trial if supplier can deliver weevils without transporting live milfoil material.

AIS Policy in the West, Erik Hanson

Erik discussed the rapid spread of mussels across the United States and the lack of funding in the west (as compared to the eastern U.S. and Lake Tahoe) to address the issue, despite the significant economic costs. The northwestern United States is one of the last strongholds to be mussel free.

Erik described state programs including: (1) North and South Dakota – virtually no AIS program; (2) Montana – monitoring, increased funding but still insufficient to launch full program and increased emphasis on boat inspections; (3) Wyoming – new program funded using boat sticker fees for mandatory boat inspection stations; (4) Utah – monitoring program and mandatory inspections using general fund dollars; (5) California – mandatory border check stations funded by general funds and mandatory quarantine of infested boats; (6) Idaho – leader in the west – mandatory boat inspections using boat sticker fees, monitoring program and mandatory quarantine of infested boats; and (7) Lake Tahoe – LTRP even more stringent than Idaho as it limits boat launch times. Hanson discussed Lake Mead, noting that decontamination does NOT equate with a mussel-free boat. Some reservoirs have been closed to boat traffic post-infestation in order to contain spread. The cost of prevention is far less than management. There is no viable option to treat water bodies like Flathead Lake.

Erik recommended preventing further spread of AIS via quarantine and pathway management by: restricting dispersal pathways, where feasible, quarantine infested water bodies as needed, consider and implement any needed prevention of overland veliger or adult mussel transport. There is a need to initiate available and relevant control actions, make a list of potential control methods to consider recognizing that most methods would require an EA or EIS.

Fish, Shrimp and Mussels: Which Invaders will prevail in Flathead Lake? Bonnie Ellis

Fish introductions have dramatically altered the composition of fish species in Flathead Lake. Prior to the introduction of mysis shrimp, native fish species such as peamouth chub were in decline, while introduced species such as kokanee benefitted. However, in 1979 mysis shrimp were introduced and that dramatically altered the food chain. After the introduction of mysis shrimp, kokanee disappeared and bull trout and cutthroat trout declined dramatically. The food web implications were significant, as the eagles that had gathered at Flathead Lake dispersed due to the disappearance of the kokanee.

AIS Risk Assessment and Prevention Program in Glacier National Park, Chris Downs

In Montana, four native salmonids exist west of the continental divide, and 5 east of the divide. Non-native fish include: lake and rainbow trout, lake whitefish, kokanee, arctic grayling and Yellowstone cutthroat trout. Glacier National Park (GNP) is significant for bulltrout because the Park supports 1/3 of the of the natural lacustrine bulltrout population in the United States and GNP and the Blackfeet Reservation support the only bulltrout population found east of the continental divide in the U.S.

GNP's AIS program includes: entrance interviews (which showed boat from all over the country enter GNP), boat inspection training for staff (and development of inspection flow chart), development of risk assessment tool for zebra/quagga (calcium, pH, temperature, DO, boat use), boat permit program – permit is free, designed to increase inspections and face time with staff, public outreach and education and monitoring.

“Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin”, John Duffield

AIS prevention costs are much less than management costs based on expected value of damages associated with an AIS infestation. Infestation severity summary showed that zebra and quagga mussels could colonize the Columbia River Basin, but variability in infestation may vary depending upon calcium levels, temperature (as it affects reproduction timing), velocity, diet, pH and possibly water quality conditions. If an infestation occurs, costs will be in the millions on an annual basis. Many uncertainties exist regarding economic impacts, and more information is needed, including: factors affecting viability of mussels, vectors and locations of introductions, prevention strategies and effectiveness, colonization and growth on fish screens, potential for hatchery infestations and food web effects.

2.0 Agency Meeting Summary

Agency Updates:

Alberta Environment – (Ian Dyson) Regional Planning and Land-Use Framework (this is a Government of Alberta initiative – Sustainable Resource Development, Tourism, Parks and Recreation, Environment and other ministries are heavily involved): Two regional plans are underway, the Lower Athabasca Region Plan (LARP) and the South Saskatchewan Region Plan (SSRP). The regional plans provide an overall framework for dealing with land-use issues and managing the cumulative effects of development pressures on the environment. Regional Advisory Committees (RACs) were constituted for both plans to provide advice to the provincial government. The RACs were comprised of prominent local citizens conversant with multiple sectors and have submitted their reports to the government. The government will use the RAC reports and public review of the RAC advice to develop draft plans, which will be subject to further public review before the plans are adopted. (<<http://www.landuse.alberta.ca/>>) The SSRP RAC advice was submitted to government in Dec 2010. Public review of the RAC advice will take place this year and development of a draft plan by the spring of 2012. The RAC advice includes a surface water quality framework for main reaches of the Bow, Oldman and South Saskatchewan and a portion of the Milk. Stakeholders will be further engaged to refine this framework and a biodiversity framework will also be developed.

Watershed Planning and Advisory Councils, the broad multi-party basin partnerships formalized under the provincial Water for Life Strategy are active throughout southern Alberta as follows:

The Bow River Basin Council has developed a state of the watershed report, developed phase one of their integrated watershed management plan (water quality theme) and is now in phase two focusing on headwaters, land-use, riparian areas and wetlands. A workshop was held in November, another will take this spring and the plan will be developed this year.

The Oldman Watershed Council has developed a state of the watershed report and is about to embark on the first phase one of their integrated watershed management plan. A Core Team was assembled to provide the Council with advice on priorities and is concluding its final report. It is likely that headwaters will be included as a focus for the plan.

The Milk River Watershed Council has developed a state of the watershed report and has completed a terms of reference for their integrated watershed management plan which will include water supply, water quality, stream bank erosion, riparian protection, groundwater, land use and biodiversity. Draft targets and thresholds should be developed by this spring and the plan completed this year.

Alberta Environment has a provincial monitoring program and headwater water quality has been submitted as a priority for 2011-12.

Montana-Alberta St. Mary and Milk Rivers Water Management Initiative: follow up work recommended by the International Joint Commission is ongoing on the St. Mary and Milk Rivers. Alberta and Montana are evaluating and making joint recommendations on options that would allow both jurisdictions to better access their share of the water from the St. Mary and Milk Rivers. In the past year over 20 different structural options (diversions & reservoirs) were evaluated and the improved access each would provide is known. They have also evaluated over 10 administrative options (deficit & credit trading) and know the implications of each. Implementation of structural options would be many years down the road. Implementation of administrative options could be immediate. Montana is conducting its final evaluation and discussion with stakeholders. Montana and Alberta will meet over the next few months to prepare joint recommendation to the Governor and Premier.

In Alberta multiparty regional airshed zones have been established under the Clean Air Strategic Alliance. At the north

end of the Crown, the Calgary Regional Airshed Zone (CRAZ) is working on non regulated strategies to meet outcomes identified in a PM/Ozone Management Framework and is looking to implement a more detailed monitoring network.

Glacier National Park (Chas Cartwright)– Glacier survived the centennial year, 2010 and had the most people ever to visit the park, record visitation. We are continuing the rehabilitation of the Going-to-the-Sun Road this summer with two construction zones, one at either end of the Logan Pass. They hope to have the entire alpine section of the Going-to-the-Sun Road completed by the end of 2012. There was record use of the transit system this last summer, which was put in place to reduce congestion during construction. Currently it is sitting right on budget. However, there are operational issues with keeping the buses in good repair and replacing busses. There is a need for a long-term plan for managing visitor use of the Going to the Sun road.

They are working on a multi-million dollar building maintenance project at Many Glacier, as well as a Lake McDonald Cabin Management Plan and environmental assessments that will look at what will be done with the cabins around the lake; the public will be involved in this project. The Heaven's Peak lookout stabilization project, a cultural resource, is also scheduled this year once the Environmental Assessment process is completed.

Glacier is taking the lead as part of the Crown Managers Partnership to reprint the Crown of the Continent Invasive Plant Guide. This idea for this guide came from a 2006 CMP Forum. A group representing agencies throughout the Crown worked with the Crown of the Continent Learning Center to develop the Guide. The Park received money from Canadian partners and will be reprinting (with some minor edits) about 12000 copies.

Alberta Tourism Parks and Recreation (Keith Bocking) – There was a new provincial parks act proposed, but it has been withdrawn for more consultation and will be reintroduced in the fall 2011. Revision of the provincial parks act is currently in process. Alberta provincial parks are being restructured and this has led to the creation of a District Manager in southwest Alberta. The land includes most of the Alberta territory in the Crown of the Continent. Currently working on having Writing on Stone Park nominated as a World Heritage Site and will have it ready for nomination for 2012 and hopefully will be accepted by 2013.

United States Forest Service – (Jimmy DeHerrera) – The Flathead National Forest has a new supervisor, Chip Webber. They are implementing the Recovery Act. Last year was a big year for construction, completed almost 19 million dollars worth of projects.

Completed their forest travel plan last year, travel plans are required to be completed by every national forest. Everything in the forest is closed to motorized use unless it is a designated trail. Public feedback on trail closures has been mixed, but not as negative as originally thought. There has been a map created, this is the legal instrument that allows enforcement, there is some signage and barriers. This is standard across the entire national forest. New regulation closed everything and then travel planning opened and designated use areas.

CFLRMP, 20 projects selected nation wide, one of these projects will be focused in the Flathead.

They are continuing with hazardous fuel reduction projects, 2 or 3 major areas left for the project. Getting prepared for the de-listing of the grizzly bear in the future.

Alberta Sustainable Resource Development – (Travis Ripley) –Mountain pine beetle numbers are lower with temperature fluctuations helping contribute to lower infestations. They are continuing to observe populations but numbers are corroborated at various locations. Alberta is also monitoring spruce budworm and is looking into prescribed burns for range improvement.

The Alberta Premier has resigned. Fish and wildlife is focusing on grizzly bear recovery and is piloting grizzly bear monitoring project that will expand the research in Montana by Kate Kendall.

Also working on the development of the west slope cutthroat trout recovery plan, the plan should be out this spring. The bull trout recovery management plan is being updated to reassess the efforts over the last years.

Alberta SRD is also working on a Risk Assessment Tool for invasive species, it is currently available online and they are looking for feedback. (www.agriculture.alberta.ca/risktool)

Waterton Lakes National Park – (Dennis Madsen) - 2001 is a special year for Parks Canada, it is the celebration of the 100-year anniversary of the worlds first parks service. In 2010 the new management plan for Waterton Lakes was approved, the plan is updated every 5 years; copies are available. Waterton is in the middle of a large 5-year project. In 2008 Parks Canada consolidated some of its funding, to allow parks and sites to apply for money for restoration efforts. The objective of the program is to allow sites to improve on their ecological indicators. Waterton is focusing on landscapes and terrestrial ecosystem indicators focusing on prescribed fire and restoration of native prairie grassland. The program also includes restoration efforts aimed at whitebark pine. The project spans 5 years and Waterton received just over \$7 million. They are just finishing the second year of the project and rolling in to year three.

Waterton is also partnering with the province of Alberta on the non-invasive grizzly bear monitoring project. Waterton is following on the heels of Glacier in terms of aquatic invasive species; they had a questionnaire last year and inspected one vessel. This year a mandatory boat launch permit is required, there will be more inspections. There will also be an education and outreach program that will be run jointly with the prevention efforts.

United States Fish and Wildlife/Montana Partners for Fish and Wildlife (PFW) – (Rox Rogers) – PFW program is focusing on bull trout and west slope cutthroat trout restoration. PFW has been working with landowners in the Kootenai/ay on habitat improvement projects such as lower Grave and Therriault Creek stream and riparian vegetation restoration with landowners. Approximately 1.5 miles of lower Grave Creek has been restored demonstrating the use of instream structures, innovative riparian re-vegetation techniques and have constructed an 8-strand electric fence to prevent ungulate browsing of young plants adjacent to the creek. The Partners program continues to work with nonprofit and provincial entities as well as landowners in the East Kootenay, British Columbia. The trans-boundary partnership is working with a landowner near Jaffray that mirrors the project on Grave Creek. There will be a riparian restoration workshop in Jaffray on April 16, 2011.

British Columbia Ministry of Natural Resource Operations – (Sue Crowley) – British Columbia is undergoing political changes, Christy Clark is the new premier. The ministries are being restructured. Major goals are around one service, one delivery. Looking at one point contact for the public, one united ministry. They are continuing to downsize, however there have not been any layoffs as of yet, but they are not replacing retirees, there have been budget and funding cuts and they are looking to outside funding to support projects.

There is an invasive plant forum in April in Cranbrook, and aquatic invasive species will be one of the themes at the conference. They are looking for funding to continue with aquatic invasive species efforts and to support the brochure. Water Act is being finished and wildlife act is being printed right now. They will be focusing on the Flathead Basin and staff efforts will be shifting to this area.

Flathead Basin Commission – (Caryn Miske) – The Flathead Basin Commission is focusing on aquatic invasive species. They have a local area working group including numerous counties. The AIS plan identifies priorities over time locally. Currently there is not a rapid response plan for the state that will work, but they are working on one.

They are continuing with monitoring programs including a surface water quality monitoring program and their ground water quality monitoring program, which has turned up indications of septic leakages.

Their volunteer monitoring program will be monitoring over 40 lakes this summer including AIS. They are moving forward with the water quality district, providing a mechanism to generate revenue for water quality projects. TMDL work and modeling is ongoing. Clark Fork task force is working on projects that relate climate change.

University of Montana – (Len Broberg) – Working with Mike Quinn from the University of Calgary on the trans-boundary policy initiative. Jen McBride, a graduate student, is working on the AIS guide. The Crown of the Continent Initiative will be issuing e-magazines. The university has been in discussions with Glacier about a building within the park that would be designated as a field station for the students. They have been involved in the Crown Round Table. The university has been playing a supportive, outreach role and open to having graduate students work on projects.

Confederated Salish and Kootenai Tribes – (Clint Folden) – The Confederated Salish and Kootenai Reservation Lands are within the Southern end of the Crown of the Continent, but their aboriginal lands are in and out of the Crown as it is defined presently. They are very active in maintaining and enhancing the environment, habitat, of all terrestrial and aquatic systems on our lands.

They are actively purchasing private lands critical to wildlife and fisheries, specifically bull trout and west slope cutthroat trout. Once parcels are purchased and surveyed, the streams are restored, either full instream or revegetated to sustain or enhance production and long term survival of the species. This same approach is done for wild, again for species of special concern, Grizzly Bears specifically, but to the benefit of all species, elk, deer, black bear, etc.

They have completed the first tribal, CSKT – Aquatic Invasive Species (AIS) Strategic Prevention Management Plan, know of in the nation, which is currently out for. The program is continually seeking outside funding to help the Flathead Basin Commission (FBC) in their efforts regarding AIS as well. They have been a participant in the FBC AIS Work Group, as well as working with Lake County and Flathead County in developing a Water Quality District for the upper and lower Flathead. Flathead County has acquired a Grant to put together a Waste Water Working Group, of which the CSKT is a member, with the purpose of conducting private septic system inspections, simply detecting which are working properly and which are not, and finding remedies for owners to stop the leakage into surface of ground water systems.

The Shoreline Protection Office monitors natural water, weather flowing, such as streams and rivers or standing water such as lakes and ponds, to make sure that land owners and contractors are not dredging, filling or otherwise building something in those water bodies, without proper permits and following best management practices to insure that no adverse affects degrade the water or system.

Tobacco Plains Indian Band – (Denise Birdstone) – Are involved in the Kootenai land-use planning, a result of a demand for recreational uses on the lake. They will be taking back information from the CMP Forum about aquatic invasive species to include in the land use plan. They have signed an agreement, Strategic Engagement Agreement, a strategy of how the government will engage first nations in BC.

Strategic Plan 2011 – 2015

- First strategic plan put together with the Miistakis Institute for the Rockies
- The CMP Steering Committee is looking at having stronger input from the membership
- Vision – Ecologically Healthy Crown of the Continent ecosystem
 - CMP work together to achieve Vision by:
 - Improving understanding
 - Raising awareness
 - Promoting collaboration
 - Ensuring organizational strength
- Guiding Principles and shared values
 - Some issues only addressed at ecosystem scale

- Social and economic well being connected to ecological health
- Management is responsibility of Agencies
- Respectful of diversity in opinion and approaches
- Focus on tools, data, science, education and outreach
- Key attribute of CMP- synergy and leverage
- Encourage science-based decision making
- Promote activities and projects initiated by the CMP, not represent agencies

Strategies

- I. Document ecological health and trends in the Crown of the Continent ecosystem
- II. Developing targets and thresholds related to ecological health
- III. Facilitate/promote actions to maintain and restore ecological health
- IV. Manage uncertainty around climate change and implications for ecological health
- V. Promote agency/public understanding on the significance of the Crown of the Continent ecosystem and focus of the CMP
- VI. Establish/maintain effective administrative and financial mechanisms amongst CMP agencies

Discussion:

Should the Strategic Plan define long-term outcomes in a spatial context?

- One of the goals will be to predict some of the landscape changes and use this to help manage for long-term outcomes.
- Need a tool that takes into consideration landscape changes.
- Need to determine how we would figure out or determine long-term outcomes in a spatial context. How are we going to arrive at setting those outcomes? Need to have an approach that is as broad based as possible.
- There will be more information to figure out this question before 2015, with the EH project.
- Strategic plan will talk about long-term outcomes, but they will not be indicated in this draft. Could indicate the areas that we are interested in.

How do you manage uncertainty?

- Have a border or boundary around targets and thresholds, to avoid hard and fast rules to allow for uncertainty, wiggle room.

How do you establish/maintain effective administration and financial mechanisms?

- The CMP needs to start doing things and the money will hopefully come. How can we manage funds from so many sources into one single pot? The CMP needs to make sure that they have all the agencies together that should be at the table for the CMP SC.

Ecological Health Project

- You can view the Ecological Health presentation on the CMP website at www.crownmanagers.org.

2011/2012 Work plan

- **2012 CMP Forum** – All of the steering committee participated in the planning and running of this year's forum.
- **Ecological Health Project** – The Ecological Health project, under the direction of Erin Sexton will be continuing this year. Details can be found in the Ecological Health presentation on the website. (www.crownmanagers.org)
- **Strategic Plan Review** – Review and update of the Strategic Plan is underway with anticipation of printing the final document this spring. The review is being lead by Bill Dolan.
- **Map Project** – Ian Dyson is the project lead and has been working with the Miistakis Institute of the Rockies to produce -3 Continent-Scale maps, 5 Crown-Scale maps, and 1 Focal area map. The end result is an extensive set

of useful and scale-appropriate spatial data (including labels for many features), which are now stored in spatial geodatabases. The CMP will be able to share the maps with partner agencies. The maps should be completed by April 2011.

- **Website Design and Records Management** – Sasha Harriott will be upgrading the website and this will include a web page dedicated to the Ecological Health project. All historical CMP files will also be available to steering committee members by online access.
- **Climate Change** – Mary Riddle is the lead on the climate change initiative and is currently pursuing funding for Collaborative modeling and Decision support process: FRAME/SIMPPLLE workshops. FRAME = Framing Research for the Adaptive Management of Ecosystems and SIMPPLLE = Simulated Processes and Patterns at Landscape Level scales.
- **Large Carnivore Trend Monitoring** – Travis Ripley is the lead and is partnering with Kate Kendall USGS, Greg Hale AB SRD, and Barb Johnston WLNP. They are expanding the ongoing work of Kate Kendall (USGS) in the area of non-invasive carnivore monitoring focusing on grizzly bears. They are moving forward with a pilot project to initiate data collection in Alberta south of Hwy 3 including WLNP.
- **Aquatic Invasive Species Pamphlet** – Mary Riddle is the lead on this project and is currently working with a student from the University of Montana to collect all the relevant information and generating a preliminary layout. A group of AIS specialists from the crown have created a developed a list of species applicable to the pamphlet.
- **Terrestrial Invasive Species Booklet** – Mary Riddle in coordination with Dawn LaFleur are working on revising and reprinting the booklet that was a product of the 2005 CMP Forum on Invasive Plants.

Summary:

Overall, agency representatives and senior agency representatives that were present responded positively to and affirmed the key elements of the Strategic Plan, EH Project and 2011/2012 work-plan as presented. There was valuable discussion and feedback generated which will be taken into consideration going forward.

Agency Meeting Participants:

Carla Bick - Municipal District of Ranchlands
Mark Biel – Glacier National Park
Denise Birdstone – Tobacco Plains Indian Band
Keith Bocking – Alberta Tourism Parks and Recreation
Len Broberg- University of Montana
Chas Cartwright – Glacier National Park
Jimmy Deherrera – United States Forest Service
Steve Doherty – United States Department of the Interior
Bill Dolan – Alberta Tourism Parks and Recreation
Shannon Downey – United States Fish and Wildlife Service
Ian Dyson – Alberta Environment
Ralph Gravelle – Tobacco Plains Indian Band
Kari Hamilton – Alberta Sustainable Resource Development
Larry Kopas - Municipal District of Ranchlands
Dennis Madsen – Parks Canada – Waterton Lakes National Park
Caryn Miske – Flathead Basin Commission
Jack Potter – Glacier National Park
Mary Riddle – Glacier National Park
Travis Ripley – Alberta Sustainable Resource Development
Rox Rogers – United States Fish and Wildlife Service

Erin Sexton – University of Montana
Graham Statt – Alberta Tourism Parks and Recreation
Harry Streeter – Municipal District of Ranchlands
Tony Webster - Municipal District of Ranchlands

3.0 Panel Discussion Summary

Panel Participants: Doug Jensen, Kari Hamilton, Sue Crowley, Caryn Miske, Eileen Ryce, Bonnie Ellis, Erik Jansen, David Lamb, Chris Downs, John Duffield

PANEL 1:

Question 1: What can crown agencies collectively do to prevent/reduce the risk of AIS into the CCE?

Question 2: If there was one task, only to be completed to prevent spread of AIS, what would that task be?

- Mandatory stops at border crossings
- Education and build in evaluation, whether enforcement, monitoring, provide positive feedback. Evaluation is often the step that is missing in education and is very difficult to add in after the fact.
- Discuss collaborative actions that can be done in the short term (signing), intermediate term, long term (building AIS in to the EH)
- Crown wide containment program, inspection programs, working together
- Working together to get a collective message on websites so that tourists get the same message when planning their trips. The same messaging ensures that people understand the prevention measures that are being taken.
- Three types of user groups, residents, tourists and part time resident. How do you reach the group that doesn't use websites and planning, the part-time residents?
 - There are probably listings with contact information for the part time residents, so a mail out to these users could be an approach. Direct mailing approach with an educational brochure.
 - Community based approaches, gas pump toppers, targeted messages, and strategic placement of messages.
- What economic costs would be Flathead specific? Would need to take a closer look, before a ball-park or guess could be made. Flathead Lake, with high calcium levels and national reputation is very vulnerable to invasive species infestation.
 - \$50 million reduction in value for Lake Tahoe
- Lake Mead is an enormous source of AIS for this region, should there be more that can be done at prevention?
 - There is a record of long-term boaters in at Lake Mead, Montana should have access to this list, but cannot due to privacy act.
 - Need to figure out a way to track the movement of boats out of state.
- Seems like it takes an infestation to get money. How do we tap into funds before there is an infestation?
 - Economics, putting a price tag on the resource, EGS, will get attention.
 - Milfoil is already in the state and the cost of treating milfoil is being realized. Maybe this will help with getting funds for mussel prevention.
 - User pay principle, those that are using the lake pay. This is currently being discussed at the legislature. However we probably need money from both the users and voters.
 - Takes some time for the researchers to gather the information and demonstrate that there is an impact before the socio-economic impacts are realized. First there is the environmental pillar, economic and then the sociology pillar.
 - Is there an opportunity to get the rate payer involved before they are taxed because of infestation? People are less willing to pay taxes until they see the outcomes of infestations firsthand.
- Have you used any social networking methods? Beginning to use Facebook and Twitter, social media to get the message out. Very cognitive that the demographic for social networking is younger.
- Will be approaching boat manufactures and hoping that they will become active members of the stop the hitchhiker campaign, urging them to change the design so that the boats will drain more efficiently, and add information to boat manuals about AIS.
- What is the difference between jet skis and boats? Jet skis are small, there is a lot less area to decontaminate, but there is also ballast area and flushing the jets. Less risk than boats, but still a need to decontaminate. Bilge in larger jet skis, not concerned with outside of the jet ski, more concerned with flushing them out. Jet skis are not typically moored for a long time.

- Pressure washing, what is it. 140 degree water, because the mussels can be attached, you are trying to get them off or cook them, do not need a chemical to kill them.
- What happens when all the mussels die at the same time after they have built up around the lake, is there a health issue? Have not heard of any. There are incidences of cuts to feet from the sharpness of the shells. City of Chicago added ozonation treatment of the water to address the taste issue. How many lakes have you dealt with that have the draw down process like Flathead Lake. It would be a gradual exposure of the mussels when the lake draws down. If the draw down is over a short period of time, the mussels may move.
- How at risk are we in Alberta for AIS? How do we shake the jurisdictional complacency? Ontario Federation of Anglers and Hunters, Manitoba is dealing with cross border AIS. Working to build capacity with in provinces to deal with AIS, build coalitions with other provinces. Build leverage. Bass Pro is now in Calgary. National Aquatic Invasive Species Committee meets quarterly. Formal meetings and dialogue as well as informal conversations, peers talking to peers are really powerful. BC/MT MOU it would be helpful if some of the money could be used towards COC AIS prevention.

Panel 2

Question 1: For infestations that already exist in the COC, would there be recommended use of biological controls (if any)?

Question 2: Shifting the balance of exotic to native species – when is this possible and when should it be abandoned?

- Look at whether native or non-native bio-control agent. Some of them can be very effective. When it comes to fish we are stuck with traditional methods. There is no bright line on when to abandon the efforts to maintain or restore a native species.
- There can always be a time for bio-control, but there is a risk of screwing up more than it is already. There are a number of processes that have to be followed, EIA etc that eliminate a rapid response, but the processes are in place to make sure that the control actions are not more detrimental.
- There are places where management strategies are in place for eradicating both native and exotic. Never will be abandoned, management may be shifting focus as time goes on. Eradication to control, from control to management.
- Bio-controls can be really effective on terrestrial species, however the science is for aquatic bio-controls is still developing. If you could find a source of a native control for the invasive and see how they work and the potential of it working in the infested habitat.
- Interactions between species are so complex that it would take years to know whether the biological control has been effective.
- Maintain native species and reduce non-native species. Most methods generally suppress invasive species and do not eradicate. Need to know all the consequences of actions, but there are also consequences of not acting.
- EA's are important to make sure that the control factors are not impacting the system negatively. The discussion is very circular, rapid response versus not knowing the consequences and the need for more research and EA's.
- When do you start making a Noah's ark and move and isolate populations? If we do nothing at all then the bull trout population is in trouble. But they have to figure out how to hone in on egg laying areas. They are currently offering a bounty on lake and rainbow trout.
- What can we do to prepare for possible invasions? There are response plans that include options for treating within the legal compliance. Multi-jurisdictional effort next in Kooacanusa. Looking at possibly having boiler plate EA's done ahead of time to speed up the process.
- The public does not take too well to having pesticides dumped into the water. Are there pre-approved response plans in place, no there are not. First response to a report of an incidence is containment, shutting boat ramps down and making sure that everything that was in the water is decontaminated before leaving the area.
- Most states are using the stop aquatic hitchhikers. Can get promotional material from Eileen Ryce.

2011 CMP Forum Participant List:

Tom Bansak
Flathead Lake Biological Station
tom.bansak@umontana.edu
406-982-3301 X229

Sue Crowley
Ministry of Natural Resource
Operations
sue.crowley@gov.bc.ca
250 342-4290

Bill Dolan
Alberta Parks
bill.dolan@gov.ab.ca
403-382-4347

Clint Folden
Confederated Salish and Kootenai
Tribes
clintf@cskt.org
406-883-2888 Ext. 7255

Cameron Lockerbie
Alberta Tourism, Parks and Recreation
cameron.lockerbie@gov.ab.ca
(403) 529-3134

Mary Riddle
Glacier National Park
mary_riddle@nps.gov
406-888-7898

Janice Smith
Parks Canada, Waterton Lakes National
Park
Janice.Smith@pc.gc.ca
403-859-5127

Robin Steinkraus
Flathead Lakers
lakers@flatheadlakers.org
406-883-1346

John Wachsmuth
MT Fish, Wildlife & Parks
jwachsmuth@mt.gov
406.751454

Carla Bick
Municipal District of Ranchland
ag@ranchland66.com
403-646-3131

Rachel Darvill
Wildsight
rachel@wildsight.ca
250-344-4961

Chris Downs
Glacier National Park
chris_downs@nps.gov
406-888-7917

Michael Jamison
mjamison@npca.org
406.862.6722

Jennifer McBride
University of Montana - Environmental
Studies
julie.tompkins@mso.umt.edu
406-243-6284

Mary Sexton
MT DNRC
msexton@mt.gov
406 444-2074

Roger Smith
Flathead Lakers and Y2YCI
rstaffordsmith@gmail.com

Harry Streeter
Municipal District of Ranchland
ag@ranchland66.com
403 646-3131

Tony Webster
Municipal District of Ranchland
ag@ranchland66.com
403-646-3131

Keith Bocking
AB Tourism, Parks and Recreation /
Parks
keith.bocking@gov.ab.ca
403/580-9046

Jimmy DeHerrera
Flathead National Forest
jdeherrera@fs.fed.us
406-387-3801

Ian Dyson
Alberta Environment
Ian.Dyson@gov.ab.ca
403-381-5430

Larry Kopas
Municipal District of Ranchland
ag@ranchland66.com
403-646-3131

Jack Potter
Glacier National Park (US)
jack_potter@nps.gov
406 888-7821

Melissa Sladek
National Park Service
melissa_sladek@nps.gov
406-888-7894

Ted Smith
None
tedsmith@gmail.com
406-887-2150

Gary Tabor
Center for Large Landscape
Conservation
wildcatalyst@gmail.com
406 600 7030

Kansie Fox
Blood Tribe Land Management
Kansie@hotmail.com
403-737-8151

Joseph Iron Shirt
Blood Tribe Land Management
Iron_shirt_2@hotmail.com
403-737-8151

Paulette Fox
Blood Tribe Land Management
Iron_shirt_2@hotmail.com
403-737-8151

Souta calling last
Blood Tribe Land Management
Soutacallinglast@yahoo.com
403-737-8151

Marsha Heavy Head
Blood Tribe Land Management
mheavyhead@hotmail.com
403-737-8151

Martin Curly Rider
Blood Tribe Land Management
mcurlyrider@btlands
403-737-8151

Clay Creighton
Blood Tribe Land Management
clay_creighton@hotmail.com
403-737-8151

Graham Statt
Alberta Tourism, Parks and Recreation
graham.statt@gov.ab.ca
780-644-4948

Travis Ripley
Sustainable Resource Development
Travis.Ripley@gov.ab.ca
403-355-4071

Tara Carolin
Glacier National Park
tara_carolin@nps.gov
406-888-7863

Rich Janssen
Confederated Salish & Kootenai Tribes
richj@cskt.org
406-883-2888 Ext 7260

Leif Fredrickson
leif.fredrickson@gmail.com
406-531-9259

Ralph Gravelle
Tobacco Plains Indian Band
resources@tobaccoplains.org
2508873461

Denise Birdstone
Tobacco Plains Indian Band
administration@tobaccoplains.org
250 887 3461

Mark Maskill
US Fish and Wildlife Service
mark_maskill@fws.gov
406-758-6870

Forum Agenda:

March 14, 2011 (open to public)	
4:00pm	Hotel room check-in
5:30pm – 7:00pm	Conference registration
7:00pm -7:30pm	Crown of the Continent Overview & CMP Activities in Past Year
7:30pm	"Aquatic Invasive Species 101 in the Crown of the Continent" Keynote Speaker –Eileen Ryce, State of Montana AIS Coordinator

March 15, 2011 (open to public)	
7:30am – 8:30am	Registration
8:30am – 9:00am	Introduction to the Crown Managers Partnership Welcome to the Crown Managers 2011 Forum Steve Lozar, Confederated Salish and Kootenai Tribes Mary Sexton speaking on behalf of Governor Schweitzer Paddy Trusler, Lake County
9:00am – 10:00am	"Don't Give AIS the Crown: Lessons from the Great Lakes" Guest Presenter – Doug Jensen, Minnesota AIS Coordinator
10:00am - 10:30am	<i>Break</i>
10:30am – 11:00am	Presentation: "Vampires in the Basement: Lessons about caribou, biodiversity, and ecological restoration from the wise fishes of Alberta's Mountain Parks" Guest Presenter – Travis Ripley on behalf of Mike Sullivan
11:00am – 11:30am	"Case Study: Eurasian Water Milfoil & other aquatic invasive plants" Guest Presenter –David Lamb, Coeur d'Alene Tribe Lake Ecologist
11:30am – 12:00pm	"AIS Policy in the West" Guest Presenter – Erik Hanson, Consultant Flathead Basin Commission
12:00pm - 1:30pm	Lunch
1:30pm – 2:00pm	"Fish, Shrimp and Mussels: Which Invaders will Prevail in Flathead Lake" Guest Presenter – Bonnie Ellis, Ph.D Flathead Lake Biological Station
2:00pm – 2:30pm	"Aquatic Invasive Species Risk Assessment and Prevention Program Development in Glacier National Park" Guest Presenter: Chris Downs, Glacier National Park Fishery Biologist

2:30pm – 3:00pm	<p>"Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin" Guest Presenter –John Duffield, Ph.D University of Montana & Chair of Northwest Power and Conservation Council’s Independent Economic Analysis Board.</p>
3:00pm - 3:30pm	Break
3:30pm - 4:15pm	<p>Panel 1: Potential Pathways and How the Crown Can Work Together to Stop AIS. Kari Hamilton, Habitat Biologist, Fish and Wildlife Division, Alberta Erik Hanson, Consultant Flathead Basin Commission David Lamb, Lake Ecologist, Coeur d’Alene Tribe Caryn Miske, Executive Director, Flathead Basin Commission John Duffield, University of Montana Ph.D</p>
4:15pm – 5:00pm	<p>Panel 2: Once Here, What do We Do? Chris Downs, Fishery Biologist, Glacier NPS Bonnie Ellis, Research Scientists, Flathead Lake Biological Station Sue Crowley, Ecosystem Biologist, Ministry of Natural Resource Operations, BC Doug Jensen, AIS Coordinator, Minnesota</p>
5:00pm - 5:15pm	<p>A Peak at the 2012 Forum Elliott Fox, Director Blood Tribe Land Management Department</p>
6:00pm 6:30pm 7:30pm	<p>Cocktails Dinner (included with registration)</p> <p>"Myths and truths in the quest for sustainability of ecosystem goods and services" Keynote Speaker – Jack Stanford, Bierman Professor and Director Flathead Lake Biological</p>
<p>March 16, 2011 – CMP Business Meeting (CMP member agencies only)</p>	
7:30am – 8:15am	Breakfast (included with registration)
8:15am – 8:30am	Welcome – Summary Day 1
8:30am – 10:15am	Agency Updates
10:15am – 10:30am	Break
10:30am – 12:00pm	<p>Steering Committee Report to Forum – Chair of CMP Steering Committee</p> <ul style="list-style-type: none"> • <i>CMP Strategic Plan Update</i> • <i>Ecological Health Project Update</i> • <i>2011/2012 Work-plan</i>
12:00pm	Adjourn meeting