# MEMORANDUM

**Department of Environmental Quality**
**Water Resources Division**

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**SUBJECT:** Water Resources Guidance Memorandum No. WRD06-100
Ground Water Withdrawal Permit Procedures Manual

**TO:** Frank Daniel, RD-TRO; Gerard Seeley, RD-PRO;
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**FROM:** Terry Wagner, WRD

**DATE:** May 25, 2006

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**Summary:**

The Ground Water Withdrawal Permit Procedures Manual has been reviewed and revised by the program staff in both the regional and central office programs. This revised guidance replaces OWRM Guidance Memorandum No. 99-2005 (dated June 16, 1999). Please advise your staff to discontinue use of the previous manual and begin using the new manual effective June 1, 2006.

The revised Manual is available at \\deqfile1\wrdcommon$\OWRM\GWWPP_Permit_Manual_06\060106rev_GWWP_MANUAL.doc . This document contains hyperlinks to referenced documents that are identified as attachments and stored in the same directory. The Manual attachments are catalogued through a second document \\deqfile1\wrdcommon$\OWRM\GWWPP_Permit_Manual_06\060106rev_GWWP_MAN_ATTACH.doc . This document contains the referenced attachment documents as linked text in addition to providing the hyperlink to the documents.

This manual provides procedural guidance to the staff. This document is guidance only. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the Ground Water Management Act of 1992 and implementing regulations on the basis of the site-specific facts.

**Electronic Copy:**

An electronic copy of this guidance is available in the Water Resources section of DEQ's website at http://www.deq.virginia.gov .

**Contact Information:**

Questions about the procedures manual can be directed to Robin Patton, Ground Water Withdrawal Permitting Program, (804) 698-4085, rwpatton@deq.virginia.gov.

**Disclaimer:**
**This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.**

COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

# GROUND WATER WITHDRAWAL PERMIT PROCEDURES MANUAL

(For processing ground water withdrawal permit applications for new or expanded ground water withdrawals within designated Ground Water Management Areas.)

ADMINISTERED
BY THE
GROUND WATER PROGRAM
OFFICE OF GROUND WATER WITHDRAWAL PERMITTING
WATER RESOURCES DIVISION

June 1, 2006

**Effective Date June 1, 2006**

Key

| | |
|---|---|
| DEQ | Department of Environmental Quality |
| GWMA | Ground Water Management Area |
| OD | Office of the Director |
| OGWWP | Office of Ground Water Withdrawal Permitting |
| OPL | Office of Policy & Legislation |
| OU | Originating Unit |
| RD | Regional Director |
| RO | Regional Office |
| SWCB | State Water Control Board |
| WRD | Water Resources Division |
| VWUDS | Virginia Water Use Data System |

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# I. AUTHORIZATION AND REGULATIONS

The Ground Water Management Act of 1992 assigns the management of ground water resources in Ground Water Management Areas (GWMAs) to the State Water Control Board (SWCB).

The DEQ Ground Water Program is carried out in accordance with those sections of the State Water Control Law which apply to the protection of State waters.

# II. PURPOSE OF THE GROUND WATER PERMIT MANUAL

The purpose of this manual is to guide the permit writers on all aspects of ground water permit procedures. These procedures will ensure consistency between the Regional Offices (RO), and allow new personnel a document from which to learn how to write permits.

This manual has been developed in a loose-leaf format to allow easy modification of the procedure pages. This will help the Office of Ground Water Withdrawal Permitting (OGWWP) and the RO's keep abreast of the most recent regulations and procedures by removing or adding pages to the manual.

Procedures contained herein shall remain in effect until such time as they are formally modified and approved by the Director of the Water Resources Division.

**Headquarters and regional staff shall also keep abreast and observe changes in procedures brought about by the issuance of other WRD regulatory guidance memoranda.**

# III. RESPONSIBILITIES

A. OGWWP, through its Ground Water Program, is responsible for the administration of the Ground Water Withdrawal Permitting Program.

B. RO's, having jurisdiction within GWMAs, are responsible for following these standardized administrative procedures and in carrying out the assigned program.

# IV. DEFINITIONS

Unless a different meaning is required by the context, the following terms, as used in this manual, shall have the following meanings.

"Act" means the Ground Water Management Act of 1992, Chapter 25 §62.1-254. et seq. of the Code of Virginia as adopted 1992.

"Adverse Impact" means reductions in ground water levels or changes in ground water quality that limit the ability of any existing ground water user lawfully withdrawing or authorized to withdraw ground water at the time of permit or special exception issuance to continue to withdraw the quantity and quality of ground water required by the existing use.

"Amendment" has the same meaning as "Major Modification" as defined in 9 VAC 25-20 of the Permit Fee Regulation which carries a $ 3,000 fee.

“Annual Water Use Simulation” means a regional flow model simulation using all withdrawals for a calendar year as users reported these amounts to the VWUDS program and/or to the Ground Water Withdrawal Permitting Program.

"Applicant" means a person filing an application to initiate or expand a ground water withdrawal in a ground water management area.

"Area of impact" means the areal extent of each aquifer where more than one foot of drawdown is predicted to occur due to a proposed or expanded withdrawal.

"Beneficial use" includes, but is not limited to domestic (including public water supply), agricultural, commercial, and industrial uses.

"Board" means the State Water Control Board.

"Consumptive use" means the withdrawal of ground water, without recycle of said waters to their source of origin.

Conjunctive Use System - see "Surface and Ground Water Conjunctive Use System"

"Department" means the Department of Environmental Quality.

"Draft permit" means a prepared document indicating the board's tentative decision relative to a permit action.

"Director" means the director of the Department of Environmental Quality.

"Existing user" means those persons that have been granted a ground water withdrawal permit subject to this regulation and all other persons whose withdrawals are excluded from permit requirements by 9 VAC 25-610-50.

"Geophysical investigation" means any hydrogeologic evaluation to define the hydrogeologic framework of an area or determine the hydrogeologic properties of any aquifer or confining unit. This testing must not cause unmitigated adverse impacts to existing ground water users. Geophysical investigations include, but are not limited to, pump tests and aquifer tests.

“Geophysical log” means a borehole geophysical log suite including spontaneous potential, single point resistance, 16”/64” short and long normal resistivity, and natural gamma. The scale for the geophysical logs shall be 20 feet per inch.

"Ground Water" means any water, except capillary moisture, beneath the land surface in the zone of saturation or beneath the bed of any stream, lake, reservoir or other body of surface water wholly or partially within the boundaries of this Commonwealth, whatever the subsurface geologic structure in which such water stands, flows, percolates or otherwise occurs.

"Ground water management area" means a geographically defined ground water area in which the Board has deemed the levels, supply or quality of ground water to be adverse to the public welfare, health and safety.

"Historic prepumping water levels" means ground water levels in aquifers prior to the initiation of any ground water withdrawals. For the purpose of this regulation, in the Eastern Virginia and Eastern Shore Ground Water Management Areas, historic prepumping water levels are defined as water levels present in aquifers prior to 1890.

"Human consumptive use" means the withdrawal of ground water for private residential domestic use and that portion of ground water withdrawals in a public water supply system that support residential domestic uses and domestic uses at commercial and industrial establishments.

"Minor amendment" as defined in 9 VAC-610-330 of the Ground Water Withdrawal Regulations has the same meaning as "Minor Modification" as defined in 9 VAC 25-20 of the Permit Fee Regulation.
Minor amendments may be for the following purposes:

1. Correct typographical errors;
2. Require reporting at a greater frequency than required in the permit or special exception;
3. Add additional or more restrictive monitoring requirements than required in the permit or special exception;
4. Replace an existing well so long as the replacement well is screened in the same aquifers as the existing well, the replacement well is in the same location as the existing well, the ground water withdrawal does not increase, and the area of impact does not increase;
5. Add additional wells so long as the additional wells are screened in the same aquifers as the existing well, additional wells are in the same location as the existing well, the total ground water withdrawal does not increase, and the area of impact does not increase;
6. Combine the withdrawals governed by multiple permits into one permit when the systems that were governed by the multiple permits are physically connected, as long as the interconnection will not result in additional ground water withdrawal and the area of impact will not increase;

7. Change an interim compliance date in a schedule of compliance to no more than 120 days from the original compliance date and provided it will not interfere with the final compliance date; and
8. Allow for a change in ownership or operational control when the board determines that no other change in the permit or special exception is necessary, provided that a written agreement containing a specific date for transfer of permit or special exception responsibility, coverage and liability from the current to the new owner has been submitted to the board.[1]

"Mitigate" means to take actions necessary to assure that all existing ground water users at the time of issuance of a permit or special exception who experience adverse impacts continue to have access to the amount and quality of ground water needed for existing uses.

"Permit" means a Ground Water Withdrawal Permit issued by the board permitting the withdrawal of a specified quantity of ground water under specified conditions in a ground water management area.

"Permittee" means a person who currently has an effective Ground Water Withdrawal Permit issued by the board.

"Person" means any and all persons, including individuals, firms, partnerships, associations, public or private institutions, municipalities or political subdivisions, governmental agencies, or private or public corporations organized under the laws of this Commonwealth or any other state or country.

"Public hearing" means a fact finding proceeding held to afford interested persons an opportunity to submit factual data, views and comments to the board pursuant to the board's Procedural Rule No. 1.

"Salt Water Intrusion" means the encroachment of saline waters in any aquifer that creates adverse impacts to existing ground water users or is counter to the public interest.

"Special Exception" means a document issued by the board for withdrawal of ground water in unusual situations where requiring the user to obtain a ground water withdrawal permit would be contrary to the purpose of the Ground Water Management Act of 1992. Special exceptions allow the withdrawal of a specified quantity of ground water under specified conditions in a ground water management area.

"Surface and Ground Water Conjunctive Use System" means an integrated water supply system wherein surface water is the primary source and ground water is a supplemental source that is used to augment the surface water source when the surface water source is not able to produce the amount of water necessary to support the annual water demands of the system.

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“Total Permitted Simulation” means a regional model simulation of all active and pending permits at their maximum withdrawal limit specified in the permit. All other withdrawals are simulated at the reported amount for the most recent VWUDS annual data.

“Viable Alternate Water Supply” means a source of water supply that is not totally dependent on ground water sources that will provide a workable solution to the applicants needs for water supply. Alternate sources include surface water sources, existing private and/or public water systems that may provide the volume of water needed by the applicant, and any sources of reclaimed water that may be available to supply the water needs of the applicants.

"Well" means any artificial opening or artificially altered natural opening, however made, by which ground water is sought or through which ground water flows under natural pressure or is intended to be artificially drawn.

"Withdrawal system" means; (1) One or more wells or withdrawal points located on the same or contiguous properties under common ownership for which the withdrawal is applied to the same beneficial use, or (2) Two or more connected wells or withdrawal points which are under common ownership but not necessarily located on contiguous properties.

# V. APPLICATION PROCEDURES

The following procedures are used in the administration of ground water permitting activities. All related forms are attachments.

## A. Application to Withdraw Ground Water

A Ground Water Withdrawal Permit application (see Attachment B) is required from the applicant for the proposed withdrawal of 300,000 gallons or more of ground water in any one month in a GWMA.(see Attachment V for a GWMA MAP). The following is the general application process:

1. Application package: Applicant contacts RO by phone or letter to request a ground water withdrawal permit application package (see Attachments A,B,B1,C,O,T). At a minimum, an application package consists of application instructions, application, sample mitigation plan, LGOF form, permit application fee form, copy of the Ground Water Withdrawal Regulations, and GW-2 form.

2. Preapplication conference: At the time of application inquiry, the RO shall inform the applicant of the requirement to schedule a preapplication conference prior to application submittal to the RO. The owner/operator of the permit or a representative of same (does not include hired consultant) must attend preapplication conference. **The RO shall instruct the applicant of the need to compile all existing well construction, aquifer/pump test, and geophysical data and submit same to DEQ prior to the meeting. Once this information has been received the RO will facilitate scheduling of the Preapplication conference.** The RO should advise the applicant that specific site work will likely be required by DEQ to support the permit evaluation and that any work initiated without DEQ concurrence may not meet the permit standards. In the case of new withdrawals for public water supplies, the RO shall review item 5 of the application instructions, JUSTIFICATION FOR THE AMOUNT OF WITHDRAWAL REQUESTED:, with the applicant to explain the statutory relationship between the State Health Department's waterworks operation permit and ground water withdrawal permit. The RO shall coordinate the scheduling of the preapplication conference with CO modeling staff and identify all hydrogeologic information on file at the regional office. All available site specific hydrogeologic information must be made available to the assigned modeler in advance of the meeting:
   1. map of location, showing applicant's wells and any other wells within 2 miles
   2. all available well completion information (that is in RO files) - GW2, yield testing of any type, geophysical logs, cuttings description,
   3. Health Department permit including engineering description sheet
   4. history of use of wells
   5. description of project history regarding owner/user/driller/developer, recent enforcement/compliance issues, onsite monitoring data

6. expected amount they will apply for.

The purpose of the preapplication conference is to discuss application requirements as well as information needed to conduct a technical evaluation of the area of impact and 80 % drawdown criterion. RO/CO staff should discuss at the preapplication conference, if possible, the need for a mitigation plan, monitoring wells, hydrogeologic data collection (cores, cuttings, aquifer tests), and the need for an evaluation of salt water intrusion. Results of the meeting shall be documented on a Preapplication Conference Meeting Form. (see Attachment B2) One application shall be submitted for each withdrawal system (see definitions).

The general format for the preapplication meeting should be:

- Introductions
- Applicant provides a short description of project.
- DEQ gives an overview of the GWWP program purpose and identifies the RO and CO responsibilities and specifies the point of contact.
- Review of existing site information.
- DEQ describes any known issues for the area.
- RO staff steps through the application form including necessary emphasis on building a site specific water conservation and management plan.
- CO staff describes hydrogeologic evaluation and, if sufficient information is supplied at the meeting, determines hydrogeologic investigation necessary to support the evaluation.
- RO staff discusses mitigation plan requirements.
- Discussion of anticipated schedule for site work and application submittal.

3. Permit Application Fee: As stated in the Permit Application Fee Instructions, the applicant will be instructed to submit the appropriate permit fee and the fee form (http://www.deq.virginia.gov/waterresources/pdf/feeform04.pdf) to DEQ, Receipts Control, P.O. Box 10150, Richmond, VA 23240. A copy of the check or money order and a copy of the fee form shall be attached to the application when submitted to the RO. Accounting will notify the RO to confirm payment of the fee. The RO shall record the deposit date and the fee amount on the front page of the application. Permit processing cannot be initiated until the fee is submitted.

   It is the CO Finance Office's responsibility to notify the RO when a check has been returned by the bank due to insufficient funds. The RO must notify the applicant of the check's return, the proper fee, and balance due by deficiency letter. The Regional Office shall provide a copy of the original fee form, with the DC#, to the applicant for use when submitting the additional fees. The applicant is to note the changes on the original fee form, then return the corrected fee form and the additional payment to DEQ Receipts Control, with copies to the RO. Copies of deficiency letters pertaining to permit fees should be sent to the Finance Office to identify incorrect payments received from applicants. Such deficiency letters should state that the application was deemed incomplete and processing will not resume until the proper fee is remitted. The deficiency letter should direct payments to DEQ Receipts Control.

4. Numbering: The applicant will be instructed to submit the original application and one copy to the RO in 3-ring binders. Upon receipt of an application, the RO shall date stamp the application and the copy, and assign an identification number. (NOTE: This number is unique for each application, the same number will be assigned to the permit if issued). Each RO will be assigned a block of permit numbers as follows: Piedmont Regional Office - GW0000100 to GW0029900; Tidewater Regional Office - GW0030000 to GW0099900. Permit numbers will consist of an alpha numeric number with a "GW" prefix followed by a seven digit number. For applications not resulting in a permit, such numbers will not be reassigned. NOTE: Numbers will be assigned to applications for new or expanded withdrawals in the sequence they are received. GW permit numbers will be assigned to applications based on historic use when review begins.
   Minor modifications (no fee required – ex. change in ownership or well replacement with no change in permit term, see Minor amendment definition) do not receive a new number.
   Major modifications ($3000 effective 7/1/02 – ex. change in withdrawal pattern or amount with no change in permit term) receive a new number where only the first digit changes, incremented by 1 for each successive modification. (For example GW0030100 is modified to GW1030100.)
   Reissuance of a permit – (e.g. the amount is less than or equal to the amount of the previous permit) receives a new number where the last two digits are used to indicate successive reissuances. For example GW0030100 is reissued as GW0030101.
   All new permits or applications for expanded use receive a new GW permit number.

5. Date stamped: The resubmittal of an application to correct administrative or technical deficiencies, and any other correspondence received concerning the application shall be date stamped by the RO.

## B. Priority of Evaluation

Applications shall be evaluated in order based on the date that the application is deemed to be complete. An application will be considered complete when 1.) all the required administrative information/documents have been received, 2.) sufficient technical information has been received to define the nature and amount of withdrawal necessary to support the beneficial use, and 3.) sufficient site specific hydrogeologic information has been submitted to develop a technically defensible evaluation of impacts.

In cases where a RO receives multiple applications on the same day, every effort should be made to process those applications in a fashion so that draft permits for that group of applications can also be issued on the same date. Should any such applicants not correct deficiencies as described above they shall not be included in the group.

In cases where a RO has multiple outstanding applications, regardless of date of receipt,

and there is reason to believe that the issuance of one permit may limit the ability to issue another permit, applications for human consumptive uses shall be given a priority of evaluation above all other uses.

# VI. REVIEW PROCEDURES

## A. Administrative Application Review (RO)

The RO shall review the application and attachments within 30 days of receipt to determine if the application submittal is administratively complete. The Application Review Checklist (Attachment E3) is a means for tracking the progress of each application. The application submittal will be considered administratively complete on the date submitted to the RO provided:

1. All sections of the application have been addressed, including the preapplication conference meeting date.

2. The application is signed and dated.

3. A complete copy of the application and all attachments is included.

4. The permit fee has been paid and the fee form and check copy submitted.

5. A signed LGOF form is attached. (In instances where a local government has not signed a LGOF, the applicant may satisfy this requirement by providing a signed certified mail receipt indicating that the local government received the LGOF form more than 45 days prior to the date of the application together with a statement that the local government has not responded to the applicant's request.)

6. A complete State Health Department waterworks operation permit including Engineering Description Sheets, or equivalent, must be attached if the type of use is an existing public water supply as defined by the State Health Department. A waterworks operation permit will not be required to consider an application for a proposed public water supply administratively complete. A waterworks operation permit will be required prior to the issuance of a final permit for a proposed public water supply.

If the application submittal is administratively incomplete, the RO shall notify the applicant of the deficiencies (see Attachment E1). Applicants will be given 10-30 days, at the discretion of the RO, to correct all deficiencies. If requested by the applicant, the RO may extend the response time no more than an additional 30 days.

The RO shall evaluate the applicant's response to the administrative deficiency letter within 30 days of receipt to determine if the applicant has addressed all deficiencies.

If the RO receives a response within the specified time period correcting all deficiencies, processing proceeds.

If the applicant fails to respond within the specified time period, the RO shall notify the applicant in writing that the application is no longer being considered and has lost its place in the evaluation process.

If the RO receives a response but all deficiencies are not satisfactorily corrected within the specified time period, the RO may either return the original application for correction and re-submittal of deficient items or simply notify the applicant in writing of deficient items. If the RO believes that the applicant is unable or unwilling to adequately address deficiencies or if resolution of deficiencies is taking an inordinate amount of time (three or more administrative or technical review deficiency letters) the RO may notify the applicant in writing (Attachment E4) that the application is no longer being considered and has lost its place in the review process.

## B. Technical Application Review (RO)

Description of Technical Application Review process by the Regional Offices: An applicant must demonstrate, through information submitted in a ground water withdrawal permit application, to the Board's satisfaction that the maximum safe supply of ground water will be preserved and protected for all other beneficial uses, and that the applicant's proposed withdrawal will have no significant unmitigated impact on existing ground water users or the ground water resource. RO staff shall conduct a technical review of the application within 60 days to determine if adequate information has been submitted to allow RO preparation of a draft permit. Upon determination that the application is technically complete, the RO shall forward a copy of the application to the Office of Ground Water Withdrawal Permitting. An application shall be considered technically complete when the applicant has submitted the required information based on the (1) preapplication conference, (2) withdrawal permit application, and (3) Ground Water Withdrawal Regulations (see Attachment T) and has demonstrated compliance with the following criteria:

1. AMOUNT RO reviews item 5 on the application to determine
    a. if the applicant demonstrates that the amount of ground water withdrawal requested is the smallest amount of withdrawal necessary to support the proposed beneficial use and that the amount is representative of the amount necessary to support similar beneficial uses when adequate conservation measures are employed. This amount shall be justified for the term of the permit.
    b. if the proposed withdrawal amount is reasonable when compared to similar uses by other applicants or existing permit holders and ensure the application documents the actual or proposed pumping rates including

c. seasonal or intermittent pumping schedules for each well included in the application. Check to see if apportionment of withdrawal by aquifer and/or by well(s) is required and if so, present in application.

2. WASTE WATER DISPOSAL RO reviews item 6 on the application to ensure that the applicant has the ability to dispose of any waste water that is produced by the proposed facility. In cases where the applicant has an existing discharge permit, or is concurrently applying for a discharge permit, the RO shall ensure that the applicant has the ability to discharge the amount of ground water that is requested. A final ground water withdrawal permit shall be coordinated with the issuance of an appropriate waste water discharge permit.

3. PUMP & WATER INTAKE POSITION RO reviews items 8 and 9 on the application to ensure that the "Pump set" column is completed and is in agreement with the submitted documentation. CO staff will determine appropriate aquifer tops. RO staff ensures no existing pumps or water intake devices are placed below the top of the uppermost confined aquifer that a well utilizes as a ground water source or below the bottom of an unconfined aquifer that a well utilizes as a ground water source and that proposed pump settings meet this criterion. In the case of applications for permits based on historic use pursuant to GWMA of 1992, pumps must either be raised to a level that will comply with the criterion or the applicant must agree to a plan to bring pump settings into compliance during the first year of the permit. This plan shall be included as an enforceable permit condition. Facilities that were issued permits based on historic use pursuant to GWMA of 1992 must demonstrate compliance with specified pump setting limits prior to the effective date of any new permit. If proof of compliance with pump settings has not been received by the effective date of the new permit, the RO is to follow up with a letter of noncompliance.

4. RO shall ensure that accurate latitude/longitude readings for each withdrawal point, obtained by RO staff using GPS equipment and specifying the datum utilized, accompany the application transmittal to CO.

5. LGOF RO reviews item 10 on the application to ensure that the applicant provides certification by the local governing body that the location and operation of the withdrawing facility is in compliance with all ordinances adopted pursuant to Chapter 22 of Title 15.2 of the Code of Virginia. In instances where a local government has not signed a LGOF, the applicant may satisfy this requirement by providing a signed certified mail receipt indicating that the local government received the LGOF form more than 45 days prior to the date of the application and a statement that the local government has not responded to the applicant's request. In such cases, the permit writer shall contact the locality in question to ensure that the locality did not actually deny the LGOF request.

6. WATER QUALITY RO reviews item 11 on the application to determine if the applicant demonstrates that the ground water withdrawal will originate from the aquifer or aquifers that contain the lowest quality water that will support the proposed beneficial

use. The evaluation must include a list of critical water quality parameters with minimal limits which are associated with the type of proposed use as well as documentation of expected water quality in the aquifers present at the proposed withdrawal site. The applicant must demonstrate that the ground water withdrawal will originate from the aquifer or aquifers that contain the lowest quality water that will support the proposed beneficial use. NOTE: Applications for public water supplies shall not be required to include critical water quality parameters or demonstrate that the ground water withdrawal will originate from the aquifer or aquifers that contain the lowest quality water.

Mixing or blending of differing water quality should be allowed provided that individual wells are not screened in both high quality aquifers (250 mg/l chloride or less) and low quality waters (251 mg/l chloride or greater). A permit will not be issued for a withdrawal from a new well which screens high and low quality ground water. Drill stem or packer tests may be required during test drilling to document the 250 mg/l chloride location. This criterion will be applied to all applications for new withdrawals, and all applications which include new wells as part of an expanded application.

In the case of applications for expanded withdrawals where the applicant's existing wells are screened in both high and low quality waters, this review will not be complete until the regional evaluation of impacts is completed by CO. Following the CO hydrogeologic review, the criterion may be applied to existing wells when the RO determines there is evidence of or potential for cross-contamination between aquifers. In cases where the RO applies this criterion to existing wells, the RO may require the abandonment of such wells or alteration of the construction of such wells so that they no longer connect high and low quality aquifers prior to issuance of the permit, or the applicant must agree to a plan to bring the existing wells into compliance with this criterion during the term of the permit. Any such plan shall be included as an enforceable permit condition. Such evidence of the potential for cross contamination includes, but is not limited to, higher hydraulic head in the low quality aquifer than in the high quality aquifer.

7. <u>ALTERNATE SOURCES</u> RO reviews item 12 on the application to determine if the applicant demonstrates that no other sources of water supply, including reclaimed water, are viable. Information as to the proximity to public water supplies, surface water sources and sources of reclaimed water should be included.

   If an applicant proposes a permitted ground water withdrawal within the service area of an existing public or private water system, and the existing water system has excess capacity that may be used to serve the applicants needs, the conclusion will be that a viable alternate water supply is available to the applicant. In cases where an applicant argues that the cost of purchasing such water is prohibitive (i.e. the applicant argues that the alternate supply is not viable), DEQ staff will perform an ability to pay analysis to determine if the cost of water would cause the applicant to either close their operation or preclude the applicant from initiating their operation. If this analysis

concludes that the applicant has the “ability to pay”, the alternate source will be considered viable.

**Does an alternate source of water exist?:**

| | |
|---|---|
| Yes | • the applicant is within a public utility service area<br>  ○ [This means the utility either has lines at the property or will provide a line - basically the facility would then be responsible for a hook up fee.]<br>• the utility desires to sell the necessary amount of water<br>• the quality of the water is sufficient for the intended use |
| No | • The applicant is within a public utility service area but can provide documentation that the water purveyor is either unable or unwilling to sell the necessary water to the applicant. |

| | |
|---|---|
| Maybe | • the applicant is within a public utility service area but the source water of the utility is ground water<br>  ○ *If the existing PWS (ground water based) had anticipated the withdrawal required by the new kid on the block and included it in their needs documentation we should certainly consider that a viable source.*<br>  ○ *If the existing PWS had some "cushion" and wanted to supply the new kid, a viable source.*<br>  ○ *If the existing PWS wanted to apply for a larger withdrawal (no "cushion") to supply the new kid they might be a viable source.*<br>  ○ *If the PWS had fully planned for their permitted amount and did not want to supply the new kid they would obviously not be a viable source - we may want to encourage a new user into another aquifer in some instances*<br>• the applicant is within a public utility service area but the cost of purchasing and treating the water is greater than the facility's ability to pay [An Ability to Pay analysis will be conducted by the Office of Financial Assurance for those cases in which ground water permit applicants claim they can't afford to pay for the water that is available from a surface water provider. The DEQ Office of Financial Assurance would perform a cash flow analysis and then the RO would compare the available cash against the cost of the water.]<br>• there are options for water reuse or reclamation |

8. <u>WATER CONSERVATION & MANAGEMENT PLAN (WCMP)</u> RO reviews item 13 on the application to determine if the water conservation and management plan provided by applicant satisfies the requirements as described in 9 VAC 25-610-100 of the Ground Water Withdrawal Regulations. The purpose for developing a WCMP is to insure that the amount of water requested is the least necessary to support the beneficial use and that established conservation measures will be sustained over the life of the permit. Implementation of the water conservation and management plan shall be included as enforceable permit conditions. Approvable WCMPs are site specific and shall contain the following elements:

   (a) Requirements for the use of water saving plumbing and processes including, where appropriate, the use of water saving fixtures in new and renovated plumbing as provided in the Uniform Statewide Building Code.

A plan that contains requirements that water saving fixtures be used in all new and renovated plumbing as provided in the Uniform Statewide Building Code meets the above element. This may not be appropriate in all cases, especially some industrial or agricultural facilities. If so, the Plan should discuss the suitability and the RO staff should evaluate the correctness or other possible water saving devices that could be implemented.

(b) A water loss reduction program.

A plan that contains requirements for making technological, procedural, and/or programmatic improvements to the applicant's facilities and processes to decrease water consumption meets the above element. These requirements shall assure that the most efficient use is made of ground water.

A plan that contains requirements for an audit by the permittee of the total amount of ground water used in the applicant's distribution system and operational processes during the first two years of the permit cycle meets the above element. Subsequent implementation of a leak detection and repair program will be required within one year of the completion of the audit, when such a program is technologically feasible.

There may be other methods to implement a water loss reduction program, which can be proposed by the facility and evaluated by the RO staff.

(c) A water use education program.

A plan that contains requirements for the education of water users and employees controlling water consuming processes to assure that water conservation principles are well known by the users of the resource meets the above element.

(d) An evaluation of water reuse options.

A plan that contains an evaluation of potential water reuse options and assurances that water will be reused in all instances where reuse is feasible meets the above element.

(e) Requirements for mandatory water use reductions during water shortage emergencies declared by the local governing body or director of DEQ, including, where appropriate, ordinances prohibiting the waste of water generally and requirements providing for mandatory water use restrictions, with penalties, during water shortage emergencies.

For a municipal public water supply applicant, a plan that contains requirements for mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ that prohibit all non-essential uses

such as lawn watering, car washing, and similar non-essential residential, industrial and commercial uses for the duration of the water shortage emergency and an ordinance containing the above plus penalties for failure to comply with mandatory water use restrictions meets the above element.

For a non-municipal public water supply applicant, a plan that contains requirements for mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ that prohibit all non-essential uses such as lawn watering, car washing, and/or similarly appropriate non-essential uses for the duration of the water shortage emergency meets the above element.

For non-public water supply applicants a plan that contains requirements for compliance with mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ meets the above requirement.

Permittees are to maintain a record logging the dates activities required in the WCMP are completed. These logs are to be made available to DEQ staff upon request.

9. MITIGATION PLAN A Mitigation Plan is required after CO modeling staff has determined the area of impact, and RO staff has determined that the area of impact does not remain on the property owned or served by the applicant, or the applicant has failed to demonstrate that existing ground water withdrawers are not located within the area of impact. However, it will speed the application process if the applicant provides a plan to mitigate all adverse impacts on existing ground water users with the initial application. A model mitigation plan is included in Attachment B1. The RO staff shall review the proposed mitigation plan to ensure that, at a minimum, It contains the following features. Implementation of the mitigation plan shall be included as enforceable permit conditions.

(1). The rebuttable presumption that water level declines that cause adverse impacts to existing wells within the area of impact are due to the proposed withdrawal.

(2). A commitment by the applicant to mitigate undisputed adverse impacts due to the proposed withdrawal in a timely fashion. The applicant should commit to reviewing all claims within five business days of receipt and responding to the claimant that the claim is complete or that additional information is required to complete the claim. The applicant should commit to informing the claimant within ten days of a complete claim that they will either mitigate the claim or deny it. The applicant should commit to providing an interim source of water to an undisputed claimant who has lost their water supply as a result of the applicant's withdrawal within 72 hours.

(3). A speedy, non-exclusive, low-cost process to fairly resolve disputed claims for mitigation between the applicant and any claimant.

(4). The requirement that the claimant provide the following documentation: that he is the owner of the well; documentation that the well was constructed and operated prior to the initiation of the applicant's withdrawal; the depth of the well, the pump, and screens and any other construction information that the claimant possesses; the location of the well with enough specificity that it can be located in the field; the historic yield of the well, if available; historic water levels for the well, if available; and the reasons the claimant believes that the applicant's withdrawals have caused an adverse impact.

The effective date of a mitigation plan associated with a permit issued to a previously permitted facility shall be as follows:

a. If there are no proposed increases in amount or changes in withdrawal pattern for the system or if there is a proposed reduction in amount from existing well locations, effective date of new mitigation plan will be same as effective date of original mitigation plan. Users who came on line after the initial issuance will not be eligible to request mitigation under the permittee's mitigation program because adverse effects of the withdrawal should have already been established.

b. If there are no proposed increases in amount or changes in withdrawal pattern resulting from conversion of a historic based permit to a new GW permit, effective date of mitigation plan will be the same as the date of issuance of the historic based permit that the new permit replaces. As in item a above, users who commenced withdrawals after the initial permit issuance will not be eligible to claim mitigation under the permittee's mitigation program because adverse effects of the historic based withdrawal should have already been established.

c. If there is a proposed increase in amount or a change in withdrawal pattern for a system, effective date of new mitigation plan will be same as date of reissued permit. All existing users in area of impact on date of permit reissuance will be eligible to claim mitigation under the permittee's mitigation program because adverse effects of the new withdrawal will not have been established.

10. <u>OTHER INFORMATION</u> RO staff shall require that geophysical logging is performed and that two (2) copies of the geophysical logs (spontaneous potential, single point resistance, 16/64 short and long normal resistivity, and natural gamma) are provided for all new or proposed production wells. This requirement may be waived with CO concurrence on a case by case basis.

In addition to the evaluation criteria listed above, staff may require any or all of the following information prior to considering an application complete. RO and CO staff should identify and require additional information at the preapplication conference if possible. **RO staff shall ensure that the additional information that was identified as needed at the preapplication meeting accompanies the application when they forward the complete application to CO modeling staff**. RO/CO staff may require all or some of the following information:

(1) Information needed by CO modeling staff to conduct an evaluation of the area of impact and 80% drawdown criterion such as the installation of monitoring wells and the collection and analysis of drill cuttings, continuous cores, geophysical logs, camera survey, water quality samples or other hydrogeologic information necessary to characterize the aquifer system present at the proposed withdrawal site. RO/CO may require one or more monitoring wells in the production aquifer and the placement of monitoring wells in the aquifer above and/or below the production aquifer to determine leakance. (see attachments U, Hydrogeologic Testing Publications (EPA, NJ, MD, Fla.) and CC1, Technical Advisory For Preparing An Aquifer Test Plan for hydrogeologic testing guidance) In cases where construction information does not exist for an existing well, staff may require a camera survey to determine screen intervals. All geophysical logs shall be clearly labeled with the DEQ well number. Drill stem or packer tests may be required to collect water quality samples in order to delineate the 250 mg/l chloride boundary. Drill cuttings shall be collected at 10 foot intervals and a geologist's log submitted for at least one well in each new well field. The need for continuous cores will be determined on a case by case basis.

(2) The completion of constant rate aquifer tests to determine aquifer characteristics at the proposed withdrawal site. (see the attached aquifer test plan advisory in attachment CC1). When an aquifer test is determined to be necessary, it shall be preceded by submission of an Aquifer Test Plan (ATP). This ATP shall be submitted to the RO for review. The RO comments and the ATP shall be forwarded to the appropriate ground water modeler for concurrence (see Attachments CC2 and CC3 ). The applicant shall resubmit an original and one copy of a revised ATP based on these comments at least two weeks prior to commencement of the aquifer test. RO staff shall review the subsequent Aquifer Test Report to ensure that it contains the required information and data.

(3) Information required by CO modeling staff to conduct an evaluation of the potential for the proposed withdrawal to cause salt water intrusion into any portions of any aquifers or the movement of waters of lower quality to areas where such movement would result in adverse impacts on existing ground water users or the ground water resource. RO/CO staff will consider the proximity of salt water sources to the proposed withdrawal when determining the need for the evaluation of the potential for salt water intrusion.

(4) Other information that the staff believes is necessary to evaluate the application.

If the application submittal is technically incomplete, the RO shall produce a technical deficiency letter. (see Attachment E2). Applicants will be given 10-30 days, at the discretion of the RO, to correct all deficiencies. If requested by the applicant, the RO may extend the deadline no more than 30 days.

The RO shall evaluate the applicant's response to the technical deficiency letter within 30 days of receipt to determine if the applicant has addressed all deficiencies.

If the RO receives a response within the specified time period correcting all deficiencies, and the application demonstrates compliance with all criteria contained in this section, the RO shall prepare a draft permit as described in section VII.Draft Permit Procedures.

If the applicant fails to respond within the specified time period, the RO shall notify the applicant in writing that the application is no longer being considered.

If the RO receives a response but all deficiencies are not satisfactorily corrected within the specified time period, the RO may either return the original application for correction and re-submittal of deficient items or simply notify the applicant in writing of deficient items. In either case, the RO must notify the applicant in writing that the application is no longer being considered. The applicant may reactivate the application if they correct all deficiencies within 60 days of the end of the time period established to correct technical deficiencies.

The RO shall ensure that the GWPermit2 database is updated and current with the application for the Owner/Facility/Permit screens according to the GWPermit2 Manual, and then transmit one copy of the of the final application including hydrogeologic information such as geophysical logs, aquifer test data, geologist logs, and GW-2 forms to the Office of Ground Water Withdrawal Permitting.

11. AREA OF IMPACT CO modeling staff shall predict the impacts of proposed ground water withdrawal including determination of the area of impact of each impacted aquifer (see Sections C, Hydrogeologic Review and D, Technical Evaluation Report, below). These findings shall be compiled in the Technical Evaluation Report. In some areas the predicted drawdown exceeds one foot at the modeled boundary for that aquifer. In those cases the modeled boundary defines the limit of the AOI. The CO shall forward the Technical Evaluation Report to the RO permit writer within 60 days. RO receives and concurs with the Technical Evaluation Report (see Attachment C2). If the AOI extends off of the property owned or served by the applicant, the RO shall make the (rebuttable) presumption that not all water users are served by the applicant and that there are ground water users in the AOI so that a Mitigation Plan will be required - unless the applicant can rebut our presumption with data.

12. 80% DRAWDOWN LIMIT CO modeling staff shall determine if the proposed withdrawal in combination with all existing lawful withdrawals will not lower water levels, in any confined aquifer that the withdrawal impacts, below a point that represents 80% of the distance between the historical prepumping water levels in the aquifer and the top of the aquifer. These findings shall be compiled in the Technical Evaluation Report. (see Sections C, Hydrogeologic Review and D, Technical Evaluation Report, below)

    All applications for new or expanded ground water withdrawal permits where the predicted area of impact includes any area where the evaluation of total permitted and lawful withdrawals indicates a potentiometric surface below the critical surface or where additional areas are predicted to fall below the critical surface will be recommended for denial. Since the recommendation will be originally based on the outputs of a regional model, each decision that results in a recommendation for denial will be further evaluated to determine, to the extent possible, actual aquifer conditions in the specific areas of interest. It is very important to remember that we are evaluating predicted impacts that will occur if all lawful rights are exercised. Since all lawful users are not currently withdrawing their entire permitted amounts, the predicted impacts to aquifers have not occurred and can not be directly measured. The basis for such decisions to deny ground water withdrawal applications will be based on 9VAC25-610-110.D.3.

    In cases where an existing permittee applies for renewal at a withdrawal rate equal to or less than their existing permitted rate, and the technical evaluation results in a decision to deny such application, the final recommendation will be to administratively continue the decision and allow the permittee to continue to withdraw under the authority of their existing permit until such point in time that the Agency can take appropriate actions necessary to allow the issuance of such permits.

    When an applicant is unable to demonstrate compliance with all criteria contained in this section, or the results of the Technical Evaluation Report are not in compliance with all criteria contained in this section, the RO shall recommend denial of the application. The RO shall notify the applicant in writing of the department's decision to recommend to the Board denial of the application. The letter shall state the reason(s) for denying the application (Attachment N1). The applicant shall be informed of the option to modify the application in order to achieve a favorable recommendation, withdraw the application, or proceed with the processing of the original application. If the applicant modifies the application to comply with all criteria, the RO shall proceed with production of a draft permit. **Material changes in the nature of the proposed withdrawal (significant change of well location, construction, withdrawal amount, etc.) requested by the applicant, after technical evaluation has been completed by DEQ staff, may require submittal of a new application and $6,000 application fee. A new application and fee will normally be required when the nature of the requested changes results in the need to conduct a second technical evaluation.** If the applicant elects to withdraw the application no ground water withdrawal permit will be issued. If the applicant elects to proceed with the original application, the RO shall recommend denial of the application to the Regional Director as described in section I.

In addition to the preceding evaluation criteria, the RO staff should insure that all technical information required for evaluation of impacts has been submitted and is complete and in the format requested. This required information may have been identified during the preapplication meeting or through subsequent application review.

## C. Hydrogeologic Review (CO)

The purpose of the hydrogeologic review is to:

1) identify the source aquifer(s) from which the withdrawal originates,
2) evaluate compliance with statutory prohibition against placement of pump intakes below aquifer tops,
3) determine whether adequate information has been submitted to predict the area of impact and to evaluate compliance with the allowable drawdown criterion (80% drawdown evaluation),
4) establish electronic records for tracking withdrawal data,
5) manage submitted data to insure the accuracy of future evaluations of resource impacts,
6) evaluate individual well construction to check for potential for cross contamination between aquifers where one source is of a lesser quality.

Hydrogeologic Information The following information should be submitted with all applications for CO review and identified by date obtained and source of data:

1. Status of all wells and original well construction documentation are required for all active and historic wells for which any withdrawals have been reported or can be documented. These withdrawal points will be used for historic simulations.
2. CO will review latitude, longitude and elevation data. In all cases the locational information for the well must be obtained with GPS by DEQ staff (see also section VI.B.4).
3. CO coastal plain geologist will review well construction information and geological information (borehole geophysics, drillers and/or geologist logs, cuttings/cores analysis, water quality) submitted by applicant and compare to published reports and electronic maps in order to determine aquifer(s) screened by the well and to determine the maximum depth a pump intake can be set in the well.
4. CO modeler is to check for VWUDS numbers (MPID and userid) and provide updated information to VWUDS data manager if needed. If no VWUDS number exists, CO staff will obtain numbers for each well.
   a. For historic wells out of service that never submitted withdrawal data to VWUDS, CO will assign an MPID number that will be used for historic simulations – denoted by 00 as the last two digits.
   b. Proposed wells will be assigned a temporary MPID number – denoted with 55 as the last two digits.
   c. Monitoring well records will also be established with a false MPID (denoted with 9# as last two digits) so that compliance records can be established.

5. CO modeler will update/enter well/interval/mat data in GWPermit database.
6. Check to see if apportionment of withdrawal by aquifer and/or by well(s) is required and if so, present in application.
7. Check GPS locations in GIS and make model allocation table entries or update if necessary.
8. Review aquifer test data to see if it is sufficient for obtaining hydrogeologic properties at the site.
    a. Verify that the aquifer test was conducted according to a DEQ accepted aquifer test plan or that the historic data submitted was obtained under a technically acceptable testing procedure.
    b. Verify that the components identified in the plan were submitted (electronic copy of the data, construction of the wells, distance between wells, background data assessment - interference, pumping rate through test, etc.)
    c. Analyze the test data to insure that it is statistically sound when compared with standard aquifer test solutions.
    d. Compare the solution with similar tests in the area and with published values.
9. CO will review well construction and site geology to assess potential for cross contamination between aquifers.
    a. Mixing or blending of differing water quality should be allowed provided that individual wells are not screened in both high quality aquifers (250 mg/l chloride or less) and low quality waters (251 mg/l chloride or greater). A permit will not be issued for a withdrawal from a new well which screens high and low quality ground water. For example, wells shall not connect the Chickahominy-Piney Point Aquifer and the Potomac aquifer system. Drill stem or packer tests may be required during test drilling to document the 250 mg/l chloride location. This criterion will be applied to all applications for new withdrawals, and all applications which include new wells as part of an expanded application.
    b. In the case of applications for expanded withdrawals where the applicant's existing wells are screened in both high and low quality waters, the criterion may be applied to existing wells when the CO determines there is evidence of or potential for cross-contamination between aquifers. In cases where this criterion is applied to existing wells, DEQ may require the abandonment of such wells or alteration of the construction of such wells so that they no longer connect high and low quality aquifers prior to issuance of the permit, or the applicant must agree to a plan to bring the existing wells into compliance with this criterion during the term of the permit. Any such plan shall be included as an enforceable permit condition. Such evidence of the potential for cross contamination includes, but is not limited to, higher hydraulic head in the low quality aquifer than in the high quality aquifer.

## D. Technical Evaluation and Report (CO)

The purpose of the technical evaluation is to:

1) determine the area of impact (1 foot drawdown contour) for each aquifer
2) check for compliance with the 80% drawdown criterion for each confined aquifer,
3) evaluate the potential for adverse changes in water quality
4) recommend appropriate permit special conditions.

1. Methods For Predicting Drawdown

a. 2-D analytical solution

(small withdrawal rate (Q), 1 withdrawal (WD) location)

2-D analytical solutions may be used to evaluate withdrawals with impacts in only the source aquifer. This type of analysis can be done for small to medium single wells withdrawals or facilities with two wells that are within a few hundred feet. The solution can include leakance IF supported by aquifer test data. On-site testing data is used to calculate transmissivity. Aquifer tests conducted with an observation well are the only way to obtain values for storage coefficient.

In rare circumstances, single well pump test information can be sufficient to support an application. This should only be considered for withdrawals that are less than 8 million gallons/year. For example, a withdrawal that has been in existence prior to the establishment of this regulatory program where the maximum permitted amount has not increased and the published aquifer properties indicate high transmissivity (aquifer > 100 ft thick and K > 30 ft/d). To predict impacts, storage coefficient can be estimated using Lohmann's number ($1 \times 10^{-6}$ for each foot of aquifer thickness) or if thickness of the aquifer is not known, $1 \times 10^{-5}$. If the area of impact (AOI) determined this way is > ½ mile, it is recommended that the applicant conduct an aquifer test or step test to obtain more accurate values.

Step test analysis can provide good support for withdrawals < 1 million gallons/month (further east, a step test may be sufficient to support withdrawals up to 20 million gallons/year.) To predict impacts, storage coefficient can be estimated using Lohmann's number ($1 \times 10^{-6}$ for each foot of aquifer thickness) or if thickness of the aquifer is not known, $1 \times 10^{-5}$. If the AOI determined this way is > 1 mile, it is recommended that applicant conduct aquifer test to obtain values that are more accurate.

b. 2-D numerical or analytical simulations

(small-medium Q, multiple WD locations)

2-Dimensional simulations must be used for small to medium withdrawals (AOI can not be determined using a regional model) with more than 2 wells or if the two wells are more than a few hundred feet apart and all wells withdraw from the same source aquifer. These types of analysis must be supported by on site aquifer test data. Any impacts that extend from > 1 mile must be simulated using regional model too in order to check for influences to drawdown resulting from hydraulic gradient or impacts to overlying or underlying aquifers.

c. 3-D numerical site specific simulations

(any Q, boundary effects, new hydrogeologic information)

Development of a site-specific, 3-D model may be required in instances when site specific hydrogeologic data differs substantially from existing regional models or where boundary effects may significantly influence the shape of the 1-foot drawdown contour (for example, a shallow aquifer withdrawal near a large surface water boundary that is in direct connection with the source aquifer). In addition, a multi-aquifer small to medium size withdrawal may necessitate development of a local 3-D model. In all instances staff should utilize existing licenses for pre- and post-processors for increased efficiency (for example using GMS). Site specific testing data would be required to support this type of analysis but regional flow model data can be used to establish boundary conditions.

d. Regional Flow Models

(all large Q single or multi-aquifer)

For ALL permit evaluations not located on Virginia's Eastern Shore, compliance with the 80% drawdown criterion is evaluated using the most recent Total Permitted Simulation for the Virginia Coastal Plain Model. Estimates for the potential for salt water intrusion on the Eastern Shore of Virginia should be made using the Eastern Shore Sharp Interface Model.

For all large (approximately 30,000 gpd on the Eastern Shore or 500,000 gpd in all other areas) or multi-aquifer withdrawals, the regional flow models used for evaluation of regulatory compliance should also be used to predict drawdowns. A summary of the steps for this evaluation follows:

1) If considering an expanded or reissued permit, set the facility withdrawals to 0 in the most recent total permitted (TP) simulation. Run simulation and post-process for head values for each aquifer in each cell. Save all input/output files in facility subdirectory. This is the base simulation from which to determine impacts. If the withdrawal is proposed, then there would not be an entry in the most recent TP simulation so that becomes the base file.
2) Add the proposed withdrawal to the same TP simulation. Be sure to identify requested withdrawal apportionment and manage assignments by well considering aquifer and row/column assignments. Run simulation and post-process for head values. Save files in the facility subdirectory. Subtract heads determined in this simulation from the base simulation in order to determine drawdown.
3) When VCPM is utilized, construct map showing existing cells below the critical surface and any new cells that have dropped below the critical surface as result of the withdrawal.
4) When Eastern Shore Sharp model is utilized, construct map of fresh, mixed, and salt cell changes.
5) Contour drawdown (positive number) – spline 20 nearest neighbors – then select the 1 foot drawdown contour and convert to a polygon. This is the AOI. In some areas the predicted drawdown exceeds one foot at the modeled boundary for that aquifer. In those cases, the modeled boundary

defines the limit of the AOI. Do a rough check to for potential problems with 80% drawdown criterion.

6) Use the contours to produce drawdown and AOI maps using GIS.

2. Methods for Assessing Adverse Changes to Water Quality

CO modeling staff should review site hydrogeologic information and the results of the drawdown simulation to assess the potential for adverse changes to water quality. This evaluation should consider the proximity of the withdrawal to source aquifer incisement of brackish surface water, possible upconing from an underlying aquifer with less desirable water quality, potential for salt water intrusion and areas where the regional flow of ground water is reversed.

3. Technical Evaluation Report

a. The technical evaluation report should identify the owner of the facility, the name of the facility, the type of facility and the location of the facility. The report must include the requested annual and monthly limits and a listing of all wells at the facility – production and monitoring, all out of service wells, and any wells abandoned since the last technical evaluation for the facility. Proposed wells must also be listed. The description of each well is to include the facility designation, the DEQ well number, the DEQ MPID number (a temporary number for proposed wells), the latitude and longitude with datum of the well to the nearest tenth of a second (estimated for proposed wells to the nearest second), the elevation (and datum), the screen intervals, and the pump intake for all active production wells.

b. The report should describe the local aquifer elevations as designated in the appropriate regional model as well as the model row and column designation(s). CO staff geologist's assessment of aquifer tops and appropriate pump setting should also be summarized and referenced to source material for the designations if they differ from the in-use regional model framework.

c. The report should summarize any field investigations or data gathered to support the application as well as any provided analysis of same. Any DEQ staff work completed to analyze data relevant to the application must be described in sufficient detail for any following reviewer to be able to duplicate the analysis. The results of these analyses as they were utilized in assessing the impacts from the withdrawal must be explicitly stated in the report.

d. Methods used for determination of the Area of Impact and assessment of compliance with the 80% drawdown criterion must also be sufficiently presented in the report so a reviewer could reproduce the analysis. Maps illustrating the Area of Impact or "AOI" (one-foot drawdown contour) for each aquifer are a key element of the report and become a part of the permit through the mitigation plan. These maps should show the AOI as a red outline overlaying an appropriate scale USGS topographic map or, if regional, a coastal plain counties map. The maps should identify the DEQ staff member who completed the analysis, the method used for the

determination and the pumping rate simulated. Facility wells should also be identified on a map by facility designation and DEQ well number.

e. Any permitted well occurring within the area of impact is to be listed by DEQ permit number and well number along with the owner name and facility name, the aquifer impacted is to be identified as well as an approximate latitude and longitude.

f. The results of the evaluation of compliance with the 80% drawdown criterion must be described and illustrated if appropriate for the discussion. Any methods used to evaluate potential changes to water quality must also be described.

An example format for the technical evaluation report is presented in Attachment C2

# VII. DRAFT PERMIT PROCEDURES

## A. Draft Permit Development

When an applicant demonstrates compliance with all criteria contained in section A above, and the withdrawal satisfies the technical evaluation criteria for permit issuance, the RO shall:

1. Prepare a draft ground water withdrawal permit. The draft permit (see Attachment M1) shall contain conditions, withdrawal limitations, standards and other requirements applicable to the permit (see Attachment M2), monitoring and reporting requirements, requirements for mitigation of adverse impacts and requirements for a water conservation and management plan. All ground water withdrawal permits shall contain an annual and monthly ground water withdrawal limit. The RO may draft ground water withdrawal permits with other withdrawal limitations as appropriate, including, but not limited to, grouping of wells by aquifer and/or location, daily, weekly, or seasonal withdrawal limits.

2. Prepare a draft ground water withdrawal report form (Attachment P1, in Word or P2, in Excel) or forms as necessary.

3. Prepare a draft public notice of the proposed issuance as required in section B. below (Attachment H).

4. Prepare a draft public notice authorization form indicating the newspaper of publication (Attachment G).

5. Prepare a transmittal letter (Attachment D) and mail a copy of the draft permit, draft ground water withdrawal report form , draft public notice, area of impact maps, applicant response form (Attachment D2), and public notice authorization form (Attachment G) to the applicant. The RO shall copy the appropriate OGWWP modler with the draft permit at the same time as sending it to the applicant. A copy of the Technical Evaluation Report will be provided by the CO modeling staff upon request from the applicant. Following receipt of the applicant's agreement with the draft permit

and the signed public notice authorization form, the RO shall proceed with required public participation procedures described in section F. below.

If the applicant fails to submit the signed public notice authorization form by the date required, the RO shall contact the applicant by telephone to determine if they are unwilling to accept the draft permit, including all terms and conditions. When an applicant is unwilling to accept the terms contained in a draft permit, or is unable to reach a negotiated compromise, or refuses to withdraw the application, the RO shall recommend denial of the application. The RO shall notify the applicant in writing of the department's decision to recommend to the Board denial of the application (Attachment N2). If the applicant elects to accept the draft permit the RO shall proceed with required public participation procedures described in section F. below. If the applicant refuses to accept the draft permit the RO shall recommend denial of the application to the Regional Director as described in section VII.E.

NOTE: for permits issued based on historic use, the RO shall copy the Office of Ground Water Withdrawal Permitting on all hydrogeologic, well construction and well status information submitted by the permittee subsequent to permit.

## B. Draft Permit Public Notice

The RO shall prepare a notice of the draft permit to be used to advertise the Agency's tentative decision to issue a ground water withdrawal permit (Attachment H). Note that when using this Public Affairs template, the underlined portions are fill-in-the-blank. Remove the underlining when submitting to the newspaper. Further, the text in brackets is to be used when it is appropriate to the particular facility. The notice shall include:

1. Name and address of the applicant. If the location of the proposed withdrawal differs from the address of the applicant the notice shall also state the location in sufficient detail such that the specific location may be easily identified.
2. Brief description of the beneficial use that the ground water withdrawal will support.
3. The name and depth below ground surface of the aquifer(s) that will support the proposed withdrawal.
4. The yearly and monthly amount of ground water withdrawal requested expressed as an average annual gallonage per day (if appropriate).
5. A statement of the tentative determination to issue a permit.
6. A brief description of the final determination procedure.
7. The address, phone number, and email address of a specific person at the department's RO from whom further information may be obtained.
8. A brief description of how to submit comments and request a public hearing.

Each RO shall maintain the master mailing list for all local governments within each GWMA. The master mailing lists shall be kept on the subdirectory wrdcommon$\OWRM\Permitting_Info\Public_Notice so as to be available to both regions. The RO shall mail a copy of the draft permit notice to each local governing body within the GWMA within which the proposed withdrawal will occur on or before the date of public

notice (see Attachment F for Local Govt. Trans. Letter). At the same time, the RO shall also provide a copy of the public notice in pdf format for publication on the DEQ website to OGWWP.

For new or expanded withdrawals which will require a waterworks operation permit from the Virginia Department of Health, the RO shall forward a copy of the draft permit to the Virginia Department of Health. A ground water withdrawal permit will not be effective until the Department of Health issues a waterworks operation permit, or equivalent. The expiration date of the draft DEQ permit will remain firm. The status of these permits should be identified as “PENDING” in the GWPermit database. The status and effective date fields must be updated once the VDH waterworks operation permit is issued.

The RO shall send the draft permit notice (Attachment H), a transmittal letter requesting that the notice be published (Attachment I1 ), and the completed public notice authorization form (Attachment G) to a newspaper of general circulation in the area affected by the withdrawal. The RO shall copy the applicant with the letter (or email) to the newspaper, and shall send the applicant an email (Attachment I 2) advising them to verify that the notice was published accurately. Alternatively, the email suggested in Attachment I2 could be modified so it can be sent as a letter. The RO shall ensure that the notice of the application is advertised by the receipt of proof of publication from the newspaper.

The RO shall accept comments on the draft permit for a period of 30 days following the date of the public notice. The RO shall review and consider all comments received during the 30 day public comment period to determine if there is significant public interest and substantial, disputed issues relevant to the issuance of the permit.

If there are no disputed issues, or if the RO can resolve all disputed issues by modifying draft permit conditions or other means, and there is not a specific request for a public hearing, the RO shall proceed with permit issuance as described in section H. below. The RO should make every attempt to resolve disputed issues.

If the draft permit is modified to resolve disputed issues the RO may consult with the Office of Ground Water Withdrawal Permitting to determine if readvertisment of the modified draft permit is required.

## C. Draft Permit Public Hearing

The RO shall comply with all requirements for informal public hearings to consider ground water withdrawal permit applications as they are described in the Agency's internal procedures for public hearings, Part I, Informal Hearings for Permit Actions (see attachment Q, Hearing Procedures).

If the RO determines that there is significant public interest and there are disputed issues that cannot be resolved, or if there is a written request for a public hearing, the RO shall prepare an authorization cover memo and authorization memo (Attachment J1) for the Regional Director's consideration to hold a public hearing based on the staff

recommendations. If a public hearing is requested in writing, the RO shall include the name of the person and the reason for the request. Generally, if there is a written request for a public hearing and the RO can resolve all disputed issues including issues raised by the requestor, the permit writer should recommend that the request for a public hearing be denied. Generally, if disputed issues can not be resolved or the permit writer perceives that a particular application is particularly controversial, the RO should recommend that the public hearing request be granted. The Regional Director will review the RO recommendation for determination on the necessity of an informal hearing.

In cases where the RD determines that a public hearing is not necessary, the RO shall inform the person(s) requesting a public hearing that their request is denied (Attachment J3) and proceed with permit issuance as described in section D.

Should an informal hearing be held on the application, the RO may require additional information from the applicant to address issues raised by public comments. Any such information is to be made available to the public for 30 days prior to the hearing and for some period of time to be determined following the hearing.

Following the public hearing, the RO shall consider all public responses and receipt of any additional technical data in determining a recommendation on permit issuance as required by the public hearing procedures. If the draft permit is in compliance with, or may be modified to obtain compliance with, all criteria contained in section D. above, Ground Water Withdrawal Regulations (9 VAC 25-610-10 et seq), and the Ground Water Management Act of 1992, the RO shall recommend issuance of the ground water withdrawal permit as described in section H. If information is presented in the public hearing that demonstrates that the draft permit is not in compliance with the criteria listed above and the permit can not be modified to obtain compliance, the RO shall recommend denial of the ground water withdrawal permit as described in section E.

If the draft permit is modified to resolve disputed issues the RO may consult with the Office of Ground Water Withdrawal Permitting to determine if readvertisment of the modified draft permit is required.

## D. Permit Issuance

The RO shall prepare and forward a complete permit package to the Regional Director, Deputy Regional Director or Remediation Manager, within 15 days of the close of the public comment period for all approvable ground water withdrawal applications that do not require a public hearing. The permit package shall contain the permit and conditions (Attachments M1 and M2), a well identification plate stamped with the DEQ well number, a ground water withdrawal permit transmittal letter (Attachment L), an approvable staff recommendation memo (Attachment K) and envelopes and labels with the owner's addresses. The effective date of the permit shall be the 1st of the month following signature. The expiration date shall be the last day of the month of signature, nor more that 10 years in the future. As an example, a permit that is signed August 15, 2004 would have an effective date of September

1, 2004, and an expiration date no farther in the future than August 31, 2014. Following Regional Director, Deputy Regional Director or the RO Remediation Manager's signature, the RO shall mail the permit to the applicant and copy the (CO) Office of Ground Water Withdrawal Permitting. The CO Office of Ground Water Withdrawal Permitting is responsible for transmitting a copy of the well page from the Technical Evaluation Report and the first page of the final permit to the VWUDS program.

If the application is for a public water supply regulated by the Virginia Department of Health, the permit package prepared for the Regional Director, Deputy Regional Director or RO Remediation Manager shall also include a copy of the Virginia Department of Health Waterworks Operation Permit, or equivalent. The permit shall contain a special condition that states, "Daily withdrawals shall be consistent with the requirements and conditions of the Virginia Department of Health Waterworks Operation Permit #_____ (or equivalent document reference)." A final ground water withdrawal permit shall not be issued for a public water supply regulated by the Virginia Department of Health prior to the issuance of the appropriate waterworks operation permit.

In cases where all statutory and regulatory criteria have been met to issue a ground water withdrawal permit, but a Waterworks Operation Permit, or equivalent, has not been issued by the State Health Department, an intent to issue letter (Attachment AA) may be mailed to the applicant. We cannot extend the expiration date beyond the time frame that the facility used to document need. When ground water withdrawal permit issuance is delayed by issuance of a VDH WWOP, the period of the ground water withdrawal permit shall not be for a full 10 year term after their receipt of their WWOP. The term of the final permit shall be based with reference to the date of our Intent to Issue letter (i.e., if we send Intent to Issue letter on January 1, 2010, but they don't receive a WWOP from SHD until January 1, 2014, they will receive a permit good for only 6 years). Note that pending permits are simulated when running a Total Permitted scenario.

Ground water withdrawal applications that require public hearings shall be processed as required by the Agency's internal procedures for public hearings, Part I, Informal Hearings for Permit Actions (see attachment Q, Hearing Procedures) for consideration by the Board. The RO shall develop a permit package that contains the permit and conditions (Attachments M1 and M2), a well identification plate stamped with the DEQ well number, a ground water withdrawal permit transmittal letter (Attachment L) and envelopes and labels with the owner's addresses. (This final permit package will be the appropriate documentation as required for permit issuance in the public hearing procedures.) The permit writer shall ensure that the final permit package is available for the Regional Director’s signature on the day of the Board meeting. Following Regional Director’s signature, the RO shall mail the permit to the applicant.

## E. Permit Application Denial

When an applicant is unable to demonstrate compliance with all criteria contained in section VI.B. above, and is unwilling to modify his application to obtain compliance with those criteria, or is unwilling to withdraw the application, the permit writer shall recommend denial of the application. The permit writer shall recommend that a public hearing be held for any ground water withdrawal application that is recommended to be denied. The RO shall public notice the Agency's intent to deny the application and hold an informal public hearing. The RO shall comply with all requirements for informal public hearings to consider ground water withdrawal permit applications as they are described in the Agency's internal procedures for public hearings, Part I, Informal Hearings for Permit Actions (see attachment Q, Hearing Procedures). The permit writer shall prepare an authorization cover memoranda and authorization memoranda (attachment J1) for the RD recommending that a public hearing be held based on the staff recommendation to deny the application.

Following the public hearing, the RO shall consider all public responses and receipt of any additional technical data in determining a recommendation on application denial as required by the public hearing procedures. If the application is not in compliance with all criteria contained in section D. above, Ground Water Withdrawal Regulations (9 VAC 25-610-10 et seq.), and the Ground Water Management Act of 1992, the RO shall recommend denial of the application to the Board.

The permit writer shall prepare a letter for the RD's signature to the applicant informing them of the Board's decision to deny the ground water withdrawal application (Attachment N3). The RO shall assure that the final letter is available for the RD's signature on the day of the Board meeting.

# VIII. SUBSEQUENT TO PERMIT ISSUANCE

NOTE: The RO shall copy the Office of Ground Water Withdrawal Permitting on all hydrogeologic, well construction and well status information submitted by the permittee subsequent to permit issuance as required in the permit.

## A. Uncontested Termination of Permits

The following procedure will apply to the termination of permits that are uncontested by the permittee because the existing permit is no longer required due to cessation of the withdrawal or reduction of the withdrawal to an amount less than 300,000 gallons per month.

1. Termination may be proposed by the permittee or by staff. Verification and documentation that the permit is no longer necessary will be made by the permit writer. In the case of a permittee who wishes to terminate a permit based on a reduction of ground water withdrawals to a level less than 300,000 gallons per month, the last four quarterly ground water withdrawal permit reports must support this claim.
2. The permit writer must advise the permittee of the right to a hearing by completing and

sending the attached "Intent to Terminate Letter" (Attachment W1) and "Uncontested Termination Agreement Form" (Attachment W2) and ask that the Agreement Form be signed and returned.

3. If the "Uncontested Termination Agreement Form" is signed and returned indicating the permittee has waived the right to a hearing and certifying that there are no pending state or federal enforcement actions on the permit, the "Uncontested Termination Notification Letter" (Attachment W3) is completed and sent to the permittee by certified mail informing him that the permit is terminated. This letter should be signed by the person delegated the authority to issue the permit.
4. The termination agreement form and correspondence is filed at the regional office and copies are sent to the OGWWP in Central Office.
5. The Ground Water Withdrawal Permit Tracking System database is updated by the permit writer to reflect the change in permit status.

## B. Transfer of Ownership

A change of ownership can be accomplished either as an automatic transfer under 9 VAC 25-610-320 B or as a minor modification under 9 VAC 25-610-320 A. In either case, change of ownership does not require permit fees or public notice if it is the only modification to the permit. A change of ownership requires a written request from the owner asking for the change and an agreement to abide by all conditions and requirements in the permit. In the interest of customer service and for compliance and enforcement purposes, all changes of ownership, require a complete permit be submitted to the new owner with the final package.

Upon receipt of written notification, the RO shall transmit the appropriate cover letter and change of ownership form (Attachments Z1 and Z2) to the existing owner. Upon receipt of the Change of Ownership Agreement with the proper signatures, the RO shall amend the permit or special exception to reflect the change of ownership and forward a copy of the permit/special exception to the new owner by certified mail. An amended copy of the permit/special exception shall be forwarded to the Office of Ground Water Withdrawal Permitting.

## C. Application Fee Refund

During the permit application review phase if there is a determination that the amount paid is greater than the correct application fee, then a refund memo must be initiated by the RO. The following examples are the only cases where DEQ will process a full or partial refund of permit fees:

a) an incorrect fee amount is determined during the permit application review, including duplicate payments, no application submitted with fee, a minor permit modification which requires no fee, or an agricultural permit which requires no fee,

b) the application is withdrawn within 90 days of receipt AND prior to being deemed administratively complete. Refund requests may only be initiated for permit fees received within the past 90 days. Should the 90 day period be exceeded, (such as in cases where an applicant has submitted a $6,000 permit fee for an expanded permit application but elects to accept a permit based on historic use) the RO may submit a refund request with documentation. Consideration for refund will be made on a case by case bases.
A refund of a permit fee must be initiated via the form included as Attachment BB. This form must be completed and signed by a person in a position with delegated permit issuance and approval authority, and sent to the DEQ Accounts Receivable Accounting Manager. A copy of the fee form, which identifies the payment and date of deposit must be attached to the refund memo. Revenue refund requests will be sent to the Ground Water Permit Fee Fund Manager in WRD, who will review the request and approve or deny the request. Once the request has been received, reviewed, and approved by the Ground Water Permit Fee Fund Manager, the Finance staff will process the revenue refund and maintain the supporting documentation from the RO. Refund requests that are not approved will be sent back to the requesting office.

## D. Minor Amendment

In accordance with 9 VAC 25-610-330, the RO may make minor amendments to an existing permit without following the public involvement procedures.
Minor amendments may be for the following purposes:
1. Correct typographical errors;
2. Require reporting at a greater frequency than required in the permit or special exception;
3. Add additional or more restrictive monitoring requirements than required in the permit or special exception;
4. Replace an existing well so long as the replacement well is screened in the same aquifers as the existing well, the replacement well is in the same location as the existing well, the ground water withdrawal does not increase, and the area of impact does not increase;
5. Add additional wells so long as the additional wells are screened in the same aquifers as the existing well, additional wells are in the same location as the existing well, the total ground water withdrawal does not increase, and the area of impact does not increase;
6. Combine the withdrawals governed by multiple permits into one permit when the systems that were governed by the multiple permits are physically connected, as long as the interconnection will not result in additional ground water withdrawal and the area of impact will not increase;
7. Change an interim compliance date in a schedule of compliance to no more than 120 days from the original compliance date and provided it will not interfere with the final compliance date; and
8. Allow for a change in ownership or operational control when the board determines that no other change in the permit or special exception is necessary, provided that a written agreement containing a specific date for transfer of permit or special exception responsibility, coverage and liability from the current to the new owner has been submitted to the board.

In no case shall a minor amendment to a permit extend the term of the permit, (9 VAC 25-610-140.A.8) including combining multiple permits into one permit. It would only be appropriate to combine multiple permits with different areas of impact for their mitigation plan, into one permit if the existing areas of impact would continue to be appropriate.

The RO shall prepare and forward a MODIFIED permit package to the Regional Director, Deputy Regional Director, or Remediation Manager. The permit package shall contain the MODIFIED permit and conditions, a replacement well identification plate stamped with the DEQ well number, a ground water withdrawal permit transmittal letter (Attachment L2), an approval/staff recommendation memo (Attachment K1) and envelopes and labels with the owner's addresses. Following Regional Director, Deputy Regional Director or Remediation Manager's signature, the RO shall mail the permit to the permittee and copy the Office of Ground Water Withdrawal Permitting.

# Attachments

January 1, 2005

Re: Ground Water Permit Application

Dear Potential Applicant:

This letter is in response to your inquiry regarding new ground water usage. I have enclosed an Application for a Ground Water Withdrawal Permit, a model mitigation plan, a Local Government Ordinance Form (LGOF), a copy of the Ground Water Withdrawal Regulations, a Technical Advisory to assist in preparation of an aquifer test plan, and a Water Well Completion Report Form. **Please note that a Pre-application meeting is required prior to submittal of an application and is advisable prior to initiating any on-site ground water investigations or well construction activities.** The purpose of a preapplication meeting is to explain the permitting process which includes a technical evaluation of the impacts of the proposed withdrawal. Please contact me to schedule this meeting at your convenience.

Requests for new or additional withdrawals are evaluated as new uses and require an application. The enclosed Ground Water Withdrawal Permit Application and **one copy** should be submitted for the total amount of ground water withdrawal requested for each withdrawal system. A "withdrawal system" is defined as: (1) One or more wells or withdrawal points located on the same or contiguous properties under common ownership for which the withdrawal is applied to the same beneficial use, or (2) two or more connected wells or withdrawal points which are under common ownership but not necessarily located on contiguous properties.

All nonagricultural applicants are required to pay permit application fees. The fee for a permit application for a new or expanded withdrawal is $6,000.

I would like to emphasize that it is a well owner's responsibility to supply the DEQ with a properly completed application and necessary accompanying information. **Material changes in the nature of the proposed withdrawal (significant change of well location, construction, withdrawal amount, etc.) requested by an applicant, after technical evaluation has been completed by DEQ staff, may require submittal of a new application and $6,000 application fee. A new application and fee will normally be required when the nature of the requested changes results in the need to conduct a second technical evaluation.**

Use of greater than 300,000 gallons per month of ground water without the proper permit from the Department of Environmental Quality is a violation of the Ground Water Management Act of 1992.

If I can be of further assistance, please do not hesitate to call me at (xxx) xxx-xxxx.

Sincerely,

Permit Writer
Ground Water Permits

Enclosures

COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

# APPLICATION FOR A GROUND WATER WITHDRAWAL PERMIT (FOR USE IN GROUND WATER MANAGEMENT AREAS)

**PREAPPLICATION CONFERENCE DATE:** _____

**1. APPLICANT INFORMATION:** FIN/SSN: _____

Applicant: _____ Phone: _____

Applicant Address: _____
(Street, City, State, Zip Code)

**2. FACILITY INFORMATION:**

Facility/System Name: _____

Facility Address: _____
(If Applicable, Street, City, State, Zip Code)

Contact Name: _____ Title: _____ Phone: _____

Fax: _____

Location of Withdrawal Well or Well System: _____
(County/City)

**3. TYPE OF APPLICATION:**

This application is for:

- ☐ Existing withdrawal, not previously permitted
- ☐ New withdrawal
- ☐ Expand or enlarge existing permit No. _____
- ☐ Modification of permit No. _____
- ☐ Reapplication for existing permit No. _____ with modification
- ☐ Reissue existing permit No. _____ without modification

Existing withdrawal permit amount _____ gallons per _____ (Day,Month,Year)

Date of expiration of existing Ground Water Withdrawal Permit _____

Requested withdrawal amount _____ maximum gallons per year,
_____ maximum gallons per month

**4. TYPE OF USE:** (Check all that apply)

| USE | %USE | | %USE |
|---|---|---|---|
| ☐ Public Water Supply | _____ | ☐ Aquaculture | |
| ☐ Industrial | _____ | ☐ Golf Course Irrigation | |
| ☐ Commercial | _____ | ☐ Landscape Irrigation | |
| ☐ Fire Protection | _____ | ☐ Nursery | |
| ☐ Drought Relief | _____ | ☐ Crop Irrigation | |
| ☐ Livestock Watering | _____ | ☐ Other _____ | |

If type of use is public water supply;

Estimate the percentage of the withdrawal for human consumptive use _____%;

Attach a complete copy of the Virginia Department of Health Water Works Operation Permit and Engineering Description Sheets or equivalent.

**OFFICE USE ONLY** Application # _____

Date Application Received _____ Date Fee Received _____ Amount _____

Notice Date _____ LGOF Date _____ Returned _____ Date Complete _____

**5. JUSTIFICATION FOR THE AMOUNT OF WITHDRAWAL REQUESTED:**

Briefly describe the nature of the activity and the proposed beneficial use of ground water.

_____

_____

_____

**Documentation of beneficial use:** Attach documentation demonstrating that the annual and monthly amount of ground water withdrawal requested is the smallest amount of withdrawal necessary to support the proposed beneficial use and that the amount is representative to support similar uses when adequate conservation measures are employed.

Include a description of the product produced or the service provided, the unit of measure (acres, lbs.,bushels, etc.) of the product or service, the unit of time that the product or service is produced (day, month, year), the amount of water (gallons) required to produce a unit of product or service, and the quantity of the product or service. Include all calculations showing the total amount of water required to produce a product or provide a service.

Attach a line drawing showing the water flow through the facility/system. Indicate wells, meter locations, sources of surface intake, and treatment, or other operations generating wastewater. Construct a water balance on the line drawing by showing average flows between intakes, treatment units and discharge points.

**Water demand projections:** Include documentation to support the intended beneficial use over a ten year permit cycle such as population and water demand projections and expansion plans. Describe special treatment (i.e. RO, EDR) when proposed.

**Apportionment of withdrawal to individual wells:** Attach an operational pumping schedule for applications with multiple wells. Indicate whether the withdrawal from each well is daily, seasonal or intermittent. Describe the frequency of use and pumping volume for each well for each month in a calendar year.

**6. WASTEWATER TREATMENT AND DISPOSAL:**

Will wastewater be generated as a result of the withdrawal of ground water?
☐ YES ☐ NO *(If yes, check the appropriate box below.)*

☐ Septic Tank and Drainfield

☐ Public Sewer _____
(Name of system)

☐ State Waters _____
(Name of water body)

Discharge Permit #

☐ Have applied for a discharge permit from the Department of Environmental Quality.

**7. WELL LOCATION(S):**

Locate all wells (existing, proposed, abandoned, out of service), facility property boundaries and/or water supply service area associated with the application on a (1) United States Geological Survey 7 1/2 minute topographic map, or copies of such maps, and (2) detailed location map of each existing and proposed well. The USGS map should contain the quadrangle name, the scale of the map, and a north arrow. The detailed location map must be of sufficient detail such that all wells may be easily located for site inspection.

## 8. EXISTING WELL INFORMATION

Complete the well information worksheet for all existing wells associated with this application. **ATTACH** copies of original water well completion reports for each well listed below. DEQ well identification plates must be attached to each existing well. Well identification plates can be obtained at the appropriate DEQ Regional Office.

| Well Name | Owner well # | DEQ Well # | Depth (ft.) | Pump Capac. (gpm) | Pump Set (ft) | Well* Type | Well** Status | Screen Interval(s) (ft.) | Office Use Only | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Latitude NAD27 | Longitude NAD27 | El (ft.) |
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Attach additional sheets if necessary

* Well Types: (P) Production, (M) Monitoring, (E) Emergency Standby, (R) Drought Relief, (S) Aquifer Storage & Recovery (D) Permanent Dewatering, (O) Other - Specify
** Well Status: (Act) Active, (Abn) Abandoned, (Alt) Altered From the Original Construction, (OOS) Out of Service

## 9. PROPOSED WELL INFORMATION

Complete the proposed well information worksheet for all proposed wells associated with this application. Contact the appropriate DEQ Regional office to obtain DEQ well identification numbers prior to the start of drilling operations. Reference the DEQ well identification number on all drilling documentation. A DEQ well identification plate must be attached to each completed well. Contact the DEQ RO at least two weeks prior to the start of drilling operations for each proposed well.

| Well Name | Owner well # | Depth (ft.) | Pump Capac. (gpm) | Pump Set (ft) | Well* Type | Well** Status | Screen Interval(s) (ft.) | Office Use Only | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | DEQ Well # | Latitude NAD27 | Longitude NAD27 | El (ft.) |
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Attach additional sheets if necessary

*Well Types: (P) Production, (M) Monitoring, (T) Test, (E) Emergency Standby, (R) Drought Relief, (S) Aquifer Storage & Recovery, (D) Permanent Dewatering, (O) Other - Specify

** Well Status: (NEW) New, (REP) Replacement Well, (ALT) Altered

**10. LOCAL AND AREAWIDE PLANNING REQUIREMENTS:**

Attach the notification from the local governing body of the county, city or town in which the withdrawal is to occur that the location and operation of the withdrawing facility is in compliance with all ordinances adopted pursuant to Chapter 22 ( 15.2-2200 et seq.) of Title 15.2 of the code of Virginia.

If the Local Government Ordinance Form (LGOF) is not enclosed, enclose documentation demonstrating that the county, city or town failed to respond within 45 days to such a request made by the applicant by certified mail, return receipt requested (9 VAC 25-610-90 C.2.b).

**11. EVALUATION OF THE LOWEST QUALITY WATER NEEDED FOR THE INTENDED BENEFICIAL USE:**

Attach an evaluation of the lowest quality water needed for the intended beneficial use. The evaluation must include a list of critical water quality parameters with minimal limits which are associated with the type of use. Demonstrate that the ground water withdrawal will originate from the aquifer that contains the lowest quality water that will support the proposed beneficial use.

**12. EVALUATION OF SOURCES OF WATER SUPPLY, OTHER THAN GROUND WATER:**

Attach an evaluation of sources of water supply, other than ground water, including sources of reclaimed water. Include information as to the proximity to public water supplies, surface water sources and sources of reclaimed water.

**13. WATER CONSERVATION AND MANAGEMENT PLAN:**

Provide, as a stand-alone attachment, a water conservation and management plan to include, at a minimum, the following:

- Requirements for the use of water saving plumbing and processes including, where appropriate, the use of water saving fixtures in new and renovated plumbing as provided in the Uniform Statewide Building Code;
- A water loss reduction program;
- A water use education program;
- An evaluation of potential water reuse options;
- Requirements for mandatory water use reductions during water shortage emergencies declared by the local governing body or the Director of DEQ, including, where appropriate, ordinances prohibiting the waste of water generally and requirements for mandatory water use restrictions, with penalties during water shortage emergencies.

**14. AREA OF IMPACT OF THE PROPOSED WITHDRAWAL:**

Pursuant to 9 VAC 25-610-110 D.2. of the Ground Water Withdrawal Regulations, DEQ staff will perform a technical evaluation to determine the areas of any aquifers that will experience at least one foot of water level decline due to the proposed withdrawal. Hydrogeologic information such as, but not limited to, aquifer properties (transmissivity and storage coefficient) obtained from aquifer testing may be required.

**15. MITIGATION PLAN:**

Pursuant to 9 VAC 25-610-110 D.3.g. of the Ground Water Withdrawal Regulations, if the DEQ's technical evaluation determines the predicted area of impact extends beyond the property owned by the applicant and/or other ground water users exist within the area of impact, a mitigation plan is required. Since the area of impact most often extends beyond the applicants property, it is recommended that a mitigation plan be submitted at the time of application to reduce application processing time. In the event that the results of the technical evaluation show that the area of impact remains on the applicant's property or there are no ground water users within the area of impact, DEQ staff will inform the applicant that a mitigation plan is not required. A model mitigation plan is included in the ground water permit application package.

**16. EVALUATION OF THE 80% DRAWDOWN CRITERION:**

Pursuant to 9 VAC 25-610-110 D.3.h. of the Ground Water Withdrawal Regulations, DEQ staff will conduct an evaluation to demonstrate that the proposed withdrawal in combination with all existing lawful withdrawals will not lower water levels, in any confined aquifer that the withdrawal impacts, below a point that represents 80% of the distance between the historical prepumping water levels in the aquifer and the top of the aquifer at the points that are halfway between the proposed withdrawal site and the predicted one foot drawdown contour based on the predicted stabilized effects of the proposed withdrawal. Ground water withdrawal permit applications which do not meet the 80% drawdown criteria will be denied.

**17. ADDITIONAL INFORMATION REQUIRED BY THE BOARD**

In addition to information requested at the preapplication conference, DEQ staff may require hydrogeologic and geophysical information necessary to characterize the aquifer system during application processing and review to obtain a complete application. Information including, but not limited to, the following may be required:

- ☐ Aquifer testing plan
- ☐ Pump test (step drawdown test);
- ☐ Aquifer test (constant rate discharge test);
- ☐ Monitoring well installation;
- ☐ Collection and analysis of drill cuttings;
- ☐ Collection and analysis of continuous core;
- ☐ Geophysical logs (spontaneous potential, single point resistance, 16/64 short and long normal resistivity, and natural gamma)
- ☐ Camera survey
- ☐ Water quality sampling;
- ☐ Other

I certify under penalty of law that this document and all information submitted were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify that I am an authorized signatory as specified in the Ground Water Withdrawal Permit Regulation 9 VAC 25-610-10 et seq.

Signature: _____

Date : _____

Printed Name: _____

Title: _____

Phone: _____

# APPLICATION INSTRUCTIONS

*For Completing a Ground Water Withdrawal Permit Application*

**WHO MUST APPLY FOR A GROUND WATER WITHDRAWAL PERMIT?**
9 VAC 25-610-40 of the Ground Water Withdrawal Regulations prohibits the withdrawal of ground water in a ground water management area without a ground water withdrawal permit, except as excluded in 9 VAC 25-610-50.

**WHAT WITHDRAWALS ARE EXCLUDED?**

(1) Withdrawals of less than 300,000 gallons per month. (2) Temporary construction dewatering withdrawals that do not exceed twenty four months in duration. (3) Withdrawals associated with a state-approved ground water remediation that do not exceed sixty months in duration. (4) Withdrawals for a ground water source heat pump where the discharge is reinjected into the aquifer from which it was withdrawn. (5) Withdrawals from ponds recharged by ground water without mechanical assistance. (6) Withdrawals for the purpose of conducting geophysical investigations, including pump tests. (7) Withdrawals coincident with exploration for and extraction of coal or activities associated with coal mining regulated by the Department of Mines, Minerals, and Energy. (8) Withdrawals coincident with the exploration for or production of oil, gas or other minerals other than coal, unless such withdrawal adversely impacts aquifer quantity or quality or other ground water users within a ground water management area. (9) Withdrawals in any area not declared to be a ground water management area. (10) Withdrawal of ground water authorized pursuant to a special exception issued by the board. (11) Withdrawal of ground water discharged from free flowing springs where the natural flow of the spring has not been increased by any method.

**PREAPPLICATION CONFERENCE**

A preapplication conference is **required** to discuss application completion, processing and evaluation procedures. A Ground Water Withdrawal Permit Application **WILL NOT** be accepted without a preapplication conference. Additional application information may be required, such as mitigation plans, monitoring well installation, hydrogeologic data collection and report, and pump/aquifer tests. Information required for DEQ staff to evaluate the area of impact will be discussed. Contact the appropriate Department of Environmental Quality (DEQ) Regional office to schedule a meeting. Information requested by DEQ staff will be documented on the Preapplication Conference Meeting Form and a copy will be provided to the applicant.

**APPLICATION FORMAT**

Application for a Ground Water Withdrawal Permit requires completion of all sections of the attached application. Omission of required information in any section will result in return of the application as incomplete.

An application is to be submitted on the forms provided with additional sheets attached, as stated in the application. Do not attach additional sheets in lieu of completing the blanks on the application. If the space provided on the application is insufficient, attach additional sheets as needed. Attachments should clearly identify the part/question of the application form to which they pertain and should be numbered to facilitate review. Attachments should be submitted on 8 1/2" X 11" paper when possible.

**APPLICATION INSTRUCTIONS**

1. **APPLICANT INFORMATION:** The applicant's official or legal name, Federal Identification Number, phone number and mailing address where correspondence should be sent. Applicants without FINs should enter their individual Social Security Number.

2. **FACILITY/SYSTEM INFORMATION:** Name of the commercial, industrial or agricultural facility or the public water supply system from which the withdrawal will occur. Enter the street address of the facility if different from the address above. If the address is the same, enter "same". If the application is for a withdrawal for a public water supply, with multiple well lots, leave the facility address blank. Give the name, title, and work number of a person who is thoroughly familiar with the operation of the withdrawal facility and with the facts reported in this application and who can be contacted by DEQ staff if necessary.

3. **TYPE OF APPLICATION:** Check the appropriate action and give the most recent permit number, permit amount, and expiration date, if applicable. Enter the amount of water needed to support the proposed beneficial use.

4. **TYPE OF USE:** Check the appropriate use types to which the requested withdrawal will be applied. If the withdrawal is to be applied to more than one beneficial use, provide an estimate of the percent of use. If the type of use is a public water supply, estimate the percent of the withdrawal for human consumptive use and attach a complete copy of the Virginia Department of Health Water Works Operation permit, including Engineering Description Sheets, or equivalent.

5. **JUSTIFICATION FOR THE AMOUNT OF WITHDRAWAL REQUESTED:** Briefly describe the nature of your activity (e.g., products produced or services provided) and the proposed beneficial use of ground water. Document and calculate the amount of water needed to produce a product or provide a service. For example: ACME Widget Co. makes widgets. ACME makes 100 widgets per day. 100 gallons of water is needed to make one widget. Therefore, the daily water demand for ACME is 100 widgets per day x 100 gallons of water per widget or 10,000 gallons per day. Provide a schematic showing water flow through the facility/system. Applications for new public water supplies should document need based on low flow plumbing requirements in the Uniform Statewide Building Code. Justification of need based on Health Department wastewater estimates of 400 gallons per day per ERC will **NOT** be accepted.

6. **WASTEWATER TREATMENT AND DISPOSAL:** Check the appropriate method of wastewater disposal if applicable.

7. **WELL LOCATION(S):** Locate all wells (existing, proposed, abandoned, out of service), facility property boundaries and/or water supply service area associated with the application on a (1) United States Geological Survey 7 1/2 minute topographic map, or copies of such maps, and (2) detailed location map of each existing and proposed well. The USGS map should contain the quadrangle name, the scale of the map, and a north arrow. The detailed location map must be of sufficient detail such that all wells may be easily located during site inspections.

8. **EXISTING WELL INFORMATION:** Complete the table for all existing wells associated with the application and attach water well completion reports if available. Note that all wells, including observation and abandoned or out of service wells, should be listed. Every effort should be made to obtain completion reports. This can be accomplished by contacting the well driller, previous employees, Virginia Department of Health or DEQ. Do NOT enter "see attached" on this table. Enter "NA" if well construction information is not available. Enter "none" on the first line if there are no existing wells associated with the application. DEQ well identification plates must be attached to each existing well. Well identification plates can be obtained at the appropriate DEQ Regional office.

9. **PROPOSED WELL INFORMATION:** Complete the proposed well information worksheet for all proposed wells associated with this application. Do NOT enter "see attached" on this table. Contact the appropriate DEQ Regional office to obtain DEQ well identification numbers prior to the start of drilling operations. Refer to the DEQ well identification number on all drilling documentation. A DEQ well identification plate must be attached to each completed well. Identification plates may be obtained from the DEQ Regional offices listed on the front of the application package. Contact the DEQ Regional office at least two weeks prior to the start of drilling operations for each proposed well.

10. **LOCAL AND AREAWIDE PLANNING REQUIREMENTS:** Attach the original notification from the local governing body of the county, city or town in which the withdrawal is to occur that the location and operation of the withdrawing facility is in compliance with all land use, planning and zoning ordinances adopted pursuant to Chapter 22 ( 15.2-2200 et seq.) of Title 15.2 of the code of Virginia. If the Local Government Ordinance Form (LGOF) is not enclosed, enclose documentation demonstrating that the county, city or town failed to respond within 45 days to such a request made by the applicant by certified mail, return receipt requested (9 VAC 25-610-90 C.2.b).

11. **LOWEST QUALITY OF GROUND WATER NEEDED:** Attach an evaluation of the lowest quality water needed for the intended beneficial use. The evaluation must include a list of critical water quality parameters with minimal limits which are associated with the type of use. Demonstrate that the

ground water withdrawal will originate from the aquifer that contains the lowest quality water that will support the proposed beneficial use.

12. **SOURCES OF WATER OTHER THAN GROUND WATER:** Attach an evaluation of sources of water supply, other than ground water, including sources of reclaimed water. Include information as to the proximity to public water supplies, surface water sources and sources of reclaimed water.

13. **WATER CONSERVATION AND MANAGEMENT PLAN:** Attach a water conservation and management plan to include, at a minimum, the following:(1) Requirements for the use of water saving plumbing and processes including, where appropriate, the use of water saving fixtures in new and renovated plumbing as provided in the Uniform Statewide Building Code;(2) A water loss reduction program; (3) A water use education program;(4) An evaluation of potential water reuse options; (5) Requirements for mandatory water use reductions during water shortage emergencies declared by the local governing body or the Director of DEQ, including, where appropriate, ordinances prohibiting the waste of water generally and requirements for mandatory water use restrictions, with penalties during water shortage emergencies.

14. **AREA OF IMPACT OF THE PROPOSED WITHDRAWAL:** Pursuant to 9 VAC 25-610-110 D.2. of the Ground Water Withdrawal Regulations, DEQ staff will perform a technical evaluation to determine the areas of any aquifers that will experience at least one foot of water level decline due to the proposed withdrawal. Hydrogeologic information such as, but not limited to, aquifer properties (transmissivity and storage coefficient) obtained from aquifer testing may be required at or following the preapplication conference.

15. GROUND WATER PERMITTEES IMPACTED BY THE PROPOSED WITHDRAWAL **- MITIGATION PLAN:** Pursuant to 9 VAC 25-610-110 D.3.g. of the Ground Water Withdrawal Regulations, DEQ staff will determine if the predicted area of impact extends beyond the property owned by the applicant and/or other ground water users exist within the area of impact. Since the area of impact most often extends beyond the applicant's property, it is recommended that a mitigation plan be submitted at the time of application to reduce application processing time. In the event that the results of the technical evaluation shows that the area of impact remains on the applicants property or there are no ground water users within the area of impact, DEQ staff will inform the applicant that a mitigation plan is not required. A model mitigation plan is included in the ground water permit application package. Mitigation plans must, at a minimum, contain the following features: (1) The rebuttable presumption that water level declines that cause adverse impacts to existing wells within the area of impact are due to the proposed withdrawal; (2) A commitment by the applicant to mitigate undisputed adverse impacts due to the proposed withdrawal in a timely fashion; (3) A speedy, non-exclusive, low-cost process to fairly resolve disputed claims for mitigation between the applicant and any claimant; (4) The requirement that the claimant provide the following documentation when available; (a) That the claimant is the owner of the well and that the well was constructed and operated prior to the initiation of the applicant's withdrawal; (b) Well construction, water levels, historic yield and location of the claimant's well(s); (c) The reasons the claimant believes that the applicants withdrawals have caused an adverse impact on the claimant's well(s).

16. **80 % DRAWDOWN CRITERION:** Pursuant to 9 VAC 25-610-110 D.3.h. of the Ground Water Withdrawal Regulations, DEQ staff will conduct an evaluation to demonstrate that the proposed withdrawal in combination with all existing lawful withdrawals will not lower water levels, in any confined aquifer that the withdrawal impacts, below a point that represents 80% of the distance between the historical prepumping water levels in the aquifer and the top of the aquifer at the points that are halfway between the proposed withdrawal site and the predicted one foot drawdown contour based on the predicted stabilized effects of the proposed withdrawal.

17. **ADDITIONAL INFORMATION REQUESTED BY THE BOARD:** In addition to information requested at the preapplication conference, DEQ staff may require hydrogeologic and geophysical information necessary to characterize the aquifer system during application processing and review to obtain a complete application.

The application must be signed in accordance with the Ground Water Withdrawal Regulation 9 VAC 25-610-150 as follows:

FOR A CORPORATION: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

FOR A MUNICIPALITY, STATE, FEDERAL OR OTHER PUBLIC AGENCY, by either a principal executive officer or ranking elected official. (A Principal executive officer of a Federal, Municipal, or State agency includes the chief executive officer of the agency or head executive officer having responsibility for the overall operation of a principal geographic unit of the agency).

FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP, by a general partner or the proprietor, respectively.

**APPLICATION SUBMITTAL**

The original signed application and one (1) copy shall be submitted to the appropriate Department of Environmental Quality Regional office. Refer to the front page of the application package for Regional Office addresses and a list of cities and counties covered by the Regional Offices.

**PERMIT APPLICATION FEES**

The Permit Fee Regulation 9 VAC 25-20-10 et seq. requires that an application fee be paid at the time an application is submitted for a new or expanded ground water withdrawal permit. Permit fees for agricultural withdrawal permits are not required. The fee for issuance/reissuance is $6,000. The fee for a permit modification is $3,000. The check or money order should be payable to the Commonwealth of Virginia - DEQ. A permit application fee form will be included in the application package. Please submit the appropriate permit fee and the fee form to the DEQ accounting office in Richmond, Virginia. A copy and a copy of the check or money order will need to be sent with the completed permit application to the appropriate Regional Office of the DEQ. Permit processing cannot be initiated until the fee is submitted.

**APPLICATION PROCESSING**

DEQ staff will review the application for completeness. Applicants who have failed to submit a complete application and attachments will be requested by DEQ staff, in writing, to furnish such information as is necessary to allow processing of the application. The application will be considered incomplete, and processing will be suspended until such information is provided. When an application does not accurately describe an existing or proposed ground water withdrawal system, the Board may require the applicant to amend the existing application or submit a new application before the application will be processed.

In accordance with DEQ's ground water withdrawal permit regulation, the application shall be public noticed at the applicant's expense. Details and guidelines for the public notice publication will be sent to the applicant after the application has been deemed complete by the staff.

The DEQ Regional Office will recommend approval of the application provided:

(1) Inquiries resulting from Public Notice can be satisfactorily answered by the staff, and

(2) The ground water withdrawal activities proposed comply with Chapter 25 of the code of Virginia and the Ground Water Withdrawal Regulations.

If the inquiries resulting from Public Notice can not be satisfactorily answered by the staff, a public hearing may be necessary, and the issuance of the permit will be decided by the Regional Office Director or the seven citizen members of the State Water Control Board.

# MITIGATION PLAN

**DEQ GROUND WATER WITHDRAWAL PERMIT NO.**

**OWNER NAME**

**FACILITY NAME**

**LOCATION**

## INTRODUCTION

On _____ (Application Date), _____ (Owner name, Facility name) submitted a Ground Water Withdrawal Permit Application to the Virginia Department of Environmental Quality (DEQ) to withdraw ground water. Ground water withdrawals associated with this permit will be utilized to

_____.

(Describe the proposed beneficial use in the space above.)

The purpose of this Mitigation Plan is to provide existing ground water users a method to resolve claims that may arise due to the impact of the withdrawal from the _____ well field.

Predicted drawdown of water levels due to the withdrawal(s) from the_____

_____aquifer(s) are shown in figure(s)

.

Modeled impacts, as shown on the attached maps, extend beyond the boundary of the _____ facility. Due to these findings, _____ recognizes that there will be a rebuttable presumption that water level declines that cause adverse impacts to existing ground water users within the area of impact are due to this withdrawal. Claims may be made by ground water users outside this area, however, there is a rebuttable presumption that _____ has not caused the adverse impact. _____ proposes this plan to mitigate impacts to existing users and excludes impacts to wells constructed after the effective date of this permit.

## CLAIMANT REQUIREMENTS

To initiate a claim, the claimant must provide written notification of the claim to the following address:

Contact Name _____

Title _____

Permittee Name _____

Address _____

City, State Zip Code _____

The claim must include the following information: (a) a deed or other available evidence that the claimant is the owner of the well and the well was constructed and operated prior to the effective date of the permit; (b) all available information related to well construction, water levels, historic yield, water quality, and the exact location of the well sufficient to allow
to locate the well on the claimant's property; (c) the reasons the claimant believes that the _____ withdrawal has caused an adverse impact on the claimants well(s).

## CLAIM RESOLUTION

_____ will review any claim within **five (5) business days**. If _____ determines that no rebuttal will be made and accepts the claim as valid, _____ will so notify the claimant and will implement mitigation within **thirty (30) business days**. If the claim is not accepted as valid, _____ will notify the claimant that (a) the claim is denied **or** (b) that additional documentation from the claimant is required in order to evaluate the claim. Within **fifteen (15) business days** of receiving additional documentation from the claimant, _____ will notify the claimant (a) that _____ agrees to mitigate adverse impacts or (b) the claim is denied. If the claim is denied, the claimant will be notified that the claimant may request the claim be evaluated by a three (3) member committee. This committee will consist of one (1) representative selected by _____ , one (1) representative selected by the claimant, and one (1) representative mutually agreed upon by the claimant and _____.

Any claimant requesting that a claim be evaluated by the committee should provide the name and address of their representative to _____. Within **five (5) business days** of receipt of such notification, _____ will notify the claimant and claimant's representative of the identity of _____ representative and instruct the representatives to select a third representative within **ten (10) business days**. Representatives should be a professional engineer or hydrogeologist with experience in the field of ground water hydrology. _____ agrees to reimburse the members of the committee for reasonable time spent, at a rate prevailing in the area for experts in the above listed fields, and for direct costs incurred in administering the plan. The claimant may, at his or her option,

choose to provide the reimbursement for the member of the committee selected by the claimant and up to half of the reimbursement for the mutual representative.

Within **ten (10) business days** of selection of the third representative, the committee will establish a **reasonable deadline** for submission of all documentation it needs to evaluate the claim. Both the claimant and _____ will abide by this deadline.

Within **fifteen (15) business days** of receipt of documentation, the committee will evaluate the claim and reach a decision by majority vote. The committee will notify the claimant regarding its decision to (a) deny or (b) approve the claim. If the claim is approved, _____ _____ will mitigate the adverse impacts within **thirty (30) business days** of making the decision or as soon as practical. If the claim is denied by the committee,
may seek reimbursement from the claimant for the claimant's committee representative and one half of the 3rd representative on the committee.

If a claimant within the indicated area of impact indicates that they are out of water, _____ will accept the responsibility of providing water for human consumptive needs within **seventy-two (72) hours** and to cover the claim review period.
reserves the right to recover the cost of such emergency supply if the claim is denied by _____or found to be fraudulent or frivolous. If _____ denies a claim and the claimant elects to proceed with the three (3) member committee,
____ will continue the emergency water supply at the claimants request during the committee's deliberations, but reserves the right to recover the total costs of emergency water supply in the

case that the committee upholds the denial of the claim. Similarly,

reserves the right to recover costs associated with the claim process if a claim is found to be fraudulent or frivolous.

If it is determined by the committee or shown to the committee's satisfaction that a well operating under a mitigation plan similar to _____ Plan other than those owned and operated by _____ has contributed to the claimed adverse impact, _____ share of the costs associated with mitigation will be allocated in proportion to its share of the impact. Such a determination shall be made by the committee after notification of the third party well owner, giving the third party well owner opportunity to participate in the proceedings of the committee.

## PLAN ADMINISTRATION

Nothing in the Plan shall be construed to prevent the Department of Environmental Quality Staff from providing information needed for resolution of claims by the committee.

**COMMONWEALTH of VIRGINIA**
**DEPARTMENT OF ENVIRONMENTAL QUALITY**

# PREAPPLICATION MEETING

## APPLICATION FOR A GROUND WATER WITHDRAWAL PERMIT

***(FOR USE IN GROUND WATER MANAGEMENT AREAS)***

**Date:**_____

**1. APPLICANT INFORMATION:**

Applicant: _____ Phone: _____

Applicant Address: _____
(Street, City, State, Zip Code)

**2. FACILITY INFORMATION:**

Facility/System Name:_____

Facility Address:_____
(If Applicable, Street, City, State, Zip Code)

Contact Name: _____ Title: _____ Phone: _____

Fax: _____ Email: _____

Withdrawal Well or Well System located in _____(County/City)

Proposed Source Aquifer(s): _____

**Estimate of requested withdrawal amount**

| | |
|---|---|
| Maximum gallons per year: | Maximum gallons per month: |

**3. ADDITIONAL INFORMATION REQUIRED**

Hydrogeologic information is the basis for all technical evaluations of withdrawal impacts. The indicated information below is required based on the proposed withdrawal amount, source aquifer and location described above. Any change in the nature of the requested withdrawal must be reviewed by DEQ modeling staff and may result in changes to the additional information required. If the required information submitted is not adequate to develop a technically defensible assessment of withdrawal impacts, DEQ staff may require additional hydrogeologic and geophysical information necessary to characterize the aquifer system during application processing and review to obtain a complete application. The following information is required for application at this time:

| | |
|---|---|
| ☐ Aquifer test plan | ☐ Pump test (step drawdown test with a minimum of five pumping rates) |
| | ☐ Aquifer test (constant rate discharge test with at least one observation well) |
| ☐ Geophysical logs (spontaneous potential, single point resistance, 16/64 short and long normal resistivity, natural gamma) | ☐ Camera survey |
| ☐ Collection and analysis of drill cuttings | ☐ Water quality sampling |
| ☐ Collection and analysis of continuous core | ☐ Monitoring well installation |

| |
|---|
| ☐ Other |
| ☐ Other |
| ☐ Other |
| ☐ Other |

NOTE: **Material changes in the nature of the proposed withdrawal (significant change of well location, construction, withdrawal amount, etc.) requested by the applicant, after technical evaluation has been completed by DEQ staff, may require submittal of a new application and $6,000 dollar application fee. A new application and fee will normally be required when the nature of the requested changes results in the need to conduct a second technical evaluation.**

Comments: _____

_____

_____

Preapplication Conference Meeting
Attendees List

Date _____

| Name | Representing | Phone |
|---|---|---|
| | | |
| | | |
| | | |
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| | | |
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| | | |
| | | |

**DEPARTMENT OF ENVIRONMENTAL QUALITY**
**WATER QUALITY DIVISION**
**PERMIT APPLICATION FEE FORM**
**EFFECTIVE JULY 1, 2004**

## INSTRUCTIONS

Applicants for individual Virginia Pollutant Discharge Elimination System (VPDES), Virginia Pollution Abatement (VPA), Virginia Water Protection (VWP), Surface Water Withdrawal (SWW), and Ground Water Withdrawal (GWW) Permits are required to pay permit application fees, except farming operations engaged in production for market. Fees are also required for registration for coverage under General Permits except for the general permits for sewage treatment systems with discharges of 1,000 gallons per day (GPD) or less and for Corrective Action Plans for leaking underground storage tanks. Except for VWP permits, fees must be paid when applications for permit issuance, reissuance* or modification are submitted. Applicants for VWP permits will be notified by the DEQ of the fee due. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received. ( * - the reissuance fee does not apply to VPDES and VPA permits - see the fee schedule included with this form for details.)

The permit fee schedule is included with this form. Fees for permit issuance or reissuance and for permit modification are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Environmental Quality
Receipts Control
P.O. Box 10150
Richmond, VA 23240

A copy of the form and a copy of your check or money order should accompany the permit application. You should retain a copy for your records. Please direct any questions regarding this form or fee payment to the DEQ Office to which you are submitting your application.

**APPLICANT NAME:**_____ **SSN/FIN:**_____

**ADDRESS:**_____ **DAYTIME PHONE:** (_____)_____
**Area Code**

_____

_____

**FACILITY/ACTIVITY NAME:**_____

**LOCATION:**_____

**TYPE OF PERMIT APPLIED FOR**
**(from Fee Schedule):**_____

**TYPE OF ACTION:** _____ **New Issuance** _____ **Reissuance** _____ **Modification**

**AMOUNT OF FEE SUBMITTED**
**(from Fee Schedule):**_____

**EXISTING PERMIT NUMBER (if applicable):**_____

**DEQ OFFICE TO WHICH APPLICATION SUBMITTED (check one)**

| | | | |
|---|---|---|---|
| ☐ Abingdon/SWRO | ☐ Harrisonburg/VRO | ☐ Woodbridge/NVRO | ☐ Lynchburg/SCRO |
| ☐ Richmond/PRO | ☐ Richmond/Headquarters | ☐ Roanoke/WCRO | ☐ Virginia Beach/TRO |

**FOR DEQ USE ONLY**
**Date:**_____
**DC #:**_____

**Original Form and Check - DEQ Receipts Control, Richmond**
**Copy of Form and Copy of Check - DEQ Regional Office or Permit Program Office**

## FEE SCHEDULES

**A. VPDES and VPA Permits.** Applications for issuance of new individual VPDES or VPA permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. (Flows listed are facility "design" flows. Land application rates listed are facility "design" rates.) [NOTE: VPDES and VPA permittees pay an Annual Permit Maintenance Fee instead of a reapplication fee. The permittee is billed separately by DEQ for the Annual Permit Maintenance Fee.]

| TYPE OF PERMIT | ISSUANCE | MODIFICATION |
|---|---|---|
| VPDES Industrial Major | $24,000 | $12,000 |
| VPDES Municipal Major | $21,300 | $10,650 |
| VPDES Municipal Major Stormwater / MS4 | $21,300 | $10,650 |
| VPDES Industrial Minor / No Standard Limits | $10,200 | $5,150 |
| VPDES Industrial Minor / Standard Limits | $3,300 | $3,300 |
| VPDES Industrial Stormwater | $7,200 | $3,600 |
| VPDES Municipal Minor / Greater Than 100,000 GPD | $7,500 | $3,750 |
| VPDES Municipal Minor / 10,001 GPD - 100,000 GPD | $6,000 | $3,000 |
| VPDES Municipal Minor / 1,001 GPD - 10,000 GPD | $5,400 | $2,700 |
| VPDES Municipal Minor / 1,000 GPD or Less | $2,000 | $1,000 |
| VPDES Municipal Minor Stormwater / MS4 | $2,000 | $1,000 |
| VPA Industrial Wastewater Operation / Land Application of 10 or More Inches Per Year | $15,000 | $7,500 |
| VPA Industrial Wastewater Operation / Land Application of Less Than 10 Inches Per Year | $10,500 | $5,250 |
| VPA Industrial Sludge Operation | $7,500 | $3,750 |
| VPA Municipal Wastewater Operation | $13,500 | $6,750 |
| VPA Municipal Sludge Operation | $7,500 | $3,750 |
| All other VPA operations not specified above | $750 | $375 |

**B. Virginia Water Protection (VWP) Permits.** Applications for issuance of new individual, and reissuance or major modification of existing individual VWP permits. Only one permit application fee will be assessed per application; for a permit application involving more than one of the operations described below, the governing fee shall be based upon the primary purpose of the proposed activity. (Withdrawal amounts shown are maximum daily withdrawals.)

| TYPE OF PERMIT | ISSUANCE/REISSUANCE | MODIFICATION |
|---|---|---|
| VWP Individual / Surface Water Impacts (Wetlands, Streams and/or Open Water) | $2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($60,000 maximum) | $1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($30,000 maximum) |
| VWP Individual / Minimum Instream Flow - Withdrawals equal to or greater than 3,000,000 gallons on any day | $25,000 | $5,000 |
| VWP Individual / Minimum Instream Flow - Withdrawals between 2,000,000 and 2,999,999 gallons on any day | $20,000 | $5,000 |
| VWP Individual / Minimum Instream Flow - Withdrawals between 1,000,000 and 1,999,999 gallons on any day | $15,000 | $5,000 |
| VWP Individual / Minimum Instream Flow - Withdrawals < 1,000,000 gallons on any day that do not otherwise qualify for a general VWP permit for water withdrawals | $10,000 | $5,000 |
| VWP Individual / Reservoir - Major | $35,000 | $12,500 |
| VWP Individual / Reservoir - Minor | $25,000 | $12,500 |
| VWP Individual/Nonmetallic Mineral Mining | $2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($7,500 maximum) | $1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($3,750 maximum) |

**C. Surface Water Withdrawal (SWW) and Ground Water Withdrawal (GWW) Permits.** Applications for issuance of new individual, and reissuance or major modification of existing individual SWW permits or GWW permits.

| TYPE OF PERMIT | ISSUANCE/REISSUANCE | MODIFICATION |
|---|---|---|
| Surface Water Withdrawal | $12,000 | $6,000 |
| Ground Water Withdrawal / Initial Permit for an Existing Withdrawal Based Solely on Historic Withdrawals | $1,200 | $600 |
| Ground Water Withdrawal | $6,000 | $3,000 |

**D. Registration Statements for General Permit Coverage.**

1. Except as specified in 2, 3, 4 and 5 below, the fee for registration for coverage under a general permit is $600.
2. General VPDES Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000 GPD (9 VAC 25-110) = $0.
   General VPDES Permit Regulation for Discharges From Petroleum Contaminated Sites (9 VAC 25-120) = $0.
3. **VWP General Permit:**

| TYPE OF PERMIT | ISSUANCE |
|---|---|
| VWP General / Less Than 4,356 sq. ft. (1/10 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water) | $0 |
| VWP General / 4,356 sq. ft. to 21,780 sq. ft. (1/10 acre to 1/2 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water) | $600 |
| VWP General / 21,781 sq. ft. to 43,560 sq. ft. (greater than 1/2 acre to one acre) of Surface Water Impact (Wetlands, Streams and/or Open Water) | $1,200 |
| VWP General / 43,561 sq. ft. to 87,120 sq. ft. (greater than one acre to two acres) of Surface Water Impact (Wetlands, Streams and/or Open Water) | $1,200 plus $120 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 43,560 sq. ft. (one acre) ($2,400 maximum) |
| VWP General / Minimum Instream Flow / Reservoir - Water withdrawals and/or pond construction | $2,400 |

4. **VPDES Storm Water General Permits (except as specified in 5 below):**

| TYPE OF PERMIT | ISSUANCE |
|---|---|
| VPDES General / Industrial Storm Water Management | $500 |
| VPDES General / Storm Water Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres) | $500 |
| VPDES General / Storm Water Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development less than 5 Acres) | $300 |

5. Owners of facilities that are covered under the Industrial Activity (VAR5) and Construction Site (VAR10) storm water general permits that expire on June 30, 2004, and who are reapplying for coverage under the new general permits that are effective on July 1, 2004, must submit a fee of $600 to reapply.

SUBJECT: LOCAL AND AREAWIDE PLANNING REQUIREMENTS
TO: Applicants for Permits to Withdraw Ground Water

9 VAC 25-610-90.C.2.b of the Ground Water Withdrawal Regulation states:

> The application shall include notification from the local governing body of the county, city or town in which the withdrawal is to occur that the location and operation of the withdrawing facility is in compliance with all ordinances adopted pursuant to Chapter 22 (§ 15.2-2200 et seq.) of Title 15.2 of the Code of Virginia. If the governing body of any county, city or town fails to respond within 45 days following receipt of a written request by certified mail, return receipt requested, by an applicant for certification that the location and operation of the proposed facility is consistent with all ordinances adopted pursuant to Chapter 22 § 15.2-2200 et seq.) of Title 15.2, the location and operation of the proposed facility shall be deemed to comply with the provisions of such ordinances for the purposes of this chapter;

In accordance with this section, new applications for permits to withdraw ground water will not be considered complete until the information below is submitted to the Virginia Department of Environmental Quality (DEQ) Regional Office.

- - - -

# GROUND WATER WITHDRAWAL PERMIT APPLICATION
# RO REVIEW CHECKLIST

**APPLICANT NAME:**

**FACILITY NAME:**

**PRE-APPLICATION MEETING DATE:**

| COMPLETED ACTIONS | DATE | INITIALS |
|---|---|---|
| Administratively Complete | | |
| Technically Complete | | |
| Application Sent to CO for modeling | | |
| Technical Evaluation Received | | |
| Draft Permit Sent to Applicant/CO | | |
| Public Notice Submitted for Publication | | |

**APPLICATION REVIEW TIME SUMMARY**

| REVIEW ACTION | TARGET | ACTUAL (days) |
|---|---|---|
| Administrative Review Conducted | Within 30 days from receipt of application | |
| 1st Admin review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| 2nd Admin review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| 3rd Admin review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| Technical Review Conducted | Within 60 days after app. is administratively complete | |
| 1st Tech review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| 2nd Tech review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| 3rd Tech review response from applicant | 10 - 30 days | |
| RO Evaluation of Response | 30 days from receipt | |
| RO Receives Technical Evaluation Report From CO | 60 days after application is technically complete | |
| Applicant's response to Draft Permit | 30 days | |
| Permit Signed | 15 days after public notice closes if no public hearing | |
| Processing of Complete Application | 120 days after technically complete | |

**Notes:**

**Permit Number_GW00_____ DEQ Reviewer**

## SECTION 1: ADMINISTRATIVE REVIEW

Date Application Received: _____.

Administrative Review Conducted on: _____.

Notified applicant of need for correction of application on:

_____ _____

Response due on: (10 to 30 days)

_____ _____

Corrected application received on:

_____ _____

RO evaluation of response on: (30 days from receipt of corrections)

_____ _____

Application administratively complete on: _____.

_____

1. _____ Received original application and at least one copy.

2. _____ Date-stamped and annotated permit number on application and copy.

3. _____ Application is signed and dated by applicant and signature on application is appropriate.

4. _____ Copy of permit fee form and copy of check or money order received.

5. _____ Signed LGOF or signed certified mail receipt for 45-day waiver attached.

6. _____ Received validated permit fee form from DEQ Accounting.

7. _____ Recorded fee deposit date and amount on front page of application.

8. _____ All sections of the application have been addressed, to include:

   ___ a. withdrawal amount requested at item 3 specifies both annual and monthly limits.
   ___ b. type of use at item 4 is specified.
   ___ c. line diagram of water system and water balance is included.
   ___ d. LGOF at item 10 is properly certified by appropriate authority; or, when absent with proper documentation, the locality was contacted by DEQ to ensure that the LGOF request was not denied.
   ___ e. appropriate maps are included (i.e., well locations, service area.) with appropriate map scale and north arrow
   ___ f. completion reports for all wells are included.

___ g. Abandonment reports for all wells that have been abandoned since last permit review

___ h. complete State Health Department Waterworks Operation Permit and engineering description sheets are attached for existing public water supply expansion application.

**NOTES:**

**SECTION 2: TECHNICAL REVIEW**

Technical Review Conducted on: _____ through _____

Notified applicant of need for correction of application on:

_____ _____

Response due on: (10 to 30 days)

_____ _____

Corrected application received on:

_____ _____

RO evaluation of response on: (30 days from receipt of corrections)

_____ _____

Application technically complete on: _____

_____

1. _____ Amount of water requested at Application item 5 is smallest amount necessary to support the requested beneficial use.

2. _____ Waste Water Disposal at item 6 has or will have been authorized by appropriate permits prior to issuance of ground water withdrawal permit.

3. _____ Pump and Water Intake Positions at items 8 and 9 are in agreement with the submitted documentation.and are at appropriate proposed depths, or an approvable plan for correction of existing pump or screen setting depths will be included as an enforceable permit condition.

4. _____ Apportionment of withdrawal between wells is specified for wells in different aquifers or more than a couple hundred feet apart

5a._____ Water Quality at item 11 is shown to be of the lowest quality necessary to

support the beneficial use. (Public water supplies are exempt from this demonstration.)

5b._____ New wells are not screened across multiple aquifers whose water quality is a mixture of both low quality (greater than 250 mg/l chloride) and high quality (250 mg/l chloride or less) waters.

5c._____ Existing wells currently screened across high and low quality aquifers in an unacceptable manner will be modified according to an approvable plan included as an enforceable permit condition.

6. _____ Alternate Sources at item 12 indicates no other viable sources exist.

7. _____ Water Conservation and Management Plan (WCMP) at item 13 contains the following elements:

___ (a) Requirements for the use of water saving plumbing and processes including, where appropriate, the use of water saving fixtures in new and renovated plumbing as provided in the Uniform Statewide Building Code.

A plan that contains requirements that water saving fixtures be used in all new and renovated plumbing as provided in the Uniform Statewide Building Code meets the above element.

A plan that addresses water saving processes for an industrial, agricultural, or similar type use meets the above element.

___ (b) A water loss reduction program.

A plan that contains requirements for making technological, procedural, and/or programmatic improvements to the applicant's facilities and processes to decrease water consumption meets the above element. These requirements shall assure that the most efficient use is made of ground water.

A plan that contains requirements for an audit by the permittee of the total amount of ground water used in the applicant's distribution system and operational processes during the first two years of the permit cycle meets the above element. Subsequent implementation of a leak detection and repair program will be required within one year of the completion of the audit, when such a program is technologically feasible.

There may be other methods to implement a water loss reduction program that can be proposed by the facility and evaluated by the RO staff.

___ (c) A water use education program.

A plan that contains requirements for the education of water users and employees controlling water consuming processes to assure that water conservation principles are well known by the users of the resource meets the above element.

___ (d) An evaluation of water reuse options.

A plan that contains an evaluation of potential water reuse options and assurances that water will be reused in all instances where reuse is feasible meets the above element.

___ (e) Requirements for mandatory water use reductions during water shortage emergencies declared by the local governing body or director of DEQ, including, where appropriate, ordinances prohibiting the waste of water generally and requirements providing for mandatory water use restrictions, with penalties, during water shortage emergencies.

For a municipal public water supply applicant, a plan that contains requirements for mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ that prohibit all non-essential uses such as lawn watering, car washing, and similar non-essential residential, industrial and commercial uses for the duration of the water shortage emergency and an ordinance containing the above plus penalties for failure to comply with mandatory water use restrictions meets the above element.

For a non-municipal public water supply applicant, a plan that contains requirements for mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ that prohibit all non-essential uses such as lawn watering, car washing, and/or similarly appropriate non-essential uses for the duration of the water shortage emergency meets the above element.

For non-public water supply applicants a plan that contains requirements for compliance with mandatory water use restrictions during water shortage emergencies declared by the local governing body or director of DEQ meets the above requirement.

**Permit Number_GW00_____ DEQ Reviewer**

8. _____ Mitigation Plan is included and contains the following enforceable permit conditions: (this requirement may be delayed until after Technical Evaluation Report is complete based upon judgement of RO staff)

___ (a) rebuttable presumption that water level declines that cause adverse impacts to existing wells in the predicted area of impact are due to the proposed withdrawal.

___ (b) commitment by applicant to mitigate undisputed loss of water supply within 72 hours: and to review other claims within 5 days and inform claimant of the mitigation decision within 10 days.

___ (c) speedy, non-exclusive, low-cost process for resolving disputed claims.

___ (d) requirement that claimant provide necessary documentation for claim resolution.

9. _____ Accurate latitude/longitude readings are obtained by RO staff using GPS equipment

10._____Other Information at item 17 is present, if required.

_____ Aquifer test plan (ATP) - acceptable plan submitted
_____ Aquifer Test **Report** in accordance with the ATP, including electronic water level data
_____ Pump test (step drawdown test)
_____ Aquifer test (constant rate discharge test)
_____ Monitoring well installation
_____ Collection and analysis of drill cuttings
_____ Collection and analysis of continuous core
_____ Geophysical logs (spontaneous potential, single point resistance, 16/64short and long normal resistivity, natural gamma)
_____ Camera survey
_____ Water quality sampling
_____ Other
_____ Other
_____ Other

**NOTES:**

**Permit Number_GW00_____ DEQ Reviewer**

## SECTION 3: HYDROGEOLOGIC EVALUATION

_____ RO received Hydrogeologic Evaluation Report.

_____ RO/CO concur on the Hydrogeologic Evaluation Report.

**NOTES:**

## SECTION 4: DRAFT PERMIT PROCESSING

_____ Draft permit and draft public notice prepared and sent to OGWWP.

_____ Mailed notice of draft permit for new or expanded withdrawals requiring a Waterworks Operation Permit to the Va. Health Dept. for review and possible comment.

_____ Mailed draft permit with area of impact maps, draft public notice, and public notice authorization form to applicant. (At the same time mailed draft permit with area of impact maps to Eastern Shore Ground Water Committee if an Eastern Shore application). A copy of the Technical Evaluation Report will be provided to applicant upon request.

_____ Response due from applicant (30 days after mailing draft permit)

_____ Received acceptance of draft permit from applicant.

_____ Received public notice authorization.

## SECTION 5: PUBLIC NOTICE

1. _____ Mailed notice of draft permit to each local governing body within the Ground Water Management Area on or before date of public notice.

2. _____ Sent e-mail to OGWWP (Beverly Quinlan as of January, 2005) with public notice attached.

3. _____ Public Notice period begins on _____ and closes on _____

4. _____ Verified that Public Notice was properly published.

**Permit Number_GW00_____ DEQ Reviewer**

5. _____ Public Hearing held.

6. _____ Board approved permit.

7._____ Permit signed (15 days after close of public notice if public hearing is not required).

**NOTES:**

# MEMORANDUM

**Department of Environmental Quality**

Division of Water Resources

Mail Address:
P.O. Box 10009
Richmond, VA 23240-0009

Location:
629 E. Main St.
Richmond, VA 23219

Subject: [Owner], [Facility]
Ground Water Withdrawal Permit Application GW00###00

To: Permit Writer, PRO/TRO

From: Terry Wagner

Date: [date]

Copies:

Attached you will find the results of the technical evaluation conducted in this office of the subject application. This application was evaluated using _____ _____ solution to predict drawdowns. The results of this simulation are documented in the accompanying report.

[Additional Notes and recommendations]

If you have any questions regarding the report please do not hesitate to call me at (804) 698-4043.

# MEMORANDUM

**Department of Environmental Quality**
Division of Water Resources
Office of Ground Water Withdrawal Permitting

Mail Address:
P.O. Box 10009
Richmond, VA 23240-0009

Location:
629 E. Main St.
Richmond, VA 23219

**SUBJECT:** Technical Evaluation of [Owner], [Facility]
Ground Water Withdrawal Permit Application GW00###00

**TO:** Terry Wagner

**FROM:** [Ground Water Modeler]

**DATE:** [date]

**COPIES:**

I have completed the hydrogeologic review and technical evaluation for [Owner], [Facility ]Ground Water Withdrawal Permit Application GW00###00, and the report is attached. The application is for an [existing/new] [public/industrial] water supply that [has/has not] been permitted under the current regulation. It was previously issued [permit #] for ## gallons per month. The applicant is now requesting a permit for #,###,000 gallons per year (##,### average gpd) and #,###,000 gallons per month (#,### average gpd) withdrawing from the _____ aquifer.

[Special Notes and Recommendations – including Special Condition requirements.]

Analysis of the simulation indicated the proposed withdrawal met/did not meet the 80% drawdown requirement and predicted [no] adverse impacts to water quality. The evaluation is included as an attachment. Questions regarding this report may be addressed to [Ground Water Modeler Name, Phone Number].

**Technical Evaluation - Office of Ground Water Withdrawal Permitting**

**Applicant:** [Owner]

**Facility:** [Facility]

**Application #:** GW00###00

**Facility Type:** [Public/Commercial/Industrial/Agricultural/Golf Course] water supply

**Location:** [County/City (location of withdrawal point(s))]

**Requested withdrawal amount**: X gallons per year (X average gpd) not to exceed
X gallons in any month (X average gpd)

[table of all wells associated with facility]

**Production Wells:**

| Identification | Location | Construction | Pump Intake | Source Aquifer |
|---|---|---|---|---|
| Owner Well Name: Sinclair Manor<br><br>DEQ Well Number: ###-#####<br><br>MPID: ############### | Lat: 37° 37' 10.7"<br>Lon: -77° 14' 43.57"<br>(datum ex.NAD 1927)<br><br>Elevation ### feet (datum – ex.NAVD88) | Completion Date: 04/30/74<br><br>Screens (ft-bgs): 260-270, 322-332, 362-372<br><br>Total Depth (ft-bgs): 382 | 255 ft-bgs | Middle Potomac |

**Proposed Production Wells:**

| Identification | Location | Construction | Pump Intake | Source Aquifer |
|---|---|---|---|---|
| Owner Well Name: Sinclair Manor<br><br>DEQ Well Number: ###-#####<br><br>MPID: #############55 | Lat: 37° 37' 10.7"<br>Lon: -77° 14' 43.57"<br>(datum ex.NAD 1927)<br><br>Elevation ### feet (datum – ex.NAVD88) | Completion Date: 04/30/74<br><br>Screens (ft-bgs): 260-270, 322-332, 362-372<br><br>Total Depth (ft-bgs): 382 | 255 ft-bgs | Middle Potomac |

**Out of Service Production Wells:**

| Identification | Location | Construction | Pump Intake | Source Aquifer |
|---|---|---|---|---|
| Owner Well Name: Sinclair Manor<br><br>DEQ Well Number: ###-#####<br><br>MPID: ############### | Lat: 37° 37' 10.7"<br>Lon: -77° 14' 43.57"<br>(datum ex.NAD 1927)<br><br>Elevation ### feet (datum – ex.NAVD88) | Completion Date: 04/30/74<br><br>Screens (ft-bgs): 260-270, 322-332, 362-372<br><br>Total Depth (ft-bgs): 382 | 255 ft-bgs | Middle Potomac |

**Abandoned Production Wells:**

| Identification | Location | Construction | Pump Intake | Source Aquifer |
|---|---|---|---|---|
| Owner Well Name: Sinclair Manor<br><br>DEQ Well Number: ###-#####<br><br>MPID: ############### | Lat: 37° 37' 10.7"<br>Lon: -77° 14' 43.57"<br>(datum ex.NAD 1927)<br><br>Elevation ### feet (datum – ex.NAVD88) | Completion Date: 04/30/74<br><br>Screens (ft-bgs): 260-270, 322-332, 362-372<br><br>Total Depth (ft-bgs): 382 | 255 ft-bgs | Middle Potomac |

**Monitoring Wells:**

| Identification | Location | Construction | Pump Intake | Source Aquifer |
|---|---|---|---|---|
| Owner Well Name: Sinclair Manor<br><br>DEQ Well Number: ###-#####<br><br>MPID: #############9# | Lat: 37° 37' 10.7"<br>Lon: -77° 14' 43.57"<br>(datum ex.NAD 1927)<br><br>Elevation ### feet (datum – ex.NAVD88) | Completion Date: 04/30/74<br><br>Screens (ft-bgs): 260-270, 322-332, 362-372<br><br>Total Depth (ft-bgs): 382 | 255 ft-bgs | Middle Potomac |

**Coastal Plain Model data:**

| Aquifer | feet elevation (msl) | Feet depth (bls) |
|---|---|---|
| | row 19 column 28 (well 1) | |
| Yorktown-Eastover aquifer (top) | 158 | |
| Chickahominy-Piney Point (top) | 46 | 89 |
| Aquia aquifer (top) | -87 | 222 |
| Upper Potomac aquifer (top) | not present | |
| Middle Potomac aquifer (top) | -180 | 315 |
| Lower Potomac aquifer (top) | -431 | 566 |

**Staff Geologist report:**

After reviewing [Scott's source of information], Scott Bruce made the following picks: [cut/paste from his email. Make sure to include top and bottom of source aquifer.]

Drilled depth:

| | |
|---|---|
| Chickahominy-Piney Point aquifer | 110' - 170' |
| Aquia aquifer | 225' - 272' |
| Middle Potomac confining unit | 272' - 325' |
| Middle Potomac aquifer | 325' - 540' |
| Top of the lower Potomac aquifer | 635' |
| Bottom of the lower Potomac aquifer | Not Encountered |
| Top of basement | Not Encountered |

**Aquifer Test:**

[text description of aquifer test and consultant's analysis]

**Evaluation of Withdrawal Impacts:**

[text description of withdrawal impact evaluation including aquifer test analysis method]

**Method of Evaluation:**

type
description of solution method

**Model Input Parameters:**

| | |
|---|---|
| Transmissivity: | X,XXX ft2/day (source: [source]) |
| Storage Coefficient: | 0.xxxxx (source: [source]) |
| Leakage Factor (inverse), $B^{-1}$ = | 0.xxxxxx (source: [source]) |
| Withdrawal rate / Simulation Time: | [rate/time period] |

**Model Results - Area of Impact:**

[text description of size of impact area, for instance: The results of the prediction show one foot of drawdown occurs at a radius of x feet from each production well (see attached map).]

**80 % Drawdown:**

The elevation of the aquifer top is -xxx feet. Based on a total permitted withdrawal simulation (using 200x water use) the water level elevation is -xx feet (msl) for the [affected] aquifer[s] . The predicted additional drawdown in the [affected] aquifer from the proposed withdrawal at the evaluation point is xx feet. The resulting water level elevation is -xx feet in the [affected] aquifer.

The 80 % drawdown requirement allows the water level elevation (based on the VCPM hydrogeologic framework) to be reduced to -xxx feet (msl) in the [affected] aquifer. Therefore, this withdrawal is within the limits set by the 80 % drawdown criteria.

**Water Quality:**

There is no alteration to the regional flow patterns in the [affected] aquifer and no indication that water quality will be adversely affected.

Or

[description of water quality issues]

**Conclusion:**

The withdrawal requested by [Owner], [Facility] facility satisfies the technical evaluation criteria for permit issuance.

**Lower Potomac Aquifer – Existing Permitees within [Facility] Area of Impact**

| Permittee | Permit Number | Well Number | Latitude | Longitude |
|---|---|---|---|---|
| Sussex Service Authority | GW0002100 | 191-00095 | 37.04944 | -77.19944 |
| | | 191-00096 | 37.04833 | -77.20083 |

**Middle Potomac Aquifer – Existing Permitees within [Facility] Area of Impact**

| Permittee | Permit Number | Well Number | Latitude | Longitude |
|---|---|---|---|---|
| Hanover County of | GW0000100 | 142-00558 | 37.61375 | -77.33861 |
| | | 142-00510 | 37.62833 | -77.30861 |
| Narricot Industries Incorporated | GW0043500 | 187-00132 | 36.58694 | -77.20444 |
| | | 187-00211 | 36.58556 | -77.20417 |

## Upper Potomac Aquifer – Existing Permitees within [Facility] Area of Impact

| Permittee | Permit Number | Well Number | Latitude | Longitude |
|---|---|---|---|---|
| New Kent County of | GW0000600 | 163-00154 | 37.49278 | -76.86389 |
| | | 163-00155 | 37.505 | -76.865 |
| Titan Virginia Ready-Mix, L.L.C. | GW0044900 | 234-00241 | 37.1928 | -76.57973 |
| Lancaster Farms Incorporated | GW0060100 | 161-00460 | 36.86857 | -76.47112 |

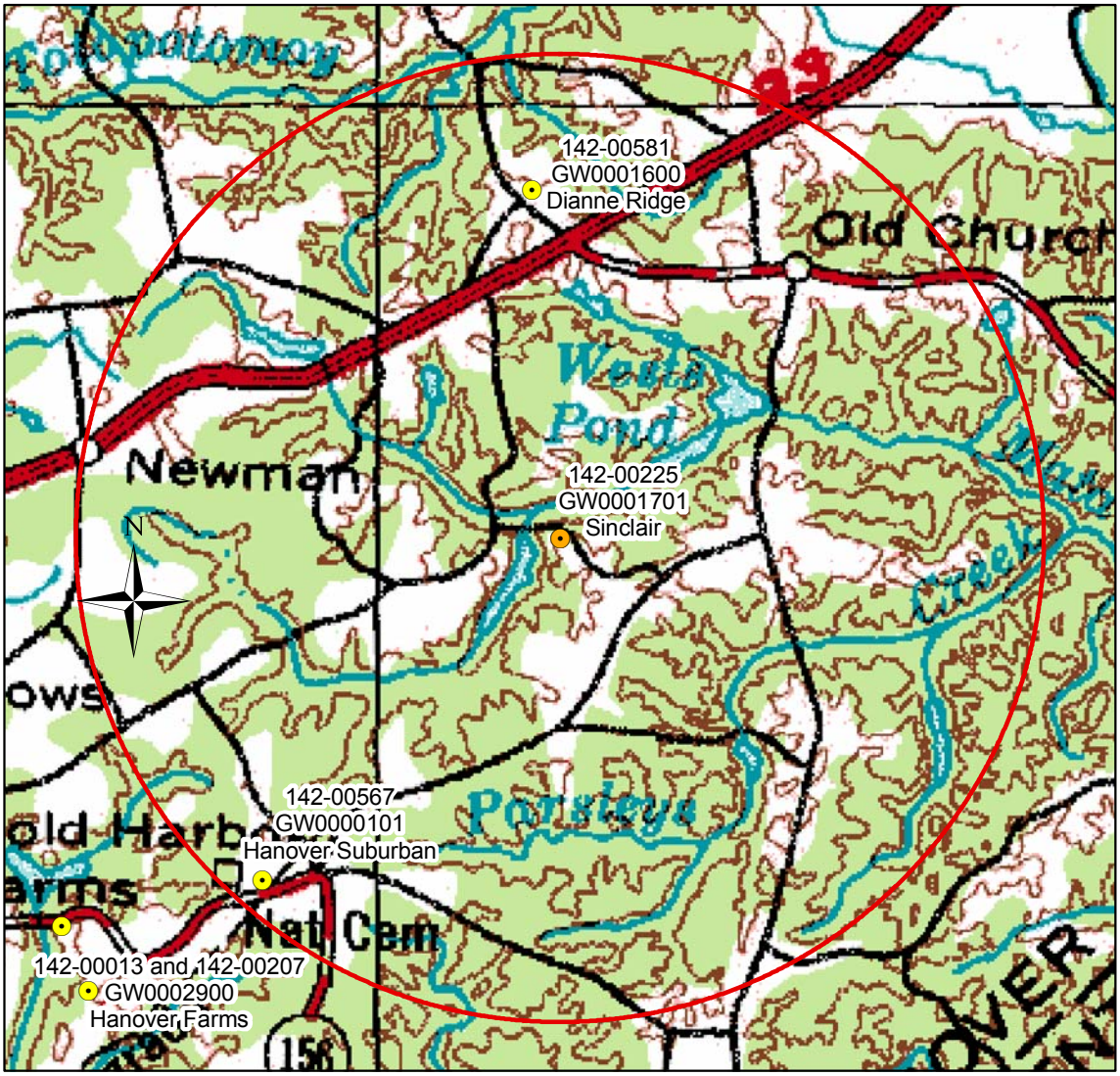
## Aquia Aquifer – Existing Permitees within [Facility] Area of Impact

| Permittee | Permit Number | Well Number | Latitude | Longitude |
|---|---|---|---|---|
| Franklin City of | GW0042900 | 233-00003 | 36.68081 | -76.9229 |
| A R Tedesco | GW0000200 | 174-00212 | 37.145 | -77.3592 |
| Colonial Williamsburg Foundation | GW0041300 | 230-00014 | 37.28222 | -76.6972 |

## Chickahominy Piney Point Aquifer – Existing Permitees within [Facility] Area of Impact

| Permittee | Permit Number | Well Number | Latitude | Longitude |
|---|---|---|---|---|
| James City Service Authority | GW0030000 | 147-00256 | 37.42352 | -76.81508 |
| | | 147-00249 | 37.42428 | -76.8201 |
| York County Dept. of Environmental Services | GW0030100 | 199-00088 | 37.35528 | -76.74056 |
| | | 199-00089 | 37.34833 | -76.73833 |

# Hanover County - Sinclair
# Area of Impact - Middle Potomac Aquifer




0 0.5 1 2 3 4 Miles

United States Geological Survey
Richmond 1:250,000 series, 1973
UTM Zone 18, NAD 1927

Area of Impact based on 2-d analytical simulation of a single confined aquifer. Pumping was simulated at 5,310,000 gallons per year for 10 years. Transmissivity of 610 ft sq/day was estimated from an on-site step test. Storage coefficient was estimated from a nearby aquifer test. The one-foot drawdown contour (area of impact) occurs at 15,260 ft from the pumping well.

- Production Well
- Area of Impact
- Nearby Permitted Wells

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Technical Evaluation performed by
Beverly Quinlan
Ground Water Modeler
Office of Ground Water Withdrawal Permitting
February 23, 2006

Applicant's Address

Dear Applicant:

This is to advise you that the Department of Environmental Quality is considering issuance of a ground water withdrawal permit to (facility name). Enclosed is a copy of the draft Ground Water Withdrawal Permit for your facility. Please review the draft permit package including the Special Conditions carefully, and provide written acceptance, rejection, or comments regarding the draft permit's conditions by [date, 30 days from the date mailed to applicant].

Certain public notice and public participation procedures must be complied with before the actual permit can be issued. They are as follows:

1. DEQ will ensure that the attached Public Notice is advertised once in a newspaper of general circulation in the area affected by the withdrawal. The applicant is responsible for authorizing payment for the public notice. Enclosed is a Public Notice Authorization Form that must be signed by the applicant and returned to us. The cost will be approximately $300.00 to $500.00 that will be billed to you by the newspaper. DEQ will terminate application processing for applicants that do not provide authorization within requested time periods.

2. A minimum of 30 days will be allowed for public response following the date of the public notice. If no public response is received, or if the public response received can be satisfactorily answered, then the permit may be issued. However, if there is significant public response, then it may be necessary to initiate public hearing procedures. If a public hearing is necessary, you will be so advised.

A copy of the Area of Impact Maps, as determined by our Office of Ground Water Withdrawal Permitting modelers is also included in the Mitigation Plan for your reference. If you have any questions or comments on the draft permit or public notice requirements, please contact me at [staff phone number].

Sincerely,

RO GW Permit Writer/Supervisor

Enclosures

Cc: [name], Remediation Manager
OGWWP

# COMMONWEALTH OF VIRGINIA
# DEPARTMENT OF ENVIRONMENTAL QUALITY

## Applicant Response to Draft Permit Number GW#######

Name of Facility: [Facility name]
Owner: [Owner name]
Address: [address]

After reviewing the Draft Ground Water Withdrawal Permit for the facility referenced above.

(Please Check One Box Below)

☐ I accept the terms and conditions of the draft permit.

☐ I plan to accept the terms and conditions of the draft permit but have included comments containing suggested permit modifications for your review at this time.

☐ I do not plan to accept the terms and conditions of the draft permit.

_____
Printed Name & Title

_____
Signature

_____
Date

Please prepare comments regarding the draft ground water withdrawal permit on a separate sheet and attach them to this form. Submit this form and any comments by [date, 15 days from the date mailed to applicant] to:

Department of Environmental Quality
Attn: [permit writer]
[RO address]

Applicant's Address

Dear Applicant:

Thank you for submitting your application for [facility] to withdraw _____ gallons per year. An administrative review of the application noted several administrative deficiencies which must be addressed so that staff can continue processing the permit application. Please address the following deficiencies:

1.
2.
3.
etc.

Please submit two copies of your application revisions in a format suitable for substitution into your application to this office no later than [10-30 days from the date mailed to the applicant]. If necessary, the staff will contact you to correct any additional deficiencies noted after review of your responses.

Applicants that do not address deficiencies within requested time periods will have their application processing terminated and will lose their place in the review process.

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your permit application and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number]. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. . For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for: http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf.

If you have any questions, please contact me at [staff phone number].

Sincerely,

RO GW Permit Writer

Applicant's Address

Dear Applicant:

Thank you for submitting your application for [facility] to withdraw _____ gallons per year. At this time, the application is administratively complete. However, a technical review of the application noted several technical deficiencies which must be addressed so that staff can continue processing the permit application. Please address the following deficiencies:

1.
2.
3.
etc.

Please submit two copies of the required information, in a format suitable for substitution into your application, to this office no later than [10-30 days from the date mailed to the applicant]. If necessary, staff will contact you to request additional information after review of your responses.

Applicants that do not address deficiencies within request time periods will have their application processing terminated and will lose their place in the review process.

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your permit application and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number]. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for: http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

If you have any questions, please contact me at [staff phone number].

Sincerely,

RO GW Permit Writer

Certified Mail
Return Receipt Requested

Date

Owner's Address

Dear Owner:

My staff has requested on [list dates of letters] that you correct several deficiencies in your ground water withdrawal application for [facility]. This application was initially received on [date] and processing has continued since that time. At this point, processing of your application has taken an inordinate amount of time and staff does not believe that the current issues will be resolved in a reasonable amount of time. Therefore, your application has lost is priority for evaluation. DEQ may issue permits as a result of applications that were received subsequent to yours which may preclude issuance of your permit. When all deficiencies with your application are addressed, processing of your application will proceed.

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your permit application and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number]. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for: http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

If you have any questions, please contact (staff member and phone number).

Sincerely,

Remediation Manager

Cc: OGWWP
Permit writer

Local Government Address

Dear (Executive Officer):

The Department of Environmental Quality has received an application to withdraw ground water in the [ Eastern Virginia, Eastern Shore] Ground Water Management Area. 9 VAC 25-610-250 B. of the Ground Water Withdrawal Regulation requires that the DEQ send a notice of each draft permit to each local governing body within the ground water management area where the proposed withdrawal will occur.

In accordance with this section, please find the enclosed notice which will be advertised in the [newspaper name] on [date]. [This applicant [previously/currently] [held/holds] a ground water withdrawal permit authorizing a [# of gallons] gallon per year withdrawal.] Additional information on the permit application can be obtained by contacting me.

The Department will accept comments concerning the proposed issuance of this draft permit for thirty days. All comments must be received by [time] on [date].

Sincerely,

RO Permit Writer

Enclosure

PUBLIC NOTICE AUTHORIZATION FORM
AUTHORIZATION FOR PUBLIC NOTICE BILLING TO
GROUND WATER WITHDRAWAL PERMIT APPLICANT

I hereby authorize the Virginia Department of Environmental Quality (DEQ), to have the cost of publishing a public notice once in the_____ charged to:
(newspaper)

Agent or Department
to be billed: _____

_____

_____

_____

Applicant's
Address: _____

_____

_____

_____

Authorizing Agent: _____
(print)

Authorizing Agent's
Signature: _____

Applicant's Phone Number: (  ) _____

**RETURN TO: DEQ**
**[TRO/PRO] REGIONAL OFFICE**
**RO address**
**ATTN: [permit writer]**
**(RE: *FACILITY NAME.*)**

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality for the withdrawal of ground water in CITY/COUNTY, Virginia.
PUBLIC COMMENT PERIOD: MONTH DAY, YEAR to MONTH DAY, YEAR
PERMIT NAME: Ground Water Withdrawal Permit issued by DEQ, under the authority of the State Water Control Board
APPLICANT NAME, ADDRESS AND PERMIT NUMBER: NAME OF APPLICANT; ADDRESS; NUMBER
{This facility is an {Environmental Enterprise}{Exemplary Environmental Enterprise}{Extraordinary Environmental Enterprise} participant in Virginia's Environmental Excellence Program.}
{NAME AND LOCATION OF WATER WITHDRAWAL: NAME; ADDRESS OR SPECIFIC LOCATION}
PROJECT DESCRIPTION: NAME OF APPLICANT has applied for a {new}{modified}{reissuance of a} permit for DESCRIPTION OF BUSINESS OR ACTIVITY in CITY/COUNTY, Virginia. The permit would allow the applicant to withdraw an average of NUMBER of gallons per day. {The modification of the permit would allow DESCRIPTION.} The ground water withdrawal will support DESCRIBE BENEFICIAL USE. The proposed withdrawal will utilize the NAME aquifer at a depth between NUMBER feet to NUMBER feet below the land surface at the withdrawal site. An aquifer is a body of rock or layer of sediment in the ground in which ground water is stored and transported. DEQ has made a tentative decision to issue the permit.
HOW TO COMMENT: DEQ accepts comments by e-mail, fax or postal mail. All comments must be in writing; contain a brief statement on how the proposal affects the person commenting, other users or the aquifer; and be received by DEQ during the comment period. The public also may request a public hearing. If a public hearing is requested, the written comments should include the reason for holding a hearing and related factual concerns. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the proposed permit. The public may review the draft permit and application at the DEQ office named below.
CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:
NAME; NAME OF REGIONAL OFFICE, STREET, CITY, Virginia, ZIP CODE; Phone: PHONE NUMBER; E-mail: E-MAIL ADDRESS; FAX: FAX NUMBER

[date]

Ms. Phyllis Moor
The Virginian Pilot
Legal Advertising Department
150 W. Brambleton Avenue
Norfolk, Virginia 23510

Dear Ms. Moor:

Please publish the attached legal notice in your paper's classified advertisement section on [day], [date].

Upon completion of the advertising, please send proof of publication to:

[Permit Writer]
DEQ - Tidewater Regional Office
5636 Southern Blvd.
Virginia Beach, VA 23462

Please send the bill for your services to:

[Applicant name and address from authorization form]

If you have any questions or concerns please do not hesitate to contact me at (757) 518-XXXX.

Sincerely,

~~[Permit Writer]~~

Enclosure

cc: Applicant

# *** IMPORTANT NOTICE ***

Previously you were copied on an e-mail sent to your local newspapers requesting publication of the public notice for your Ground Water Withdrawal Permit application. We strongly advise that you obtain a copy of the newspapers for the public notice publication date and verify that the notice has been published. The DEQ does not have access to all local newspapers so it cannot verify publication on the requested date. If the notice does not appear in the newspaper please contact the signatory of this e-mail as soon as possible. While the newspaper is requested to provide DEQ with proof of publication it may not be sent until after the public notice period closes. If verification is not received and subsequent inquiry reveals that the notice was not published it will have to be published at the next available publication date and issuance of your permit will be delayed at least thirty days. Publication at a later date than initially requested will also extend the opportunity for public comments because copies of the public notice are mailed to each local governing body and posted on the DEQ website at the time of initial publication request.

RO Memohead

To: Regional Director

From: Regional Office Ground Water Permitting Staff

Date:

Copies: OPL Policy Analyst, Terry Wagner

Subject: Authorization for Public Hearing: GW0000000, [ Facility Name ], [ Owner ], [ County ]

Enclosed is the draft public hearing authorization request package for the proposed [ facility name ] ground water withdrawal permit application in [ County name ] County. It is composed of the following items:

1. Briefing memo requesting authorization for the public hearing.
2. Copies of the Public Notice.
3. Copies of comments received from public notice.
4. Copies of [ PRO, TRO ] responses to comments received from public notice.
5. Draft letter notifying owner/concerned citizens of hearing.
6. Draft Public Notice of Hearing

RO Memohead

To: Regional Director

From: Remediation Manager

Date:

Copies: Office of Policy & Legislation, Office of Ground Water Withdrawal Permitting

Subject: Briefing Memo Requesting Authorization to Convene [Deny] a Public Hearing regarding the Issuance of a Ground Water Withdrawal Permit No. GW0000000, [ Facility Name ], [ Owner ],[ County]

Background

[ Owner Name ] submitted a Ground Water Withdrawal Permit Application on [ Date ]. The application is for a [ new, expanded ] withdrawal. The application was for [ X ] gallons per year which will [ describe beneficial use ]. The draft permit was public noticed on [ date ] and the public comment period closed on [date]. [ Number ] responses were received by [ PRO, TRO ]. A written request for a public hearing [ was, was not received ].

Comment and Response Summary
(Summarize each comment and it's corresponding in numerical order as follows):

1. Comment: Summary
   Response: Summary

2. Comment: Summary
   Response; Summary

Statutory and Regulatory Considerations

Staff have analyzed the comments received with respect to the statutory and regulatory considerations for hearings. Staff has determined that there are [are not] substantial disputed issues relevant to the permit issuance. There are [no] statutory requirements for a hearing. Significant public interest has [has not] been demonstrated. [Describe any persons requesting a hearing in writing, if any, and their reason for requesting a hearing.] The issuance of the permit is not inconsistent with, or in violation of, the Ground Water Management Act of 1992 or any regulation promulgated thereunder.

Staff Recommendation

The staff recommends that the Regional Director:

1. [ Approve, Disapprove ] the convening of a Public Hearing concerning the [ issuance, reissuance ] of Ground Water Withdrawal Permit No. GW000000.

APPROVED: _____
Regional Director

DATE: _____

RO Memohead

To: Regional Director

From: Remediation Manager

Date:

Copies: Office of Policy & Legislation, Office of Ground Water Withdrawal Permitting

Subject: Briefing Memo Requesting Authorization to Convene a Public Hearing regarding the Denial of Ground Water Withdrawal Application No. GW0000000, [ Facility Name ], [ Owner ],[ County]

Background

[ Owner Name ] submitted a Ground Water Withdrawal Permit Application on [ Date ]. The application is for a [ new, expanded ] withdrawal. The application was for [ X ] gallons per year which would [ describe beneficial use ]. Staff has evaluated the application and determined that it is not in compliance with criteria contained in Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.). Staff has requested the applicant to modify the application to comply with the regulation or to withdraw the application. The applicant has refused to modify or withdraw the application.

Evaluation Summary

Summarize areas of non-compliance with regulations.

Staff Recommendation

The staff recommends that the Regional Director:

1. Approve the convening of a Public Hearing concerning the denial of Ground Water Withdrawal Application No. GW000000.

APPROVED: _____
Regional Director

DATE: _____

[Date]

Name

Address

Dear [ ]:

Thank you for your [ date ] letter concerning the proposed issuance of Ground Water Withdrawal Permit No. GW00XXX00. We believe that the proposed Ground Water Withdrawal Permit adequately addresses issues raised by the public during the public comment period which are within the jurisdiction of the Ground Water Withdrawal Permit Program. Based on this information and in accordance with 9 VAC 25-230-10 et seq., PROCEDURAL RULE NO. 1 - Public and Formal Hearing Procedures, I do not find sufficient justification to conduct a public hearing.

My staff and I sincerely appreciate your interest in this permit.

Sincerely,

Regional Office Director

[Date]

Name

Address

Dear [ ]:

Thank you for your [ date ] letter concerning the proposed issuance of Ground Water Withdrawal Permit No. GW00XXX00. We believe there are substantial, disputed issues regarding the issuance of this permit raised by the public during the public comment period which warrants the convening of a public hearing to gather additional information on this action. A public hearing will be scheduled in accordance with 9 VAC 25-230-10 et sec, PROCEDURAL RULE NO. 1 - Public and Formal Hearing Procedures. The public hearing will be held within 60 days from the date of this letter. The time and date of the public hearing will be published in the [newspaper name]. A member of my staff will notify you of the hearing time and date.

My staff and I sincerely appreciate your interest in this permit.

Sincerely,

Regional Office Director

**MEMORANDUM**

# DEPARTMENT OF ENVIRONMENTAL QUALITY
# _____ REGIONAL OFFICE

5636 Southern Blvd. Virginia Beach, VA 23462

Subject: Recommendation to Issue Ground Water Withdrawal Permit No. GW00XXX00 for [Facility Name] to [Applicant Name]

To: Regional Director through Remediation Manager

From: Permit Writer

Date: , 200x

Copies: Office of Ground Water Withdrawal Permitting

Legal Name & Address: Owner
Street Address
xxxxxxxxxxxxx, Virginia 23xxx

Application Submitted By: [signatory], [title]

Application Date: Signed [date] and received [date]

Location and Purpose of Facility: [City/County], [purpose]

Permit Fee Received: $6,000 deposited on [date]

Local Government: On [date] [City/County] indicated facility operations are consistent with all ordinances.

Application Complete: [date]

Background: This ground water withdrawal is for [short justification of need]. The withdrawal will utilize the [name] Aquifers located at depths of approximately x00 to x00 feet below land surface.

Public Notice: Closed on [date]. During the Public Notice Period, written comments were received from the County of New Kent and the Richmond Regional Planning District Commission. No specific objections to the draft permit were raised.

Staff Comments: Please note this permit application meets all technical and administrative regulatory requirements for issuance. [any other pertinent comments regarding this application/permit]

STAFF RECOMMENDATIONS:
The staff recommends that the Director:

1. Approve the subject draft permit and pursuant to Section 62.1-266., authorize the issuance of a permit to [Owner], [Facility] to withdraw a total of xxx,x00,000 gallons per year of ground water from their wells. This water must be applied to beneficial [public/industrial] use as described in the application dated [date] and subsequently amended.

2. Direct [Owner], [Facility] to adhere to the conditions of the permit.

**MEMORANDUM**

# DEPARTMENT OF ENVIRONMENTAL QUALITY
# _____ REGIONAL OFFICE

5636 Southern Blvd. Virginia Beach, VA 23462

Subject: Recommendation to Issue MODIFIED Ground Water Withdrawal Permit No. GW00XXX00 for [Facility Name] to [Applicant Name]

To: Regional Director through Remediation Manager

From: Permit Writer

Date: , 200x

Copies: Office of Ground Water Withdrawal Permitting

Legal Name & Address: Owner
Street Address
xxxxxxxxxxxxx, Virginia 23xxx

Application Submitted By: [signatory], [title]

Application Date: Signed [date] and received [date]

Location and Purpose of Facility: [City/County], [purpose]

Permit Fee Received: $6,000 deposited on [date]

Local Government: On [date] [City/County] indicated facility operations are consistent with all ordinances.

Application Complete: [date]

Background: The purpose of this modification is to authorize [ explain the nature of the modification]. **OR** The purpose of this modification is to authorize the change of ownership of Ground Water Withdrawal permit number GW00XXX00 to [new owner name]. This permit continues to limit the volume of withdrawal to [ ] gallons of groundwater per month and [ ] gallons of groundwater per year. This ground water withdrawal is for [short justification of need]. The withdrawal will [continue to] utilize the [name] Aquifers located at depths of approximately x00 to x00 feet below land surface.

Public Notice: Closed on [date]. During the Public Notice Period, written comments were received from the County of New Kent and the Richmond Regional Planning District Commission. No specific objections to the draft permit were raised. **OR** No public notice is required for this minor modification.

Staff Comments: Please note this permit application meets all technical and administrative regulatory requirements for issuance. [any other pertinent comments regarding this application/permit]

STAFF RECOMMENDATIONS:

The staff recommends that the Director:

1. Approve the subject draft permit and pursuant to Section 62.1-266., authorize the issuance of a permit to [Owner], [Facility] to withdraw a total of xxx,x00,000 gallons per year of ground water from their wells. This water must be applied to beneficial [public/industrial] use as described in the application dated [date] and subsequently amended.

2. Direct [Owner], [Facility] to adhere to the conditions of the permit.

[date]

Certified Mail
Return Receipt Requested

Name and Address

Dear:

Pursuant to Title 62.1, Chapter 25, Code of Virginia, 1950, as amended, (The Ground Water Management Act of 1992) the Director has authorized issuance of a permit to utilize ground water. This permit limits the volume of withdrawal to [ ] gallons of ground water per month and [ ] gallons of ground water per year.

The completed permit is enclosed for your records. Please note the requirement to record meter readings each month. Monthly use of ground water shall be reported to the [_____] Regional Office of the Department of Environmental Quality by the tenth ($10^{th}$) day of each January, April, July, and October on the enclosed Ground Water Withdrawal Reporting Form. You are responsible for making additional copies of the form.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually receive this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

In addition, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you should have any questions, please contact [staff member] of our [ ] Regional Office (xxx) (xxx-xxxx).

Sincerely,

Regional Office Director/Remediation Manager

Enclosure
cc: OGWWP
permit writer, DEQ - RO

[date]

Certified Mail
Return Receipt Requested

Name and Address

Dear:

Pursuant to Title 62.1, Chapter 25, Code of Virginia, 1950, as amended, (The Ground Water Management Act of 1992) the Director has authorized issuance of a modified permit to utilize ground water. The purpose of this modification is to authorize [ explain the nature of the modification]. **OR** The purpose of this modification is to authorize the change of ownership of Ground Water Withdrawal permit number GW00XXX00 to [new owner name]. This permit continues to limit the volume of withdrawal to [ ] gallons of groundwater per month and [ ] gallons of groundwater per year.

The completed permit is enclosed for your records. Please note the requirement to record meter readings each month. Monthly use of ground water shall be reported to the [_____] Regional Office of the Department of Environmental Quality by the tenth ($10^{th}$) day of each January, April, July, and October on the enclosed Ground Water Withdrawal Reporting Form. You are responsible for making additional copies of the form.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually receive this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

In addition, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you should have any questions, please contact [staff member] of our [ ] Regional Office (xxx) (xxx-xxxx).

Sincerely,

Regional Office Director/Remediation Manager

Enclosure
cc: OGWWP

# COMMONWEALTH of VIRGINIA
## DEPARTMENT OF ENVIRONMENTAL QUALITY
# PERMIT
## TO WITHDRAW GROUND WATER
(FOR USE IN GROUND WATER MANAGEMENT AREAS)

Permit Number: GW00XXX00
Effective Date: ~~December 1, 2000~~
Expiration Date: ~~November 30, 2010~~

Pursuant to Section 62.1-256 of the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.), the STATE WATER CONTROL BOARD hereby authorizes

Permittee ~~Legal Owner Name~~

Address ~~Mailing Address~~

City, Virginia XXXXX

Facility ~~Facility Name~~

to withdraw and use ground water in accordance with this permit and the application received ~~[ Month dd, yyyy ]~~ and subsequently amended.

The permittee is authorized to withdraw ~~XXX,000,000~~ gallons per year.

The permittee shall comply with all requirements contained on this cover page, Part I - Permit Standards, Limitations, and Conditions, Part II - Special Conditions, the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia), and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.). Nothing in this permit or this regulation shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes and regulations.

The permitted withdrawal will be used to provide ~~an institutional water supply, boiler feed water, and a potable water supply~~. Other beneficial uses are not authorized by this permit.

Any noncompliance with permit conditions, the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.) or the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) is a violation of the regulation and law, and is grounds for enforcement action, permit termination, revocation, amendment, or denial of a permit renewal application.

By direction of the STATE WATER CONTROL BOARD, this Permit is granted by:

Signed_____ Date _____

For the STATE WATER CONTROL BOARD

Part I
Permit Standards, Limitations and Conditions

1. The withdrawal of ground water shall originate from the following withdrawal points:

| Owner Well Name | DEQ Well# | Depth | Aquifer | Latitude | Longitude |
|---|---|---|---|---|---|
| ~~Well #1~~ | ~~xxx-xxx~~ | ~~xxx'~~ | ~~Lower Yorktown-Eastover~~ | ~~36°36' 45"~~ | ~~76° 10' 54"~~ |
| ~~Well #2~~ | ~~xxx-xxx~~ | ~~xxx'~~ | ~~Upper/Middle Yorktown-Eastover~~ | ~~36°36' 41"~~ | ~~76° 10' 48"~~ |
| ~~Well #3~~ | ~~xxx-xxx~~ | ~~xxx'~~ | ~~Lower Yorktown-Eastover~~ | ~~36°36' 48"~~ | ~~76° 11' 00"~~ |

2. Withdrawals from the well or well system are limited as follows :

   In a calendar month: Total pumpage from these wells shall not exceed xx~~,000,000~~ gallons. The permittee shall report any amount in excess of the monthly withdrawal limit by the fifth day of the month following the month of over withdrawal.

3. Water use from each well and total system water use shall be recorded monthly and reported on forms provided by the Department of Environmental Quality (Department) to the ~~Tidewater~~ Regional Office of the Department by the tenth day of each January, April, July and October for the respective previous standard quarter. Records of water use shall be maintained by the permittee as required in Section 9 VAC 25-610-130.F. of the Ground Water Withdrawal Regulation.

4. Permitted users shall install in-line totalizing flow meters to read gallons, cubic feet or cubic meters on each well prior to beginning the permitted use. Meters shall be tested in accordance with American Water Works Association (AWWA) Manual M-6, "Water Meters - Selection, Installation, Testing, and Maintenance". Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in ground water withdrawal reports.

5. Each permitted well shall be equipped in a manner such that water levels can be measured during pumping and nonpumping periods without dismantling any equipment. Any opening for tape measurement of water levels shall have an inside diameter of 0.5 inches and be sealed by a removable plug or cap. The permittee shall provide a tap for taking raw water samples from each permitted well.

6. The permittee shall not place a pump or water intake device lower than the top of the uppermost confined aquifer that a well utilizes as a ground water source or lower than the bottom of an unconfined aquifer that a well utilizes as a ground water source.

7. Each well that is included in this ground water withdrawal permit shall have affixed to the well casing, in a prominent place, a permanent well identification plate that records the Department of Environmental Quality well identification number, the ground water withdrawal permit number, the total depth of the well and the screened intervals in the well, at a minimum. Such well identification plates shall be in a format specified by the Department and are available from the Department of Environmental Quality.

8. The Water Conservation and Management Plan as described in the application received ~~Month dd, yyyy~~ and subsequently amended is incorporated into this permit and included as Attachment A. Requirements in the Water Conservation and Management Plan shall have the same effect as any condition contained in this permit and may be enforced as such. Records of activities conducted pursuant to the Plan are to be submitted to DEQ upon request.

9. This permit may be reopened for the purpose of amending the conditions of the permit to meet new regulatory standards duly adopted by the Board.

10. A new permit application must be submitted 270 days before the expiration date of this permit.

11. A new permit application must be submitted 270 days prior to any proposed modification to this permit that will result in an increase of withdrawal above permitted limits or violate the terms and conditions of this permit.

12. This permit may be reopened for amendment, transfer, or revocation as described in Part 6 of the Ground Water Withdrawal Regulation.

13. The permittee must notify the Department in writing and obtain staff approval of any change in the status, construction or pump setting of wells included in this permit. A revised GW-2 form must be submitted to the Department within 30 days in the event that the physical construction of a well is altered or the pump setting in the well is changed.

14. The permittee must notify the Department in writing of any change of contact person, address, or phone number that is contained in the application received ~~Month dd, yyyy~~.

15. Upon presentation of credentials the Board or Department, or any duly authorized agent, shall have the power to enter, at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, located anywhere in the Commonwealth for the purposes of obtaining information, conducting surveys or inspections, or inspecting wells and springs to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which the Board or Department may adopt, issue or establish to carry out the provisions of the Ground Water Management Act of 1992 and the Ground Water Withdrawal Regulation.

Part II
Special Conditions

1. Withdrawals from individual wells are limited as follows:

Maximum Pumping Rate(s)

| Owner Well Name/Number | DEQ Well Number | VWUDS MPID Number | Gallons per (day, month, year) | Source Aquifer |
|---|---|---|---|---|
| Southern Well Field #1 | 175-00062 | 370524076224501 | 3,600,000 gal/yr | Aquia |
| Southern Well Field #2 | 175-00063 | 370524076224502 | 8,000,000 gal/yr | Chickahominy-Piney Point |
| Northern Well Field #1<br>Northern Well Field #2<br>Northern Well Field #3 | 175-00100<br>175-00101<br>175-00102 | 370521076224501<br>370522076224602<br>370522076224703 | combined total not to exceed 52,000,000 gal/yr | Upper Potomac |

2. **Mitigation Plan**
The Mitigation Plan, as described in the application received (*application date*) and subsequently amended, is incorporated into this permit and included as Attachment B. Requirements in the Mitigation Plan and subsequent revisions shall have the same effect as any condition contained in this permit and may be enforced as such.

3. **Health Department Permit**
Daily withdrawals shall be consistent with the requirements and conditions of the Virginia Department of Health Waterworks Operation Permit (permit #). The permittee shall submit copies of WWOP and the associated Engineering Description Sheets to DEQ within 30 days of an upgrade.

4. **Additional Wells**
A minor amendment to this permit must be made to include additional wells. Additional wells may be permitted under a minor amendment if the total withdrawal does not exceed the permitted amount contained in this permit, the withdrawal from all additional wells originates from the (*aquifer name*) Aquifer, and the location of the wells are approved by DEQ staff prior to construction. Additionally, a complete suite of geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) shall be submitted to the DEQ ~~Tidewater~~ Regional Office prior to setting the pump intake.

The following special conditions MAY be included at the discretion of the permit writer. Additional special conditions may be included at the discretion of the permit writer.

5. **Drilling Schedule Notification**
At least two weeks prior to the scheduled construction of (*owner well name, DEQ well #*), the permittee shall notify the (TRO, PRO) Regional Office of the Department of Environmental Quality of the drilling timetable and receive prior approval of the well locations. Completed water well construction reports shall be submitted to DEQ within 30 days of the completion of any well and prior to the initiation of any withdrawal from the well. Additionally, geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) shall be completed for the well and submitted with the corresponding completion report.

6. **Geophysical Logs**
The permittee shall collect geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) and prepare geologist's logs from the drill cuttings for all proposed production wells. The permittee shall evaluate this information to estimate the top of the (*aquifer name*) Aquifer, and therefore, a depth below which pumps may not be set. The permittee's determination of the top of the (*aquifer name*) aquifer shall be submitted for review and Department concurrence prior to installation of any pump. All geophysical and geologist's logs shall be referenced by the DEQ well number.

7. **WWCR** (FORM GW-2)
The permittee shall provide complete Water Well Construction Reports (Form GW-2) to DEQ staff for all production and monitoring wells within 30 days of the completion of the well. All pages of the submission shall be referenced by the DEQ well number. These reports shall be submitted prior to the initiation of any withdrawal from the well.

8. **Water Quality Monitoring**

The permittee shall collect a ground water quality sample from *(owner well name, DEQ well #*) completed in the (*aquifer name*) Aquifer on a quarterly basis. Prior to collecting the sample, the well shall be pumped sufficiently to withdraw at least three well volumes and the Ph, temperature, and conductivity of the discharge shall be stabilized. The sample shall be analyzed for chloride, sulfate, alkalinity (as mg/L calcium carbonate, $CaCO_3$), fluoride (where appropriate), calcium, magnesium, zinc, sodium, iron, and potassium content, and an anion-cation balance (as described in Part 1030 F.1 of "Standard Methods for the Examination of Water and Wastewater") shall be performed on the results. Water quality analyses with major cation-anion imbalances greater than eight percent are considered unreliable and are to be re-analyzed and/or resampled and reanalyzed within 30 days. A report of the results shall be submitted quarterly with the withdrawal reports required in Condition 3 of Part I - Permit Standards, Limitations and Conditions. Records of ground water quality sampling results shall be maintained by the permittee as required in 9 VAC 25-610-130.F. of the Ground Water Withdrawal Regulation. If no trends in chloride concentration are shown after the collection of 10 consecutive quarterly samples, sampling frequency may be reduced to an annual basis at the request of the permittee with approval by DEQ staff.

9. **Water Quality Reopener**

If the monitoring information required in Condition (*paragraph number*), above, indicates the potential for adverse impacts on ground water quality due to this withdrawal, this permit may be reopened to include ground water quality action levels.

10. **Water Level Monitoring**

(*Within [time frame] of the effective date of the permit*), a continuous water level recording instrument shall be installed and maintained on the monitoring well (*owner well name, DEQ well #*) completed in the (*aquifer name*) Aquifer. Daily low water level records shall be submitted quarterly with the withdrawal reports required in Condition 3 of Part I - Permit Standards, Limitations and Conditions. Records of ground water levels shall be maintained by the permittee as required in 9 VAC 25-610-130.F. of the Ground Water Withdrawal Regulation.

11. **Water Level Reopener**

If the monitoring information required in Conditions (*paragraph number*), above, indicates the potential for adverse impacts on ground water level due to this withdrawal, this permit may be reopened to include ground water level action levels.

12. **Pump Intake Settings (existing wells)**

Pump settings in individual wells are limited as follows:

| Owner Well Name (or #) | DEQ Well# | Max Pump Setting (ft below land surface) |
|---|---|---|
| ~~Well~~ | ~~xxx-xxx~~ | ~~xxx~~ |
| ~~Well~~ | ~~xxx-xxx~~ | ~~xxx~~ |
| ~~Well~~ | ~~xxx-xxx~~ | ~~xxx'~~ |

The permittee may provide additional information regarding the depth of the top of the (*aquifer name*) Aquifer to justify pump settings different from those listed above. Any change in the pump settings must receive prior approval by staff of the Department of Environmental Quality and be included in this permit as a minor amendment.

13. **Pump Intake Settings (proposed wells)**

Prior to any withdrawals from the proposed production wells, the permittee shall consult with DEQ in order to determine the maximum depth of the pump intake for each well.

14. **Pump Intake Reset (applicable only to permits issued based on historical use)**

(*No later than one (1) year from the effective date of this permit*), or at the time of any modification to (*owner well name, DEQ #*), whichever comes first, the permittee shall raise the pump intake to no lower than (___) feet below the land surface. The permittee shall advise, in writing, DEQ of the new pump setting within 30 days of the modification.

15. **Unknown Well Construction**

At the time of any well maintenance which results in the pump being pulled for (owner well name, DEQ#), the permittee shall perform a camera survey of the well to determine well depth, casing sizes and type, as well as screen intervals. The results of the camera survey are to be reported to the DEQ Regional Office within 30 days of completion. .

16. **Well Abandonment**

Within 90 days of the effective date of the permit, the permittee shall properly abandon the unused (*owner well name, DEQ well #*) in accordance with the Virginia Department of Health's Private Well *(or Waterworks)* Regulations and submit documentation to the Department of Environmental Quality. At least one week prior to permanently abandoning the well, the permittee shall notify the Department of Environmental Quality of the scheduled well abandonment date.

17. **Annual Irrigation Report**

The permittee will submit, by January 10 of each year, an Annual Irrigation Water Use Report for the preceding year to the (Tidewater, Piedmont) Regional Office of the Department of Environmental Quality. The report shall be submitted with the withdrawal reports required in Condition 3 of Part I - Permit Standards, Limitations and Conditions. Records of the Annual Irrigation Water Use Report shall be maintained by the permittee as required in Section 9 VAC 25-610-130.F of the Ground Water Withdrawal Regulation. This report should address the total irrigation water (surface and ground water) usage, for each month and the complete year. The items to be included in the report are: total irrigation demand (combined surface and ground water sources metered from the irrigation lake); irrigation demand (ground water) from the production wells; and resultant surface water contribution. Should this report indicate that more irrigation water is available from the surface water sources than was assumed in the application received (*application date*), and subsequently amended, the permit may be reopened to reduce the annual withdrawal amount authorized.

18. **Irrigation Lake Flow Meter**

The permittee shall install an in-line totalizing flow meter to read gallons, cubic feet or cubic meters on the irrigation lake's withdrawal prior to beginning the permitted use. This meter should be capable of totalizing all water applied to the golf course for irrigation purposes. The meter shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in ground water withdrawal reports.

19. **Withdrawal System Growth**

This permit recognizes that the permittee anticipates using (___) percent of the permitted withdrawal amount of ( ) gallons per year by the 5th year of the permit.

21. **Lake Level Control**

The permittee shall install and maintain a device to control water levels in the irrigation lake to insure that ground water pumped into the lake does not discharge through the lake's overflow pipe.

20. **Permit Reopener**

This permit may be reopened if the issuance of ground water withdrawal permits required by the Ground Water Management Act of 1992 for existing permitted or certificated users indicate that the basis used for predicting compliance with regulatory drawdown criteria was inaccurate.

(To Applicant Recommending Denial of application)

Certified Mail
Return Receipt Requested

Date

Owner's Address

Dear Owner:

My staff has reviewed your application to withdraw [requested amount] of ground water that was submitted on [date]. On [date] my staff transmitted a letter to you indicating technical deficiencies with your application. [Describe any response to technical deficiency letter] A technical review of the application continues to note several technical deficiencies which must be addressed so that staff can continue processing the permit application. The specific deficiencies are:

1. (list deficiencies with Ground Water Withdrawal Regulations, or the Ground Water Management Act of 1992)
2.

etc.

At this time, you may modify your application to address the above-listed issues, withdraw your existing application, or proceed with your existing application. Should you elect to proceed with your existing application DEQ will recommend to the Board that it deny the application for the reasons listed above.

If you wish to modify your existing application or withdraw your application, please contact [staff member] in writing by [date]. If no response is received by [date], I will direct my staff to initiate a proceeding to determine whether to deny your application.

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your permit application and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number]. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for:
http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

If you have any questions, please contact (staff member and phone number).

Sincerely,

Regional Office Director

Certified Mail
Return Receipt Requested

Date

Owner's Address

Dear Owner:

My staff mailed a draft ground water withdrawal permit, public notice, and public notice authorization form to you on [date]. My staff contacted you on [date] by telephone because you failed to return the signed public notice authorization form in a timely manner. It is my understanding that you are unwilling to accept the draft permit, including all terms and conditions.

If you wish to accept the draft permit please complete the public notice authorization form and mail it to [staff member] by [date]. If you are unwilling to accept the draft permit or no response is received by [date], I will direct my staff to initiate a proceeding to determine whether to deny your application.

If you have any questions, please contact (staff member and phone number).

Sincerely,

Regional Office Director

Date
Certified Mail
Return Receipt Requested

Owner's Address

Dear Owner:

On [date of Board meeting] the State Water Control Board denied the issuance of a Ground Water Withdrawal Permit that you requested in an application dated [date]. The Board's decision to deny issuance of a Ground Water Withdrawal Permit was based on the following reason(s):

1. [List reason for denial]
2.
3.
4.
etc.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually receive this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

In addition, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.



If you should have any questions, please contact [staff member] of our [ ] Regional Office (xxx-xxxx).

Sincerely,

Regional Office Director

Form **GW-2**

Revised 12/1/00

**COMMONWEALTH OF VIRGINIA**
**WATER WELL COMPLETION REPORT**

(Certification of Completion/County Permit)

**DEQ WELL #** _____
**USGS LOCAL #** _____

Virginia Dept. Of Environmental Quality
P.O. Box 10009
Richmond, VA 23240-0009

DEQ Permit _____

County Permit _____

Certification of inspecting official:
This well does ____ does not _____
Meet code/law requirements.
Signature: _____
Date: _____

*For Office Use*

COUNTY / CITY _____
(County / City Stamp)

**Virginia Plane Coordinates**
_____ N
_____ E

**Latitude & Longitude**
Datum: _____
_____ N
_____ W
Topo. Map No. _____
Elevation _____ ft.
Formation _____
Lithology _____
River Basin _____
Province _____
Type Logs _____
Cuttings _____
Water Analysis _____
Aquifer Test _____

Owner _____
Well Designation or number _____

Address _____
_____

Phone _____

Drilling Contractor _____
Address _____
_____

Phone _____

Tax Map I.D. No. _____
Subdivision _____
Section _____
Block _____
Lot _____
Class Well I _____ IIA _____
IIB _____ IIIA _____ IIIB _____
IIIC _____ IIID _____ IIIE _____

WELL LOCATION: _____ (feet/miles) _____ (direction) of _____
and _____ (feet/miles) _____ (direction) of _____
***If possible please include map showing marked well location.***

Date Started _____ Date Completed _____ Type Rig _____

**1. WELL DATA:** New ___ Reworked __ Deepened ____
Total Depth _____ ft.
Depth to Bedrock _____ ft.
**Hole Size** (Also include reamed zones)
_____ inches from _____ to _____ ft.
_____ inches from _____ to _____ ft.
_____ inches from _____ to _____ ft.
**Casing Size (I.D.) and Material**
_____ inches from _____ to _____ ft.
Material _____
Weight per ft. _____ or wall thickness _____ in.
_____ inches from _____ to _____ ft.
Material _____
Weight per ft. _____ or wall thickness _____ in.
_____ inches from _____ to _____ ft.
Weight per ft. _____ or wall thickness _____ in.
**Screen Size & Mesh for Each Zone**
_____ inches from _____ to _____ ft.
Mesh Size _____ Type _____
_____ inches from _____ to _____ ft.
Mesh Size _____ Type _____
_____ inches from _____ to _____ ft.
Mesh Size _____ Type _____
_____ inches from _____ to _____ ft.
Mesh Size _____ Type _____
**Gravel Pack**
From_____ to _____ ft.
From_____ to _____ ft.
**Grout**
From_____ to _____ ft. Type _____
From_____ to _____ ft. Type _____

**2. WATER DATA:** Water Temperature _____F
Static Water Level (unpumped level measured) _____ft.
Stabilized measured pumping water level _____ ft.
Stabilized Yield _____ gpm after _____ hours
Natural Flow: Yes ____ No ____ Flow Rate _____ gpm
Comment on water quality: _____

**3. WATER ZONES:** From _____ To _____
From _____ To _____ & From _____ To _____
From _____ To _____ & From _____ To _____

**4. USE DATA**
Type of Use: Drinking _____ Livestock Watering _____
Irrigation _____ Food Processing _____ Household ____
Manufacturing _____ Fire Safety _____ Cleaning _____
Recreation _____ Aesthetic _____ Cooling/Heating ____
Injection _____ Other _____
Type of Facility: Domestic ____ Public Water Supply ___
Public Institution ____ Farm ____ Industry ____
Commercial ____ Other _____

**5. PUMP DATA:** Type _____ Rated hp. _____
Intake Depth _____ft. Capacity _____ gpm at _____head

**6. WELLHEAD:** Type of Well Seal _____
Pressure Tank _____ gal. Location _____
Sample Tap _____ Measurement Port _____
Well Vent _____ Pressure Relief Valve _____
Gate valve _____ Check Valve (when required) ____
Electrical Disconnect Switch on Power Supply _____

**7. DISINFECTION:** Well Disinfected _____ Yes _____ No
Date _____ Disinfectant Used _____
Amount _____ Hours Used _____

**8. ABANDONMENT:** (where applicable) ____ Yes ____ No
Casing Pulled ____ Yes ____ No ____ NA
Plugging Grout From ____ to ____ Material _____

**OWNER:** _____ **DEQ WELL #** _____
**USGS LOCAL #** _____

**9.** State law requires submitting to the Virginia State Water Control board information about ground water and wells for every well made in the State intended for water, or any other non-exempt well. This information must be submitted whether the well is completed, on standby, or abandoned. Information required includes: an accurately and completely prepared water well completion report, full data from any aquifer pumping tests, drill cuttings taken at ten foot intervals (unless exemption is secured), the results of any chemical analysis, and copies of the geophysical logs. Quarterly pumpage and use reports are required from owners of public supply and industrial wells. County or State permits to drill may be required in some parts of the state. Some counties require submission of a water well completion report. The Virginia State health Department requires a water well completion report for public water supply.

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**10. Driller's Log** (Use additional sheets if necessary)

| Depth (feet) | | Type of Rock or Soil | Remarks | **11.** Drilling Time (Min.) | **12. Diagram of Well Construction** (with dimensions) |
|---|---|---|---|---|---|
| From | To | (Color, material, fossils, hardness, etc.) | (Water, caving, cavities, broken, core, shot, etc.) | | |
| | | | | | |

**13.** Well Lot Dedicated? _____ Size _____ ft. by _____ ft. Well House? _____
Distance to nearest pollutant source _____ ft. Type _____
Distance to nearest property line _____ ft. Building _____ ft.

**14.** WATER SERVICE PIPE: Checked under _____p.s.i. for _____ minutes
Pipe Size _____ in. Material _____
Installer _____
Date _____

**15.** I certify that the information contained herein is true and correct and that this well and/or system has been installed and constructed in accordance with the requirements for well construction as specified in compliance with appropriate county or independent city ordinances and the laws and rules of the Commonwealth of Virginia.

Signature _____ Date _____
(Well driller or authorized person)

License Number _____

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarter 1 2 3 4
Page 1 of 1

Quarterly Ground Water Withdrawal Report

Owner ~~The Colonial Wbg. Foundation~~
Facility ~~Green Golf Course~~
Address ~~Post Office Box 1776~~
~~Address line 2~~
~~Williamsburg~~, VA 23~~187~~
Meter readings are in _____ (gallons, 100's or 1000's of gallons, cubic feet, etc.)

Name of Operator _____
Position/Title _____
Signature _____ Date _____
Phone _____
Permit # GW0036100 expires ~~February 28, 2015~~
Note: New application due ~~June 3, 2014~~

Month of _____ Year of _____

| Owner Well Number | DEQ Well Number and MPID Number | Present Reading | Previous Reading | Total Gallons |
|---|---|---|---|---|
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| | | Total Gallons | (this month) | |
| | | Total Gallons | (year to date) | |

Month of _____ Year of _____

| Owner Well Number | DEQ Well Number and MPID Number | Present Reading | Previous Reading | Total Gallons |
|---|---|---|---|---|
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| | | Total Gallons | (this month) | |
| | | Total Gallons | (year to date) | |

Month of _____ Year of _____

| Owner Well Number | DEQ Well Number and MPID Number | Present Reading | Previous Reading | Total Gallons |
|---|---|---|---|---|
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| ~~Green Golf Course J~~ | ~~147-235 365750076251501~~ | | | |
| | | Total Gallons | (this month) | |
| | | Total Gallons | (year to date) | |

Hearing Procedures can be found online on the Legislative Information System

http://leg1.state.va.us/000/reg/TOC09025.HTM#C0230

Title 62.1 - Chapter 25 - Ground Water Management Act of 1992

§ 62.1-254. Findings and purpose.
The General Assembly hereby determines and finds that, pursuant to the Groundwater Act of 1973, the continued, unrestricted usage of ground water is contributing and will contribute to pollution and shortage of ground water, thereby jeopardizing the public welfare, safety and health. It is the purpose of this Act to recognize and declare that the right to reasonable control of all ground water resources within this Commonwealth belongs to the public and that in order to conserve, protect and beneficially utilize the ground water of this Commonwealth and to ensure the public welfare, safety and health, provision for management and control of ground water resources is essential.
§ 62.1-255. Definitions.
As used in this chapter, unless the context requires otherwise:
"Beneficial use" includes, but is not limited to, domestic (including public water supply), agricultural, commercial, and industrial uses.
"Board" means the State Water Control Board.
"Ground water" means any water, except capillary moisture, beneath the land surface in the zone of saturation or beneath the bed of any stream, lake, reservoir or other body of surface water wholly or partially within the boundaries of this Commonwealth, whatever the subsurface geologic structure in which such water stands, flows, percolates or otherwise occurs.
"Ground water withdrawal permit" means a certificate issued by the Board permitting the withdrawal of a specified quantity of ground water in a ground water management area.
"Person" means any and all persons, including individuals, firms, partnerships, associations, public or private institutions, municipalities or political subdivisions, governmental agencies, or private or public corporations organized under the laws of this Commonwealth or any other state or country.
§ 62.1-256. Duties of Board.
The Board shall have the following duties and powers:
1. To issue ground water withdrawal permits in accordance with regulations adopted by the Board;
2. To issue special orders as provided in § 62.1-268;
3. To study, investigate and assess ground water resources and all problems concerned with the quality and quantity of ground water located wholly or partially in the Commonwealth, and to make such reports and recommendations as may be necessary to carry out the provisions of this chapter;
4. To require any person withdrawing ground water for any purpose anywhere in the Commonwealth, whether or not declared to be a ground water management area, to furnish to the Board such information with regard to such ground water withdrawal and the use thereof as may be necessary to carry out the provisions of this chapter, excluding ground water withdrawals occurring in conjunction with activities related to exploration for and production of oil, gas, coal or other minerals regulated by the Department of Mines, Minerals and Energy;
5. To prescribe and enforce requirements that naturally flowing wells be plugged or destroyed, or be capped or equipped with valves so that flow of ground water may be completely stopped when said ground water is not currently being applied to a beneficial use;
6. To enter at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, for the purposes of obtaining information, conducting surveys or inspections, or inspecting wells and springs, and to duly authorize agents to do the same, to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which it may adopt, issue or establish to carry out the provisions of this chapter;

7. To issue special exceptions pursuant to § 62.1-267;
8. To adopt such regulations as it deems necessary to administer and enforce the provisions of this chapter; and
9. To delegate to its Executive Director any of the powers and duties invested in it to administer and enforce the provisions of this chapter except the adoption and promulgation of rules, standards or regulations; the revocation of permits; and the issuance, modification, or revocation of orders except in case of an emergency as provided in subsection B of § 62.1-268.
§ 62.1-257. When Board may initiate a ground water management area study proceeding; hearing required.
A. The Board upon its own motion or, in its discretion, upon receipt of a petition by any county, city or town within the area in question, may initiate a ground water management area proceeding, whenever in its judgment there may be reason to believe that:
1. Ground water levels in the area are declining or are expected to decline excessively;
2. The wells of two or more ground water users within the area are interfering or may reasonably be expected to interfere substantially with one another;
3. The available ground water supply has been or may be overdrawn; or
4. The ground water in the area has been or may become polluted. Such pollution includes any alteration of the physical, chemical or biological properties of ground water which has a harmful or detrimental effect on the quality or quantity of such waters.
B. If the Board finds that any one of the conditions required above exists, and further finds that the public welfare, safety and health require that regulatory efforts be initiated, the Board shall by regulation declare the area in question to be a ground water management area. The Board shall include in its regulation a definition of the boundaries of the ground water management area. The Board shall mail a copy of the regulation to the mayor or chairman of the governing body of each county, city or town within which any part of the area lies.
§ 62.1-258. Use of ground water in ground water management area.
It shall be unlawful in a ground water management area for any person to withdraw, attempt to withdraw, or allow the withdrawal of any ground water, other than in accordance with a ground water withdrawal permit or as provided in § 62.1-259, subsections C, D and F of § 62.1-260, and subsection C of § 62.1-261.
§ 62.1-259. Certain withdrawals; permit not required.
No ground water withdrawal permit shall be required for (i) withdrawals of less than 300,000 gallons a month; (ii) temporary construction dewatering; (iii) temporary withdrawals associated with a state-approved ground water remediation; (iv) the withdrawal of ground water for use by a ground water heat pump where the discharge is reinjected into the aquifer from which it is withdrawn; (v) the withdrawal from a pond recharged by ground water without mechanical assistance; (vi) the withdrawal of water for geophysical investigations, including pump tests; (vii) the withdrawal of ground water coincident with exploration for and extraction of coal or activities associated with coal mining regulated by the Department of Mines, Minerals and Energy; (viii) the withdrawal of ground water coincident with the exploration for or production of oil, gas or other minerals other than coal, unless such withdrawal adversely impacts aquifer quantity or quality or other ground water users within a ground water management area; (ix) the withdrawal of ground water in any area not declared a ground water management area; or (x) the withdrawal of ground water pursuant to a special exception issued by the Board.
§ 62.1-260. Permits for existing ground water withdrawals in existing ground water management areas.
A. Persons holding a certificate of ground water right or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore

Groundwater Management Areas and currently withdrawing ground water pursuant to said certificate or permit shall file an application for a ground water withdrawal permit on or before December 31, 1992, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1987, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation; however, with respect to a political subdivision, an authority serving a political subdivision or a community waterworks regulated by the Department of Health, the permit shall be issued for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1980, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation.

B. Persons holding a certificate of ground water right issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas and currently withdrawing ground water pursuant to the certificate shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1988, and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.

C. Persons holding a permit to withdraw ground water issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas shall not be required to apply for a ground water withdrawal permit until the expiration of the term of the permit to withdraw ground water as provided in subsection C of § 62.1-266, and may withdraw ground water pursuant to the terms and conditions of the permit to withdraw ground water. Such persons may apply for a ground water withdrawal permit allowing greater withdrawals of ground water than are allowed under an existing permit, and the Board in its discretion may issue a permit for such greater withdrawals, upon consideration of the factors set forth in § 62.1-263.

D. Persons holding a certificate of ground water right issued prior to July 1, 1992, or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, who have not withdrawn ground water prior to July 1, 1992, may initiate a withdrawal on or after July 1, 1992, pursuant to the terms and conditions of the certificate or permit. The persons shall file an application for a ground water withdrawal permit on or before December 31, 1995, and may continue withdrawing ground water under the terms and conditions of their certificate or permit until the required ground water withdrawal permit application is acted on by the Board, provided that the ground water withdrawal permit application is filed on or before December 31, 1995. The Board shall issue a ground water withdrawal permit for the total amount of ground water withdrawn and applied to a beneficial use during any consecutive twelve-month period between July 1, 1992, and June 30, 1995, together with (i) such savings as can be demonstrated to have been achieved through water conservation and (ii) such amount as the Board in its discretion deems appropriate upon consideration of the factors set forth in § 62.1-263. This subsection shall not apply to a political subdivision, or an authority serving a political subdivision, holding a permit or certificate for a public water supply well for supplemental water during drought conditions, which shall apply for a ground water withdrawal permit as provided in § 62.1-265.

E. Persons withdrawing ground water for agricultural or livestock watering purposes in the Eastern Virginia or Eastern Shore

Groundwater Management Areas on or before July 1, 1992, shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1983 and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.
F. Persons withdrawing ground water for agricultural or livestock watering purposes, or pursuant to certificates of ground water right or permits to withdraw ground water issued prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, may continue such withdrawal until the required permit application is acted on by the Board, provided that the permit application is filed by the appropriate deadline.
G. Persons applying for a ground water withdrawal permit may request that they be permitted to withdraw more ground water than the amount to which they may be entitled based on their historic usage and water conservation as set forth in this section. The Board in its discretion may issue a permit for a greater amount than that which is based on historic usage and water conservation, upon consideration of the factors set forth in § 62.1-263.
H. Failure by any person covered by the provisions of subsection A, B, D or E to file an application for a ground water withdrawal permit prior to the expiration of the applicable period creates a presumption that any claim to withdraw ground water based on history of usage has been abandoned. In reviewing any application for a ground water withdrawal permit subsequently made by such a person, the Board shall consider the factors set forth in § 62.1-263.
§ 62.1-261. Permits for existing ground water withdrawals in newly established ground water management areas.
A. Persons withdrawing ground water in any area declared a ground water management area on or after July 1, 1992, shall file an application within six months after the ground water management area has been declared in order to obtain a permit for withdrawals. The Board shall issue permits for the total amount of ground water withdrawn during any consecutive twelve-month period in the five years preceding said declaration, together with such savings as can be demonstrated to have been achieved through water conservation.
B. Persons withdrawing ground water for agricultural or livestock watering purposes in any area declared a ground water management area on or after July 1, 1992, shall file an application within six months after the ground water management area has been declared in order to obtain a permit for withdrawals. The Board shall issue permits for the total amount of ground water withdrawn during any consecutive twelve-month period in the ten-year period preceding such declaration, together with such savings as can be demonstrated to have been achieved through water conservation.
C. Persons withdrawing ground water in any area declared a ground water management area on or after July 1, 1992, may continue such withdrawal until the required permit application is acted on by the Board, provided that the permit application is filed within the six-month period following the declaration.
D. Persons applying for a ground water withdrawal permit issued pursuant to this section may request that they be permitted to withdraw more ground water than the amount to which they may be entitled based on their historic usage as set forth in this section. The Board in its discretion may issue a permit for a greater amount than that which is based on historic usage, upon consideration of factors set forth in § 62.1-263.
E. Failure by any person covered by the provisions of subsection A or B to file an application for a ground water withdrawal permit within the six months following the declaration of the ground water management area creates a presumption

that any claim to withdraw ground water based on history of usage has been abandoned. In reviewing any application for a ground water withdrawal permit subsequently made by such a person, the Board shall consider the factors set forth in § 62.1-263.

§ 62.1-262. Permits for other ground water withdrawals.

Any application for a ground water withdrawal permit, except as provided in §§ 62.1-260 and 62.1-261, shall include a water conservation and management plan approved by the Board. A water conservation and management plan shall include: (i) use of water-saving plumbing and processes including, where appropriate, use of water-saving fixtures in new and renovated plumbing as provided under the Uniform Statewide Building Code; (ii) a water-loss reduction program; (iii) a water-use education program; and (iv) mandatory reductions during water-shortage emergencies including, where appropriate, ordinances prohibiting waste of water generally and providing for mandatory water-use restrictions, with penalties, during water-shortage emergencies. The Board shall approve all water conservation plans in compliance with subdivisions (i) through (iv) of this section.

§ 62.1-263. Criteria for issuance of permits.

When reviewing an application for a permit to withdraw ground water, or an amendment to a permit, the Board may consider the nature of the proposed beneficial use, the proposed use of alternate or innovative approaches such as aquifer storage and recovery systems and surface and ground water conjunctive uses, climatic cycles, unique requirements for nuclear power stations, economic cycles, population projections, the status of land use and other necessary approvals, and the adoption and implementation of the applicant's water conservation and management plan. In no case shall a permit be issued for more ground water than can be applied to the proposed beneficial use.

When proposed uses of ground water are in conflict or when available supplies of ground water are insufficient for all who desire to use them, preference shall be given to uses for human consumption, over all others.

In evaluating permit applications, the Board shall ensure that the maximum possible safe supply of ground water will be preserved and protected for all other beneficial uses.

In evaluating the available ground water with respect to permit applications for new or expanded withdrawals in the Eastern Virginia or Eastern Shore Groundwater Management Areas, the Board shall use the average of the actual historical ground water usage from the inception of the ground water withdrawals of a political subdivision or authority operating a ground water and surface water conjunctive use system and shall not use the total permit capacity of such system in determining such availability.

§ 62.1-264. Permits for public water supplies.

To ensure that any ground water withdrawal permit issued for a public water supply does not impact a waterworks operation permit issued pursuant to § 32.1-172, the maximum permitted daily withdrawal shall be set by the Board at a level consistent with the requirements and conditions contained in the waterworks operation permit. This section shall not limit the authority of the Board to reduce or eliminate ground water withdrawals by a waterworks if necessary to protect human health or the environment. In promulgating regulations to implement this section, and in administering such regulations and this chapter, the Board shall consult and cooperate with the State Health Department to the end that effective, equitable management of ground water and safeguarding of public health will be attained to the maximum extent possible.

§ 62.1-265. Drought relief wells.

A political subdivision, or an authority serving a political subdivision, holding a certificate of ground water right issued prior to July 1, 1992, or a permit to withdraw ground water issued prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, for the

operation of a public water supply well for the purpose of providing supplemental water during drought conditions, shall file an application for a ground water withdrawal permit on or before December 31, 1992. The Board shall issue ground water withdrawal permits for supplemental drought relief wells for the amount of ground water needed annually to meet human consumption needs as documented by a water conservation and management plan approved by the Board as provided in § 62.1-262. Any ground water withdrawal permits for supplemental drought relief wells shall be issued with the condition that withdrawals may only be made at times that mandatory water use restrictions have been implemented pursuant to the water conservation and management plan.

§ 62.1-266. Ground water withdrawal permits.

A. The Board may issue any ground water withdrawal permit upon terms, conditions and limitations necessary for the protection of the public welfare, safety and health.

B. Applications for ground water withdrawal permits shall be in a form prescribed by the Board and shall contain such information, consistent with this chapter, as the Board deems necessary.

C. All ground water withdrawal permits issued by the Board under this chapter shall have a fixed term not to exceed ten years. The term of a ground water withdrawal permit issued by the Board shall not be extended by modification beyond the maximum duration, and the permit shall expire at the end of the term unless a complete application for a new permit has been filed in a timely manner as required by the regulations of the Board, and the Board is unable, through no fault of the permittee, to issue a new permit before the expiration date of the previous permit. Any permit to withdraw ground water issued by the Board on or after July 1, 1991, and prior to July 1, 1992, shall expire ten years after the date of its issuance.

D. Renewed ground water withdrawal permits shall be for a withdrawal amount that includes such savings as can be demonstrated to have been achieved through water conservation, provided that a beneficial use of the permitted ground water can be demonstrated for the following permit term.

E. Any permit issued by the Board under this chapter may, after notice and opportunity for a hearing, be amended or revoked on any of the following grounds or for good cause as may be provided by the regulations of the Board:

1. The permittee has violated any regulation or order of the Board pertaining to ground water, any condition of a ground water withdrawal permit, any provision of this chapter, or any order of a court, where such violation presents a hazard or potential hazard to human health or the environment or is representative of a pattern of serious or repeated violations which, in the opinion of the Board, demonstrates the permittee's disregard for or inability to comply with applicable laws, regulations, or requirements;

2. The permittee has failed to disclose fully all relevant material facts or has misrepresented a material fact in applying for a permit, or in any other report or document required under this chapter or under the ground water withdrawal regulations of the Board;

3. The activity for which the permit was issued endangers human health or the environment and can be regulated to acceptable levels by amendment or revocation of the permit; or

4. There exists a material change in the basis on which the permit was issued that requires either a temporary or a permanent reduction or elimination of the withdrawal controlled by the permit necessary to protect human health or the environment.

F. No application for a ground water withdrawal permit shall be considered complete unless the applicant has provided the Executive Director of the Board with notification from the governing body of the county, city or town in which the withdrawal is to occur that the location and operation of the withdrawing facility is in compliance with all ordinances adopted pursuant to Chapter

22 (§ 15.2-2200 et seq.) of Title 15.2. The provisions of this subsection shall not apply to any applicant exempt from compliance under Chapter 22 (§ 15.2-2200 et seq.) of Title 15.2.
G. A ground water withdrawal permit shall authorize withdrawal of a specific amount of ground water through a single well or system of wells, including a backup well or wells, or such other means as the withdrawer specifies.
§ 62.1-267. Issuance of special exceptions.
A. The Board may issue special exceptions to allow the withdrawal of ground water in cases of unusual situations where requiring the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act.
B. In reviewing an application for a special exception, the Board may consider the amount and duration of the proposed withdrawal, the beneficial use intended for the ground water, the return of the ground water to the aquifer, and the effect of the withdrawal on human health and the environment. Any person requesting a special exception shall submit an application to the Board containing such information as the Board shall require by regulation adopted pursuant to this chapter.
C. Any special exception issued by the Board shall state the terms pursuant to which the applicant may withdraw ground water, including the amount of ground water that may be withdrawn in any period and the duration of the special exception. No special exception shall be issued for a term exceeding ten years.
D. A violation of any term or provision of a special exception shall subject the holder thereof to the same penalties and enforcement procedures as would apply to a violation of a ground water withdrawal permit.
E. The Board shall have the power to amend or revoke any special exception after notice and opportunity for hearing on the grounds set forth in subsection D of § 62.1-266 for amendment or revocation of a ground water withdrawal permit.
§ 62.1-268. Issuance of special orders.
A. The Board may issue special orders (i) requiring any person who has violated the terms and provisions of a ground water withdrawal permit issued by the Board to comply with such terms and provisions; (ii) requiring any person who has failed to comply with a directive from the Board to comply with such directive; or (iii) requiring any person who has failed to comply with the provisions of this chapter or any decision of the Board pertaining to ground water to comply with such provision or decision.
B. Such special orders are to be issued only after a hearing with at least thirty days' notice to the affected person of the time, place and purpose thereof, and they shall become effective not less than fifteen days after service by certified mail, sent to the last known address of such person, with the time limits counted from the date of such mailing; however, if the Board finds that any such person is grossly affecting or presents an imminent and substantial danger to (i) the public welfare, safety or health; (ii) a public water supply; or (iii) commercial, industrial, agricultural or other beneficial uses, it may issue, without advance notice or hearing, an emergency special order directing the person to cease such withdrawal immediately and shall provide an opportunity for a hearing, after reasonable notice as to the time and place thereof to the person, to affirm, modify, amend or cancel such emergency special order. If a person who has been issued such a special order or an emergency special order is not complying with the terms thereof, the Board may proceed in accordance with § 62.1-269, and where the order is based on a finding of an imminent and substantial danger, the court shall issue an injunction compelling compliance with the emergency special order pending a hearing by the Board. If an emergency special order requires cessation of a withdrawal, the Board shall provide an opportunity for a hearing within forty-eight hours of the issuance of the injunction.
C. The provisions of this section notwithstanding, the Board may proceed

directly under § 62.1-270 for any past violation or violations of any provision of this chapter or any regulation duly promulgated hereunder.

D. With the consent of any person who has violated or failed, neglected or refused to obey any regulation or order of the Board pertaining to ground water, any condition of a ground water withdrawal permit or any provision of this chapter, the Board may provide, in an order issued by the Board against such person, for the payment of civil charges for past violations in specific sums not to exceed the limit specified in § 62.1-270. Such civil charges shall be instead of any appropriate civil penalty which could be imposed under subsection A of § 62.1-270 and shall not be subject to the provisions of § 2.1-127.

§ 62.1-269. Enforcement by injunction, etc.

Any person violating or failing, neglecting or refusing to obey any rule, regulation, order, standard or requirement of the Board pertaining to ground water, any provision of any ground water withdrawal permit issued by the Board, or any provision of this chapter may be compelled to obey same and to comply therewith in a proceeding instituted by the Board in any appropriate court for injunction, mandamus or other appropriate remedy. The Board shall be entitled to an award of reasonable attorneys' fees and costs in any action brought by the Board under this section in which it substantially prevails on the merits of the case, unless special circumstances would make an award unjust.

§ 62.1-270. Penalties.

A. Any person who violates any provision of this chapter, or who fails, neglects or refuses to comply with any order of the Board pertaining to ground water, or order of a court, issued as herein provided, shall be subject to a civil penalty not to exceed $25,000 for each violation within the discretion of the court. Each day of violation of each requirement shall constitute a separate offense.

Such civil penalties may, in the discretion of the court assessing them, be directed to be paid into the treasury of the county, city, or town in which the violation occurred to be used for the purpose of abating environmental pollution therein in such manner as the court may, by order, direct, except that where the person in violation is such county, city or town itself, or its agent, the court shall direct such penalty to be paid to the State Treasurer for deposit into the Virginia Environmental Emergency Response Fund pursuant to Chapter 25 of Title 10.1.

With the consent of any person in violation of this chapter, the Board may provide, in an order issued by the Board against the person, for the payment of civil charges. These charges shall be in lieu of the civil penalties referred to above. Such civil charges shall be deposited by the State Treasurer into the Virginia Environmental Emergency Response Fund.

B. Any person willfully or negligently violating any provision of this chapter, any regulation or order of the Board pertaining to ground water, any condition of a ground water withdrawal permit or any order of a court shall be guilty of a misdemeanor punishable by confinement in jail for not more than twelve months and a fine of not less than $2,500 nor more than $25,000, either or both. Any person who knowingly violates any provision of this chapter, any regulation or order of the Board pertaining to ground water, any condition of a ground water withdrawal permit or any order of a court issued as herein provided, or who knowingly makes any false statement in any form required to be submitted under this chapter shall be guilty of a felony punishable by a term of imprisonment of not less than one year nor more than three years, or in the discretion of the jury or the court trying the case without a jury, confinement in jail for not more than twelve months and a fine of not less than $5,000 nor more than $50,000 for each violation. Any defendant that is not an individual shall, upon conviction of a violation under this subsection, be sentenced to pay a fine of not less than $10,000. Each day of violation of each requirement shall constitute a separate offense.

C. Any person who knowingly violates any provision of this chapter, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily harm, shall, upon conviction, be guilty of a felony punishable by a term of imprisonment of not less than two years nor more than fifteen years and a fine of not more than $250,000, either or both. A defendant that is not an individual shall, upon conviction of a violation under this subsection, be sentenced to pay a fine not exceeding the greater of one million dollars or an amount that is three times the economic benefit realized by the defendant as a result of the offense. The maximum penalty shall be doubled with respect to both fine and imprisonment for any subsequent conviction of the same person under this subsection.
D. Criminal prosecution under this section shall be commenced within three years of discovery of the offense, notwithstanding the limitations provided in any other statute.

Ground Water Withdrawal regulations can be found online on the Legislative Information System

http://leg1.state.va.us/000/reg/TOC09025.HTM#C0610

**Hydrogeologic Testing Publications**

1. Osborne, Paul S., 1993, *Suggested Operating Procedures for Aquifer Pumping Tests*, U.S. Environmental Protection Agency, Superfund Technology Support Center for Groundwater, EPA/540/S-93/503, 23pp.

Available Online at http://www.epa.gov/swertio1/tsp/download/sopaqu.pdf

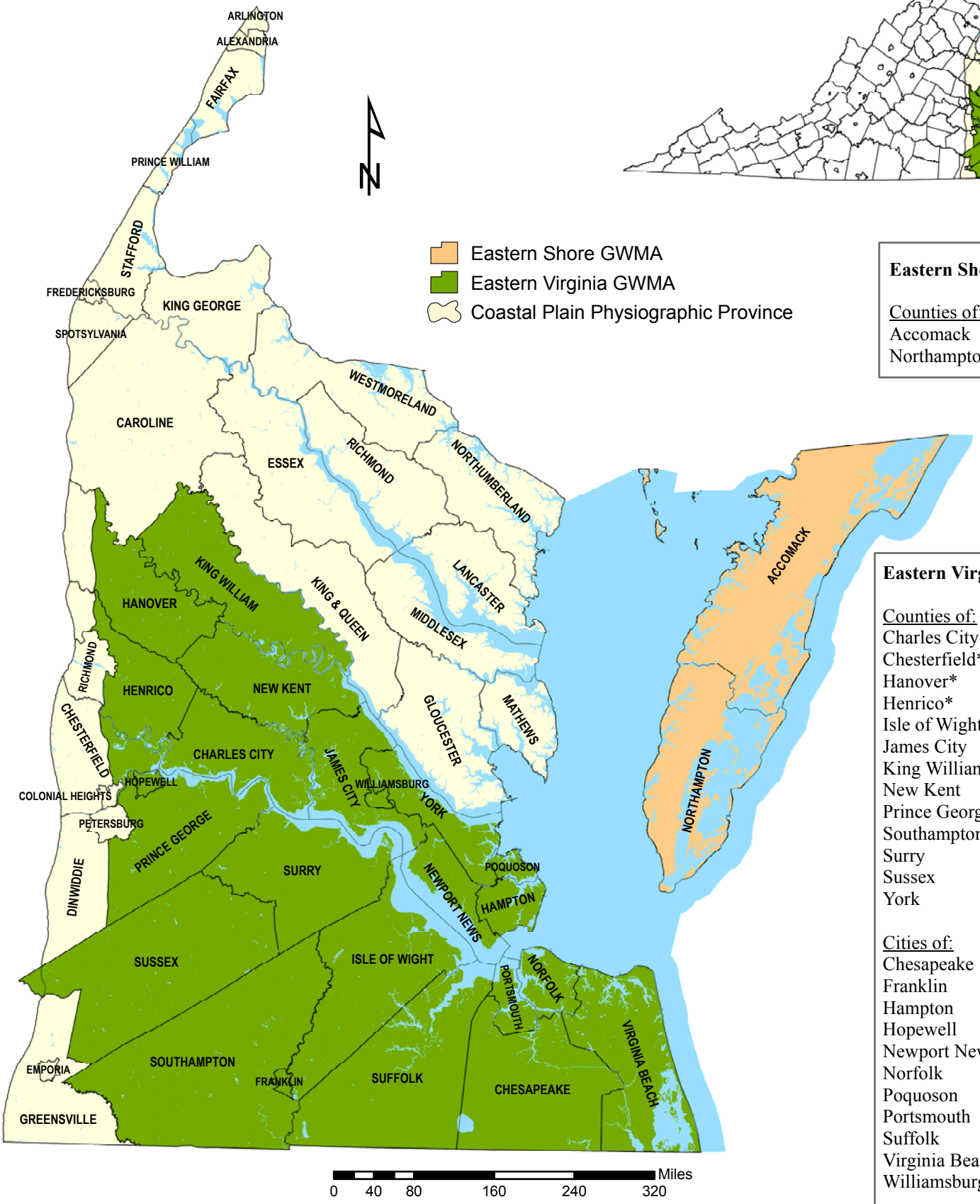
2. St. Johns River Water Management District, 2006, Applicant's Handbook: Consumptive Uses of Water Chapter 40C-2, F.A.C.

Available Online at http://sjr.state.fl.us/programs/regulation/handbooks/pdfs/cuphdbk.pdf

3. GSR 29 - Guidelines for Preparing Hydrogeologic Reports for Water-Allocation Permit Applications, with an Appendix on Aquifer-Test Analysis Procedures, Hoffman, Jeffrey L., and others, 1992, 33 p.,

Available from the New Jersey Geologic Survey, Price $5.00, http://www.state.nj.us/dep/njgs/

# Virginia Ground Water Management Areas (GWMA)




**Eastern Shore GWMA**

Counties of:
Accomack
Northampton

**Eastern Virginia GWMA**

Counties of:
Charles City
Chesterfield*
Hanover*
Henrico*
Isle of Wight
James City
King William
New Kent
Prince George
Southampton
Surry
Sussex
York

Cities of:
Chesapeake
Franklin
Hampton
Hopewell
Newport News
Norfolk
Poquoson
Portsmouth
Suffolk
Virginia Beach
Williamsburg

*Only those portions east of I-95 are included in the Eastern Virginia GWMA

DEQ
Virginia Department of Environmental Quality

Office of Ground Water Withdrawal Permitting
Prepared by Beverly Quinlan
June 20, 2006

**Intent to Terminate Letter**

Regional Letterhead

Date

Facility Contact
Facility Name
Address

RE: Termination of Ground Water Withdrawal Permit No. ____

Dear :

The Department of Environmental Quality, on behalf of the State Water Control Board, intends to initiate a proceeding to determine whether to terminate the referenced permit for the following reason(s):

[**provide an explanation**]

If you agree with the proposed termination and wish to dispense with the prescribed hearing, please sign and date the attached agreement form in the spaces provided and return it to this office within 14 days.

If you do not agree to the termination of this permit and wish a hearing under § 62.1-266.E of the Code of Virginia, please contact me as soon as possible.

If you have any comments or questions, please call me at [( ) **XXX-XXXX**].

Sincerely,

[**Permit Writer**]

Enclosures:
Termination Agreement Form

**Uncontested Termination Agreement Form**

SUBJECT: TERMINATION OF GROUND WATER WITHDRAWAL PERMIT NO. _____

TO: [**Permit Writer**]
[**DEQ Regional Office Address**]

OWNER: [**Full name as on permit**
**Address**
**City, State, Zip**]

I hereby agree to the termination of Ground Water Withdrawal Permit No. _____ for the following reasons:
[**Provide reason for Termination**]

In addition, I waive my right to a hearing in accordance with Section § 62.l-266.E of the Ground Water Management Act of 1992.

I certify that the permit is not subject to a pending state or federal enforcement action, including citizen suits, brought under state or federal law.

SIGNED: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____

**Uncontested Termination Notification Letter**

Regional DEQ Letterhead

Date

Contact Name
Facility Name
Address

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Ground Water Withdrawal Permit No.

Dear :

The Department of Environmental Quality has approved the termination of the Permit referenced above. Termination of this permit is effective 30 days from the date of this notification unless you provide an objection in accordance with one of the two paragraphs below.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date you receive this decision within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Virginia Department of Environmental Quality.

In addition, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §9 VAC25-230-130 of the Board's Procedural Rule No. 1.

If you have any questions, please call [**permit writer**] at ( ) XXX-XXXX.

Sincerely,

cc: OGWWP
Department of Health **(if facility also has VDH Waterworks Operation Permits)**

DATE

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Name
Title
Permittee Name
Address

RE: Ground Water Withdrawal Permit GW00XXX00
Facility Name
Change of Ownership

Dear Permittee:

Thank you for your inquiry regarding the transferability of your permit to a new owner. 9 VAC 25-610-320 B. of the Ground Water Withdrawal Regulations requires the current owner to provide written notification to the State Water Control Board 30 days in advance of the proposed transfer of ownership. The notification must include a written agreement between the existing and proposed owner containing a specific **Date of Transfer** of permit responsibility, coverage and liability between them.

Attached for you convenience is a transfer of ownership notification form. Please complete the "Existing Owner" portion of the form and have the new owner complete the "Proposed Owner" portion of the form and return to me.

Furthermore, the name change must also be reflected in the Water Conservation and Management Plan, (and the Mitigation Plan). Please coordinate with the new owner to submit appropriately modified plans with the Change of Ownership Form.

Provided the Board does not notify you and the proposed owner of it's intent to amend the permit within the 30-day time period prior to the transfer date, a modified permit reflecting the new owner’s name will be issued to the new owner.

The form must be signed in accordance with the Ground Water Withdrawal Regulation 9 VAC 25-610-150 as follows:

FOR A CORPORATION: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

FOR A MUNICIPALITY, STATE, FEDERAL OR OTHER PUBLIC AGENCY, by either a principal executive officer or ranking elected official. (A Principal executive officer of a Federal, Municipal, or State agency includes the chief executive officer of the agency or head executive officer having responsibility for the overall operation of a principal geographic unit of the agency).

FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP, by a general partner or the proprietor, respectively.

If you have questions, please contact this office.

Sincerely,

RO Permit Writer

Enclosure: Change of Ownership Form

cc: DEQ (RO) Fil

GROUND WATER WITHDRAWAL PERMIT

CHANGE OF OWNERSHIP AGREEMENT FORM

Effective ____[date]_____, the undersigned request the transfer of ownership of Ground Water Withdrawal Permit number GW00XXX00 from _Existing Owner Name__ to _Proposed New Owner Name_. Furthermore, _Proposed New Owner Name__ agrees to accept all responsibility, coverage, and liability associated with the Ground Water Withdrawal Permit and its supporting application.

Existing Owner Signature

SIGNED: _____

TITLE: _____

DATE: _____

Proposed New Owner Signature

SIGNED: _____

TITLE: _____

DATE: _____

Please print name(s) as they should appear on the amended Ground Water Withdrawal Permit.

**OWNER**: _____

ADDRESS:_____

PHONE:_____ FAX:_____ EMAIL:_____

**FACILITY NAME**: _____

FACILITY ADDRESS: _____

_____

Please print the new facility contact person, address, and phone number.

**FACILITY CONTACT**: _____

ADDRESS:_____

PHONE:_____ FAX:_____ EMAIL:_____

[date]

Certified Mail
Return Receipt Requested

Name and Address

Dear:

Pursuant to Title 62.1, Chapter 25, Code of Virginia, 1950, as amended, (The Ground Water Management Act of 1992) the Director has authorized issuance of a modified permit to utilize ground water. The purpose of this modification is to authorize [ explain the nature of the modification]. **OR** The purpose of this modification is to authorize the change of ownership of Ground Water Withdrawal permit number GW00XXX00 to [new owner name]. This permit continues to limit the volume of withdrawal to [ ] gallons of groundwater per month and [ ] gallons of groundwater per year.

The completed permit is enclosed for your records. Please note the requirement to record meter readings each month. Monthly use of ground water shall be reported to the [_____] Regional Office of the Department of Environmental Quality by the tenth ($10^{th}$) day of each January, April, July, and October on the enclosed Ground Water Withdrawal Reporting Form. You are responsible for making additional copies of the form.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually receive this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

In addition, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you should have any questions, please contact [staff member] of our [ ] Regional Office (xxx) (xxx-xxxx).

Sincerely,

Regional Office Director/Remediation Manager

Enclosure
cc: OGWWP

Date

Certified Mail
Return Receipt Requested

Permittee Address

RE: Facility Name, Permit Number

Dear [ ] ;

The public comment period for your draft permit for withdrawals associated with your ground water withdrawal application closed on [ date ]. No significant comments were received regarding the draft permit and no public hearing will be required.

A final ground water withdrawal permit will not be issued prior the issuance of a Waterworks Operation Permit ("WWOP") by the Virginia Department of Health. I will prepare the final ground water withdrawal permit as soon as you provide a copy of a waterworks operation permit for the facility. The terms and conditions of the final permit will be the same as the draft permit and the term of the permit will be ten years from the date of today's letter. I anticipate that a final ground water withdrawal permit can be issued within 15 days of my receipt of a copy of your waterworks operation permit.

DEQ's intention to issue a ground water withdrawal permit to [Facility Name] will continue for five years from [date, that is first of the month following the date of this letter]. If no WWOP has been issued by [date, that is 5 years from first of the month following the date of this letter], DEQ will initiate a proceeding to determine whether to deny the application.

If you have questions or concerns, please do not hesitate to contact me at [permit writer phone #].

Sincerely,

RO permit writer
Title

cc: RO Remediation Manager
OGWWP
Terry D. Wagner

SUBJECT: Permit Fee Refund Request
TO: DEQ Accounts Receivable Accounting Manager
FROM: Deputy Regional Director
DATE:

Owner name and Facility that made the original payment:

_____

Permit Number that made the original request: _____

Permit Type: _____Ground Water Withdrawal_____

Name and address to which a refund should be made payable:

_____

_____

_____

Federal identification number to whom the refund should be made: _____

DEQ deposit certificate (DC) number and date of the original payment:

DC Number: _____ DATE: _____

Amount of original payment: _____

Amount recommended to be refunded: _____

Date application or registration form received: _____

Basis for the proposed refund: [check at least one of the following and explain in detail why a refund is appropriate in an attached Memorandum with copies of the check and Fee Form from applicant. All requests that are incomplete will be disapproved and returned.]

____ an incorrect fee amount is determined during the 90 day application review.

____ a duplicate payment was made. Copies of all payments and fee forms must accompany the refund request.

____ no application submitted with fee.

____ the agricultural permit has no required fee.

____ the application was withdrawn within 90 days of application receipt date.

____ other: explain in Memorandum

Attachments: Memorandum

Copy of Fee Form

Copy of Check

For Fee Fund Manager Only:

Approved: _____

Disapproved: _____

Date: _____

Effective : 10/1/05

# TECHNICAL ADVISORY FOR PREPARING AN AQUIFER TEST PLAN AS PART OF A VIRGINIA GROUND WATER WITHDRAWAL PERMIT APPLICATION

This Aquifer Test Plan (ATP) advisory is meant to be a thought provoking document to provide advice to permit writers when establishing the requirements in an ATP, and to applicants or their consultants when developing proposed ATPs for permit writers review. ATPs must be designed for the specific location and proposed withdrawal that is being considered.

An ATP will be approved jointly by the Regional Office (RO) and Central Office. This process will be aided by the submission, at least 30 days prior to the test, of an original and one copy to the RO.

When an aquifer test is required for technical evaluation of a groundwater withdrawal application, an aquifer test plan is submitted to the Virginia Department of Environmental Quality (DEQ) for approval, prior to commencement of the test. This Technical Advisory outlines the suggested content of an aquifer test plan and provides information regarding important aspects of plan implementation. It is intended to assist applicants with preparation and implementation of an aquifer test plan; however, it remains the applicant's responsibility to provide the DEQ with satisfactory test results. Two documents which may be of further assistance: the EPA Ground Water Issue "Suggested Operating Procedures for Aquifer Pumping Tests", and the New Jersey Geological Survey Report "Guidelines for Preparing Hydrogeologic Reports for Water-Allocation Permit Applications, with an Appendix on Aquifer-Test Analysis Procedures" are available from the DEQ.

A plan is only as good as its implementation. It is highly recommended that DEQ staff be present at least at test startup. They are not there to direct the test in any way, but to observe, learn, and lend a hand when requested.

An Aquifer Test Plan Should Include/Address:

— A conceptual narrative summary of the proposed test setup that includes production and observation well locations and construction, proposed pumping rate, background monitoring, length of test, discharge location, methods of measuring drawdown and discharge, and any other applicable information.

— A schematic drawing showing the proposed test system setup. The drawing should show: locations of all wells, their construction including screened intervals, the receptor for the discharge water, and all water level and discharge measuring devices. If the drawing is not to scale, all distances between wells, all depths, etc. should be noted.

— A well location map showing the locations of the test wells, the discharge location and any intermediate discharge water holding tanks, ponds, etc. at the test site. This map should show local cross streets and be of sufficient detail to drive to the test site.

— The number and placement of observation wells will be dependent on the hydrogeologic properties at the test site. In tests where only one observation well is to be used, this well is often placed at a distance of 1.5 times the saturated thickness of the aquifer from the pumping well, but not less than 50 feet and not more than 200 feet from it. Selection of observation well locations should incorporate predictive simulations performed using published estimates of aquifer properties, the proposed test pumping rate, and the proposed test length in order to estimate the drawdown that may be achieved in the observation wells during the test. Based on the predictive simulations, adjustments to the proposed pumping rate or length of test may need to be considered to insure that sufficient drawdown in the observation wells is achieved. The simulation method employed and the results of the simulations should be included in the plan.

— All applicable Virginia Department of Health (VDH) requirements should be considered when preparing the aquifer test plan and concurrence with those portions of the plan pertaining to their requirements should be obtained from the VDH prior to implementing the plan. In the case of modifications to waterworks during performance of the aquifer test, concurrence should be obtained from the VDH that the planned modifications would not adversely impact the water supply.

— During drilling of the boreholes for the wells, cuttings must be circulated and collected every 10 feet. A set of ground samples should be collected and placed in a well-drained area (not on plastic). A driller's log shall be prepared from the cuttings. Large withdrawals or those in critical areas should develop geologists logs from the cuttings

— Geophysical logs (16"/64" Normal, Single Point, Self Potential, and Natural Gamma) shall be performed in the production well or observation well borehole. The scale for the geophysical logs shall be 20 feet per inch.

— The driller/geologist log, as applicable, and a GW-2 form shall be submitted to the DEQ within 30 days of completion of the wells. The final geophysical log shall also be submitted at this time. The DEQ numbers assigned to the wells shall be included on each page of all submissions.

— Observation wells and production wells must be gravel packed and the casings grouted to prevent leakance between aquifers. Gravel pack should be terminated close to the top of well screens and should not extend above the top of the target aquifer.

— The method of well development should be included in the plan. The wells shall be developed at a minimum by pumping. Preferable development is by surging and pumping.

— The reaction of all observation wells to changing water levels should be tested by injecting into or removing a known volume of water from each well and measuring the subsequent change of water level. Any wells that appear to have poor response should be either redeveloped or replaced. The results of these "slug" tests should be included in the aquifer test report.

— It should be determined that the test pump is set at a depth that is above the top of the aquifer from which the production well is to draw water, in order to simulate withdrawal conditions during production. The top of the aquifer shall be determined from review of all available logs, with concurrence from the DEQ.

— Whenever possible, an electric motor driven pump is preferred to a gasoline or diesel driven pump/generator in order to lessen the possibility of variations in flow rate. If a gasoline or diesel driven pump/generator must be used, its speed should be restricted to one-half to two-thirds of its maximum RPM so that it will run within its most steady range.

— During the aquifer test, the production well should be pumped at the maximum rate expected during normal operations. In all cases, the withdrawal rate should be sufficient to adequately define a drawdown curve from the test's time-drawdown data. Often, best results are obtained when using the highest pumping rate that the well can support.

— Discharge flow rate shall be recorded in gallons per minute at least once every 10 minutes during the first hour of the test and at least every 60 minutes thereafter. The flow rate should not vary by more than plus or minus 5 percent. Flow shall be measured either with an automated data recorder or manually monitored. Flow rate readings shall be submitted with the test results. Test results submitted with significant pumpage variations or insufficient flow rate recordings may be rejected.

— Adjustments to flow rate should be controlled by a valve in the discharge line rather than by controlling power to the pump.

— Whenever continuous pumping is interrupted longer than 1 minute, the test will be suspended for a period of time at least as long as the elapsed pumping time before pumping is resumed.

— Water levels in the pumping well and observation well shall be measured to 0.01 foot.

— The frequency with which water levels must be measured during the early part of the test may necessitate use of an automated recording system in one or more wells. In such cases manual measurements should be recorded occasionally as a check on the automatic system.

— During the test, each time interval reading for each well should be manually plotted to observe the progress of the test and to determine when the test can be concluded. The test should continue until the data are adequate to define the shape of the type curve sufficiently so that acceptably accurate values of the hydraulic coefficients can be determined. Any irregularities in the plots should be noted and reported to the DEQ as soon as possible but prior to dismantling the test equipment. Any irregularities should also be discussed in the test report. The time intervals plotted should correspond with the schedule listed below.

| Time Since Pumping Began or Ceased | Time Between Measurements |
|---|---|
| 0 - 2 minutes | 10 seconds |
| 2 - 5 minutes | 30 seconds |
| 5 - 15 minutes | 1 minute |
| 15 minutes - 1 hour | 5 minutes |
| 1 - 2 hours | 10 minutes |
| 2 - 8 hours | 30 minutes |
| 8 - 24 hours | 1 hour |
| 24 hours - end | 2 hours |

— A description of the background monitoring activities that will be performed is required in the plan. A background monitoring period is important to develop baseline conditions prior to beginning the aquifer test. The period of time for background monitoring should be sufficient to ensure that all static water levels are not fluctuating. During the background monitoring period, the on-off times and the discharge rates should be recorded for any nearby wells in use. Any other local activities that may affect the test should be documented during the background monitoring period. Planned background monitoring activities should be included in the aquifer test plan and the results of background monitoring should be included in the aquifer test report.

— The recovery period after completion of any pre-testing prior to beginning the aquifer test must be at least as long as the pumping period. Water level measurements in the pumping well should be taken prior to any pre-testing and during recovery from pre-testing to document the achievement of static conditions after the completion of pre-testing. Water levels during this period should recover to within 1 foot of levels measured during background monitoring.

— Post-testing recovery data should be plotted from all wells and with the same frequency as pumping data. An adequate recovery portion of the test is usually considered to have occurred when water levels have recovered to 95 percent of the drawdown observed in the pumping well but not less than 8 hours. As the presence or absence of a foot check valve in the pumping well will affect observed recovery, its status should be noted on the data sheets. A check valve is necessary to obtain good recovery data.

— An original and one copy of an aquifer test report must be submitted that contains at a minimum:

- An introduction that describes the project, its location, and hydrogeologic setting
- Aquifer test setup description, including schematic drawing, and well location map
- Driller/geologist logs, completed GW-2 form for each well constructed, and geophysical logs
- Description and results of background monitoring
- Description and results of pre-testing
- Documentation of return to static water levels after pre-testing
- Results of aquifer test, including copies of field plots with explanations of any irregularities in the plots, tables of water level measurements for all wells, and table of discharge flow rates. Water level data must also be submitted in electronic format.

It is suggested that the report also include data analysis to determine hydraulic properties of the aquifer. All calculations should clearly show the data used for input, the equations used and the results achieved. Any assumptions made as part of the analysis should be noted in the calculation section. This is especially important if the data were corrected to account for conditions discovered during background monitoring. The calculations should reference the appropriate tables and graphs used for a particular calculation.

Month ##, 200#

[inside address]

Re: [facility] Aquifer Test Plan

Dear [consultant]:

Thank you for submitting an Aquifer Test Plan (ATP) for the [facility] for our review and comment. Our review comments for the ATP are provided below. Please submit two copies of the revised ATP based on these comments. One general comment we offer is [describe any general comments].

<u>[section of ATP]</u>
[itemized list of corrections needed, such as below]

1. During drilling of the boreholes for the wells, cuttings must be circulated and collected every 10 feet. A set of ground samples should be collected and placed in a well-drained area (not on plastic). A driller's log shall be prepared from the cuttings. Large withdrawals or those in critical areas should develop geologist's logs from the cuttings.
2. Geophysical logs (16"/64" Normal, Single Point, Self Potential, and Natural Gamma) shall be performed in the production well or observation well borehole. The scale for the geophysical logs shall be 20 feet per inch. Due to the distance between the production wells (approximately 500 feet), we will probably need a set of logs from each well.
3. The driller/geologist log, as applicable, and a GW-2 form shall be submitted to the DEQ within 30 days of completion of the wells. The final geophysical log shall also be submitted at this time. The DEQ numbers assigned to the wells shall be included on each page of all submissions.

<u>[section of ATP]</u>
[itemized list of corrections needed]

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your ATP and is not a final determination or case decision under the Administrative Process Act. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for:
http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

If you have any questions regarding these comments, please contact me at (###) ###-####.

Sincerely,

[name]
RO Permit Writer

cc: [name], Remediation Manager
[name – facility contact]
DEQ - OGWWP

Month ##, 200X

inside address

Re: [Facility Name] Aquifer Test Plan

Dear [consultant] :

Based on the latest revisions to the Aquifer Test Plan submitted on [date], we find the plan acceptable as amended [with one exception]. Please keep in mind though that while the DEQ can provide technical assistance in plan preparation, it is the applicant's responsibility to submit acceptable test results to the DEQ. [Describe any minor exceptions to the nearly acceptable plan]. Please notify me of the test date at least one week prior to commencement of the test.

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your Aquifer Test Plan and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number]. In the event that you disagree with the contents of this letter and discussions with staff do not lead to a satisfactory resolution, you may elect to participate in DEQ's Process for Early Dispute Resolution. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for:
http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

Sincerely,

[name]
RO Permit Writer

cc: [name], Remediation Manager
[facility contact]
OGWWP