



## **Groundwater Withdrawal Permit Application Guide for Designated Capacity Use Areas**

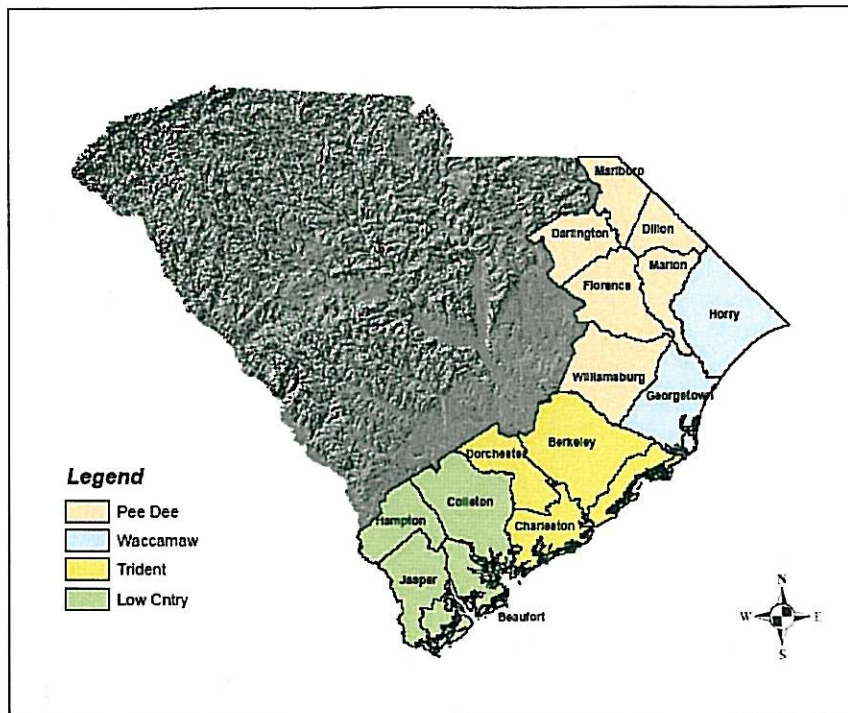
The guidance contained in this document are applicable to all persons who withdraw or are capable of withdrawing in excess of three (3) million gallons in any given month from a well or multiple wells in a designated Capacity Use Area. The application process is intended to assist the applicant in developing appropriate information necessary for the Department to evaluate the potential effect of the existing or proposed groundwater withdrawal on the water resources of the area. These guidelines are provided as a courtesy and all applications must comply with R.61-113, Groundwater Use and Reporting regulations.

Not all sections will apply to every application. Please read carefully and complete only those sections which are applicable to your facility and/or operation. Some information may have been previously submitted to the Department and should be noted on the application as such. If you are unsure, it is better to submit the information again, or contact the Department to verify your facility's file information. As always, if you there any questions or concerns with the application or guidance document, please contact:

- ❑ **Paul L. Bristol at 803-898-3559 or [bristopl@dhec.sc.gov](mailto:bristopl@dhec.sc.gov) or,**
- ❑ **Alex P. Butler at 803-898-3575 or [butlerap@dhec.sc.gov](mailto:butlerap@dhec.sc.gov) .**

The enclosed Groundwater Withdrawal Permit Application guidance is for existing or proposed groundwater withdrawal within a designated Capacity Use Area. The following map depicts currently designated Capacity Use Area counties. (Please note Hampton County was approved and incorporated with the Low Country Capacity Use Area on January 10, 2008)

## Capacity Use Areas



### Step 1.

Determine if your groundwater withdrawal meets the permitting threshold of three (3) million gallons in a given month. For example:

- A well pumping at 70 gallons/minute 24 hours/day for thirty days will produce 3.024 million gallons (exceeding the threshold limit);
- Applying 1" of water per week for one month on 28 acres will produce 3.04 million gallons (exceeding the threshold limit);
- Filling a 2 acre pond with average depth of 5 feet requires 3.26 million gallons (exceeding the threshold limit);
- A full circle irrigation system (125 acres) at 80% application efficiency requires

879 gallons/minute to apply 0.3 inches/day, which equals 1.27 million gallons (exceeding the threshold limit in 3 applications).

The above examples are intended as a general guide and every withdrawal must be evaluated on an individual basis. The Department will work closely with individual applicants to determine the necessity of filing a Permit to Construct application and/or a Permit to Operate a groundwater withdrawal system. Applicants in the Low Country and Waccamaw Capacity Use Areas may contact **Alex Butler** at (803) 898-3575 or [BUTLERAP@dhec.sc.gov](mailto:BUTLERAP@dhec.sc.gov) and applicants in the Trident and Pee Dee Capacity Use Areas may contact **Paul L. Bristol** at (803) 898-3559 or [BRISTOPL@dhec.sc.gov](mailto:BRISTOPL@dhec.sc.gov) for any questions.

## Step 2.

Complete the Application for Groundwater Withdrawal Permit (form DHEC 2504, revised 11/2000). Applicants are required to provide the Department sufficient documented evidence to aid in evaluating the effect of the existing or proposed groundwater withdrawal or use on the water resources of the Capacity Use Area. Generally, documented evidence will include (but may not be limited to):

1. Name, address, and phone number of applicant who shall be the owner and his applicable agent, professional engineer or professional geologist, as appropriate;
2. Location of all existing and/or proposed wells, properly identified, for which the permit is requested, marked on the best available map, which may be a portion or copy of a United States Geological Survey 7 ½ (seven and one-half) minute quadrangle map, latest county highway map, or more detailed map or aerial photography, where required by the Department, provided the map or aerial photography submitted is clearly identified;
3. The latitude and longitude of all wells, obtained from the location map or by acceptable Global Positioning System (GPS) instrumentation;
4. As-built construction details of all existing wells to include, but not limited to, the following:
  - Name of driller;
  - Date of drilling;
  - Total depth of well (in feet);
  - Diameter of drilled hole;
  - Diameter, depth, and type of casing;
  - Depth (length) of grouting;
  - Depth and diameter of well screen(s), if used, and the material, type, and diameter of screen openings;
  - Type of pump, size (horsepower), and performance curves;
  - Static water level and pumping water level; and

- Number of hours per day the well(s) is pumped.
5. A completed SCDHEC Water Well Record or other approved form and driller's logs, if available;
  6. Copy of geophysical/mechanical logs, if available;
  7. The ground elevation of the well(s), if available;
  8. The location of all abandoned or unused well(s) owned or under the control of the applicant;
  9. The proposed amount of groundwater withdrawal (in million gallons) per year;
  10. A "Best Management Plan" for water use and water conservation designed to protect water quality and reduce water consumption to include, but not limited to, the following, as applicable;
    - Reasonable and appropriate conservation techniques, application processes, and alternate sources of water, including but not limited to, surface water(s) and/or availability of treated effluent, to minimize or eliminate groundwater sources;
    - Based on the current and/or proposed withdrawal rates, provide reasonable and appropriate documentation that the proposed water use is necessary to the anticipated needs of the applicant to include, but not limited to, the following;
      - a. Public Water Supply- by system, population served, anticipated growth, annual water use statistics (e.g., monthly average, peak summer/winter consumption);
      - b. Industrial Water Supply- by industry type, anticipated growth, and annual water use statistics (e.g., monthly average, peak summer/winter consumption);
      - c. Irrigation Water Supply- irrigated acreage, major crops (with irrigated acreage for each crop), water use by crop (per acre), calculated irrigation requirement (including available precipitation), critical period growth requirements, growing season, and nutrient and pest management strategy;
      - d. Golf Course Irrigation Water Supply- irrigated acreage (differentiating actual golf course areas and aesthetic landscaping), water use per acre, calculated irrigation requirement (including available precipitation), annual water use statistics (e.g., monthly

average, peak summer/winter consumption), and nutrient and pest management strategy;

e. Aquaculture Water Supply- pond capacity (acre-feet), make-up water requirement, drain-fill periodicity, (e.g., monthly average, peak summer/winter consumption).

- Maintenance schedule to preserve the integrity and efficient operation of water conveyance system(s); and
- A statement specifying the beneficial use of the groundwater being withdrawn as necessary to meet the reasonable needs of the applicant.

11. Historical water use information;

12. Availability of alternate water sources;

13. Any present or anticipated unreasonable adverse or potential adverse effects on other water uses or users, including, but not limited to, adverse effects on public use; and

14. Permitted effluent discharges in accordance with a valid NPDES Discharge Permit.

### **Construction Requirements**

In addition to the information required above, applicants proposing new well construction or increasing the rated capacity of an existing well or wells shall provide proposed well construction details and technical specifications or pump specifications to include (but may not be limited to):

1. Name of driller, if known;
2. Date of drilling, if known;
3. Total depth of well (in feet);
4. Diameter of drilled hole;
5. Diameter, depth, and type of casing;
6. Depth of grouting – the minimum length of grout to protect the aquifer utilized, unless demonstrated that an alternate grout length is as protective, shall be;
  - Type II and III, the first confining bed (clay, marl, etc.) immediately

above the aquifer being utilized or to within ten (10) feet of the uppermost screen when no confining bed is encountered;

- Type IV, twenty (20) feet into firm limestone or firm marl, whichever is less.
7. Depth and diameter of the open hole or well screen(s), if used, and the material, type, and diameter of screen openings. The open hole or screen setting(s) shall not connect aquifers or zones with documented differences in water quality or result in or create the potential for contamination of any aquifer or zone or cause depletion or significant loss of head in any aquifer or zone;
  8. Type of pump, size (horsepower), and performance curves;
  9. Deep well airline of steel, iron, or heavy gauge copper material, or an access port not less than one-half inch in diameter, with screw cap for water-level measurements;
  10. Proposed geophysical/mechanical logging; and
  11. Filling, plugging, and sealing procedures for any well(s) that are to be abandoned.

In addition to the information and standards identified above, applicants proposing new well construction must comply with requirements established in S.C. R.61-44, South Carolina Individual Residential Well & Irrigation Permitting and comply with R.61-58, State Primary Drinking Water Regulation, as applicable.

### Step 3.

Submit the completed application and all requested information and maps to:

BOW/Groundwater Management Section  
2600 Bull Street  
Columbia, SC 29201  
Attention:

**Alex Butler-** For counties in the Low Country and Waccamaw Capacity Use Areas.

**Paul Bristol-** For counties in the Trident and Pee Dee Capacity Use Areas, or where unsure.

In considering all applications for groundwater withdrawal, the Department will consider (but may not be limited to):

1. The number of persons using an aquifer and the object, extent, and necessity of their respective withdrawals or uses;
2. The nature and size of the aquifer;
3. The physical and chemical nature of any impairment of the aquifer adversely affecting its availability or viability for other water uses, including public use;
4. The severity and duration of such impairment under foreseeable conditions;
5. The injury to public health, safety, or welfare which may result if such impairment were not prevented or abated;
6. The kinds of businesses or activities to which the various uses are related;
7. The relative importance and necessity of uses claimed by permit holders and permit applicants, or of the water use of the area, and the extent of injury or detriment caused or reasonably expected to be caused to other water uses, including public use;
8. Diversion from or reduction of flows in surface water or other aquifers;
9. An approved local or regional Groundwater Management Strategy; and
10. Any other relevant factors, such as, but not limited to, public comments and best available geologic and hydrologic information on the aquifer or aquifers of the area.

Where an applicant for a Groundwater Withdrawal Permit demonstrates to the Department's satisfaction that the groundwater withdrawal is reasonable and necessary to

meet the applicant's requirements and where there are no unreasonable adverse effects on other water users, including public use, and including potential as well as current use, a Groundwater Withdrawal Construction Permit will be issued by the Department and may contain additional conditions on well construction, as deemed necessary or appropriate. The Department will also provide public notice wording to the applicant who will publish the notice, for one (1) day, in a newspaper of general circulation in the area of the proposed groundwater withdrawal. The applicant will provide to the Department an affidavit of publication from the newspaper within fifteen (15) days of initial publication and a copy of the published notice. The public notice provides for a thirty (30) day comment period for interested parties to make comment on the proposed groundwater withdrawal and well construction. The applicant may initiate construction concurrently with the public notice period or wait to the end of the period to determine the extent and nature of interest in the groundwater withdrawal.

Additional information may be obtained from the Department's webpage at [WWW.SCDHEC.GOV](http://WWW.SCDHEC.GOV), under the banner heading ENVIRONMENT.