Project: Libby Dam Total Dissolved Gas Exchange Study

PI: Mike Schneider

Branch/Group: Inland Hydraulic Structures Branch, Environmental Hydraulics Group

Project Description/Activities/Capabilities:

The purpose of this field study was to define and quantify processes that contributed to dissolved gas transfer during spill releases at Libby Dam. In general, the transfer of dissolved gas is a function of the unit spillway discharge, spill pattern, spillway geometry, stilling basin and tailwater depth and flow conditions, forebay TDG concentration, project head differential, and water temperature. This study focused on resolving questions regarding accurate source and sink descriptions of mass conservation of dissolved gases in the Kootenai River below the dam.

Sponsor: Seattle District, POC Kent Easthouse

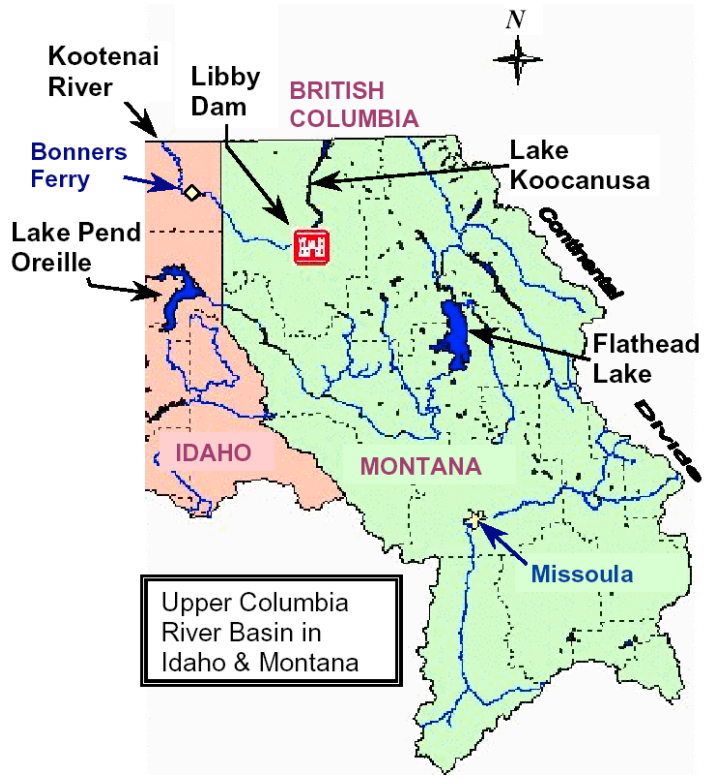
Personnel: Mike Schneider (CHL), Calvin Buie (CHL), Laurin Yates (CHL), Joe Carroll (EL), Carolyn Schneider (EL), and Kathryn Barko (Dyntel Corp.)

Project Location and Description:

Libby Dam is located on the Kootenai River at river mile (RM) 221.9 in Montana. The length of the dam crest is 3,055 ft with a width at crest of 54 ft and a t the base of 310 ft. The dam has 2 spillways with a capacity of 150,000. There are 5 Francis turbines generating 120,000 kw each.

Facilities: Field Study

Related Topic Areas: Hydrualic Structures, Environmental Studies, Spillway Flow Deflectors, Total Dissolved Gas, Hydropower, reservoir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Kootenai River
Libby Dam
BRITISH COLUMBIA
Bonners Ferry
Lake Koocanusa
Lake Pend Oreille
Continental
Flathead Lake
Divide
IDAHO
MONTANA
Missoula
Upper Columbia River Basin in Idaho & Montana