

**Idaho Department of Fish and Game,
October – December, 2001**

Kootenai River Fisheries Recovery Investigations

Quarterly Progress Report and Summary of Activities

Project Personnel:

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Field Work Completed or in Progress and Summary of Results

White Sturgeon

Telemetry was the only ongoing activity for white sturgeon. There are 39 white sturgeon with active transmitters at present. Five of the fish are in the Kootenai River while the remainder are in Kootenay Lake. Of the five white sturgeon in the river, two are males, one is a female, and two are juveniles. The three adults are carrying depth sensitive radio transmitters.

Burbot

Hoop net sampling for burbot began on October 17 in British Columbia and on November 30 in Idaho. Five burbot were captured in British Columbia, and one burbot was captured in Idaho. The burbot in Idaho was captured at rkm 244.6, and had previously been captured twice during February 2001 in the same area. Two blood samples were collected from captured burbot: one from Idaho and one from British Columbia.

Flows were relatively low in the Kootenai River throughout this quarter. The discharge at Libby Dam was 170 m³/s (6,000 cfs) throughout October and most of November. In late November, discharge was increased to 266 m³/s (9,400 cfs). Discharge at Libby Dam was later decreased to 227 m³/s (8,000 cfs) in late December (Figure 1).

Telemetry surveys were conducted in Idaho and British Columbia. Four previously tagged burbot were relocated (#218, 230, 232, and 234), and sonic transmitters were implanted in two burbot (#255 and 258) caught during this field season. Burbot 234 and burbot 232 moved very little over the three-month period. Between September 13 and November 15, burbot 230 moved 12 km upstream to rkm 185.0. This fish moved back and forth between rkm 183.5 and rkm 185.8 throughout the remainder of November and December. Between June 18 and November 15, burbot 218 moved about 25 km upstream to rkm 206.3. Burbot 218 then moved back and forth between rkm 206.3 and 208.8 during the month of December. One of the newly tagged burbot (#258) moved upstream approximately 1.0 km from its release location and stayed there throughout the month of December. The other newly tagged burbot (#255) moved upstream from rkm 151.5 on November 8 to rkm 169.5 by November 28. This fish later moved downstream to rkm 153.2 by December 20. All telemetry contact locations for burbot will be evaluated with daily flow during the next quarter. However, Figure 1 shows an example of flow and movement of burbot 255.

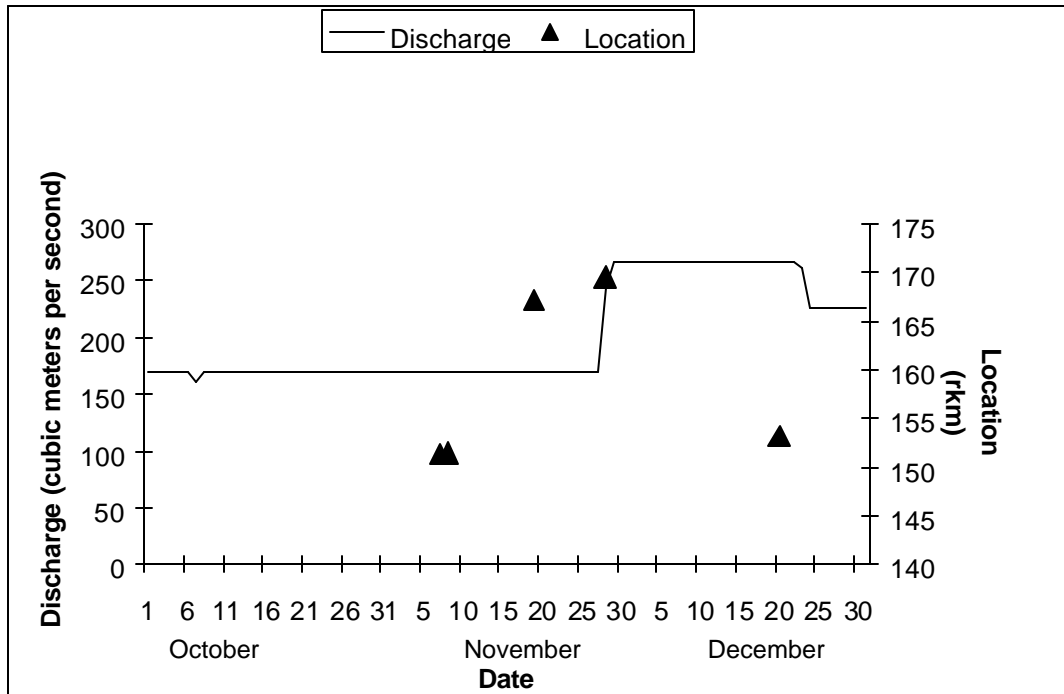


Figure 1. Discharge at Libby Dam (Kootenai River, Montana), and telemetry locations for burbot 255 during October through December, 2001.

Rainbow and Bull Trout

We conducted redd surveys on Boulder, Caribou, Curley, and Snow creeks, and the Moyie River in September and October. Four bull trout redds and two possible bull trout redds were observed in Boulder Creek on October 3. To our knowledge, this is the first time bull trout redds have been documented for the Kootenai drainage in Idaho. No bull trout redds were found in the other streams.

Kokanee redds were observed in Boulder and Curley creeks, and 11 kokanee carcasses were found in the Moyie River. Kokanee redds were difficult to count in Boulder Creek, but we estimate at least nine redds there. In addition, 35 live kokanee and 11 carcasses were counted in Boulder Creek on September 25. Five kokanee and one redd were observed in Curley Creek on September 14.

Radio telemetry continued weekly through October, and approximately every two weeks in November and December. Two bull trout were located in O'Brien Creek, Montana in October. One of these fish remained in O'Brien Creek through

December. No other bull trout ascended Kootenai River tributaries in Idaho or Montana during the spawning season. Two additional bull trout were radio-tagged in December and released near Deep Creek.

The Kootenai River creel survey continued. Angling pressure decreased significantly beginning in October. Only 2 boats were counted in October, but some fishing continued into November with the warm weather. Only one angler was interviewed in December.

Work on the Moyie River spawning channel was postponed until next year. The engineer recommended monitoring water levels in 2002 before beginning construction.

A first draft of the 2000 annual report for rainbow and bull trout work was completed in October and distributed for comments.

Analysis of the summer 2001 drift net sampling was completed this fall. The total rainbow trout summer outmigrant estimate for Boulder, Debt, and Sand creeks and the Moyie River was 6,852. Most of these fish came out of Boulder Creek

(6,520 summer outmigrants). These estimates were extrapolations based on drift net samples collected on randomly selected dates in June, July, and August (Figures 2 and 3). The 2001 year-class in Boulder Creek was almost double the 2000 estimate of 3,343 outmigrants. No outmigrants were

collected from Caboose or Curley Creeks. Although 15 rainbow trout fry were collected from Debt Creek on 7/11/01, these fish could not outmigrate because the stream was running subterranean at the mouth.

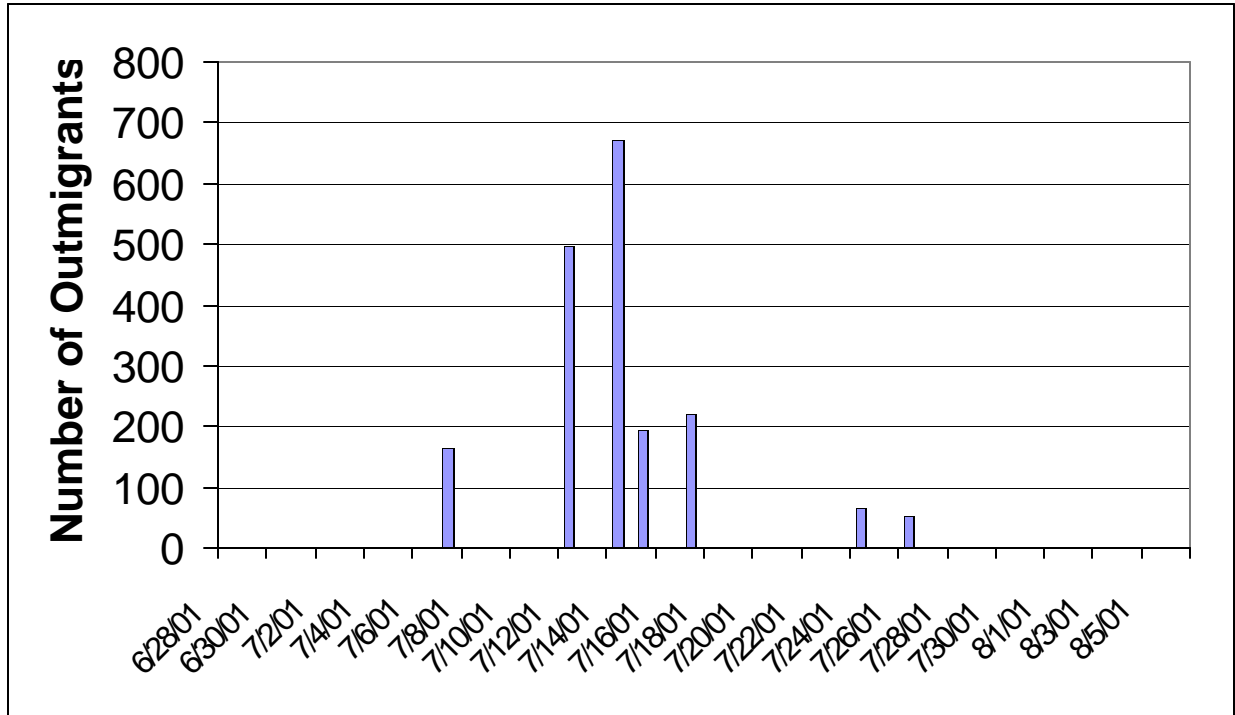


Figure 2. Estimated number of juvenile rainbow trout outmigrants by sample date for Boulder Creek, summer 2001. Sample dates were June 28, July 4, 7, 12, 14, 15, 17, 24, 26, and August 6.

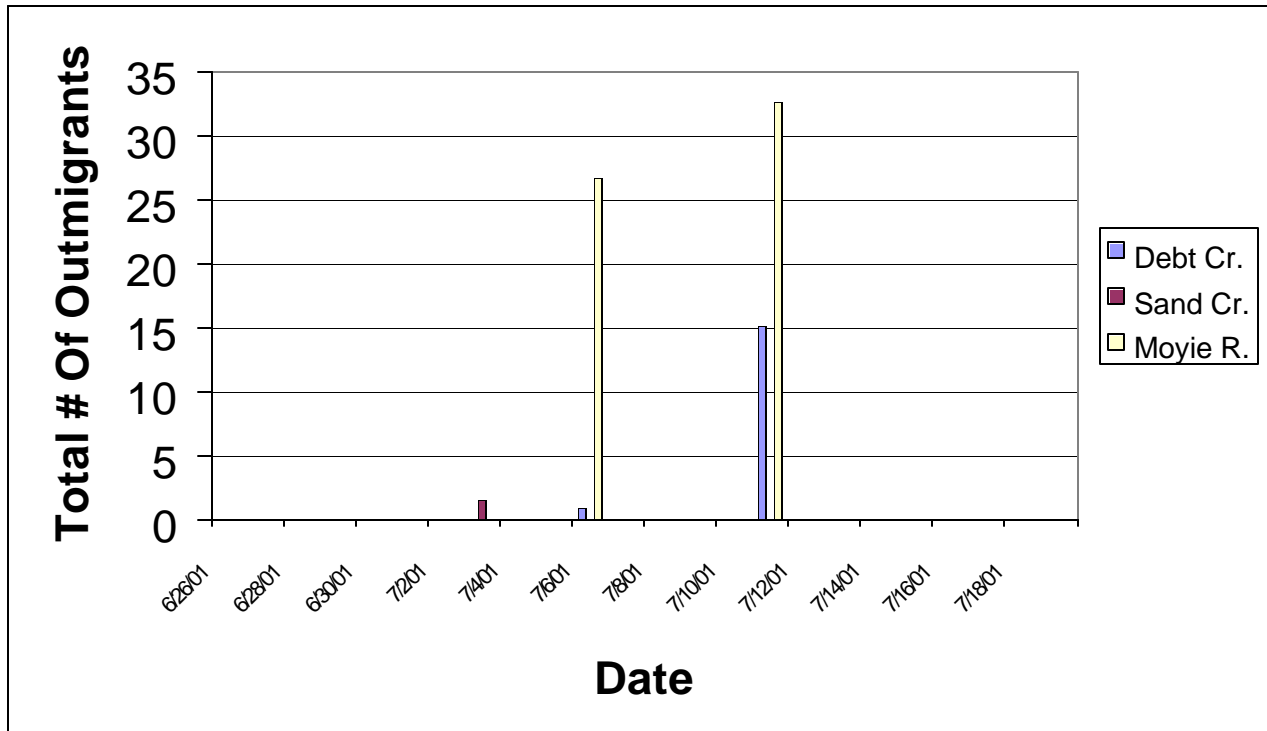


Figure 3. Estimated number of juvenile rainbow trout outmigrants by sample date for Debt and Sand creeks and the Moyie River, summer 2001. Sample dates were June 26, and July 3, 6, 11, 19.

Activities Planned for Next Quarter

White Sturgeon

- Telemetry will be conducted monthly through March. It will be coordinated with trout and burbot studies.
- Fishing for sturgeon with set-lines and rod and reel will begin in March to collect fish for tagging and for the Kootenai Tribe of Idaho Hatchery.

Burbot

- Sonic tagged burbot telemetry will continue through March and will be coordinated with white sturgeon and trout telemetry.
- Burbot sampling with baited hoopnets will continue through March.
- Blood samples will be collected from all burbot to measure plasma steroid concentrations. Blood samples will also be collected from burbot in an unnamed tributary to Columbia Lake, British Columbia. The Columbia Lake samples will be used as a reference to compare with blood samples from Kootenai River burbot.

Rainbow and Bull Trout

- Radio telemetry flights at least once/month or more often if there is fish movement.
- Creel Survey will continue through February.
- Edits to the draft 2000 annual report.

- Analysis of 2001 data and begin writing the 2001 annual report.
- Planning for the 2002 field season.

Meetings Held/Attended and Communication

Jody attended a burbot population modeling workshop in Nelson, British Columbia in December
Jody reviewed a manuscript on the affects of flows on larval redhorse survival, submitted to Transactions of the American Fisheries Society, in November.
Vaughn met with the Boundary Co. Comm. and a Resource Advisory Comm.
Vaughn spoke about white sturgeon to the Kootenai River Trout Anglers in Troy, MT.
Jody and Vaughn submitted abstracts for the Columbia River Ecosystem-Based Management workshop to be held in Spokane April 27-May1, 2002.
Vaughn attended a USACE meeting to discuss VarQ and a NSPA document.

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