

TUC Institutional Options Study



DISCUSSION ON FUNCTIONS

ACF Stakeholders
Governing Board Meeting:
Cordele, GA
December 13, 2012

Education

- A function of all but 2 of the organizations interviewed
- Includes dissemination of information to inform public & stakeholders
- May motivate public to become more involved in water issues

Education

- Examples from other basins
 - MWDSC: Water Forum provides grants to local university for research, develops & tests curricula on water issues for primary & secondary schools
 - SRBC: produces information sheets & distributes through local media
 - CRT: sponsors conferences & stakeholder meetings focused on water issues in basin

Data Acquisition, Coordination, and Dissemination

- Widespread among organizations interviewed
 - Cited by some as critical to success & a main strength
- Impacts almost every other function
 - Adds weight to final product whether recommendation or decision
- Type of data collected depends on scope of institution

Data Acquisition, Coordination, and Dissemination

- Examples from other basins
 - CRT: rainfall & snowpack data used to plan for hydropower & prevent flooding
 - ICPRB: chemical & biological monitoring of water quality
 - MDBA: Sustainable Rivers Audit used to inform basin plans; data made publicly available
- ACF Examples
 - Jones Ecological Center, WaterSMART, SWMP/IFA

Water Conservation

- Can be regulatory or non-regulatory
 - Information based approaches: educating public
 - Regulatory approaches: mandating conservation measures
 - Financial approaches: subsidize or fund projects to improve efficiency or reduce leaks

Water Conservation

- Examples from other basins
 - MWDSC: provides funds to utility companies to promote conservation practices & funds to residents for installation of water-efficient devices (\$310 million since 1990)

Agricultural Practices

- May affect both quality & quantity
- Different approaches:
 - Education & technical extension
 - Funding for efficiency measures
 - Issuing withdrawal permits & implementing water shortage plans

Agricultural Practices

- Examples from other basins
 - ORSANCO: studies impacts of agriculture on water quality
 - CBP: uses local media outlets to educate public, obtains grants to implement BMPs, considering a nutrient credit market
 - NWPCC: funds efficient irrigation projects
 - SFWMD: regulates withdrawals, issues permits, & implements water shortage plans

Recreation

- Active engagement with recreation not widespread among interviewed organizations, but indirect engagement
 - Water quality: Regulating water quality may benefit recreation
 - Water quantity: Reservoir levels & releases may affect recreation opportunities
- Possible approaches
 - Providing environmental flows to support nurseries
 - Stocking recreationally important fish
 - Purchasing land or easements
 - Building & maintaining facilities

Recreation

- Examples from other basins
 - SFWMD: land acquisition program (in past), owns over 1.2 million acres open for public use
 - TVA: provides access to 80 sites on almost 300,000 acres of land, provides information on best areas for fishing

Flood Control

- Many approaches
 - Mapping floodplains & watersheds
 - Monitoring flows & issuing public warnings
 - Affecting land use patterns to minimize risk (buyouts & appraisals)
 - Planning/construction/maintenance of infrastructure

Flood Control

- Examples from other basins
 - UMRBA: flood risk management through land appraisals
 - DRBC: recent collaboration with interstate-federal task force focusing on stormwater management, reservoir control, & flood warning management
 - GoMA: flood forecast center
 - SRBC: warning system that promotes collaboration between local weather stations & USGS

Restoration

- May involve entire ecosystems or specific species
- Variety of approaches approaches
 - Creation & review of data
 - Providing grants for & collaborating with other agencies/groups with expertise
 - Conducting restoration projects with in-house resources

Restoration

- Examples from other basins
 - CRB: modifies dam operations based on biological opinions for salmon
 - MWDSC: provides seed money for new restoration organizations, engages in habitat conservation in some areas
 - SFWMD: collaboration with Corps & other agencies to restore Everglades

Planning

- Widespread among organizations interviewed
- Scope of planning depends on organization's mission
- Can be used to accomplish institution-level goals (e.g. comprehensive water quality or allocation planning) & to address specific issues (e.g. droughts or floods)

Planning

- Examples from other basins
 - Many organizations develop & enforce comprehensive plans (e.g. DRBC, SRBC, MDBA, TRPA)
 - ICPRB: plans for withdrawals & reservoir releases during droughts

Regulatory Review

- May focus on quantity, quality, or a combination of both
- Different approaches:
 - Advisory role in reviewing & commenting on permits
 - Establishment of standards & issuing permits

Regulatory Review

- Examples from other basins
 - DRBC: established TMDLs in 1960s before EPA existed & before mandated by CWA
 - GLC: reviews & comments on permitting decisions made by EPA
 - Many organizations issue water use or effluent discharge permits (e.g. DRBC, SRBC, TVA, SFWMD, TRPA)

Ecological Flows

- An emerging & complicated topic
 - Most organizations made before CWA & ESA, so not on radar in creation
 - Defining flow requirements & flow-ecology relationships a developing science
 - Precedence for providing minimum flows, variable flows more difficult
- May involve data generation, flow prescription recommendations, & modification of dam operations

Ecological Flows

- Examples from other basins
 - MDBA: The Living Murray program, stores & delivers water for environment at certain sites, monitoring of ecological response & adaptive management, attempts to buyback water for environment in over-allocated basins

Hydropower

- Not many organizations that produce & sell hydropower
 - Generally under purview of federal & state agencies (e.g. Army Corps of Engineers) & private companies
 - More often indirect effects on power companies: implementing environmental flows, providing minimum flows for water quality & endangered species

Hydropower

- Examples from other basins
 - TVA: can build & operate hydropower facilities
 - CRT: created to maximize hydropower generation & minimize flooding
 - ORSANCO & TRPA: review permits for new hydropower facilities to see if adverse water quality effects
 - NWPCC: produces hydropower plans & oversees impacts of hydropower, but doesn't establish or maintain hydropower projects

Water Quality

- A scope rather than a function
 - Many organizations interviewed address a combination of both quantity & quality
- Wide range of approaches taken by interviewees
 - Regulatory: setting & enforcing standards
 - Non-regulatory & Market based: subsidizing or funding upgrades & BMPs for point sources & non-point sources, nutrient credit trading, education & technical extension

Water Quality

- Examples from other basins
 - Only quality: TRPA has regulatory control of lake quality that includes developing & implementing land development codes as well as TMDL/NPDES
 - Combination:
 - ORSANCO & ICPRB initially focused on quantity now also addressing quantity
 - MWDSC initially quantity now also quality
 - Importance of addressing both expressed by multiple interviewees