City of Whitefish
Wastewater System Planning for the Future

The City of Whitefish has hired a consulting team utilizing Anderson-Montgomery Consulting Engineers of Helena, in association with Robert Peccia and Associates of Kalispell, to assess the City's wastewater treatment plant and collection system. The age and condition of the wastewater facilities in the City, as well as new regulatory treatment standards, provides the impetus for the technical assessment. The City has over 58 miles of sewage main and 17 lift stations required to serve the homes and businesses found on the varied topography throughout the community. The treatment system utilizes a lagoon-based technology that has been modified and upgraded several times over the last 40 years including the inclusion of a mechanical process to remove the nutrient phosphorous. Both the wastewater collection facilities and the treatment plant will require improvements to make the system effective and capable of complying with new anticipated treatment standards.

The existing collection system allows clear water to enter the pipe network through leakage in the pipe joints, leakage in manholes, roof drains, sump pumps and inflow through manhole covers. During wet weather and snowmelt, it is estimated that over half of the flow to the plant may be clear water. On an annual basis, over 16% of the flow to the plant is clear water. When the treatment plant is upgraded in the future, the design of the system must be adequately sized to handle the extraneous water, significantly raising both the capital and operating cost of the pumps, basins, chemical feeders and other components required to make the system work.

In the past, the City has implemented several projects to reduce the infiltration and inflow of extraneous water into the system, generally with good results. Given the size the collection system, additional work is proposed to further remove infiltration and inflow. A Preliminary Engineering Report was completed in 2013 that estimated that over 200,000 gallons per day of clear water could be removed from the collection system with the implementation of a number of projects that would rehabilitate or replace specific portions of the collection system. To work towards this goal, the City is pursuing grants and low interest loans to support a proposed $1.14 million dollar project that would primarily focus on repair of leaking manholes and connecting sewers.

The City is anticipating new regulatory standards to be implemented by the Montana Department of Environmental Quality within the next five years, limiting the discharge of ammonia, total nitrogen and phosphorous from the wastewater plant. These standards cannot be met with the existing City wastewater treatment system and a costly new treatment facility will be required under a mandated compliance schedule. Reduction in the average and peak flow volume to the plant by removal of clear water now could significantly reduce the future cost of the new plant, potentially resulting in a savings amount that will offset the cost of the current investment into the collection system repairs.

The proposed sewer system repair project will be discussed at the upcoming April 7, 2014 Council meeting. Comments from the public are welcome.