

MYSTIC MEETING SUMMARY FISHERIES AND AQUATIC HABITATS

**OCTOBER 21, 2003
BILLINGS SHERATON HOTEL**

The purpose of today's public meeting was to openly discuss 1) resource goals for the Mystic Project area, 2) possible resource impact study needs, 3) anticipated Project impacts to resources, 4) anticipated PM&E for Mystic Project resources and 5) determine a next meeting date and agenda for the group. The discussions presented below are a work in progress and do not reflect formal decisions made by PPLM or any agency or public group.

Technical Group in Attendance:

John Gangemi American Whitewater Association, Bigfork
Tim Schulz PPL Montana, Butte
Jim Darling FWP, Billings
Mark Wilson USFWS, Helena
Jim Olsen FWP, Billings
Scot Shuler USFS, Livingston
Ginger Gillin GEI Consultants, Inc.
Brent Mabbott PPL Montana, Butte

Recent and on-going research:

The group discussed some of the work that's been done and being done, including:

DNA work on fish from Mystic, Island and Silver Lakes and that some or most of this data has been misplaced. Discussion on not using U of M for this work because of misplaced or lost data.

Fish population work in Mystic Lake, including; a hook and line mark and recapture effort, gill netting efforts, stomach samples, scale and weight collections for aging and condition work; and, sonar work to attempt a population estimate

Using Rosgen techniques to evaluate 2 sections of the bypass and 1 section of the stream below the powerhouse

Jim Olsen and Brent Mabbott, last week, tested the bypass section for potential future use of electrofishing as a sampling method. The test indicated that electrofishing is an option for fish sampling.

FWP is currently sampling (gillnets) both Emerald and W. Rosebud lakes every two years. They have also established an electrofishing section in W. Rosebud Creek below the Pine Grove Campground.

Potential concerns for aquatic resources:

After some discussion on the relicensing issues at the Mystic facility, group decided to divide the issues into three areas; 1. Mystic Lake and upstream, 2. The bypass section, and, 3. From the powerhouse downstream. The group was also reminded that additional issues can be added to those discussed today.

Issues noted for Mystic Lake and above

- Entrainment, screening of outlet, FERC requirements and structures present
- Fish population – effects of reservoir operations
 - on spawning and recruitment
 - growth and survival
 - angling success
- DNA in fish of Mystic, Island, Silver lakes – where do pure Ct occur
 - Barriers...where or do they exist in upper system
- July 10th fill date...necessity?

Issues in the Bypass

- Is recruitment an issue?
- Spawning habitat availability
- Fishing access to most of this area is difficult
- Minimum instream flow
 - scientific validity of old study?
 - timing of higher flows may not be best for rainbow spawning
 - is current minimum flow adequate?
 - does flow meet current beneficial use standards?
- Value of recreational fishery
- Do not enhance brown trout, encourage rainbow
- Monitoring

Issues below the powerhouse

- Impact of rereg dam on fish passage/spawning migrations
- Temps and flows below the rereg
 - monitor temps to understand impacts of system
 - flows are currently monitored below the rereg dam
 - need to understand flows to understand potential impacts on downstream spawning/eggs in redds...Brown trout in fall and winter...excellent spawning habitat below Pine Grove campground
- monitoring of fish populations of West Rosebud Lake and Emerald Lake is done by FWP on a regular basis. FWP also monitors West Rosebud Creek periodically
- define extent of impact
 - impacts on brown trout spawning
 - potential impacts to riparian zone below rereg
- effectiveness of rereg

- are the current annual flows allowing for channel maintenance flows?
- flows and effects on non-game species

Overall goals identified by the fisheries resource group include:

At a minimum, bypass reach must have enough flow to protect beneficial uses.

In the bypass, protect rainbow trout but do not enhance brown trout.

In the lower system (below the powerhouse), protect all fishes

Maintain and enhance existing fishery and aquatic habitat by minimizing effects of the dams and reservoir.

Possible aquatic resource studies include the following:

Mystic Lake

- Expand DNA information...barriers...impact or potential impact of introduced rainbow into Mystic Lake
- Summarize entrainment information
 - Trash rack spacing
 - flows through outlet and ramping rates
 - finalize fish aging, condition info, stomachs
- complete fish population estimate...sonar data
- July 10th...modeling date...flow information July 10th was established due to a boating club that once occupied Mystic Lake

Bypass section

- I.D. of recreation values
 - review existing 2001 study
- Recruitment...is it limiting or limitations
 - E-fishing...age/population dynamics and numbers/spawning timing...areas
- Instream flow
 - determination...need for change?...sufficient for spring spawning?
 - model the bypass flow...changes...what should it be?
- qualitative evaluation of access...observe and note
- evaluate characteristics of habitat
 - spawning habitat availability...dynamics of habitat in bypass
- video of bypass...slow motion

Below Powerhouse

- Quantify spawning habitat
 - transects...what flows are needed to protect fall spawning fish and redds
- peak spring flows...timing and amount...has it changed from the natural hydrograph?
- Temperature monitoring...effects of operations
 - above powerhouse
 - below powerhouse
 - below W. Rosebud Lake
 - last campground
- fish passage at rereg structure....benefit or not?

Future monitoring.

Need to develop a collaborative effort to collect this data?

Mystic Lake monitoring at 2-3 year intervals

- pop estimates/sonar(?)
- aging/condition/stomach analysis

Bypass monitoring at 2-3 year intervals

- Fish pop dynamics
 - E fishing-pop numbers
 - Age/condition

Lower – Below powerhouse

- Continue monitoring lakes at 2-year intervals
 - Fish pop dynamics
 - Netting two lakes
 - Age/condition
- Monitoring of stream?

Semi-annual meeting to review data collected and review proposed studies