Institutional Issues In North America Water Management

Focus on Western States and Other Water Scarce Areas

Allocation Systems

- Federal
  - U.S. Army Corps of Engineers (Flood Control)
  - U.S. Bureau of Reclamation (Water Supply)
  - Federal Law

  - State Law
    - Riparian – east of the Mississippi River
    - Appropriation System – Western States
    - Others (combined) – California
    - Group

Federal Level

- Reservoirs Operations

  * Operating Rules
    - Flood Control
    - Water Supply
    - Multi-Purpose Facilities

*** Potential for conflict among water users

State Level

- Water Laws – systematic allocation
- Enforcement – State Engineer's Office
- Water Courts – obtaining water rights
- Differences between Surface and Groundwater
- Interstate Allocations
- Changes and Adaptability only through legal processes (historically)

"Rule-based Policies

- Federal Level – Congressional Authorization, Interstate Compacts, Federal Lands

- State Level – Water Law, water rights, and water court, inter-governmental agreements, temporary water usage ("trading), water transfers (change in use)

Water Transfers

- Transfer of Water from one type of use to another. Agricultural to Municipal
- Transfers create water markets
  - Buying and selling of water rights – rights not tied to the land
  - A water right is a property right that can be bought and sold, moved and reused
- Water Pricing – willing buyer and willing seller
- Transfer of water rights cannot "injure" other water rights (Water Court)

Water Court Issues

- Historical Use
- Proposed Use (type and place)
- Amount and timing of water right
  - Consumptive Use
  - Return flows
  - Protect other water rights

Ease of Altering Allocation Systems

- Federal Level – Change congressional authorization, amend interstate compacts, amend Federal law
- State Level – amend state water law, work within "Federal" constraints and state water courts
- "Where is the flexibility?"

Stakeholder Cooperation

- Intergovernmental Agreements
- Local and Regional Water Management Plans
- Stakeholder Cooperative Agreements
  1. Decrease conflict between user groups
  2. Optimize water use efficiency
  3. Lessen the need for institutional approvals

Use of Models

- Identification of Goals and Objectives
  - Social Tolerance and Desires
  - Economic Assessment
  - Stakeholder “buy-in”

- Legal and Technical Inputs
  - Engineering issues
  - Institutional constraints
  - Legal framework
  - Water Management (reservoir operating principles, drought planning

Types of Models

- Technical
- Legal and Institutional
- Policy

- Integration
- Cooperation
- Implementation