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# **BULL TROUT OPERATIONAL PLAN**

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**ROCKY REACH HYDROELECTRIC PROJECT  
FERC Project No. 2145**

**April 10, 2001**



**Public Utility District No. 1 of Chelan County  
Wenatchee, Washington**

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## ***BULL TROUT OPERATIONAL PLAN***

This document is a step-by-step description of procedures that will be used at Rocky Reach and Rock Island dams to trap and tag bull trout during the 2001 Mid-Columbia study. These procedures have been developed to minimize stress on bull trout as well as to minimize adverse effects on other species that use the ladder at each project. In the event we discover that the operation of the trap affects the migration or behavior of anadromous fish, we will cease operation of the trap and identify methods that will minimize effects.

- The traps will operate within a time window beginning in mid-April through early July, or until desired numbers of bull trout are tagged, at both Rocky Reach and Rock Island dams. Most tagging activity and trap operation is expected to occur from late May through June. A detailed description of the tagging schedule is provided in the Bull Trout Study Plan. It is possible that trapping could end earlier if the desired sample size of bull trout is reached before the end of July. The PUD will schedule daily trapping operations. The traps will be manned between 8 am and 5 pm, Monday through Friday, adjusted as needed if bull trout passage occurs outside this time window. The trap will only be operated until the number of bull trout required for the study have been trapped. Hours of operation will be limited to the period of time needed to trap the desired number of bull trout in a day.
- At each project (Rocky Reach and Rock Island) one person located near the viewing window of each ladder will monitor fish passage. These individuals will operate the pneumatic gates (open gate for capture and close gate for passage), which will direct bull trout into the capture facility.
- When a lone bull trout enters the viewing area, the operator will open the pneumatic gate, which will trap the trout as it moves upstream. It is possible that not all bull trout will immediately swim into the trapping facility. In such an event, the operator can activate a system that will release a stream of bubbles downstream of the fish to entice it to move into the capture facility. To avoid potential adverse effects on salmonids immediately downstream of the window, the bubble system will only be used as a last resort. Chelan PUD will consult with NMFS if use of the bubble system appears necessary. The gate will remain open until the target fish enters the trapping facility or for a maximum of three minutes, after which it should be closed and fish allowed to pass. .
- If other non-target species (e.g., salmon or steelhead) enter the viewing area before the bull trout enters the trap, the operator will close the pneumatic gate allowing both the bull trout and non-target species to pass through the ladder exit.
- The operation is designed to capture only bull trout and therefore we expect no incidental catches. However, in the unlikely event that a non-target species is captured, the operator will open the gate to allow the fish to swim out of the trap. If the fish does not swim out

of the trap, the operator will close the gate to prevent trapping of additional fish and remove the upstream pickets of the capture area, allowing the non-target species to exit the trap. If any listed chinook or steelhead are trapped, operations should be discontinued immediately and consultation initiated with NMFS.

- Once a lone bull trout is trapped, no additional trapping of bull trout will take place until that fish is processed and released (at no time will more than one bull trout be captured at the same time).
- An activity log of all trap operations will be kept during the study. The log will include time of day and total time the trap was open, whether or not any anadromous salmonids were caught, whether they left the trap through the upstream leads or back out the entrance, and whether they continued upstream or moved back down through the ladder. A record of the time required for anadromous salmonids to enter the counting window following activation of the trap will also be kept.
- After capturing a bull trout, the trap operator will immediately contact the tagging crew responsible for tagging bull trout, who will arrive on site as soon as possible. Several tagging crews are available to tag bull trout; therefore, the period of time between capture and tagging will be minimized.
- Two tagging specialists will process trout, one surgically implants tags while the other records data, controls anesthetic water, and monitors fish condition. At Rocky Reach and Rock Island, the tagging operation will be done outside the fishway. We have designed the study so that no more than two bull trout will be captured on a given day and this would occur rarely.
- Bull trout captured at the Rocky Reach, Rock Island and Wells dams will remain in their respective traps until all personnel, tagging stations, tags and release vehicles are present and have been prepared. That is, all surgical equipment will be sterilized and prepared before anesthetic is administered to bull trout. Buffered solutions of MS222 anesthetic will be prepared and ready for use when the bull trout are removed from the trap. Radio tags will be tested to confirm tag operation and channel code combination. Release vehicles (boats and trucks), containers, and personnel will be ready prior to tag implantation to reduce holding and travel time associated with fish release.
- The capture vessel holding the bull trout will be raised slowly to a level that allows water to drain from the upper six inches of the tank. A net will be draped over the tank to prevent the fish from jumping out. At the same time, the tagging crew will add the predetermined amount of MS-222 solution to the vessel. To ensure that none of the MS-222 solution enters the ladder, the tagging crew will add the MS-222 only when the top of the capture tank is flush with the wooden floor. If any solution splashes out of the tank, it will be immediately wiped off the wooden floor with dry towels.

- While the fish succumbs to the MS-222, the tagging crew will slowly raise the capture vessel clear of the picketed enclosure and carefully move it to the surgical station.
- Once fully anesthetized, the tagging crew will gently remove the bull trout from the capture tank and place the fish on the surgical table where water containing MS-222 will be flushed across the gills of the fish. At Rocky Reach the anesthetized bull trout will be placed in a recovery tank and transported to the off-ladder tagging site.
- A trained biologist will surgically implant the radio-transmitter into the anesthetized trout following procedures described in the Bull Trout Study Plan.
- Once surgery is complete, the tagging crew will carefully transfer the trout to the recovery tank. Transportation and release of the recovered trout will follow procedures described in the Bull Trout Study Plan.
- After the bull trout is released, the tagging crew will drain all anesthetic water from the capture vessel, and rinse the vessel with freshwater. Both the anesthetic and rinse water will be disposed of on the ground away from the river. The capture tank will then be placed back into the trap facility so that trapping can resume. All surgical equipment will be sterilized and made ready for the next operation.