

Tennessee Duck River Development Agency

Regional Drought Management Plan

December 7, 2010



Agenda

- Introductions (9 am)
 - Objectives for Workshop No. 1
 - Project and Stakeholder Objectives
 - Project Approach
 - Project Schedule
 - Communications
 - Stakeholder Participation
 - Task Force Roles and Responsibilities
 - Project Scope of Work
 - Meeting Participants Input/Comments
- Break (10:30 am)
- A Potential Framework for Drought Management
 - Next Steps

Adjourn (12 Noon)

Introductions

■ Strategic Team

- ▶ O'Brien & Gere
- ▶ HydroLogics

■ Task Force

- ▶ TDEC
- ▶ TWRA
- ▶ TVA
- ▶ USFWS
- ▶ USGS
- ▶ DRATAC
- ▶ TNC

■ Workshop Participants

Objectives of Workshop No. 1

- Solicit input on project objectives
- Present approach and schedule for DRA's DMP
- Review stakeholder and Task Force roles and responsibilities
- Outline scope of work to be performed under DRA's DMP
- Present a potential framework for drought management
- Define next steps

Project Objectives

- Partially satisfy State's Guidance for Developing Community Water System DMPs
 - ▶ http://tn.gov/environment/dws/pdf/droughtmgtpn_guidance.pdf
- Address EPA Region 4 Guidelines for water supply programs
- Establish and agree on roles and actions to be taken during droughts by water systems, agencies, and agricultural and golf course withdrawers
- Others????

Project Approach

- Project approach will be similar to water supply plan
- Four interactive work sessions to present findings and solicit input
- Approach follows checklist outlined in TDEC Guidance Document
- Task Force to direct technical aspects of DMP
- Request data from water systems as needed to address source of supply evaluations

Project Schedule

- Workshop No. 1 - Kick-off December 7, 2010
- Workshop No. 2 – Evaluate Triggers February 2011
- Workshop No. 3 – Refine Triggers April 2011
- Workshop No. 4 – Conclusions June 2011
- Draft Report June 2011
- Final Report July 2011

Communications

- Routine points of contact:
 - ▶ Doug Murphy – DRA
 - › doug@duckriveragency.org
 - ▶ Thomas Dumm – O'Brien & Gere
 - › Thomas.Dumm@obg.com
 - ▶ Brian McCrodden – HydroLogics
 - › bmccrodden@hydrologics.net

- Task Force members with emails

Communications

- Workshops
- www.duckriveragency.org
- Task Force video conferencing
- One-on-One meetings



Stakeholder Participation

- Participate in workshops
- Provide feedback to member of Task Force

Task Force Roles and Responsibilities

- Review and direct technical aspect of DRA's DMP
- Participate in workshops and video conferencing sessions
- Provide information and data in area of individual expertise

Project Scope of Work

■ Task 1 – Preplanning

- ▶ *Define authority to activate responses to drought conditions (Water Systems)*
- ▶ Identify Task Force to create DMP (DRA and Water Systems)
- ▶ Describe characteristics and constraints for supply sources (DRA and Water Systems)
- ▶ *Disaggregate water demands by use category (Water Systems)*
- ▶ Define demand characteristics including peaking factors (DRA and Water Systems)

Project Scope of Work (Continued)

■ Task 2 – Organizing the Planning Process

- ▶ Define goals, objectives and priorities for water use (DRA and Water Systems)
- ▶ *Identify whether priorities could be met during droughts (Water Systems)*
- ▶ Define process for development of DMP (DRA and Water Systems)

Project Scope of Work (Continued)

■ Task 3 – Identifying Existing Plans, Partnerships, Policies, and Procedures

- ▶ Characterize level of risk for system based on historic drought (DRA)
- ▶ Identify whether DMP addresses system limitations (DRA and Water Systems)
- ▶ Characterize problems during most recent drought (DRA and Water Systems)
- ▶ *Identify level of risk for system's most critical needs (Water Systems)*
- ▶ Identify partnerships for obtaining additional water (DRA and Water Systems)

Project Scope of Work (Continued)

- **Task 4 – Coordinate with State and Regional Agencies**
 - ▶ Discuss changes to Normandy Reservoir operating curve (DRA)
 - ▶ Discuss changes in NPDES wasteload requirements (DRA)
 - ▶ Define efforts for regional cooperation for supplies (DRA)
 - ▶ Define instream flow needs (DRA)

Project Scope of Work (Continued)

■ Task 5 – Plan Management Phases and Responses

- ▶ Define at least three phases of drought management for drought response (DRA and Water Systems)
- ▶ Define triggers for activating demand management phases (DRA)
- ▶ *Define water conservation rates (Water Systems)*
- ▶ *Define system's water treatment capacity (Water Systems)*
- ▶ *Identify and address limitations on pumping and distribution (Water Systems)*
- ▶ *Identify and address limitations on storage tank capacity (Water Systems)*
- ▶ *Identify source limitations or contract limitations for interconnected systems (Water Systems)*
- ▶ *Identify adequacy of system interconnections to meet demands (Water Systems)*
- ▶ Identify capabilities of wells under extreme drought (DRA and Water Systems)

Project Scope of Work (Continued)

■ **Task 5 – Plan Management Phases and Responses (Continued)**

- ▶ Identify the number of days of remaining supply or other metrics (DRA)
- ▶ Define critical low flow requirements (DRA)
- ▶ Identify efforts to develop additional sources (DRA)
- ▶ Define potential for each supply source (DRA)
- ▶ Define impacts on water quality of sources (DRA)
- ▶ Define level of risk of supply sources under various phases of demand management (DRA)
- ▶ Define level of risk for interconnection sources under various phases of demand management (DRA and Water Systems)
- ▶ Identify timing for connecting to alternative sources (DRA)

Project Scope of Work (Continued)

■ Task 5 – Plan Management Phases and Responses (Continued)

- ▶ Define critical event that would limit system's ability to supply water (DRA)
- ▶ Define trigger points for demand management phases (DRA and Water Systems)
- ▶ Identify whether reduction measures meet anticipated water supply conditions (DRA)
- ▶ *Define whether priority demands can be met by existing sources (Water Systems)*
- ▶ *Identify whether ban on non-essential water uses meets average water use (Water Systems)*
- ▶ Identify potential for increased water use by non-customers (DRA)
- ▶ Estimate reductions in water use by hauling water for non-customers (DRA)

Project Scope of Work (Continued)

■ Task 6 – Plan for Implementation – Monitoring, Key Element, and Trigger Points

- ▶ Ordinances allowing drought declarations and response (DRA and Water Systems)
- ▶ Roles of the drought management team (DRA and Water Systems)
- ▶ Monitoring water use by category of user (DRA and Water Systems)
- ▶ Agricultural and golf courses (DRA and Water Systems)
- ▶ *Time of day use (Water Systems)*
- ▶ *Water system zoning to maintain service (Water Systems)*
- ▶ *Implementing notification, monitoring and enforcement (Water Systems)*
- ▶ Lead times for drought management phases (DRA)
- ▶ *Adequacy of level of enforcement (Water Systems)*
- ▶ *Public notices (Water Systems)*

Project Scope of Work (Continued)

- **Task 7 – Identify Management Team – Purpose, Structure, Roles and Functions**
 - ▶ Individual responsible for contact Division of Water Supply to activate drought phases (DRA)
 - ▶ Individuals responsible for monitoring conditions (DRA)
 - ▶ Actions for stepping down drought phases (DRA and Water Systems)

Project Scope of Work (Continued)

- **Task 8 – Review, Evaluate and Update DMP**
 - ▶ Plan for evaluating DMP and making changes (DRA and Water Systems)
 - ▶ Expiration date and update period (DRA and Water Systems)

Project Scope of Work (Continued)

- **Task 9 – Public Hearings / Meetings**
 - ▶ Meetings (DRA and Water Systems)
 - ▶ Draft and Final Report (DRA and Water Systems)
 - ▶ Other communications (DRA)

Meeting Participant Input / Comments



A Framework for Drought Management

- Presentation by HydroLogics

Next Steps

- Next Meeting
 - ▶ Work Session - February 2011
 - ▶ Video Conference with Task Force
- Action Items Summary
 - ▶ ???

Meeting Participant Input / Comments

