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:

A. Varied uses (all competing for available water):

- Domestic
- Health and safety
- Agriculture
- Industrial
- Recreation
- Municipal

B. 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?

C. The water/energy interface: we need water to produce energy – we need energy to produce, treat, & transport water.

D. Conjunctive characteristics: surface water and ground water often interact; this must be taken into account.

E. Environmental concerns

F. Water quality

G. 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

H. 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

I. Decision making

- Who makes decisions? Basis for decisions?
- How to decide among competing demands for water?

J. 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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