

**Informal Review of the St. Johns River Water Management District (SJRWMD)
Water Conservation Program Plan
Final Comments and Panelist Reviews
May 14, 2009**

The St. Johns River Water Management District (SJRWMD) is putting together a comprehensive integrated District-wide Water Conservation Program Plan, and has identified the need for an external panel of experts to help advise them during this process. The UF Water Institute is working with the SJRWMD to facilitate this process, with the first step being to form a panel to provide a review of the initial planning documents for this program. Under Contract#25298, Work Order #1, UF Water Institute has formed a panel to provide a review of the initial planning documents and to provide recommendations to enhance and to improve them.

This document provides a brief summary of the process and comments for consideration by the District. It also provides access to verbatim draft review comments from each of the panelists on each of the planning documents as well as general comments and recommendations on the program as a whole. It should be noted that these draft reviews represent the opinions of the individual panelists and not of the University of Florida Water Institute.

1. Review Process and Panel:

On March 31st, 2009, The District provided to the UF Water Institute, by email, word files of documents referred to in the Scope of Work. These documents were referred to in the Scope of Work as: “a Water Conservation 3-Year Action Plan, Water Conservation Program Charter, Draft Water Conservation Program 2009 Plan, and the Water Conservation Cost-Share Program Application Package.” Since the titles of the document files received by email were not exactly the same as in the work order, WI requested clarification to be sure that the files obtained were appropriate and that the scope was clearly understood. To facilitate clear identification of each Document and prevent any confusion when referring to each document during the review process, the WI numbered the files before sending the files to the PANEL. The document files were renamed:

- Doc 1 - SJRWMD Water Conservation 3 year Action Plan
- Doc 2 - SJRWMD Water Conservation Program Charter
- Doc 3 - SJWMD Draft Water Conservation Program 2009 Plan
- Doc 4a - SJRWMD Water Conservation Cost-Share Program Description
- Doc 4b - SJRWMD Water Conservation Cost Share program Application Form
- Doc 4c - SJRWMD Water Conservation Cost-Share Program Instructions

The UF Water Institute composed a panel of the following professionals to review the SJRWMD's initial Water Conservation Program planning documents:

- Dr. Sanford Berg, Distinguished Service Professor, Economics, UF
- Mr. David Bracciano, Demand Management Coordinator, Tampa Bay Water
- Dr. Michael Dukes, Assistant Professor, Agricultural and Biological Engineering, UF
- Dr. Jim Heaney, Professor, Environmental Engineering Sciences, UF
- Dr. Pierce Jones, Professor, Agricultural and Biological Engineering, UF
- Ms. Wendy Nero, Vice President and Florida Coordination Area Manager, CH2M Hill

On April 3, 2009 the six documents were distributed to the Review Panel with instructions to briefly look over the documents and submit any questions of clarification. The only question of clarification from the Panel at that time was a request for brief bios of the SJRWMD Core and External Team members of the Water Conservation Team. SJRWMD provided the bios, and WI provided SJRWMD bios of the expert review panel members (see web page url below for bios).

On April 6, 2009 the WI provided the Statement of Work and review guidelines (developed based on phone discussion Staal/Castaneda clarifying what types of information would be most helpful, and the scope of work) to the review panel (Appendix 1) as well as the SJRWMD Scope of Work that had been provided to the Water Institute. Each of these professionals was asked to review the set of initial planning documents and provide general comments and recommendations. Specifically the panelists were asked to consider:

- How effective the approach outlined in the initial planning documents will be in helping the SJRWMD reach its Water Conservation Program Goals
- Does the overall approach integrate policy, technical, educational information and expertise necessary to reach the SJRWMD Water Conservation Program Goals
- How effective the approach and plan outlined for each focus area of the work plan structure will be, including consideration of the challenges and opportunities for each area, the accessibility of the information needed for each area, and the additional policy, technical or other information needed for effective planning and information.

On April 24th the WI met by phone with Hal Wilkening and Max Castaneda. WI agreed to provide comments, and the panelists comment files, to SJRWMD and to share all comments with each of the panelists by Wednesday, April 29th. A 2-hour meeting was scheduled for May 7th (10am – 12pm) to provide an opportunity for meaningful interchange and to provide the district input for consideration in the staff driven process of revising the documents.

On May 7th a 2-hour meeting was held on the campus of the University of Florida. The meeting participants included Hal Wilkening, Max Castaneda and Malissa Dillon, Don Brandes and Kraig McLane (*last three by phone*) from SJRWMD, Dr. Wendy Graham, Lisette Staal from the Water Institute, and members of the Panel: Sandy Berg, Dave Bracciano (*by phone*), Michael Dukes, Jim Heaney, Pierce Jones, (*Wendy Nero was unable to participate*). The agenda was set

through a telephone discussion (between the Water Institute, Max Castenda and Hal Wilkening) prior to the meeting. One of the concerns shared by all the panelists in their comments on the documents was that they lacked an overall context and framework, and that it was hard to see how the overall Program fit together. The SJRWMD wanted an opportunity to clarify the goals water conservation effort, the advisory role of the Water Institute Panel and also to discuss additional issues on which they would like additional input and insights from the Panel. Hal Wilkening and Max Castaneda led the discussions around the topics on the agenda:

- SJRWMD Vision of the Water Conservation Effort Context, Plan and Panel role (Hal Wilkening)
- Role of Economics in Conservation, Conservation Rate Structure , and staffing (Hal Wilkening)
- Cost Share Program (Max Castaneda)
- Next steps - explore potential opportunities for engagement, spin offs and discrete activities (Hal Wilkening/Max Castaneda)

This meeting brought closure to the first phase of the Water Institute's engagement.

2. Recap of Comments from May 7, 2009 meeting:

Hal Wilkening noted that within the current context of legislative direction to look at alternative water supplies (beyond fresh groundwater), and concerns voiced about tapping surface water, SJRWMD is making an effort to address the overall water conservation efforts in an integrated fashion. SJRWMD is engaging in a process of reviewing agency efforts, reassessing and re-evaluating how to improve water conservation. They are interested in using new and innovative efforts. In the last six months they have hired an overall conservation coordinator, developed planning documents, and engaged with the WI for review/informal consultation to begin to tie together what they are doing relative to conservation. The SJRWMD Board is planning to fund a cost share program for conservation that will eventually be economically self-sustained by utilities (that is, not permanently subsidized by the District). It will also be important to articulate how the effort is integrated with the new Water Supply Plan.

The panel discussed some considerations regarding the implications of what is meant by “ a sustainable water supply,” conservation and drought rate structures, additional staffing needs, and the proposed cost share program.

a. What is meant by a sustainable water supply and how do you measure it?

- Need for quantifiable metrics for conservation programs (volume water saved and dollars saved over time)
- Sustainability goals should be the same for all initially subsidized alternative water supplies, i.e. surface water, desal, and conservation ---considered in “gallons delivered by subsidized practice”
- Sustainability analysis needs to take into account the reliability of the alternative water supplies as well as the cost of both developing and operating supplies (e.g. Desal is

energy intensive and reliability can be an issue, for conservation reliability is a distributed responsibility)

- Need Life cycle cost analysis. Consider evaluating the value of water not extracted from the natural system, or not used for a different purpose (opportunity cost). Note that if MFLs are considered non-negotiable environmental costs this is equivalent to infinite value for leaving water in the ecosystem.
- Water use caution areas – is the district going to apply special water conservation requirements in these areas? Should the district focus attention on the WUCAs?
- How are private domestic wells treated. Domestic wells used for indoor use are not regulated by district. However domestic wells for outdoor irrigation are regulated by the district (although difficult to control). If don't design water conservation program carefully, i.e. just specify a reduction in gpcd for the utility this might drive the utility to subsidize private irrigation wells which may not have the desired effect of reducing overall use.

b. How can SJRWMD improve efforts in water conservation by considering what constitutes a conservation/drought rate structure and how a rate structure could be designed that makes it economically attractive for utilities to conserve waer?

Things to consider:

- Utility marginal costs are low once the permit is given and distribution infrastructure is in place
- Opportunity costs of raw water are not currently taken into account
- Costs to consumer have to be high enough need to have an impact on behavior
- Need to work with utilities on billing analysis, etc.
- How can it be made to be profitable for utilities to sell less water?
- Setting of rate structures currently needs to show a relationship between what a utility is charging and what costs the utility incurs... does not take into account intrinsic value of water.
- There is a need to define rate blocks based on concrete knowledge/data, i.e. the first block could be for conservative indoor use, higher blocks for conservative outdoor use, wasteful outdoor use etc..
- How is water use valued (from basics to aesthetics- drinking, flushing, showering, irrigation-should costs differ?)
- Where is the “tipping point” to actually drive the “political will” to do something different regarding water conservation?
- Can you reward utilities for conserving water by allowing them to trade unused but permitted consumptive use capacity (i.e. trading consumptive use points)?
- SJRWMD currently doing an analysis to get a picture of water use by utilities to see which utilities are doing well regarding water conservation. Should also analyze proposed DRIs to see which DRIs are doing well regarding water conservation.
- Should DRI process be coupled with CUP process ? (they are currently separate). Perhaps through the new Regional Water Supply Planning process?

- Statewide data bases on land use exist and SJRWMD could look at how to link to EZ guide (Conserve Florida) for improved measurements.
- Drought surcharges by utilities should be encouraged, but these should not be confused with conservation rate structures.

c. Proposed Cost Share Program

- Should consider expanding from focus only on irrigation. Indoor technology is tried and true
- Perhaps separate programs: Demonstration program to evaluate long-term viability of outdoor irrigation technologies for water conservation. Traditional cost share program for indoor.
- Current program seems designed too much like a construction project. Need to fund projects over longer duration and need to include funding for collection and analysis of the data so that can quantify water savings accurately over the long term.
- Should be flexible – include special projects - Pierce Jones gave example of current program, <http://gainesvillegreen.com> a simple tool to help visualize and track energy usage. Innovative education/social marketing projects could be funded also.
- Think about designing the program to pay for conservation, not pay for equipment. i.e. designate some of the funding as “pay for performance”. Note this needs to be separated from demonstration projects that are evaluating feasibility.
- Consider social equity in designing program. Low flush toilets will benefit more low income people, high tech irrigation controllers will benefit more high income people.

3. Preliminary Summary Comments (submitted April 29, 2009) :

Panel comments recognized that SJRWMD is ready to embrace conservation, commended the District for its aggressive efforts, and appreciated the skill and creativity demonstrated in developing, delivering, and managing resource protection projects. Several panelists recommended that the District revise the documents to articulate the comprehensive approach being taken to develop a Water Conservation Plan by SJRWMD, and to refocus documents to clearly build on one another and referring to specific goals, activities and outcomes. A brief summary is provided below for each of the general review questions posed to the panel.

- a. How effective will the approach outlined the initial planning documents be in helping SJRWMD to reach its Water Conservation Program Goals?

The effort being developed by SJRWMD, with the intent of striving for comprehensive, coordinated and effective conservation programs and policies, provides an opportunity for highlighting SJRWMD as a leader in conservation and demand management. Several panelists pointed to already recognized successes and commended the initiative and noted that SJRWMD has made a good effort, and there is some potential to meet the goals.

However, the overall the “approach” reflected in the collection of documents lacks clarity on what is meant by “Water Conservation Program Plan” and where this fits in the SJRWMD priorities. It is unclear whether SJRWMD is asking for a review of a “Plan” or of a “collection of documents.” The documents were described as confusing, as having significant gaps, disjointed, and lacking in general design. The “collection of documents” as they currently stand does not reflect an overall coordinated plan and there is a need to reflect a more comprehensive plan.

A clear introduction of SJRWMD Water Conservation Program with a clear articulation of the goals is needed. There is a need to standardize the terminology and structure of documents, so that there is consistency in terms, and a clear logic. What goals, actions, and measurable outcomes are anticipated? Several reviewers’ comments reflect this, and some good suggestions are provided in their specific comments. It is important to set a clear context as to where SJRWMD is right now. Dr. Jones, in particular, provides specific input/information that could be used to help establish that context and establish simple “facts” upfront and follow a simple logic to summarize the strategic water supply situation within the SJRWMD. Drs. Berg and Graham indicate that establishing reasonable goals (targets), measures, and metrics is essential to move forward, and Dr. Berg provides an example of a document for reference. Ms. Nero noted that SJRWMD may need to step back, develop the plan recommended previously and establish more articulate goals and programs/workplans to support those goals.

- b. Does the overall approach integrate policy, technical, educational information and expertise necessary to reach the goals? What else might be needed?

A clear effort is being made to structure teams and mixed working group. The group brings many skills to the table and by looking at the issues more holistically should make a difference. However, it is not clear from the “Work Structure” outlined in Document 3 how the work plan is to be implemented. Is there structural integrity and accountability to the Water Conservation Plan? Who really is leading the effort, how specifically do the different functional groups work together? Dr. Graham noted that clear vision, goals, strategies, actions and metrics should be consistent across documents. There is a need for more description of how the work plan structure will be implemented and the direct links of this structure to the Action Plan and including tools from public administration mentioned by Dr. Berg.

An integrated approach that links different disciplines was not strongly evidenced. Dr. Sandy Berg points out that lack of a strong “economic” analysis component. Dr. Dukes emphasized the importance of the peer reviewed science to enable a solid basis for policy decisions and educational outreach. Understanding and engaging the stakeholders in this design was also noted to be important to reflect the multiple perspectives that SJRWMD must consider in a Conservation plan, articulating who they are and why they are engaged.

- c. How effective the approach and plan outlined for each focus area of the work plan structure will be, including consideration of the challenges and opportunities for each

area, the accessibility of the information needed for each area, and the additional policy, technical or other information needed for effective planning and information.

The panel made specific comments on the functional areas in Document 3 directly, or in their summary reviews that will be helpful in each of specific functional areas. Please refer to the Panel's specific comments.

In general, it was difficult to see how each of the functional items related to the action plan and charter documents directly and how the list of items in the work plan should be considered in the overall context. The work plan structure should reflect the actions required to specifically meet the goals outlined in the Charter and the Action plan. As mentioned in previous comments, it would be useful to pull these three documents together using similar language regarding goals, actions and outcomes.

External Credibility, both in science and perception, is of critical importance and will require significant interaction and transparency with stakeholders, including the public. Public education, engagement, participation, and involvement will require new approaches to communication and education in an integrated fashion. Lumping Education into External Credibility may make sense in that it recognizes the linked role of education, engagement and credibility. However, it will require more than "implementing current education" and "Publicizing" as line items to achieve an integrated approach. New Conservation and Technology Research seems to be a bit too "separate" as it currently appears in the work structure. Rather, this seems like it is a cross cutting focus, and should be integrated into each of the teams.

4. Panelist Verbatim Draft Review Comments:

Panelists provided specific comments on many of the planning documents directly, as well as general comments and recommendations on the program as a whole or referring to specific documents in a summary review. Verbatim draft review comments are being made available by web access. Not all reviewers provided specific edits or comments embedded in all documents. A total of 29 documents were submitted by the reviewers:

- Berg- 2 documents (Doc 1, Review Summary)
- Bracciano – 6 documents (Doc 1,2,4a,4b,4c, Review Summary)
- Dukes – 7 documents (Doc 1,2,3,4a,4b,4c, Review Summary)
- Heaney - 7 documents (Doc 1,2,3,4a,4b,4c, Review Summary)
- Jones – 1 document (Review Summary)
- Nero – 4 documents (Doc 1, 4b, 4c, Review Summary)
- Graham - 1 document (Review Summary)

For ease of access, the documents are available on the Web in a password protected site and they can be sorted by individual reviewer or individual document. Documents can be downloaded in

PDF format or the entire set of reviews in available in a .zip file at the website. These documents will be available at this website through the end of the contract. To log in:

<http://www.waterinstitute.ufl.edu/login.asp> (*user name and password were provided in the email*)

These draft reviews represent the opinions of the individual panelists and not of the University of Florida Water Institute.

APPENDIX 1 - Review Panelist - STATEMENT OF WORK

UF Water Institute Review Panelist - STATEMENT OF WORK Informal Review of the SJRWMD Water Conservation Program Plan

I. Introduction/Background

The St. Johns River Water Management District (District) has developed a Water Conservation Program and drafted The District Water Conservation 3-Year Action Plan. The University of Florida's Water Institute (Institute) will form a Panel to carry-out an informal review of the District's Water Conservation Program planning-level documents. The purpose of the review is to ensure the draft documents related to the Planning effort are sound, and to provide recommendations to enhance and improve them.

As a member of the panel, we are asking you provide constructive informal comments and participate in the successful completion of a peer review of the SJRWMD District Water Conservation 3-Year Action Plan and related documents (*total of 6 documents*). The UF Water Institute shall lead the activities of the Panel including the coordination and editing of the final comments.

Timeline

The peer review shall consist of the following major tasks:

- April 8, 2009 - Submit any initial questions for clarification.
- April 22, 2009 – Submit review comments to the Water Institute.
- April 29, 2009 – Participate in conference call discussion with Water Institute and SJRWMD

Activities

1. Review each of the following documents, and making specific comments, suggestions and recommendations by using TRACK CHANGES.

Document 1. WATER CONSERVATION 3-Year ACTION PLAN
Document 2. WATER CONSERVATION PROGRAM CHARTER
Document 3. DRAFT WATER CONSERVATION PROGRAM 2009 PLAN (Work Plan Structure)
Documents 4a, 4b, and 4c. WATER CONSERVATION COST-SHARE PROGRAM APPLICATION PACKAGE (3 documents)

2. Provide general comments and recommendations using the Review Questions provided below.
3. Submit your input including the reviewed documents (with track changes) and your responses to the Review Questions electronically to Lisette Staal (lstaal@ufl.edu) by Wednesday, April 22nd.
4. Participate in a conference call with the Water Institute and SJRWMD to discuss the review panel members comments (to be scheduled approximately April 29th).

VII. Budget - The total amount budgeted for **each panel member's** participation is \$2000.

PANEL REVIEW QUESTIONS:

1. How effective will the approach outlined in the proposed Action Plan, Charter and Work Structure be in helping SJRWMD to reach its established **critical goals for success** outlined in the draft Charter and listed below?
 - *Develop well-defined, quantifiable water savings goals, measures and metrics*
 - *Ensure consistency of message across the organization with expectations managed well.*
 - *Interdepartmental cooperation and agreement on Program Goals (including Executive Office/Governing Board).*
 - *Actions must be realistic, practical, and implementable.*
 - *Establish external credibility and perception of fairness/equity.*
 - *Identify criteria to evaluate potential uses of water, and identify specific permitted and non-permitted uses.*
 - *Increasing Stakeholder cooperation*
 - *Developing an effective cost-share program.*
2. Does the overall approach integrate policy, technical, educational information and expertise necessary to reach the goals? What else might be needed?
3. Evaluate and comment on the approach and plan outlined for each focus area of the Work Plan Structure outlined in Document 3. For each area, consider at least the following questions: What are the challenges and opportunities? How accessible is the information needed for implementation? What additional policy, technical or other information is needed, and from whom, for effective planning and implementation?
 - A. Measurement
 - B. Cost Sharing Funding
 - C. Enforcement
 - D. Integration/Rulemaking
 - E. Standardization
 - F. *Education (no section- note that this was merged with the function area below)*
 - G. External Credibility/Education (education was merged with external credibility)
 - H. Local Government Coordination
 - I. New Conservation Science and Technology Research
4. Please provide any other comments, and observations, and recommendations.