

Using Remote Sensing to Improve Agricultural Water Management

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Collaborating Agencies

Rio Grande Basin Initiative

Western Pecan Growers Association

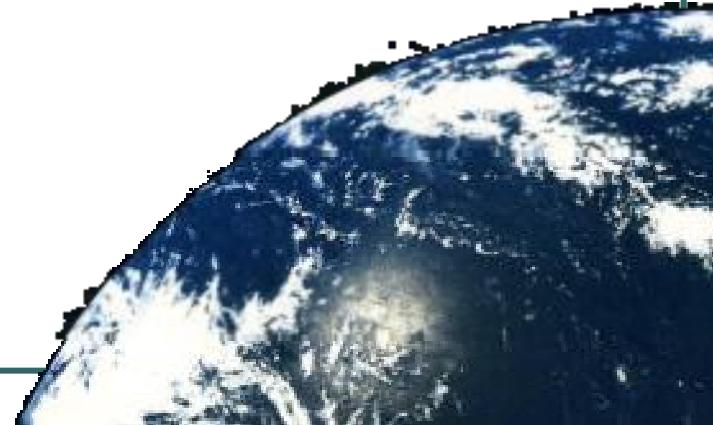
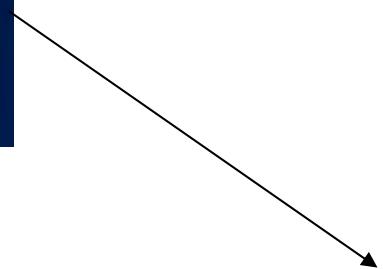
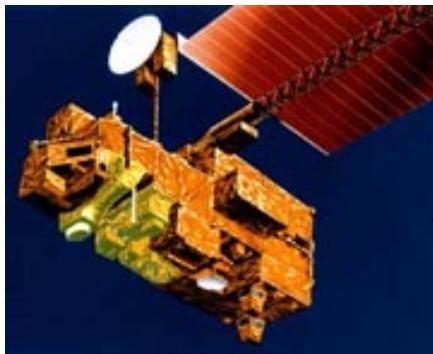
Office of State Engineer

Elephant Butte Irrigation District

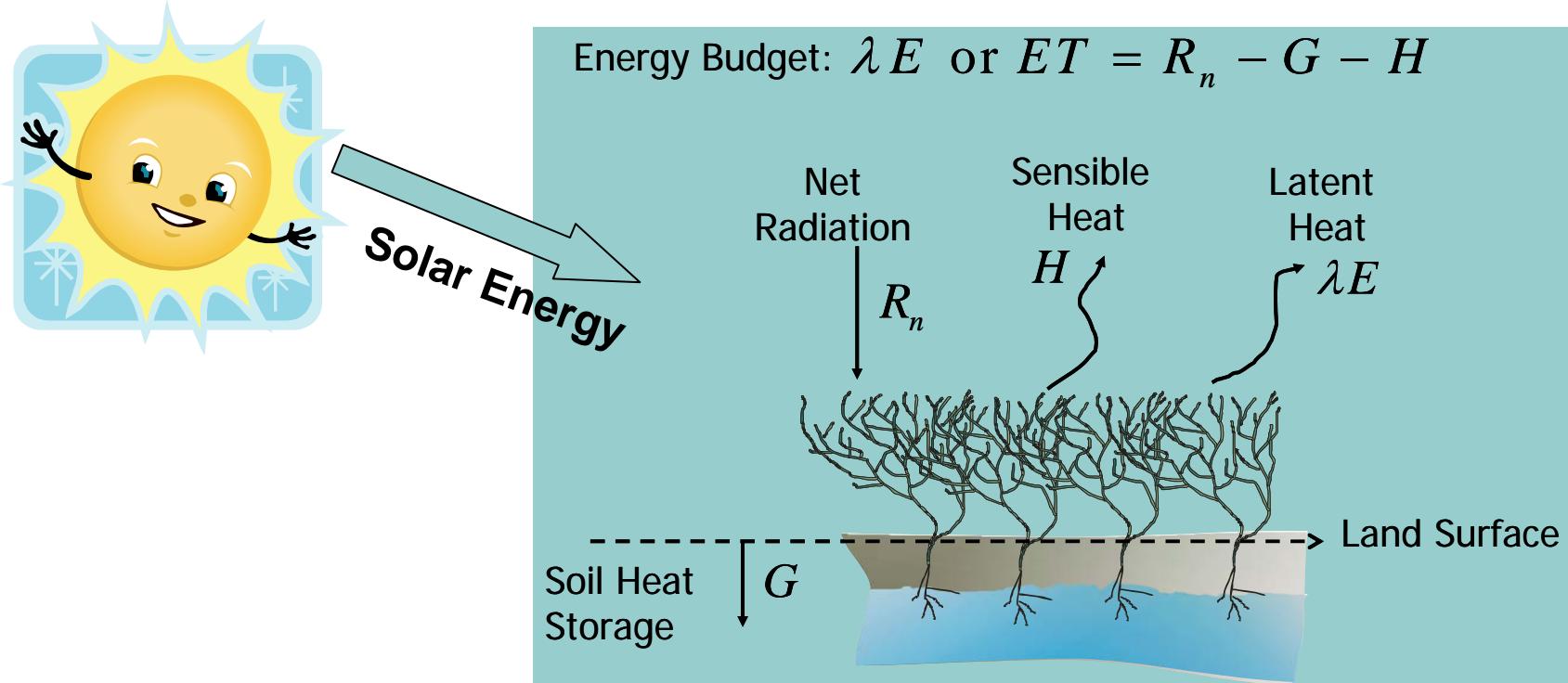
City of Las Cruces

Stahmann Farms

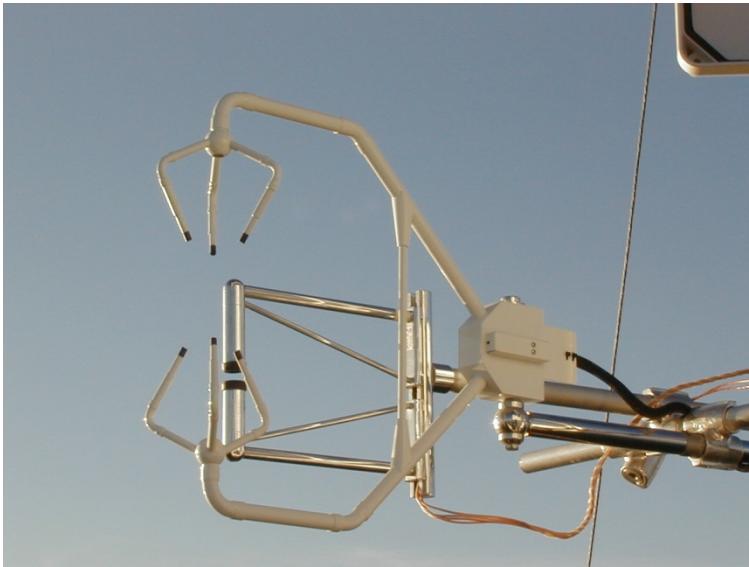
Regional ET Estimation Model (REEM)



Evaporation + Transpiration (ET)



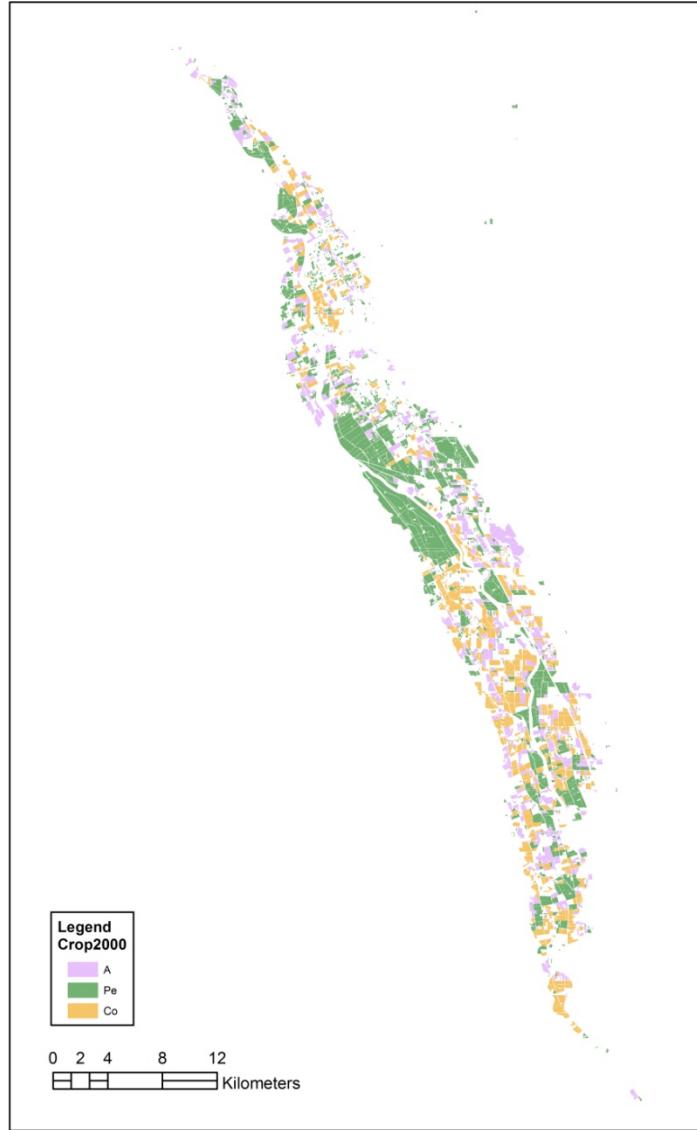
Measuring ET in the Field



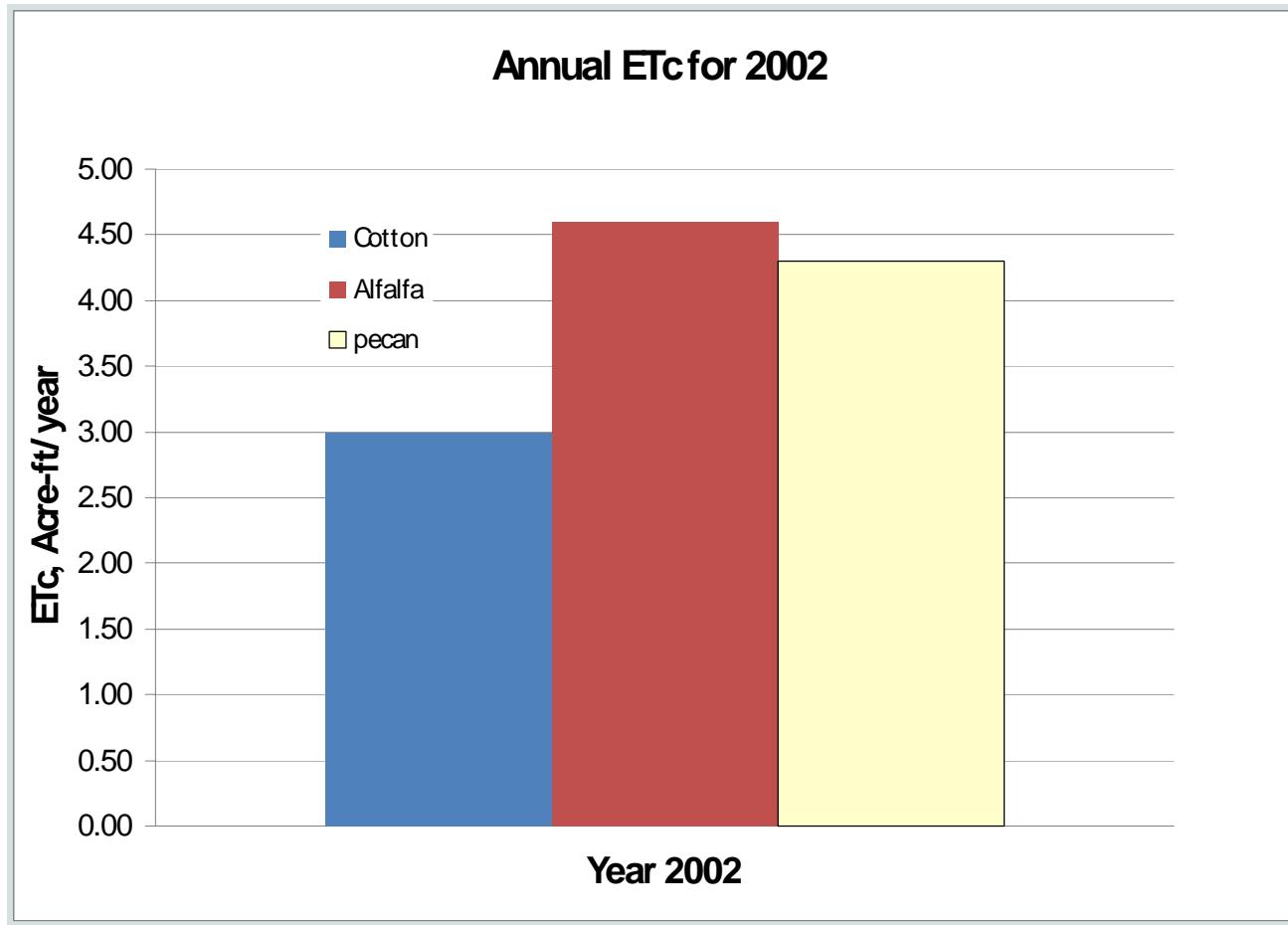
**3-D Sonic Eddy
Covariance
System**



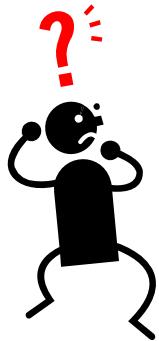
- Crop Survey



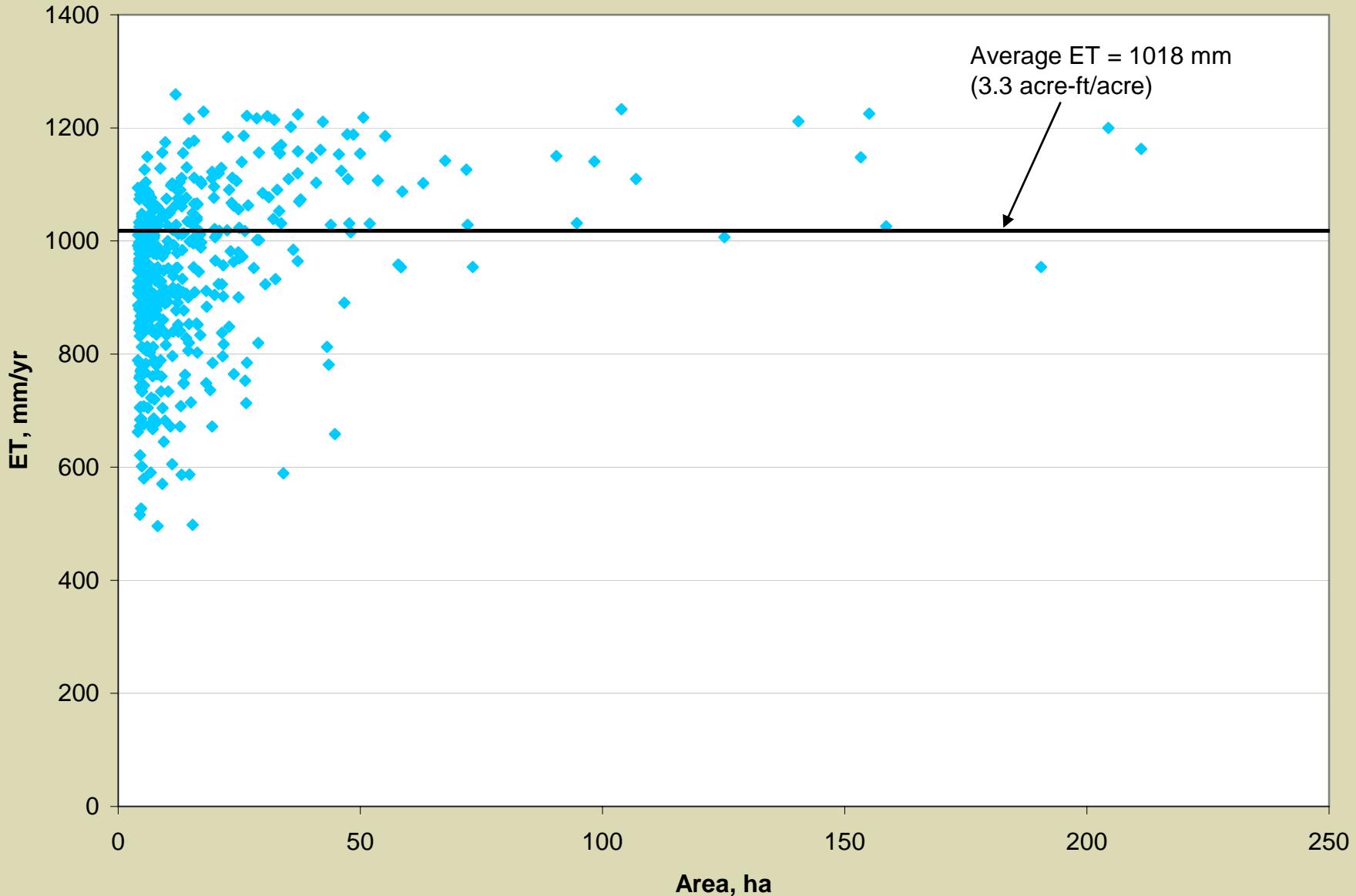
What does theory (books) say?



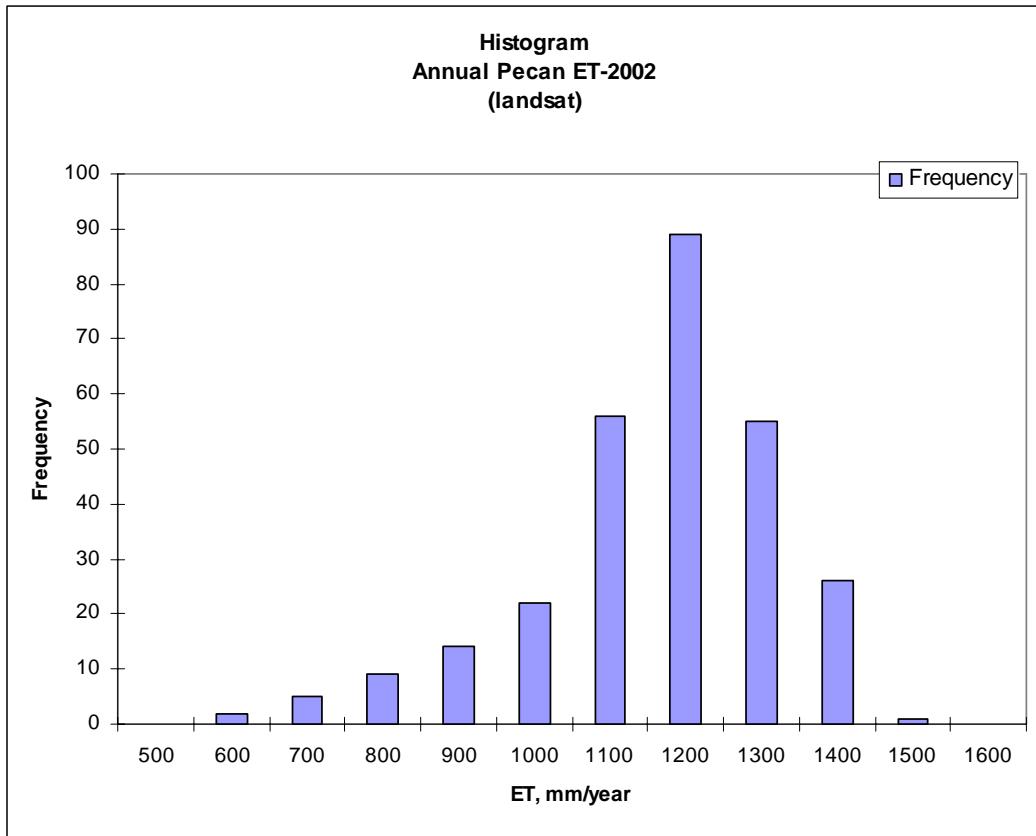
➤ Why Remote Sensing



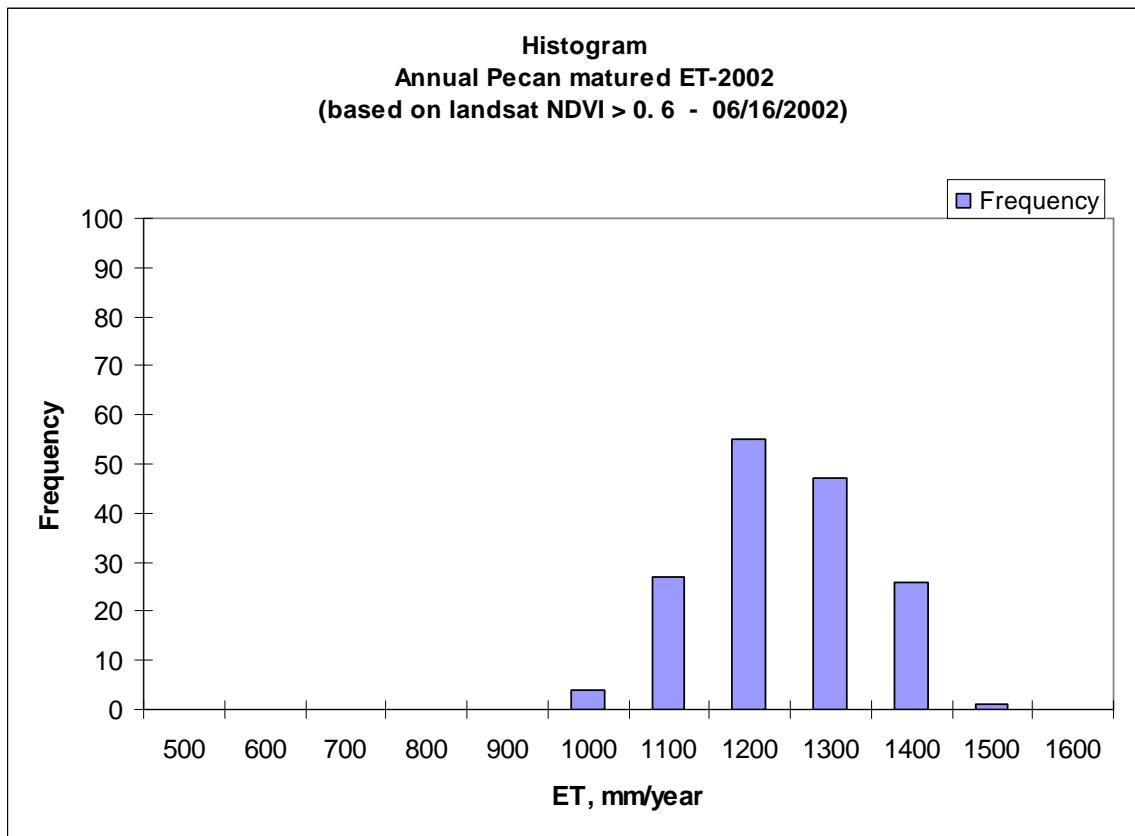
How are we doing in practice ?



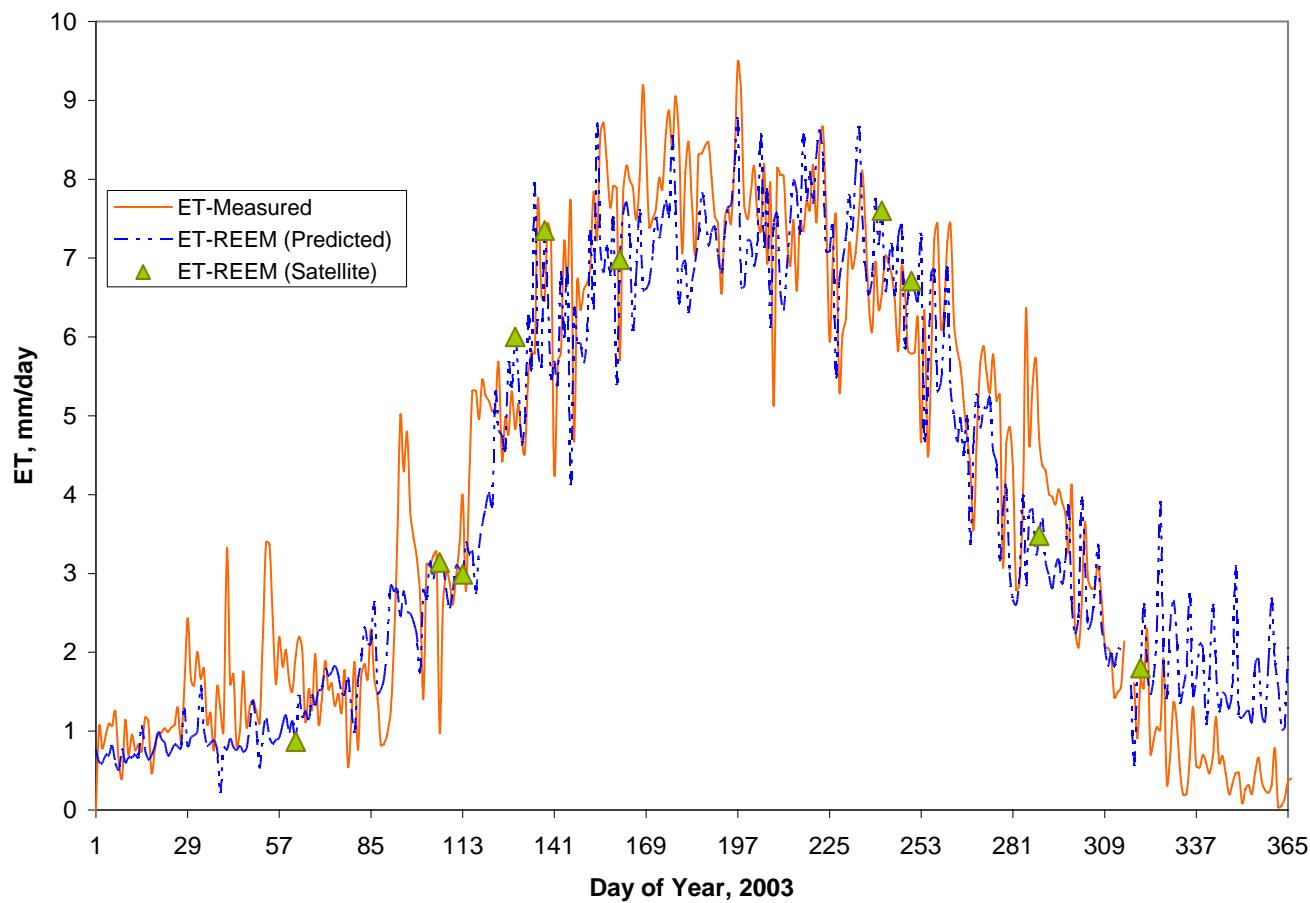
We are normal people

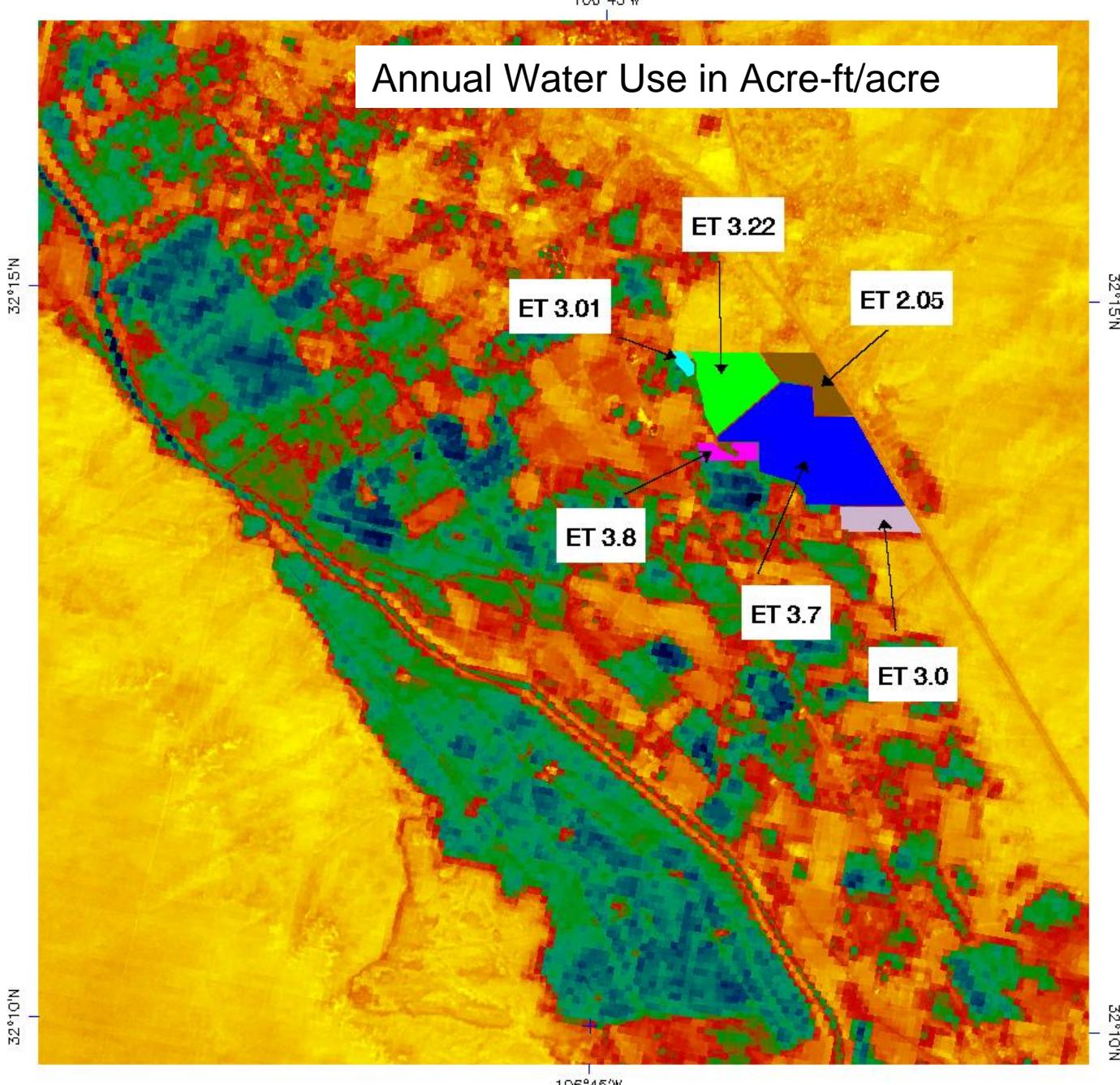


Matured Pecan ET Histogram

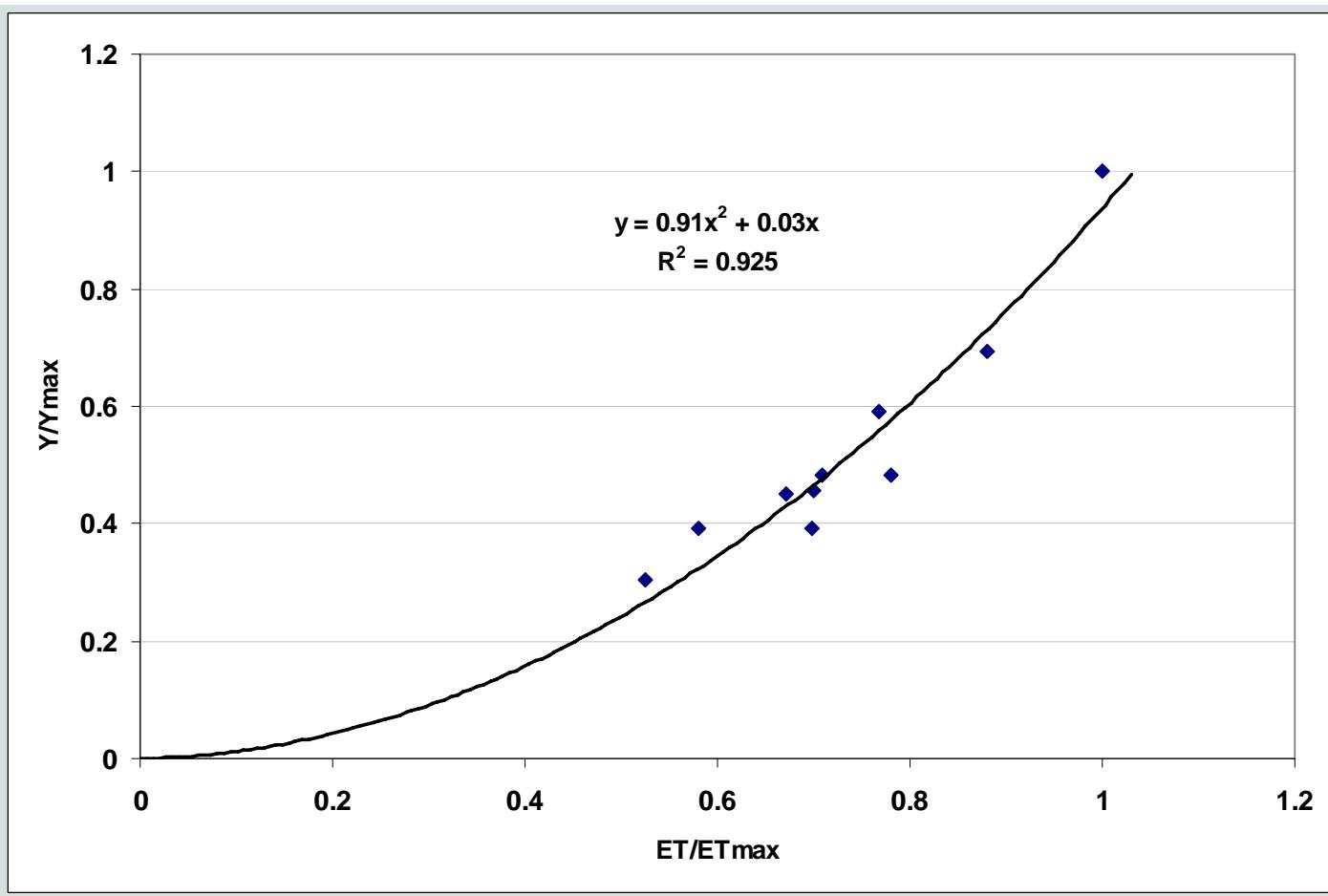


Comparison – Predicted vs. Measured



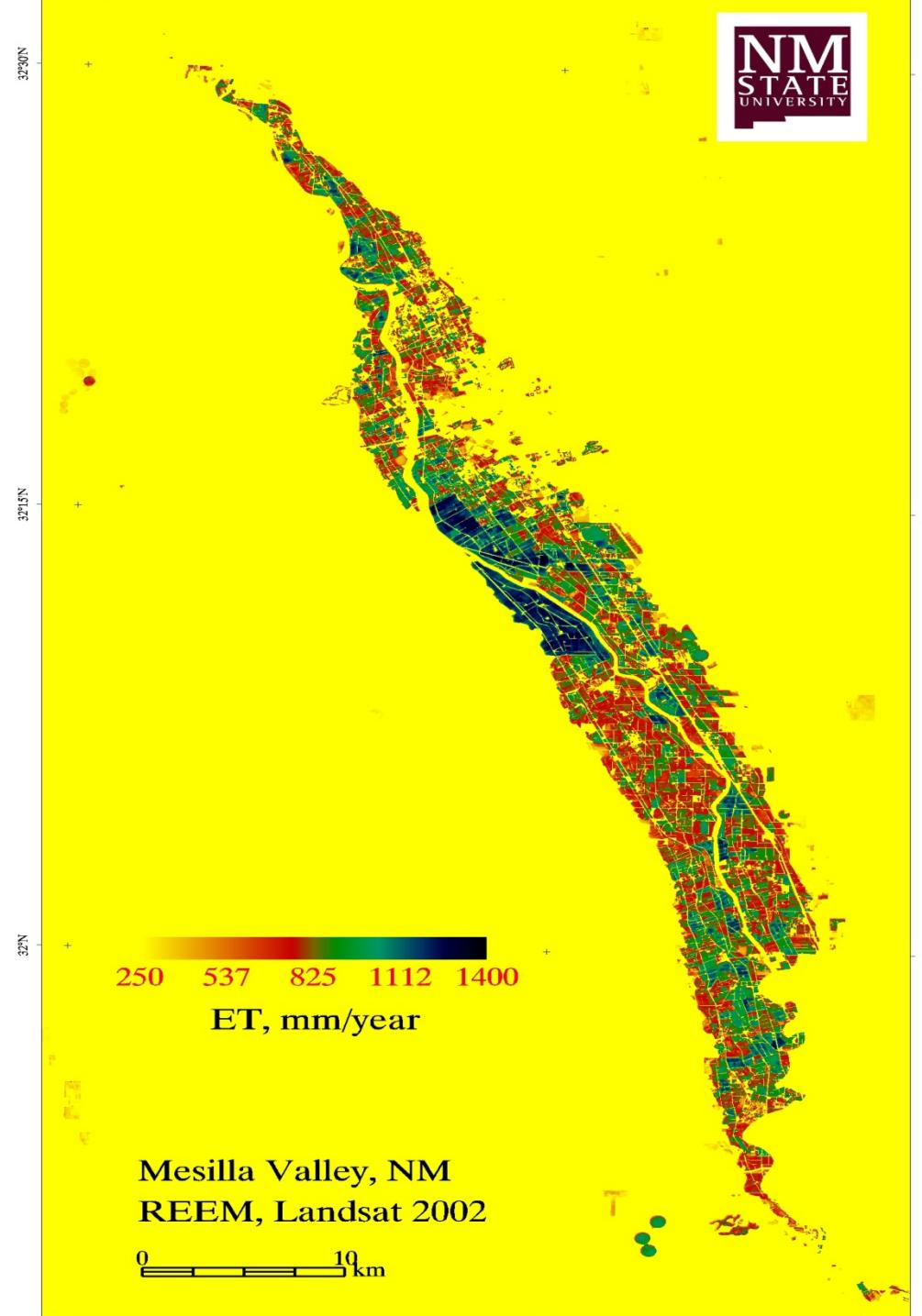


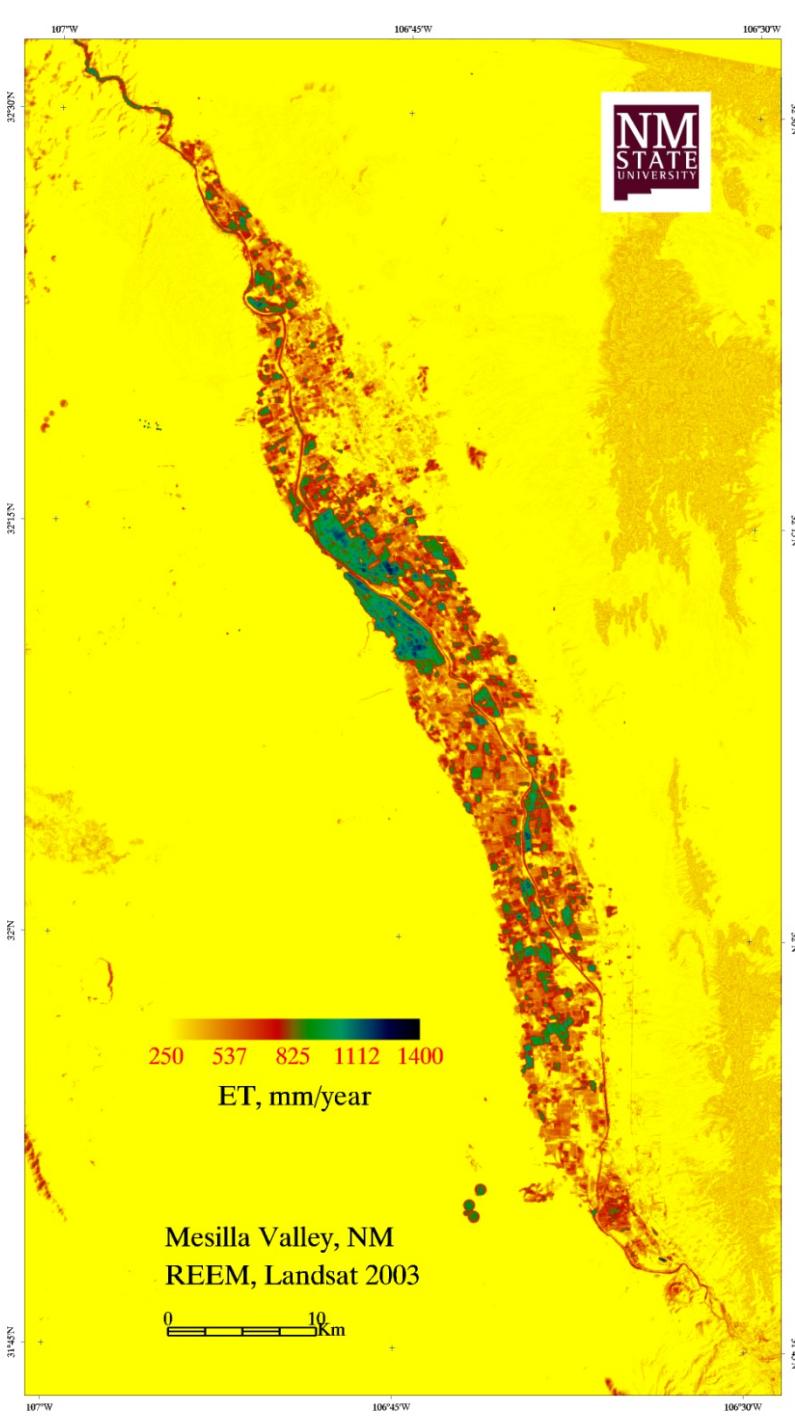
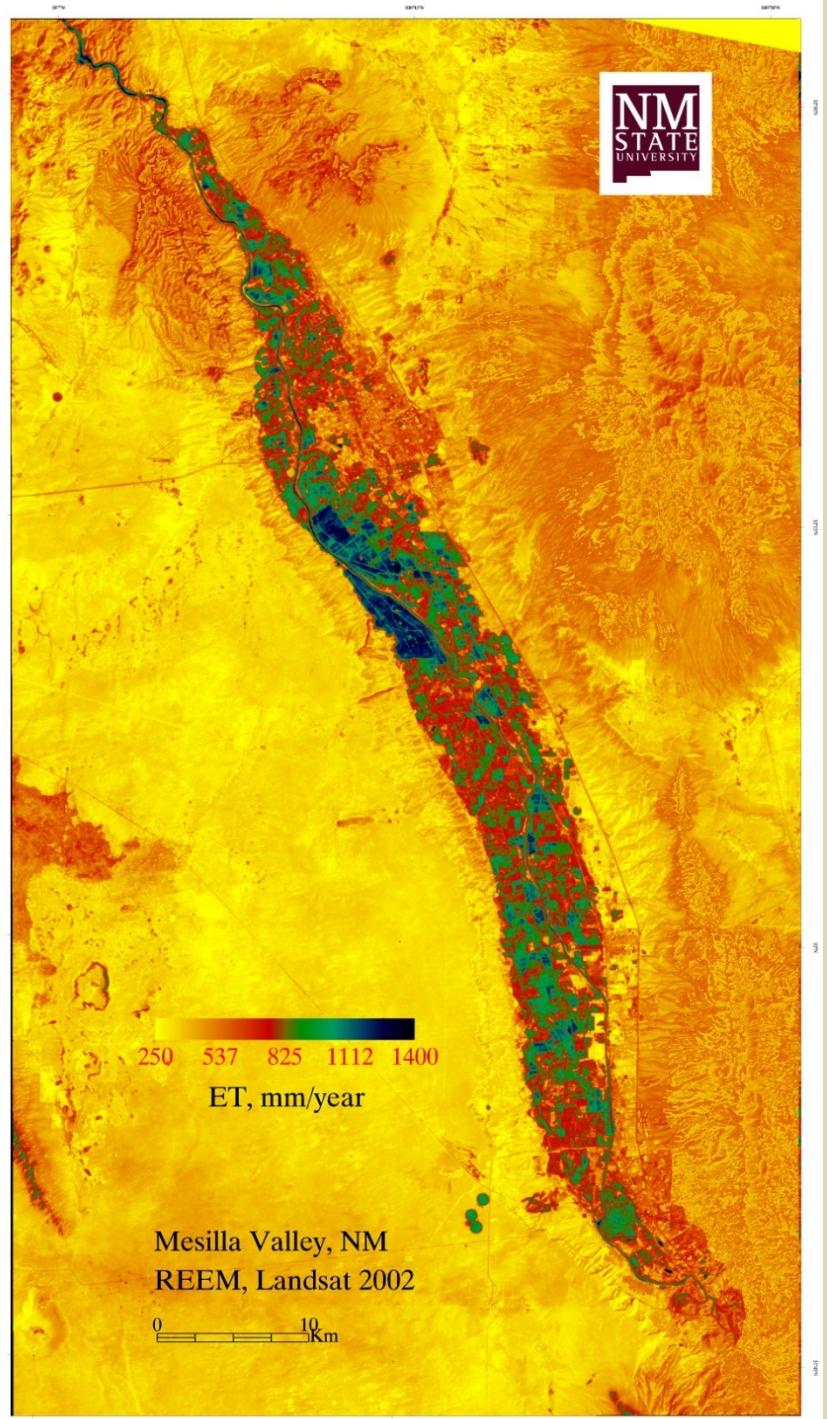
Relative Yield as a function of Relative ET



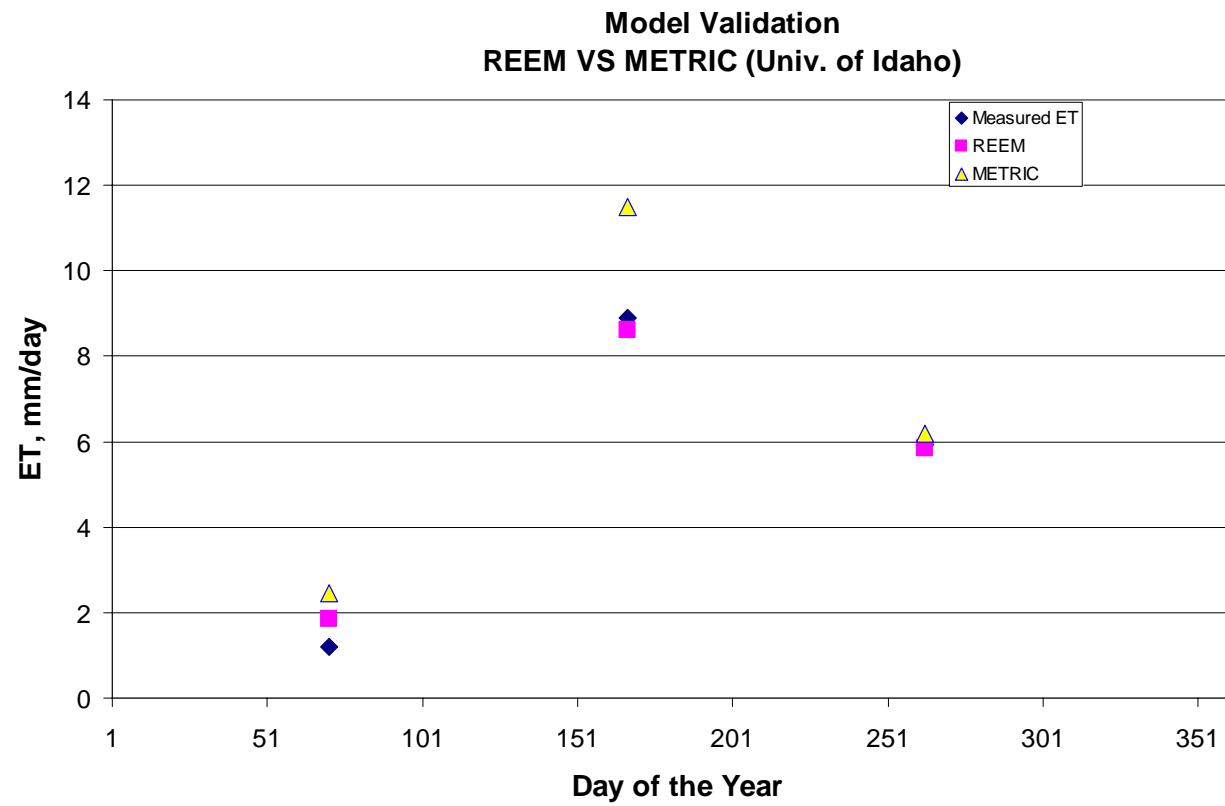
Annual ET
Mesilla Valley
2002

REEM Model





Outside Review by OSE



Plan for Future

- Evaluate Kc and ET for major Agricultural Crops
- Evaluate Economic Return from Agricultural Water Use
- Optimize EBID Operation
- Evaluate On-Farm Efficiencies

The background of the image is a large tree with a dense canopy of yellow autumn leaves. The leaves are bright yellow, with some green and orange tones, and are densely packed on the branches. The tree occupies most of the frame, with its branches reaching across the center.

Thank You

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