

(With amendments as adopted by the
Jamestown Town Council on
January 8, 2007.)

Sec. 82-314. High groundwater table and impervious layer overlay district.

This district encompasses specific areas of the town as shown on the attached map depicting the High Groundwater Table and Impervious Layer Overlay District where natural physical limitations render the land unsuitable for development without restrictions. These are areas where nonconforming lots predominate, no public sewer and water are available, and the water table is within four feet below the original grade or where the depth to impervious layer is within five feet below original grade. These conditions create severe limitations for development and require special design and/or infrastructure in order to be safely developed. Lots 40,000 square feet or greater are exempt from this section.

The purpose of this district is to invoke development standards for development within these areas. Applications for development meeting these development standards may be reviewed administratively. The district shall be broken into two subdistricts.

Subdistrict "A" shall consist of those lots where the seasonal high groundwater table has been determined, to be less than or equal to 18 inches or the impervious layer is less than or equal to 42 inches below the original grade.

Subdistrict "B" shall consist of those lots where the seasonal high groundwater table has been determined to be greater than 18 inches and equal to or less than 48 inches or the impervious layer is greater than 42 inches and up to and including 60 inches below the original grade.

The decision as to whether a particular lot is located in either subdistrict "A" or subdistrict "B" shall be made by the zoning enforcement officer based on evidence the town determines to be sufficient and/or which is submitted to the town by a RIDEM Class IV Soil Evaluator engaged by the lot owner or a potential developer of the lot. A submission to the zoning enforcement officer shall include all of the results of examination or testing conducted on the lot and shall be accompanied by a written representation by the soil evaluator that no such results are being withheld. Where the examination and/or testing of multiple areas of a lot yield different results, the zoning enforcement officer shall make a determination: (1) that the lot is in subdistrict "A" if any of the multiple areas examined or tested meet the subdistrict "A" criteria; (2) if the lot is not in subdistrict "A", that the lot is in subdistrict "B" if any of the multiple areas examined or tested meet the subdistrict "B" criteria; or, (3) if none of the multiple areas examined or tested meet either the subdistrict "A" or the subdistrict "B" criteria, that the lot is not in the Overlay District.

For any development in subdistrict "A" and for any development in subdistrict "B" which includes the construction of a new dwelling or which requires a septic

suitability determination from the Department of Environmental Management, the number and location of test holes shall be in accordance with the following Table:

Criteria for Test Hole Location Within Subdistricts "A" and "B"

Lot Size (s.f.)	# of Test Holes	Criteria for Test Hole Location (# Indicates Test Holes in That Location)				
		Within 25' of ISDS Leachfield	Within 10' of Building Foundation	Within Footprint of Building Foundation	Evenly Spaced Over Remaining Area	Central to the Remaining Area
0--7200	3	2*		1		
7201--14400	4	2*		1		1
14401--21600	5	2*	2**			1
21601--39,999	6	2*	2**		2	

*Minimum 10 ft. apart**Minimum 20 ft. apart

For development in subdistrict "B" which does not involve a new dwelling and which does not require a septic suitability determination from the Department of Environmental Management, a single test hole in the area of the proposed development shall be required, but such development may be relieved by the zoning enforcement officer after review with the town planner and the town engineer of any test hole requirement upon presentation of existing water table and impervious layer data.

A. *Prohibited uses.* The following activities are prohibited:

1. In subdistrict "A":

- a. The installation of basements associated with either new construction or additions to existing construction where the finished or unfinished level of the basement floor is within 12 inches of the seasonal high groundwater table.
- b. In-ground swimming pools.

2. In subdistricts "A" and "B":

The installation of subsurface drains designed to intercept and lower the groundwater table for the installation of an ISDS.

B. *Development within subdistrict "B".* Development within subdistrict "B" shall comply with the development standards below in section 82-314. B.1.--6. Development proposals that meet these standards will be reviewed administratively by the zoning enforcement officer after review with the town planner and the town engineer. The town may engage professional assistance to assist with the professional review of applications and advise with the applicant responsible for such cost. Applications failing to meet one or more of the development standards in 1.--6. below shall require a

special use permit per article 6 and meet the development standards for subdistrict "A" in section 82-314 C.1.--4. below.

1. The slab, not including pilings/footings, of a dwelling shall have a 12-inch separation between the bottom elevation of the structure and the seasonal high groundwater table. All Foundation elements below the seasonal high-groundwater table shall be engineered to allow for free passage of water.
2. All new ISDSs and ISDSs requiring major repair shall have been approved by RIDEM and provide for either denitrification or enhanced pathogen removal. Denitrification or pathogen treatment levels, measured at the outlet of the treatment unit prior to discharge to a drainfield shall achieve:
 - a. Minimum total nitrogen removal of 50 percent and a reduction to less than or equal to 19mg/1 total nitrogen.
 - b. TSS and BOD5 shall be equal to or less than 10mg/1 each.
 - c. For pathogen removal fecal coliform treatment achieving minimum fecal coliform removal to less than or equal to 1,000 fecal coliform MPN/100 ml.

Approved technologies shall be those listed by the Department of Environmental Management and capable of achieving the above treatment levels.
3. Where RIDEM approves the separation between a leach field and a potable well which is less than 100 feet, the ISDS design shall provide for microbiological treatment of the effluent which shall result in a final concentration of fecal coliform of less than or equal to 200 mpn/100ml.
4. All ISDS and any well serving new dwellings shall be located on the same lot as the structure it/they serves.
5. Total impervious surface coverage shall not exceed 15 percent. Elevated structures with roofs allowing for groundwater infiltration that are less than 120 square feet in size are exempt when calculating the amount of impervious surface coverage in sub-district B or sub-district A .
6. Proposals shall provide stormwater controls demonstrating that the increase in the difference between the predevelopment and post development volume of runoff from a ten-year 24-hour storm will

be contained on site. For the purposes of this calculation the following table will be used:

Percent of Rainfall Which Becomes Runoff

Bare soil	40%
Grassland	35%
Cultivated	30%
Timber/Forest	15%
Lawn 0--5% slope	15%
>5% slope	30%
Roofs	95%
Paved areas (conc, asphalt, brick etc)	85%
Gravel surfaces (constructed)	60%

There shall be a ten-foot separation between a leachfield and the edge of any stormwater infiltration system.

Elevated structures with roofs allowing for groundwater infiltration and structures less than 120 square feet in size are exempt from this standard.

- C. *Development within subdistrict "A"*. Any development within subdistrict "A" shall, after review by the Planning Commission, require a special use permit per article 6 from the zoning board of review, in accord with the Special Use Permit Criteria contained in this section.

A development plan shall be filed with the zoning enforcement officer and shall be at a suitable scale, to show the following information:

- Property boundary lines, with area and dimensions of the property to be developed;
- Vicinity plan showing adjacent or nearby properties, uses, ISDS's, wells, wetlands, streams or surface water reservoirs within a 500-foot radius;
- Topography map of the property;
- Site specific soils map of the property;
- Stormwater management plan;
- Wetlands map (wetlands on site shall be verified by DEM);

- The applicant shall provide a copy of the RIDEM ISDS approval; and
- The planning commission may require additional information that they determine to be necessary to act on the application.

The applicant shall also indicate proposed use and development. For the purposes of this section, development shall be defined as any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations upon the lot.

1. Criteria for the issuance of Special Use Permits.

The Special Use Permit criteria contained in this section are implemented in recognition of:

- The natural characteristics of the land, including its suitability for use based on soil characteristics, geology, topography and susceptibility to surface and groundwater pollution;
- The values of unique or valuable natural resources and features;
- The availability and capacity of existing and planned public and/or private services and facilities;
- The goals and pattern of land use contained in the Jamestown Comprehensive Plan;
- The need to protect the island's vulnerable and limited water supplies by maintaining maximum groundwater recharge of rainfall and treated wastewater to replenish drinking water supplies and avoid salt water intrusion;
- The need to prevent further impacts and restore impaired areas where intense development and water use, in combination with limited land development suitability, have resulted in localized flooding, incidents of groundwater contamination, low well yields, and salt water intrusion.
- All efforts should be made to maintain original grade while minimizing cut and fill. All grading and filling

should benefit the Stormwater management plan for the site and surrounding area.

All proposals for the granting of special use permits under this section 82-314 C shall, in addition to the requirements of article 6 hereof, meet the following criteria and, in addition the standards outlined in section 83-314 B.1--6, which ever are greater:

2. *Subsurface structures.*

- The design of the subsurface structures shall minimize the problems and hazards created by the seasonal high groundwater table and/or impervious layer and result in the least grading, filling, or other disturbance to the site and to any wetland buffer as possible. Any foundation elements below the seasonal high-groundwater table shall be engineered to allow for free passage of water.
- The seasonal high groundwater table will not damage, interfere or reduce the potential for the proper functioning of the subsurface structure.
- The subsurface structure will not pose any threat to public health or safety or to the water resources of the town, including groundwater
- The siting and design of the ISDS and dwelling it serves shall result in the least disturbance to the site and to the wetland buffer as possible.

3. *Individual sewage disposal systems.*

- All proposals relating to the installation of an ISDS shall insure that the system, once in use, will not pose a threat to the public health and safety nor cause any degradation of ground or surface water quality, including adverse effects due to cumulative impact.
- All proposals relating to the installation of an ISDS shall demonstrate that the design, siting and selection of technologies for the treatment and dispersal units are the most appropriate for the site.
- All proposals relating to the installation of an ISDS shall demonstrate that the project has been designed so as to

minimize combined impacts related to the ISDS, stormwater runoff, and potential disturbances to wetland buffers.

4. *Stormwater management.*

- The applicant shall demonstrate that runoff control measures have minimized site disturbance, maximized nonstructural controls, and have not adversely affected subsurface flow of groundwater.
- All proposals shall show, to the greatest extent possible that the proposed site improvements shall minimize fill and grading, and maintain, to the greatest extent possible, the existing overland flow of runoff from the site to surrounding areas.
- All stormwater management measures will maintain the water quality function of wetland buffers and avoid any encroachment that might impair the wetland's pollutant removal capacity such as directing channelized flow to the wetland, reducing subsurface flow through the buffer, increasing sedimentation, reducing shade cover, or any alteration that would result in fluctuating water levels that negatively impact sensitive habitat.

The Percent of Maximum Impervious Cover for Sub-District A Lots shall be as follows:

<u>Water Table</u>	<u>0 - 10 "</u>	<u>10.1 - 14"</u>	<u>14.1 - 18"</u>	<u>Greater than 18"</u>
<u>Impervious Layer</u>				
<u>0 - 20"</u>	<u>8%</u>	<u>9%</u>	<u>10%</u>	<u>11%</u>
<u>21 - 31"</u>	<u>9%</u>	<u>9%</u>	<u>10%</u>	<u>12%</u>
<u>32 - 42"</u>	<u>9%</u>	<u>10%</u>	<u>10%</u>	<u>13%</u>
<u>Greater than 42"</u>	<u>9%</u>	<u>10%</u>	<u>10%</u>	<u>see Sub-District B</u>

Where the examination and/or testing of multiple areas of a lot yield different results as to the Water Table and/or Impervious Layer, the percent of maximum impervious cover for the lot shall be calculated on the most restrictive result. No lot in Sub-District A shall be allowed impervious cover in excess of 2,000 square feet, regardless of lot size. Freshwater wetlands shall be subtracted from total lot size prior to calculating maximum impervious cover above.

.D *Variances for prohibited development in subdistrict "A".*
Applicants proposing uses prohibited pursuant to section A hereof shall, after development plan review by the planning commission, be required to obtain a use variance pursuant to article 6 hereof. In addition to the standards contained in article 6 hereof, all applicants shall demonstrate that the proposal meets, to the greatest extent possible, all of the development standards contained in subsections B and C hereof.

Applicants shall file a development plan with the zoning enforcement officer which shall be at a suitable scale and which shall show the following information:

1. Property boundary lines, with area and dimensions of the property to be developed;
2. Vicinity plan showing adjacent or nearby properties, uses, ISDS's, wells, wetlands, streams or surface water reservoirs within a 200-foot radius;
3. Topography map of the property;
4. Site specific soils map of the property;
5. Stormwater management plan;
6. Wetlands map (wetlands on site shall be verified by DEM); and
7. The planning commission or the zoning board may require additional information that they determine to be necessary to act on the application.

(Ord. of 2-10-2003; Ord. of 3-22-2004(2); Ord. of 4-26-2005)