



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

Permit Number: GW0052100
 Effective Date: November 1, 2008
 Modified Date: June 16, 2014
 Expiration Date: October 31, 2018

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 Groundwater Withdrawal Regulation (9 VAC 25-610-10 et seq.), the STATE WATER CONTROL BOARD hereby authorizes

Permittee Town of Ivor
 Address P.O. Box 335
Ivor, VA 23866
 Facility Town of Ivor Public Water System

to withdraw and use groundwater in accordance with this permit and the application received April 25, 2006 and subsequently amended.

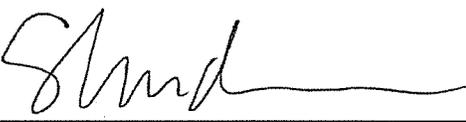
The permittee is authorized to withdraw 19,725,000 gallons per year.

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 Groundwater 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 a public water supply to the Town of Ivor. Other beneficial uses are not authorized by this permit.

Any noncompliance with permit conditions, the Groundwater 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 7/8/14

For the STATE WATER CONTROL BOARD

Part I
Permit Standards, Limitations and Conditions

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

<u>Owner Well Name</u>	<u>DEQ Well #</u>	<u>Depth</u>	<u>Aquifer</u>	<u>Latitude</u>	<u>Longitude</u>
Well #2	187-00018	315'	Potomac	<u>36° 54' 27.0"</u>	<u>076° 53' 56.9"</u>
Well #4	187-00019	450'	Potomac	<u>36° 54' 14.8"</u>	<u>076° 53' 51.7"</u>

Note: Well #3 (187-00221) is Out Of Service and is scheduled for abandonment upon construction of Well #5 (187-00236).

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

In a calendar month: Total pumpage from these wells shall not exceed 2,290,000 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 (the "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 Groundwater 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 groundwater withdrawal reports.
5. Each permitted well shall be equipped in a manner such that water levels can be measured during pumping and non-pumping 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 groundwater source or lower than the bottom of an unconfined aquifer that a well utilizes as a groundwater source.
7. Each well that is included in this groundwater 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 groundwater 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 April 25, 2006 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 Groundwater 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 April 25, 2006.
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 Groundwater Withdrawal Regulation.

Part II
Special Conditions

1. **Health Department Permit**
Daily withdrawals shall be consistent with the requirements and conditions of the Virginia Department of Health Waterworks Operation Permit # 3175400. The permittee shall submit copies of WWOP and the associated Engineering Description Sheets to DEQ within 30 days of an upgrade.
2. **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 Potomac 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. These conditions apply to the proposed Well #5, DEQ Well # 187-00236.
3. **Drilling Schedule Notification**
At least two weeks prior to the scheduled construction of Well #5, DEQ well # 187-00236, the permittee shall notify the TRO Regional Office of the Department of Environmental Quality of the drilling timetable and receive prior approval of the well location. Completed water well construction reports shall be submitted to DEQ within 30 days of the completion of the well and prior to the initiation of any withdrawal from the well.
4. **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 Potomac Aquifer, and therefore, a depth below which pumps may not be set. All geophysical and geologist's logs shall be referenced by the DEQ well number.
5. **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.
6. **Pump Intake Settings**
Pump settings in individual wells are limited as follows:

<u>Owner Well Name (or #)</u>	<u>DEQ Well#</u>	<u>Max Pump Setting</u> (ft below land surface)
Well #2	187-00018	245
Well #4	187-00019	245

The permittee may provide additional information regarding the depth of the top of the Potomac 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.

7. **Pump Intake Settings (proposed well)**

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.

8. **Well Abandonment**

Within 90 days of construction of proposed Well #5, DEQ well # 187-00236, the permittee shall properly abandon the unused Well #3, DEQ well #187-00221 in accordance with the Virginia Department of Health's 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.

9. **Permit Reopener**

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

ATTACHMENT A

WATER CONSERVATION AND MANAGEMENT PLAN

**ATTACHMENT 13
WATER CONSERVATION AND MANAGEMENT PLAN
GROUND WATER WITHDRAWAL PERMIT GW 0052100
TOWN OF IVOR, VIRGINIA**

1. INTRODUCTION

The Town of Ivor (Town), being acutely aware of the need to conserve and effectively manage its valuable water supply resource, proposes the following water conservation and management plan. The plan outlines means by which the Town will optimize its groundwater use and thus reduce its need for additional groundwater withdrawal.

2. WATER CONSERVATION AND WATER SUPPLY EMERGENCY ORDINANCE

The Town has adopted a Utilities Code, Article II. Water which contains items normally found in a Water Conservation and Water Supply Emergency Ordinance. The Utilities Code, which dictates conservation measures during normal conditions and during emergency conditions along with penalties for non-compliance, is included herein by reference to Division 2 (Sections 58-71, 58-72, and 58-73).

3. CODE ENFORCEMENT

The Town will adhere to the Virginia Statewide Building Code which adopts the most recent BOCA Code requirements for water conserving fixtures in all new and renovated construction.

4. WATER LOSS REDUCTION PROGRAM

The Town will maintain an ongoing program of upgrading its system to reduce excess water use and/or loss. New system meters were installed at the time of the system upgrade in 2000-2001. In the future these efforts will consist of:

- A. Installation of meters on unmetered services (currently all connections are metered). New connections will be metered at time of construction.
- B. Meter replacement to prevent leakage from meters and yokes will be made as problems develop. Currently, meters are new, having been installed with the recent system upgrade. Problems will be indicated by rapid changes in water volumes used or smaller longer term changes with no apparent user changes.
- C. Pipe replacement will be made on an as needed basis within 30 days.
- D. Water main breaks will be repaired within 48 hours.
- E. If water loss audits indicate an investigation by the Operator and/or Water Committee is required, the investigation and repair can be made within 30 days.

5. PUBLIC EDUCATION PROGRAM

The Town will include with selected future billings, information on the importance of conserving precious groundwater resources and advise to customers on means by which water may be conserved. In addition, water conservation literature will be made available at the Town Hall, to Civic Organizations, and at local festivals where large groups gather.

6. WATER USE AUDIT

During the first two years of the permit cycle, the Town will audit groundwater use. The total water used will be determined by addition to billing records estimates of the following unbilled usage.

- a. Fire fighting.

- b. Main flushing.
- c. Main breaks.
- d. Tank draining.

This total usage will be compared to pumping records and anticipated usage to determine if there is excessive usage or excessive unaccounted for loss requiring leak investigation. For individual connections, the Water Operator will compare usage to past usage for the time of year or type of use. If increased usage of any significant amount cannot be explained, it will be investigated and repaired within 30 days.

7. WATER REUSE

Water reuse is not a viable option for the Town as water is used for human consumption. Wastewater from the Town is returned to the ground using individual septic drainfields.

**Utilities Code - Water
Town of Ivor, Virginia**

Chapter 58

UTILITIES*

Article I. In General

Secs. 58-1—58-30. Reserved.

Article II. Water

Division 1. Generally

- Sec. 58-31. Rules and regulations of the council.
- Sec. 58-32. Tapping of mains.
- Sec. 58-33. Charges for connections.
- Sec. 58-34. Extension of mains outside corporate limits; acquisition of land, financing and equality of rates.
- Sec. 58-35. Town to have access for inspection purposes.
- Sec. 58-36. Service lines.
- Sec. 58-37. Tampering with meter devices; trespassing.
- Sec. 58-38. Unauthorized connection.
- Sec. 58-39. Unlawful taking or carrying away of water.
- Sec. 58-40. Deposit.
- Sec. 58-41. Perpetual easement for meter.
- Sec. 58-42. Multiple service.
- Sec. 58-43. Sale of water prohibited.
- Sec. 58-44. Nonsubscribers.
- Sec. 58-45. Rates to subscribers.
- Sec. 58-46. Closing of accounts.
- Sec. 58-47. Billing for multiple occupants, tenants.
- Sec. 58-48. Billing.
- Sec. 58-49. Reconnection charges.
- Sec. 58-50. Penalties.
- Secs. 58-51—58-70. Reserved.

Division 2. Water Conservation; Water Supply Emergency

- Sec. 58-71. Water conservation during normal conditions.
- Sec. 58-72. Water conservation during water supply emergencies.
- Sec. 58-73. Penalties.

*Cross references—Administration, ch. 2; businesses, ch. 14; environment, ch. 26; floods, ch. 34; design criteria for utilities and facilities, § 34-95; manufactured homes and trailers, ch. 38; solid waste, ch. 46.

State law references—Franchises, public utilities, etc., Code of Virginia, § 15.2-2100 et seq.; health regulations pertaining to sewage disposal, Code of Virginia, § 32.1-163 et seq.; health regulations pertaining to public water supplies, Code of Virginia, § 32.1-167 et seq.; State Water Control Law, Code of Virginia, § 62.1-44.2 et seq.

ARTICLE I. IN GENERAL

Secs. 58-1—58-30. Reserved.

ARTICLE II. WATER**DIVISION 1. GENERALLY**

Sec. 58-31. Rules and regulations of the council.

The council shall have the power to promulgate such rules and regulations, not in conflict with state law or the provisions of this Code, relative to the waterworks of the town.

Sec. 58-32. Tapping of mains.

No person but the properly authorized representatives of the town, or persons approved by the town, shall tap or make any connection with the main or distributing pipes of the town water system.

Sec. 58-33. Charges for connections.

The rates and fees to be charged by the town for its services in making connections to the town water system within the town and for tapping water mains of the town extended beyond the corporate limits of the town shall be as provided by the council. The rates and fees shall be uniform for all service within the town.

Sec. 58-34. Extension of mains outside corporate limits; acquisition of land, financing and equality of rates.

When the property owners outside of the corporate limits of the town wish water service, the town may, at the discretion of the council, construct a standard water line with the necessary valves, fire hydrants, etc. Property owners must deed the necessary rights-of-way to the town and pay for the total cost of construction. After the work is completed and the town reimbursed, the property owners shall surrender all claims to the line in favor of the town. The town shall maintain the water line; and upon application and approval by the town, service shall be made available upon payment of the appropriate connection charge as set by the council.

Sec. 58-35. Town to have access for inspection purposes.

The duly authorized representatives of the town shall have free access at all reasonable hours to all parts of any premises to which town water is or is to be supplied to make necessary inspection.

Sec. 58-36. Service lines.

(a) Service lines running from the water meter to the premises must be installed at the expense of the applicant for water service, and no service line smaller than three-fourths-inch inside diameter shall be permitted.

(b) On each service line there shall be installed a shutoff valve or cock, commonly known as a stop and waste drain.

Sec. 58-37. Tampering with meter devices; trespassing.

It shall be unlawful for any person to open the meter box, tamper with the water meter or any of its appurtenances, or to trespass upon publicly owned property on which is situated the town's wells, water storage tanks or other apparatus pertaining to the waterworks.

Sec. 58-38. Unauthorized connection.

It shall be unlawful for any person to connect by any physical means his or any other private water system with or to the water system of the town.

Sec. 58-39. Unlawful taking or carrying away of water.

During the time that any water service is disconnected for nonpayment of the account, any act of taking, carrying away or using water obtained from the water service of any other customer of the town shall be deemed larceny.

Sec. 58-40. Deposit.

(a) All applicants shall be required by the town clerk-treasurer to pay a deposit as set by the council, which must be made before the town clerk-treasurer shall authorize water service.

(b) The town shall not pay interest on the amounts held in trust by the town to guarantee payment of customer accounts through deposits.

Sec. 58-41. Perpetual easement for meter.

(a) Where existing layout of water lines makes it practical and/or necessary to install the meter on private property, the fact that the owner requested and/or permitted installation of the meter on private property, its location on private property shall be deemed a perpetual easement in favor of the town to grant normal ingress and egress for purposes of reading, maintaining, repairing or discontinuing the water meter or service line.

(b) No water meter shall be installed inside of any building or structure.

Sec. 58-42. Multiple service.

(a) No more than one building or structure shall be served from any one meter connection except on property around or controlled by municipal, county or state governmental agencies or where service is provided to an appurtenant structure accessory to the normal use or operation of the main building served on the meter connection.

(b) In structures where one building contains more than one family living unit or apartment, service may be provided on one meter, but special rates may be applied in computing the bill for such service, as may be provided for in this division.

Sec. 58-43. Sale of water prohibited.

It shall be unlawful for any person to sell water from the town water system.

Sec. 58-44. Nonsubscribers.

No person, except subscribers to the town water system, may purchase water from the town system.

Sec. 58-45. Rates to subscribers.

(a) The water service rates shall be as set by the council.

(b) The council shall establish a minimum charge under this section. However, when the owner of a building or a tenant closes out his water service account not more than 15 days after the last water meter reading, he shall be billed on a pro rata basis, determined by the water consumption as shown by the water meter for the period of time in which the premises were occupied at a rate set by the council.

(c) Where a meter serves a building in which there is located more than one family living unit or apartment as provided for in section 58-42(b), the minimum charge and incremented numbers of gallons shall be multiplied by a factor equal to the number of family units or apartments served by the meter, so as to make the charges per family unit or apartment as nearly equal as possible, regardless of whether such unit is served on a separate meter or on the same meter with other such units in the same building.

(d) Except as provided in section 58-42, the minimum charge under this section shall never be less than an amount set by the council for each bimonthly billing period as to each meter serving one family living unit or apartment, and never less than such amount multiplied by the number of family units or apartments served, where a meter serves more than one such family living unit or apartment.

Sec. 58-46. Closing of accounts.

Where the owner of a building or a tenant closes out his water service account at any time after the last water meter reading and before the current reading is due, he shall be billed at the rate set by the council.

Sec. 58-47. Billing for multiple occupants, tenants.

On all residential, commercial or industrial buildings where more than one occupant or tenant is served through a single meter connection, such as apartments, multifamily dwellings or office buildings, the water service charge shall be billed to the owner of the premises, who shall be responsible for payment of the entire charge.

Sec. 58-48. Billing.

Billing shall be computed as determined by the council. A penalty as set by the council may be imposed on delinquent water customers. Service shall be discontinued by cutting off the water connection if the bill and penalty have not been paid at a time determined by the council.

Sec. 58-49. Reconnection charges.

Where the water service is discontinued for nonpayment of the account or temporarily at the request of the customer, the account must be settled in full before service can be restored; and there shall be a cut-on or reconnection charge set by the council before water service may be restored.

Sec. 58-50. Penalties.

Violation of any section, subsection or part of this division shall be deemed to be a class 3 misdemeanor; and each day's violation shall be considered as a separate offense.

Secs. 58-51—58-70. Reserved.

DIVISION 2. WATER CONSERVATION; WATER SUPPLY EMERGENCY

Sec. 58-71. Water conservation during normal conditions.

(a) Flow rates for plumbing fixtures:

(1) This division shall conform to the requirements of the latest edition of the Virginia Uniform Statewide Building Code. Values in this subsection are from the 1990 edition. If there is a conflict between the standards and the Virginia Uniform Statewide Building Code, those standards of the Virginia Uniform Statewide Building Code shall prevail.

(2) In all new construction and in all remodeling and/or replacement of plumbing fixtures, only fixtures not exceeding the following flow rates and/or water consumption shall be permitted:

Water closet, gallons per flush	1.6
Urinal, gallon per flush	1.0
Shower head, gallons per minute at 80 psi	2.5
Lavatory, nonpublic, gallons per minute at 60 psi	2.2

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Lavatory, public, gallon per minute at 80 psi	0.5
Lavatory, public (self-closing), gallon per metering cycle	0.25
Sink faucet, gallons per minute at 60 psi	2.2

(b) *Carwashes.* All existing and new carwash installations shall be equipped with an approved water recycling system.

(c) *Waste of water generally; leak repairs.*

- (1) Any owner of any residential unit, commercial or industrial establishment who is found to be an excessive user of water due to leakage from water lines or plumbing fixtures on the premises and who fails to repair and stop such leakage after notice by the council shall be subject to the penalty provided under section 58-73.
- (2) No person shall permit the water to run from any hydrant, meter or fixture without proper care to prevent waste.

(d) *Continuous flow equipment.* In all new construction and all repair or replacement of continuous flow devices, any water connector device or appliance requiring a continuous flow of five gallons per minute or more and not covered by this section shall be equipped with an approved water recycling system.

Sec. 58-72. Water conservation during water supply emergencies.

(a) Should the council or the director of the department of environmental quality find that a water supply emergency exists, the council will, by public declaration, limit or prohibit the following uses of water:

- (1) The use of water to wash down sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas, buildings or structures.
- (2) The use of water to wash automobiles, trucks, trailers or any other type of mobile equipment, except in facilities operating with a water recycling system. Any facility operating with an approved recycling system must prominently display in public view a sign stating such recycling system is in operation.
- (3) The watering of shrubbery, trees, lawns, grass, plants or other vegetation, except when using recycled water, or except from watering containers not exceeding three gallons in capacity.
- (4) The use of water in the operation of any ornamental fountain, or for scenic and recreational ponds and lakes, except for the minimum amount required to support fish life.
- (5) The use of water from fire hydrants for construction purposes, or any purpose other than firefighting.
- (6) The use of water to fill or refill swimming pools.
- (7) The serving of drinking water in restaurants unless requested by customers.

(b) Any or all of the restrictions specified in subsection (a) of this section shall become effective upon their being printed in any newspaper of general circulation in the town and/or broadcasted over any radio or television station serving the town. These restrictions shall be terminated upon finding that the water shortage is over and the emergency situation no longer exists.

(c) Should the implementation of all of the specified measures fail to conserve sufficient amounts of water supply for the citizens of the town, specific allotments of water supply, by volume, to each water customer shall be imposed. If the allotted amount of water is exceeded within any billing period, each customer so exceeding its allotment shall pay a surcharge. The allotment for each customer and the surcharge rate shall be determined by the council.

Sec. 58-73. Penalties.

Any person convicted of violating any of the provisions of this division shall be guilty of a class 4 misdemeanor. Each day such violation continues shall constitute a separate offense.