Regional Water Planning Guidance

Georgia Environmental Protection Division

JULY 2009

Table of Contents

Table of Contents

Figures

Tables

Appendices

Acknowledgements

The Georgia Environmental Protection Division (EPD) acknowledges the efforts of AECOM Water Team (formerly Metcalf & Eddy) including EDAW|AECOM, Wiedeman & Singleton, and Ecological Planning Group for their assistance is preparing this document.

This page left intentionally blank

Summary of Concepts for Regional Planning

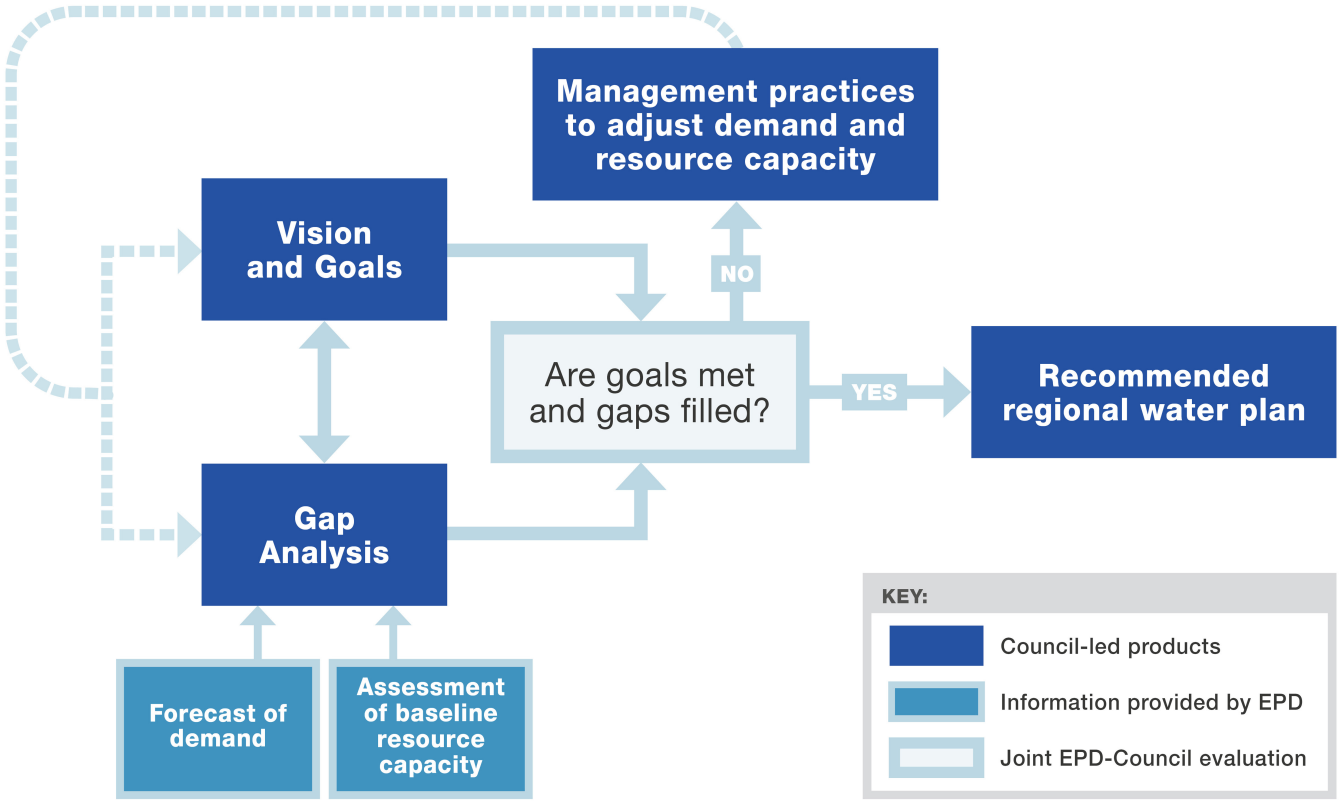
The State Water Plan calls for the preparation of regional water plans designed to manage water resources in a sustainable manner through 2050. It establishes ten regional water planning councils and provides a framework for regional planning consistent with the policy statement that "Georgia manages water resources in a sustainable manner to support the state's economy, to protect public health and natural systems, and to enhance the quality of life for all citizens."

This summary provides a brief description of the basic steps in regional water planning. The concepts summarized here are described in more detail in the following sections of this Planning Guidance.

Overview of Regional Planning

- The regional water plans are being prepared following the consensus-based planning process outlined in Figure 1.
    - The process requires input of regional water planning councils, local governments, and the public.
    - The Georgia Environmental Protection Division (EPD) is overseeing the regional water planning process and, along with partner agencies, providing support to the regional water planning councils.

Figure 1: Regional Water Planning: Information Flow and Products



The products and schedule for regional water planning are shown in Table 1. A more detailed schedule of water plan activities is provided in Appendix A.

- As shown in the target dates in the last column, some products will be developed concurrently. Some of the products may also be completed earlier than indicated by the target dates in Table 1.

TABLE 1: REGIONAL WATER PLANNING PRODUCTS AND SCHEDULE

PRODUCTS	REGIONAL WATER PLANNING COUNCIL ACTIVITIES SCHEDULED FOR:
Regional vision and goals	April 2009 – September 2009
Assessment of baseline resource capacity	November 2009 – March 2010
Forecasts of demand	February 2009 – March 2010
Gap analysis (i.e. comparison of resources and demands to identify gaps)	January 2010 – October 2010
Water management practices to adjust demand and resource capacity	January 2010 – January 2011
Recommend regional water plan	January 2011 – June 2011

Regional Water Planning Roles and Responsibilities

- The role of the regional water planning council is to develop a recommended regional water plan for the protection, conservation, and use of regional water resources and submit it to EPD for adoption. Specific roles and responsibilities for regional water planning councils are outlined in a MOA between each Council, EPD and the Georgia Department of Community Affairs (DCA).
- Each Council will adopt a Public Involvement Plan that states how each regional water planning council will seek input from the public, local government officials, other affected local governments, water providers, and interested stakeholders.
- Regional water planning councils will coordinate on shared water resources with other regional water planning councils and the Metro Water District.
- Updates or revisions of the Metro Water District plans will follow EPD guidance consistent with that provided for preparation of regional water plans.

Regional Vision and Goals

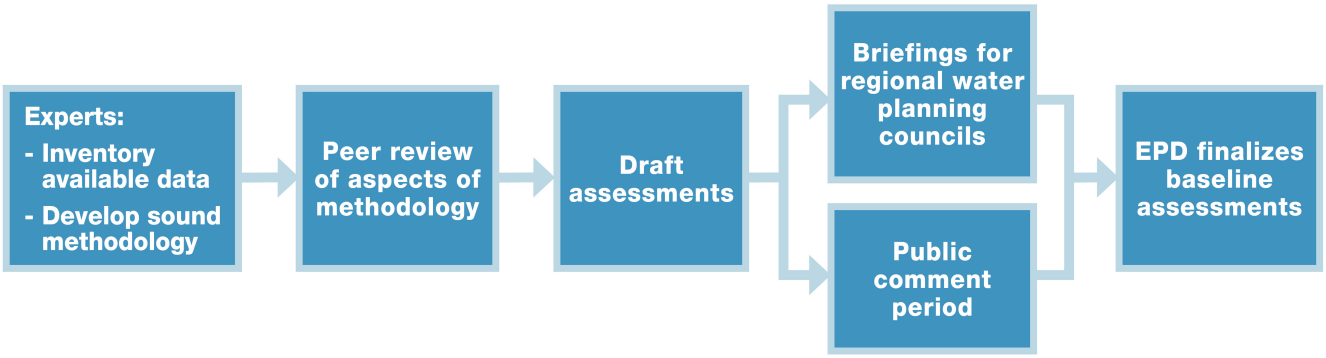
- Regional vision and goals will describe the economic, population, environmental and water use conditions desired for the future.
- Vision leads to action-oriented goals.
- Vision and goals will help guide selection of management practices.
- Vision will also be revisited and revised as needed to be consistent with other products, including forecasts, comparison of resource capacities and demands to identify gaps, and management practices.

Assessment of Baseline Resource Capacity

- Scientific evaluations of the capacities of the water resources on which each region relies.
- With the forecasts of demand described below, resource assessments form the scientific basis for regional water plans.
- Are based on the boundaries of the resource: watersheds and aquifers.
- Three types of resource assessments are being done: surface water availability, groundwater availability, and water quality (assimilative capacity).
- Surface water availability:
    - Will determine the amount of water that can be consumed without substantially altering the desired flow regime and the opportunities for instream and downstream use supported by that flow regime.
    - Assessments are being conducted state-wide on a sub-basin scale.
- Groundwater availability:
    - Will provide information on the capacity of water from aquifers to meet current and future needs.
    - Detailed groundwater modeling is being done for Coastal Plain aquifers (priority aquifers defined per the State Water Plan). Modeling will determine the sustainable yield of the aquifer, or the amount of water that can be withdrawn without causing an unacceptable impact.
    - Less complex models are being used to assess groundwater availability for aquifers in North Georgia, where it will not be possible to determine sustainable yield within a reasonable time period.
- Water quality (assimilative capacity):
    - Will measure the capacity of Georgia's surface waters to absorb pollutants from treated wastewater and stormwater without unacceptable degradation of water quality.
    - Assessments are being conducted state-wide on a river/stream reach/lake scale (i.e., for lakes or short sections of rivers and streams).
- Process for development (see Figure 2):
    - Developed by technical experts within EPD and under contract to EPD.

  - Input (i.e., peer review) from scientific and engineering advisory panel on specific scientific and engineering questions (as specified in State Water Plan).
  - Public comment on draft assessments (as specified in State Water Plan).
  - Councils will be fully briefed on methods and assumptions of the resource assessments.
  - EPD will then finalize baseline assessments for use by the Councils in preparation of regional water plans.
- Resource assessments will provide a baseline indicating what is available under current conditions. The baseline may or may not be what is needed or desired for the future. As regional water planning progresses, water planning councils will consider whether management practices should be implemented to adjust the baseline resource capacity.

Figure 2: Development of Resource Assessments



Forecasts of Water and Wastewater Demand

- Regional forecasts of future demand are being developed for four major water use sectors: municipal, industrial, agricultural, and energy.
- Will be developed for 10, 20, 30, and 40-year time periods.
- Forecasts for different sectors will be combined to estimate total future water and wastewater demand.
- For municipal water and wastewater demand forecasts, population projections will provide the basis for estimates of future growth.
  - Population projections are being prepared by the Governor's Office of Planning and Budget (OPB), the state agency responsible for demographic data for the state. Population projections are being developed for each county in the state. OPB will produce a set of future population scenarios based on different growth assumptions. OPB will select one of these scenarios as its most likely future population scenario.
  - For water planning purposes, the regional water planning councils will have the opportunity to examine the implications of the different future population scenarios.
  - Councils will select the scenario(s) that, in addition to OPB's most likely scenario, will be used to forecast municipal water and wastewater demand. Councils will also identify region-

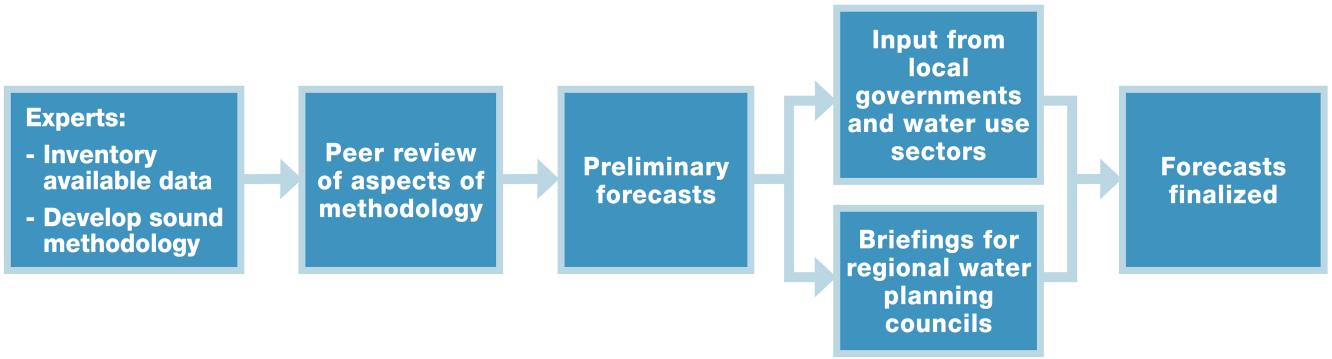
specific factors that are to be considered in forecasting of demand. For example, seasonal and/or transient populations may need to be added for forecasting purposes.

  - EPD, with input from water users, will then convert the selected scenario(s) for population growth into forecasts of municipal water and wastewater demand. Conversion to water and wastewater forecasts will estimate demand on a watershed/aquifer basis.

- For industrial water and wastewater demand forecasts, employment projections for the major water-using industries and other industry-specific factors will provide the basis for estimates of future growth.
- Each regional water planning council will receive employment projections for the major water-using industrial sectors in their region. Employment projections are being prepared by EPD for each region as a whole.
  - EPD, with input from water users, will convert the employment forecasts into forecasts of industrial water and wastewater demand. Conversion to water and wastewater forecasts will estimate demand on a watershed/aquifer basis.
- Each regional water planning council will also receive:
  - Forecasts of agricultural and energy water use.
    - Agricultural forecasts are being developed by UGA's College of Agricultural and Environmental Sciences, under contract with EPD. Input is being provided by agribusiness and related agricultural interests. Agricultural forecasts will estimate demand on a county basis and a watershed/aquifer basis.
    - Energy forecasts are being developed with input from Georgia energy companies. Energy forecasts are expected to be on a state or watershed scale.
  - Scenarios of future land use.
    - Scenarios of future land use will be developed to help identify areas where improved stormwater management practices may be needed. Land use changes can increase stormwater runoff that, without improved management, may contribute to poor water quality. These land use scenarios will be provided on a watershed scale.
- Process for development (see Figure 3):
  - Preliminary projections and forecasts developed by technical experts in partner state agencies, UGA, and other experts under contract with EPD.
  - Input from Councils and local governments on population projections.
  - Input from Councils and industrial water users on employment projections.
  - Input from water users on forecasts.
  - Councils will be fully briefed on methods and assumptions of the forecasts.
  - EPD and other state agencies will then finalize forecasts for use by Councils in preparation of regional water plans.
    - OPB will finalize population projections. EPD, in consultation with stakeholders from water use sectors, will finalize employment projections and forecasts of agricultural water use, energy water use, and municipal and industrial water and wastewater demand.

- As regional water planning progresses, water planning councils will consider whether management practices should be implemented to adjust the forecasts of water and wastewater demand.

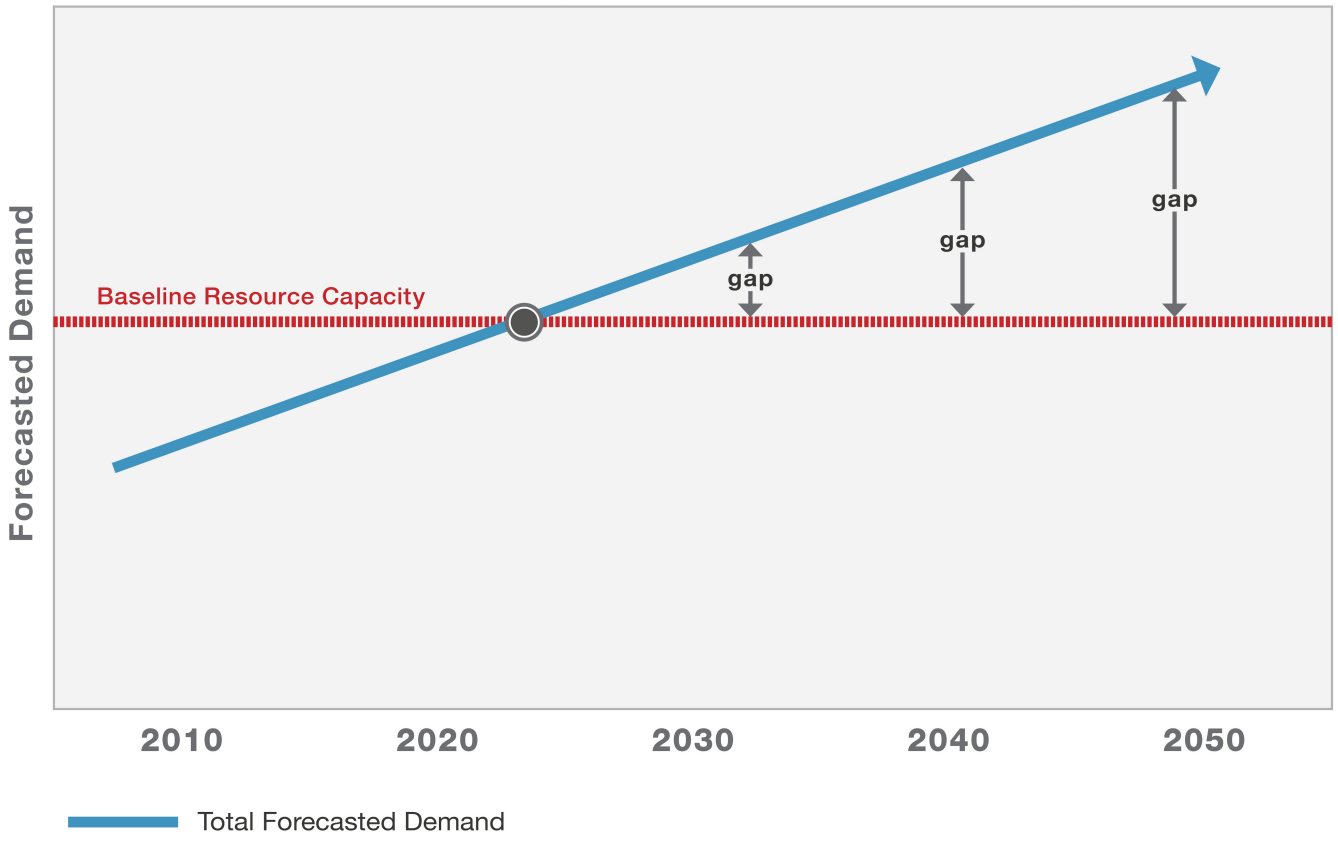
Figure 3: Development of Forecasts



Gap Analysis: Comparison of Resources and Demands to Identify Gaps

- Regional water planning councils will compare results of resource assessments with water and wastewater forecasts in order to identify any "gaps" or shortfalls between resource capacities and future needs (see Figure 4).
    - Will be done for 10-year intervals between 2010 and 2050.
- Identification of gaps will be done for groundwater availability, surface water availability, and assimilative capacity.
    - Gap analysis will be conducted on a watershed and aquifer basis, comparing demand forecasts with baseline resource capacity.
- Water resource gaps may not be evenly distributed geographically.
    - Regional water planning councils, with assistance from regional planning contractors, will identify the specific aquifers, sub-basins and stream reaches with the most critical water availability and water quality gaps.
- Analysis of the gaps and their locations in the water planning region will inform the regional water planning councils' initial selection of management practices.

Figure 4: Identification of Gaps



Water Management Practices to Adjust Demand and Resource Capacity

- In an iterative process, Councils will select the management practices to be employed to ensure that there is sufficient water and assimilative capacity to sustainably meet future needs.
- Selection of management practices starts with two questions: Are the regional goals met? Do any gaps need to be filled?
- Management practices may be needed to fill gaps or to meet specific goals for the region's water resources.
    - Councils will consider all water uses.
        - Uses of water withdrawn from surface water and groundwater for agricultural, energy, municipal and domestic, commercial, and industrial uses.
        - Instream uses of surface water including waste assimilation, hydropower, recreation, maintenance of aquatic habitats, and support of biological integrity.
        - Aquifer use to protect groundwater quality and maintain low flows in streams.
- Councils will consider practices that decrease forecasted demand for each water source (e.g., practices to increase the efficiency of water use; see Figure 5a). Councils will also consider

practices that increase the capacity of a water resource (e.g., surface water storage; see Figure 5b).

  - Water conservation will be a priority practice for consideration by all regional water planning councils.
  - Other practices, such as the water return and water supply management practices described in the State Water Plan, may also be considered.
  - For gaps between wastewater demand and the assimilative capacity of surface waters, practices that influence the quality of surface waters will be considered.
    - Practices to manage wastewater or stormwater may be considered. Practices may also include steps to restore water quality in waters that do not currently meet water quality standards.

- Regional water planning councils will coordinate the selection of management practices with other councils to provide for the long-term sustainability of shared water resources.
- Councils, with input from members of the local government advisory body, will also consider fiscal impacts and impacts on shared water resources when evaluating water management practices.
- Finalizing the water management practices will be an iterative process with opportunity for public comment and input from members of the local government advisory body.
  - Steps in the iteration include selecting management practices, evaluating the effect of those practices on forecasted needs and/or resource capacities, and refining management practices to ensure that any gaps are addressed and Council goals are met.
  - After councils identify an initial set of management practices, the practices will be evaluated on a whole watershed/aquifer scale.
    - EPD will apply tools that model the effect of management practices and test whether those practices will close any gaps between resource capacities and future needs.
    - Councils will evaluate the results and assess whether the practices will meet their regional goals.
  - If gaps are not filled or goals are not met by the initial set of management practices, Councils will review their regional vision and goals; revisit the gap analysis (including the baseline resource assessments and forecasts used in that analysis), and refine their management practices for another round of evaluation.
  - Process will continue until gaps between future demand and resource capacities are filled and regional goals met by the modeled water management practices.

Figure 5: Examples of the Process of Selecting Management Practices to Adjust Demand or Capacity for a Specific Water Resource

Figure 5a: Practices to Reduce Demand

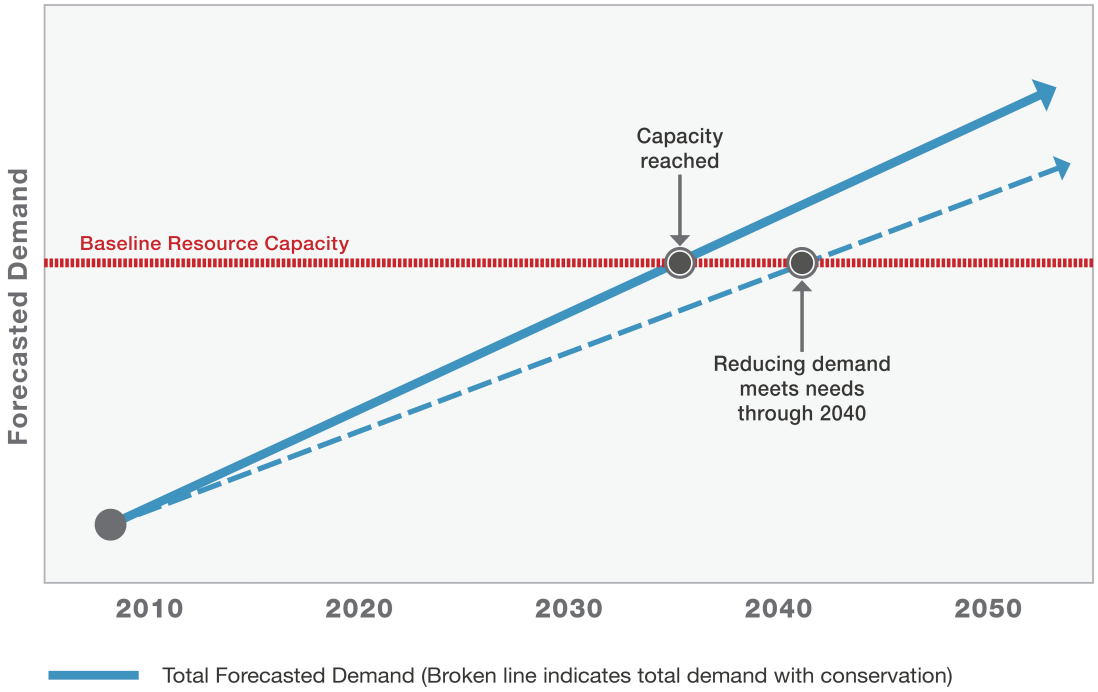
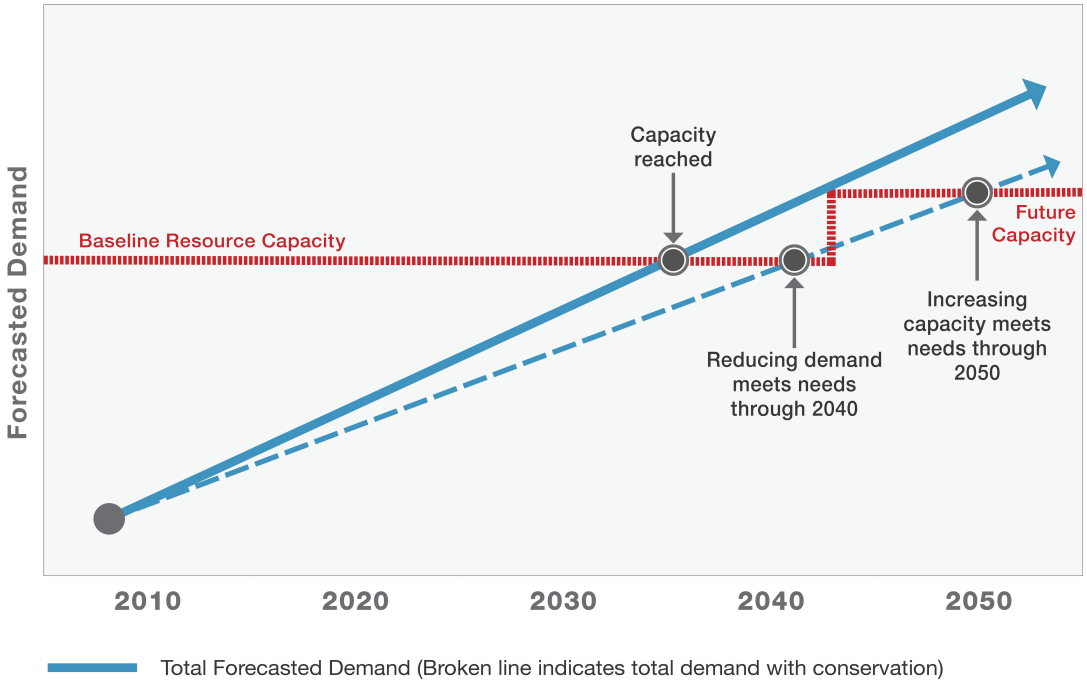


Figure 5b: Practices to Reduce Demand and Increase Resource Capacity



Recommended Regional Water Plan and Adoption of Final Regional Water Plan by EPD

- The products shown in Figure 1 will be compiled into a recommended regional water plan.
- Regional water plans will follow a template provided by EPD to ensure completeness and consistency across the state.
- Regional water plans will be implemented by water users, including local governments and entities that apply for water permits, grants, and loans.
    - Plans will include a schedule for implementation of the water management practices.
    - Regional water planning councils with assistance from their regional planning contractors will assess the implementation costs for the selected water management practices.
- Plans will identify quantitative and qualitative benchmarks that can be used to evaluate the water planning region's progress toward achieving their regional vision and goals and the guiding policies of the State Water Plan.
- Regional water planning councils will submit their initial recommended regional water plan to the Director of EPD for consideration by January 31, 2011.
    - EPD will provide public notice and a 45-day public comment period.
    - EPD will review the initial recommended regional water plan for consistency with the State Water Plan, rules for regional planning, and regional planning guidance adopted pursuant to that Plan.
- Water planning councils, with assistance from the regional planning contractors, will make revisions based on comments from EPD and the public, as necessary, to finalize their recommended plan by June 30, 2011.
    - If the recommended plan is consistent with the State Water Plan and regional water planning rules and guidance, the Director will adopt the recommended plan.
- The final regional water plan, when adopted by EPD, will guide agency decision making.
- As described in the State Water Plan, regional water plans will be reviewed and revised as needed every five years.

Section 1: Overview of the Regional Planning Process

Georgia's Comprehensive State-wide Water Management Plan (State Water Plan) calls for the preparation of regional Water Development and Conservation Plans (regional water plans) throughout the state by regional water planning councils. The State Water Plan, which serves as the foundation for this Planning Guidance, recognizes that the characteristics of water resources and water users vary significantly in the different regions across Georgia. Protecting the ability of the state's water resources to meet the needs for water supply and the assimilation of wastewater will require regional, resource-based plans that identify the management practices appropriate to the resources and users in each water planning region.

Regional water plans will manage "water resources in a sustainable manner to support the state's economy, to protect public health and natural systems, and to enhance the quality of life for all citizens", as directed by the 2004 Comprehensive State-wide Water Management Planning Act (O.C.G.A. §12-5-520). To achieve full coverage of the state, the State Water Plan creates ten new water planning regions that join the existing Metropolitan North Georgia Water Planning District (Metro Water District) (see Figure 1-1). Regional plans will address management of water resources through the year 2050.

The purpose of this Planning Guidance is to provide a framework for the preparation of coordinated and comprehensive regional water plans that are consistent with the State Water Plan. The regional water plans, although developed in a consistent fashion, will reflect the unique water resources characteristics of the water planning region and, as described below, the vision and goals established by the regional water planning council.

Regional water planning councils, supported by regional planning contractors, will submit recommended regional water plans to EPD. If a recommended regional water plan is consistent with the State Water Plan, the rules for regional water planning, and this and any supplemental regional planning guidance, then the Director of EPD will adopt the plan.

Regional water plans are being prepared using a consensus-based planning process shown in Figure 1-2. The process requires input from local governments and the public as well as coordination between regional planning councils that share water resources.

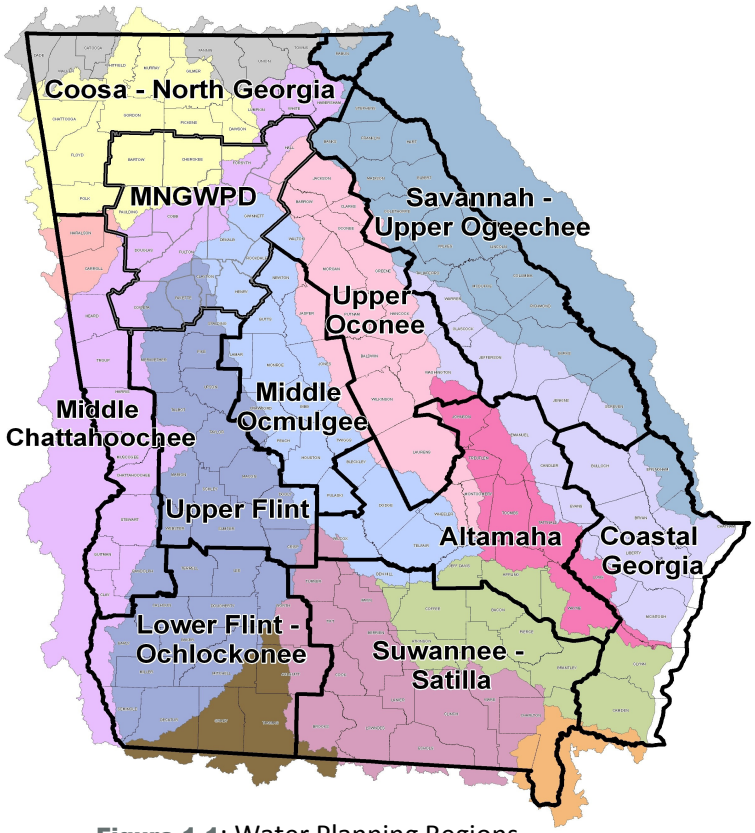
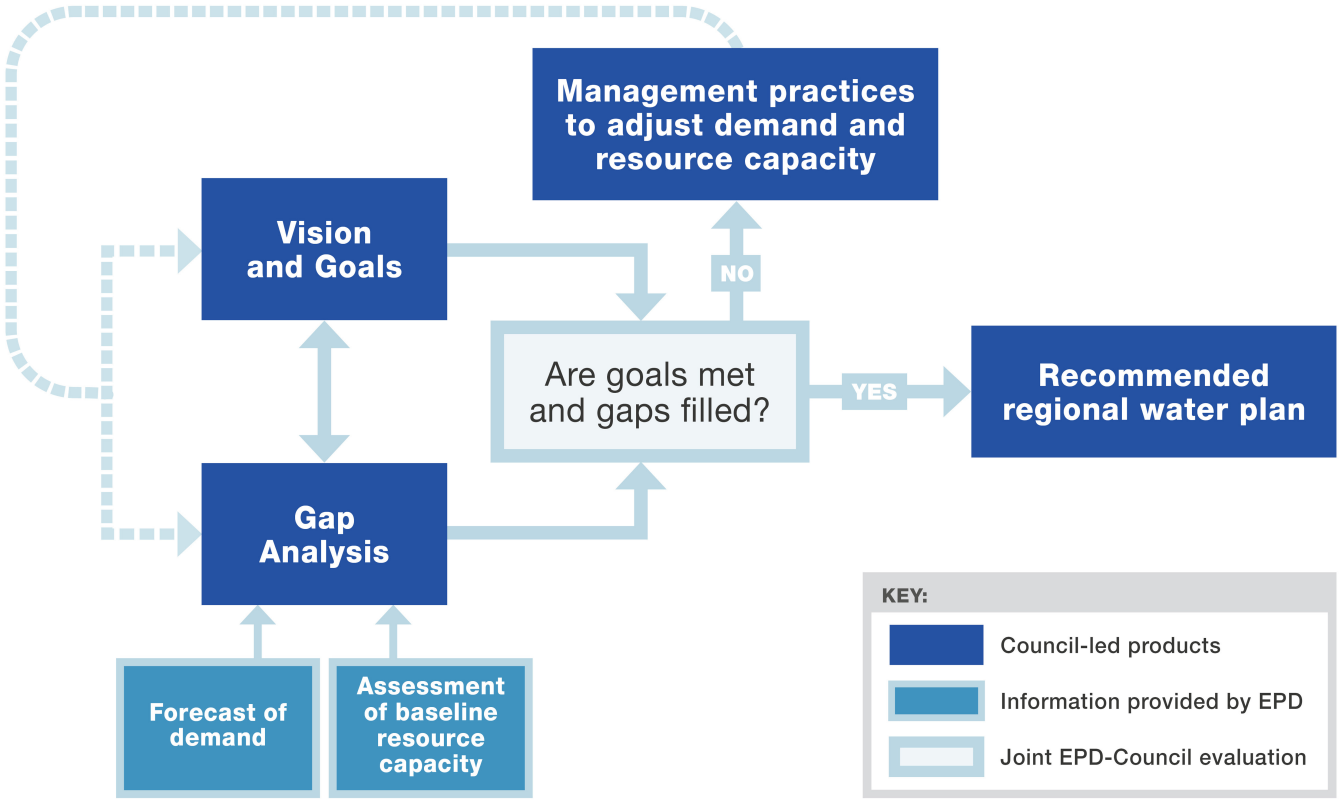


Figure 1-1: Water Planning Regions

The Georgia Environmental Protection Division (EPD) is overseeing the regional water planning process and providing support to the regional water planning councils, together with partner agencies and contractors.

Figure 1-2: Regional Water Planning: Information Flow and Products



Regional Water Planning Products and Schedule

Regional water planning councils began the regional water planning process in March 2009 and will complete the planning process with the submission of a recommended regional water plan to EPD. EPD has established a three-year schedule for the completion of regional water plans, summarized in Table 1-1 and presented in detail in Appendix A. The regional water planning councils will submit early drafts of regional water plan elements by December 31, 2009 and July 31, 2010 and quarterly progress reports in the form of meeting summaries. The regional water planning councils will submit their recommended regional water plan no later than January 31, 2011. Following a public comment period, the final recommended regional water plan will be submitted to EPD no later than June 30, 2011.

The products and schedule for regional water planning are shown in Table 1-1. Each product is described in greater detail in the section of this Planning Guidance listed in the second column of Table 1-1. The target dates, shown in the last column of Table 1-1, identify the products that will be developed concurrently. The target dates are estimates as some products may be started or completed earlier than indicated by the target dates in Table 1-1.

TABLE 1-1: REGIONAL WATER PLANNING PRODUCTS AND SCHEDULE		
PRODUCTS	**DESCRIBED IN:**	**REGIONAL WATER PLANNING COUNCIL ACTIVITIES SCHEDULED FOR:**
Regional vision and goals	Section 3	April 2009 – September 2009
Assessment of baseline resource capacity	Section 4	November 2009 – March 2010
Forecasts of demand	Section 5	February 2009 – March 2010
Gap analysis (i.e. comparison of resources and demands to identify gaps)	Section 6	January 2010 – October 2010
Water management practices to adjust demand and resource capacity	Section 7	January 2010 – January 2011
Recommended regional water plan	Section 8	January 2011 – June 2011

Regional Water Planning Council Activities

Regional water planning councils will undertake a number of activities to develop the products shown in Table 1-1 and complete a recommended regional water plan. To provide a road map for regional water planning councils, Council activities throughout the regional water planning process are summarized in Table 1-2. Each of these activities is discussed further in the sections of this Planning Guidance listed in Table 1-2.

TABLE 1-2: REGIONAL WATER PLANNING COUNCIL ACTIVITIES

COUNCIL ACTIVITY	DESCRIBED IN:
Regional Water Planning Roles and Responsibilities	
#1: Attend and actively participate in regional water planning council meetings	Section 2
#2: Sign a MOA and follow operating procedures	Section 2
#3: Finalize and follow the Public Involvement Plan	Section 2
#4: Receive and incorporate input from local governments and the public	Section 2
Regional Vision and Goals	
#5: Draft regional vision and update throughout the planning process	Section 3
Assessment of Baseline Resource Capacity	
#6: Understand the water resource assessments	Section 4
Water and Wastewater Demand Forecasts	
#7: Understand forecasts of water and wastewater demands	Section 5
Gap Analysis: Comparison of Resources and Demands to Identify Gaps	
#8: Compare results of resource assessments with water and wastewater forecasts in order to identify any “gaps”	Section 6
Water Management Practices to Adjust Demand and Resource Capacity	
#9: Select, refine, and finalize selection of management practices	Section 7
#10: Coordinate with neighboring regional water planning councils regarding the selected water management practices	Section 7
Recommended Regional Water Plan	
#11: Prepare a recommended regional water plan and submit to the Director of EPD for review and approval. Make revisions based on comments from EPD and the public.	Section 8

Section 2: Regional Water Planning Roles and Responsibilities

Completion of regional water plans will involve a number of parties in specific roles. The major actors and their responsibilities are summarized in this section, starting with the regional water planning councils.

Regional Water Planning Councils

The role of the regional water planning council is to develop a recommended regional water plan for the protection, conservation, and use of regional water resources and then submit the regional water plan to EPD for adoption. Members of the regional water planning councils were appointed by the Governor, Lieutenant Governor, and Speaker of the House, following the process outlined in the State Water Plan. The regional water planning council members' roles and responsibilities are outlined in detail in the Memorandum of Agreement (MOA) that is signed by the regional water planning council, EPD, and the Georgia Department of Community Affairs (DCA).

Regional Planning Contractors

Regional planning contractors are providing technical and planning support to the regional water planning councils and preparing the recommended regional water plan following regional water planning guidance.

EPD and Partner Agencies

EPD, in consultation with a number of partner state agencies, will ensure consistency with the State Water Plan so that the Director can approve the regional water plans. Partner agencies include the DCA, Department of Economic Development (DEcD), Georgia Environmental Facilities Authority (GEFA), Georgia Forestry Commission (GFC), Governor's Office of Planning and Budget (OPB), Georgia Soil and Water Conservation Commission (GSWCC), and the Department of Agriculture. EPD also maintains the schedule and budget for regional water plan development. EPD, other state agencies, and contractors are assisting the regional water planning process by providing specific information, such as the resource assessments, forecasting, and training.

Local Governments and the Public

Input from local governments and the public will be solicited throughout the planning process. Representatives from counties and cities located within the water planning region will provide input on regional population and employment forecasts, other relevant data and information required for preparation of the regional water plans, and elements of the regional water plan that impact the fiscal responsibilities of local governments.

Each regional water planning council will adopt a Public Involvement Plan that states how they will seek input from the public, local government officials and other affected local governments, water users, and interested stakeholders. All regional water planning council meetings will be open meetings and announced at least 24 hours in advance. An outline for the Public Involvement Plan is provided in Appendix B. The outline contains minimum standards that each regional water planning council must follow. Regional water planning councils may choose to adopt additional provisions as shown in the outline.

Council Coordination

Regional water planning councils will coordinate with other councils and the Metropolitan North Georgia Water Planning District (Metro Water District), especially regarding shared water resources. Scheduled joint meetings throughout the planning process will provide opportunities for Councils to coordinate on issues such as the capacity of shared water resources and the selection of water management practices. As the water planning regions do not strictly follow resource boundaries, communication and coordination throughout the development of regional water plans will be essential to foster sustainable water use.

Metropolitan North Georgia Water Planning District

The Metro Water District was statutorily created by the Georgia General Assembly in 2001 (O.C.G.A. 12-5-570). The Metro Water District has developed three integrated water management plans, which were updated in May 2009. Future updates and revisions of the Metro Water District's plans will follow EPD guidance consistent with that provided for the preparation of regional water plans.

Section 3: Regional Vision and Goals

At the outset of the planning process, each regional water planning council will develop a vision for the region's water future. Regional water planning councils will then build on the initial vision by setting action-oriented goals that support the vision. The regional vision and goals will inform the Council's work on other pieces of the regional water plan, including selection of water management practices. The Council will periodically revisit the regional vision and update the vision, as needed, to ensure that all the elements of the regional water plan are consistent.

Using the Regional Vision and Goals

The regional water planning councils will develop the regional vision and goals to describe the water planning region's water future over the 40-year time horizon of the regional water plan. The regional vision will address economic, population, and environmental conditions as well as desired water uses.

The regional vision and goals will be used to inform the selection of water management practices by the regional water planning councils. The regional vision and goals will be revisited and revised throughout the regional water planning process, as needed, to be consistent with other products, including the forecasts of demand, the comparison of resource capacities and demands to identify gaps, and the selection of water management practices.

In the iterative process described in the following sections, the regional vision and goals will be revisited and revised, if needed, following completion of the forecasts and analysis of gaps between resource capacities and demands. The vision and goals will then help guide the regional water planning council's initial selection of water management practices. The vision and goals will be reviewed again (and revised if needed) as water management practices are evaluated and refined to meet the regional goals and fill any gaps between resource capacities and forecasted demands.

Section 4: Assessment of Baseline Resource Capacity

The State Water Plan concludes, "We cannot effectively plan for and manage what we do not measure. Better information is needed on water availability as well as water quality. The state must determine how much water can be removed from rivers, lakes, and aquifers without causing unacceptable negative impacts and determine how much wastewater and stormwater streams can handle...". Assessments of baseline resource capacity are designed to meet this information need.

The baseline resource capacities are scientific evaluations of the capacity of the water resources on which each region relies. EPD will provide three resource assessments to regional water planning councils: groundwater availability, surface water availability, and surface water quality (also referred to as assimilative capacity). These resource assessments are based on the boundaries of the resource — watersheds and aquifers — not water planning regions. Along with the forecasts of demand described in the next section, the resource assessments provide the scientific basis for regional water planning, building toward the selection of management practices that adjust demand or resource capacities where needed. Understanding the baseline water resource assessments will be a major activity of the regional water planning councils and EPD will support the Councils in this activity.

Groundwater Availability

The groundwater availability assessments will provide information on the capacity of water from aquifers to meet current and future needs. Detailed groundwater modeling is being done for Coastal Plain aquifers, which have been defined as priority aquifers under the State Water Plan, based on the amount of groundwater withdrawn, current stress on the aquifer, and the availability of data. Less complex models are being used to assess groundwater availability for aquifers in North Georgia, where less groundwater is withdrawn. Groundwater modeling will be a tool to determine the sustainable yield of the aquifer, or amount of water that can be withdrawn without causing an unacceptable impact. The type and degree of unacceptable impact(s) will be specific to each modeled aquifer. Technical experts and regional water planning councils will provide input on identifying unacceptable impacts and quantifying sustainable yields.

Surface Water Availability

The surface water availability assessments will determine the amount of water that can be consumed without substantially altering the desired flow regime and the opportunities for instream and downstream use supported by that flow regime. The desired flow regime will be determined by EPD after consultation with a scientific and engineering advisory panel. During the regional water planning process, water planning councils may consider if their regional vision indicates a desired flow regime that exceeds the flow regime used by EPD in the baseline assessments. The surface water availability assessments are being conducted state-wide on a sub-basin scale, based on the locations of long-term stream gages.

Water Quality (Assimilative Capacity) Assessment

Surface water quality assessments will measure the assimilative capacity, or the ability of Georgia's surface waters to absorb pollutants from treated wastewater and stormwater without the unacceptable degradation of water quality. The water quality assessments are being conducted state-wide on a

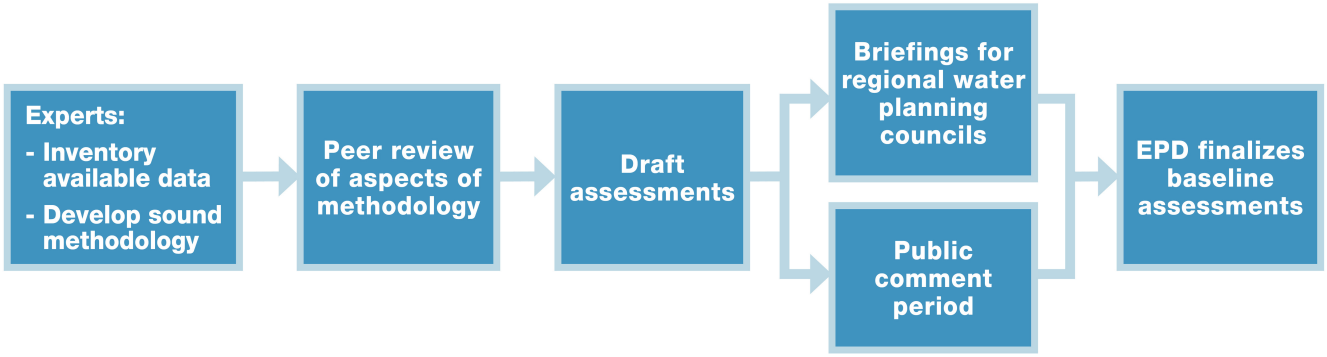
stream reach scale that assesses sections of rivers and streams and/or watersheds upstream of major lakes. Unacceptable degradation of water quality will be based on current water quality standards. During the regional planning process, water planning councils may consider if their regional vision includes areas that warrant protections more stringent than existing water quality standards.

Developing and Using Resource Assessments

The baseline resource assessments are currently being developed by technical experts within EPD and under contract with EPD, following the process shown in Figure 4-1. As part of the development process, EPD is soliciting input (i.e. peer review) from a scientific and engineering advisory panel on specific science and engineering questions, as specified in the State Water Plan. EPD will brief the regional water planning councils on the methods and assumptions of the resource assessments. As specified in the State Water Plan, the draft baseline resource assessments will also be available for public comment. EPD will consider comments received and then finalize the baseline resource assessments. EPD will provide the regional water planning councils with the baseline resource assessments as a key component of regional water planning.

The resource assessments will establish a baseline indicating what is available under current conditions. It is important to note that the baseline resource capacities are based on the status quo or continuation of existing trends. The baseline may or may not be what is needed or desired for the future. As regional water planning progresses, the regional water planning councils will consider whether water management practices should be implemented to adjust the baseline resource capacity, as discussed in Section 7.

Figure 4-1: Resource Assessment Development



Section 5: Water and Wastewater Demand Forecasts

As described below, forecasts of future water and wastewater demand are being developed for each water planning region for four major water use categories; municipal, industrial, agricultural, and energy. The sum of the forecast for each water use category yields the total demand projection for the water planning region. Future land use scenarios are also being developed. As directed by the State Water Plan, forecasts are being developed for 10-, 20-, 30-, and 40-year time periods. Understanding the forecasts will be a major activity of the regional water planning councils and EPD will support the Councils in this activity.

Municipal and Industrial Water and Wastewater Forecasts

For municipal water and wastewater demand forecasts, population projections will provide the basis for estimates of future growth. The population projections are being prepared the Governor's Office of Planning and Budget (OPB), the state agency responsible for demographic data for the state. Population projections are being developed for each county in the state. OPB will produce a set of scenarios based on different growth assumptions. OPB will select one of these scenarios as its most likely future population scenario.

For water planning purposes, the regional water planning councils will have the opportunity to examine the implications of the different scenarios. Councils will select the scenario(s) that, in addition to OPB's most likely scenario, will be used to forecast municipal water and wastewater demand. Councils will also identify region-specific factors to be considered in forecasting of demand. For example, seasonal and/or transient populations may need to be added for forecasting purposes.

EPD, with input from water users, will use the region-specific factors and convert the selected scenarios for population growth into forecasts of municipal water and wastewater demand for each watershed/aquifer within the water planning region.

For industrial water and wastewater demand forecasts, employment projections for the major water-using industries and other industry-specific factors will provide the basis for estimates of future growth. Employment projections are being prepared by EPD, with assistance from UGA's Carl Vinson Institute of Government, for the industrial sectors that are major water users in each water planning region. Following completion of the employment projections and with the assistance of water users, EPD will convert the employment forecasts into forecasts of industrial water and wastewater demand for each watershed/aquifer within the water planning region.

Agricultural and Energy Water Use Forecasts

Agricultural demand forecasts are being developed by the UGA College of Agricultural and Environmental Sciences, under contract with EPD and with input from agribusiness and related agricultural interests. Agricultural forecasts will estimate water demand on a county basis and a watershed/aquifer basis.

Energy forecasts are being developed with assistance from GEFA and input from Georgia energy companies. When complete, energy forecasts are expected to estimate water demand for energy production on a state-wide or watershed scale.

Land Use Scenarios

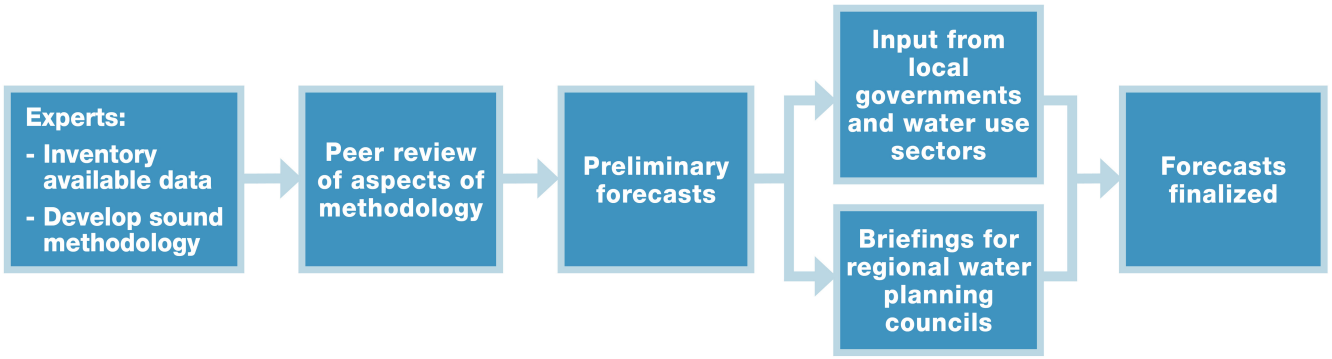
Finally, UGA's College of Agricultural and Environmental Sciences is developing scenarios of future land use. These land use scenarios will identify areas where improved stormwater management practices may be needed. Land use changes can increase stormwater runoff that, without improved management, may contribute to poor water quality. Scenarios of land use will be provided on a watershed scale.

Developing and Using Forecasts

Figure 5-1 outlines the process for developing the various forecasts. Preliminary forecasts are currently being developed by technical experts in partner state agencies, UGA, and experts under contract to EPD. Water users will have an opportunity to provide input on these preliminary forecasts. EPD will brief the regional water planning councils on the methods and assumptions used to the forecasts. EPD and the other state agencies will consider comments received and then finalize the forecasts. OPB will finalize population projections while EPD, in consultation with stakeholders from water use sectors, will finalize employment projections and forecasts of agricultural water use, energy water use, and municipal and industrial water and wastewater demand. EPD will provide the regional water planning councils with the forecasts to be used for regional water planning.

As regional water planning progresses, the regional water planning councils will consider whether water management practices should be implemented to adjust the water and wastewater demand forecasts, as outlined in Section 7.

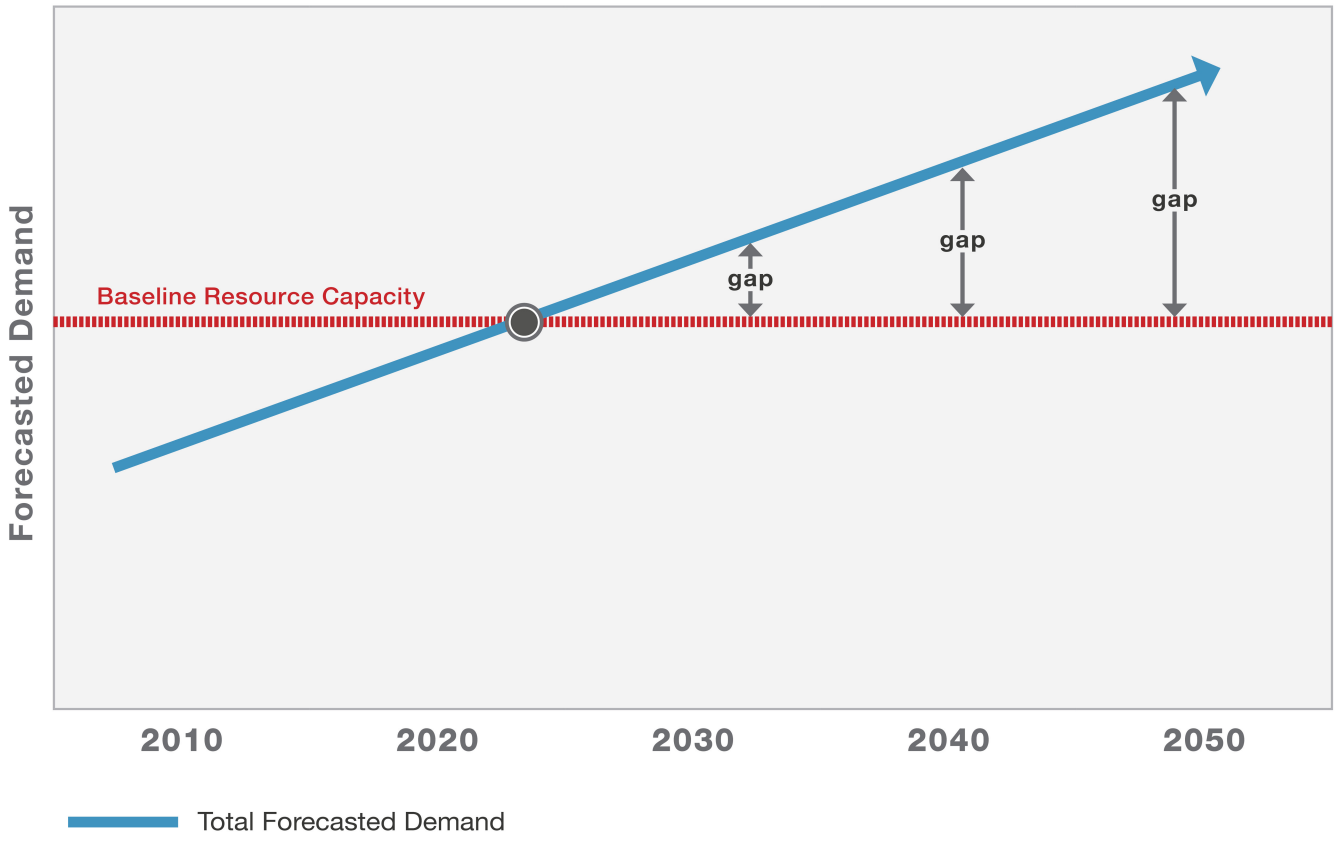
Figure 5-1: Forecast Development



Section 6: Comparing Resources and Demands to Identify Gaps

Regional water planning councils will compare the results of the resource assessments with the water and wastewater forecasts in order to identify any "gaps" or shortfalls between resource capacities and future needs. The gaps, as shown conceptually in Figure 6-1, will be calculated for 10-year intervals between 2010 and 2050 for groundwater availability, surface water availability, and water quality (assimilative capacity).

Figure 6-1: Identification of Gaps



The gap analysis will be conducted on a watershed and aquifer basis, comparing demand forecasts with baseline resource capacity. The water resource gaps are unlikely to be evenly distributed geographically. The regional water planning councils, with assistance from their regional planning contractor, will identify the specific aquifers, sub-basins, and stream reaches with the most critical water availability and water quality gaps. The analysis of the gaps and their locations in the water planning region will inform the initial selection of water management practices by the regional water planning council. Water management practices will be selected to address the gaps for specific aquifers, sub-basins, and stream reaches. Therefore, some water management practices may only be applied to portions of the water planning region.

Section 7: Water Management Practices to Adjust Demand and Resource Capacity

The regional water planning councils will select water management practices through an iterative process to ensure there is sufficient water and assimilative capacity available to meet future needs. Water management practices include any activity that helps meet the regional vision and goals, or adjusts the baseline resource assessment or the forecasted water or wastewater demand. As shown in Figure 1-2, the regional water planning councils will select water management practices that meet the regional goals and address any identified gaps between resource capacities and forecasted demands. Regional water planning councils are responsible for selecting water management practices and coordinating the selection process with neighboring water planning councils and local governments.

Regional water planning councils will consider all water uses including the following:

- Uses of water withdrawn from surface water and groundwater – agricultural, energy, municipal and domestic, commercial, and industrial;
- Instream uses of surface water – Waste assimilation, hydropower, recreation, maintenance of aquatic habitats, and support of biological integrity; and
- Aquifer use to protect groundwater quality and maintain low flows in streams.

Regional water planning councils will consider water management practices that decrease forecasted demand for a water source (e.g., practices to increase the efficiency of water use). Councils may also consider practices that increase the capacity of a water resource (e.g., surface water storage). Figure 7-1 demonstrates the effects of water management practices selected to reduce future demand to meet resource capacity. Figure 7-2 demonstrates the effects of water management practices selected to increase the resource capacity as well as reduce future need.

For gaps between forecasted demand and the capacity of a surface or groundwater source, water conservation will be a priority practice for consideration by all regional water planning councils. The Water Conservation Implementation Plan is a resource to help guide selection of effective water conservation practices for seven water use sectors. Other practices, such as the water return and water supply management practices described in the State Water Plan may also be considered.

For gaps between wastewater demand and the assimilative capacity of surface waters, regional water planning councils will consider practices that influence the quality of surface waters. Water management practices may focus on wastewater and/or stormwater sources. Regional water planning councils may also consider water management practices to restore surface waters that currently do not meet water quality standards.

Since the water planning regions do not follow water resource boundaries, regional water planning councils will coordinate with other Councils during the selection of water management practices to provide for the long-term sustainability of shared resources. Regional water planning councils, with input from local governments, will also consider the fiscal impacts and impacts on shared water resources during selection of water management practices.

Figure 7-1: Example: Use of Water Management Practices to Reduce Demand on a Water Resource

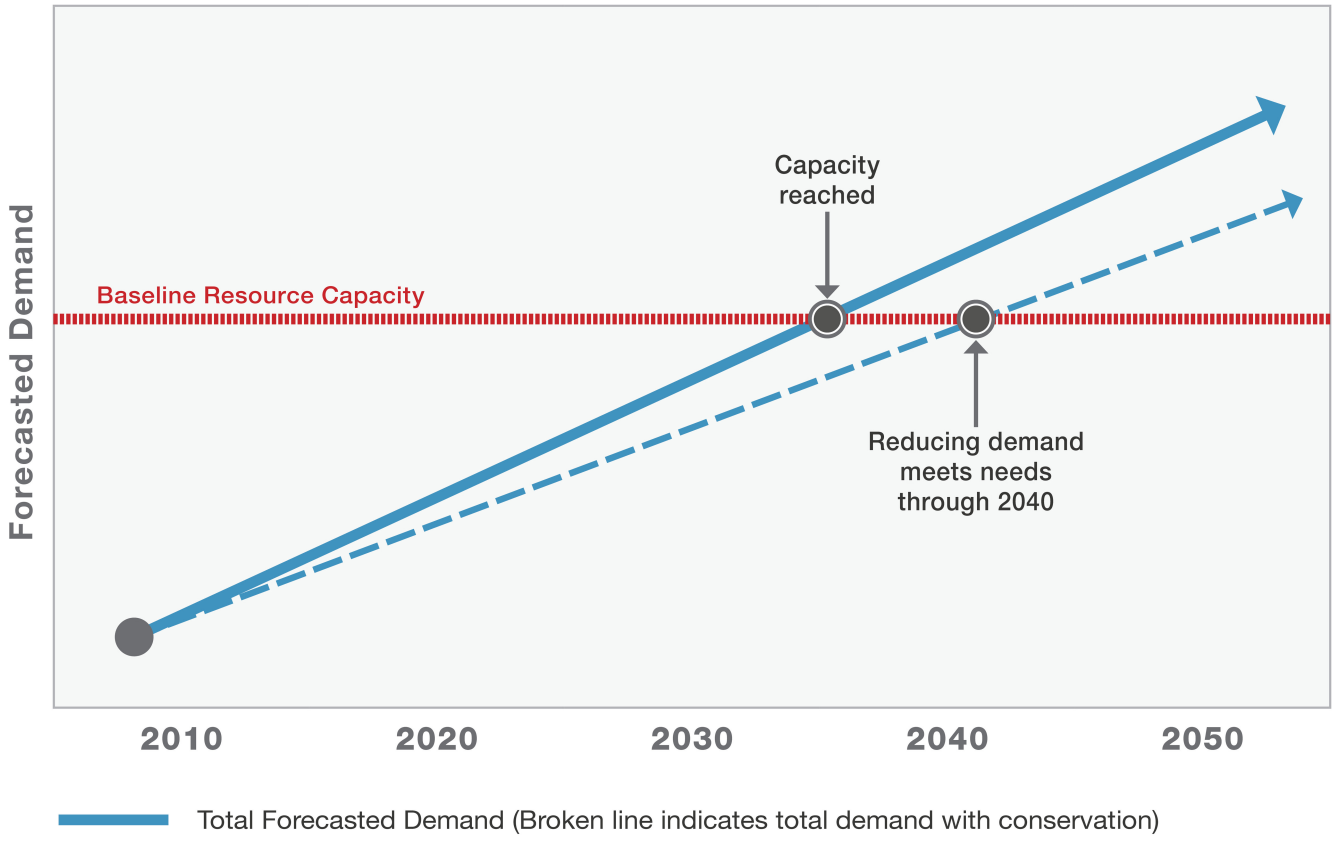
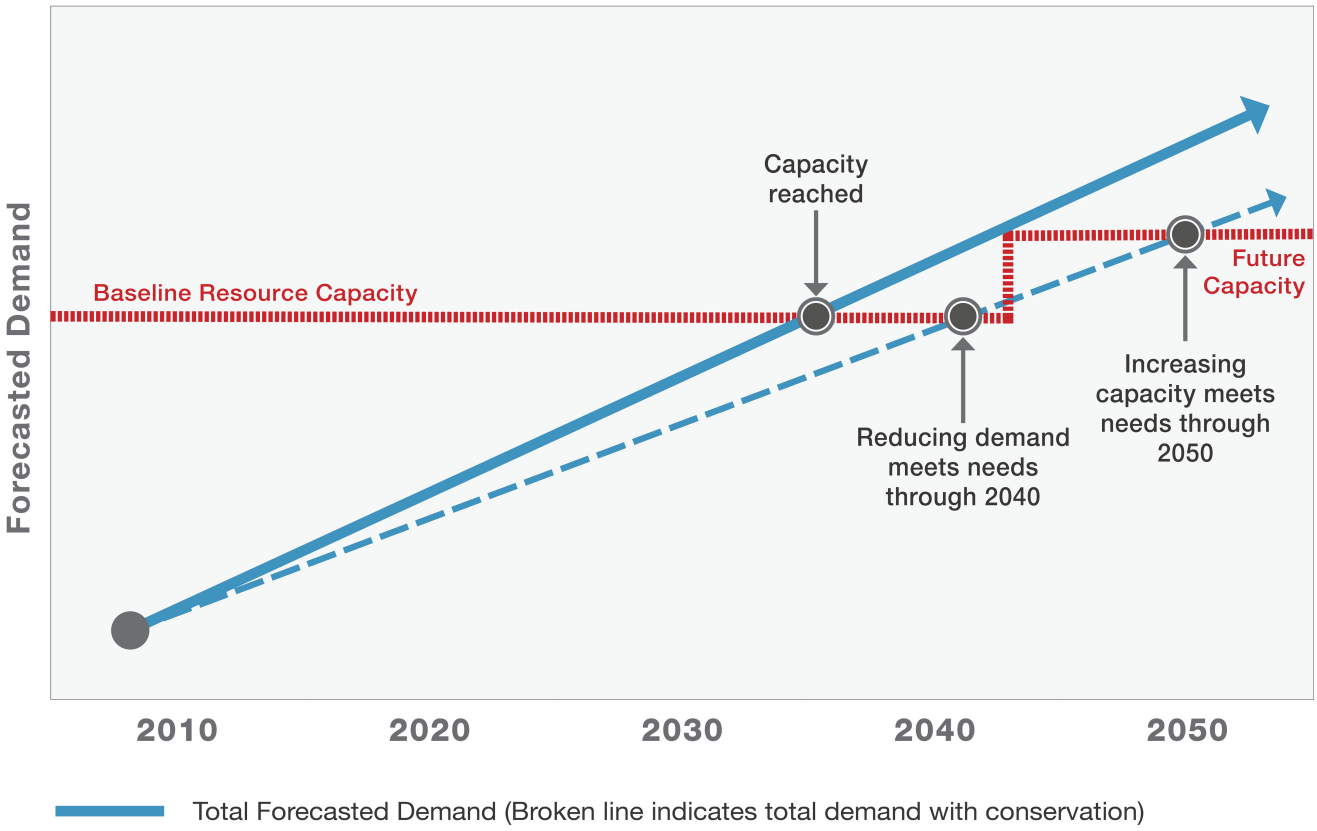


Figure 7-2: Example: Use of Water Management Practices to Reduce Demand and Increase the Capacity of a Water Resource



Water Management Practice Evaluation

Water management practices will be selected and finalized through an iterative process with opportunity for public comment and input from members of the local government advisory body. The iterative process can be subdivided into three steps as follows:

- Initial selection – The regional water planning councils, with assistance from the regional planning contractors, will develop an initial list of water management practices that can address regional goals and gaps identified by the baseline assessments and forecasted demands.
- Evaluation – The practices will be evaluated on a whole watershed/aquifer scale. EPD will apply tools that model the effect of management practices and test whether the initial set of practices are sufficient to close any gaps between resource capacities and future needs. The regional water planning councils will evaluate the results and assess whether the water management practices meet their regional goals.
- Refinement – If the water management practices do not fill the gaps or meet the regional goals, the regional water planning council will review the vision and goals, refine the water

management practices, and revisit the gap analysis, applying new or revised management practices to adjust the baseline resource assessments and forecasted demands.

This process will be repeated if needed for the modeled water management practices to address any gaps and meet the regional vision and goals.

Section 8: Regional Water Plan Adoption Process

After selecting water management practices to promote sustainable water use, the regional water planning councils, with support from their regional planning contractor, will compile the products shown in Table 1-1 into a recommended regional water plan. The regional water plan will follow a template provided by EPD to ensure completeness and consistency throughout the State. Recommended regional water plans will be submitted to EPD for review and a public comment period. Regional water planning councils will then make revisions, as appropriate, and submit the revised document to the Director of EPD for consideration and adoption.

As outlined in the State Water Plan, the regional water plans will be implemented by water users, including local governments and entities that apply for water permits, grants, and loans. The regional water plan will include a schedule for implementation of the water management practices selected to meet the regional goals and fill any identified water resources gaps. To support implementation efforts, regional water planning councils, with assistance from their regional planning contractors and input from local governments in the region, will assess the implementation costs for the selected water management practices.

As directed by the State Water Plan, the regional water plans will identify quantitative and qualitative benchmarks that can be used to evaluate the water planning region's progress toward achieving their regional vision and goals and the guiding policies of the State Water Plan.

Regional Water Plan Review and Adoption Process

The regional water planning councils will submit an initial recommended regional water plan to the Director of EPD for consideration by January 31, 2011. EPD will provide public notice and a 45-day public comment period on the initial recommended regional water plan. The Director of EPD will review the initial recommended regional water plan for consistency with the State Water Plan, the rules for regional water planning, and any published guidance. The Director will advise the regional water planning council of necessary changes to make the plan approvable, concurrent with the public review. The regional water planning councils will review and revise the regional water plan based on the public review comments and EPD comments and then submit a final recommended regional water plan by June 30, 2011.

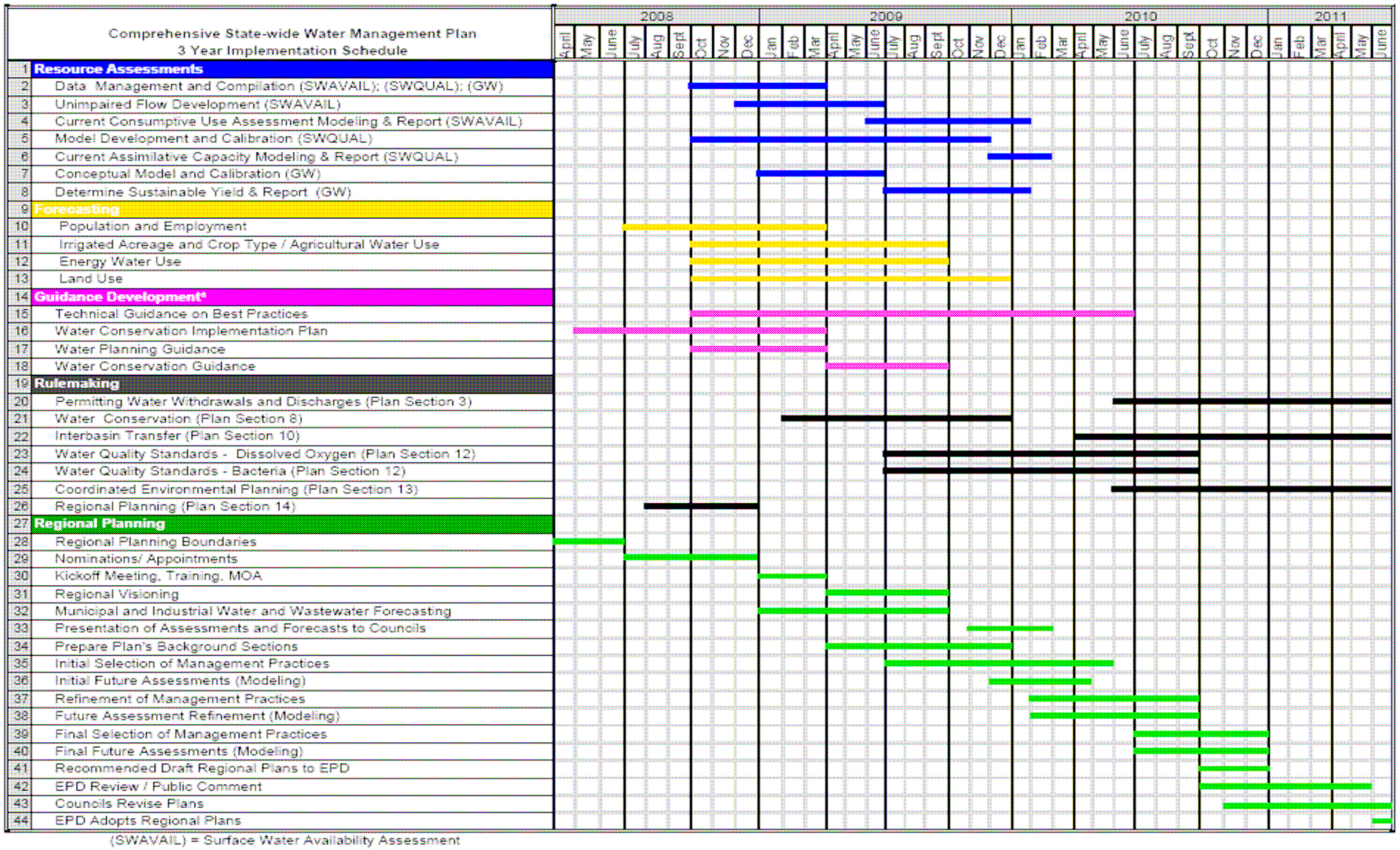
The Director of EPD will review the final recommended regional water plan and, if consistent with the State Water Plan and rules and guidance for regional planning, either adopt the recommended regional water plan as submitted or adopt the recommended regional water plan with conditions. Once adopted by EPD, the final regional water plans will guide agency decision making.

The regional water plans are not static documents. As described in the State Water Plan, the regional water plans will be reviewed and revised as needed every five years.

Appendix A: Master State Water Plan Schedule

The comprehensive State-wide Water Management Plan 3 year Implementation Schedule is attached. A description of each line item is provided in the supplemental information pages that follow. The activities listed under the green subsection, Regional Planning, are the focus of the Regional Water Planning Councils. Resource Assessments and Forecasting are inputs to the regional planning process. Guidance Development and Rulemaking are both instructions for the regional planning process and tools for implementation.

APPENDIX A: Master State Water Plan Schedule



(SWAVAIL) = Surface Water Availability Assessment
(SWQUAL) = Surface Water Quality Assessment
(GW) = Groundwater Quantity and Quality Assessment
*Additional Guidance may be completed if necessary

Comprehensive State-wide Management Plan 3 Year Implementation Schedule Supplemental Information

Resource Assessments – State Water Plan Sections 4 and 6 Schedule Items 1-8		
1	Resource Assessments	"Resource Assessments" will provide a thorough evaluation of Georgia's water resources. Current assessments for surface water availability (SWAVAIL), surface water quality (SWQUAL), and groundwater (GW) will be delivered to the Regional Water Planning Councils by the end of 2009 so they can select their management practices for future assessments, see items 35-41.
2	Data Management and Compilation (SWAVAIL); (SWQUAL); (GW)	As an initial step in the development of the Resource Assessments, a variety of data about our water resources will be compiled into usable formats.
3	Unimpaired Flow Development (SWAVAIL)	A critical component of the surface water availability assessment is the development of in-stream flows that would have been observed had there not been human activities that altered such flows. Once complete, the unimpaired flow data set will serve as the basis for modeling both the current and future assessments of surface water availability.
4	Current Consumptive Use Assessment Modeling & Report (SWAVAIL)	The current consumptive use assessment starts once the unimpaired flow is available. This assessment will identify whether the current level of water use can be sustained to meet desired water supply reliability. As noted in item 1, the current assessments will be delivered to the Regional Water Planning Councils by the end of 2009 so they can conduct their future assessments and select their suite of management practices in 2010.
5	Model Development and Calibration (SWQUAL)	The surface water quality, or "assimilative capacity", assessment involves modeling watersheds, lakes and estuaries to determine the amount of contaminant load that can be discharged to a specific waterbody without exceeding water quality standards or criteria. These models will be calibrated using data compiled during the effort described in item 2.
6	Current Assimilative Capacity Modeling & Report (SWQUAL)	The current assimilative capacity assessment will be determined using the calibrated models and delivered to the Regional Water Planning Councils by the end of 2009 so they can conduct their future assessments and select their suite of management practices in 2010.
7	Conceptual Model and Calibration (GW)	The groundwater assessment will involve the development of conceptual models for prioritized aquifers calibrated for aquifer geometry, aquifer hydraulic properties, natural recharge and discharge, interactions with surface water, and anthropogenic stresses.
8	Determine Sustainable Yield & Report (GW)	EPD will use the calibrated conceptual groundwater models to determine the sustainable yield of prioritized aquifers. The current assessments will be delivered to the Regional Water Planning Councils by the end of 2009 so they can conduct their future assessments and select their suite of management practices in 2010.

Forecasting – State Water Plan Sections 1,4,10, and 14 Schedule Items 9-13		
9	Forecasting	Forecasts will be developed for water planning regions and will reflect jurisdictional boundaries and economic interdependencies as well as hydrologic boundaries. Regional Water Planning Councils will compare the forecasts with the resource assessments so that management practices can be selected to ensure anticipated demands can be met within the capacities of the resources.
10	Population and Employment	The Carl Vinson Institute of the University of Georgia will develop projections of population and employment for each of Georgia's water planning regions for a range of forecast years. These population and employment projections will then be the basis for the municipal and industrial water and wastewater forecasts described in item 32.
11	Irrigated Acreage and Crop Type / Agricultural Water Use	The University of Georgia Research Foundation will produce a set of regional forecasts of additional water needed for irrigation of agricultural crops expected to be grown in Georgia in forecast years 2020, 2030, 2040, and 2050.
12	Energy Water Use	This effort will yield a set of regional projections of water needs associated with producing the additional energy required to meet the state's power needs in future years.
13	Land Use	Future impervious surface and land use forecasts will be developed using calibrated Land Use Change and Urban Growth models. The resource assessment models will use future land use and impervious surface to determine non-point source pollutant loading.

Guidance Development – State Water Plan Sections 7, 9, 10, 13, and 14 Schedule Items 14-18		
14	Guidance Development	These documents will provide technical and procedural information for Regional Water Planning Councils.
15	Technical Guidance on Best Practices	Technical guidance documents will assist with regional water planning, provide technical and procedural information for Regional Water Planning Councils in the selection of management practices.
16	Water Conservation Implementation Plan	The State Water Plan requires that the Department of Natural Resources lead the development of a water conservation implementation plan, with assistance from stakeholders from multiple water use sectors, which will include water conservation goals, benchmarks, and best management guidelines for Georgia's diverse water use sectors. The plan will identify state resources and funding mechanisms to help achieve water conservation goals. It will also provide guidance on flexibility in implementation and reporting for smaller permittees (including the definition of a threshold for large vs. small permittees) and the reporting of progress toward water conservation goals.
17	Water Planning Guidance	Water planning guidance will describe the procedures and products of regional water planning. This guidance will be available to the Regional Water Planning Councils as they begin work in early 2009.
18	Water Conservation Guidance	The State Water Plan requires guidance to further clarify and support implementation of the water conservation implementation plan. This guidance will be developed once the water conservation implementation plan is complete.

Rulemaking – State Water Plan Sections 3,8,10,12, 13, and 14 Schedule Items 19-26		
19	Rulemaking	The State Water Plan calls for the Board of Natural Resources to consider promulgating rules on specific topics.
20	Permitting Water Withdrawals and Discharges	These rule amendments will facilitate implementation of the State Water Plan's "Integrated Water Policy." It will provide additional factors for the EPD Director to consider in permitting water withdrawals and discharges of pollutants, will authorize the EPD Director to place appropriate conditions in these permits to reflect those considerations, and will clarify other provisions relating to all water permit holders.
21	Water Conservation	This rule will provide permit requirements, technical assistance to permittees and permit applicants, and annual reports for non-farm water uses. This rule will also encourage the most efficient, practicable irrigation and tillage practices for farm water uses as provided in the water conservation implementation plan. These rules will require compliance with Georgia's Water Quality Control Act, Georgia's Groundwater Use Act and the general provisions of Georgia's Water Resources Laws relating to the regulation of rain sensor shut-off switches. This rulemaking will begin once the water conservation implementation plan is complete.
22	Interbasin Transfer	These rule amendments will provide additional factors for the EPD Director to consider in evaluating interbasin transfer permits.
23	Water Quality Standards - Dissolved Oxygen	These rule amendments will update the water quality standards for dissolved oxygen so that the standards are correct and appropriate for different areas of the State.
24	Water Quality Standards - Bacteria	These rule amendments will update the water quality standards for bacteria to use better indicator organisms and reflect different areas of the State.
25	Coordinated Environmental Planning	This rule will establish the framework for ensuring coordination between state agencies, permittees, and local government entities responsible for land use planning and management.
26	Regional Planning	This rule will establish the framework for the preparation of the regional water development and conservation plans.

Regional Planning – State Water Plan Section 14 Schedule Items 27-44		
27	Regional Planning	Implementation of the State Water Plan depends on the development of regional water plans called "Water Development and Conservation Plans." Once the resource assessments and forecasts are complete, recommended Regional Water Development and Conservation Plans will be prepared (following EPD guidance) by the Regional Water Planning Councils that select the management practices to be employed in their regions to ensure anticipated demands can be met within the capacities of the resources.
28	Regional Planning Boundaries	Regional water planning boundaries were adopted in April 2008 in accordance with provisions of the State Water Plan. Ten regional water planning boundaries were adopted, in addition to the boundaries adopted by statute in 2001 for the Metropolitan North Georgia Water Planning District.
29	Nominations and Appointments	Nominations will be received for 10 Regional Water Planning Councils. The Governor, Lt. Governor, and Speaker of the House will make appointments to the Regional Water Planning Councils prior to the 2009 legislative session.
30	Kickoff Meeting, Training, MOA	A kickoff meeting will be held in February of 2009 to officially start the work of the newly formed Regional Water Planning Councils and provide a unified forum for the Regional Water Planning Councils, EPD and the contractors to familiarize themselves with the planning process and their working relationships. The State Water Plan requires newly appointed Regional Water Planning Council members to attend mandatory training which will provide members with the necessary background and information to do their work. The State Water Plan also requires each Regional Water Planning Council to execute a memorandum of agreement (MOA) with EPD and DCA, to establish the Regional Water Planning Council's procedures.
31	Regional Visioning	Each Regional Water Planning Council will develop a "vision" for the region's future. The outcome of this process will guide management practice selection and the preparation of the region's Water Development and Conservation Plan.
32	Municipal and Industrial Water and Wastewater Forecasting	Regional Water Planning Councils, with the assistance of EPD and contractors, will use the forecasts of population and employment to prepare municipal and industrial water and wastewater forecasts for their region using a statewide methodology tailored for region specifics.
33	Presentation of Assessments and Forecasts to Councils	The results of the surface water availability (SWAVAIL), surface water quality (SWQUAL), and groundwater (GW) assessments as well as the agricultural and power needs forecasts will be presented to the Regional Water Planning Councils prior to the selection of management practices in 2010.
34	Prepare Plan's Background Sections	One component of Regional Water Development and Conservation Plans is a background section with summary information about the region, including local governments, major water users, and a summary of previously completed water resource related plans.

Regional Planning – State Water Plan Section 14 Continued		
35	Initial Selection of Management Practices	Following guidance and with contractor assistance, Regional Water Planning Councils will select management practices to meet their forecasted needs based on the resource assessments. This is the first step of an iterative process of management practice selection and evaluation of impacts ending with the final future assessment.
36	Initial Future Assessments (Modeling)	The models developed in the resource assessments will be used to evaluate potential impacts of the initial management practices on water resources and other water planning regions.
37	Refinement of Management Practices	Based on the initial future assessment results, Regional Water Planning Councils will refine their management practices. If results are already acceptable, refinement may not be necessary.
38	Future Assessment Refinement (Modeling)	The models developed in the initial future assessments will be used to evaluate the potential impacts of the refinements.
39	Final Selection of Management Practices	Based on the input received from the future assessment refinement, management practices will be finalized. The final selection of management practices must occur with enough time for the drafting of the final plan, EPD review and public comment, plan revision, and EPD adoption.
40	Final Future Assessments (Modeling)	The models will be refined to reflect the final section of management practices to verify that needs are met within the capacity of the natural resources. This is the last step of the iterative management practice selection process.
41	Recommended Draft Regional Plans to EPD	Regional Water Planning Councils (following guidance) will prepare and submit recommended Water Development And Conservation Plans to the EPD Director. These plans will be provided to EPD by the end of 2010 to allow for review and any necessary revisions prior to EPD adoption.
42	EPD Review / Public Comment	The EPD Director will review recommended Water Development And Conservation Plans and determine if they are consistent with the rules for regional water planning and guidance adopted pursuant to those rules. Before adopting any such plan, the EPD Director will provide public notice and a forty-five day comment period.
43	Councils Revise Plans	Following EPD and public review, the Regional Water Planning Councils will revise the plans based on any input.
44	EPD Adopts Regional Plans	After the required forty-five day public notice and comment period and following provisions of Section 14 of the State Water Plan, guidance and the Regional Planning Rule, the EPD Director will adopt the recommended Water Development and Conservation Plans by June 30, 2011. The EPD Director will prepare Water Development and Conservation Plans for any region whose plan is not submitted by this date. Once adopted, the EPD Director will use the Water Development and Conservation Plans to guide decisions regarding permitting. These plans will also guide state grants and loans from the Georgia Environmental Facilities Authority for water-related projects within that region. Once the regional Water Development and Conservation Plans have been developed and adopted, the State and the regions must partner to implement the plans.

This page left intentionally blank

Appendix B: Public Involvement Plan Outline

Regional water planning councils will adopt a Public Involvement Plan based on the following template. The template establishes the basic public involvement activities to be undertaken by all regional water planning councils. It also provides for additional elements to be adopted at the discretion of individual water planning councils.

The Chair of the regional water planning council will use discretion in permitting additional public comment or adjusting to adapt to specific meeting timelines and constraints, so long as the intent and expectations described below are followed.

The regional water planning councils with assistance from regional water planning contractors should complete the following form, including specifying additional elements that may be identified by each council.

The regional water planning councils, assisted by their regional planning contractors, will follow the adopted Public Involvement Plan to provide opportunities for meaningful input from key stakeholders, the members of local government advisory body, and the general public.

Guiding principles

The _____ regional water planning council recognizes the benefit and importance of providing opportunities for diverse input throughout the regional water planning process. The principles of the public input process are:

- Stakeholders and regional water planning council members will treat each other with respect and dignity;
- All participants will have an open mind and participate openly and honestly;
- The regional water planning process will continue with concurrent public comment throughout;
- EPD will provide public notice and take public comment on draft regional water plans after they are submitted;
- Stakeholder comments will be pertinent to the topic of the meeting at which they are expressed; and
- Input from the public, key stakeholders, and the members of the Local Government Advisory Body will be considered and incorporated in regional water planning council work products.

Regional water planning councils may add expectations to this list as deemed necessary.

Key stakeholders

The key stakeholders for the _____water planning region are identified below. All members of the public will have opportunities for input, even if not specifically identified in this section.

- Local government officials – includes one representative from each city and county within the water planning region
- Neighboring regional water planning councils – water planning councils that share borders and/or water resources
- Regional Commissions – agencies supporting local and regional comprehensive planning
- Agriculture – includes water permit holders for agricultural applications
- Businesses – includes local businesses (this audience may be sub-divided into more specific categories)
- Industries – includes industrial water permit holders and municipally-supplied industrial facilities
- Forestry – includes owners of managed forest lands and the forest products industry
- Institutions/educational/schools – includes public and private schools as well as institutions
- Tourism – includes public and private organizations related to local travel and tourism
- Recreation – includes citizens and industry related to recreational water uses
- Environment – includes citizens, agencies, and groups focused on environmental protection
- Public – any citizen interested in the regional water planning process

Regional water planning councils may add key stakeholders to this list as deemed necessary. Other stakeholders:

Procedural criteria

Time will be provided at every regional water planning council meeting for input from stakeholders and the public. The procedural criteria are intended to ensure the public respects the regional water planning council's schedule constraints and the regional water planning council respects the public's opportunity to present relevant and different opinions. To facilitate a fair and efficient process, the _____water planning council has adopted the following procedures for public comment.

- All regional water planning council meetings will be open meetings
- Stakeholders will be provided an opportunity to provide comments pertinent to the topic of the meeting in which they are expressed
- Time will be provided at the _____(such as, beginning/during/end) of all _____ regional water planning council meetings
- Provisions for written comments will be made at all regional water planning council meetings

The Chair of the regional water planning councils will use discretion to manage public comment under different circumstances in ways that enable the council to progress with its work and respect those who want to comment

Regional water planning councils may add to this list as deemed necessary. Other provisions:

Meeting announcements

All regional water planning council meetings will be open meetings, including at least a 24-hour notice of any meetings. The following provisions will be made for all planning council meetings to inform the public of upcoming meetings.

- Posted on the _____ regional water planning council website with a meeting agenda or summary of topics to be covered, meeting time, and meeting address
- Posted at the meeting location with a meeting agenda or summary of topics to be covered, meeting time, and meeting address
- Meeting summaries will be posted on the _____regional water planning council website

Regional water planning councils may add to this list as deemed necessary. Other provisions:

Stakeholder and public comment opportunities

Specific opportunities during the regional water planning process for stakeholder and public input include but are not limited to the following.

- Meetings of the _____ regional water planning council
- _____ regional water planning council website (documents will be posted periodically with timeframes for comment and mechanisms for comment clearly stated)
- Letters may be mailed to EPD
- Emails to the regional water planning council and/or EPD
- EPD public notice period for the resource assessments
- EPD public notice period on the draft regional water plans

Regional water planning councils may use their discretion to permit additional stakeholder and public comment opportunities, as deemed appropriate. Other provisions:

Local government officials

Much of the implementation of the regional water plans is the responsibility of local governments; therefore input will be sought from the local government officials on the following specific topics.

- Regional population, economic and employment forecasts
- Fiscal implications of water management practices
- Draft regional water plan

The regional water planning council and local government officials should identify proper communication pathways. The following actions are intended to coordinate activities of the local government officials with the regional water planning councils.

- Local government officials will be provided an opportunity at the (beginning, during, end) of the regional water planning council meetings to comment on the regional water planning process and items on the meeting agenda
- Local government officials may provide written comments to the regional water planning council, as needed.

Regional water planning councils may add to this list as deemed necessary. Other provisions:

Other regional water planning councils

In order to plan and coordinate the use and protection of shared water resources, the regional water planning council will coordinate with adjacent and hydrologically-connected councils throughout the regional water planning process. EPD will convene some meetings to discuss shared water resources, such as on the current resource assessments. The regional water planning councils will use the following communication pathways to coordinate with adjacent regional water planning councils.

- Members of the regional water planning council will attend shared resource meetings and other joint meetings
- At the discretion of the Chair, an opportunity may be provided at regional water planning council meetings for announcements or progress reports from adjacent regional water planning councils

The Chair of the regional water planning councils may use their discretion to provide additional coordination with adjacent regional water planning councils, as deemed appropriate.

Regional water planning councils may add to this list as deemed necessary. Other provisions:

Review and consideration of public input

The objective of this process is to gather relevant and diverse input to improve the quality of the recommended regional water plans. Once public comments are received from the public and key stakeholders the regional water planning council with the assistance of the regional planning contractor will consider and address these comments. Written comments and web comments will be summarized and provided to the regional water planning council members. Verbal comments will be summarized and included in meeting summaries.