

Permit Map Memorandum

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Project: Western Water Use Management Model

Subject: Permit Maps for Irrigated Acreage in the North Platte River, Pumpkin Creek and Lodgepole Creek Basins

Background

In the Western Water Use Management Model (WWUM Model) efforts, permit maps were an important component to the development of ditch service areas. Permit maps reflect an area of land that is permitted to receive irrigation water from a ditch, either currently or historically. Ditch service areas were then used during the irrigated acreage delineation efforts and during the attribution process to assign a surface water structure to each irrigated parcel.

For the North Platte basin, ditch service areas developed for the COHYST effort served as the starting point for the WWUM Model ditch service areas. No ditch service area information was available in the Pumpkin Creek or Lodgepole Creek basins. Therefore, it was necessary to obtain permit maps to refine ditch assignment information in the North Platte basin, and develop historical ditch service areas in the Pumpkin Creek and Lodgepole Creek basins. Permit maps in the North Platte basin were provided by the Nebraska DNR for service areas that needed refinement; permit maps for all service areas in the North Platte basin were not provided. Permit maps for historical service areas in the Pumpkin Creek and Lodgepole Creek basins were provided by the Nebraska DNR and the South Platte NRD, respectively. Note that Pumpkin Creek historical ditches that did not have an electronically available permit map were not acquired due to the difficulty in assessing a service area from a written permit description.

Deliverable

Acquired permit maps were scanned and geo-referenced for their use in ArcGIS. Geo-referencing this information allows permit maps to be accessed, viewed and used with other spatial information. Permit maps for the North Platte River and Pumpkin Creek basins are included on the *NPNRD CD1* and *NPNRD CD2*. *NPNRD CD1* generally includes the final WWUM Model NPNRD service area shapefile; permit maps for Belmont/Bridgeport Irrigation District; and permit maps for the Pumpkin Creek basin, categorized by Banner, Garden and Morrill Counties. *NPNRD CD2* generally includes permit maps for service areas associated with Gering-Fort Laramie, Interstate, Tri-State, and Minatare Canals. The permit maps and final WWUM Model service area shapefile for the South Platte NRD are included on the *SPNRD CD/DVD*.