COMPLETE STATEMENT OF

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BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

ON

COMPREHENSIVE WATERSHED MANAGEMENT AND PLANNING: DROUGHT-RELATED ISSUES IN THE SOUTHEASTERN UNITED STATES

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Introduction

Madam Chair and members of the Subcommittee, I am Brigadier General Joseph Schroedel, Division Commander, South Atlantic Division, U.S. Army Corps of Engineers. Thank you for the opportunity to provide this testimony on comprehensive watershed management at it pertains to drought-related issues in the southeastern United States.

I will start my testimony with an overview of the current drought situation. I will follow that with basic information about the Corps roles and responsibilities; our engagement on drought issues in the states of Alabama, Florida, Georgia, North Carolina and South Carolina; coordination with other federal agencies; and my views on future programs and actions that could increase communication and coordination among all affected parties.

Status of the Southeastern United States Drought

Drought conditions in the southeastern United States began in 2006 and continued to worsen over most of the southeast during 2007. These conditions are exacerbated by higher water demand. The latest U.S. Drought Monitor (http://drought.unl.edu.dm) indicates over 70% of the southeast is classified as being in a drought. The condition in almost 20% of that area is classified as "exceptional," which is the worst drought category. Record rainfall deficits reached 20-25 inches (about 50% of normal) for much of the southeast during 2007. Many streams also reached record low flows during the fall of 2007. Record low lake levels were observed at Lanier, Carters, and Falls (about 2 feet lower than previous lowest level). Municipal and industrial water supply, agriculture, navigation, recreation, hydropower and the environment all have been severely affected by the drought.

U.S. Army Corps of Engineers Role and Responsibilities

The Corps generally constructs and operates multi-purpose water resource projects. Purposes can include flood damage reduction, production of hydropower, recreation, navigation, water supply, water quality, irrigation, and fish and wildlife conservation. Day-to-day operation of our multi-purpose projects seeks to balance these competing and often conflicting purposes. During drought, these conflicts are magnified due to the limited water resources and higher demands.

Under the authority of the 1958 Water Supply Act, the Corps may make water supply storage available for municipal and industrial (M&I) uses. By making storage available, it conveys the right to store a resource in a Corps reservoir project but this does not include a guarantee that the water will be available. The federal government makes no representation with respect to either the quantity or quality of water and assumes no responsibility for the treatment or availability of the water.

Corps South Atlantic Division Engagement in the Southeastern U.S. Drought

The South Atlantic Division's jurisdiction includes all or significant portions of the states of Georgia, Florida, South Carolina, Alabama, Mississippi and North Carolina. There are four

districts within the South Atlantic Division that have water management functions – Jacksonville, Mobile, Savannah and Wilmington. Our district water managers routinely engage federal, state and local agencies, industry and other concerned stakeholders. We strive for both continual communication and complete transparency. Due to the nature of this drought, coordination and information sharing has increased significantly.

Corps Coordination on Drought Conditions in North Carolina, South Carolina and Southeastern Florida

North Carolina. The drought situation in North Carolina is very serious. The Wilmington District has "hands on" responsibility for water resource management in North Carolina. The Wilmington District has done an exemplary job of engaging the state and local agencies, industries and stakeholders. District staff has held weekly conference calls with the affected parties since the drought of 2002. Since November 2007 of the current drought, the district has added monthly face-to-face meetings to the conference calls. These meetings focus on five projects in North Carolina and Virginia. The Wilmington District senior water manager is also an advisor to the North Carolina Drought Council and the U.S. Drought Monitor.

South Carolina. The situation in South Carolina has been serious since mid 2006. In 2007, precipitation levels across the state were approximately 50% of normal. At the time of this hearing, drought conditions have improved somewhat due to very recent rainfall events; only 4-percent of the state is classified in the worst intensity level of "exceptional" compared to 20% at the start of 2008. However, NOAA's 3 to 6 month precipitation forecasts indicate that South Carolina will experience drier than normal conditions.

Since July 2006, Savannah District staff has held bi-weekly teleconferences with affected stakeholders. These calls continued through January 2007 when reservoir levels began to climb. After a short time during the period of reservoir recovery, the drought conditions resumed and the drought teleconferences resumed during the month of June and continue today. These calls engage federal agencies, state agencies from both Georgia and South Carolina and other major stakeholders. The Savannah District also held several public meetings last November and December to provide information to attendees and allowed stakeholders and the public to express their concerns to district water management, environmental and operations staffs. The Savannah District is a standing member of the state of Georgia's Drought Management Committee.

Southeastern Florida. Southeastern Florida is in the grip of a historic drought. Lower than average rainfall for multiple years has depleted ground water levels that supply the vast majority of drinking water and water for agricultural and industrial use. Of particular concern is the low level of Lake Okeechobee, which acts as the back up supply when ground water supplies are low.

Presently, the level of water in Lake Okeechobee is just above 10 feet, which is approximately 4 feet below average for this time of year. If this year's wet season is not productive, hydrologic modeling indicates we could experience a lake level as low as 8 feet; a level never witnessed before. Due to water control structure limitations, at elevations below 10 feet, water must be pumped out of the lake to supply agricultural users. Pumps will only provide benefits for a short period of time, however, if the lake level continues to fall below 10 feet.

Management of Lake Okeechobee, for its flood control and navigation functions, is carried out by the Jacksonville District. Management actions are always worked closely with the state's local watershed management agency, the South Florida Water Management District (SFWMD). As a normal practice, the Jacksonville District water management staff holds weekly teleconferences with the operations staff of the SFWMD. In April 2007, as drought conditions worsened, an additional weekly operations coordination call was instituted for the purpose of focusing solely on drought coordination. Also in April 2007, the principal leadership of the Jacksonville District, Department of Interior, South Florida Water Management District and several Florida agencies including the Florida Departments of Environmental Protection and Agriculture and Consumer Services began to hold regularly scheduled teleconferences to discuss both policy and technical issues.

Corps Coordination on Drought in the Alabama-Coosa-Tallapoosa Rivers (ACT) and Apalachicola-Chattahoochee-Flint Rivers (ACF) Basins

The ACT Rivers system is a multipurpose system authorized for flood control, hydropower, navigation, water supply, water quality, recreation and fish and wildlife conservation. The system has five Corps projects and ten Alabama Power Company (APC) dams. The Corps projects consist of two major storage projects, Allatoona and Carters in Georgia at the upper end of the basin and three run-of-the-river projects at the lower end of the basin in Alabama. Alabama Power Projects are located on the Coosa and Tallapoosa Rivers and are operated in conjunction with Corps projects to provide a minimum seven day average flow in the system. The Corps oversees the Alabama Power Projects for purposes of flood control operations.

The ACF Rivers system is also a multipurpose system authorized for flood control, hydropower, navigation, water supply, water quality, recreation and fish and wildlife conservation. The federal projects on the basin system begin with Lake Sidney Lanier at the headwaters, West Point Lake, Lake Walter F. George, George W. Andrews and Lake Seminole at the lower end of the basin. There are also several lakes with hydropower facilities operated by private and public utilities along the system.

Under normal circumstances, the Corps operates and manages these reservoirs to meet all project purposes in accordance with the draft water management plans developed in the late 1980s. These plans establish certain zones of water levels that trigger actions when these levels are reached. It is when drought occurs that complicated issues begin to develop within these basins. The Corps continues to operate and manage the systems based on the draft water control plans. This calls for balancing the various reservoirs with available water to maintain project purposes as long as possible as water supplies continue to dwindle. As drought conditions worsen, some project purposes may be adversely affected temporarily. These purposes can include water supply, water quality, hydropower, recreation, and fish and wildlife conservation. Fortunately, we are often able to simultaneously meet several of these needs with one action. For example, water released for water quality can also be run through a generator to produce hydropower.

The ACT Rivers Basin. On May 15, 2007, APC requested permission to reduce the required flows from its projects measured at Montgomery, Alabama by up to 40-percent. The Mobile District prepared an Environmental Assessment. This assessment resulted in a Finding of No

Significant Impact on July 20, 2007, for an immediate flow reduction of 10-percent with the provision to increase the flow reduction up to 20-percent with additional monitoring. The 10-percent flow reduction at the APC projects was implemented on July 20, 2007.

As conditions deteriorated this spring, the South Atlantic Division and Mobile District held a Drought Summit for the ACT basin in Columbus, Georgia on June 25, 2007. Affected stakeholders in Georgia and Alabama, as well as state and federal agencies that deal with the system attended the summit. The summit allowed the Corps to gain a better understanding of their views and concerns, and allowed them to share technical information with the Corps. During this meeting, the Corps briefed the current and future operations in the system.

As the drought worsened through the late summer of 2007, the Mobile District and division staffs have worked closely with state agencies in Georgia, Alabama and the APC to coordinate and develop drought management policies. On November 14, 2007, the Corps began coordination with the state of Alabama and the APC and jointly developed ten proposals for drought management within Alabama. The action items included short and long-term items. To date, seven of the ten proposals have been implemented, and work continues on the three long-term proposals.

The ACF Rivers Basin. In addition to the extreme heat and drought conditions this summer in Georgia, flow requirements in the Apalachicola-Chattahoochee-Flint system were causing system storage to be depleted at a rapid rate. In particular, flow requirements at the Jim Woodruff Dam at Lake Seminole to support industry and endangered species were driving water management decisions. On November 16, 2007 and in consultation with the U.S. Fish and Wildlife Service, the Mobile District was able to lower the flow requirements and increase the storage provisions of the Corps Interim Operating Plan to conserve water in the system. We are currently working with the Fish & Wildlife Service to extend these provisions.

Open and continual communication has figured prominently in our approach to managing the ACT and ACF basin systems during this historic drought. On July 11, 2007, the Mobile District and South Atlantic Division began holding weekly and or bi-weekly teleconferences on the ACT Basin. On September 20, 2007, the Corps began bi-weekly teleconferences on the ACF Basin. These teleconferences allow all to hear the latest information on system conditions, to anticipate future changes, and to respond with necessary adjustments. The calls also provide a venue through which participants transmit information to the Corps.

Division and district community outreach has been robust. Corps staff has engaged in hundreds of community forums including meetings, local news programs, and radio and newspaper interviews, all in an effort to inform the public about the roles and responsibilities of the Corps and the challenges it faces. We have gained an in-depth understanding of the concerns of the industry, user groups and supply groups, and the public at large.

Coordination with other Federal Agencies

Coordination with other federal agencies such as the Department of Interior, U.S. Fish and Wildlife Service, the U.S. EPA, the National Oceanic and Atmospheric Administration (NOAA) and the Federal Energy Regulatory Commission (FERC) is extremely important. We believe it

is vitally important that we act as an integrated federal team given the complexity of the issues that span multiple state and local governments, and affect numerous user groups and private industries such as those which provide hydropower.

Our work with NOAA is an excellent example of federal cooperation as we look to their expertise in drought monitoring and prediction to assist our programs and actions. They have briefed us extensively during this drought and we value their continued support.

Our coordination with the Fish and Wildlife Service has been extremely successful. Under drought conditions, the impacts of our actions on endangered species, such as three species of mussels and the Gulf sturgeon on the Apalachicola River and the wood stork and snail kite in the Everglades, require consultation under Section 7 of the Endangered Species Act (ESA). During informal consultation and as new scientific information became available, the Corps adjusted its operations at the Jim Woodruff Dam as needed to provide adequate flow conditions to afford protection for the Gulf sturgeon and protected mussel species in the Apalachicola River. Our team approach to ESA coordination has allowed both agencies to reduce review times down to a duration we would never have imagined possible.

In southeastern Florida, the Corps faces issues associated with the endangered snail kite's ability to nest and reproduce as water levels on Lake Okeechobee fall. We have always maintained a very close working relationship with the Fish and Wildlife Service staff in south Florida.

Consideration of the potential impacts on drinking water supplies and energy production has prompted us to coordinate with the Department of Homeland Security (DHS). The Corps has been working with DHS at the highest level. My staff in Atlanta, along with Headquarters staff provided a briefing for DHS staff on the drought on January 11, 2008, with a follow-on briefing on February 12, 2008. We provide weekly data to DHS on the status of the projects where water shortages are most acute.

My division staff has also participated in two meetings sponsored by the Department of Energy. The first meeting was held on November 16, 2007, with a follow-up meeting in January 8, 2008. These meetings included the major power producers in the southeast and focused on developing contingency plans for power production if drought conditions worsened.

Near Term Drought Mitigation Strategy: Updates of Water Control Plans

Project operations at each reservoir are described in water control plans and/or manuals. These manuals typically outline the regulation schedules for each project, including operating criteria, guidelines and rule curves, and specifications for storage and releases from the reservoirs. The water control plans also outline the coordination protocol and data collection, management and dissemination associated with routine and specific water management activities (such as flood control operations or drought contingency operations). Updates or revisions to the water control plans are typically integrated with the National Environmental Policy Act (NEPA) public involvement and documentation process.

The district water managers in the southeast have been diligent in adjusting operating and drought plans to manage the limited water resources during this drought. When conditions

became so severe that our approved plans could no longer support the systems in accordance with our regulations, the district water managers sought approval for temporary deviations from the South Atlantic Division.

Current water control plans are the most important management tool water managers have. Without updated water control plans, the Corps runs the risk of any or all of the following: adversely affecting water quality downstream; failing to provide sufficient water where and when needed to meet the authorized purposes of our projects and the needs of stakeholders, whether domestic or municipal and industrial; adversely affecting endangered species; expending water resources too early, thereby reducing our ability to maintain the system to meet project purposes and the needs of the stakeholders; and flooding people and facilities that are within flood plains.

Updates of water control plans are done in accordance with statutory (Flood Control Act of 1944) and regulatory requirements (Engineering Regulation (ER) 1110-2-240 and ER 1110-2-8156), that comply with NEPA and account for demographic, hydrologic, environmental and technological changes that have occurred within the basins. The Water Resource Development Acts (WRDA) of 1988 and 1990 also provide for public involvement of all interested stakeholders during the development of new or revised water control plans, which ensures consideration of the current public interests within the basin.

The South Atlantic Division is now in the process of updating several water control plans in accordance with Corps regulations. The Mobile District has recently been directed by the Secretary of the Army to update the water control plans for the ACF and the ACT River basins. These water control plans were being updated in the late 1980s and early 1990s when work was stopped due to litigation. The Jacksonville District is finishing a two-year effort to update the Lake Okeechobee Water Control Plan. Following the hurricanes of 2004 and 2005, which caused Lake Okeechobee to experience extended periods of high water levels, the Jacksonville District studied ways to manage the lake at lower levels. The result is a new operating plan which will result in lower lake levels while still meeting authorized project purposes.

Future: Southeast Regional Water Resource Council Concept

If any of the agencies - whether federal or state, industry or the public - are to successfully manage water, we must find a way to work more closely and cooperatively across boundaries, missions and jurisdictions. Towards this end, almost a year ago I introduced the concept of a state-led forum to develop a regional vision for integrated solutions to water resource challenges in the southeastern region. My intent was to establish a process whereby the Corps and other federal partners could ensure our programs and priorities are in concert with states needs and priorities across the region and to foster a more collaborative and consistent effort for development and use of water resources in the region.

Early informal feedback from our contacts with governors and state government officials was generally favorable, but cautious. Initial feedback from a variety of constituent groups with direct interest in water resources issues was quite favorable. They saw the regional council of states as an opportunity to reduce fragmentation, establish more consistent approaches to water resources issues across the region, set some overarching regional water resource priorities, and

build a collaborative working relationship among states and federal partners. We have since assigned a team of division and district staff to refine the concept and to further communicate with the states and stakeholders. We are in the process of that coordination now.

The concept, as it is now defined, is a state-led forum among the southeastern states to address existing and emerging regional water resources challenges in the region. A regional water resources forum in the Southeast would provide a means to: (1) maintain ongoing multi-state regional dialogue on water resources issues and priorities; (2) develop regional strategies and establish regional priorities for water resources management and investments; and (3) promote creation of innovative interstate partnerships to address critical water resources issues.

I strongly believe establishing a southeastern water resources council could provide enormous benefits to the states, federal partners and residents of the region.

Conclusion

Madam Chair, Members of the Subcommittee, thank you for this opportunity to testify before you. This concludes my testimony. I would be happy to answer any questions you might have.