MYSTIC LAKE PROJECT

Recreation, Land Use and Aesthetics Resource Group
Final Meeting Summary

June 20, 2007

Note from Jon Jourdonnais: The summary discussions presented below are a work in progress and do not reflect formal decisions made by PPLM or any agency or public group.

Participants:

PPL Montana – Jon Jourdonnais
PPL Montana – Lance Elias
PPL Montana – Ryan Olson
American Lands – Nancy Johnson
MFWP – Jim Darling
USFS – Jeff Gildehaus
MDEQ – Chris Levine
Beartooth Paddlers – Ian McIntosh
Beartooth Paddlers – Ron Lodders
American Whitewater – Kevin Colburn

Nancy Johnson facilitated the on-site meeting at the West Rosebud Lake dam. The purpose of the meeting was to review measures being implemented by PPL Montana in 2007 to develop the Mystic whitewater flow plan, and to obtain feedback from agencies and whitewater stakeholder groups on the measures. These measures include increasing the elevation of West Rosebud Lake by 1 to 1.5 feet to facilitate a whitewater release and changing operation of the gate at the dam at West Rosebud Lake during a whitewater release. Other agenda items were a review of predicted runoff for this year, and selection of a summer weekend to implement augmentation of flow in West Rosebud Creek for whitewater resources.

Participants discussed the following items.

Ron Lodders noted that 2.0 as measured on the Pine Grove staff gage was a desired minimum boatable flow for paddlers, and that flow targets determined through the whitewater study in 2004 and 2005 would likely need to be revised higher using information from the new gage. Nancy suggested that with the new USGS gage operable at the Emerald Lake campground, it would be good to collect a summer's worth of data and compare the flow measurements to those measured on the staff gage. Flow measurements for the upper USGS gage located below the powerhouse could also be collected and used for comparison.

The group reviewed operation logistics for the flow release. Jon noted that the elevation of West Rosebud Lake had been increased 1.5 feet this spring to provide additional volume for a whitewater release. Jon stated that flow through the powerhouse varies between 20 and 170 cfs, and that peak generation with 170 cfs could be provided during a whitewater release. Ryan Olson, dam foreman at the Mystic Project, showed the group how the gate at the re-regulation dam would be operated to provide an additional 93 cfs in flow. While typical outflow through this gate is between 10 and 13 cfs, the gate can be opened to provide about 93 additional cfs in flow. Jon reviewed a target release of an additional 300 cfs, using the maximum output through the

powerhouse (170 cfs) plus an additional 97 cfs through the gate and 10 cfs through the bypass reach. Some in the group noted that tributary inflow and groundwater contribute also to flow in West Rosebud Creek.

Kevin Colburn stated that PPLM should record the change in lake elevation this summer if any boards were pulled from the West Rosebud dam. Ryan Olson, dam foreman, told the group that lake elevation is tracked for any boards pulled from the bays at the West Rosebud dam. He also noted that from past records, a 1-foot drop in lake elevation would likely occur during a 4-hour release of water. Ryan noted that if boards were pulled, a second day with a whitewater release would require replacing boards to allow for refill of the lake.

Kevin Colburn stated that it would be important to identify any triggers for augmentation of flow in West Rosebud Creek.

Agencies commented on potential effects that could occur with an increase in lake elevation or a whitewater release. Jeff Gildehaus questioned whether the increase in lake elevation, with water pooled on both sides of the West Rosebud road at the southwest corner of the lake, would increase infiltration of water into the base of the road. Ryan noted that there was a culvert under the road for passage of water.

Chris Levine noted that a whitewater release in late July could affect fry and spawning. Jim Darling raised the following concerns for any whitewater release:

- Change from the 'traditional' hydrograph for West Rosebud Creek
- Extended flow manipulation
- The dam and lake at West Rosebud not functioning for re-regulation of creek flows
- Putting fishery and aquatic habitat at risk
- Increasing erosion and sedimentation
- Increasing insect and fry drift
- Stranding in side channels following a whitewater release
- Effects on riparian areas and bank stability
- Effects on bank fishability

Monitoring and study needs could include:

- Comparing the proposed and traditional hydrographs
- Measuring change in stage height at key locations below the West Rosebud Lake dam
- Taking habitat inventories before and after a whitewater release
- Measuring insect and fry drift before, during and after a whitewater release
- Sampling key side channels before, during and after a whitewater release

Kevin Colburn agreed to provide information on other hydro projects where whitewater flows have been provided by licensees.

Jim Darling noted two different approaches to any manipulation of flows for whitewater resources: manipulation on the ascending or descending curve of the hydrograph, or more substantial flow augmentation and manipulation later in the season. Chris Levine noted that downstream irrigators would need information on any planned flow change, since this could affect operation of irrigation gates or ditches.

Lance Elias told the group that creek flow could be expected to decrease quickly this year, with spill at Mystic Lake coming earlier than usual and minimal snow pack to support continued runoff. He suggested that a whitewater release should be attempted in July rather than in August. The group agreed that July 14 and 15 would be the target weekend for augmentation of creek flow for whitewater resources. The increase in flow up to 300 cfs would be planned for 12 noon to 4 PM on Saturday, and earlier on Sunday if possible.

Ron Lodders noted that following years of tracking boatable flows in West Rosebud Creek, he believed that during the period following the descending hydrograph, a small augmentation of 50 to 80 additional cfs would enhance the boatability of the stream. He encouraged PPL Montana to try this approach for improving stream flows and boatability on a weekend this summer. Ron also reported that for flow and staff gage numbers collected so far this season, a measurement of 1.7 on the Pine Grove staff gate occurred when the upper USGS gage at the plant read 200 cfs and the lower USGS gage at the Emerald Lake bridge read 300 cfs.

Nancy thanked everyone for their participation. The meeting ended at 12 noon.