

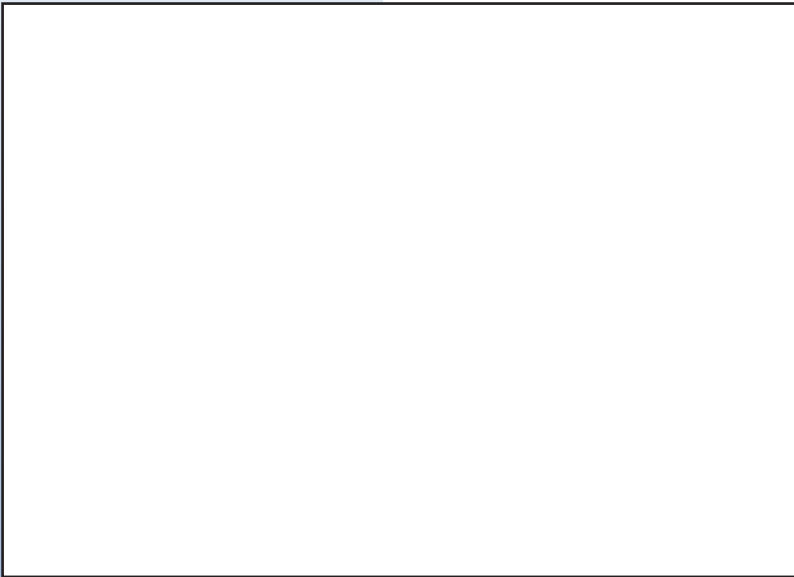


Information Bulletin

# Dina Creek Enhancement Project

PEACE/WILLISTON FISH & WILDLIFE COMPENSATION PROGRAM

***Objective:*** To create spawning habitat for rainbow and brook trout in Dina Lakes No. 1 and 2. The Dina Lakes system is the subject of long-term enhancement project.



▲ This Mackenzie resident places a boulder in the spawning bed at Dina Creek. The use of rocks and boulders increases the spawning potential by varying the currents and providing visual separation for spawning fish.

**W**hen biologists conduct long-term enhancement projects, it sometimes takes years before they can be certain of the results. In the case of Dina Creek, thousands of spawning trout are all the evidence they need.

Dina Creek is located within the Dina Lakes chain, about 30 kilometres north of Mackenzie. The project was initiated in 1991 when a stock assessment survey of Dina Lakes Nos. 1 and 2 identified a lack of

spawning habitat for the lake population. These lakes are annually stocked with juvenile rainbow and brook trout by B.C. Environment and the mature fish were in need of a place to spawn.

“The fish require specific conditions before spawning is successful. The spawning gravel must be clean—if it is covered by sand or silt, the eggs will be deprived of oxygen and will suffocate,” said fisheries biologist Arne Langston. “The depth of the creek is also important. Rainbow and brook trout require a minimum depth of 15 centimetres with a water velocity ranging from 30 to 80 centimetres per second.”

The only potential spawning habitat was Dina Creek, which flows from Dina Lake No. 2 into Dina Lake No. 1. Otherwise, the lake system was “closed” as there are no other inlet or outlet streams. The 1991 survey showed that Dina Creek was blocked by several beaver dams and it was too shallow for larger fish to swim upstream. Program biologists recognized

a fisheries enhancement potential in Dina Creek, which could be altered to allow the natural reproduction of fish and eliminate their spawn-bound condition.

Program biologists initiated the stream enhancement project in 1992. They began by breaching the five beaver dams that prevented fish from entering the creek from Dina Lake No. 1. To reduce competition for the limited spawning grounds, they used lumber and existing timber to construct a coarse fish barrier. The barrier is low enough for the trout to jump, but prevents long-nosed suckers-who can successfully spawn in the lake - from entering the spawning stream.

Once access was created, the biologists and members of the Mackenzie Fish and Game Association set about improving the existing spawning habitat. Using a high-powered fire pump and hose, they cleaned the silt and sand from the creek bed and spread brush and debris across the creek to protect the fish from predators.

To maximize the spawning potential, fisheries biologists

conducted instream habitat completing. They began by rechanneling the creek to consolidate the flow of water. Large rock material called 'rip-rap' was used to stabilize the stream banks and help prevent silt from eroding into the spawning area. Logs and rocks were strategically placed to create a series of spawning beds and holding pools along the length of the creek.

Next, a series of small rock weirs was constructed along the creek. The weirs create small waterfalls and promote larger and deeper pools for the trout to use as they make their way up the creek to spawn. Finally, eight truckloads of clean spawning gravel was placed in the creek to create optimal spawning conditions.

Soon after the habitat enhancement was complete, the biologists saw evidence of their success. "About 1,000 rainbow trout entered the stream to spawn in the spring," said Langston. "In addition, we have a building brook trout population returning in the fall to spawn."

In order to increase public awareness of the fish and wildlife values and encourage visitors to the site, a trail and viewing areas were constructed along the edge of the creek in 1993. The best time to watch the fish spawn at Dina Creek is the first week of June (rainbow trout) and the first week of September (brook trout). Detailed signs at the site explain the history and progress of the enhancement and identify nearby recreation are trails.

Program biologists and Mackenzie Fish and Game Association volunteers return to the creek regularly to ensure that the enhancement devices are functioning properly.

As with other fisheries projects at Dina Lakes, local interest in the Dina Creek enhancement remains high. Approximately 250 Mackenzie school students visited the creek during a field day in 1996 where they were given a tour by biologists. Similar numbers are expected in future years.

This project was completed by the Peace/Williston Fish and Wildlife Compensation Program and the Mackenzie Fish and Game Association, with additional funding from the Public Conservation Assistance Fund.

The Peace/Williston Fish and Wildlife Compensation Program is a joint B.C.Hydro and B.C. Environment initiative to enhance and protect fish and wildlife within the Williston and Dinosaur watersheds in northeastern British Columbia.

For more information, please contact:

Fish Biologist  
Peace/Williston Fish & Wildlife Compensation Program  
1011 Fourth Avenue  
Prince George, B.C. V2L 3H9  
Phone: 250-565-6135  
Fax: 250-565-6629