TALKING PAPER

SOME THOUGHTS ABOUT WATER

Water is essential for life and economic stability! Factors that contribute to the complexity of managing water include the following:

1. Varied uses (all competing for available water):
* Domestic
* Health and safety
* Agriculture
* Industrial
* Recreation
* Municipal
1. Exponential population growth threatens to outstrip availability – both surface water and ground water
* Water supply locations don’t match demand locations
* Small communities/rural areas resent large metropolitan speculation over their water.
* Sustainability (recharge = discharge); how do we ensure a sustainable supply of water?
* At what cost?
* Water is a renewable resource, but it is also finite.
* There is no new water. Will economic institutions adjust to this?
1. The water/energy interface: we need water to produce energy – we need energy to produce, treat, & transport water.
2. Conjunctive characteristics: surface water and ground water often interact; this must be taken into account.
3. Environmental concerns
4. Water quality
5. Many alternatives exist regarding how to supply water in the future. Among these are:
* Conservation
* Rainwater harvesting
* Reuse/recycling: “gray” water, waste water, and storm flow
* Surface reservoirs
* Underground aquifers
* Desalination
* Artificial aquifer recharge; aquifer storage and recovery
1. Evaluation of alternatives
* Must be thorough; must be long-term rather than short-term; must identify unintended consequences of growth
* Stakeholders must be identified as must impact of the project on stakeholders
* Need reliable technical, scientific, economic data
* Objective analysis requires use of cost-benefit analysis
* Must identify and publicly reveal who benefits & who pays
* Property rights considerations
1. Decision making
* Who makes decisions? Basis for decisions?
* How to decide among competing demands for water?

1. Other “confounding” variables
* Capital costs plus annual operating costs (including maintenance of water distribution systems, pumps, waste water treatment)
* Who should pay for the various alternatives? User pay? State pay?
* Should current users pay or future users who will benefit?
* How can population growth & development be controlled in the face of non-availability of water? Local/regional/state jurisdictions? Is expansionist growth always a good thing?
* Who pays for conservation? Consumer? Water supplier? Who decides? Use of incentives?
* Water allocation decisions: Who decides? Basis for decisions?
* Role of Water Conservation Districts? Regional planners?
* Should allocation be on basis of priority of use and sustainability?
* Subsidies: should they be used? Why? For whom?
* Legal issues: Who owns the water?
* Authority to establish rate structure?
* Role of the Texas legislature? TWDB? TCEQ? WCDs?

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