

### **Milltown Reservoir Site Update, May 3, 2007.**

Construction work continues at the Milltown Reservoir Site to prepare for springtime high river flows. The Reservoir is currently drawn down 6.5 feet from full pool, up from a maximum drawdown of about 12 feet earlier this winter. The reservoir level rises with increased flow in the river. River flows have increased during the past week, but remain well below normal spring peak flows. Envirocon has completed the Clark Fork flood berm and most of the Blackfoot berm surrounding the contaminated sediments in the lower reservoir.

Turbidity levels in the rivers have also risen with the increased flow. Recreational users downstream continue to ask about the disruption upstream at Milltown and whether it is safe to boat, fish or swim in the river. Since the project began in June, 2006, the reservoir has not been a major source of contamination downstream. Arsenic, copper levels and suspended sediments in the river have been consistently below site construction standards. Water quality has generally been cleaner downstream of the dam than it is upstream on the Clark Fork at Turah, especially for sediments and arsenic. This is due to the dilution effect of cleaner Blackfoot River water. Turbidity levels are high enough now to trigger required daily sampling of the river for sediments, arsenic and copper.

As river flows continue to increase, and reach their peak later this month, significant scouring of sediments and woody debris from the reservoir is expected. Water quality will likely be worse downstream of the dam than upstream. This may continue for a month or more. Arsenic, copper and suspended sediments are typically elevated in the river during spring runoff, due to erosion of mine wastes along the river from Butte and Anaconda to Missoula. Water quality is often worse downstream of the dam during high flow or ice flow conditions, when sediments are eroded downstream. If contaminant levels in the river exceed standards, and it is the result of activity at the reservoir, the reservoir water level may be raised to reduce erosion of sediments downstream. This will also occur as the reservoir water level gradually rises with increased river flow.



This photo shows an overview of the construction site from the bluff above the dam. A water truck is applying water to the road in the foreground, to control dust. Heavy equipment is excavating a sedimentation pond in the foreground behind the water truck. The Clark Fork flood berm is complete, and a crane is placing large rock along the Blackfoot berm, which is expected to be complete this week.



Water is flowing over the spillway of the dam in this photo taken Tuesday of this week. Water is also flowing through the powerhouse outlets, and through the radial gate between the powerhouse and spillway. The flow in the river today is about 8,000 cubic feet per second (cfs). A ten year flood event for the combined flows of both rivers is 25,900 cfs. The flood berms in the reservoir are sized to protect against the ten year flood event, with an additional two feet of

freeboard for additional safety. In addition, the removal of the turbine equipment and routing of flows through the powerhouse provides significant additional flood protection. Unless we receive very heavy rains this spring it is very unlikely that we will get close to a ten year flow in the rivers this year.



This photo shows large rock riprap placed along the Blackfoot flood control berm. Much of this rock will drop or be “launched” into place below water level when high river flows erode some of the finer grained reservoir sediments below the rock. The berm will look a bit different in July after the rivers drop to summertime flows.

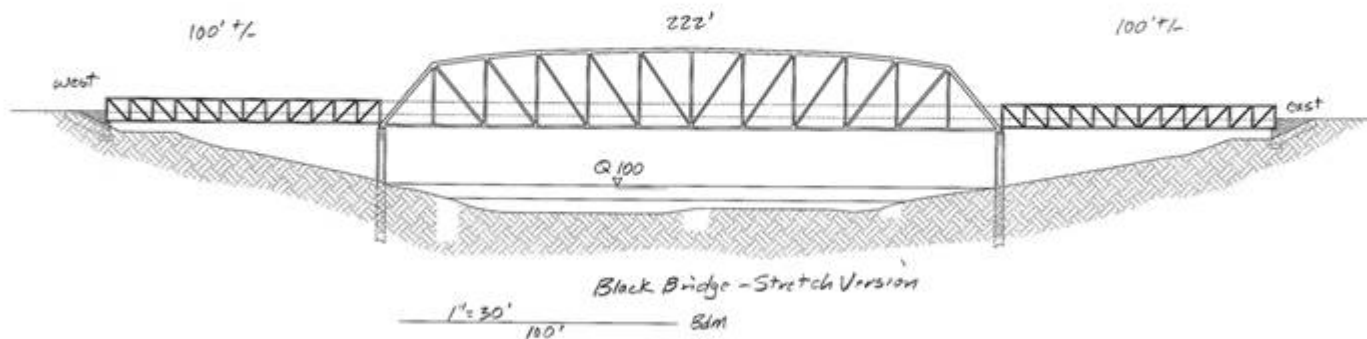


This photo shows the excavation area for the bypass channel. The excavation is about 25 feet deep, and the channel will be 100 feet wide at its base. Note the darker color of sediments in the bank on the right, where water is seeping into the pit. Logs and stumps have been uncovered at the bottom of the pit. Water level in this excavation is being reduced by pumping from a series of large wells, which discharge directly to the Blackfoot River. A small deeper pit in the upper left hand corner of the pit is where water has been pumped to test the effectiveness of this method as compared to using the large wells next to the pit. EPA and other agencies are currently reviewing updated plans for dewatering the bypass channel excavation, and a contingency plan for treatment of water from the excavation if downstream water quality exceeds standards for arsenic or other contaminants. Excavation of the bypass channel will continue in May or June, with completion by this fall before the next 6 foot reservoir drawdown.





Envirocon controls dust emissions from their roads and disturbed areas with this water truck. A more long-lasting treatment of magnesium chloride dust control will be applied to the main access road into the site, closest to the residential areas of Pittsville and Bonner Pines. Dust from the on-site roads is not contaminated with arsenic or heavy metals, the main concern is particulate pollution. Contaminated sediments stockpiled on site may also be treated hydroseeded and/or sprayed with water to limit wind erosion. So far the sediments are much too wet to be eroded by the wind. With a few exceptions, dust has not been a problem at the site since the project began. On one recent windy day dust was observed coming from on site roads and blowing near the Interstate highway. Envirocon responded quickly by re-applying water to the roads. Dust was also a problem when truck hauling started this spring to bring rock along Rustic Road, just upstream of Piltzville. The Montana Department of Transportation responded quickly and swept the road to remove remnants of wintertime sanding material from the road. EPA and DEQ have established a no visible dust standard for the construction project.



The drawing above shows the proposed design of the pedestrian bridge over the Blackfoot River. (See attached pdf file for more detailed color version) This bridge is owned by Missoula County. It will become unsafe when the dam is removed a year from now, and must be either upgraded or replaced. Missoula County received approval of a \$975,652 grant from the Montana Natural Resource Damage Program in 2006 to complete this project. It was approved by the Governor in December. Shortly after that, the State decided to replace the highway 200 bridge, just downstream of the pedestrian bridge. The Natural Resource Damage Program put the County's grant on hold, and required an amended grant proposal to address the highway 200 decision, since the new highway bridge will include at least one 5 foot pedestrian walkway. The County's proposal will be considered by a Citizen Advisory Council on Tuesday, May 8, at 2 p.m. at the St. Ann's Catholic Church in Bonner. After hearing public comment, the council will vote on the proposal. Unfortunately, the program staff has recommended against funding the proposal, primarily because it will cost an additional \$700,000 compared to the cheapest alternative considered. Program staff believe that these funds should be applied to other projects. But the County is not requesting any additional funds from the State. The additional funds would come from the U.S. Environmental Protection Agency, thanks to Montana Director John Wardell, and from the Federal Highway bill funds secured by Senator Max Baucus. Total cost of the project is estimated at \$2.3 million, with less than half provided by the Natural Resource Damage Program.

Benefits of the proposed new pedestrian bridge, as compared to the 5 foot walkway on the highway 200 bridge, include the following:

- Maintain a separate, safe and desirable multi-use bridge crossing
  - The new bridge would be suitable for multiple uses, including pedestrians, bicyclists, persons with disabilities and other non-motorized users. The

new bridge would be 12-18 feet in width compared to 5 foot width of the walkway on the highway 200 bridge. The 5 foot Highway 200 walkway would not be suitable for multiple uses.

- The new pedestrian bridge would provide a safer crossing of the river for pedestrians and other users by providing a greater separation from traffic on the highway 200 bridge, which carries more than 7,000 vehicles per day..
  - Improved aesthetics – The new pedestrian bridge would provide a much more pleasant experience crossing the river, where people will be able to hear and see the sights and sounds of the restored river without the distraction of heavy traffic on the highway 200 bridge.
  - Superior connection to recreation trails in restored confluence – As a recreational trail connection, the separate pedestrian bridge will provide a much higher quality experience for recreational users of the trail system and proposed State Park and Interpretive Center near the restored confluence of the Blackfoot and Clark Fork Rivers. The 18 foot wide center section of the new bridge will include locations for viewing, sitting and fishing. The new bridge will also have a much greater architectural appeal, adding to the desirability of the pedestrian crossing linking the local community to the restored confluence and proposed State Park.
- Demonstrate restoration friendly design for replacement of historic bridge - through use of restoration program funds, the project will help demonstrate a method for replacing aging bridge structures with new bridges that retain historic elements and remove obstructions to natural processes in the river channel. These methods may be used for other bridges in the Clark Fork watershed.

Public comment will be heard at the May 8 meeting, and the public is encouraged to attend. Written comments may also be submitted to:

Carol Fox, Restoration Program Chief  
Natural Resource Damage Program  
Montana Dept. of Justice  
1301 E. Lockey  
PO Box 201425  
Helena, MT 59620

Or email. [cfox@mt.gov](mailto:cfox@mt.gov)

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