

	TASK	LEAD	SUPPORTING	Est. Start Date	Estimated Completion Date	Dependent upon completion of Task #
1.0	JUSTIFICATION AND ADMINISTRATION OF PLAN	Steering Committee¹				
1.1	Identify rationale for the proposed geographic scope of the region to be planned for and identify all planning participants (municipalities, county governments, utility districts, water suppliers, and wastewater utilities).		COE Phase I	ongoing	2/15/09	
1.2	Determine the planned effect of the plan on future decisions in the region (locally, by TDEC and other agencies) including examples of possible effects		TDEC			This is needed early in study to fully coordinate with interested parties.
1.3	Discuss plan with impacted agencies (e.g., ECD, TDOT, Development Districts, local planning entities)		TDEC			
1.4	Establish 'ownership' of the plan and recommended updates along with a process and timetable for updating the plan		TDEC			
1.5	Establish a GIS database to house the information determined		COE Phase I	ongoing	ongoing	1.4
1.6	Establish ownership of the GIS information generated and the management of that data for future updates		TDEC			1.5

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2.0	DETAILED DESCRIPTION OF PLANNING REGION	TACIR	COE Land Trust TNC			
2.1	Cities / counties within primary planning area		COE Phase I	ongoing	2/15/09	
2.2	Physical description of planning region (square miles)		COE Phase I	ongoing	2/15/09	
2.3	Demographics (e.g., rural or metropolitan, average household income in comparison to state averages, education level, etc.)					
2.4	Political representation (mayors, state representatives)		TDEC			
2.5	Major industries (including agricultural)					
2.6	Population (Historical and current)					
2.7	Regional economy (e.g., primary economic base for the population, primary economic activities including agricultural activities businesses highly dependent on water resources)					
2.8	Areas on the periphery of the planning region with potential impacts to, or inclusion in, the study		COE Phase I	ongoing	2/15/09	

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2.9	Initial assessment of the region's agricultural and natural resources including any threatened or endangered species in the region or ecologically unique river or stream segments and significant recreational sites (e.g., State Wildlife Action Plan data from TWRA in Crossville for the South Cumberland region)		TDEC TNC			
3.0	CURRENT USE	COE	TDEC USGS			
3.1	PWSs sources (e.g., groundwater, reservoirs, streams, interconnections with other utilities, etc.)		COE Phase I	11/15/08	3/15/09	
3.2	Maximum daily and monthly production and average daily production for the past year for the PWSs in the planning region. Phase II will capture all available historic recorded		COE Phase I and II	11/15/08	3/15/09	
3.3	Existing drought management and water conservation plans for the PWSs in the planning region		COE Phase II	2/15/2009	3/30/2009	
3.4	Current areas of water shortages and surpluses in the region		COE Phase I and II	11/15/08	3/15/09	
3.5	Current reservoir operating guides will be reviewed for all resources within and adjoining the planning area		COE		3/15/09	

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3.6	All existing water use demands in the region must be accounted for, including (but not limited to) assimilative capacity requirements for NPDES permits, TMDL flow demands, recreational use needs, lost and unaccounted for, and agricultural use		TDEC USGS		Must be done by 4/15/9 to support task 4.3	
4.0	RESOURCE AVAILABILITY	COE	TDEC, TDA, USGS			
4.1	River basins in the planning region		COE Phase I	11/15/08	2/28/09	
4.2	Other water sources in the planning region (including those not currently connected to a water system and those associated with PWSs on the periphery of the planning region)		COE Phase II	3/15/09	4/30/09	
4.3	Firm and sustainable yields from existing water sources		COE Phase II	4/15/09	6/30/09	3.6, 4.4 thru 4.11
4.4	Seasonal fluctuations on water availability data for the sources		COE Phase II	4/15/09	6/30/09	
4.5	Water availability of source during drought conditions		COE Phase II	4/15/09	6/30/09	
4.6	Information on past water resource issues resulting from drought over the past few years (specific to the South Cumberland Region)		COE Phase II	2/15/2009	3/30/2009	

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4.7	Sources used by agricultural users (dairy, fruit and vegetable growers, sod) and those depended on by recreational users (e.g., golf courses)		TDA			
4.8	Identification of sources and quantities used by self-supplied residences, industry, etc.		COE Phase I	ongoing	2/15/09	
4.7	Water quality issues of current and potential sources		USGS COE Phase I TDEC	ongoing	2/15/09	
4.8	Information on the general rainfall patterns in the region and the magnitude of drought over the past few years		COE Phase II	2/15/2009	3/30/2009	
4.9	Drought and climate change impact issues for current and potential sources		COE Phase II	2/15/09	3/30/09	
4.10	Identify alternative sources that are available (e.g., groundwater, streams, potentially enlarged or new reservoirs)		COE Phase II	7/1/09	9/30/09	
4.11	Identification of wastewater disposal systems regarding their potential contribution to downstream supplies (e.g., use of nonpotable water for irrigation, etc.)		COE Phase I and II	Phase I ongoing Phase II	3/30/09	

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5.0	PROJECTIONS & COMPETING USES	USGS	TACIR, USGS, TNC, ISSE, Land Trust			
5.1	Population projections (with at least two population / economic development growth scenarios) <i>TACIR will not have 2 scenarios</i>		TACIR (UT-ISSE)	4/4/09	6/30/09	2.3,2.7, 7.11, 9.1, 9.2
5.2	Population projections in comparison to statewide projections		TACIR			5.1
5.3	Identified areas of water need (projected water demands exceed the existing water supplies)		COE Phase II	6/1/09	6/30/09	5.4
5.4	30-year to 50-year demand forecast, with basis, including the estimated demand of any areas the present systems expect to extend service to during that period by sector (based on at least two growth scenarios) divided into increments of no more than 10 years		USGS	4/4/09	6/30/09	5.1, 5.5
5.5	All future water use demands in the region must be accounted for, including (but not limited to) assimilative capacity requirements for NPDES permits, TMDL flow demands, recreational use needs, and agricultural use		USGS	4/1/09	5/30/09	

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6.0	ALTERNATIVES & RECOMMENDED PLAN	TDEC COE	STEERING COMMITTEE			
6.1	Evaluate adequacy of present sources for projected needs		COE Phase II	3/15/09	6/30/09	5.4,6.2,6.3
6.2	Identification of conservation strategies (including outreach and education programs, conservation pricing, incentive programs for residential efficiency upgrades, leak detection / pipe and meter replacement, etc.) for residents, agriculture, business and industry in the planning region and the potential impact on the projected water demand if successfully implemented		USGS	6/15/09	7/31/09	3.3
6.3	Assess potential impact of the implementation of land stewardship practices including low impact development					

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6.4	Identify new sources (including combinations of sources) or alternatives, modified reservoir operating guides and any associated costs and quantities including interconnection between systems (including regional "Big Water" sources), consolidation of supplies, new or larger ground and surface sources, high-flow harvesting and storage, trimming demand, etc.		COE Phase II	6/15/2009	7/31/2009	6.5
6.5	Re-evaluate in-stream flow prescriptions and identify acceptable modified flows (considering flow magnitudes, habitat structure and water quality) that more accurately reflect natural extreme low flow conditions		TWRA USGS TNC TDEC	7/15/2009	8/30/2009	
6.6	Resource issues associated with identified alternative sources including legal access issues		COE Phase II	7/15/2009	9/30/2009	
6.7	Policy and/or legislative issues associated with the alternatives					
6.8	Identify societal (public awareness and comfort) or regulatory barriers to reclaimed and grey water use strategies		ISSE			

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6.9	Identify any other economic, environmental impacts that might result from implementing the plan					
6.10	Outline of NEPA process and timeline, if necessary, as associated with specific alternatives		COE Phase II	10/15/2009	11/30/2009	
6.11	Firm and Sustainable Yields from Alt Sources		COE Phase II	7/1/2009	10/31/2009	6.4,6.5
6.12	Specify the preferred alternative(s) and the reasons for the preference (considering both population / economic development projections) Recommend changes in reservoir operating guides, streamflow requirements, wastewater treatment improvements, policies regarding agricultural withdrawals and water conservation alternatives (leak detection and repair, fixture retrofit program, public education, rate structures, irrigation policy, water recycling and reuse)		COE Phase II	10/1/2009	11/30/2009	6.4-6.11
6.12	Establish the process for an energy management program for the water suppliers under the preferred alternative - Energy Star Portfolio Manager tool					

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7.0	COST STRUCTURE & ECONOMICS	TACIR	COE, Comptroller's Office, SWRI , USDA Rural Development			
7.1	Public water systems in the planning region		COE Phase I	ongoing	2/15/09	
7.2	Wholesale water providers in the region		COE Phase I	ongoing	2/15/09	
7.3	Any water plans produced by the PWSs in recent history		COE Phase I	ongoing	2/15/09	
7.4	Population served by the PWSs		COE Phase I	ongoing	2/15/09	
7.5	Identification of current water uses by sector		COE Phase I	ongoing	2/15/09	
7.6	Percentage of water produced that is billed		COE Phase I	ongoing	2/15/09	
7.7	Unaccounted-for water in the PWSs system and identification of potential source of the loss		COE Phase I	ongoing	2/15/09	
7.8	Results of any energy or water audits conducted at the PWSs in recent history		COE Phase II	2/15/2009	3/30/2009	
7.9	Estimate of quantity of water used by self-supplied residences, industry, etc.		COE Phase I	ongoing	2/15/09	
7.10	Inventory of the unserved areas in the planning region (differentiating current residents without water separately from currently unoccupied developments with no water)		COE Phase I (Identification of unserved areas) Others (Inventory of Unserved Areas)	ongoing	2/15/09	

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7.11	Evaluation of PWSs current pricing model and its adequacy in addressing the true costs of extracting, treating and distributing water					
7.12	Assessment of the local governments' and utilities abilities to support the growth driving the water supply demand with fees and tax rates that will be acceptable to the residents of the area				6/1/2009	
7.13	Determine how (or if) the communities to be served could finance the proposed alternatives (including construction costs, land acquisitions costs, long term treatment, potential water quality issues (e.g., disinfection by products), pumping costs, maintenance, annual operating costs, etc.)					
7.14	Assess business structure scenarios for the management of the preferred alternative(s) and the recommended management structure					
7.15	Assess the potential socioeconomic impact of not meeting the identified need					

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8.0	INFRASTRUCTURE	COE	COE, USDA Rural Development			
8.1	Design capacities of the current treatment and storage systems for the PWSs in the planning region		COE Phase I	ongoing	2/15/09	
8.2	Number of connections and the location of service lines		COE Phase I	ongoing	2/15/09	
8.3	Number and capacity of interconnections between systems		COE Phase I	ongoing	2/15/09	
8.4	Assessment of the degree of treatment afforded by the plants for future required treatment levels and the ability to treat water from any proposed new sources		COE Phase I and II	2/15/2009	3/30/2009	
9.0	LAND-USE PLANNING	ECD	Land Trust, TACIR			
9.1	Major development / land use plans for the planning region (including any state Economic & Community Development policies, identified industrial site and other plans and regional development district plans or goals, recent reports from UTC and the Office of Local Planning for the South Cumberland region)				To Support Task 5.1 4/4/9	

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9.2	Include information on local economic development goals and any official land use plans, including those adopted pursuant to Title 13 and to PC 1101				To Support Task 5.1 4/4/9	
10.0	COMMUNITY PLANNING, FACILITATION & OUTREACH	TDEC	STEERING COMMITTEE			
10.1	Identification of significant organizations for outreach (e.g., political, environmental, business and professional organizations)					
10.2	Identify and engage all private firm consultants and engineers who are currently or have, in the recent past, worked with participating utilities, municipalities, and/or county governments. Any outside consultants utilized by individual regional planning participants should be engaged openly with the regional planning effort.		COE Phase I and II	2/15/2009	5/30/2009	
10.3	Establish plans for public interaction throughout the pilot and plan implementation					

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10.4	Identify local newspapers for meeting notices and periodic update articles or newsletters on the regional planning process					
10.5	Development and maintenance of a website for posting information on the process and receiving inquiries and comments					

¹Members of the Planning team organizations

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KEY:
TDEC = TN Department of Environment and Conservation
COE = US Army Corps of Engineers - Nashville District
TACIR = TN Advisory Commission for Intergovernmental Relations
USGS = US Geological Survey
TNC = The Nature Conservancy
ECD = TN Department of Economic & Community Development
SWRI = SE Water Resources Institute
ISSE = Institute for a Secure & Sustainable Environment
DRA= Duck River Agency
USDA - RD= US Department of Agriculture Rural Development
TDA = TN Department of Agriculture