



FWEA Utility Council

Protecting Florida's Clean Water Environment

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September 18, 2015

Janet Llewellyn
Office of Water Policy
Florida Department of Environmental Protection
3900 Commonwealth Blvd., MS 46
Tallahassee, FL 32399-3000
Submitted via email to: sb536study@dep.state.fl.us

Re: FWEA Utility Council Comments on SB 536 Study

Dear Ms. Llewellyn,

The Florida Water Environment Association (FWEA) Utility Council appreciates the opportunity to provide comments on the Florida Department of Environmental Protection's (FDEP's) draft "Report on Expansion of Beneficial Use of Reclaimed Water, Stormwater, and Excess Surface Water" (SB 536 Study). The FWEA Utility Council believes that this process presents an opportunity to improve state water policies and result in the expansion of the beneficial use of reclaimed water, stormwater, and excess surface water.

By way of background, the FWEA Utility Council is the voice of Florida's domestic wastewater treatment community. Our members operate domestic wastewater collection, treatment, disposal, and reuse facilities. Utility Council members provide essential infrastructure services to over 9 million Floridians. Utilities across the State have invested millions of dollars upgrading wastewater treatment systems to remove pollutants, including nitrogen and phosphorous, before safely discharging or reusing the treated effluent. A significant number of our members also operate public water supply and stormwater management systems.

1. Overarching Comments

As required by Senate Bill 536 (2014), the SB 536 Study provides a comprehensive overview on the "the expansion of the beneficial use of reclaimed water, stormwater, and excess surface water." The FWEA Utility Council agrees with many of the study's proposals, such as recommendations to facilitate reclaimed water aquifer storage and recovery, remove unnecessary barriers to supplementing reclaimed water with stormwater, and repeal outdated and non-scientific restrictions on the use of reclaimed water to spray irrigate certain vegetables. Despite these major points of agreement, the FWEA Utility Council believes that SB 536 Study would greatly benefit if it included an implementation plan for its policy recommendations and

prioritized those recommendations determining those that are cost beneficial and most likely to yield water supply benefits.

In many areas of the State the use of reclaimed water to offset the use of potable water for irrigation uses may not be the best use of reclaimed. This historic emphasis of the use of reclaimed water predates the technological advances made in treatment and avoids the question of its use as a potable source. Infrastructure costs to either retrofit or expand irrigation systems for reclaimed water might be better prioritized in these areas for use to pursue treatment options and public education and acceptance campaigns recognizing the importance of reclaimed water in the water sources “pie.”

Therefore, in addition to a more detailed implementation plan, the SB 536 study should include additional information explaining the current status of reuse practices in the State. In particular, the FWEA Utility Council recommends that Section 2.3 of the SB 536 Study address how the economic feasibility of expanding reclaimed water use is often a function of local hydrogeology, infrastructure, historic development patterns, variable seasonal demands, and local water resource constraints (or lack thereof). For instance, reclaimed water is more readily used for aquifer recharge purposes in regions of the state where aquifer conditions enable the cost-effective use of rapid infiltration basins. In some areas, the use of reclaimed water for wetlands restoration may achieve highly desirable local environmental goals, superior to that of other practices with a higher recharge fraction or greater potable offset. In other “built-out” urban areas, utilities may have appropriately focused their financial resources on potable water conservation measures, advanced wastewater treatment, and other environmentally beneficial measures due to high cost of retrofitting developed areas for irrigation reuse.

The SB 536 Study should include a discussion of these factors to contextualize reported information on regional per capita reuse flow and the “desirability” of particular reuse activities. This is essential information which will help inform the Legislature to better understand the Study’s policy recommendations regarding the appropriate and available methods to increase reclaimed water use.

Finally, it must be recognized that use of reclaimed water began as a means of wastewater effluent disposal and that will remain a factor for all utilities in their decision making process on how best to utilize their reclaimed water. It is a commodity paid for by the ratepayers of a utility and the use of which the utility must balance the cost of treatment and distribution versus the benefit of utilizing it as a source.

In addition, the Utility Council requests that the report incorporate the specific revisions suggested in the following comments.

2. Funding

The FWEA Utility Council recommends that the SB 536 Study explore alternatives for funding and/or increased funding, and the Study should acknowledge that funding is one of the most significant obstacles to the implementation and optimization of these alternative water sources. Specifically, the SB 536 Study should explore ways to improve the link between Regional Water Supply Planning and the Legislative appropriations process; opportunities to promote regional, cooperative water supply projects; and methods to increase reuse funding statewide.

a. Improving the Link between Regional Water Supply Planning and Project Funding

An overarching strategy that will facilitate the development of reclaimed water, stormwater, and excess surface water supplies is improving the link between the regional water supply planning process and the Legislature's approach to funding individual water projects. Recent legislative efforts have sought to improve the way the State identifies and funds water resource and water supply development projects. The FWEA Utility Council believes that the best way to promote transparency and ensure that State taxpayer dollars are well spent is to have projects first vetted at the local and regional levels and then "bubble up" to the Florida Legislature for potential state funding. These improvements can be achieved without creating new project evaluation panels or councils.

While Florida has a regional water supply planning process, it too often produces a laundry list of water resource options as a compilation of individual projects from utilities rather than a proactive effort to plan for the future. These lists also tend to lack prioritization, identification of specific sources to meet particular needs, or closely scrutinized cost estimates. Additionally, the regional planning process is often divorced from the Legislature's approach to funding individual water projects.

In order to facilitate the development of alternative water supplies, the SB 536 Study should recommend that the regional water supply planning process be refocused on the identification of technically and financially feasible water projects, and water supply plans should prioritize projects that support minimum flow and level implementation, including adopted recovery and prevention strategies and that limit competition among water users and the natural system. Undeniably, this focus would lead to the identification of opportunities to expand the beneficial use of reclaimed water, stormwater, and excess surface waters. The plans should also include an annually updated five-year workplan that identifies the costs, targeted completion dates, quantitative benefits to state waters, and any anticipated local, regional, and state funding for water supply and water restoration projects. This retooled planning process should then be tied to the water management districts' funding programs, including their annual budget submittals.

Because the regional water supply planning process occurs in a public forum, these modifications would greatly improve the transparency and effectiveness of the state's water project funding process. The SB 536 Study should embrace these improvements.

b. Regional Cooperatives

The establishment of regional cooperatives is a key strategy to expanding the use of reclaimed water, stormwater, and surface water. FDEP and the WMDs should implement incentives to promote the formation of cooperatives to maximize sources, funding assistance and other collaborative efforts acceptable to the parties to the cooperatives.

c. Funding Inequities

The SB 536 Study includes a table that outlines water management district reclaimed water funding over the past ten years. [SB 536 Study at Table 2.2] Although in the aggregate the total funding of the water management districts is significant, in reality only SWFWMD has provided significant funding in the past five years for reclaimed water projects. The report should explore

the reasons behind the relative inequity between districts in reclaimed water project funding and consider whether there are potential solutions to address the tax base disparities.

3. Mandatory Reuse Zones

The FWEA Utility Council supports improving the regulatory link between a local government's mandatory reclaimed water zone and the water management district's implementation of the consumptive use permitting process.

A local government may adopt an ordinance establishing a mandatory reclaimed water zone identifying all or a portion of a utility's service area that requires the use of reclaimed water . The mandatory reclaimed water zone ordinance may require any individual or business to use reclaimed water, for irrigation uses that could be met by reclaimed water, if reclaimed water is available and technically and environmentally feasible, as determined by the District.

Despite the establishment of mandatory reclaimed water zones in areas where the reclaimed water is available, potential reclaimed water customers are still occasionally permitted fresh groundwater for irrigation purposes by the water management districts. This occurs because the end user asserts to the water management district that reclaimed water is economically infeasible to use, despite its availability. Water Management Districts are inconsistent in their current application of economic feasibility analyses related to the availability of reclaimed water at the time of CUP permit application. The Department, in cooperation with the Water Management Districts and reclaimed water suppliers should develop an approach to economic feasibility evaluations that will be consistent across WMDs. Utilities charge for reclaimed water use (just as they do for potable water use), and these charges tend to exceed the costs of installing and operating a freshwater well. But costing more should not equate to economic infeasibility. This is particularly true in Water Use Caution Areas and other regions of the state where traditional groundwater sources are limited.

The FWEA Utility Council recommends that where a mandatory reclaimed water use zone exists and reclaimed water is available and technically and environmentally feasible, the districts will presume that reclaimed water is economically feasible, and an applicant for a consumptive use permit will bear the burden of overcoming this presumption in the water management districts' consumptive use permitting process. This requirement would apply to all regulated water uses, regardless of type of permit or authorizations, excluding exemptions. The Districts would still be able to issue a consumptive use permit to meet an applicant's reasonable-beneficial demands not met by the provision of reclaimed water and a quantity necessary for emergency back-up or standby purposes.

This "rebuttable presumption of economic feasibility" concept is not new. The Reclaimed Water Workgroup, of which the Department was a member, recommended this approach in its May 2012 report. The concept was also included in legislation 2011 that the Department supported but which failed to pass. The FWEA Utility Council recommends that the Department again support this concept and include it as a recommendation in its SB 536 Study Report.

4. Potable Reuse

The Utility Council recommends that the report include a recommendation to review and evaluate any revisions that should be made to Chapters 62-610 and 62-600, Florida

Administrative Code, and recommend revisions that would support the opportunities to maximize the use of reclaimed water.

As an example, the FWEA Utility Council recommends that the Department reevaluate the definition of indirect potable reuse (IPR). [SB 536 Study at 13] The existing definition reflects the rule language in Chapter 62-610, Florida Administrative Code, in which the Department draws an outdated distinction between groundwater recharge and IPR. The discharge of reclaimed water to a surface water to augment public water supplies appears to be the same as adding reclaimed water to an aquifer used for public water supply through either direct injection or recharge through rapid infiltration basins. The definition in Chapter 62-610 should be updated.¹

The WaterReuse Association in conjunction with the American Water Research Association has just published a report entitled “A Framework for Direct Potable Reuse.” The FWEA Utility Council recommends that the Department cooperatively with reclaimed water utilities, coordinate with the Water Reuse Foundation concerning this report as well as other relevant research and information regarding the consideration of direct potable reuse. As an example of a topic to be further researched, the SB 536 Study indicates that the cost per 1000 gallons for potable reuse is shown as about half the cost of seawater or desalination. [SB 536 Study at 24] While the costs of direct potable reuse have declined in recent years, the most recent data presented by the Water Reuse Foundation has indicated that the costs of direct potable reuse may be comparable to desalination depending on treatment required and availability of power require for desalination.²

5. Private Commercial and Residential Irrigation Wells

The FWEA Utility Council recommends that the SB 536 Study specifically recommend a policy preventing new lawn and landscape irrigation wells where a utility has invested in infrastructure for and reclaimed water is available and feasible for irrigation use. As you know, private irrigation wells are at times constructed in areas where reclaimed water is available for irrigation use. Hotels, residential developments, and other potential end users may already be connected to a reclaimed water line, but in order to save money, these entities choose to dig a private well and use groundwater in lieu of reclaimed water.

Because the withdrawals from private irrigation wells tend to fall below thresholds requiring standard or general consumptive use permits (i.e. are less than 100,000 gallons per day), their construction and use is generally automatically authorized. The water management district general consumptive use permits by rule authorizing this private well irrigation use prohibit such use when reclaimed water is available, but the water management districts generally do not enforce these provisions. Additionally, enforcement of this restriction after the homeowner has

¹ In addition to updating the definition of indirect potable reuse, the FWEA Utility Council recommends that the Department should evaluate other elements of Chapter 62-610. For instance, the setback requirements between areas where reclaimed water is used and private wells exist should be evaluated to determine whether a sound scientific basis exists for the limitation. See Rule 62-610.471, 521, 571, 621, .662, F.A.C., The existence of private wells either on the property on which reclaimed water will be used or on adjoining properties can restrict reuse opportunities.

² See, e.g. Raucher, *The Opportunities and Economics of Direct Potable Reuse*, WaterReuse (2014), available at <https://www.watereuse.org/product/14-08-1>.

spent money and time constructing a private irrigation well is politically problematic because a lay person would resist any restrictions on the well's use due to the time and money already incurred. Finally, because these withdrawals are authorized by a general consumptive use permit by rule, no application is required and thus, the withdrawals are not subject to the reuse feasibility analysis or utility coordination requirements of § 373.250(4)(b), F.S. In sum, these potential reuse opportunities fall through the cracks.

The construction and use of private wells in reclaimed water service areas creates a number of problems for reclaimed water providers. First, the use of well water where reclaimed water is available creates a stranded asset problem because the utility's reuse distribution system infrastructure is in place but is not being used. Second, utilities are often subject to requirements in their consumptive use permits to promote and expand the use of reclaimed water. Sometimes these utility permits even include numeric reuse targets. Obviously, the achievement of these reuse goals will be frustrated when reclaimed water customers are free to decline to use available reclaimed water supplies. Third, the construction and use of these wells undermine state objectives to promote and expand the use of reclaimed water in lieu of limited ground water resources. And fourth, the use of groundwater for landscape irrigation undermines regional groundwater protection initiatives and is in contradiction to established policies to match source quality to use.

This should be remedied. One means to do so would be to eliminate the construction of private lawn and landscape irrigation wells when reclaimed water is available and economically, technically, and environmentally feasible to use. The SB 536 Study should recommend the following legal change to accomplish this objective:

§ 373.309 Authority to adopt rules and procedures.—

(1) The department shall adopt, and may from time to time amend, rules governing the location, construction, repair, and abandonment of water wells and shall be responsible for the administration of this part. With respect thereto, the department shall:

(f) Prohibit the construction of new private wells to be used for lawn and landscape irrigation purposes when a utility has made reclaimed water available for use and its use is feasible in accordance with s. 373.250(2). This prohibition shall not apply to any applicant seeking authorization for agricultural use on land that has been classified as agricultural pursuant to s. 193.461.

A practical benefit of this proposal is that it would prevent a lay person from expending the time and money to construct a private irrigation well where reclaimed water is available. This proposal would also assist in the enforcement of the existing water management district general consumptive use permits by rule authorizing residential irrigation. Accomplishing these objectives would further the State's overall goal of promoting reclaimed water use in lieu of groundwater.

6. Supplementation

The FWEA Utility Council agrees that the Department should review the treatment requirements for supplementation of reclaimed water systems. [SB 536 Study at 30] The present requirements

pose an obstacle to expanding the use of reuse to offset irrigation uses by potable water as a conservation strategy. In some cases the use of surface water or stormwater may actually be the primary source of irrigation and would be supplemented by reclaimed water.

In addition to discussing stormwater supplementation, SB 536 Study should endorse the use of groundwater as a supplemental source, since it is often the most economical way to maximize the number of reclaimed customers that can be connected to an irrigation-based system and reduces reclaimed water disposal. The amount of groundwater to be used only during the peak dry month/s can greatly expand the number of reclaimed water customers that can be served, thereby reducing the overall use of groundwater in the area throughout the year. By way of contrast, the use of stormwater for supplementation often requires a large volume of storage at a high cost since excess stormwater is not usually available during the dry periods when an irrigation-based system experiences peak demands.

7. Section 2.7.3 Study Recommendations for Providers and Users of Reclaimed Water

The FWEA Utility Council would like to request that when the term “waters” is used in this subsection that “as defined in s. 403.031(13), F.S.” be inserted for clarity and recognition that the definition of “waters” is contained elsewhere in the statutes.

The Utility Council recognizes that SB 536 included a direction to:

“. . . identify constraints . . . including fiscal constraints to expansion including rate structures for reclaimed water.”

Within the context of this section, the issue of tiered rate structures is narrowly focused. Rate structures and the remaining items in this recommendation section could significantly impact the business operations to the detriment of a reclaimed water utility. Rate structures, governance, determination of customers to serve and contracts are all singularly within the realm and authority of a utility’s business model and operation. Such recommendations carry inherent inconsistencies when applied statewide. The characteristics, customer bases, financial circumstances and governance entities of utilities may seem similar but are really quite varied when looking at individual utilities. The FWEA Utility Council respectfully expresses its concern that this section may, although apparently drafted to comply with one of the Bill’s directives, result in unintended consequences and exceed the intent of the study.

8. Conjunctive Use

The SB 536 Study briefly mentions conjunctive water use as a strategy that should be “encouraged.” The FWEA Utility Council suggests that the Department and the districts evaluate regulations to facilitate conjunctive use permitting, particularly when the surface water and groundwater sources are both primary sources.

9. Update Non-scientific Limitations on Crop Irrigation with Reclaimed Water

As noted above, the FWEA Utility Council supports the Study’s recommendation to clarify existing law that it is safe to irrigate residential gardens with public access quality reclaimed water. The Utility Council suggests that as part of this update, consideration be given to the lowering of effluent quality standards for irrigation of citrus crops. Current DEP regulations

require high-level disinfection to irrigate citrus, but also allow Class B biosolids to be spread on citrus. Upgrading a wastewater treatment facility from basic to high-level disinfection requires an expensive upgrade to the facility along with significantly more licensed operator onsite time. It seems reasonable that if Class B biosolids can be spread on citrus groves, than WWTFs meeting basic disinfection should also be allowed to irrigate citrus, possibly limiting the application to low trajectory irrigation practices. Another option may be to require a minimum chlorine residual of 1.0 mg/L for citrus irrigation, without the other, onerous requirements of high-level disinfection. Additional consideration should be given to allowing intermediate edible crops that are peeled, skinned, cooked before consumption.

10. Other

The FWEA Utility Council also suggests the following minor revisions:

- On page 77, a map identifies South Cross as an ASR facility. This ASR is no longer in operation and should be removed from the site map.
- On page 133, the Study references, the Pinellas/Tampa Bay Water Reclaimed Water Purification Option, a direct potable reuse system to utilize up to 5.0 MGD of reclaimed water from the utilities in Pinellas County as a supply source for an advanced purification and professional training facility. This bullet point needs to be deleted. After an initial review of this project, it was determined not be a viable project at this time.

The FWEA Utility Council appreciates your consideration of these comments. Should you have any questions or concerns, please do not hesitate to contact Reuse Issue Chair, Jan McLean at Jan.McLean@tampagov.net.

Sincerely,



Brian Wheeler
FWEA Utility Council President

CC: Jan McLean
David Childs