

WSF 2021 Status Report # 5195

PROJECT: LLNRD Columbus Area Recharge Project –
WSF Application #5195 (awarded November 28, 2017)

DATE: MARCH 22, 2021
(FOURTH ANNUAL REPORT DUE
ON OR BEFORE APRIL 1, 2021)

See Application 5195 Section D #2 For Project Tasks Summary and Timeline

PROJECT PROGRESS APRIL 2020 TO APRIL 2021:

This is the fourth annual report. The LLNRD has continued to work with the City of Columbus, Platte County, and the Christopher's Cove Homeowners Association to develop the Columbus Recharge Project. As discussed in the application, the LLNRD, County, City, and the HOA are working with Archer Daniels Midland Company (ADM) to offset groundwater depletions by utilizing diverted reuse water near the Loup Public Power Tailrace Canal and conveying it to the remnant Lost Creek channel. Additionally, water would also be conveyed into Christopher's Cove to help provide added recharge. Both channel and lake structures would allow water to infiltrate into the water table, but the system would only be operated during normal to dry conditions. By using tailrace canal water to recharge the remnant channel and utilizing a high capacity well near the abandoned channel to add water into Christopher's Cove, the potential infestation from invasive species (Asian Carp, Zebra Mussel, etc.) into Christopher's Cove is reduced. This winter, standing vegetation along the Lost Creek channel has been removed, primarily along the Project's existing easement. The group has finished coordination with all the necessary agencies for project permitting and finalized engineering analysis. Additional funding for the project has been obtained from the U.S. Bureau of Reclamation and all necessary agreements with that agency have been finalized. Final design was completed, and the project was advertised for invitation of construction bids. Construction bids were received from prospective contractors and are being reviewed for selection. A bid opening was held March 18, 2021 and a recommended contractor was selected at the LLNRD March Board of Director's meeting.

ANTICIPATED ACTIVITIES FROM NOW UNTIL NEXT ANNUAL REPORT DUE APRIL 1, 2022:

The construction schedule will be determined during April 2021. The project construction is anticipated to begin in May 2021 and continue until completion in the fall of 2021. The LLNRD will continue to coordinate with the project group and monitor contractors to ensure a successful project completion.

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

Reimbursement Claim #1 for \$137,935.46 (60% of eligible costs) was submitted on August 6, 2019. The LLNRD and its partners and WSF have funding obligations towards this project (\$2,040,000 total project costs) under grant award #5195. The final Reimbursement Claim will be submitted after completion of construction on the project, which is anticipated by early 2022.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 5195 WILL BE REALIZED:

From the 5195 WSF Application: Tangible benefits of the project include reduced pumping costs from area groundwater wells and avoided emissions, specifically criteria air contaminants (CAC) and greenhouse gas (GHG) emissions associated with the production of electricity used to power groundwater well pumps. The resulting benefits and energy calculations for each entity were calculated as follows: Irrigation pumping water levels were reduced by 10 feet from 65 feet to 55 feet, ADM pumping water levels were also reduced by 10 feet from 65 feet to 55 feet. The recharge project could save up to 223,580 kilowatt hours per year for a total savings of \$5.7 million over 50 years.

Additionally, this project could provide a minimum of 2,500 acre-feet per year of water recharge to the groundwater decline area southeast of Columbus that would have potential, positive impacts to flows at the confluence of the Loup and Platte Rivers.