

## Belt Water Treatment Project

Abandoned Mine Lands Program

November 2018

### Project Objectives

In an average day the abandoned coal mines in Belt discharge over two hundred thousand gallons of water which contains over 800 pounds of iron, aluminum and other dissolved metals. Lower Belt Creek is on Montana's list of impaired water bodies. The abandoned mines are the primary cause of the impairment and contribute to elevated levels of aluminum, cadmium, iron, lead, and zinc in Belt Creek.

**The objective of the Belt Water Treatment project is to restore beneficial uses to Belt Creek by capturing and treating the mine water.**

### Look Ahead

DEQ is in the design phase of the Belt water treatment plant. The identified location for the plant is the property bordering 5th Street South, near the location of the Anaconda Belt Mine discharge.

Tetra Tech, Inc. has been selected as the primary design engineering firm. The initial engineering step will produce a 30 % design which will be completed in January 2019. The design will address:

- Stability of the plant foundation.
- Hydraulic bulkeads (plugs) to address acid mine discharge on the east side of Belt.
- Pumping test evaluation to test the mine pool to determine if mine water can be reduced by pumping out of the flooded portions of the mine.
- Slug testing to assess the abandoned mine's capacity to accept sludge produced by the water treatment plant.
- Geotechnical studies along the sludge pipeline.
- Risk elimination in the water treatment plant.
- Equipment sizing.

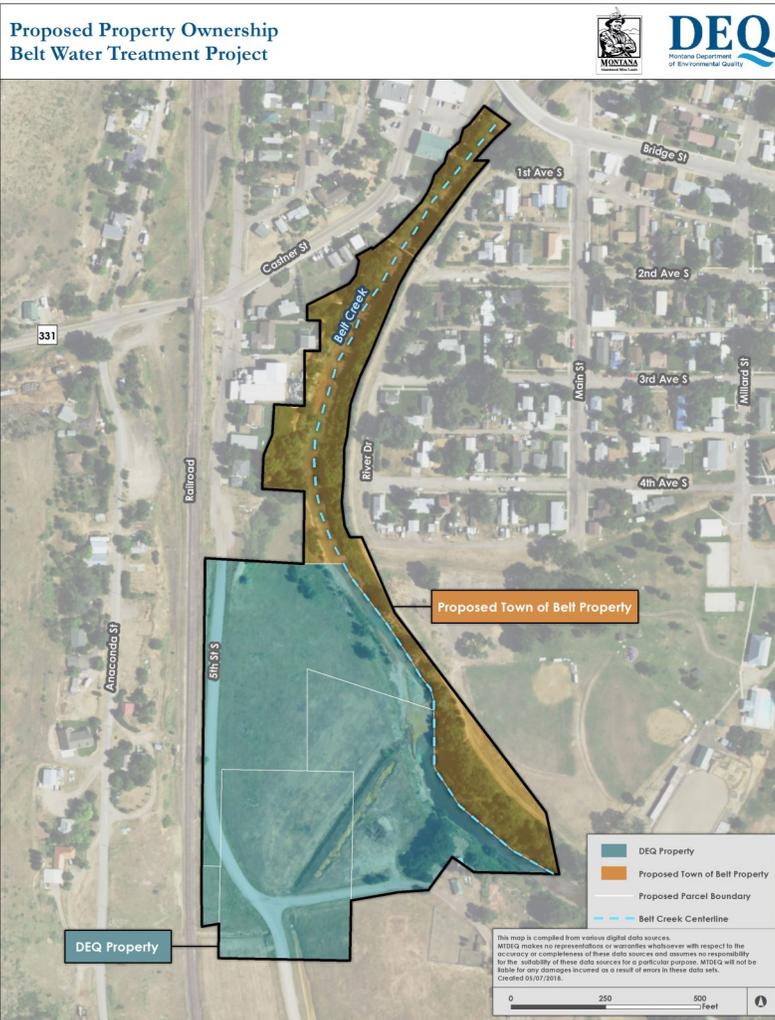


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### Schedule

Major 2017 and 2018 project benchmarks included 3,000 feet of drilling to determine the conditions within the Anaconda Belt Mine, two phases of treatability testing to design water treatment processes, and acquisition of property from the Montana Department of Transportation to house the water treatment plant. Project bidding is anticipated in the summer of 2019, with plant construction and initial operation occurring in the fall and winter of 2019. Project bidding will use the Montana Acquisition & Contracting System (eMACS).



### Land Ownership

DEQ acquired the parcels of land in Coke Oven Flats necessary for the water treatment plant. To clear up the title and property boundaries, the DEQ will go through a boundary adjustment and quiet title action in the winter of 2018, and DEQ will work with local landowners on easements to construct pipelines and infrastructure necessary to operate the plant.

### Funding

The Abandoned Mine Lands Program began a Water Treatment Fund in 2010 to finance the construction and operation of a water treatment plant. This money has been received from the U.S Department of Interior, Office of Surface Mining Reclamation and Enforcement to address the hazards and environmental degradation posed by abandoned coal mines in Montana. Additional funding will be provided by the Montana DNRC Reclamation and Development Grants Program.



2017 Mine Pool Pumping Test



2017 Treatability Testing