Watershed Protection in the Leon River
Case Study: Facilitating Action

Texas State Soil & Water Conservation Board

Brazos River Authority

Parsons

January 25, 2011
Agenda

- Background
- Challenges
- Stakeholder Perspectives
- Outcomes
Leon River Watershed

- ~97,000 people
- Central Texas - 3 rural counties
- Watershed 1,375 square miles
- Leon River is 190 miles
Project Area – Impairments

Bacteria Impairments

Area
- Leon River Below Proctor Lake (1996)
- Resley Creek (2004)
- South Leon River (2006)
- Pecan Creek (2006)
- Indian Creek (2006)
- Walnut Creek (2006)

Subwatersheds

Geometric Mean for E-coli

- 0 - 126
- 126.01 - 206
- 206.01 and Above
- No Data
Public Participation: Problems

- Citizen Concerns
  - Questionable benefits
  - High costs and time commitments
  - No trust in people, process, science

- Decision making responsibility limited
  - No real contribution to decisions
  - Unequal contribution to decision making
  - Veto
  - No local knowledge

- Regimented institutional channels

- Uncertain environmental benefit
Challenges

- E. coli Standard vs. Fecal coliform model
- Nutrient concerns
- Lack of health data to confirm ambient water quality is a problem
- Re-evaluation of WQS for contact recreation
- Financial resources
- Participation vs Input: Motivation and incentives
- Rural counties
Organizational Structure

1. FOCUS GROUPS

- Farm/Ranch: ~18
- Dairy: ~12
- Large Lot Landowners: ~22
- County Government: ~13
- Municipality: ~9

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2. WORKING COMMITTEE

- Farm/Ranch Representative
- Dairy Representative
- Large Lot Landowners Representative
- County Government Representative
- Municipality Representative

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3. TOWN HALL MEETINGS

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Applied Concepts

- Relied on establishing a narrative
  - Gained knowledge about each other
  - Interviewed each group to understand their issues, vision, and metrics for progress
  - Helped people understand each others' interests (not positions)
  - Provided freedom to express themselves equally and freely
- People highlighted their interest and worked on goals rather than positions
- Held government sessions in parallel
- Stakeholders always wish to avoid harm and share similar goals
Our Components of a Rapid Consensus Process

- Listen, Listen, Listen
- Rapid awareness of issues
- No coercion in sessions
- Design a solution derived from narrative
- Built a DSS for use by stakeholders to account for cost, environmental benefit, and social acceptance
  - built for the problem – to bracket uncertainty
  - bridges the gap between modeling and practical strategies
- Outcomes different but still advanced a cohesive plan
Collaborative Design Process

Goal: Turn control of the modeling tools over to the stakeholders

Forest

Ranchers

Municipal

CAFO

Farm
Setting Goals

E. coli Concentration (cfu/100ml)

Cumulative Investment (dollars)

No projects

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206 goal

126-full contact

Uncertainty ban
Stakeholder Guided Options

Subwatersheds

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Load Reduction for Subwatershed 40

Cumulative Reduction of E. coli Load (10^6 orgs/day)

- MDL at 126 org/100 mL
- MDL at 206 org/100 mL
- WWTF improvements
- Grease trap ordinance
- SSO Plan
- Address failing OSSFs
- Feral hog control
- Deer population management
- Alternative watering sources
- Dead animal disposal
- WQMPs
- WAF Manure management
- Strategies for R/C/I
- Not Addressed
- Not Available for Reduction

Outcome Examples
Outcomes

- Participation vs. Input
- Re-engaged stakeholders to undertake responsibility developing options
- Show how to use science (despite uncertainty) in a consensus building process
- Preparation of a draft WPP that has broad-based local support
Discussion

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1. How do you achieve acceptance that information used is based on the best available science, data, and evaluation methods?

2. What hurdles are stakeholders most concerned about at the outset of water quality improvement efforts?

3. How can you get feedback during the course of the project on whether the stakeholders are supportive of the process?