

Duke Power Nantahala Area Hydro Relicensing West Fork Hydro Project Trash Removal Study Report

Introduction

During March of 2000, Duke Power Nantahala Area (DPNA) filed a notice of intent to relicense the West Fork Hydroelectric Project. DPNA was requested to implement a trash and debris management plan at the Tuckasegee Development portion of the West Fork Project during the initial scoping process. In response to this request, DPNA formed a Technical Leadership Team (TLT) to develop an appropriate response.

Background

Trash and debris is common in and near all streams in the Nantahala Area and visual observation indicates that the trash/debris loading in the area of this hydro project is not substantially greater than it is at other large streams in this region. Some of this debris, that which is organic and biodegradable, is an important component of stream ecosystems. Other trash, mostly man-made and non-biodegradable, is better removed and disposed of properly. This trash and debris collects on the intake racks and reduces water flow into the turbine at these plants. Over time, some of this debris builds up in front of the intake racks, reducing intake area and causing increased pressures on the racks.

In addition, only a small portion of the total trash in the river is deposited on the intake racks. Most trash is moved down the river during high streamflow events. During these events, the tainter gates are opened at the station to help stabilize reservoir levels. Since river currents are greater near the open tainter gates, most of the trash and debris goes through the tainter gate openings and down the river. Much of this trash is deposited on the riverbanks as flow in the streams subsides.

Objectives

The primary objective of the trash removal study plan was to determine a safe, cost effective, environmentally sound means of removing and disposing of debris that collects

on the intake racks. In addition DPNA agreed to consider ways to become an active partner in organized large scale trash and debris management efforts.

DPNA Trash Removal Program

DPNA will initiate the following actions to improve trash removal and to help ensure a cleaner environment:

- (1) Suitable collection containers will be placed at the project near the intake racks. On days designated for trash collection, operators will separate the non-biodegradable from the biodegradable. Biodegradable debris will be passed downstream. Non-biodegradable trash will be placed in the collection container. A log sheet recording the results of this operation will be kept at each plant. When the collection container becomes full, the operator will dispose of the trash at an appropriate landfill. Date of disposal and the approximate amount of trash will be recorded in the log for the station. The trash removal program described in this section was implemented on March 31, 2001 at the Tuckasegee Development.
- (2) There are several groups and organizations that are involved in river clean up projects in the Nantahala Area. DPNA will actively support and participate in such river clean up efforts by helping sponsor and/or promote these projects. DPNA will also help increase public awareness on the benefits of clean rivers, streams, and reservoirs by working with state and local groups like the public schools. In alignment with this program, DPNA will sponsor and help promote the National River Clean-up Day in May, 2002.
- (3) Duke Power already helps promote an annual reservoir cleanup effort, Big Sweep, on other hydro project reservoirs. This same effort will be expanded onto the Nantahala Area reservoirs and accordingly DPNA will sponsor and help promote "Big Sweep" on Nantahala Area reservoirs in September, 2002.