Assessment of Cabinet Gorge Fish Hatchery Ladder as a Bull Trout Passage Facility [AFS]

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Cabinet Gorge Dam was built in 1952 on the Clark Fork River, approximately 10 miles upstream of Lake Pend Oreille. No fish passage facilities were included in the dam design. It is surmised that the lack of upstream fish passage at this dam has had a detrimental effect on migratory fishes living in the Clark Fork River and Lake Pend Oreille system. In February 2000, Avista was issued a new operating license for Cabinet Gorge Dam by the Federal Energy Regulatory Commission (FERC). The FERC license requires that Avista improve the long term viability of native fish populations through improved fish movements and genetic exchange among native salmonid subpopulations. The Cabinet Gorge Fish Hatchery is located on the banks of the Clark Fork River downstream of Cabinet Gorge Dam. Part of the hatchery facilities include a fish ladder that is designed to collect kokanee returning to spawn; however it was discovered that bull trout also entered the ladder. The goal of this research has been 1) to determine the suitability of the Cabinet Gorge Fish Hatchery ladder and trap as a component of the long-term trap and truck program for fish passage at Cabinet Gorge Dam, and 2) to further our knowledge of bull trout behavior and movement patterns so that long-term fish passage solutions can be developed. Some bull

trout enter the Clark Fork River from Lake Pend Oreille as early as January, although most do not move into the river until at least April. However, these fish do not enter the ladder until August, with the bulk of the run occurring in September. The presence of cold water springs along the river near the hatchery may make summer residence in the river possible in spite of apparently unsuitable water temperatures elsewhere in the river. Thus, it appears that it is the urge to spawn that prompts bull trout to enter the ladder, not a search for cold water. Although the ladder is an effective device for collecting bull trout in this system, the timing of the run may make the ladder unsuitable as a tool for providing fish transport. Bull trout entering the ladder in September and then transported past the dam may not have enough time to find their way to spawning areas in tributaries upstream. Further research needs to be done to find a method to safely collect bull trout for transport earlier in the season.