

**EXTENDED ABSTRACT TITLE: The South Carolina Water Resources Consortium (Water Initiatives for 2015 and Beyond).**

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In the coming two decades between 2010 and 2030, the population of South Carolina is projected to increase by approximately 21 percent. That's a growth rate substantially higher than the average across the U.S., and one that will dramatically increase pressures on the water resources of South Carolina. While various state and federal agencies have missions and responsibilities related to specific water uses, or the regulation of the effects on water quality and quantity, there is no one agency that comprehensively addresses the future of water resources in South Carolina.

As part of its water resources stewardship mission, the U.S. Army Corps of Engineers (hereafter Corps of Engineers) Charleston District proposes to guide the formation of a South Carolina Water Resources Consortium (SCWRC) for the state that would focus on these "bigger picture" issues. The guiding principle of this SCWRC is "collaboration," with the purpose found in the phrase "Sound Science for Good Public Policy." The importance of this approach is reflected in a recent comment by Assistant Secretary of the Army (Civil Works) Jo Ellen Darcy, that "as demands for water resources increase, collaborations with Federal, state, local, and non-governmental partners must also expand if we are to remain relevant to the needs and expectations of our partners."

Historically, almost no country, and very few states, have effectively and comprehensively adapted to the unusual strains drought places on the numerous and interdependent resources competing for water availability; nor have they been able to comprehensively manage water resources; nor implement lasting public policy regarding those resources and their profound interconnection to energy, public health, environmental sustainability, agriculture, food supplies, and notably national security.

Persistent drought conditions have stressed Australia's environment and economy severely, forcing that nation to awaken to the indisputable fact that it had no choice but to implement an historic national water policy. The country has instituted national water plans that will ensure enough water for human and ecological purposes. Currently, Australia is globally in the water resources public policy forefront, through collaboratively establishing a disciplined national water agenda. Leading proactively by example, the country has transformed its management of water, and has concurrently implemented administrative and technical innovations which are becoming a model for the rest of the world. Their model points to one important principle, to plan and manage through multi-interest "partnered collaboration."

During 2008 and 2009, the Corps of Engineers engaged in a national objective assessment of states' water resources planning, to identify common nationwide water resources needs. This national initiative was titled *Collaborating for a Sustainable Water Future*. The Corps of Engineers role in this initiative was as facilitator, coordinator,

integrator and convener. The findings and results of these efforts are contained in a U.S. Army Corps of Engineers National Report titled *Responding to National Water Resources Challenges*, and subtitled *Building Collaborative Relationships for a Sustainable Water Resources Future*. The report conveys an interpretation of what participating Federal, tribal, state, interstate and NGO representatives expressed during the course of a two-year collaborative effort. The report provides general recommendations and suggested actions based on the objective review of states' and Federal agencies' water planning and management documents, interviews with selected state and Federal water officials, and discussions at three regional conferences (Eastern Region in Orlando, FL, February 2009; Western Region in Kansas City, KS, April 2009; and Central Region in St. Louis, MO, June 2009). The report documented nine themes (focus areas) to be addressed in assuring a sustainable water resources future for our Nation:

- Integrated Water Resources Management (IWRM). Make integrated water resources management more understandable and a preferred way to plan and manage public water and related land resources as a system.
- Governance and Management. Strive to revitalize and/or reshape means at all levels of government to improve water resources management, decision making and evaluation in ways that build the public will to act for integrated water resources planning and management.
- Future National Water Resources Direction. Foster continued dialogue about a sustainable national water resources future direction and develop supporting strategies to elevate water resources and related infrastructure as a critical national priority.
- Collaboration. Promote opportunities and mechanisms for collaborative water resources planning and management.
- Water Resources Investment Strategies. Promote and develop innovative and sustainable financing mechanisms for public water resources solutions, including water infrastructure, at Federal and state levels.
- Managing Extreme Events. Increase the ability to anticipate risks and manage emergencies and evolving natural or man-made disasters, especially as related to water resources.
- Technology Transfer and Knowledge Capacity Building. Base the development of water resources plans and decision making upon good science and the sharing of information and technology. Increase scientific and management knowledge and technology/ technological capabilities at all levels of government.
- Enhance Water Resources Leadership. Build and reinforce leadership and stewardship for responsible water resources management among water professionals across Federal, tribal, interstate and state agencies, and at large, by responding to national water resources challenges.
- Communications and Education. Enhance the ability of public officials at all levels and public and private water resources stakeholders to understand and communicate priorities for water resources through awareness-building, formal

and informal education, learning initiatives, public outreach, and communications activities.

The Corps National report states, "The Federal government, tribes, states, interstate organizations and nongovernment organizations have important roles in the stewardship of our Nation's water resources, which can be made even more effective through collaboration. Appropriate roles and responsibilities for water planning and management can be more clearly defined in the context of the national interest. The Federal government has a legitimate role to ensure consistency and equity across groups, especially to protect the disadvantaged, and to conduct assessments for economic and environmental needs."

Mr. Steven L. Stockton, Director of Civil Works for the U.S. Army Corps of Engineers summed up the effort and the report by stating: "This project is not about the Corps of Engineers taking over planning responsibility from the states. It is about facilitating all interests to work together to solve common problems and to share responsibility. It's about a collaborative approach to a sustainable water resources future. The SCWRC initiative dovetails nicely into this vision, and offers the water resources leaders in South Carolina an opportunity to assure that the guiding principle of "Sound Science for Good Public Policy" remains a reality and not just a slogan

The SCWRC establishes a comprehensive interdisciplinary membership of appropriate water resources stakeholders, each with special knowledge, expertise, and/or authority in the various aspects of water resources stewardship, planning and use. The SCWRC will function as the catalyst and clearinghouse for all information about SC water resources. SCWRC will coordinate the sharing of information regarding the efforts of Consortium groups and stakeholders to promote complementary efforts and reduce redundant ones. SCWRC will identify SC water resources needs and challenges, and will disseminate information to member groups and the public to promote awareness of state water resources and future demands on those resources. The SCWRC is being initiated as a collaborative forum by the Corps of Engineers, Charleston District:

- Corps of Engineers Charleston District as a catalyst only.
- A co-equal partnership of Federal, state, academic, and stakeholder interests.

The SCWRC is a proposal for a co-equal partnership. The Consortium will be a partnering of diverse entities to systematically and frequently collaborate, through sharing knowledge and/or resources for the purpose of:

- Accomplishing ends that would be beyond the member entities individual means (SYNERGY).
- Accomplishing ends more easily, and with more robust outcomes, due to the mutual involvement of Consortium members (FORCE MULTIPLIED).
- Will not interfere with the individual autonomy of Member Organizations or their separate missions, responsibilities, or initiatives (MUTUAL RESPECT).

The SCWRC is proposed as a facilitated partnership thru the implementation of the following actions:

- A SCWRC public web site.
- Shared and linked GIS databases.
- Meetings for mutual situational awareness and assessing projected futures.
- Establishing emphasis for public policy makers on emerging trends and priorities.
- Periodic collaborative and systematic assessment of evolving future water resources needs in SC.
- Identifying potential synchronization of research, and providing advice on individual member initiatives.
- Guiding and collaborating on special studies (such as systems studies of large watersheds).
- Empowering special teams for cooperative efforts.

The collaborative and systematic assessment of evolving future water resources needs in South Carolina by the member organizations should be conducted within the context of watershed systems methodologies:

- Watersheds, or River Basins, consist of interwoven systems that not only have riverine-related environmental complexities, but also accept and feed significant resources through the interdependent exchange of nutrients, movements of Diadromous fishes, and a variety of other biota, with the estuary and ocean environs.
- To wisely understand and address these dynamic complex interdependencies, and the potential effects of evolving or proposed changes, monitoring, data collection, research, and analyses should be approached in a holistic synchronized systems framework. Further, any proposed change to these systems must be implemented by applying adaptive learning methodologies.
- A holistic synchronized systems framework is constructed around understanding the subsystem interfaces in the riverine, estuary, and ocean environs through collaboratively drawing on the best available scientific expertise, and state-of-the-art tools. This collaboration requires all to be focused on environmental sustainability, and be more interested in systems understanding than quick implementations.
- To sustain relevance the Consortium must continuously provide opportunities to enhance individual research efforts and outcomes, as well as provide practitioners with useful science and methods to make timely policy and management decisions in the “best interest of the public.”

The proposed road ahead to initiate implementation of the SCWRC and collaborative efforts within South Carolina to assure the future sustainability of water resources systems is:

- Establish a steering committee of key organizational leaders (November 2010).

- Further develop the concept and socialize it among the potential member organizations and key leaders in SC.
- Conduct an initial formation meeting of all potential member organizations to establish the SCWRC “Swat” Team to begin development of a draft charter (January 2011).
- SCWRC “Swat” Team produces a draft charter and a draft of some basic organizational processes.
- The SCWRC membership meets to evaluate the draft charter, and the associated proposed draft processes (February 2011).
- The SCWRC “Swat” Team responds to each member organization’s formal comments, and completes the proposed final charter (March 2011).
- Conduct a final formation meeting to vote on the charter and establish a SCWRC Executive Committee and Chairperson (April 2011).
- Newly functional SCWRC begins operation in October 2011, for the new Federal Fiscal Year of 2012 and beyond.

The SCWRC working collaboratively will provide a opportunity to enhance public policy making, and significantly contribute to the goal of a sustainable water resources future for all. The Corps’ Charleston District invites your interest, suggestions, and ideas, to make this initiative a continuing success for the state and the nation.