

Project Scope:

Great Northern Engineering provided a design engineering study for the Wasilla Wastewater Treatment Facility to determine how a geothermal Heating System could be incorporated into the current heating system in the building. Funding was provided through the American Reinvestment and Recovery Act. GNE prepared a Rough Order of Magnitude construction cost study for the city.

Project Detail:

- The geothermal heating system is to be constructed onsite at the existing City of Wasilla Wastewater Treatment Facility existing water well.
- The water used for the heat pump would be returned to the same aquifer by way of re-injection through a second well.
- Existing on-site equipment storage would be utilized.
- A ground water well system was used since an existing productive well is present onsite. Well production and well injection is estimated to be around 12 gpm. Geothermal loops can be constructed in lieu of using ground water, but the cost would be greater than a well.
- The geothermal heat pump loop is to be shipped as an assembled package and commissioned on-site.
- Circulation glycol pumps and thermostatic controls are to be installed within the facility in a code compliant zone. The pumps and expansion tank can be wall hung just inside of the designated installation point.

