MEMORANDUM

DATE: September 7, 2021
FROM: Stacey Titus, P.E., Assistant Public Works Director
RE: State Water Plan Application for East Rapid Water Treatment Plant

In 2008, the City of Rapid City contracted with Burns and McDonnel for a Utility System Master Plan. The Master Plan recommended the City begin strengthening the water supply system by constructing the Jackson Springs Water Treatment Plant (Jackson Springs) and then begin moving toward replacement of the Mountain View Water Treatment Plant (Mountain View). Jackson Springs was completed in late 2013.

Mountain View was constructed in 1960-1961 with an initial rated treatment capacity of 24 million gallons per day (MGD); the plant was expanded in 1978, however with changes in regulatory requirements and operational challenges Mountain View currently has a firm capacity of 28 MGD. The Mountain View facility has provided excellent service for the City but has exceeded the original design life and needs to be replaced. The plant and equipment are obsolete and replacement parts are no longer reliably available. In its current state, Mountain View has significant safety and maintenance issues that result in an overall rating of “poor” by Burns and McDonnel.

The replacement strategy for Mountain View has been refined under the current Master Plan being completed by Black and Veatch. The current recommendation is to construct a new surface water treatment plant in the eastern portion of the City. An eastern location supports the strong growth occurring toward the east and reinforces the City’s commitment to providing safe reliable water for Ellsworth Air Force Base and Rapid City Regional Airport. The East Rapid Water Treatment Plant will initially be constructed with a minimum treatment capacity of 20 MGD, with space to add 10 MGD of capacity in the future, to meet projections for 30 MGD total treatment capacity needs within 20 to 25 years.

The projected cost of construction in today’s market is $135,000,000. Staff proposes to submit a funding application to South Dakota Department of Agriculture and Natural Resources (SDDANR) prior to October 2021 to have the project placed on the SDDANR State Water Plan. The application package will include requests for both grant and loan funding. Submitting a project application for placement on the State Water Plan does not obligate the City.