



Frequently Asked Questions (FAQ)

In the fall of 2019, the Marshall Municipal Utilities will begin a water softening enhancement project at the existing water treatment plant. The following are answers to FAQ being asked in our community:

What is the project about? The State of Minnesota has placed a chloride (salt) limitation on the permit given to the City of Marshall Wastewater Treatment Facility for the first time. The permit requires the water entering the Redwood River following treatment to contain less than 261 mg/l or ppm by 2024. After a study by water engineering professional, it was determined that the most economical way to attain that chloride limitation, is to keep the chloride (salt) from entering the wastewater in the first place. Since a primary source of salt in the wastewater comes from ion exchange softening equipment, measures were studied to determine if Marshall's water could be made softer. Again, following professional analysis, it was determined that it can be made softer by introducing a new treatment technique.

What is the new treatment technique? The current lime softening process will add soda ash to reduce the water hardness from the 50 grains as it enters the water plant, to 6 grains following the new type of process. Today the water is treated to 35 grains hardness.

How much salt enters the Redwood River? In a February 2017 study conducted for MMU by AE2S, its water consulting engineer, it was estimated that 11,356 pounds per day on average and 15,881 pounds per day maximum, enter the Redwood River. Of this amount they estimated 7,330 pounds of salt come from softening units being recharged using salt in residential, commercial and light industrial.

Will the water at 6 grains of hardness be more expensive? Yes, it will. While an exact amount is not yet known, it is estimated that for every 1,000 gallons, it may cost \$1.44 more. There will be an offsetting lower salt costs estimated to save the water customer who softens approximately \$.93 per 1,000 gallons. Netting the lower cost of salt against the higher cost of water results in an increase of an estimated \$.51 per 1,000 gallons.

Must I remove my water softening equipment? No. It is strictly a personal choice whether you keep your softener operating. Many water customers enjoy water softened to a softness of 0-1 grains of hardness and will choose to keep their softeners working. It will be important for all old-style softeners that recharge based on time to change to softeners that recharge based on demand or usage. Most home softeners already have that style of controller.

If I have a new style softener controller, am I all set? No. After the project is finished and your water is now 6 grains hard rather than 35 grains, the controller will need to be adjusted. Your softening company would be happy to assist you in doing this. In some instances, you may be able to do it yourself. In any case, it should not be done until after the project is completed. MMU will notify its water customers when the water quality has changed, expected to be spring of 2021.

What will the project cost to construct? It is estimated that the project will cost \$11,585,492 to construct.

What are the sources of capital to fund the construction? The State of Minnesota will provide \$7,000,000 with the remainder coming from a combination of funds from the City of Marshall and the Marshall Municipal Utilities.