

Beneficially Reusing Treated Groundwater at the former Nebraska Ordnance Plant

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A significant and relatively consistent record of public concern regarding the conservation of a groundwater supply critical for local agriculture has been documented for the former Nebraska Ordnance Plant site. The U.S. Army Corps of Engineers is the lead agency for the restoration of this National Priorities List site under the Formerly Used Defense Sites program. The Record of Decision for the site includes the extraction, treatment, and disposal of almost 3,000 gpm of groundwater over a period of several decades. Interest from property owners and the local Natural Resources District that is charged with regulating groundwater supply prompted the Corps of Engineers to consider several strategies for beneficially reusing the treated water. Engineering efforts to manage potential negative impacts on groundwater supply during remediation as well as the characterization of the aquifer as relatively prolific did not substantially alleviate public concern regarding potential groundwater shortages. The use of the following instruments atypical to the CERCLA process were used to evaluate beneficial reuse strategies without sidetracking the remedial progress:

- The formation of a rural water committee which included representatives from the Corps, state and local regulators, local municipalities, the county, and property owners

- The implementation of an active program to solicit public input not required by statute

- The development of rural water feasibility studies

- The development of treated groundwater discharge plans

- The execution of interagency memorandums of agreement

Two feasibility studies were generated, and the alternatives evaluated included the establishment of a rural water district or local distribution system, delivery of water to the Lincoln, Nebraska municipal supply system and/or nearby communities, and the consideration of innovative remedial technologies to reduce the quantity of treated water requiring disposal.

The feasibility studies indicated that the large-scale use of the treated groundwater as a potable water supply is not economically feasible, however, agricultural uses of the treated groundwater have been identified.

Investments in the remediation system will facilitate the use of the water for agricultural purposes such as irrigation and stock watering. The project is currently being constructed, several property owners have expressed interest in the water, and at least one property owner has constructed a center pivot irrigation system to use the water. By adopting a good neighbor attitude and through informal partnering with state, local, and federal entities, the Corps is being a good steward of a very important state natural resource.