



Little Blue Natural Resources District

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**Instream Weir Stabilization and Low-head Embankment Stabilization Recharge Pilot Project
Final Report
Project #4146 & 4147**

Groundwater declines and degradation of stream systems are two ongoing natural resources challenges the Little Blue NRD (LBNRD) faces. These pilot projects target a small area of 640 acres within the Sand Creek watershed by Holstein, Nebraska. These projects retain water for recharge, provide grade stabilization, and capture sediment without compromising the integrity of the stream either up or downstream of the structures. There were 5 sites that were constructed. It was decided to go with several small structures, which have little to no impact on the larger environment. Water can flow over the top of the small structures and continue downstream during significant rainfall events. Smaller equipment was used; therefore, impacts were minimal during construction. This is a sandy area, by stabilizing the streambed it will improve the natural environment by reducing erosion and sediment transport. This will increase the water quality by reducing downstream sediment transport. The instream weir structures will backup 10.9 AF of water for each runoff producing storm event. Most of the water held back by the structures will infiltrate through the sandy substrate to the aquifer.

The project was substantially complete before the floods of 2019 hit. Four of the five sites were damaged by the floods. The LBNRD worked with the Natural Resources Conservation Services (NRCS) and their Emergency Watershed Protection (EWP) program to fund the rebuilding of four sites. The project was seeded and considered 100% complete on September 29, 2020.

The Natural Resources Commission contributed \$164,051.08 through the Water Sustainability Fund. The NRCS contributed \$67,130.81 towards the rebuilding of the sites. The property owners donated the land. The LBNRD contributed a total of \$139,069.74.

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