Minutes
Water Quality Advisory Council
November 14, 2017
Missoula City-County Health Department
301 West Alder 7:00 p.m.

Present:

Brett Rosenberg - WQAC	Kelly Willet - WQAC	Laura Speck – UM EVST
Bruce Sims - WQAC	Peter Bierbach - WQAC	Chris Miller – UM EVST
Ian Magruder - WQAC	John DeArment	Stephanie Bark - UM
Michelle Hutchins - MVWQD	Deb Fassnacht - WEN	Rob Roberts – TU
Travis Ross - MVWQD	Naomi Neal – UM EVST	Barbara Sims - Resident

Rob Roberts – Rattlesnake Creek Fish Passage Project

Rattlesnake Creek is an interesting creek its headwater are in a designated wilderness transitions and transitions quickly to a suburban and then urban environment.

Objectives: Prevent fish entrainment, Reconnect Rattlesnake Creek, Eliminate upstream aquatic barriers, improve recreational access.

There are 6 irrigation ditches on Rattlesnake Creek with a cumulative 12-15 CFS of water diverted. Baseflow is about 40 CFS. All ditches were screened around 2004 with screens that are simple but require a lot of maintenance. Irrigation use is primarily residential. There are very few agricultural users. There is also a new DNRC stream gage on the upper footbridge of Greenough Park. Some marks are on the bridge indicating past high water events which can now be rated to the new gauge to calculate high runoff event discharges. LiDAR was completed for Rattlesnake Dam in 2002 from mouth to Pineview Park and a new flight is planned from Pineview Park up to the Forest Service boundary. Pebble Counts are being done before winter.

Dam itself was built in 1904 made of earth and boulders. This Dam was reinforced in 1924 with concrete. It really hasn't being rehabbed since then. This was the primary water supply from 1904 until the early 1980's. Originally there were about a dozen irrigation ditches on the stream. The dam was originally fully closed later in the summer to develop the dam. The City originally built the dam and sold it to Montana Light and Power. Mountain Water converted a lot of the instream water rights to groundwater rights (6 were for storage and are with the city now).

The city and TU drew down the water to expose the bottom of the reservoir. This allowed collection of topography through traditional LiDAR. In 2012 the walk way and the mechanism to control the headgate was removed and Mountain Water decided to leave the headgate open which created the opportunity for fish to move but spring flows are at such a high velocity coming through the headgate that this created another passage barrier. Upstream fish species include whitefish, cutthroat and bull trout. No- native brook and brown trout are already upstream of the dam. Native species spawn during higher flows. There is no fishing from the dam to 6 miles upstream (Franklin Bridge). This may change after this project. Rattlesnake Creek is a strong hold for Bull Trout. There are resident life forms and a migratory life forms. FWP has done Redd counts and this is one of the better. Bull Trout Redds on Rattlesnake Creek dropped after the removal of Milltown Dam. Not really sure the

cause. The Redd counts have not fully recovered. There is some question about whether or not this occurred in the Blackfoot drainage as well. Ron Pierce at FWP might be able to answer this.

There is an opportunity to re-allign the creek to put in a meander below. A cubic meter of water stored per lindear mile??? Brusette). Historic fill area downstream would be moved to the 4 acre reservoir to become a wetland. The trail will be split between pedestrial and bike trail. There is a building on site. Options are to build around the building. Other option is to move it on city property. Another option is to move it. Dennis Bowman designed it. The City's vision is to keep this as a conservation area. It won't have a lot of infrastructure. There will be a public scoping process. Engineering and design will be done with

Paul Parson, Rob Roberts, Login McGinnis, Dennis Bowman, Morgan Valliant are project team. River Design group and Morrison Maierle will be leading this approximately one- million dollar project. The field work will start tomorrow. Pebble counts will take place above and below the project area. There will be hydraulic modeling and development of flood-prone widths. Flood elevations would potentially rise to allow the creek to access the floodplain but will probably have to demonstrate that flood elevation rises won't affect downstream owners.

Funding to date:

Northwestern Energy -	$33,125
Montana Future Fisheries –	$24,000
Westslope TU Chapter -	$35,000
Montana Trout Unlimited –	$10,000
Missoula Conservation District	$10,000
Stockman's Bank	$10,000
Other grant sources -	$85,000
TOTAL -	**$207,125**

Public scoping and review will be Winter/Spring 2018

Current estimates are around 1.2 million. TU will bring 75% of funding to the table. The City has also allocated some funding through the acquisition of the water company toward removal.

Goals:

- Reconnect 25 miles of Rattlesnake Creek
- 6 irrigation diversions fully screened
- 2000 feet of new side channels created
- 40 acres of open space and trails
- Removal of annual maintenance and operations at Rattlesnake Dam
- 4 acres of wetland restoration/rehabilitation

Upper mountain lakes may be another phase. There have been some habitat improvement project discussions.

No Public Comment

December meeting will be cancelled

Submitted by: Travis Ross