South Carolina Department of Health and Environmental Control

Capacity Use Area Groundwater Management Plans

Bureau of Water

Water Quantity Programs

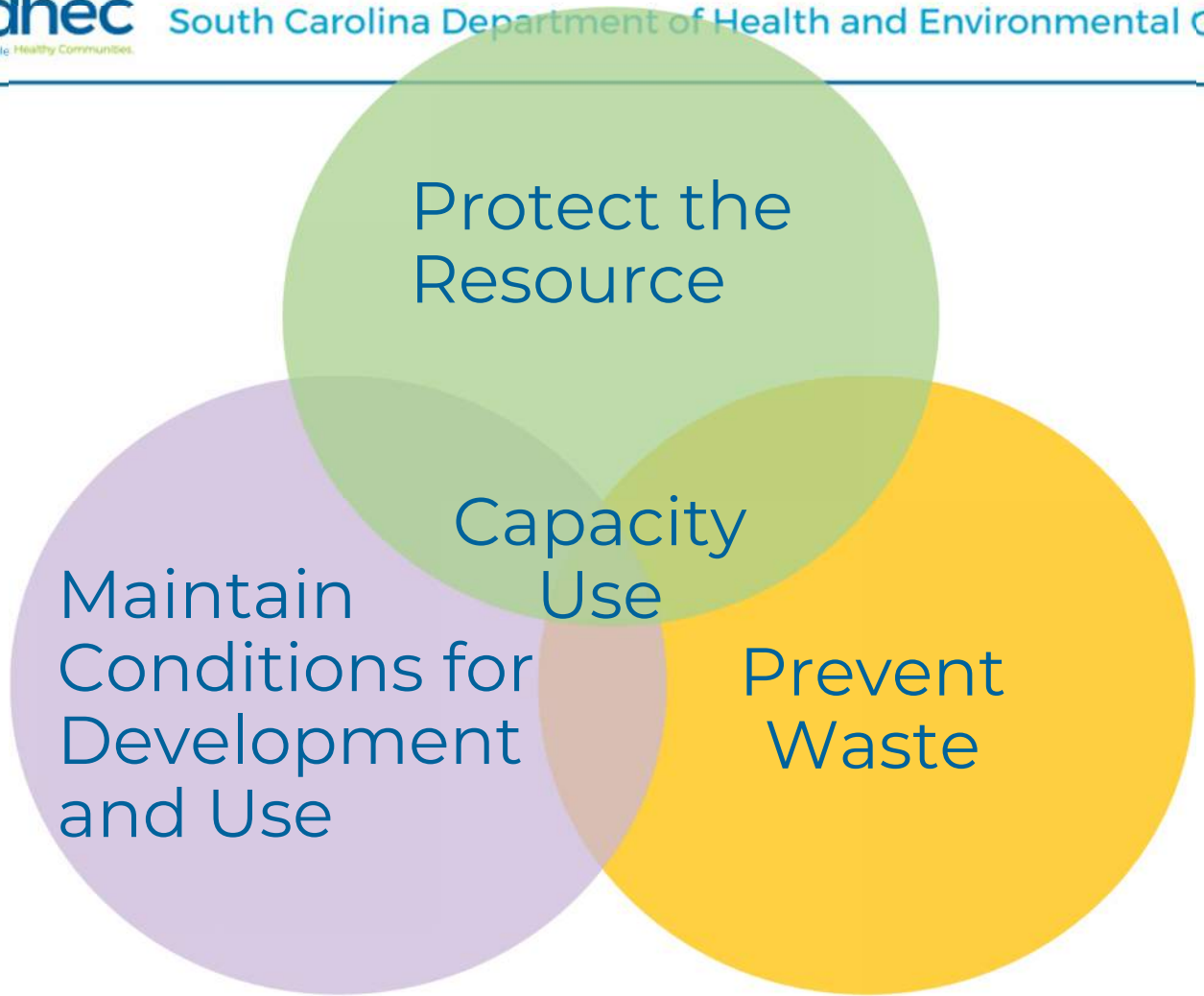
- **Groundwater Use and Reporting**
  - Since the 1970s
  - Issue permits in designated capacity areas of the coastal plain over for use over **3 million gallons in any month** (~1in of water per week for 28 acres or average use for 1,000 people)
  - Users outside of Capacity Use Areas must register wells if well or well system will use over 3 million gallons in any month
  - All registered and permitted groundwater withdrawers report their annual water use to the Department
- **Surface Water Withdrawal, Permitting and Reporting**
  - Since June 2012
  - Issue permits / registrations statewide if over 3 million gallons in any month
  - All registered and permitted surface water withdrawers report their annual water use to the Department

What is a Capacity Use Area

"..[A]n area, designated by the Board, where excessive groundwater withdrawal presents potential adverse effects to the natural resource or poses a threat to public health, safety, or economic welfare or where conditions pose a significant threat to the long-term integrity of a groundwater source, including saltwater intrusion"

Groundwater Use and Reporting Act Legislative Declaration of Policy

"The General Assembly declares that the general welfare and public interest require that the groundwater resources of the State be put to beneficial use to the fullest extent to which they are capable, subject to reasonable regulation, in order to conserve and protect these resources, prevent waste, and to provide and maintain conditions which are conducive to the development and use of water resources."


Protect the Resource
Capacity Use
Maintain Conditions for Development and Use
Prevent Waste

What are the Capacity Use Areas?

- **Waccamaw**: est. June 22, 1979, Horry and Georgetown Counties
- **Lowcountry**: est. July 24, 1981, Jasper, Beaufort, and Colleton Counties (Hampton county added June 10, 2008)
- **Trident**: est. August 8, 2002, Charleston, Berkeley, and Dorchester Counties
- **Pee Dee**: est. February 12, 2004, Marion, Marlboro, Darlington, Dillon, Florence, and Williamsburg Counties
- **Western**: est. November 8, 2018, Aiken, Bamberg, Barnwell, Calhoun, Allendale, Lexington, and Orangeburg Counties
- **Santee-Lynches**: est. July 15, 2021, Chesterfield, Clarendon, Kershaw, Lee, Richland, and Sumter Counties

Groundwater Management Planning

After notice and public hearing, the department shall coordinate the affected governing bodies and groundwater withdrawers to develop a groundwater management plan to achieve goals and objectives stated in [Legislative Declaration of Policy] .

In those areas where the affected governing bodies and withdrawers are unable to develop a plan, the department shall take action to develop the plan.

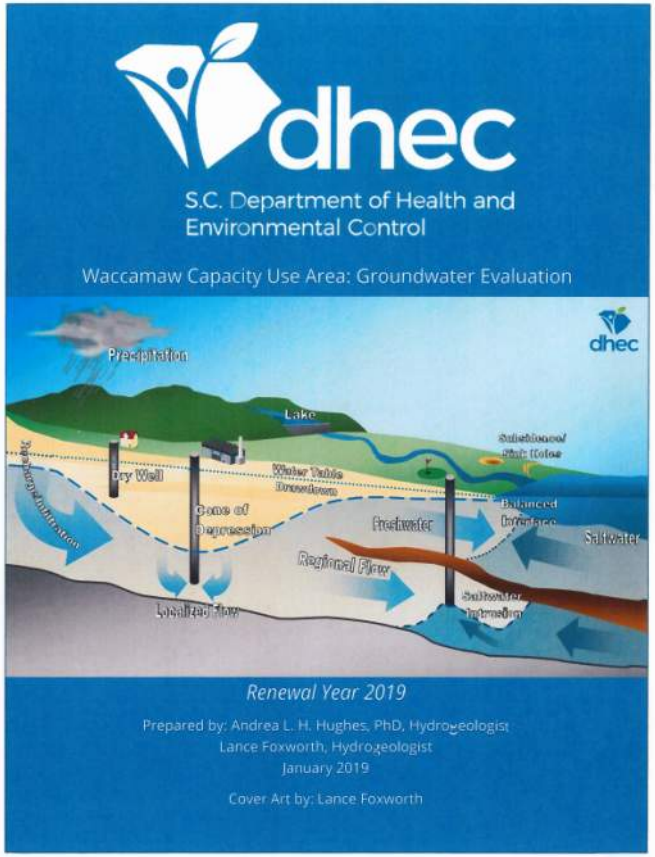
Groundwater Management Plan Process

Convene Planning Workgroup	Open House Forums	Finalize Plan & Submit to DHEC Board
Publish full calendar of meetings and workgroup members	Input from stakeholders on the draft Groundwater Management Plan	Additional public hearing prior to Board vote
Written comments from public shared with workgroup		Review & issue permits consistent with the plan

Groundwater Management Plan Reports

Every 5 years, or length of the permitting cycle, total annual groundwater withdrawals will be compiled and compared to available aquifer potentiometric maps. The report includes the following

- Listing of all permitted withdrawers, permitted withdrawal limits, and average groundwater withdrawal;
- Evaluation of withdrawal by category and by aquifer;
- Identification of areas of aquifer stress and all withdrawers utilizing the stressed aquifer(s).



Aspects of Water Use Addressed in Groundwater Management Plan:

- Current groundwater sources used
- Current water demand by type and amount
- Current aquifer storage and recovery (ASR) and water reuse
- Projected population and growth
- Projected water demand
- Projected opportunities for ASR, and water reuse
- Projected groundwater and surface water options
- Water conservation measures

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Example Groundwater Management Plan

The Waccamaw Capacity Use Area

Table of Contents

Groundwater Management Goals:

- Ensure sustainable development of the groundwater resource by management of groundwater withdrawals
- Monitoring of groundwater quality and quantity to evaluation conditions
- The protection of groundwater quality from salt-water intrusion (coastal CUAs)
- Promote educational awareness of the resource and its conservation (Western CUA)

Groundwater Management Strategies

Strategy #1: Identify areas where a leveling and/or reduction in pumping is appropriate.

Prior to each permit renewal cycle, SCDHEC will consider the best available information on the geologic and hydrogeologic characteristics of the aquifer(s) and groundwater withdrawals of the area to protect against or abate unreasonable, or potentially unreasonable, adverse effects on the aquifer(s) and water users of the Waccamaw Area.

Groundwater Management Strategies

Strategy #2: Review of permit applications based on demonstrated reasonable use.

Proposed withdrawals will be evaluated considering reasonableness of use and need, aquifer(s) being utilized, potential adverse effects on adjacent groundwater withdrawers, previous reported water use, anticipated demand for the proposed activities, availability of alternate water sources and reported water use at facilities with similar activities. Applications for groundwater withdrawal will incorporate a “Water Use Plan” or a “Best Management Strategy” detailing actual or proposed water use activities and all conservation techniques for site specific water management

Groundwater Management Strategies

Strategy #3: Establish a comprehensive groundwater monitoring program.

With increased population and a growing industrial base, water demand (from both surface and groundwater) is increasing at an expanding rate. Although water level declines are a normal response to groundwater withdrawals, not stabilizing these declines may cause serious impairment to the aquifers and groundwater quality of the region. SCDHEC will pursue partnerships with local entities, groundwater users and other agencies (both Federal and State) to facilitate the most effective use of resources in designing and maintaining a monitoring network for the Waccamaw Area.

Groundwater Management Strategies

Strategy #4: Establish a conservation educational plan for the general public and existing groundwater withdrawers.

Water conservation has increasingly become a cornerstone to the development of water management strategies.

Groundwater Management Strategies

Strategy #5: Regulation and Planning.

The Groundwater Use and Reporting Act provides for regulation of water withdrawals in South Carolina. Groundwater regulation is necessary to protect and provide for the long-term sustainability of the resource. As data are developed on the groundwater resources of the designated Capacity Use Areas, the regulations should will be reviewed to ensure that sufficient and adequate protection of the resource is provided.

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Questions?

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Waccamaw GWMP Groundwater Evaluation Recommendations

1) Place a hold on the groundwater withdrawal rates for current permit holders in the Crouch Branch aquifer.

2) No new wells that increase withdrawal rates should be permitted for construction and production in the Crouch Branch aquifer. Keep in place until the Waccamaw Area undergoes its next 5-year review in 2024. At that time, the hold on new construction should be re-evaluated based on new water level information

3) Applications which propose to use the Crouch Branch aquifer should be diverted to the surficial, McQueen Branch, Charleston, or Gramling aquifers in Georgetown and Horry Counties as appropriate for the proposed use.

Waccamaw GWMP Groundwater Evaluation Recommendations (cont.)

4) Encourage surface water as a source for future water demands.

5) Conduct a targeted public education campaign on water conservation practices and the extent of the current over-pumping evidence.

6) Each new and renewal permit for water supply wells should require that a water audit be conducted annually in accordance with the American Water Works Association policy statement for Water Loss Management, Metering and Accountability