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8 July 2019

MEMORANDUM

TO: Council Members

FROM: Kerry Berg

SUBJECT: Presentation by the Confederated Salish & Kootenai Tribes and Montana Fish, Wildlife & Parks regarding Aquatic Invasive Species.

BACKGROUND:

Presenters: Tom McDonald, CSKT Fish, Wildlife, Recreation & Conservation Division Manager; Erik Hanson, CSKT AIS Program Coordinator; Thomas Woolf, Montana Fish, Wildlife & Parks Aquatic Invasive Species Bureau Chief.

Summary: The presenters will briefly go over the negative impacts of invasive mussels and cover AIS inspection station operations currently deployed on the Flathead Reservation and for all of Western Montana. They will review the risks still present for the spread of mussels into the Columbia watershed, describe the funding for the current program, and the need for expanded prevention and coordination.

Relevance: The 2014 Program contains a strategy to prevent the introduction of non-native and invasive species in the Columbia River Basin as well as their suppression and eradication. In the rationale for that strategy the Council notes the greatest known threat in the Columbia River Basin from aquatic invasive species is the introduction into the basin of zebra or quagga mussels. The Council also supported preserving program effectiveness by aggressively addressing non-native and invasive species in emerging priority #3.



A People of Vision



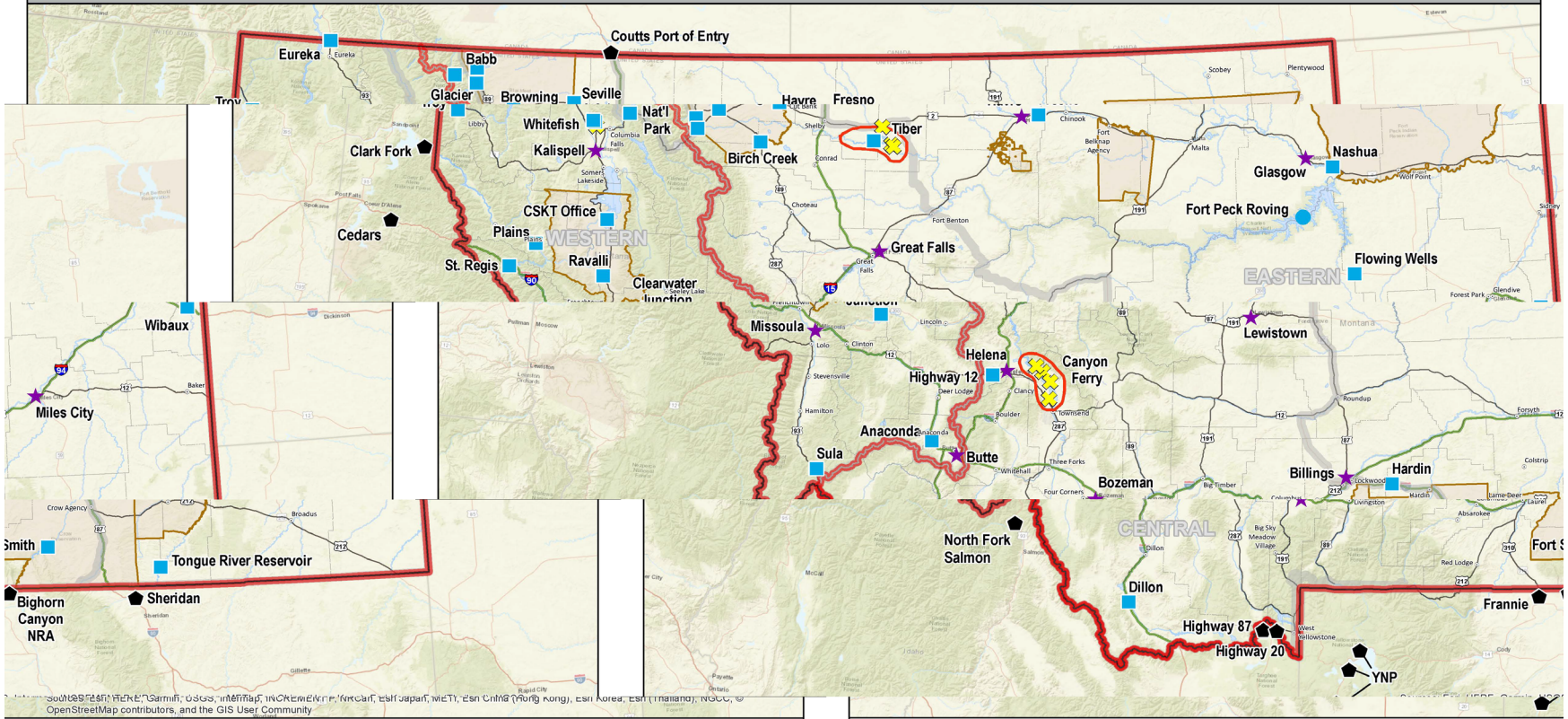
Tom McDonald, CSKT Fish, Wildlife, Recreation & Conservation Division Manager
Erik Hanson, CSKT Aquatic Invasive Species Program Coordinator
Thomas Woolf, Montana Fish, Wildlife & Parks Aquatic Invasive Species Bureau Chief.

Montana's AIS Program

- Over 200 FWP and partner staff working on AIS prevention, early detection and education in Montana.
- Coordinated effort working closely with partners.
- Actively expanding partner participation and involvement with watercraft inspection, AIS early detection and outreach and AIS outreach and education.
- www.CleanDrainDryMT.gov

FWP Watercraft Inspection and Decontamination Stations

2019 Season



N. DRAIN. DRY.

BoatInspectionStations_FY2019_Public.pdf
 3/13/2019 Created by Geographic Data Services
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- Decontamination Station
- Class I Inspection Station*
- Class I Roving
- Class II Inspection Station**
- Partner Agency Station
- Statewide Defense Perimeter
- Containment Zones
- Columbia River Basin Defense Perimeter
- Fishing District

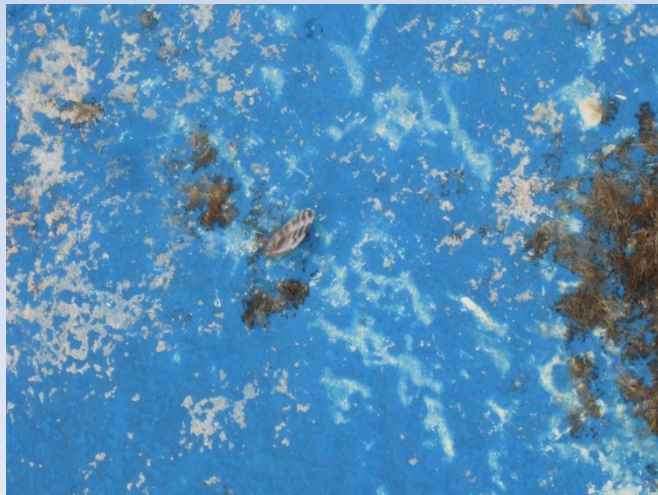


* Class I - full inspection and decontamination capability
 ** Class II - risk assessment screening, inspection and routing as needed

CSKT AIS Program

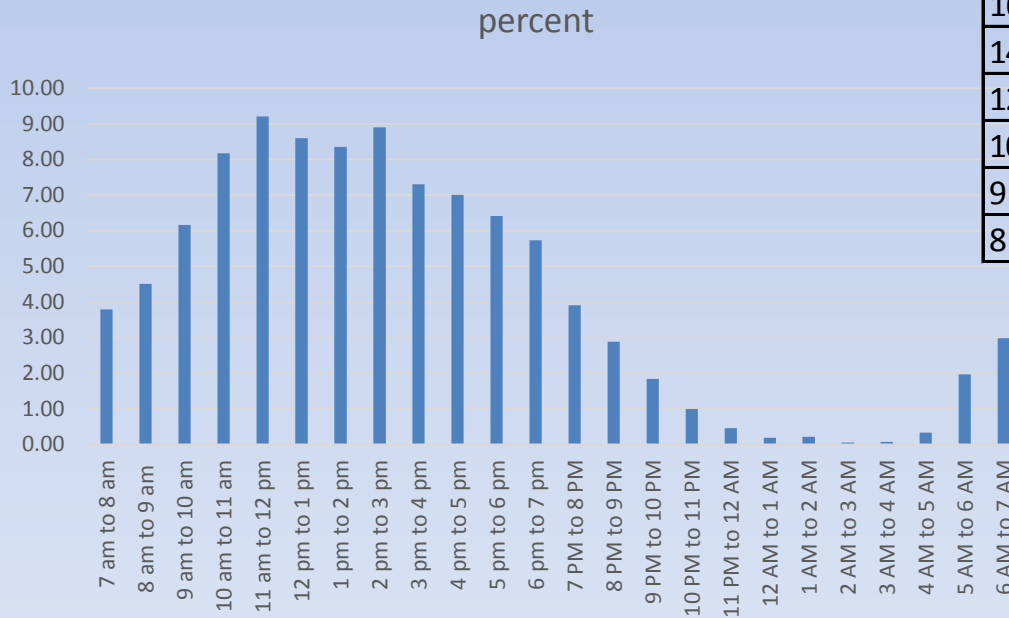
Goal: Ensure all watercraft that enter the Flathead Basin from mussel infested waters are inspected.

- Joint rule with state that requires inspection before launching in the Flathead Basin
- Operate the only 24 hour station in Montana
- Dedicated enforcement to intercept drive-bys
- Agreement with local law enforcement



CSKT AIS Program

Goal: Ensure all watercraft that enter the Flathead Basin from mussel infested waters are inspected.



Hours of Operation	% of total
20 HR Day 4 am to 12 AM	99.5
16 HR Day 6 am to 10 pm	95.7
14 HR Day 7 am to 9 pm	90.9
12 HR Day 7 am to 7 pm	84.1
10 HR Day 7 am to 5 pm	78.4
9 HR Day 8 am to 5 pm	74.6
8 HR Day 9 am to 5 pm	63.7

Advancing a Regional Defense against Dreissenids in the Pacific Northwest (PNWER/PSMFC)

- Combined economic impact of a Northwest infestation could be nearly \$600 million per year



Zebra mussels scraped from Lock & Dam #7 near LaCrescent, Minnesota, 2001

Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin (IEAB)

- The potential costs, especially in the Snake River Basin, would likely involve habitat replacement, reduced chances for recovery of protected-status species, an increased chance of listing for other species, increased costs of compliance with endangered species laws, and reduced populations of other economically important species including game fish. We assume that existing policies would require that anadromous fish and rare species populations be returned to their without-mussel status. **The cost of this compensation is unknown, but could be tens to hundreds of millions of dollars annually.**

Significant Opportunities for Improvement

Invasive Mussels Update Economic Risk of Zebra and Quagga Mussels in the Columbia River Basin (IEAB 2013-2)

- “The outlook for prevention to be successful has improved, and studies suggest that prevention may be underfunded”.
- “Prevention efforts at the State level might be improved by better enforcement, expanded inspections, and applied research”
- “The region has invested billions of dollars to maintain and increase native fish, primarily salmon and steelhead trout, and this investment could be at risk”.

Significant Improvements

- **Federal COE Funding**
 - Increased hours of operation and additional stations
- **Montana Legislation**
 - [HB 608](#) Ballast Boats
- **Montana Funding**
 - [HB 411](#)
 - Includes hydropower assessment
 - Significant dialogue that BPA should fund effort

Significant Challenges Remain

Watercraft Inspection station operation

- **Drive-bys**
 - Miss 10 to 25% of watercraft
- **Limited hours of operation**
 - Miss 10 to 20% of watercraft



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Columbia River Basin Fish and Wildlife Program 2014 (NPCC 2014-12)

Non-native and invasive species Sub-strategy:

- Prevent the introduction of non-native and invasive species in the Columbia River Basin, and suppress or eradicate non-native and invasive species.
- Currently, the greatest known threat in the Columbia River Basin from aquatic invasive species is introduction into the basin of zebra or quagga mussels. ***The role of Bonneville and the other federal action agencies under the fish and wildlife program is to assist the states and regional efforts to prevent the establishment of these species.***

Bonneville Power Authority's Role



Two week development time (can only settle at end of development)





Stoeckel, James et al 1997. Larval Dynamics of a Riverine Metapopulation: Implications for Zebra Mussel Recruitment, Dispersal, and Control in a Large River System

River currents reduce or eliminate internal recruitment by local populations, making them dependent upon external recruitment from propagules (larvae) produced by upriver populations.

Stoeckel J.A. et al. 2004 retention and supply of zebra mussel larvae in a large river system: importance of an upstream lake.

Persistence of zebra mussel populations in river systems probably depends upon the presence of upriver sites capable of hosting self-recruiting adult populations that act as sources of larvae



Significant Opportunities for Bonneville Power Authority to assist improvement

Permanent Inspection Stations

- Would increase the quality of inspections and decrease drive-bys

24 hour a day Continental Divide Stations

- Would increase the intercept rate by 15 to 20%

Dedicated enforcement

- Would increase the intercept rate by 15 to 20%

Prevention is the only option



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