Overview: Prototype Markets, Ecosystem Valuation, Urban Water Demand, and Bringing it Together -- Sandia Toolkit DSS and San Pedro DSS

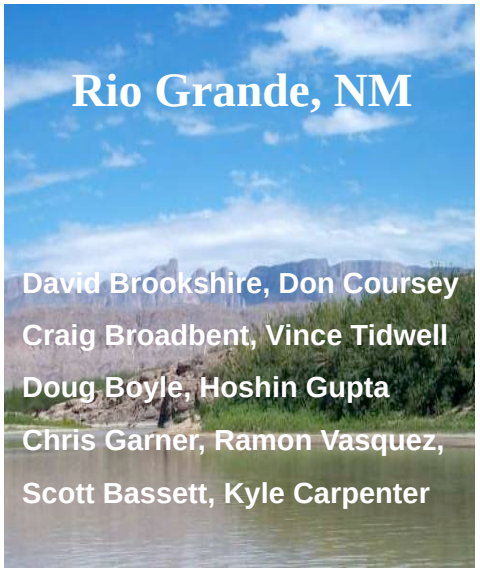
by

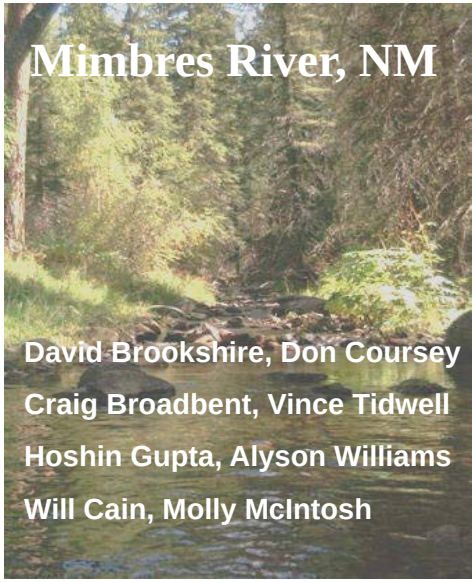
et al

(there are many of us --note the box on each project)

Designing Prototype Water Leasing Markets: Rio Grande and Mimbres, NM

Stage	Description	Current Status	Result
1	Stylized Proof of Concept	Completed 2005	Efficient Prices Welfare Gains Robust Trading
2	Enhanced Farming Decisions	Completed 2006	Efficient Prices Solved an Endogenous Market Equilibrium Robust Trading
3	Futures and Climatic Uncertainty	Completed 2008	Efficient Prices-Temporal Options Reduced Price Variance Welfare Gains Robust Trading
4	Third Party Effects	Running simulations Complete 2009	Stay Tuned (Doug Boyle Presentation)
5	Mimbres Café Style – Real Time Market in the Upper Mimbres Basin	Prototype experiments being run next week; meet with stakeholders late fall 2008 for implementation Complete 2008	Understanding "Stacking", pre and post call incentives and other trading options (e.g. two crops, etc.) as requested by stakeholders Stay tuned (Vince Tidwell presentation)
6	Scenario Analysis	Stage 4 Framework Long Term Anthropogenic (Pop, Urban Patterns) and Climatic Scenarios Complete 2009	Stay Tuned (next year)





Integrated Modeling and Ecosystem Valuation: San Pedro and Rio Grande

- Implementation
  - Rio Grande science effort (stay tuned (Arriana Brand)
  - DC/CVM San Pedro “Live” November 2008
  - Final Focus Groups Choice/ Coarse San Pedro January 2009
  - All Choice San Pedro “Live” Spring 2009
  - All Rio Grande “Live” Summer 2009
  - Available for introduction to DSS (San Pedro and Sandia Toolbox) Fall 2009

		Traditional Survey	Coarse Survey	Fine Survey
Choice Questions	San Pedro	No spatial vegetation and bird information	Spatial vegetation and bird information	Spatial vegetation and bird information, plus the ability to drill down by reach for additional information
Choice Questions	Rio Grande		Spatial vegetation and bird information	
DC / CVM	San Pedro		Policy attribute chosen by scientist	
DC / CVM	Rio Grande		Policy attribute chosen by scientist	

Internet Beta Versions

Drafted

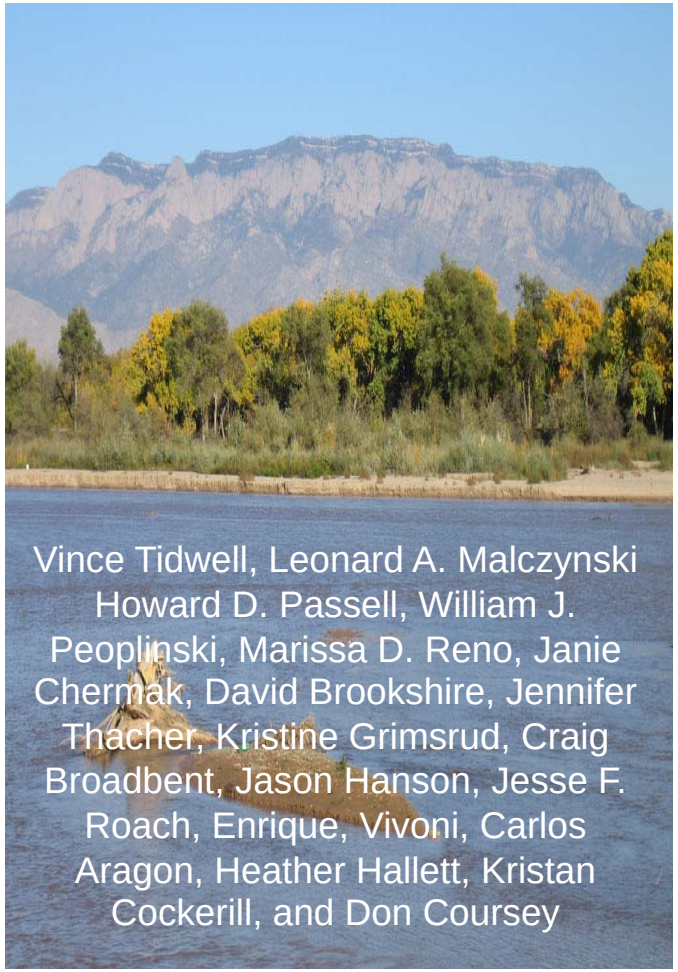
Urban Water Demand Price Elasticity

- Issue:
  - Evaluating consumer response to unobserved price levels for urban water use
- Experimental Design:
  - Base experiment on participant's historical water use, household budget
  - Water choices across activities as price increases ($1.24 per unit to over $20 per unit)
  - Ran sessions over summer 2008
  - Over 180 participants
- Status:
  - Analyzing results
  - Available for DSS (San Pedro and Sandia toolbox) Summer 2009

Sandia Toolbox (DSS)

(Kevin Lansey covered San Pedro DSS)

- Purpose:
  - Integrate hydrologic, engineering, institutional and behavioral models for the Rio Grande, NM
  - Builds on earlier Sandia Models
  - Key: integrate behavioral components
- Introduce Behavioral Components (demand):
  - Residential (Urban water demand experiments)
  - Industrial (Econometric demand estimation)
  - Agricultural (Water production functions)
  - Environmental services (Bird surveys)
- Status:
  - Finish programming behavioral relationships 2009
  - Run scenarios



Thank You