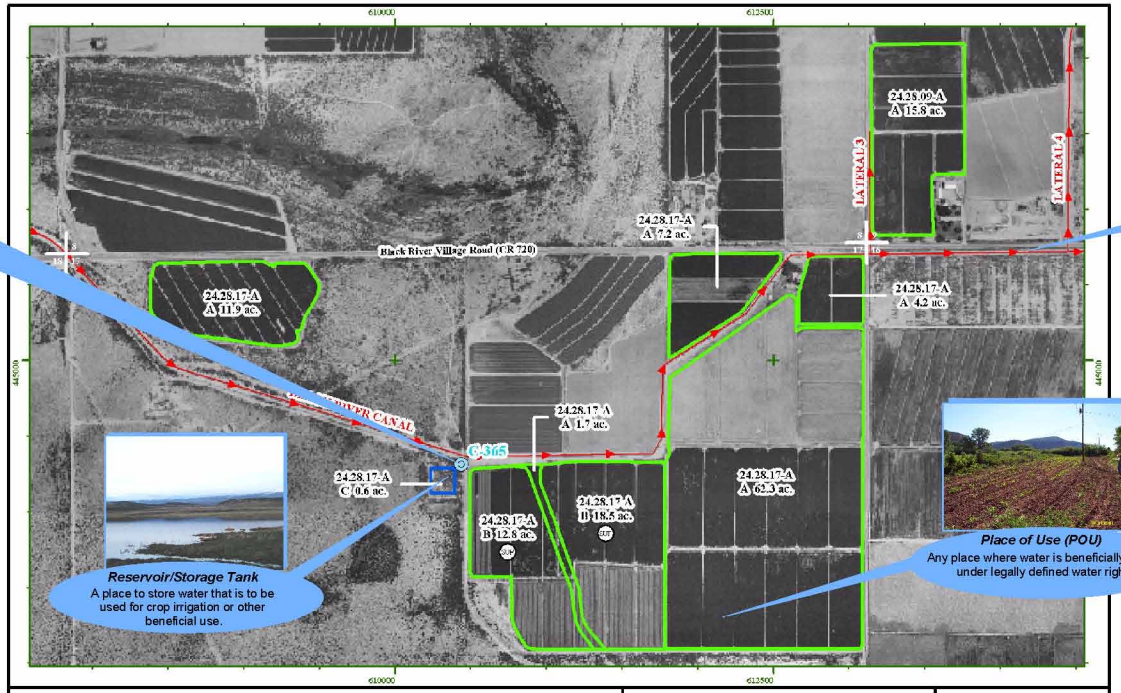
The Anatomy of a Hydrographic Survey

A Hydrographic Survey is a detailed study of water usage in a specific area. The information from this study is used in a court of law to legally determine the right of water users. The State Engineer or a judge orders a Hydrographic Survey of a stream system or groundwater basin.

Point of Diversion (POD)
Any point (well, diversion dam, etc.) at which water is diverted from its course for use in some beneficial application.



Ditch (Acequia)
A structure used to convey water to a tract of land for irrigation purposes.

Place of Use (POU)
Any place where water is beneficially applied under legally defined water rights.

Reservoir/Storage Tank
A place to store water that is to be used for crop irrigation or other beneficial use.

Step 1: Information Collection & Planning

The Office of the State Engineer (OSE) staff review water rights records, obtain digital orthorectified imagery, analyze water uses and verify land ownership records.

Step 2: Field Data Collection

OSE staff field check all water uses and survey the irrigated tracts, POD's, reservoirs, etc. using Global Positioning System (GPS) technology.

Step 3: Owner Interviews

Land owners are interviewed to obtain any additional information concerning water uses and irrigated tract boundaries.

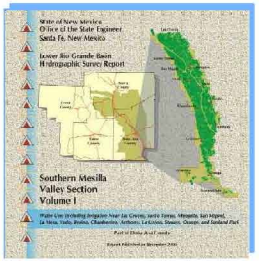
New Mexico Office of the State Engineer
Hydrographic Survey & Mapping Bureau
April, 2007

http://www.ose.state.nm.us

Step 4: Information Processing

OSE staff input and process collected data in the Geographic Information System (GIS) and produce final Hydrographic Survey maps.

Step 5: Publication & Release



A Consumptive Irrigation Requirement (CIR) is calculated based on the crops within the survey area. This and other relevant data and final maps are compiled into a report and sent to legal staff and courts.

Step 6: Litigation

An offer of judgment is sent to each water right owner; owner can accept or reject offer. After resolution, court confirms the agreements reached. Water right owners have the opportunity to challenge water rights of others. Hearings are then held to resolve challenges. A judge issues a final decree defining all water rights in the adjudicated area.