

STREAM CHANNEL TRANSMISSION LOSS IN ARID SOUTHWEST U.S.

CLIENT

- Wetland Science Applications, Inc.
- Nat. Center Housing and Environment

SERVICES PROVIDED

- Literature review
- Hydrologic Analysis
- Statistical Modeling
- GIS Modeling

STATUS

Ongoing

PROJECT SUMMARY

Transmission losses (TL) are complicated phenomena that characterize the processes of evapotranspiration and infiltration as water moves down a stream channel. Infiltration-based losses may result from losses in the channel as well as runoff overtopping channel banks and storage in depressions. Such phenomena occur in desert washes and ephemeral streams in arid regions of Arizona and other states in Southwest U.S. Because of the rarity of rainfall events, TL is often difficult to directly measure.

eDD developed an approach to understanding aggregate TL in these regions. Building from a comprehensive literature review, eDD identified previously published and sources for creating new estimates of TL. Using this combined dataset, eDD developed a statistical model to predict TL with volume or peak discharge information on stream flows from an upstream gage. Additional work will refine this statistical model with new information on stream bed particle size distribution and other characteristics.



Images of Arid
Ecosystems and Dry
Streambeds