

The Effects of Acequias and Riparian Evapotranspiration on Rio Grande Flow Levels

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Purpose of the Study

The acequias in northern New Mexico provide water for crops and recharge the groundwater supply. During drier months, the increase in groundwater due to the acequias may help recharge the Rio Grande. The researcher will investigate riparian evapotranspiration around the acequias and river near Alcalde, New Mexico, to determine whether a significant amount of groundwater is lost to riparian evapotranspiration, thereby decreasing the return flow to the river.



Study Underway

- A 10km stretch of riparian vegetation will be characterized through aerial photographs and field sampling of randomly selected fixed area plots.
- The researcher will analyze soil samples for bulk density, moisture content, and soil texture.
- From the sampling plots and images, the riparian species composition will be approximated and used to estimate riparian evapotranspiration.



Benefits

- Accurate riparian evapotranspiration rates will contribute to a more accurate estimate of the recharge rate of the Rio Grande near Alcalde.
- This information can be used to determine the benefits of the acequias to the area and help with future management decisions.

Top and Left: Ciara takes field measurements. She received a B.S. in fisheries resources from the University of Idaho in 2004. She will graduate in 2009 and work in natural resources management emphasizing riparian areas.

