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Water Congress Recommendations

By Mick Denham, Mayor, City of Sanibel

Prologue

I have been asked to prepare a preliminary draft to serve as a starting point for discussion with government leaders, Florida League of Cities, business and agriculture interests and concerned citizens in finding a solution to Florida's water challenge.

My research* has uncovered the following facts:

- California, Texas and Florida, where 50% of the nation's future population growth is forecast to occur, are the thirstiest. These three states use a quarter of all freshwater in the United States.
- Nationally, each of us uses about 90 gallons of drinking water a day at home; each household about 107,000 gallons of water a year. Almost all of that is treated to meet federal drinking standards. We use it to flush toilets, water lawns, wash dishes, clothes and cars.
- More than half of all home water use in the United States goes to greening lawns and gardens. About 14% is never used—it leaks out of our pipes.
- Surprisingly, US water consumption has been on the decline for thirty years, due in part to public awareness, modest water conservation measures and progressive pricing models. Nationally, average per capita use in 2000 was the lowest it has been since 1950. And total freshwater withdrawals in 2000 were less than 1975 despite growth in population.
- Sadly, this is not the case in Florida. In the Sunshine State both per-person consumption and total water withdrawals are on the upswing. Many Floridians view our water supply as endless.

Florida sits in a water rich part of the world; it is blessed with an extraordinary supply of ground water; it is home to more than 700 freshwater springs. As much water as you can see, there is even more you cannot see. Massive amounts of this fresh water is piped out daily and trucked to consumers statewide and in other states.

One lesson Florida has not learned, is that increased growth and economic prosperity do not have to equal increased water consumption. Water use in the United States stopped rising in the 1980s, yet population as well as gross domestic product have grown steadily ever since.

Many believe that the path to water conservation should emphasize greater efficiency, more precise management systems to avoid waste, and better matching of water sources to their uses, for example, supplying drinking-quality water for consuming and cooking but not for irrigation or toilet flushing.

My research has also found the following:

- Since 1990, water use in Southern California has dropped by 16%, as population increased by about the same amount.
- In Seattle, total water use has remained constant since 1975, even though population has increased by 30%.
- Water use in the greater Boston area hit a fifty year low in 2004, following an aggressive conservation program begun in the late 1980s that indefinitely postponed a diversion from the Connecticut River and saved residents \$500 million in capital expenditure.

The fastest, cheapest and most environmentally acceptable way to address the issue in most cases will not be an increase in supply, but improvements in efficiency to reduce waste; increases in conservation measures; and increased water supply reliability. Realizing these savings will be more economical and more politically acceptable than any new supply options, including new reservoirs and dams, and desalination plants.

In summary: In the opinion of many, we have choices:

- We can continue to waste copious amounts of water, using treated drinking water to green suburban lawns, or we can appreciate its worth.
- We can keep giving water away for free, to anyone with a business plan, or we can put a price on it to make sure our natural spring water is protected and valued.
- We can continue to bend wetlands and growth laws, or we can demand consistent enforcement.
- We can spend tax dollars on water diversion and other schemes that may be risky, or we can spend them on water conservation, land preservation and restoration projects.

*Principal sources:

“Mirage: Florida and the Vanishing Water of the Eastern U.S.” by Cynthia Barnett, University of Michigan Press, 2007.

“Reforming the Florida Water Resources Act of 1972: Beyond the First 35 Years,” by Mary Jane Angelo et al., University of Florida Sourcebook, 2008.

Review of Delegate “Top Four” Recommendations

Delegates to the Water Congress (September 2008) were asked to identify their four most significant priorities. Here they are with my comments:

1. Reinstate the annual state funding for alternative water supply development and water quality improvement (i.e., SB 444 funding to be matched by Water Management Districts and local governments/utilities). Make SB 444 funding a recurring source of annual state funding for alternative water supply development and reinstate original funding levels at a minimum.

With my limited knowledge, I question the validity of this as the #1 recommendation. Pros and Cons:

Pro: This could be a way to help the state’s struggling economy. It would create a significant number of new jobs in large capital programs.

Con: In today’s economic climate where tax dollars for new programs are scarce, support for an annual state funding program could be difficult.

(Remember that research shows the fastest, cheapest, and most environmentally acceptable way to address the issue in most cases will not be an increase in supply, but improvements in efficiency management, conservation measures and water supply reliability. This strategy is likely to be more economical and more politically acceptable than new supply options such as reservoirs, dams and desalination plants.)

2. Support regional partnerships, incentives and cooperative approaches to addressing long-term water sustainability for Florida. The Water Management Districts, the FDEP and local governments should aggressively identify opportunities and develop incentives for establishing multi-jurisdictional utility arrangements or water supply authorities and engage in other areas where such partnerships should be beneficial and cost effective to the public.

While the intent of this recommendation is not entirely clear to me, my take on this would be: Attempts to manage growth have had limited success. At the same time, regions of Florida are facing water shortage crisis. Projections suggest that sufficient water will not be available to accommodate growth in large areas of Florida. One possible strategy:

Establish links with Growth Management

- Require local governments, Water Management Districts, FDEP to fully integrate district water supply plans into their land use plans.
- Prohibit issuance of water permits unless the applicant first obtains local government land use approval and demonstrates consistency with the applicable land use plan

3. Amend, as necessary, any statute, rule or policy so that quantifiable water conservation “best management practices” are considered an “alternative water supply” and are equally as eligible for funding as capital facility expansion proposals.

This seems an effective strategy. As previously stated, we have choices:

- We can continue to waste our water, using treated drinking water to green our lawns, or we can appreciate its worth.
- We can keep giving water away for free, to anyone with a business plan, or we value it more highly, including e.g. effective pricing on “free” spring water.
- We can continue to bend wetlands and growth laws, or we can demand consistent enforcement.
- We can spend tax dollars on water diversion and other schemes that may be risky, or we can spend them on water conservation, land preservation and restoration projects.

4. Set a target or goal for per-capita water use and quantifiable best management water practices and provide a stable funding base for the Conserve Florida program directed by Sect. 373.227, F.S., including the statewide water conservation clearinghouse for public water supply.

This sounds good, but we need some further explanation as to the full intent.

Mick Denham
Delegate to Water Congress
October 13, 2008

Sanibel Natural Resources Department Analysis of the 2008 Water Congress Recommendations

The following comments are based on the 2008 Water Congress Delegate Recommendations. The “Final 18” list includes several recommendations that broadly address some of Sanibel’s water supply and water quality priority concerns. The “Final 4 Recommendations” are focused more on state funding, state and regional partnerships, quantifiable water conservation Best Management Practices, and alternative water supply.

Although the recommendations broadly cover some of our concerns, the two things that would be most beneficial to Sanibel and similar coastal communities include protection of existing water resources like springs, lakes, creeks, rivers and wetlands and increasing water storage. Protection or buffering of existing water resources from development impacts would ensure that those water bodies that are important for providing drinking water would not require water quality remediation measures in the future. Florida receives over 50 inches of rain annually, much of which is wasted by flushing it to tide and resulting in damage to coastal resources. Increasing water storage would reduce nutrient laden stormwater runoff from reaching the coast during the rainy season and would make more water available for water supply during the dry season.

Overall the Water Congress recommendations seem to focus on promoting “alternative water supply.” Given our current economic situation, fiscally responsible conservation measures that do not require major investments in infrastructure should be employed first. We should focus on projects that use proven methods that produce the biggest overall benefit in terms of water storage and treatment rather than on experimental technologies such as Aquifer Storage and Recovery (ASR) and infrastructure intensive technologies like desalinization. Recent studies on ASR have shown that in addition to high operating and maintenance costs, there is also a potential for impacting existing groundwater resources. These impacts include rock fracturing, where the rock layers or strata are damaged by the hydraulic pressure of pumping resulting in connections between the lower and surficial aquifers, and nutrient and arsenic contamination.

Below is a list of the recommendations from the Water Congress “Final 18” priority list that we feel would be beneficial to Florida’s water resources.

2. Achieve dramatic improvements in landscape irrigation efficiency by requiring use of the recommendations found in the report, *Landscape Irrigation and Florida Friendly Design Standards*, (where applicable) as a condition of:

- Consumptive Use Permits issued by Water Management Districts
- Development orders issued by local governments
- Development orders for Developments of Regional Impact as reviewed by Regional Planning Councils
- Land use amendments reviewed by the Department of Community Affairs

- Changes to land development regulations

- Environmental Resources Permits issued by the Florida Department of Environmental Protection

11. Optimize the use of alternative water supplies which take and store peak surface water flows and also restores the natural system.

14. While protecting water quality, maximize the beneficial use of reclaimed water and improve upon the capture and storage of excess water. Recruit and connect large industrial users to reclaimed water systems to reduce demand on existing and future potable systems. (It is recommended that a goal of 100% beneficial and cost effective reuse of wastewater from publicly owned wastewater treatment facilities be established for the year 2030.) (The management of wastewater needs to continue to evolve from a disposal problem to a valuable water supply opportunity.)

16. Make creation of new water storage (including new reservoirs, ASR, and wet season storage) a statewide priority by prioritizing funding, land acquisition, and needed regulatory reforms (for ASR).

17. Manage stormwater runoff that is discharged into municipal stormwater systems as a valuable water source to be used or reused for conservation purposes such as community irrigation, not as a waste product requiring quick disposal.

18. Encourage Low Impact Development practices as well as other source control measures to enhance ambient water quality in receiving water bodies.

* Recommendation 16 addresses the creation of water storage, but we would hesitate to encourage regulatory reforms for Aquifer Storage and Recovery (ASR) if they are purely to encourage the use of ASR without doing the proper due diligence that is required to ensure that it will not harm our groundwater resources. ASR is still experimental and the state has invested millions of dollars in a pilot study to investigate its use for the Comprehensive Everglades Restoration Project. Our recommendation would be to separate them into several recommendations or remove ASR completely.