

Project Management

Based on the decision of DNRC's Director, the sponsor is notified of the status of its emergency grant or loan request. If successful, the applicant and DNRC enter into a formal agreement, and the project is managed in the same manner as other grant and loan projects funded by the RRGL Program.

Emergency Grant and Loan Applications in Fiscal Years 2019 and 2020

Each emergency grant request submitted during FY 2019 and FY 2020 to date was reviewed by DNRC staff and, based on staff recommendation, was approved or denied for funding by DNRC's Director. Total funding for all emergency grants may not exceed the legislative biennial appropriation for emergency projects under the RRGL Program. \$10 million dollars per biennium is available for emergency loans.

Authorized Emergency Grant Projects

During the 2019-2020 biennium to date, the following emergency grants have been awarded:

**Medicine Lake, Town of
Water Main Replacement
May 2019**

\$10,000 *Sy 2019*

The Town of Medicine Lake had a large water main break on December 22, 2018. This took two days to repair. The town hired two contractors to assist with digging up the line and purchased hundreds of dollars of parts to repair the line. This line break was on the intersection of Main Street and Hwy 16. This break put a substantial impact on the town's water fund. Medicine Lake experienced abnormal low temperatures for many days straight as low as -50, which caused many water lines to freeze up. (over 37 business and residential lines froze). On April 6, another water line broke and had to be dug up and repaired on the 400 block of Hammond Street. The town plugged the broken water line to get water on to all its customers except two businesses, the cafe and the bank, that did not have water service. Total cost of the repairs was \$37,653.50.

**Plentywood, City of
Water Main Line Replacement
May 2019**

\$10,000 *Sy 2019*

The City of Plentywood experienced a colder than normal February and as a result had some issues with freezing water mains. On April 17th, the city crew performed an excavation to thaw and fix a section of pipe that they believed was the frozen section of the pipe. Once they fixed this area and turned the water back on to this section, it was noticed that water began rising to the surface over a large stretch of main. It was determined that the extent of the water main failure due to freezing was much greater than they anticipated. The project sponsor used the funds provided to hire a contractor to remove approximately 815 feet of failed 6-inch cast-iron pipe and replaced with the same size and length of polyvinyl chloride (PVC) pipe. Total cost of the repairs was \$86,840.06.

**Savage Public School
Copper Water Line Replacement
June 2019**

\$ 2,806 *Sy 2019*

The Savage Public School in Richland County has an existing water system and it consists of a well approximately 20 feet southwest of the School. Black poly pipe from a pitless adapter goes into the building then PVC and copper pipe mixed are throughout the rest of the building. Lead and copper test results have shown many exceedances in the drinking water. The school ordered bottled water for staff and students. At the request of the school district a Montana Rural Water Systems representative went to look over the system. Three options were given to solve the lead and copper exceedance problem. They selected the least expensive option; to remove all the copper piping on the cold-water side, except to toilets and non-drinking fixtures, and replace with polyethylene or PVC pipe. Total estimated cost for all the work was close to \$44,000. Because of the high costs the School decided to replace as much as they could with the actual total cost of \$5,362.00.

**Greenfields Irrigation District
Willow Creek Reservoir Outlet Gates Emergency Repair
August 2019**

\$10,000 *Jy 20*

Willow Creek Reservoir in Gallatin County is one of three reservoirs operated and maintained by Greenfields Irrigation District (ID) to support water management and irrigation diversion in the Sun River Watershed. Willow Creek Reservoir is owned by the U.S. Bureau of Reclamation (USBR). The Greenfields ID is responsible for the daily operation, as well as maintenance. On April 30, 2019 the district realized an on-going, progressive failure of the guard gate at the reservoir. While evaluating the issues of the guard gate, a pending failure and deteriorating operational condition of the regulating gate was experienced. An underwater diving team and Remote Operated Vehicle observed the guard gate had much damage to the gate stem guides, a bent guard stem and concrete missing around the gate frame which allowed approximately 40-cubic feet per second (cfs) of leakage when the gate was "closed". In order to make the repairs it was decided to vacate and make the warranted repairs in the "dry". Total cost of the repairs was \$25,107.

**Lower Musselshell Conservation District
Delphia-Melstone Emergency Diversion Repair
October 2019**

\$ 7,000 *Jy 20*

The Delphia-Melstone Water Users Association (WUA) in Musselshell County own and operate a concrete diversion dam/intake on the Musselshell River approximately 14.5 miles east of Roundup. The diversion and intake serve 795 acres of irrigated land. Upon a routine visit to the diversion on July 26, 2019 it was determined that 300-cfs was flowing beneath the dam rather than over. A large scour hole had formed upstream of the diversion in the approximate middle of the river and washed out beneath allowing water to flow under and through. The river was then low enough that the intake would not receive enough water to irrigate. The Board members of the Delphia-Melstone WUA met at the dam and decided to place rock upstream of the diversion to protect it and save the irrigation season. Later in the fall when the water was low, more rock was placed on the downstream side. Total cost of the repairs was \$22,900.

**Bridger Pines County Water and Sewer District
Wastewater System Emergency Pipe Repairs
January 2020**

\$ 5,000 *Jy 20*

In 2013 Bridger Pines County Water and Sewer District in Gallatin County replaced old pumps, lift stations and related piping of their wastewater system. During April, May and June 2019 the district encountered an enormous increase in groundwater infiltration into their wastewater system. Above and below ground infrastructure was investigated by video pipe inspection. They located a cracked pipe in one location and a pipe breach (pipe pulled apart) with a sag at another location. The breached pipe allowed infiltration of groundwater and gravel which ended up damaging impellers on the lift station pump. The cracked pipe location was 10 to 12 feet below grade with multiple utilities (3 phase 240V electrical line, 120V line, 2-inch force main, 6-inch diameter waste 'T' connection and 6-inch diameter water line) crossing above the waste pipe. At the pipe breach location, the district excavated to the breach and sag, straightened the pipe and reattached the pipe breach. The cracked pipe was repaired by fiberglass/epoxy lining approximately 55 feet of pipe. Total cost of repair was \$17,315.

**Stillwater County Conservation District
Yanzick/Brey-Riddle Irrigation System - Flanked Diversion Headgates
June 2020**

\$ 8,000 *Jy 20*

On May 27th the Yanzick/Brey-Riddle Ditches irrigation system had final inspection of two projects; construction of a new headgate and rehab of the Yanzick diversion on the Stillwater River and construction of a new secondary diversion structure for the Brey-Riddle ditch. On May 31, 2020 the Stillwater River discharge rate was 7,140-cfs, the highest ever recorded. The flooding saturated and scoured the recently compacted soils along the east headgate wingwall, flanking the headgate allowing large volumes of water and debris to enter the Yanzick/Brey-Riddle ditch. The ditch became saturated and eroded the recently compacted soils along the west wingwall of the secondary diversion structure, causing bank failure and allowing uncontrolled water to enter the Brey-Riddle Ditch. A contractor stabilized the eroded bank with imported riprap rock and also placed riprap upstream of the headgate to mitigate future bank erosion. Emergency repairs were completed on May 31st. Total cost of all repairs was \$9,463.00.

**Worden Ballantine Water and Sewer District
Elevated Water Storage Tank Standpipe Leak
June 2020**

\$ 8,000 *July 20*

In early July 2020, an operator of the district water system noticed a leak in the standpipe of the 40,000-gallon elevated steel storage water tank. In order to facilitate repairs the tank needs to be drained, cleaned, inspected, then repaired. An inspection of the tank is necessary to ensure additional leaks have not started and that there are no other weak spots in the welds. The repairs will include the existing leak and any other leaks found, or any other suspect welds. The tank does not have a separate drain. To finish draining the tank a drain and/or flushing hydrant needs to be added. A contractor experienced with water tank repairs is scheduled to begin and finish in the Fall of 2020. Repair costs are estimated at \$19,000.

**Milk River Joint Board of Control
St. Mary Canal Drop Structures
August 2020**

RRGL Planning Grant \$ 8,000 *Not Emergency*
RRGL Project Grant \$125,000 *Best there*

The St. Mary Storage and Conveyance Facilities were constructed between 1907 and 1923 are entirely within the Blackfeet Reservation near the Canadian border in northcentral Montana. The project provides irrigation water to over 18,000 users covering over 110,000 acres of irrigation and municipal water to several towns in northern Montana along the Milk River. Water is diverted by the St. Mary Diversion Dam just downstream from the outlet of Lower St. Mary Lake and is conveyed to the North Fork of the Milk River through a 29-mile canal, siphon, and drop system. The drop system dissipates energy for a vertical loss of 281 feet with 5 concrete drop chute structures in the final two miles of the canal into the Milk River. The entire drop system is in poor overall condition, near the end of design life, and in need of replacement. The Milk River Joint Board of Control (JBOC) in cooperation with DNRC, USBR, and the St. Mary Rehabilitation Working Group, secured funding and began the planning and design for the replacement of Drop 2.

*was
So many
going
on with
St Mary*

On May 17, 2020, Drop 5 suffered a catastrophic failure. Flows from St. Mary's facilities were halted. The impacts are numerous and far ranging. Immediate repairs were critical to assure continued agriculture production and drinking water supply. On June 3, 2020, the DNRC authorized a request by the Milk River JBOC to amend the scope of work for Drop 2 to include the engineering assessment, geotechnical investigation and preliminary design of Drop Structure 5. The engineer's contract for the design of Drop 2, was amended to include planning and design of Drop 5. Through Exigency Procurements (ARM 2.5.605, MCA 18-4-133) the Milk River JBOC and USBR negotiated a time and materials contract with a reputable contractor to begin the replacements of Drops 2 and 5. Beginning early June, construction operations started on Drop 2 while simultaneously dewatering and clearing debris on Drop 5. In late September 2020 the concrete chute of Drop 2 was complete. The chute for Drop 5 was completed in October 2020. The Facilities are scheduled to be in operation for Spring 2021.

The contract for engineering services with HRD for the design of Drop 2, was amended to include planning and design of Drop 5. Through Exigency Procurements (ARM 2.5.605, MCA 18-4-133) the Milk River JBOC and USBR negotiated a time and materials contract with Sletten Inc. to begin the replacements of Drops 2 and 5. Beginning early June, construction operations started on Drop 2 while simultaneously dewatering and clearing debris on Drop 5. In late September 2020 the concrete chute of Drop 2 was complete. The chute for Drop 5 was completed in October 2020.

Flows through the St. Mary facilities were restored to the Milk River in October 2020. The total project costs are estimated at \$8 Million. Funding for the drop structure replacement was provided from the Bureau of Reclamation under a qualified emergency, State of Montana bonding funds designated for St. Mary facilities, Montana Department of Agriculture Growth through Agriculture Grants, Milk River JBOC funds from an assessment on irrigated acres, and pumping contracts managed by the Bureau of Reclamation.

*Sweet Grass CD applied for \$5,600.00 -
under review as of 11-26-2020*