

# FWP's AIS Early Detection and Monitoring Program

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CRB Monitoring Forum – Jan 2020



# Risk Assessment

## Habitat Metrics

- Water Temp
- pH
- Hardness
- Calcium
- Conductivity
- Dissolved Oxygen
- Substrate present

## Social Metrics

- Angler days
- Mussel proximity
- Recreational boat use
- Waterbody type
- Watershed position rank



# Results 2019

Waterbodies Surveyed = 291	
Survey Method	Unique Samples
Plankton – Microscopy*	2,290
Plankton – eDNA*	339
Kick net	1,256
Rock pick	677
Visual/hand grab	477
Rake Toss	1,544
Scuba*	7
Snorkel	21
Dredge	204
Artificial substrate*	19
Mussel Detection Dogs	13



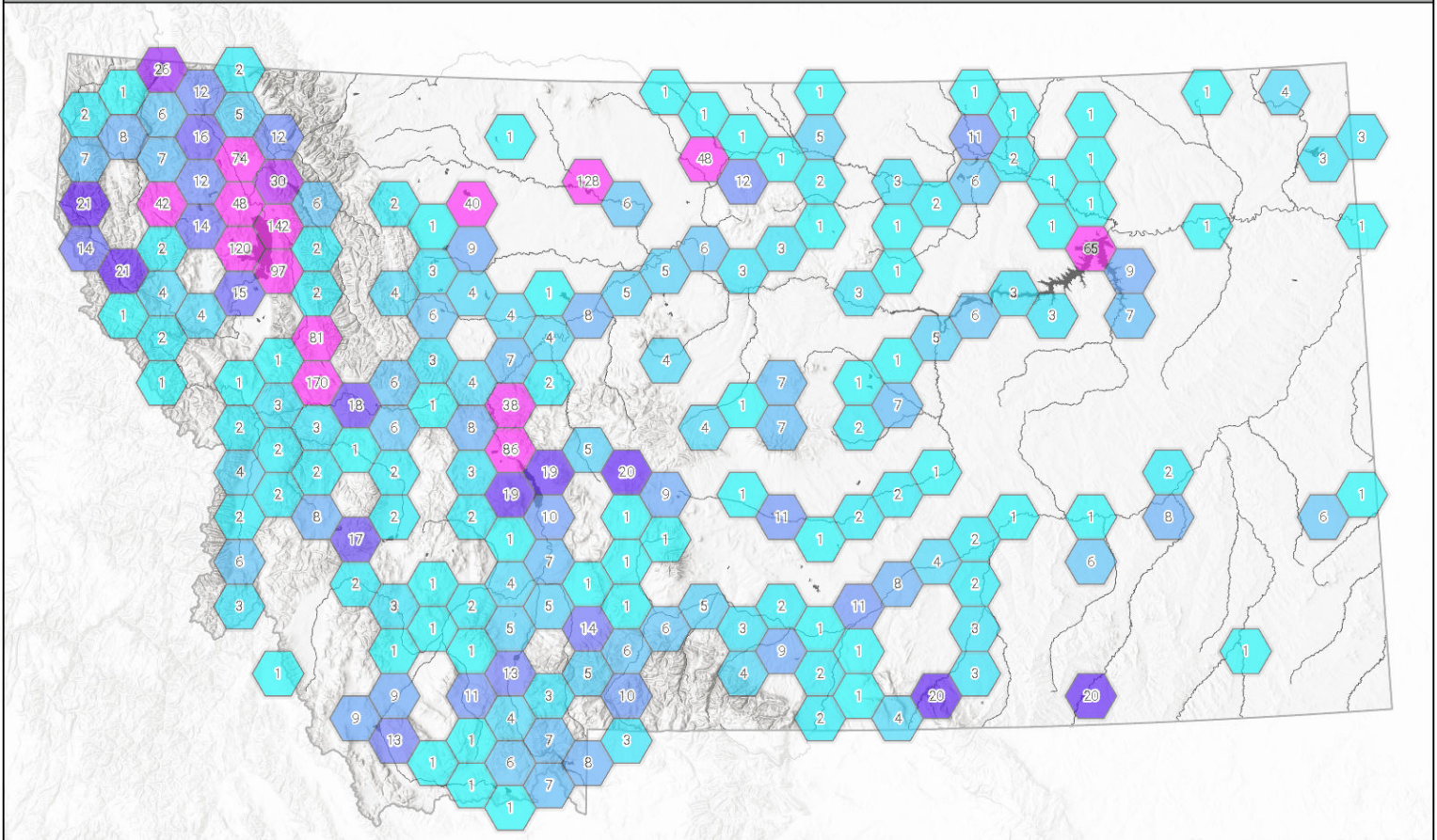
\*Includes FWP's and partners' efforts

# Sampling Location Intensity Map

AIS Surveys

MONTANA FWP

2019 Plankton Net Survey Location



Plankton Net AIS Sample Location Density



Map Produced by FWP AIS Program by RCA 11/29/2019 ISR 47388  
Survey Location date range: 5/8/19 - 10/23/19

0 30 60  
Miles



# New Finds - 2019

- Asian clams
  - *Lake Elmo (1<sup>st</sup> in Montana)*
- New Zealand mudsnails
  - *Bitterroot Fish Hatchery (1<sup>st</sup> West of divide in MT)*
  - *Clark Canyon Reservoir*
  - *Rainbow Dam Reservoir*
- Faucet snail
  - *Browns Lake*
- Curlyleaf pondweed
  - *Bozeman Creek*
  - *USFS ponds outside of Gardner, MT*
  - *Ester Lake*



# Canyon Ferry Results

- 82 Plankton Samples
- 12 Shoreline surveys
- 6 Mussel Detection Dog sites



# Canyon Ferry Delisting Rule Change Timeline

Oct 2016 - Suspect mussel veliger found

2017 - No adults/veligers found

2018 - No adults/veligers found

Oct 2019 – No adults/veligers found

Nov 2019 – Delisting process start

Public Hearing - TODAY

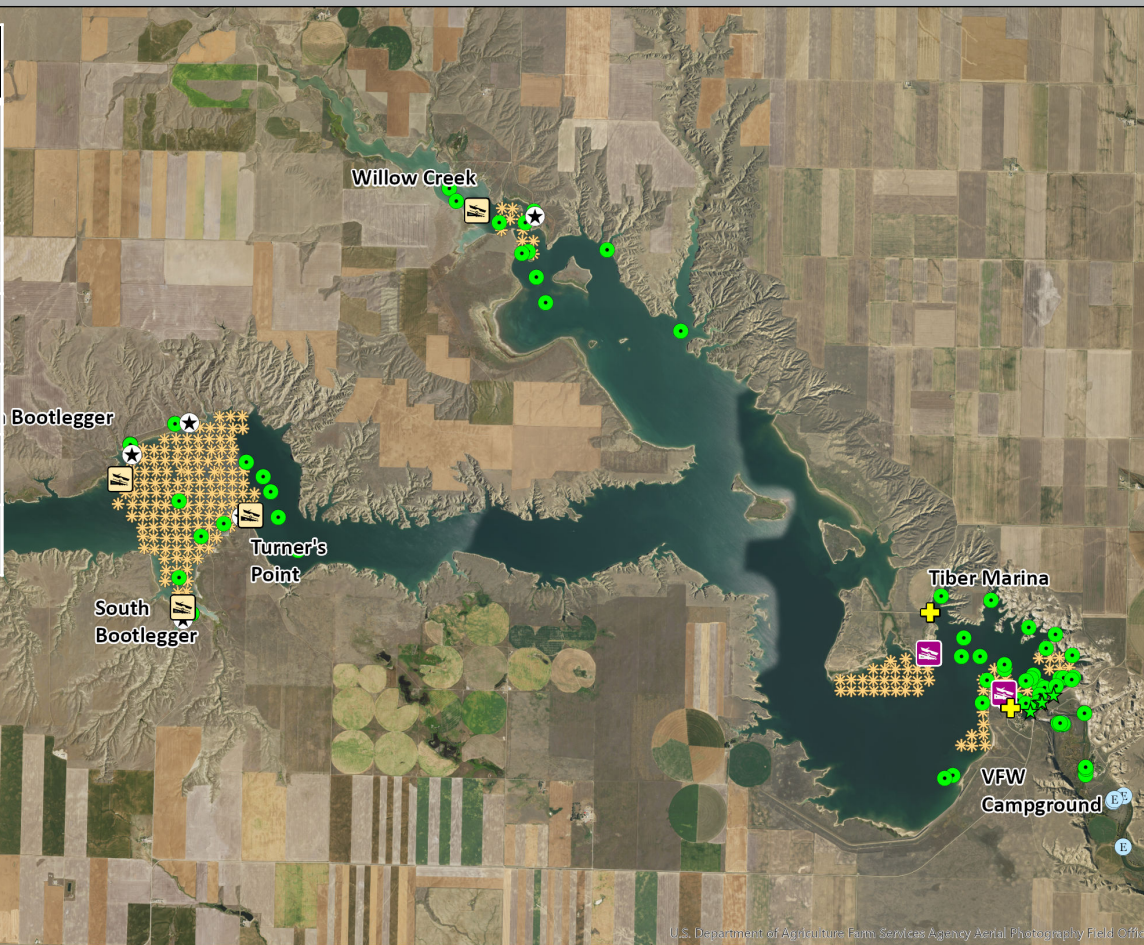
**Feb 2020 – Delist complete**



# Survey Efforts for Dreissenid Mussels in Tiber Reservoir

2019 Results- Dreissenid Mussels NOT Detected in Any Survey

Sampling Method	Sample #
Plankton samples – Microscopy	155
Plankton eDNA samples	37
Shoreline/adult surveys	10
Dredge surveys	204
Scuba Survey	7
Mussel Detection Dog	3



AIS Inspection Station

Access Site - Public Boat Launch

Access Site - Certified Boater Only

**Survey Type**

eDNA Water Sample

Shoreline Survey for Adults

Mussel-sniffing Dog Search

Plankton Net - Microscopy

Scuba

Snorkel

Artificial Substrate

Dredge Substrate Sample

Map Produced by:  
Geographic Data Services - RCA  
CFerry\_Tiber\_DreissenidSurveyLocations2019.aprx  
December 2, 2019

**Area of Interest**

0 0.75 1.5  
Miles

Survey data collected by Montana Fish, Wildlife & Parks, May 20 - October 17, 2019  
Aerial Imagery from USDA Aerial Photography Field Office, 2015

## 2 seasons of sampling to delist - Tiber

# 2020 plans similar to last year

- Use all tools in toolbox



# Contact Us

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