Northwest **Power** and **Conservation** Council

July 5, 2018

MEMORANDUM

TO: **Council Members**

FROM: **Leslie Bach**

SUBJECT: **Presentation on Aquatic Invasive Species Prevention: Status, Highlights and Challenges**

BACKGROUND:

Presenter: Kate Wilson, Montana Dept. of Natural Resources and Conservation

Summary: The Council has been actively engaged in supporting federal-cost share funding for preventing quagga and zebra mussel invasion into the Columbia River Basin. The Council has also tracked and encouraged a variety of monitoring and response efforts across the Basin. We will hear an update on Montana's efforts on quagga and zebra mussel detection and prevention, including funding opportunities and challenges, monitoring, and early detection, rapid response.

Relevance: The Council's Fish and Wildlife Program encourages a regional approach to establishing a defensive perimeter to keep invasive mussels out of Columbia River Basin waters. The program specifically identifies the need to coordinate and share tracking and monitoring data on invasive mussels in the Columbia Basin and data on rapid response, prevention, monitoring, containment, control, eradication, enforcement and education and outreach efforts among a variety of organizations.

851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204-1348
www.nwcouncil.org

Steve Crow
Executive Director

503-222-5161
800-452-5161
Fax: 503-820-2370

Background: Each of the Northwest states has established Watercraft Inspection and Decontamination stations throughout the region to prevent the introduction and establishment of invasive mussels in the waters of the Columbia River Basin. In 2014, Congress passed new authorization for the U.S. Army Corps of Engineers that included a provision giving the Corps legal authority to enter into cost-sharing agreements with the four Northwest states to establish and operate Watercraft Inspection and Decontamination stations. The cost-share program, coordinated through Pacific States Marine Fisheries Commission, has allowed the four Northwestern states to increase the number of watercraft inspection stations and their days and hours of operation.

Council staff continues to track federal authorization/appropriation for the cost-share program. For the current year, FY18, Congress appropriated $5 million for the inspection stations and related monitoring. For next year, FY19, both the House and Senate Energy and Water Development Appropriations bills provide $6 million for inspection stations and related monitoring. The FY19 appropriations process is ongoing and it is currently not clear when the House and Senate versions will go to conference and be finalized.

Detection of invasive mussel larvae in Montana reservoirs in 2016 has increased the level of investment in early detection, rapid response across the Basin. It has also enhanced communication among entities that manage waterbodies throughout the western U.S., both within and outside of the Columbia River Basin.

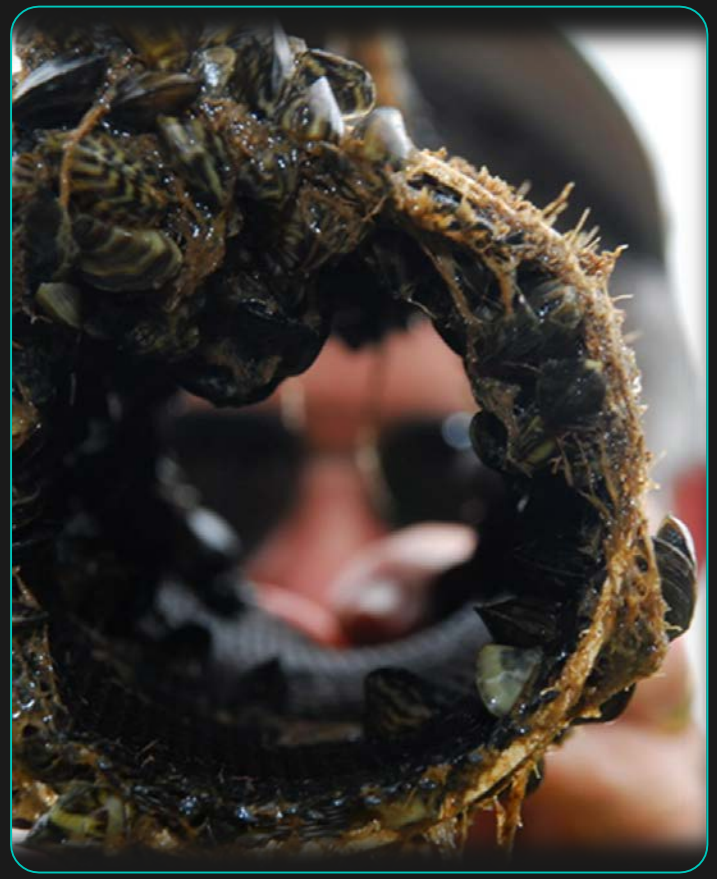
Aquatic Invasive Species: Status, Highlights & Challenges

Kate Wilson, Montana Dept. of Natural Resources & Conservation/UC³
406-542-4282 kate.Wilson@mt.gov

Tom Woolf, Montana Fish, Wildlife & Parks - AIS Bureau Chief
406-444-1230 Thomas.woolf@mt.gov

Overview

- Purpose/Intent:
  - Provide relevant updates on AIS in Montana & the Columbia River Basin
  - Enhance coordination and collaboration
  - Share success stories and challenges
- General Overview:
  - Funding
  - Response
  - Montana highlights and regional projects of interest
  - Upcoming events

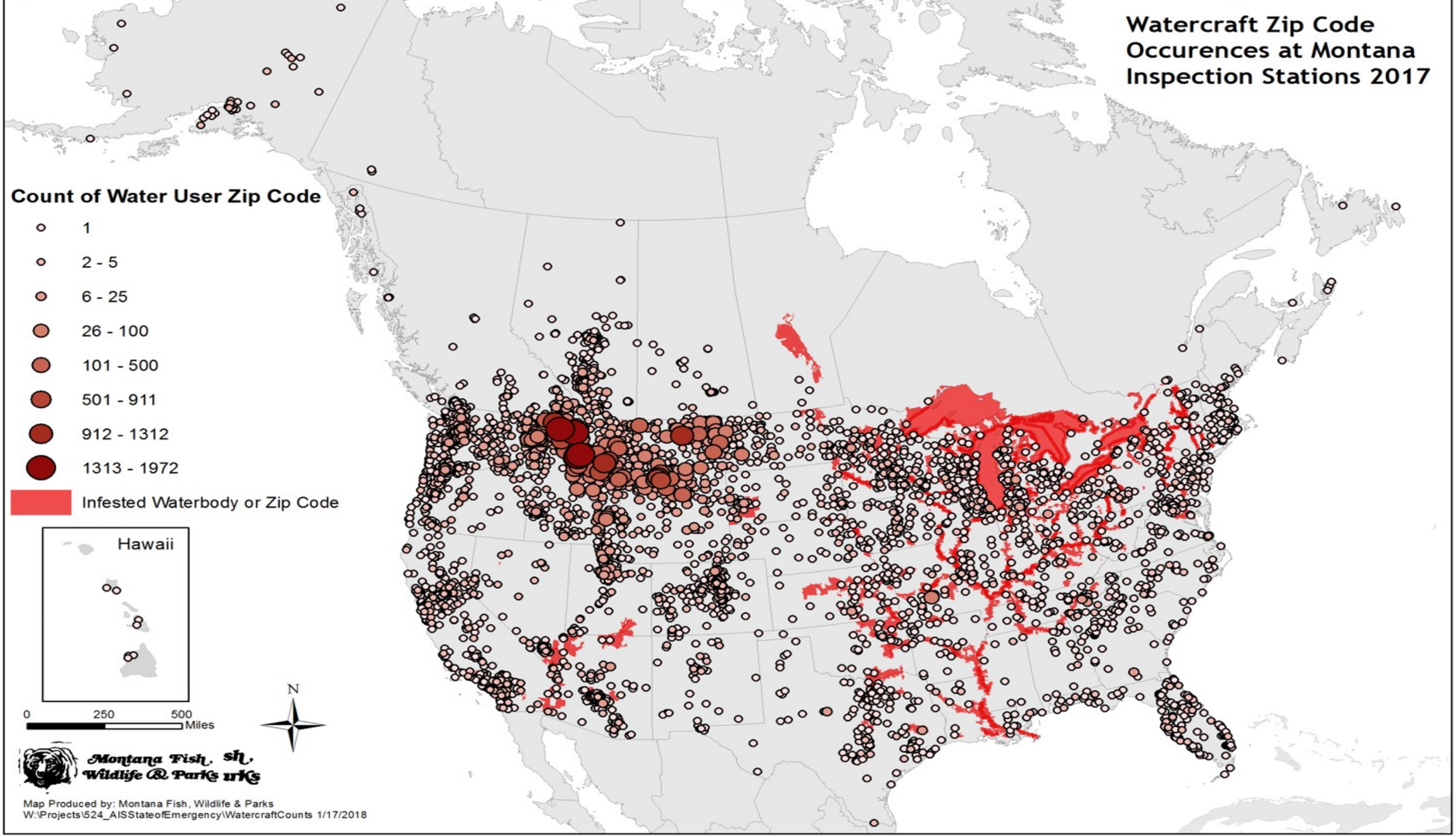


Funding - Federal

- WRDA – Advocacy appreciated
  - FY18 $1.9M to Montana
- Positive examples in inspections and monitoring
  - MT from 19 to 40+ stations; OR and WA
  - Monitoring efforts increased
- Fifty percent match difficult from some jurisdictions
- Missouri River language addition proposed (FY19):

‘Watercraft Inspection Stations.—In carrying out this section, the Secretary shall establish, operate, and maintain new or existing watercraft inspection stations—

- to protect the Columbia River Basin; and
- to protect the Upper Missouri River Basin.’

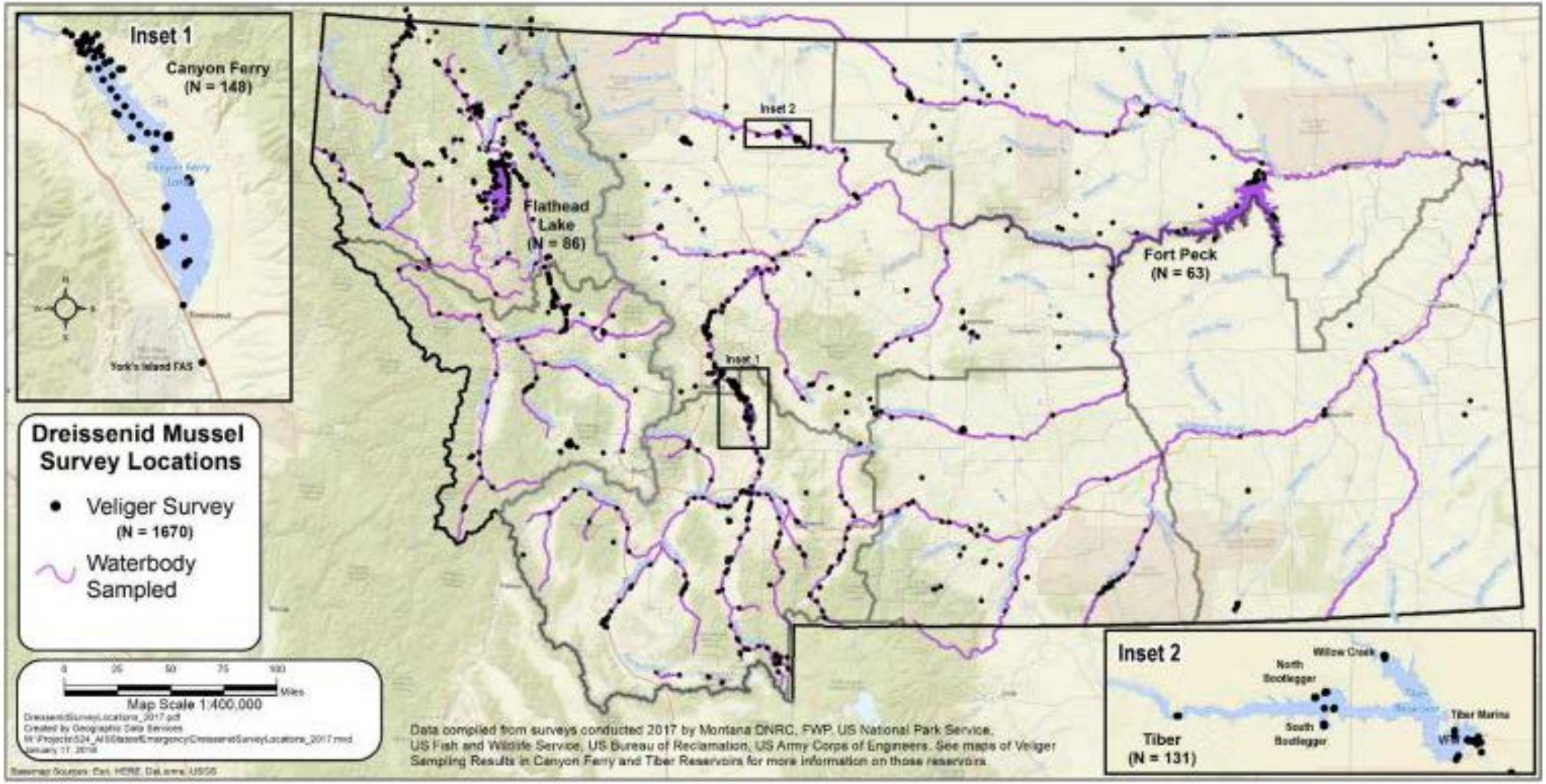

Watercraft Zip Code Occurences at Montana Inspection Stations 2017
Count of Water User Zip Code
1
2 - 5
6 - 25
26 - 100
101 - 500
501 - 911
912 - 1312
1313 - 1972
Infested Waterbody or Zip Code
Hawaii
0
250
500
Miles
N
Montana Fish, Wildlife & Parks
Map Produced by: Montana Fish, Wildlife & Parks
W:\Projects\524_AISStateofEmergency\WatercraftCounts 1/17/2018

MUSSEL ALERT

Survey Locations for Dreissenid Mussels in Montana

2017 Results

JANUARY 17, 2018



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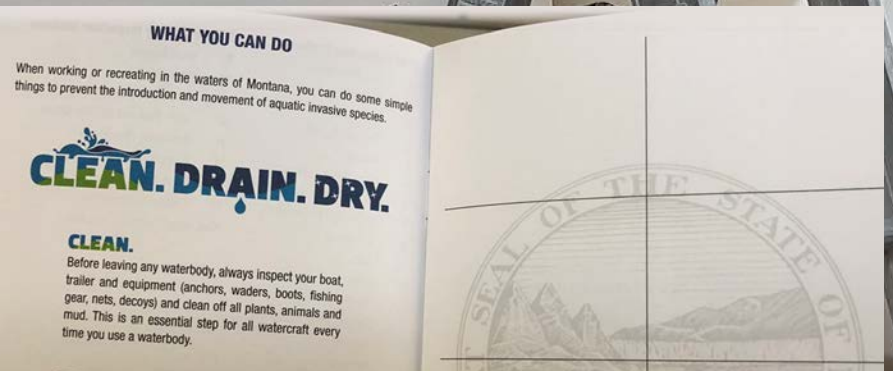
Watercraft Inspection Results: 2017



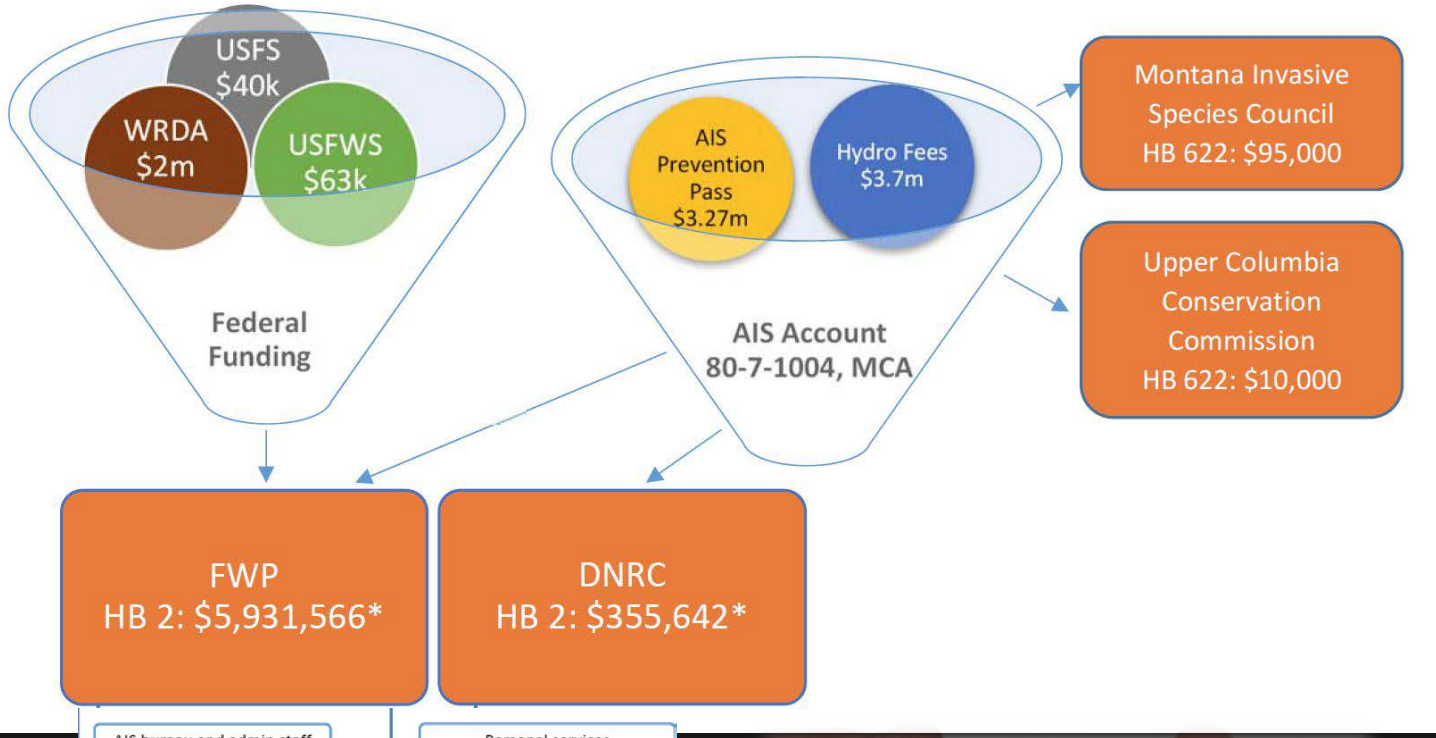
- 86,000 inspections up from 37,530 in 2016
- 17 mussel vessels up from 7 in 2016
- 80 citations; 300 warnings
- *Current:

Funding – State Comparisons

State	Total AIS Budget	Watercraft Fee Revenue	Watercraft Fee as % of Total Budget	Resident Motorized	Nonresident Motorized	Resident Nonmotorized	Nonresident Nonmotorized	Total MT Revenue
Montana	$6.29 million			69,370 to 124,311*	6,438	33,844 – 72,201**	11,012	
California	$5.98 million	$2.8 million	47%	$8 = $554,960 to $994,488	N/A	N/A	N/A	$554,960 to $994,488
Colorado†	$4 million	$2.4 million (estimated)	60%	$25 = $1.73 mill to $3.11 mill	$50 = $321,900	N/A	N/A	$2.05 mill to $3.43 mill
Idaho±	$5.4 million	$1.2 million	22%	$10 = $693,700 to $1.24 mill	$30 = $193,140	$7 = $236,908 to $505,407	$7 = $77,084	$1.2 mill to $2.02 mill
Nevada	$600,000 to $750,000	$210,000 to $262,500	35%	$12 = $832,440 to $1.49 mill	$12 = $77,256	$5 = $169,220 to $361,005	$5 = $55,060	$1.13 mill to $1.98 mill
Oregon	$810,000	$750,000 to $846,000	~97%	$2.50 = $173,425 to $310,777	$20 = $128,760	$5 = $169,220 to $361,005	$5 = $55,060	$526,465 to $855,602
Washington‡	$1.2 million	~$1.15 million	~96%	$2 = $138,740 to $248,622	$20 = $128,760	N/A	N/A	$267,500 to $377,382
Wyoming	$1.35 million	~$650,000	~48%	$10 = $693,700 to $1.24 mill	$30 = $193,140	$5 = $169,220 to $361,005	$15 = $165,180	$1.2 mill to $1.99 mill
Utah	$2.867 million	~$650,000	~23%	$10 = $693,700 to $1.24 mill	N/A	N/A	N/A	$693,700 to $1.24 mill

- **State funding mechanisms vary widely – general fund to user fees**
  - Program costs: $600k - $6.3M
  - Watercraft fees: From 0 – 97% of total program costs
  - Watercraft fees: $2-$25 resident; $12-$50 non-resident
  - BC & MT: Only jurisdictions taxing water industry (hydro)

Montana State Funding & Program Structure



Montana – Environmental Quality Council's Current Proposal

Funding Sources Proposed by EQC, May 2018	Annual estimated revenue
Anglers/Aquatic Invasive Species Prevention Pass* (Resident=$4, Nonresident=$7.50)	$2,079,120
Resident motorized watercraft fee ($25/year)	$1,734,250
General Fund, statutory appropriation	$1,160,000
Nonmotorized watercraft fee (Resident=$10, Nonresident=$10)	$640,350
Motorized watercraft-generated gas tax	$500,000
Nonresident motorized watercraft fee ($60/year)	$386,280
Commercial watercraft fee ($100/year)	TBD
Total estimated annual revenue	$6,500,000

*Current Aquatic Invasive Species Prevention Pass fees = $2/resident and $15/nonresident

- **Public Comment Period (July, Sept)**
- **Bill drafting for 2019 Legislative Session**

MUSSEL ALERT

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MONTANA CERTIFIED BOATER

CANYON FERRY 2018

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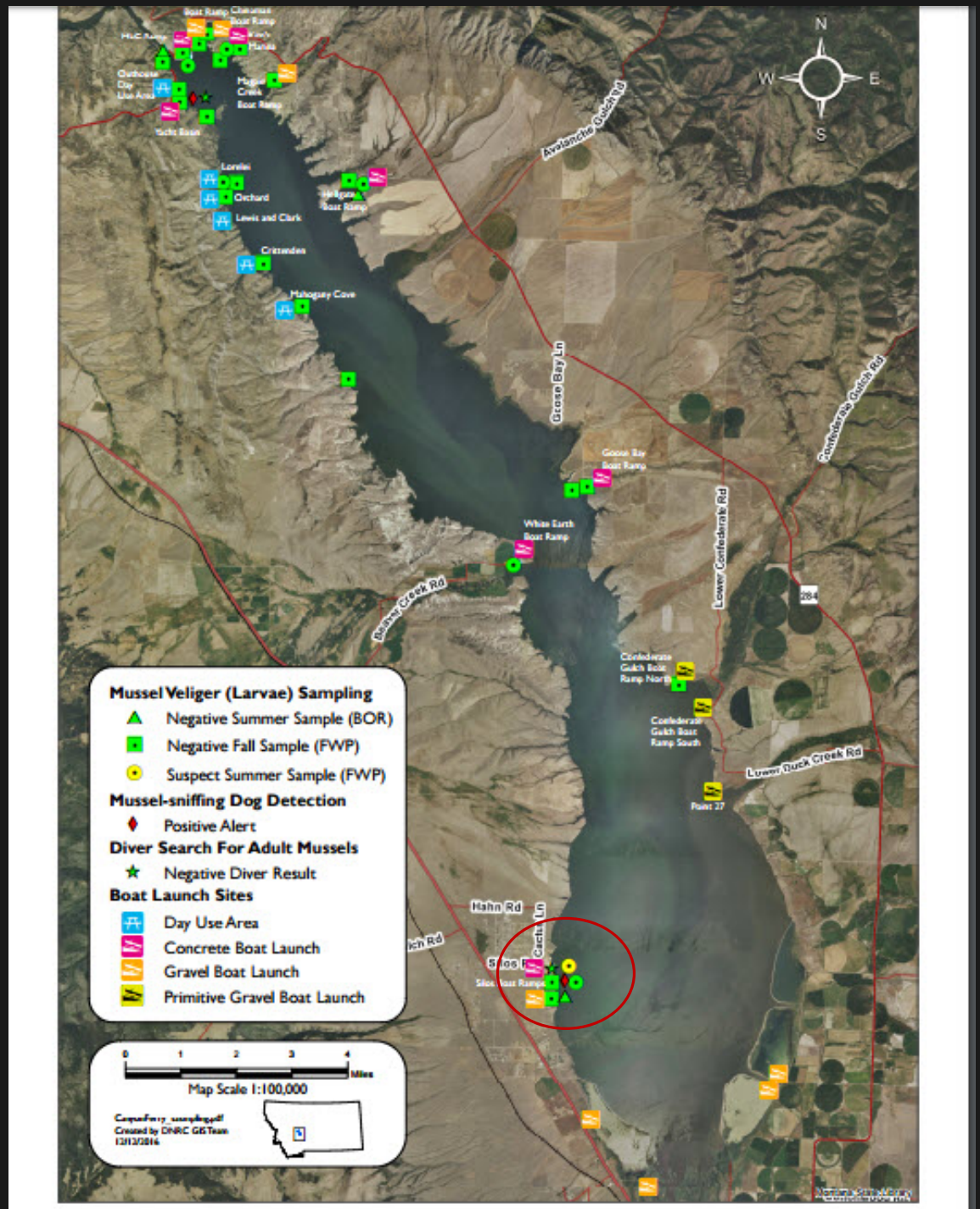
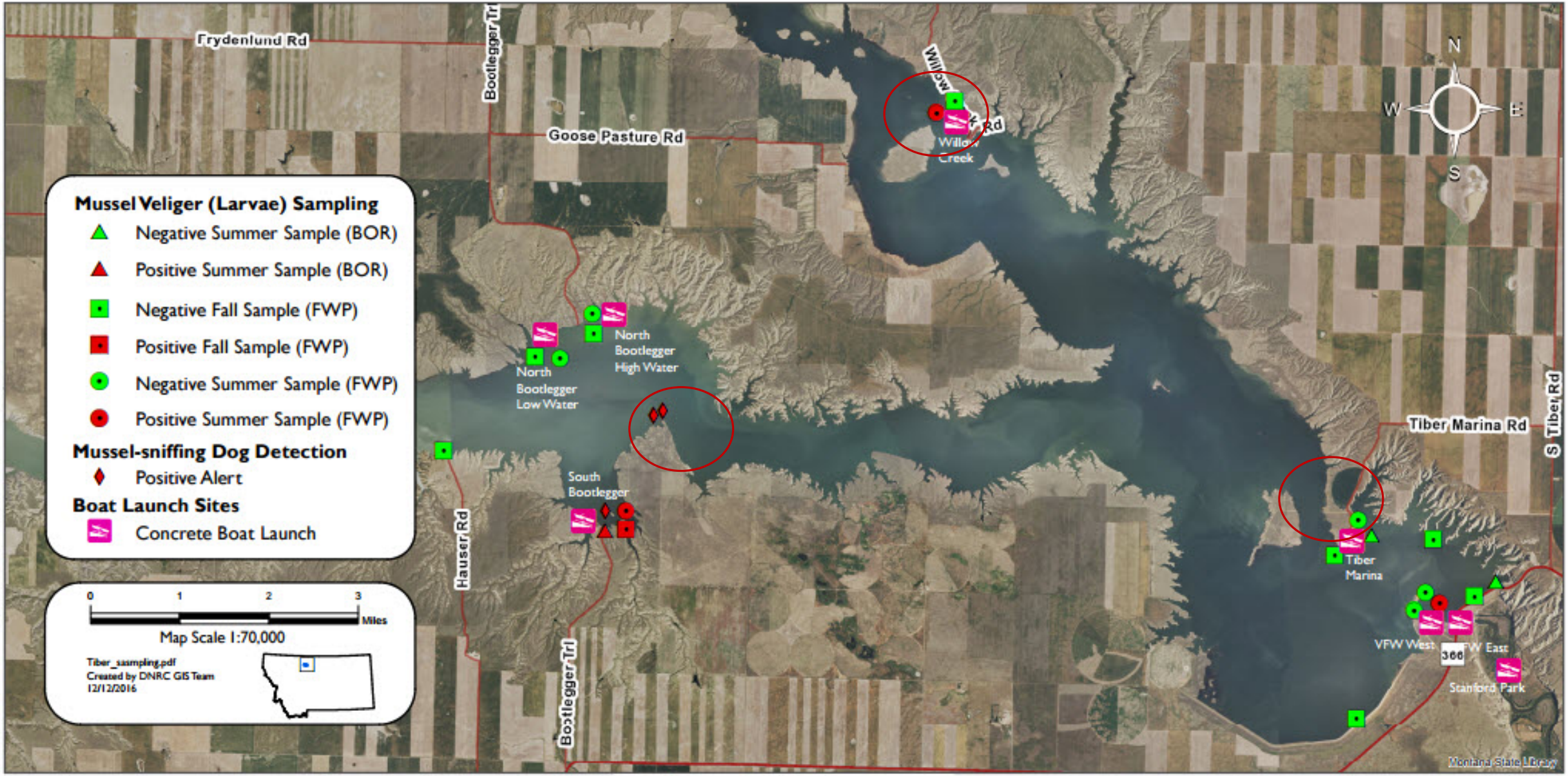


Montana
Mussel Response

Invasive Species Mussel Sampling

Tiber Reservoir, MT

Montana Mussel Response Team, December 2016



Watercraft Inspections & Monitoring

- All watercraft must stop if they are passing an inspection station
  - Motorized
  - Commercially Hauled
  - Non-Motorized (kayaks, canoes, SUP, rafts, drift boats, etc.)
- Mandatory inspection for watercraft/equipment:
  - leaving Tiber and Canyon Ferry Reservoirs
  - Entering the state
  - Crossing the Continental Divide (to the west)
  - Entering the Flathead Basin
- Multi-taxa AIS Monitoring
  - 240 waterbodies/1500 samples in 2017. Mussels: Use of microscopy/qPCR, divers, substrates, shoreline surveys, mussel dogs at Tiber/Canyon Ferry, limited environmental DNA (eDNA)
  - FWP lab: 150 this season already. Detected new mussel population in NB

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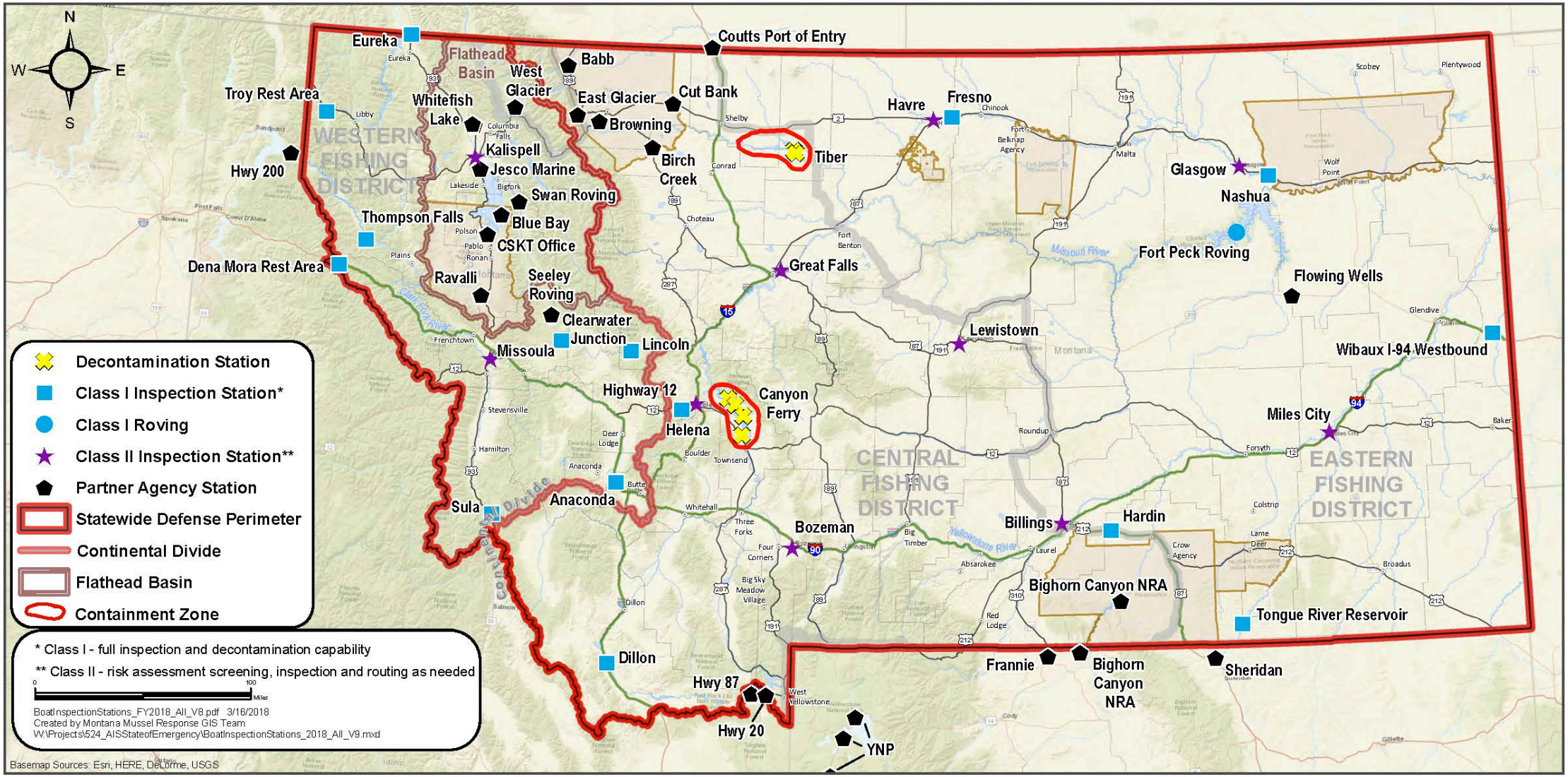
FWP Watercraft Inspection and Decontamination Stations 2018



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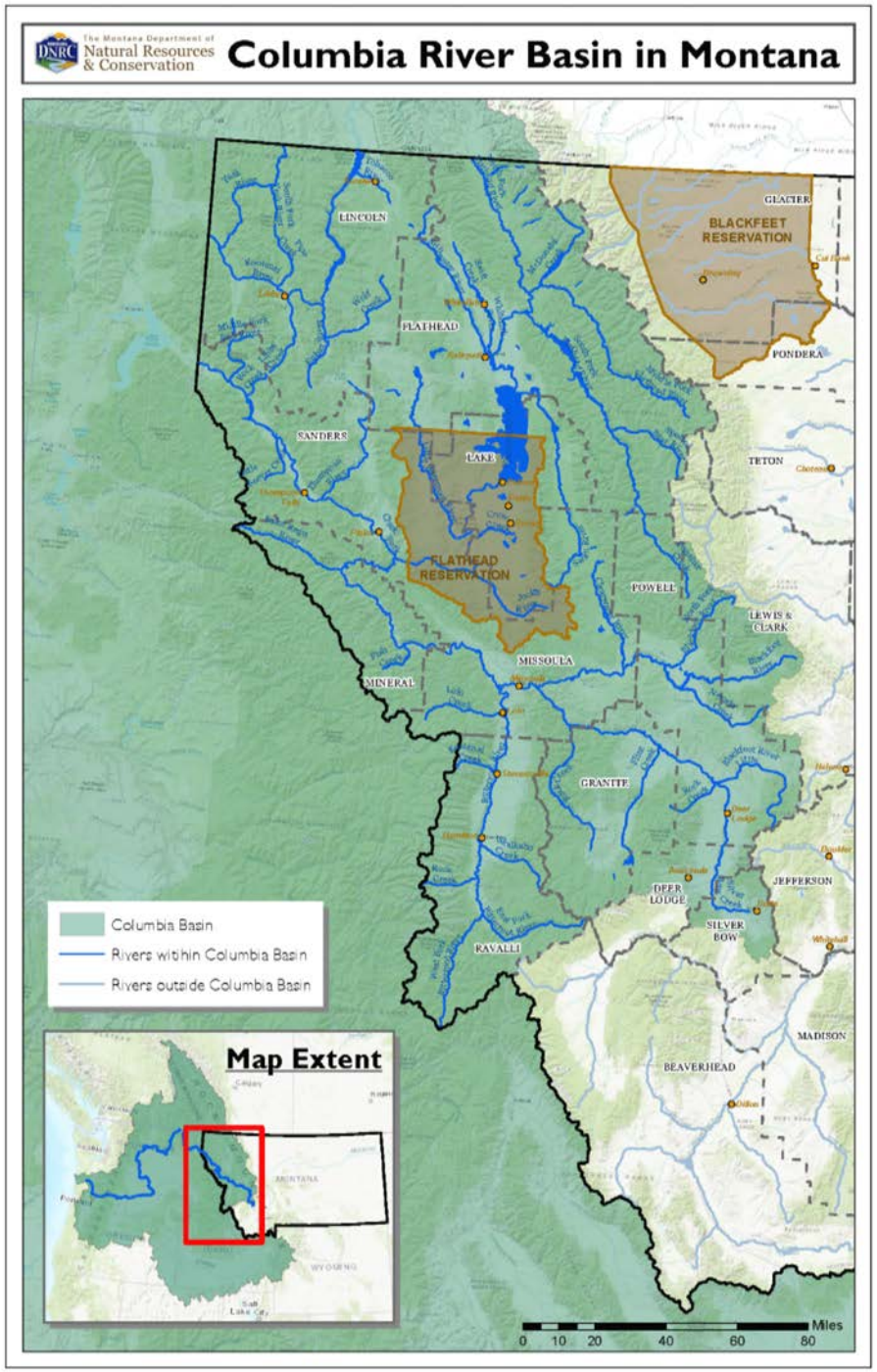
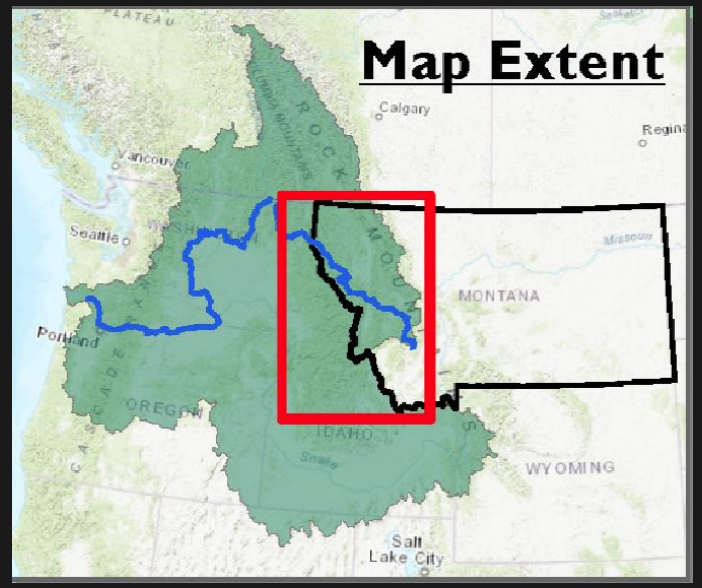
Upper Columbia Conservation Commission (UC^3)

- Columbia River Basin: last major river basin with NO MUSSELS
- Focus on AIS prevention & response planning
- Multi stakeholder council (9 voting members, + 6 ex officio)
- Created in 2017 legislative session (HB 622)
- Appointments made by Governor Bullock
- Focus areas/Committees:
  - **Early detection & monitoring**
  - **Education & outreach**
  - **Response preparedness**
  - **Watercraft Inspections**



Montana Tributaries within the Upper Columbia Basin

- Southern portion: Bitterroot Valley/Deer Lodge
- Northern portion: Eureka
  - Blackfoot River
  - Bitterroot River
  - Swan River
  - St Regis River
  - Thompson River
  - Stillwater River
  - Tobacco River
  - Yaak River
  - Flathead River/Lake
  - Clark Fork River



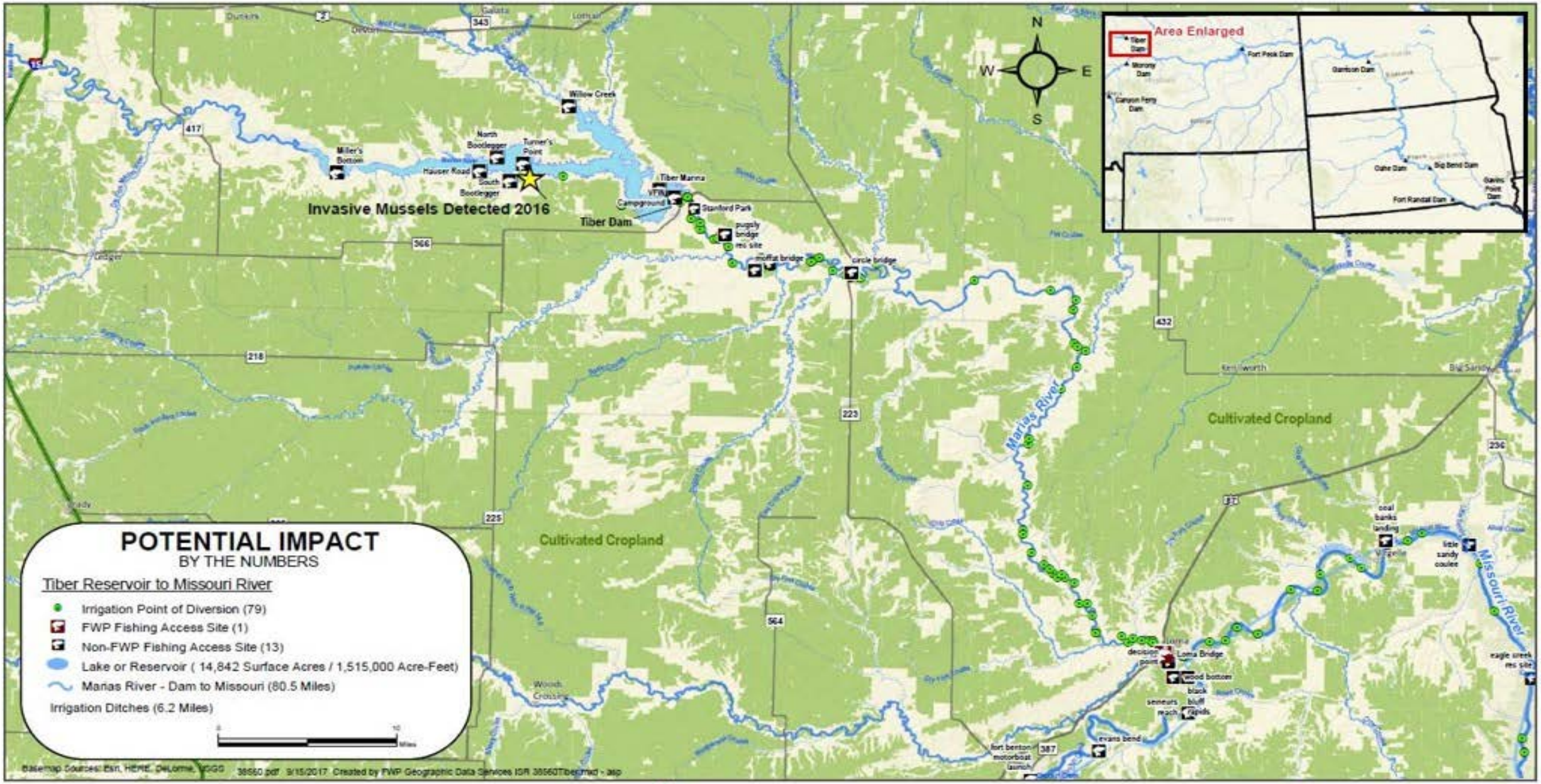
eDNA Science Advisory Panel on Invasive Mussels

- 2017 Legislature recommendation (panel)
- April 2018, Montana Invasive Species Council sponsored
- 6 eDNA experts from US/Canada
- Focus areas:
  - State of Science (mussels specifically)
  - Challenges/Gaps/Research Needs
  - Efforts to address gaps
  - Provide recommendations to managers on best use of technology for early detection
- Recommendations going forward to WRP

Columbia River Basin Response Exercise

- Coordination/Partnerships: CRB, FWP, CSKT, UC^3
- Flathead Lake: Shared management (state, CSKT)
- September 11-13, 2018
- Lessons learned (2016 detection)
- Incident Command System
- Roles & responsibilities
- Geographic Response Plan model

Potentially impacted water resources from invasive mussels downstream of Tiber Reservoir



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Rethinking Response

- Look to industry for potential partnerships on map-based geographic response planning tools
- Same approach/concept
  - Infrastructure & water users
  - Endangered/threatened species
  - Deployment of response resources
  - Incident Command System

Rich Bar	ID No. RA-EB-CYN-6-02
Site Latitude/Longitude	40.009400, -121.192538
Strategy Objective	Collect and recover floating material.
Implementation	Access to both sides of the river is available at this location. For high flows, recommend containment boom with no more than 6-inch skirt to prevent entrainment. During low and medium flows an in-line skimmer could be incorporated into the boom strategy (e.g., Elastec Circus skimmer or equivalent).
Site Safety Notes	Slippery banks when wet or icy; trip & fall hazards; roadway hazards; water hazards
Staging Area	Closest Staging Area: SA-EB-CYN-6-02; Mid-sized; Rich Bar overlook parking area. Cell service (text) available. (40.009275, -121.190897)
Field Notes	Boom below rapids and collect at foot of bridge. Private property
Protected Resources	Downstream habitats, freshwater habitats; spotted owl in vicinity in site
Cultural Resources	High – Known historic landmark (Rich Bar)
Watercourse Description	North Fork of the Feather River, East Branch. Narrow sinuous stretch of river.
Shoreline Type	Fine to medium grained granitic sand to boulders. High quality riparian habitat in areas.

ABOVE: Site Overview

SUGGESTED EQUIPMENT	
Quantity	Description
330ft / 100m	River collection boom; maximum 6-inch skirt if high flow
Event specific	Collection infrastructure (skimmers, tanks, etc.)

SUGGESTED PERSONNEL	
Quantity	Description
6	Boom deployment crew

SITE LATITUDE/LONGITUDE

39.809560, -121.431550

SITE CONTACT INFORMATION

Pacific Gas and Electric Company
916-283-4990, 916-892-4502

CLOSEST ADDRESS

13910 CA-70, Oroville, California, 95965

SITE IMAGE DESCRIPTION

Boom location above dam (575ft / 175m)

River Width: 330ft / 100m

Dam shown in second photo is just left (downstream) of main image. Water access via stairs.

Site Photos looking upstream (left) and downstream (above).

DRIVING DIRECTIONS

From: Reno, Nevada

- Merge onto US-395 N toward Susanville (23.9 miles)
- Take the CA-70 ramp to Portola/Quincy (1,500 feet)
- Turn left onto CA-70 West (105 miles)

From: Oroville, California

- Turn right to merge onto CA-70 N/State Highway 70 North (5.57 miles)
- Take exit toward CA-70 North (0.7 miles)
- Continue onto CA-70 N (21.7 miles)

End: 13910 CA-70, Oroville, California, 95965

Emergency Contact Sheet

Pend Oreille Subbasin Geographical Respo
BNSF Railway Company

Required Notifications for Oil Spills and Hazardous Substances
BNSF Notification – Resource Operations Center
BNSF Notification – Services Interruption Desk (Notify
Federal Notification – National Response Center (U.S. Spill Reporting)
Federal Notification – USEPA Region 10 Spill Response – Idaho
State Notification – Idaho State Communications Center

BNSF/FEDERAL/STATE/TRIBAL CONTACTS

BNSF HAZMAT/Road & Trainmasters/Environmental	
Director Hazmat, Special Ops – Pat Brady	817-821-1326
Hazmat Manager – Justin Piper	360-550-9872
Mgr. Hazmat Planning – Nic Winslow	406-202-8051
Div. Trainmaster – Rocco Mintini Kootenai River	406-250-1625
Div. Engineer – Keith Morehead	503-550-0232
Roadmaster – Daryl Brain	701-580-2036
Roadmaster – Arne Olson	209-267-6910
Env. Operations – Mike Parrodin	406-295-0460
Env. Remediation – Matt England	206-895-5676
Federal Agencies	
U.S. Forest Service Region 2 – Sandpoint R.D.	209-263-5801
U.S. Forest Service Idaho Panhandle National Forest Headquarters	208-765-7233
U.S. Fish Wildlife Service – Boise, ID	208-378-5240
U.S. Fish Wildlife Service – Spokane	509-891-6839
U.S. Coast Guard - Pacific Strike Team	415-883-3311
U.S. Army Corp Of Engineers – District Office / Albeni Falls Dam	206-764-3590 208-437-3133
State of Idaho	
Idaho Department of Fish and Game	208-769-1414
Idaho Department of Water Resources	406-441-1375
Idaho Bureau of Homeland Security	406-427-0034*
Idaho Department of Environmental Quality	855-847-2777*
State Historic Preservation Office	877-863-4097
Panhandle Health District	208-265-5160
Idaho State Police	208-884-7000*
Idaho DOT – Boise	209-334-8000

TRIBAL/COUNT

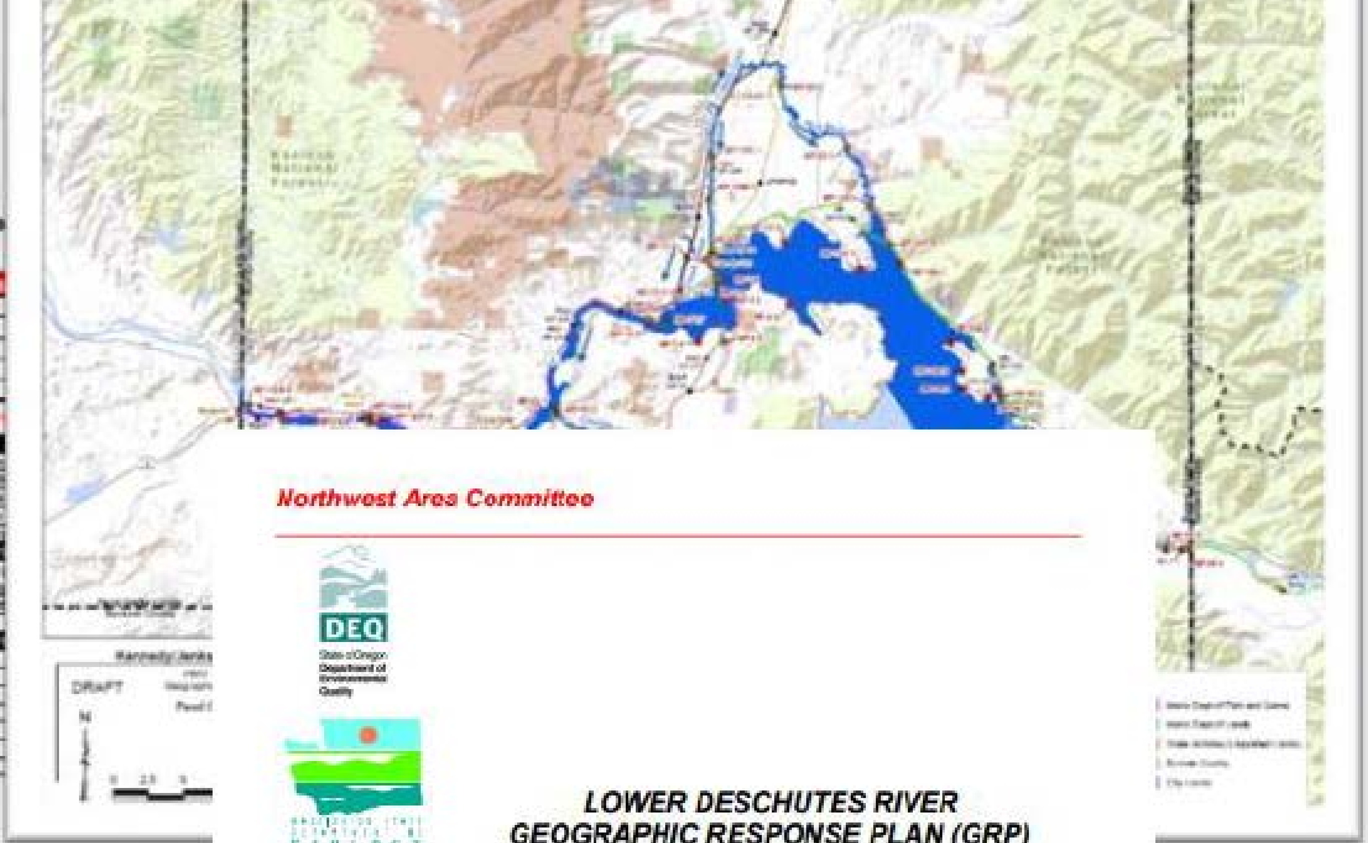
Kalispel Tribe
Tribal Headquarters
Planning & Public
Potable Water Dis
Utilities Supervisor
Tribal Public Safety
Local Government
Bonner County De
Emergency Manag
Bonner County Pu
Bonner County
Local Government
Clark Fork, ID
East Hope, ID
Ponderay, ID
Kootenai, ID
Sandpoint, ID
Dover, ID
Priest River, ID

Miscellaneous Contacts

Medical Centers	
Bonner General Hospital	208-263-1441
Flying Services	
J.C. Helicopter Services	509-447-2800
Carson Helicopters	208-265-9271
Northern Air	208-267-4059
Idaho Helicopter Services	800-984-3301
Granite Aviation	208-263-9102

Utilities	
Dig Line (ID)	800-3
Washington State Spill Reporting (as warranted)	
Washington Emergency Management Division (for spills that may impact Washington state)	800-2
Washing Department of Ecology (for spills that may impact Washington state)	509-3

*Contact numbers staffed 24 hours per day



Northwest Area Committee

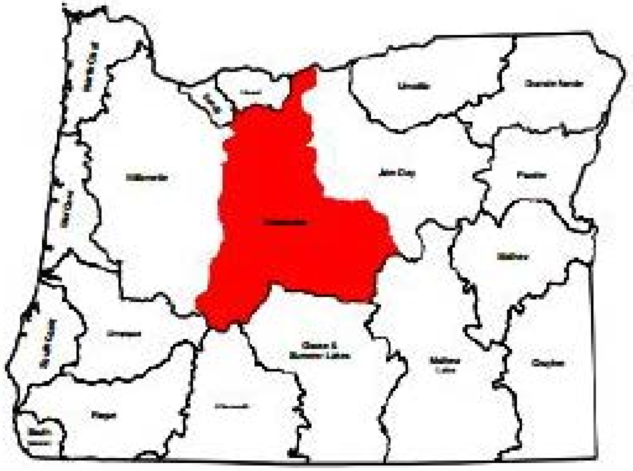
DEQ
State of Oregon Department of Environmental Quality

WASHINGTON STATE DEPARTMENT OF ECOLOGY

State of Idaho Bureau of Hazardous Materials
BHM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

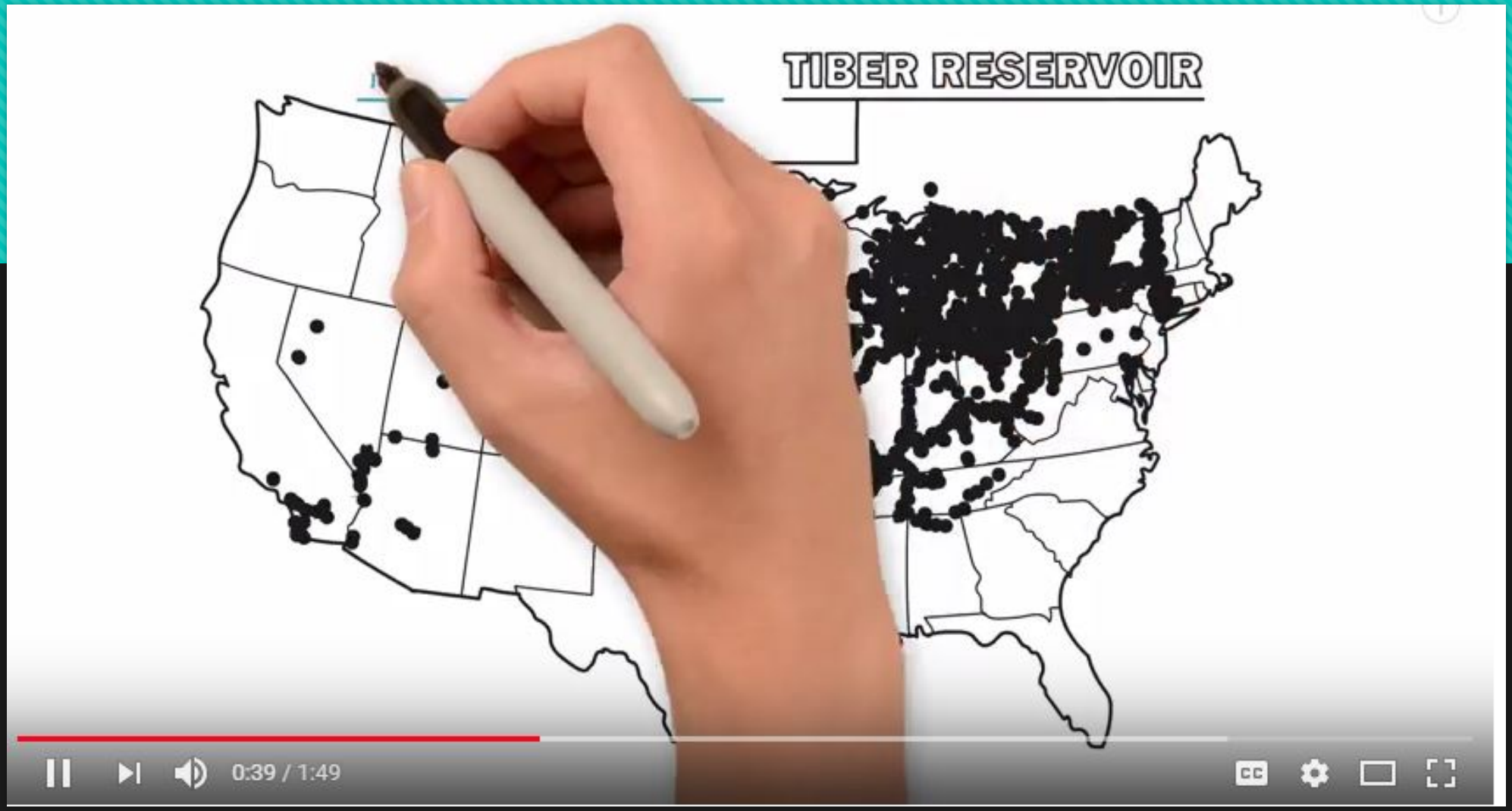
LOWER DESCHUTES RIVER GEOGRAPHIC RESPONSE PLAN (GRP)



Economic Analysis: Estimated Cost of a Mussel Infestation

- Water based recreation/tourism
- Drinking/waste water facilities
- Golf courses
- Fish hatcheries
- Irrigated Agriculture: pumps, pipes, screens, sprinklers
- Hydroelectric facilities

JURISDICTION	ESTIMATED ANNUAL COSTS
USA	~ $3.1 billion/10 years
Columbia River Basin	$500 million
Idaho	$95 million
Alberta	$75 million
Ontario	$75 - $91 million
Montana	**Coming soon!**



Be a Montana Superhero!

Fire Equipment & Seaplanes

- **USFS AIS Prevention Guide (national)**
  - Outlines risk, prevention measures
  - Hot water, dry time or chemical options
- **Northern Rockies Coordinating Group**
  - Federal, state, local partners: ID, MT, ND
  - Augment Guide with mandatory directive
  - HOW TO guide, training video
- **Highest risk equipment:** Heli buckets, foot valves, draft hoses
- **Seaplanes**
  - Existing Best Management Practices
  - Western Committee: Regional approach?
  - Montana approach: work with partners build certification program (Montana Seaplane Association)

Upcoming Events of Interest

- Pacific Northwest Economic Region: JULY 25, 2018 (Spokane)
- Upper Columbia Conservation Commission: SEPTEMBER 26, 2018 (Glacier National Park)
- Western Regional Panel: OCTOBER 23-26, 2018 (Tacoma)
- Western Governors' Association – Montana Workshop: NOVEMBER 14, 2018 (Helena)
- Montana Invasive Species Summit: NOVEMBER 15-16, 2018 (Helena)

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406-542-4282 kate.Wilson@mt.gov

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