

# What is a Sustainable Water Future for Us?

## Themes from Public Comments to the City / County Water & Wastewater Study Oversight Committee

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### *Report Outline*

#### **Preface**

As part of its work on the Water and Wastewater Study, the Oversight Committee invited the public to present their thoughts on water sustainability in the Tucson Region. Two public meetings were held (October 22 and 29, 2008) to collect comments and written statements were invited until November 7. The authors recorded the oral comments at the two meetings and reviewed the written statements, and have organized them into key themes<sup>1</sup>. Note that comments within themes are not always consistent, and sometimes are diametrically opposing.

The themes are presented in four categories – Overarching Principles, Planning and Decision Making Principles, Policy Recommendations and Observations. The "Overarching Principles" group encompasses definitions of sustainability and broad judgments and philosophical beliefs that were proposed to guide the development of water plans and policies in the Region. The "Planning and Decision Making" category focuses on who should be involved in developing plans and policies and how they should be developed. "Policy Recommendations" are suggestions about specific policies that should be adopted. "Observations" include other comments that did not fit comfortably in one of the other categories.

#### **Overarching Principles**

##### *Definitions and use of "sustainability"*

- Sustainability is the ability to sustain.
- Sustainability means living within our means (like using income rather than the invested capital).
- Sustainability means living with our means and preserving for future generations.
- Sustainability means living with our local resources limits, thinking of others, thinking of the future....thinking!
- Don't take out more than nature puts in.
- Achieving sustainability involves tradeoffs.
- Strive for healthy landscapes and sustainable communities.

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<sup>1</sup> This outline reflects commentary at the two public meetings. The report will also include written comments submitted to the Committee.

- Sustainability should not just focus on the environment.
- Environmental concerns must be included.
- Sustainable pumping takes into account environmental needs.
- Sustainability should include quality of life – clean, healthy potable water.
- Sustainability means functioning without non-renewable resources.
- We are all fellow travelers.

*Consider the problem at various scales*

- Be cognizant of climate change.
- Water policies should help solve our global climate change problem, e.g., minimize energy consumption and greenhouse gas emissions.
- Develop policies that address personal responsibility.
- Think about regional, basin and national scales.

*Maintain a long-term vision*

- Human habitation of earth is exceedingly short
- Move away from "pay-as-you-go" approach.
- Plan for long-term future as well as for the next few decades.

*Focus on our region and understand its inherent constraints*

- We live in a water-challenged desert environment.
- Strive for local and regional balance since we have cheaper and more sensible sources.
- Regional supplies should satisfy regional needs.
- Don't draw supplies from one ecosystem to satisfy needs in another.
- Focus on watersheds, not jurisdictions.
- Preserve our natural beauty.
- Don't exceed our population carrying capacity.

*Follow the "precautionary principle"*

- The future is uncertain
- Don't "paint yourself into a corner"

*Consider needs of human and non-human inhabitants*

- Water is a life & death issue.
- There's a human right to water.
- Balance needs of humans and wildlife
- Factor in services provided by riparian areas.
- Ensure conserved groundwater is used to restore riparian ecosystems.
- No negative environmental impacts.

*Address issues of growth*

- Avoid growth / no growth debates.
- Look for less destructive ways to grow.
- Don't damage the environment to support growth.
- Sustainability does not mean supporting unfettered growth.

- Don't ask current residents to subsidize growth.

*Give a consistent message about the value of water*

- Water is scarce and has great value.
- But water is also cheap for users.
- When the well runs dry, we'll know the true value of water.

*Consider the cost of providing water*

- Water should be affordable – no risk of bankruptcy.
- But obtaining reliable supplies can be very costly.
- Water should be provided cost-efficiently for life.

*Important questions to ask*

- What should we use water for?
- Do we have our water rights and priorities properly arranged? (Reorder our priorities and think through who has a right to water.)
- Should new development have priority over "been-heres"?
- Should the turf industry have a priority over citizens when it comes to getting water?
- Should water used for decorative purposes cost the same as water for food gardens?

**Planning and decision-making principles**

*Analysis criteria*

- Look at water supply limits, efficiency of use, and conservation.
- Consider the full range of supply options.
- Apply adaptive management principles.
- Use a flexible management approach.
- Be conscious of the triple bottom line: environment, economic, social aspects of the problem.
- Use "triple bottom line" to evaluate plans and efforts - including water quality.
- Use concept of economic values; include idea of water as an economic good.
- Evaluate the effect of policies before they are implemented.
- Research various methods of balancing water and supply.
- Need to borrow the experience of other countries.

*Cost analysis*

- Measure true cost of high tech options.
- Quantify costs and benefits.
- Find a way to reallocate water to its best use, taking into account economic, social, and environmental concerns.
- Promote community-wide conservation; doing the hard math and looking carefully at what water we can get from a \$1,000 spent on conservation vs. \$1,000 spent on water importation.

- Reflect the cost of replacing local sources of water.
- Analyze carefully and fully all costs of pumping water long distances.
- Weigh the cost of private vs. public ownership and management of water - rights, infrastructure, and delivery.

#### *Decision factors*

- Decisions on how we manage our effluent are looming.
- Growth should reflect available supplies and need to address current deficiencies/damage.
- Bring outside and local experts together and peer review all options.
- Use risk assessment when considering climate change.
- Set new course with sustainable, equitable, problem solving.
- Our drought plans need to reflect our projected sources and supplies.

#### *Process characteristics*

- Full transparency
- Open and balanced process
- Make decision collaboratively.
- Stop bickering and work together within the region.
- Simply acquiescing to the demands for a seat at the table can lead to unbalance and distorted outcomes.
- The process is not just about conserving water, but using all resources (people and water) wisely and efficiently.
- All stakeholders must be represented in water planning decision-making.
- All hands on deck in a democracy. (Involve all of the community.)
- Hear special interests, but don't ignore citizens and their local knowledge.
- Base process on a participatory approach that balances technical expert advice and community values.
- Need to have cooperative planning.
- The town of Marana is looking forward to working with this group.
- A person from SAWUA (Southern Arizona Water Users Association) is willing to help in the process.

#### *Importance of time*

- Don't study the problem to death - time is running out.
- Fast action is needed.

### **Policy Recommendations**

#### *Conservation*

- Look at alternative conservation methods such as using gray water.
- Consider using composting toilets as a policy option for conservation.
- Provide extensive public information on how to capture and reuse water.
- Focus public education efforts on rainwater harvesting and conservation
- Use potable water only where needed.

- Implement now Pima County's drought plan, e.g. restrict misters and watering outdoors.

#### *Alternative sources of water*

- Resist the impulse to import water.
- Reuse sewer effluent.
- Catch rainwater and use it for fire suppression and flushing toilets, etc.
- Focus on rainwater harvesting; keep local water in the Region.
- Water harvesting is critical.
- Capture storm water to be used in the valley.
- Water and wastewater infrastructure should be constructed so it can be shared; wheeling agreements should be possible.

#### *Preserve sense of place*

- Create no pump zones.
- Protect aquatic and riparian habitats.
- Stop aquifer pumping.
- Protect high groundwater tables.
- Maintain a sense of history and be sure older parts of Tucson are not disadvantaged.
- Think about how we "sell Tucson" – what is it that sets us apart from other places?
- Maintain the principles of the Sonoran Desert Conservation Plan.

#### *Land and Water*

- Integrate land and water planning and link relevant policies.
- Reinforce laws that link development and water management.
- Stop growth as unbridled growth has plundered the landscape.

#### *CAP allocation*

- Need more infrastructure in order to fully use our CAP allocation.
- Store any unused CAP allocation through recharge.
- Don't import water from the Colorado River. It is over allocated and unreliable.

#### *High Tech Solutions*

- Look beyond high-tech solutions that can have negative environmental, energy, and cost effects. For instance the Yuma desalination plant doesn't have a good track record regarding cost and production.
- A desalination plant is not needed.
- Avoid high tech solutions.

#### *Other recommendations*

- Make industrial and commercial enterprises responsible for their own water supplies.
- Reduce the "wonkiness" when setting policy.
- Keep the water in "the commons" - in public ownership.

- Continue putting wastewater effluent in the Santa Cruz River where it is essential for wildlife.

## **Observations**

### *Legal situation*

- The Groundwater Act grandfathered in huge amounts of water for use by agriculture.
- The Groundwater Management Act gave away water, then required cities to have a plan for sustainable use.
- Groundwater replenishment districts provide for "paper" replenishment, not necessarily within the same aquifer.
- Marana is moving to become a designated agency, be in charge of potable supplies, and wants to be able to recharge its effluent.

### *Things change*

- The trend is toward diminished rainfall and groundwater recharge.
- The state is oriented toward agriculture - especially cotton.
- CAP was originally meant for agriculture, but in reality it is for municipal use.
- Things change; Yuma was once a seaport.
- Effluent is the water of the future.

### *Environment*

- An abundance of rare and endangered species are supported by riparian areas.
- Riparian areas are supplied by groundwater systems, especially shallow groundwater.
- Washes are like highways, providing connectivity for daily and seasonable movements. For instance, a mountain lion lives in and uses a range of 200 square miles.

### *Examples of success in water conservation*

- Milagro co-housing development uses gray water, captures all the rain that falls in its development. The gray and black water (1700 gallons a day) in Milagro goes to subsurface wetlands where it is purified. They capture roof water (50,000 gallons) and use it for outdoor watering. Their goal is to reduce water use to a sustainable level, which they decided is 50 gpcd. They started out at 135 gpcd and now are at 75 gpcd.
- Brisbane, Australia uses 53 gpcd.

### *Sustainability is a hot topic.*

- The Seattle Public Utility uses a triple bottom line analysis for any project greater than \$250 million.
- The Southern Arizona Leadership Council mission statement is "promote policies which promote economic vitality and quality of life." They have been meeting

and working through the ideas of IRWM (integrated resource water management).  
Eighty percent of what they have heard, they agree with.

- Marana and PAG are looking at sustainability with regards to water.

*Miscellaneous*

- Growth for growth's sake is a cancer cell.
- It is not good to balkanize the utility infrastructure.
- Special interests often dominate decision-making; we can't afford this happening here.
- Bringing water from remote areas to the Tucson basin has led to complacency.
- Being at the end of the CAP pipeline makes us more vulnerable to the actions of those higher up the pipeline.