2018 Canyon Ferry Reservoir and Missouri River Fisheries Trends &
Upper Missouri River Reservoirs Fisheries Management Plan Update

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Helena Area Fisheries Biologist
(406) 495-3263
astrainer@mt.gov
2018 Relative Abundance Gillnetting Surveys

Walleye

Yellow Perch

Rainbow Trout
## 2018 Relative Abundance Gillnetting Surveys – 3 Year Average Trends

### Walleye

<table>
<thead>
<tr>
<th>Year</th>
<th>YP per net</th>
<th>Year</th>
<th>WE per net</th>
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### Yellow Perch

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### Canyon Ferry

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<tr>
<th>Target Range</th>
<th>Goal</th>
<th>2018</th>
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<tbody>
<tr>
<td>Walleye</td>
<td>3-6.9/net</td>
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<tr>
<td>Yellow Perch</td>
<td>3-14.9/net</td>
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<tr>
<td>Rainbow Trout</td>
<td>&gt;3/net</td>
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</tbody>
</table>

- **Green** = meets management goals
- **Yellow** = below management goals, within management range
- **Red** = exceeds upper or lower management triggers

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**Goal = 5-6 per net**

**Montana Fish, Wildlife & Parks**
2.7/net in 2019 = Remain Above Upper Trigger

Are small walleye driving anglers away?
Canyon Ferry Reservoir Yellow Perch

**Canyon Ferry Res. - Summer Gillnets**
Yellow Perch - # Sampled, 1955-2018

- **No. Sampled**
- **Year**

1955: 50 daily and no possession
1958: 15 daily and in possession
1960: 10 daily and in possession
1964: 2613
1967: 1541
1968: 238
1969: 27
1972: 153
1975: 0
1978: 500
1981: 1000
1984: 1500
1987: 2000
1990: 2500
1993: 3000
1996: 1541
1999: 2000
2002: 238
2005: 0
2008: 27
2011: 0
2014: 0
2017: 153
2018: 0

**Are small daily and possession limits driving anglers away?**
Canyon Ferry Reservoir Rainbow Trout

CFR Fall Rainbow Relative Abundance

5.4 per net in 2019 = Above lower trigger

Are current RB densities driving anglers away?
AIS (Mussel) Update
Canyon Ferry Reservoir

• 3rd Year
• Certified Boater Program

AIS issue keeping anglers away?
Angling Pressure
Upper Missouri River Reservoirs Fisheries Management Plan - #2 All-time

Angler Days
License Year
1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017
CFR  Hauser  Holter  HA Tailrace  Toston-CFR  HA to CFR  L. Helena

+300K
# Report Card

Upper Missouri River Reservoirs Fisheries Management Plan

## Walleye

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## Yellow Perch

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= meets management goals  
= below management goals, within management range  
= exceeds upper or lower management triggers
Missouri River – Toston Dam to Canyon Ferry
Walleye Movement Study – 2015-2017

River walleye are adfluvial Canyon Ferry Reservoir walleye

**SEASONAL MOVEMENTS AND ANGLER EXPLOITATION OF AN ADFLUVIAL WALLEYE POPULATION IN THE MISSOURI RIVER, MONTANA**

Adam Jones, Montana Fish, Wildlife & Parks, 930 Corso Avenue West, Helena, MT 59601

**ABSTRACT**
An unassisted introduction of walleye in Canyon Ferry Reservoir (CFR) challenges fisheries managers to evaluate the population’s use of habitat upstream in the Missouri River. Montana Fish, Wildlife & Parks (MFWP) confirmed walleye in the river upstream of CFR in 2007. Angler tag returns indicated walleye were abundant in the river. It was unknown if these were adfluvial walleye originating in CFR, or a discrete fluvial population. Understanding seasonal movements and ecology of walleye in the river will allow managers to effectively monitor and manage these fish.

The objectives of this study were to monitor adfluvial walleye movements to quantify movement and determine if two distinct populations exist, establish spatial and temporal habitat use within the river, and calculate exploitation rates of walleye by anglers in the river. Overall, most radiotagged walleye relocated in the river. However, 88 percent of radio-tagged fish exhibited seasonal adfluvial movements targeting, similar to other methods, that free distant populations. No present. Adfluvial walleyes were concentrated in the lower 64 km of the river during the annual increasing hydrograph, and maximum upstream estuary throughout the summer and fall migrated into CFR by late fall. Radio-tagged walleye only used the river between 17 March and 27 November. We estimated walleye exploitation rates were 31 percent for the CFR-tagged walleye and 17 percent for the river-tagged walleye. Exploitation rates for adfluvial walleyes in this study reflect CFR exploitation rates (18% from 2010-2014) for similar studies. These results suggest that adfluvial Missouri River walleye are successfully abundant and will continue at similar rates in downstream CFR, but no changes to current walleye management strategies are recommended. In addition, routine walleye populations monitoring surveys and a crew survey were warranted to determine if adfluvial CFR walleye population continues to grow and establish.

Key Words: walleye, adfluvial, Missouri River, exploitation, habitat use, radio telemetry, radio tag, anchor tag, reservoir fisheries Montana

**INTRODUCTION**
In 1992, a small population of walleye (sandeellus var.) was discovered in Canyon Ferry Reservoir (CFR) in central Montana. MFWP 1993. Based on back-calculated length at age, walleyes were likely introduced into CFR in the early 1990’s (Takahashi 2002). Given abundant spawning habitat (Gil-Matias 1993), this population was expected to persist. Concern over the new population, and its effect on one of the Missouri River’s top recreational species; Montana (Colby and Hunter 1999) prompted an investigation of the basic biology of this species in the upper Missouri Reservoir system to understand the potential trophic effects and population changes that could occur at the fish community approaches an equilibrium. In addition, an upstream sorting mechanism into the Missouri River was possible since reservoir walleye populations routinely migrate to tributary river spawning locations, typically in early spring (February 1963, Scott and Cribbins 1973, Olson et. al. 1970), and a significant proportion may persist in deep pools throughout the river during.

**Missouri River CPUE (Spring 2015-18)**
Walleye CPUE Trend Downstream of York’s Island FAS

**USGS**
USGS 06054500 Missouri River at Toston MT

**Discharge**, cubic feet per second

**IN**

**HARVEST**

**OUT**

Flow at station affected by ice
Period of approved data
Equipment malfunction
Period of provisional data

© Interim Report, Vol. 14, No. 1-2, October 2018
CFR – Two ‘new’ species in 2018

Golden Shiners (7)

Kokanee (1)
Upper Missouri River and Reservoir Fisheries Management Plan (UMRRFMP) Revision Update:

- Outreach began - in Spring 2017

- FWP Proposed 5 Changes – April 2018
  - Citizen Scoping Committee
  - Open Houses (5)
  - Denied by FWP Commission Oct. 18 “Back to the drawing board”

- On-line survey and Open Houses (3) - Dec. 2018
  - Presented outreach results – Feb. 2019

- Citizens Working Group – Spring 2019
  - Draft Plan Alternatives
  - Public Scoping - Summer 2019
  - Draft 2020-2029 UMRRFMP – Summer/Fall 2019
  - Present Draft Plan to Commission – Oct. 2019
    - Additional Public Comment
  - Present Final Plan to Commission – Dec. 2019

- Process to update the plan will start late 2017
- Unknown recreational impacts from suspect mussel detections