

WSF 2021 Status Report # 5244

PROJECT: Lower Loup NRD Drought Management Plan –
WSF Application #5244 (awarded December 18, 2019)

DATE: MARCH 28, 2022
(THIRD ANNUAL REPORT DUE ON
OR BEFORE APRIL 1, 2022)

See Application 5244 Section D #2 and #4 For Project Tasks and Timeline

PROJECT PROGRESS APRIL 2021 TO APRIL 2022:

The Lower Loup Natural Resources District (LLNRD) hired JEO Consulting Group (JEO) for assistance to develop a district drought management plan. After postponing the first planned in-person drought workshop going back to early 2020, the LLNRD was able to host three consecutive and sequenced drought workshops with a diversity of stakeholders from September 2021 through February 2022:

- The first drought workshop took place on September 9, 2021, and included 17 total stakeholders across the LLNRD representing several interests, including municipal, agriculture, utilities, hydrogeology, water quality, and more. A 5-year mock drought scenario was presented to the stakeholders, leading to general discussion on drought response, including how each stakeholder would be affected by each stage of drought.
- The second drought workshop took place on November 30, 2021, with the same list of stakeholders invited from the first workshop. A total of 23 stakeholders attended and the topic of discussion focused on the role of the LLNRD with regards to drought monitoring and management actions.
- The third and final drought workshop was held on February 17, 2022, and included 27 attendees. The LLNRD presented a drought response protocol to the stakeholders, which included defined drought zones, indicators, levels/stages, and proposed management actions. An interactive phone-based voting tool was utilized to gather stakeholder input on the draft drought response protocol, which sparked incredible dialogue among the group. This information is currently being used to finalize the draft protocol and will be incorporated into the core section of the final drought management plan.

These three workshops resulted in the LLNRD gaining a better understanding of how communities, water providers, and affected groups respond when confronted with drought events, and provided the necessary data to create a final drought response protocol. This will serve as a working document for monitoring drought on a continuous basis and responding effectively at each stage of drought, with the ultimate goal of protecting water resources within the District for the beneficial use of all of its residents.

As a result of the three stakeholder meetings, LLNRD recently designed new drought zones throughout the District to be used as representative areas for assigning drought levels using the procedures outlined in the drought response protocol. The zones were created by analyzing several geospatial datasets/overlays, including soil type, rainfall, net irrigation requirement, irrigated acres density, stream depletion factor, aquifer saturated thickness, aquifer transmissivity, hydrologic basins, groundwater surplus areas, and topographic regions. These drought zones will become a critical component of the drought management plan and may be utilized as the future LLNRD groundwater management areas, thus serving a dual purpose in NRD responsibilities to best manage water resources.

ANTICIPATED ACTIVITIES FROM NOW UNTIL NEXT ANNUAL REPORT DUE APRIL 1, 2023:

LLNRD is compiling the information gathered from the three drought workshops, which includes incorporating the final drought response protocol into the partially completed drought management plan. JEO will work with the LLNRD to outline best management practices for reducing drought impacts, and to identify potential water recharge projects throughout vulnerable drought zones within the District. All project activities and a fully developed plan are currently expected for completion in May of this year.

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

\$52,260 - The LLNRD and Water Sustainability Fund (WSF) have funding obligations towards this project (\$87,100 total project costs) under grant award #5244.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 5244 WILL BE REALIZED:

The project was slowed by the inability to host an in-person drought management workshop with identified stakeholders until September 2021. However, the project is not only on target for achieving all benefits described in the original application, but also has the potential for over-achieving by establishing the foundation for development of a future up-to-date groundwater management plan for the District.