A scenic sunset over a lake with mountains in the background and a rope railing in the foreground. The sky is filled with soft, golden light, and the water reflects the colors of the sunset. The mountains are silhouetted against the bright sky. In the foreground, a thick rope railing is visible, attached to a wooden post on the left.

Flathead Basin Commission

2013-2014 Biennial Report

www.flatheadbasincommission.org

EXECUTIVE SUMMARY



Aquatic Invasive Species (AIS)

- Leveraged over \$600,000 from federal, state, tribal, local and NGO partners to implement the Flathead AIS Strategic Plan, which includes watercraft inspection stations at Ronan, Clearwater Junction and Highway 2.
- Launched AIS detection dog pilot program in 2014 and continued volunteer boat inspection program.
- Continued implementation of a treatment plan for curlyleaf pondweed.
- Eradication of Eurasian watermilfoil at Beaver Lake close to completion.
- Assisted partners in leveraging funds to survey for mussels and aquatic invasive plants.
- Continued multi-faceted outreach efforts.
- Completed DNA protocols to enhance early detection in both the Flathead and throughout the State.
- Secured funding for focus group testing to improve AIS messaging.

Monitoring

- Continued ongoing Surface Water Quality Monitoring program with Basin partners.
- Continued the Northwest Lakes Volunteer Monitoring Network to include approximately 50 monitoring sites, collecting data for water chemistry, and the presence/absence of AIS plants and mussels.

Transboundary Resource Efforts

- Working through the Great Northern Landscape Conservation Cooperative, commenced initial steps to implement the British Columbia-Montana Memorandum of Understanding on Environmental Protection, Climate Action and Energy (which permanently banned strip mining and oil & gas development in the B.C. headwaters of the Flathead River).
- Working through the Crown Managers Partnership (CMP), expanded the cooperative AIS project to protect water resources in the Crown of the Continent.
- Working through the CMP, continued work the on Ecological Health Project, which is designed to provide resource managers with improved and consistent metrics to enable more informed decisions.

New Initiatives

- Cooperative Rail Safety Planning effort
- Secured funding for the following projects in 2014:
 - Flathead Basin Drought Management Plan
 - Flathead Wastewater Management Plan
 - AIS Strategic Plan update



INTRODUCTION

The Flathead Basin Commission was created in 1983 by the Montana Legislature to monitor and protect water quality, natural resources and the economic well-being in one of the State's most important watersheds. The Commission is a uniquely structured non-regulatory organization that works to accomplish its mandate in a consensus-building manner, stressing education, community involvement, partnerships with agencies, nonprofit groups, and basin residents.

The 23 member Commission represents a wide cross-section of citizens, and local, state, tribal, federal and provincial agency representatives who work collectively to implement innovative, cost-effective solutions that work on -the-ground.

The Commission has become a model of successful citizen and inter-agency cooperation in a geographically vast and ecologically diverse watershed characterized by its pristine character, international dimension, and multi-jurisdictional nature.

This report summarizes the Commission's activities and initiatives, and provides an overview of water quality trends.

Visit our website at:
flatheadbasincommission.org

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Cover Photo: Michael Hewston

MESSAGE FROM THE CHAIR

The State of Montana is known as the "last best place" in the U.S. Within Montana, the Flathead Basin represents one of the "last best watersheds" in the state. It is the statutory mission of the Flathead Basin Commission to protect the natural resources within this spectacular watershed, to ensure that our children and grand children can enjoy the bounty still present on this unique landscape.

While the Commission has experienced some great successes in recent years, including the signing of the B.C.-MT Memorandum of Understanding in 2010, which protects the Basin from the impacts of strip mining in the headwaters of the Flathead River in British

Columbia, and the establishment of a regional Aquatic Invasive Species program. Much remains to be done. Some of the most pressing challenges facing the Basin include, but are not limited to: rail safety standards for hazardous materials and emergency response; wastewater management; and adaptive management protocols to address large-scale changes across the landscape.

It is our goal to maintain the successes of our existing programs, while tackling the new issues facing the Basin. Natural resources straddle manmade boundaries in this transboundary region. We must recognize that in the future management will require

cooperative partnerships to ensure positive results.

We thank Montana Department of Natural and the State legislature for their continued support.

-Chas Cartwright



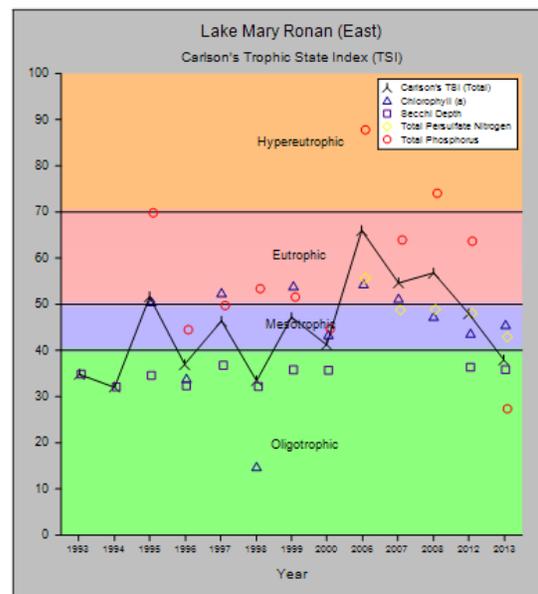
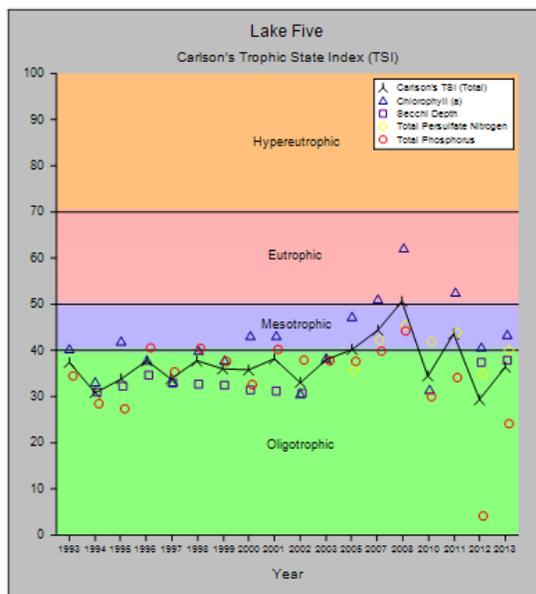
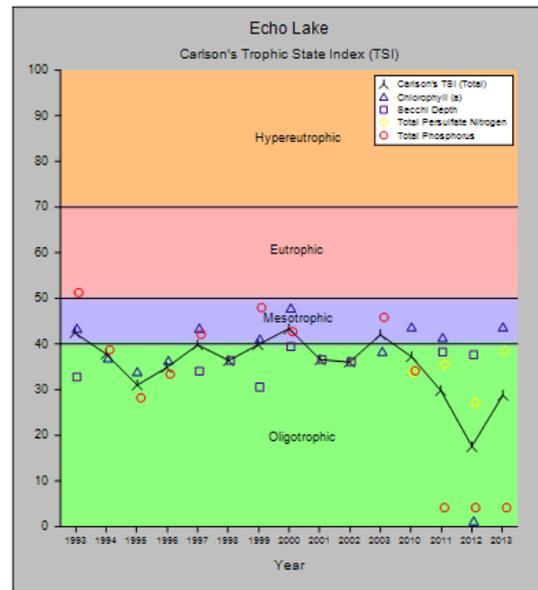
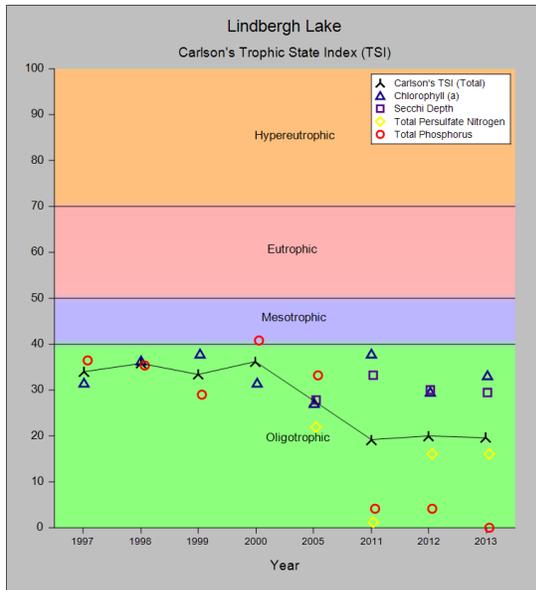
2013 WATER QUALITY MONITORING

The Northwest Lakes Volunteer Monitoring Network is a partnership between the Flathead Basin Commission, Whitefish Lake Institute and Fish, Wildlife & Parks. Program staff train “citizen scientists” to monitor 40 lakes in Flathead, Lake, Lincoln and Missoula Counties, by collecting basic water quality measurements that help

establish lake data over time, and to monitor for the presence of aquatic invasive species. The partnership enables resource managers to extend its monitoring reach through volunteer efforts, while involving community members in understanding and protecting our natural resources. Volunteers can access information and enter their

data in an interactive website. Volunteers contribute nearly 1000 hours annually to the program. The graphs below illustrate water quality trends in several lakes within the watershed.

For more information, please visit www.nwmtlvnmn.org



Northwest Montana Lakes Volunteer Monitoring Network



Aquatic Invasive Species

Monitoring: In 2013, thirty-three plankton samples were collected from twenty-five lakes. The Flathead Lake Biological Station (FLBS) performed a DNA analysis by looking for sequences of Eurasian watermilfoil, northern watermilfoil (native) and diresenid mussels. Detailed information specific to each lake can be found at www.nwmtlvmn.org

FLATHEAD BASIN COMMISSION IN ACTION

AQUATIC INVASIVE SPECIES (AIS)

Aquatic Invasive Species are a non-native species that can harm aquatic ecosystems and their capacity to benefit people. Once introduced into new habitats these organisms destroy native species and can ultimately cause extinction of valued organisms. AIS can also affect humans by causing adverse impacts to commerce, agriculture and recreation that depend on water resources for their viability.

Mandatory Inspections: In 2010, the Flathead Work Group, under the leadership of the Commission, completed the Basin’s Strategic AIS Plan to guard against the introduction and spread of invasive species. One of the key recommendations of the Plan was

the establishment of boat inspection stations at the gateways into the Flathead Basin for more robust perimeter defenses. In 2013 and 2014, the Commission secured funding to operate inspection stations at Clearwater Junction and on Hwy 2 (photo). Funding partners included:

- Bureau of Rec. Hungry Horse,
- City of Whitefish,
- Whitefish Water & Sewer District,
- Lake County,
- Trout Unlimited – Flathead, and
- U.S. Forest Service.

The Commission partnered with Fish, Wildlife & Parks for station management in 2014.

Volunteer Boat Inspections:

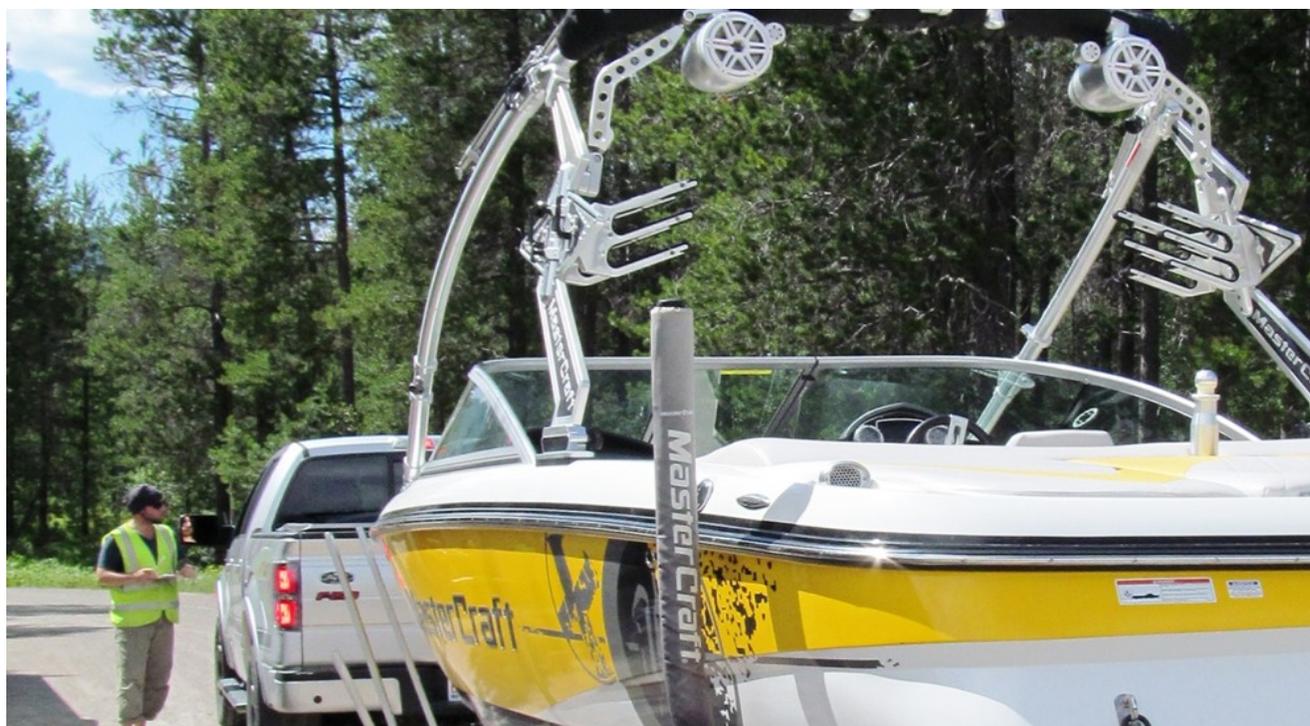
Partnering with the Swan Lakers, Flathead Lakers, and Whitefish Lake

Institute, volunteers inspected over 400 boats in 2013-14. Data indicated that 35% of boaters had not been previously inspected at a mandatory inspection stations. While no mussels were found on boats, volunteers were able to reach out to boaters unfamiliar with the CLEAN, DRAIN AND DRY message.

Volunteer Monitoring Program: AIS monitoring is ongoing. See page 4.

Education Efforts: Education is a cornerstone of the AIS prevention program. To complement our ongoing educational activities and to facilitate best management practices, the Commission produced a video targeted to both local and out-of-state boaters. The video can be viewed at :

<https://www.youtube.com/watch?v=IMs87qKpL4U>



FLATHEAD BASIN COMMISSION IN ACTION (cont.)

AQUATIC INVASIVE SPECIES

Outreach: Two “Speakers Trunks” were completed in the summer of 2013. The all-inclusive trunks contain videos, brochures, and narrated PowerPoints be used for AIS outreach by non-AIS experts. Trunks can be checked out from the Flathead Lakers in Lake County and Whitefish Lake Institute in Flathead County.

Research: Using DNA technology, the Commission partnered with the Flathead Lake Biological Station to complete a new protocol for zebra and quagga mussel veligers which allows for improved AIS monitoring and early detection.

Leveraging AIS Funds: We have been able to assist agencies/ governments in leveraging funds in excess of \$350,000 to support work critically need in the Basin.

AIS Strategy: The Commission is working with the Provinces of British Columbia and Alberta to develop a protocol for the Crown of the Continent that will facilitate: data collection protocols to ensure that data can be analyzed across jurisdictional boundaries; rapid response and notification; perimeter defense; and coordinated educational messaging.

Focus group testing: The Commission secured funding from the Great Northern Landscape Conservation Cooperative to conduct testing to determine the efficacy of existing AIS education messaging. The test results will be used to develop messaging to raise awareness and to facilitate broader adoption of “clean, drain, dry” protocols for watercraft and gear. Funding for this effort provided by GNLCC.

AIS CONT.

Curlyleaf Pondweed(CLP)

Management: Significant progress was made in containing and controlling the CLP infestation in Flathead Lake and River. Of the 8 areas identified as positive in Flathead Lake, only 2 sites remain positive for CLP: Lakeside Marina and a small area outside of Bigfork. Control work at these sites achieved a 90% level of control. As of 2014, there are scattered plants throughout the lower 10 miles immediately above Flathead Lake. Work in 2014, suppressed the population in the river but a significant effort will be needed in the future to control this area of the infestation.

Eurasian Watermilfoil Management: Control work on the EWM in Beaver Lake continued. In 2014, only about ten plants weighing less than a pound were removed from the lake. That is

a significant reduction from the 25 lbs removed in 2012 and 5 lbs in 2013. It is likely that EWM plants will still be identified and removed over the next couple of years, but full eradication is expected within the next five years.

Other AIS Efforts : Significant work was completed under the DNRC's Renewable Resource grant. AIS assessments were made at over 50 sites: plankton sampling for zebra/quagga mussels occurred at 70 sites: and a database of calcium levels in lakes for the Flathead Basin was completed. No new invasives were detected. The effort to conduct contingency planning for at risk facilities is ongoing and will be completed by the end of the year.

Flathead AIS Work Group Partners

- City of Polson
- City of Whitefish
- Clark Fork Coalition
- Clearwater Resource Council
- Confederated Salish and Kootenai Tribes
- Flathead Basin Commission
- Flathead Conservation District
- Flathead Chapter of Trout Unlimited
- Flathead Lake Biological Station
- Flathead Lakers
- Flathead National Forest
- Flathead Protection Association
- Glacier National Park
- Lake County
- Lake County Weed District
- Lolo National Forest
- Missoula County Weed District
- Montana Department of Agriculture
- Montana Department of Fish, Wildlife and Parks
- Swan Lakers
- U.S. Bureau of Reclamation
- U.S. Geological Survey
- U.S. Fish and Wildlife Service
- Whitefish Lake Institute
- Whitefish Water and Sewer District



FLATHEAD BASIN COMMISSION IN ACTION

AQUATIC INVASIVE SPECIES



In partnership with Lake County, Montana Department of Natural Resources, and the government of Alberta, the Commission engaged Working Dogs for Conservation to pilot an effort to train and deploy dogs to sniff out zebra and quagga mussels during watercraft inspections. This forward-thinking approach to inspections is on the cutting edge as only two US states, and no Canadian provinces, have incorporated detection dogs to their aquatic invasive species programs. Working Dogs for Conservation trained four dogs to detect live and

dead zebra and quagga mussels. From June to August 2014, teams deployed on 13 occasions at 5 inspection locations in Montana and Alberta. A total of 110 watercraft were searched and no mussels were detected. Based on blind tests, the dog/handler teams were both more efficient and effective at detecting mussels as compared to human inspectors alone.

Public reception to the dogs was extremely positive as 89% of boat owners wanted to watch the dogs work, take pictures, or had questions or comments which indicated their

appreciation for the dogs. The dogs also attracted local and national media attention providing outreach opportunities regarding the problem of invasive mussels that would not have been possible without the dogs. Alberta plans to expand the use of dogs in 2015. Similar efforts could be undertaken in Montana now that the efficacy of the dogs has been demonstrated, along with broad public acceptance of canine inspections.

*Working Dogs for Conservation is a Montana-based non-profit organization that partners with detection dogs to further conservation initiatives around the world by non-invasively monitoring endangered animals or seeking out invasive species to eradicate known population or prevent spread or introduction to new areas. Since its inception, Working Dogs for Conservation has deployed dog and handler teams to detect nearly 40 species in 18 states and 10 countries.

TRANSBOUNDARY: AN INTERNATIONAL WATERSHED

Flathead Basin (Montana and British Columbia)

In 2010, British Columbia and Montana signed the Memorandum of Understanding and Cooperation on Environmental Protection, Climate Action and Energy (MOU). The MOU sets out a framework for environmental and economic cooperation on clean energy development, and permanently bans mining and oil and gas development in the Transboundary Flathead River. During this biennium, the Commission has continued to work with its partners in British Columbia to undertake studies designed to protect and improve bull trout and cutthroat trout habitat in the transboundary Flathead fishery.



Great Northern Landscape Conservation Cooperative (GNLCC):

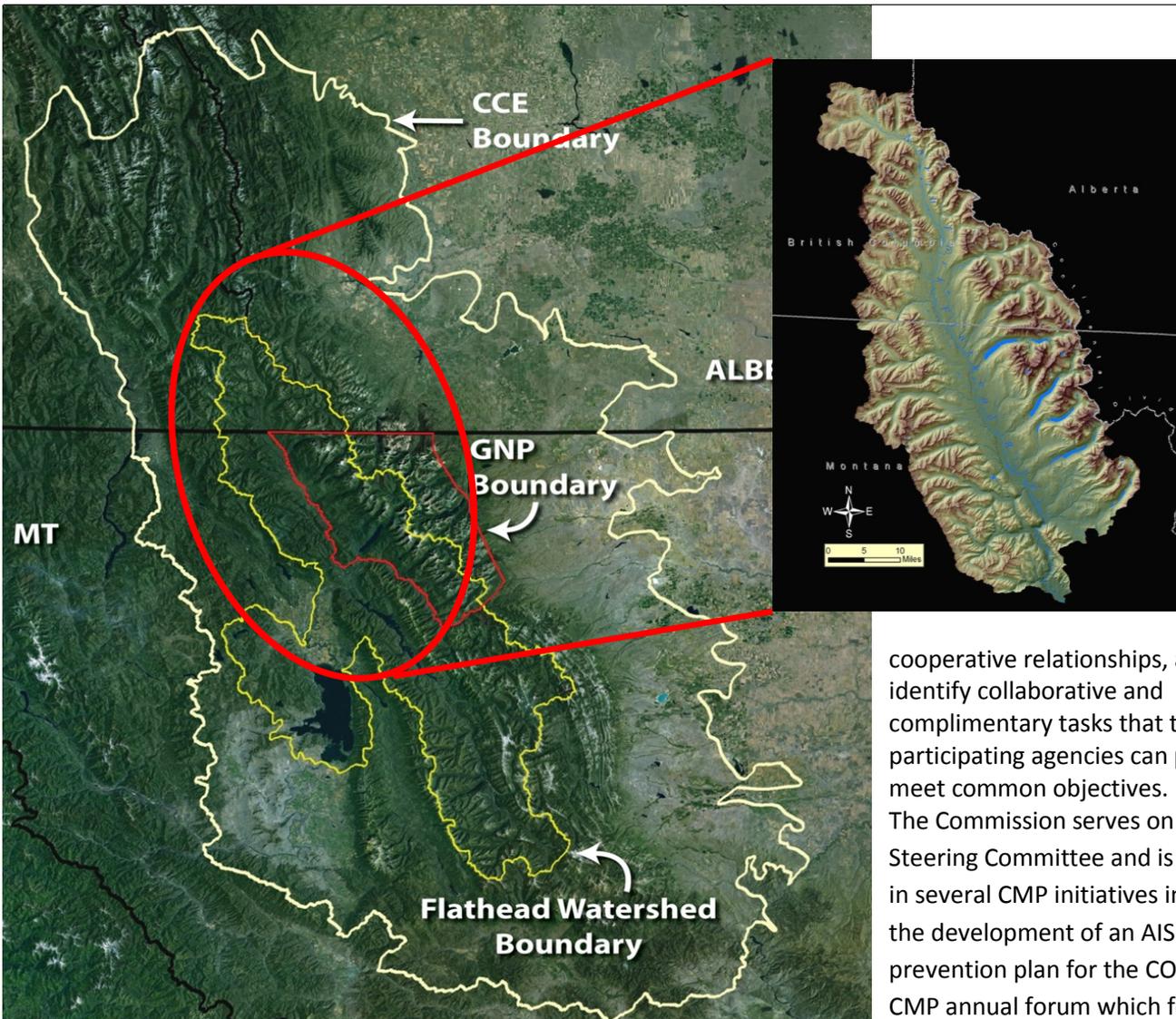
The GNLCC is a federal cooperative that brings together land and resource managers from Montana, Wyoming, Idaho, Washington, and Oregon, along with the Provinces of British Columbia and Alberta to coordinate, facilitate and promote projects that support increased resource resilience in the face of landscape-level stressors. The GNLCC focuses on scientific research, conservation action, and monitoring and evaluation to sustain diverse natural systems across a large landscape. The Commission is working with the GNLCC to assist in the development of a coordinated, large landscape AIS strategy, along

with efforts at the Crown level that can be scaled up for use at the larger landscape level (see focus group testing and Crown AIS Strategy on

page 7). Such efforts will improve and protect both our regional resources, as well as our state resources here in Montana.



TRANSBOUNDARY: AN INTERNATIONAL WATERSHED



Crown Managers Partnership (Montana, Alberta and British Columbia) The Crown of the Continent (COC) is one of North America's most ecologically diverse and jurisdictionally fragmented ecosystems. Encompassing the shared Rocky Mountain region, and immediately adjacent landscapes of Montana, British Columbia and Alberta, this 28,000 square mile region straddles two federal governments; one state and two provinces; multiple Tribal/First Nation sovereign governments;

municipal authorizes; and both public and private land blocks. Recognizing that natural resources straddle jurisdictional boundaries, land and resource managers from Alberta, Montana and British Columbia voluntarily collaborate on selected natural resource issues, such as Aquatic Invasive Species prevention, in order to better protect shared resources in the COC. While the Crown Managers Partnership (CMP) does not manage (the individual agencies manage), this partnership seeks to build

cooperative relationships, and identify collaborative and complimentary tasks that the participating agencies can pursue to meet common objectives. The Commission serves on the CMP Steering Committee and is involved in several CMP initiatives including the development of an AIS prevention plan for the COC; the CMP annual forum which focuses on information sharing and interagency cooperation; and the CMP Ecological Health Project. One of the most recent CMP collaborations involved the launch of the AIS detection dog pilot program (see page 8). Other focus areas include landscape connectivity projects, fire management, whitebark pine restoration, etc. These cooperative efforts have allowed us to leverage funding and expertise to better protect resources in this unique landscape.

FLATHEAD BASIN COMMISSION IN ACTION NEW PROJECTS

Wastewater Management: The Commission recently obtained funding from U.S. Bureau of Reclamation (BOR) to develop a wastewater management strategy to improve water quality. The Plan will be designed to reduce nutrient loads related to septic systems and other non-point pollution sources adjacent

to surface water sources, and issues associated with the land application of septage. The Commission applied for a 2014 RRGL grant to supplement the funding provided by BOR.

Drought Management: With funding from BOR, the Commission will develop a drought management strategy in the Flathead Basin by

working with stakeholders to develop a voluntary, “buy-in” plan to collaboratively and cooperatively share water resources in times of drought. The Commission applied for a 2014 RRGL grant to supplement the funding provided by BOR.



Rail Safety: Given concerns raised by local communities and the number of derailments that have already occurred in Montana, the issue of rail safety is an increasing concern. To address rail safety standards and any emergency response concerns. The Commission is working to ensure that rail safety standards and emergency response plans protect, to the greatest extent possible, both human health and the natural resources which make the Flathead unique.

APPENDIX A: BUDGET

FY 2013

Personal Services	\$80,117
Operating Expenses	\$21,727
Total:	\$101,844

FY 2014

Personal Services	\$81,177
Operating Expenses	\$16,757
Total:	\$97,934

Grants/Contracts/Donations Managed during the Biennium:

DNRC RRGL AIS	\$100,000
BOR AIS	\$95,000
BOR WaterSmart	\$100,000
Whitefish Lake Inst.	\$1,000
City of Whitefish	\$20,000
Whitefish Water & Sewer	\$5,000
CMP/GNLCC	\$40,000
Trout Unlimited	\$5,000
Total:	\$366,000

Leveraged funding secured during the Biennium for AIS: \$350,000

Leveraging Resources: With a base budget of under \$100,000, the Commission has been able to directly raise over \$350,000 for the programs described herein. In addition, we have been able to assist agencies/governments in leveraging funds in excess of \$350,000 to support work critically need in the Basin. The modest investment in the Commission pays significant dividends, with over \$700,000 coming into the Basin to support projects critically needed in the basin including drought management, wastewater management and Aquatic Invasive Species prevention.

The Commission would like to thank the State legislature for its support. We would also like to thank all of the individuals and organizations that provide funding and invaluable in-kind assistance. Without such support our work would not be possible.



Appendix B: PHOTOGRAPHY CREDITS

Cover photo:	Michael Hewston
Page 2, Message from the Chair:	Chas Cartwright
Pages 3-4 Map and Graphics:	Whitefish Lake Institute
Page 5, Boat Inspection:	Heidi Sedivy
Page 6,	
Page 7, Quagga Mussels	Heidi Sedivy
Page 8 Sniffer Dog:	Cindy Sawchuk
Page 9, Fish:	
Page 10, COC Graphics:	Erin Sexton
Page 11, Rail Yard:	Whitefish People and Places

Appendix C: COMMON INITIALISMS

AIS: Aquatic Invasive Species

BOR: United States Bureau of Reclamation

CLP: Curlyleaf Pondweed

COC: Crown of the Continent

DNRC: Montana Department of Natural Resources and Conservation

EWM: Eurasian Watermilfoil

GNLCC: Great Northern Landscape Conservation Cooperative

MOU: Memorandum of Understanding

Appendix D: FLATHEAD BASIN MEMBERS

Tim Baker
Policy Advisor for Natural Resources
Office of the Governor, Montana

Ray Beck
Deputy Director
Montana Dept. of Natural Resources and Conservation

Tom Bell
Regional Director, Kootenay Okanagan B.C. Parks
British Columbia, Canada

Susan Brueggeman
Director
Lake County Environmental Health Dept.

Chas Cartwright, FBC Chair
Governor Appointed Member
Columbia Falls

Jasmine Courville-Brown
Governor Appointed Member
Ronan, Montana

Julie Dalsoglio (Ex-Officio)
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Steve Frye
Area Manager
Montana Dept. of Natural Resources and Conservation,
Northwest Land Office

Kate Hunt
Governor Appointed Member
Creston, MT

Rich Janssen
Department Head
Natural Resources Dept. – Div. of Environmental Protection
Confederated Salish and Kootenai Tribes

Jon H. Jourdonnais
Manager of Hydro Licensing and Compliance
Northwestern Energy

Gary Krueger
Flathead County Commissioner
Flathead County

Jeff Mow
Superintendent
Glacier National Park

George Mathieus
Administrator
Montana Department of Environmental Quality

Jan Metzmaker
Governor Appointed Member
Whitefish, Montana

Dennis Philmon
Superintendent, Hungry Horse Dam
U.S. Bureau of Reclamation

Jack Potter
Governor Appointed Member
Columbia Falls, Montana

Mark D. Reller (Ex-Officio)
Montana Liaison
Bonneville Power Administration

Jim Williams
Division Regional Supervisor
Montana Department of Fish, Wildlife and Parks

Jim Simpson
Supervisor – Board Chair
Lake County Conservation District

Dean Sirucek
Supervisor
Flathead Conservation District

Thompson Smith, FBC Vice Chair
Governor Appointed Member
Charlo, Montana

Chip Weber
Supervisor
Flathead National Forest

