BYU CIVIL & ENVIRONMENTAL ENGINEERING IRA A. FULTON COLLEGE

CAPSTONE

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Environmental Research for the Arrowhead Project

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MWM Engineering researched and developed ideas regarding the environmental aspects of the Arrowhead Center and surrounding property, located in Spanish Fork, Utah and owned by Fritzi Realty. The aspects considered include potential impacts to protected species and water resource needs. MWM Engineering reviewed the site itself, existing documents of the project, and public information from Spanish Fork City and the federal government.

WATER RESOURCES

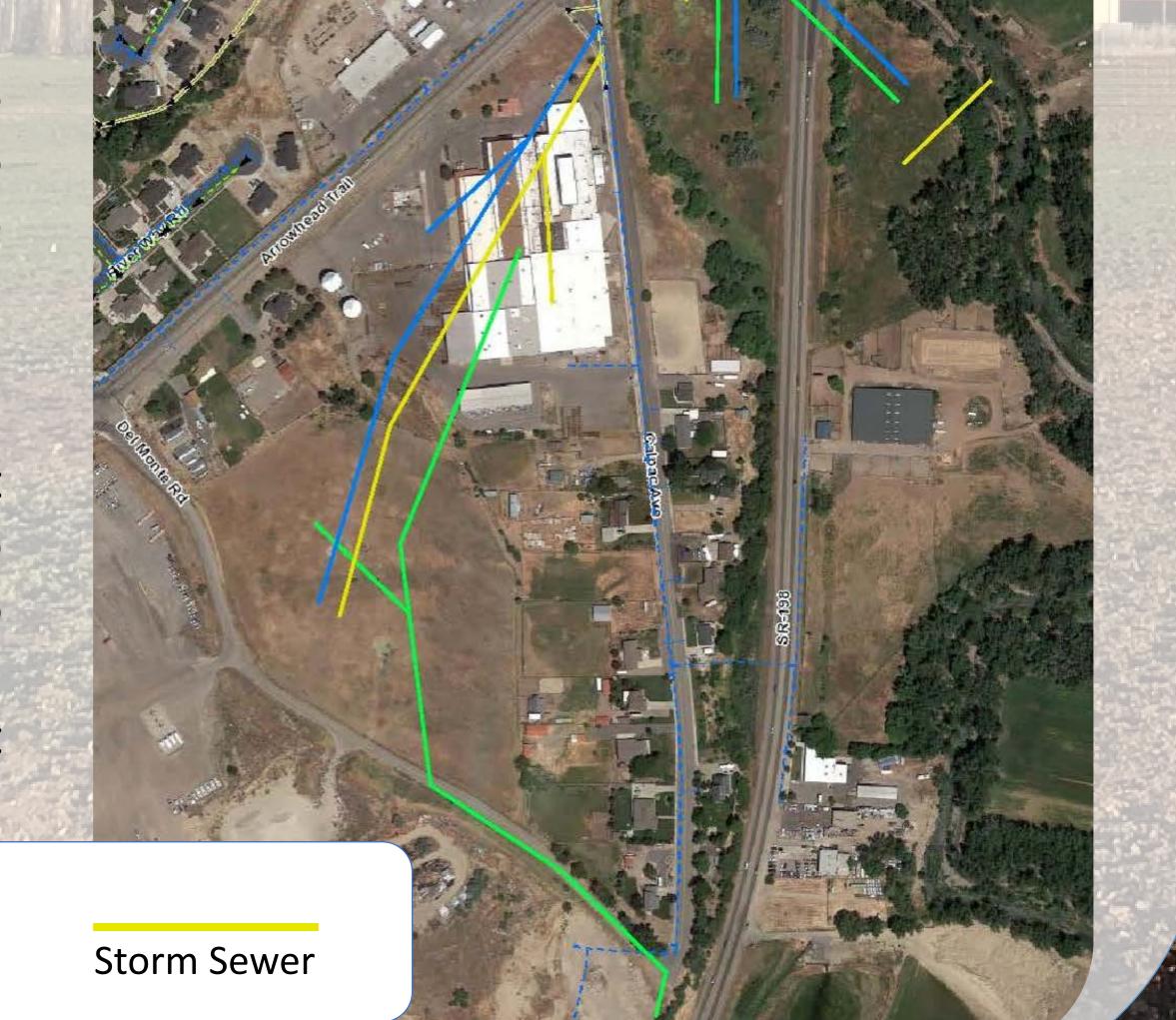
Culinary Water: Fritzi Realty currently owns numerous shares of water rights. Additionally, the company leases a water well to Spanish Fork City. Between these sources, enough water should be available to support development.

Sanitary Sewer: The proposed sewer routing is to connect Parcels 1 and 2 into the neighborhood to the north. Parcels 3 and 4 will connect with the sewer main that W.W. Clyde has proposed to install to the south.

Storm Sewer: Any development will require street catch basins and storm mains to flow directly into the Spanish Fork River. Fritzi Realty may also consider installing a detention pond, which could also serve as public park in parcels 3 or 4 to assist with storm runoff.

Proposed Utilities:

Culinary Water Sanitary Sewer



PROTECTED SPECIES

By law, developers are required to rectify the effects of negative environmental impacts by repairing the effected environment or providing sufficient substitute resources. The Arrowhead project location is potentially home to several protected birds, fish, and plants. After initial inspection of the site, no critical habitats were located. However, professional environmental surveys will need to be conducted to confirm and identify the presence of any protected wildlife. Some examples of protected species in the area may include the threatened plant—ute ladies'-tresses, and the endangered fish—june sucker, both pictured.

