

## State of New Hampshire DEPARTMENT OF ENVIRONMENTAL SERVICES



Water Division
29 Hazen Drive, PO Box 95,
Concord, New Hampshire 03302-0095
Attn: 401 Water Quality Certification Program
Phone (603) 271-2457 Fax (603) 271-7894

#### APPLICATION FOR 401 WATER QUALITY CERTIFICATION

Date of Request	
Date Request Received by DES	
I. Applicant Information	
Principal Place of Business of the A	Applicant
Mailing Address [Street, PO Box, RR, etc	:.1
City/Town and Zip Code	
Telephone No.	Email Address
Name and Title of Signatory Official which Certification is Sought (e.g.,	
II. Project Information	
Name of Project	
Name of Town and County that contain	ns the Project
Name of Receiving Waterbody and Dra	inage Basin
Summary of Activity (e.g., construct or action)	cion, operation, or other practice

## Wild Meadows Wind Project

### Danbury & Alexandria, NH

#### **Request for 401 Water Quality Certification**

#### III. Additional Submittal information

Questions from the 401 application are shown in italics, responses are provided below each individual question:

• Type of activity (e.g., construction, operation, other action such as water withdrawal) and the start and end dates of the activity.

Atlantic Wind, LLC is proposing a commercial wind project project located in the town of Alexandria, New Hampshire on Tax Map 414, Lot 144, Tax Map 415, Lot 5, Tax Map 417, Lots 4, 8, 13, 43 and Danbury, New Hampshire, on Tax Map 401, Lot 1, Tax Map 403, Lots 9, 19, 20, and 25. The project will consist of 23 wind turbines, 9 miles of access roads, an electrical substation, 10 miles of electrical distribution lines, and an operations and maintenance facility (please refer to **Attachment A** Overview Plan). The total earth disturbance for this work is 151.5 acres.

Details regarding the extent of clearing, grubbing and grading can be seen in the Alteration of Terrain Permit application on file with DES.

Wetland impacts associated with project include approximately 0.9 acres of direct permanent impacts to wetlands and an additional 1,319 square feet of direct permanent impact to intermittent streams. No direct permanent impacts to perennial streams are proposed.

The start of construction has not yet been set, but is anticipated to occur over a 1-2 year period of time. Operation of the built facility is anticipated to continue indefinitely.

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• The characteristics of the activity: Whether the activity is associated with a discharge and/or water withdrawal and whether the discharge and/or withdrawal is proposed or occurring.

	No project-related withdrawals or discharges are currently occurring.
	Process water discharges and water withdrawals are not proposed as part of this wind power project. Other discharges associated with the proposed project include:
	☐ the filling of wetlands during construction (please refer to the Wetland Dredge and Fill Application submitted as part of the Site Evaluation Committee (SEC) filing); and
	☐ the discharge of stormwater (after it passes through erosion control Best Management Practices (BMPs)) during construction; and
	the discharge of stormwater from roads, turbine pads, the operation and maintenance facility, and the electrical substation once construction of such features is complete.
	Any water withdrawals that may occur during construction would be incidental to the construction of the project and would be of such limited volume and duration (such as filling a truck- mounted tank for dust suppression or hydroseeding tanks) as to have an insignificant effect on water quantity or quality.
	It is anticipated that placement of fill material in wetlands will be permitted under the NH Programatic General Permit (NH PGP 2012) and be subject to the associated NHPGP 401 conditions unless otherwise modified by NH DES.
• <i>T</i>	he characteristics of the discharge and/or withdrawal
	Two main phases of activity can result in discharges from wind power projects; those that relate to stormwater discharges associated with the process of constructing access roads, wind turbine pads and other ancillary earth disturbances, and secondly the discharges of stormwater from the constructed features once they become operational.
	In an effort to eliminate or severely restrict the potential pollutants that might be present in stormwater from this project when compared to the range of pollutants that are commonly present in stormwater from typical development projects, the project proponents have agreed to:
	□ use no herbicides; and

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apply fertilizers only once during the period of vegetation establishment (if
needed at all, and then only at agronomic rates); and
follow blasting Best Management Practices (BMPs); and
apply road salt only in the walkways and parking areas at the operation and
maintenance area.

Due in part to these actions to minimize or eliminate potential pollutants, it is anticipated that during both the construction and operational phases of activity the potential pollutant of concern is the discharge of earthen materials (whether sand, rock, organic material these materials are hereafter referred to as Total Suspended Solids (TSS)). The force acting to create the potential for discharge is precipitation falling on and eroding disturbed ground surfaces. The main difference between the construction phase and operation phase of the project is that during construction the frequent movement and unconsolidated nature of the disturbed ground surfaces creates a greater vulnerability of such surfaces to be subject to the erosive forces of storm events. In contrast, during the operation phase these vulnerabilities are minimized due to less traffic, reduced roadway widths, more consolidated roadway surfacing materials, and vegetation growth.

#### **Construction Phase**

Addressing TSS that may emanate from the frequently changing grades and ground surface composition during the construction process necessitates a flexible *management* approach to minimize the potential for discharge of TSS. This management approach starts with preventative measures that reduces the vulnerability of the ground surface to erosion forces and also provides construction crews with the knowledge and tools needed to install and adapt sediment controls to meet the changing site conditions. These management elements form the basis of the Stormwater Pollution Prevention Plan (SWPPP) that is developed for compliance with EPA's Construction General Permit (CGP). The frequent monitoring of the erosion and sediment controls that are performed during construction ensures that the controls are implemented in a timely manner, adjusted if needed, and maintained in working order until the project is permanently stabilized.

The following discharges will occur during construction:

Wetlands will be filled with common fill and granular material where the layout
of roadways and turbine pads could not effectively avoid these wetland areas.

□ Stormwater discharges from construction sites typically contain TSS. Erosion control BMPs are designed to provide sedimentation mechanisms that will limit discharges of TSS to surface waters and wetlands.

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## Operation Phase

	ce the project has been constructed and the ground surface stabilized two potential chanisms of discharge exist:
	TSS that may be entrained in stormwater that runs off of the gravel stabilized roadways and turbine pads; and
	the discharge of lubricating oils associated with the wind turbines and electrical facilities to the ground in the event of a catastrophic failure of the oil reservoirs and a subsequent failure of the containment mechanisms designed to capture oil from a ruptured reservoir.
con Det lub	tails regarding the design approach to addressing the potential pollutants of accern associated with post construction stormwater discharges are provided below. tails on spill containment and management of leachable materials such as ricating oils will be documented in an EPA Spill Prevention Control and untermeasure (SPCC) Plan.
suris in at the the the the the the the the the th	ce the construction of all the proposed features has been completed, the disturbed faces have been stabilized to resist the erosive forces of storm events, and the site its operational stage, there exist fewer vulnerable surfaces; such surfaces will be he grades and conditions as shown on the design plans. The result is a more dictable stormwater runoff pattern that is conducive to treating stormwater to nove TSS for a variety of weather conditions that will likely be experienced over course of decades, while ensuring that such treatment features do not disrupt ural drainage patterns or thermal regimes that organisms depend on. To this end, design approach that has been used to address post construction stormwater is as lows:
	Apply suitable roadway materials to support heavy equipment, and provide a durable travel surface that resists rutting and disturbance by vehicular travel.
	Construct and maintain roadway crowns to shorten the flow path length over the roadway thereby preventing forces that would otherwise work to erode the roadway surfacing.
	Reduce travel way widths by establishing grass buffers along roadway margins to help settle coarse sediments.
	Provide short distances between culverts under access roads to ensure that stormwater and shallow groundwater that travels downslope will continue to travel downslope with little diversion by roadside ditches. This frequent culvert spacing will also have a secondary benefit of minimizing the concentration of stormwater that can itself cause erosive forces.
	Properly stabilize ditch lines that exist between culverts to retard the erosive velocities that can occur when runoff is conveyed in non-sheet flow conditions Wild Meadows Wind Project

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Construct sediment traps at many culvert and ditch outlet locations to collect and settle solids that may be entrained in stormwater runoff and to encourage the redistribution of runoff onto the forest floor where the runoff can be infiltrated back into the ground and sediments can be filtered in the leaf layer that exists on the forest floor downgradient of most outlet locations.
Strategically locate outlet locations to provide longer travel times and distance between such outlets and surface water or wetlands.
Construct traditional stormwater management practices (surface sand filters, detention ponds, and treatment swales) in various flatter locations of the site.

#### o Flow rate (cfs)

Discharge flow rates of stormwater from the developed site will vary with storm intensity and duration. Please refer to the NH DES Alteration of Terrain Permit Application (made part of the SEC filing) for details on the flow rates at various discharge points during some of the more commonly modeled storm events

#### o Potential chemical, physical, biological constituents

As identified above, it is anticipated that the *types* of constituents in stormwater that are generated on the site are more like those of logging roads (i.e. TSS) than the types found on conventional residential or commercial roadways (i.e. fertilizers, pesticides, heavy metals, TSS, bacteria, hydrocarbons), however due to the very low intensity of use once the project is operational, the continual disruption of the road surface from vehicular travel that would occur with logging activity is not anticipated.

Studies of logging roads have indicated that suspended solids that are entrained in stormwater from the roadway surfaces are readily trapped in adjacent forested areas if sufficient flow path length is provided between the roadway and the receiving water. While such studies did not indicate whether such logging roads were properly surfaced, crowned or had the benefit of stone stabilized ditches, the roadways proposed for this wind power project have been designed with such features and therefore are anticipated to provide similar or greater erosion retardance. Other features such as sediment traps, treatment swales, sand filters and detention ponds will also be employed to further enhance solids trapping. In summary, the combination of durable surfacing, disruption of the forces that cause erosion and the trapping of remaining sediments in constructed and natural features will be protective of the environment.

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#### o Frequency (e.g., daily, hourly,)

The frequency of discharges during construction and from disturbed surfaces open at any given time is largely a function of the frequency of storm events and the onsite sediment controls that are in place at the time of the storm. Because changes in grading occur rapidly (and thus controls are supplemented as needed), the frequency of discharge is difficult to predict. It is fair to assume that during the construction period there will be treated discharges from the sediment control features until the site work is completed.

The frequency of discharges from the developed site during its operational phase will relate to frequency and intensity of storm events that are sufficient to generate runoff that exceeds the ability of such surfaces to absorb the precipitation.

#### o Duration

As indicated above, the discharges will coincide with the intensity and duration of storm events. Please review the Site Specific Alteration of Terrain Permit for information about the duration of discharges that occur from the watershed(s) during various storm events.

#### o Temperature (Celsius)

The project has been designed to minimize the potential for elevating stormwater discharge temperatures. The short overland flow path length and proposed and existing vegetation provides shade to the surfaces that receive stormwater and important elements of ensuring preservation of a natural thermal regime. The dispersed flow through these areas will aid in the re-assimilation of the runoff into the ground where it can be cooled and enter the groundwater table.

Stormwater detention ponds can increase stormwater temperatures and have been specifically avoided in the design to the extent possible. Concentrated stormwater infiltration features would contradict the important design goal (on much of the higher elevation portions of the project) of shortening flow path lengths and keeping runoff dispersed. Shallow depths to groundwater and ledge that exist in many areas of the site also contradict the use of centralized stormwater infiltration devices as reliable means of temperature mitigation in such areas.

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o Latitude and longitude (dd:mm:ss)

This linear project spans two towns. The lat./lon. of the approximate center of the project is N 043:35:21/ W 071:51:09.

• The existing and designated use(s) that are potentially affected by the proposed activities. (Designated Uses are listed in the DES Consolidated Assessment and Listing Methodology).

The project lies within the drainage areas to the following AUIDs:

AUID	Name
NHRIV700010602-06	Patten Brook
NHRIV700010602-08	Bog Brook
NHRIV700010602-010	Bog Brook
NH LAK700010702-01	Grants Pond
NH RIV700010702-01	Wild Meadow Brook
NH RIV700010702-02	Wild Meadow Brook
NH RIV700010702-04	Taylor Brook
NH RIV700010702-05	Taylor Brook
NH RIV700010702-16	Pine Hill Brook

Please see Watershed Report Cards contained in **Attachment B** for a list of Designated Uses with in each AUID.

It is not anticipated that any of the Designated Uses in these AUIDs will be affected by the project activity.

• The provision(s) of surface water quality standards (Env-Wq 1700) that are applicable to the designated uses affected by the proposed activities.

Although the project is not anticipated to affect Designated Uses, the water quality standards associated with discharges of TSS include:

Env-Wq1703.03(c)(1)a. (benthic deposits)
Env-Wq1703.03(c)(1)c. (turbidity)
Env-Wq1703.08(b). (benthic deposits)
Env-Wq1703.11(b). (turbidity)

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• A pollutant loading analysis to show the difference between predevelopment and post-development pollutant loads for a typical year. The objective of the loading analysis is to show post-development pollutant loads do not exceed pre-development pollutant loads. Loading analysis guidance and a simple spreadsheet model will be provided by DES. The loading analysis will be used to determine appropriate stormwater management measures, which must be effectively designed, installed, and maintained to ensure compliance with surface water quality standards.

Based upon the foregoing discussion regarding unique construction and materials techniques, low intensity of vehicular use, sample results from similarly designed wind projects, and the fact that even in the AoT analysis point watershed with the highest level of proposed development impervious surfaces, such surfaces will only cover 1.4% of the watershed, we do not feel that the preparation of the model will properly characterize the pollutant generation, nor provide utility worthy of its preparation.

• A description of any other aspect of the activity that would affect the chemical composition, temperature, flow, or physical aquatic habitat of the surface water.

Uncured concrete can be discharged from any construction project, however with basic management of concrete washwater, as is done on these professionally managed wind construction projects, such discharges are prohibited. A concrete washwater plan will be prepared to avoid the discharge of uncured concrete at the project site.

• An original or color copy/reproduction of a United States GeologicalSurvey Quadrangle Map that clearly shows the location of the activity and all potential discharge points.

Please see attached USGS map in **Attachment C** showing the project. Due to the extent of the project and the fact that point source discharges are not proposed it is not feasible to show all possible locations where stormwater runoff from the project might discharge (enter a water of the U.S. i.e.: wetland, stream, or other surface water). For details regarding the proximity of specific project features to various wetlands and surface waters please refer to the plan set contained in the Alteration of Terrain application on file with NH DES.

• A copy of the final complete federal permit application or federal license application, including the federal permit, license, or

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project number.

Previous discussions with Mr. Dave Keddell of the United States Army Corps of Engineers indicate that he feels that the project may be subject to the NH Programmatic General Permit. While this approach to permitting the project would not require the preparation of an Individual 401 Water Quality Certificate this Request has been prepared to provide the NH DES with the information it would need to process either an Individual 401 or from which to evaluate 401 SPGP conditions and minimize permitting delays.

A copy of the NH DES Wetland Dredge and Fill permit application is on file with the NH Wetlands Bureau, but because it has been submitted concurrently with the other NH DES applications the permit number is not currently available.

• A copy of the DES wetlands permit (RSA 482-A:3), if necessary.

A copy of the NH DES Wetland Dredge and Fill permit application is on file with the NH Wetlands Bureau.

• A copy of the DES alteration of terrain permit (RSA 485-A:17), if necessary.

A copy of the NH DES Wetland Dredge and Fill permit application is on file with the NH DES Alteration of Terrain Program staff.

• The name(s) and address(es) of adjoining riparian or littoral Abutters.

An abutters list submitted to satisfy the DES wetland permit abutter notification obligations is contained in **Attachment D**. Should DES determine that littoral or riparian concerns extend to property owners beyond those provided in the wetland permit, we would be happy to find and report the names of such owners, when requested to do so.

- A plan showing the proposed activities to scale including:
- o The location(s) and boundaries of the activities;
- o The location(s), dimension(s), and type(s) of any existing and/or proposed structures; and

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o The location(s), name(s), identification number(s), and extent of all potentially affected surface water bodies, including wetlands.

Please see project plans filed with the Wetland and Alteration of Terrain permit applications.

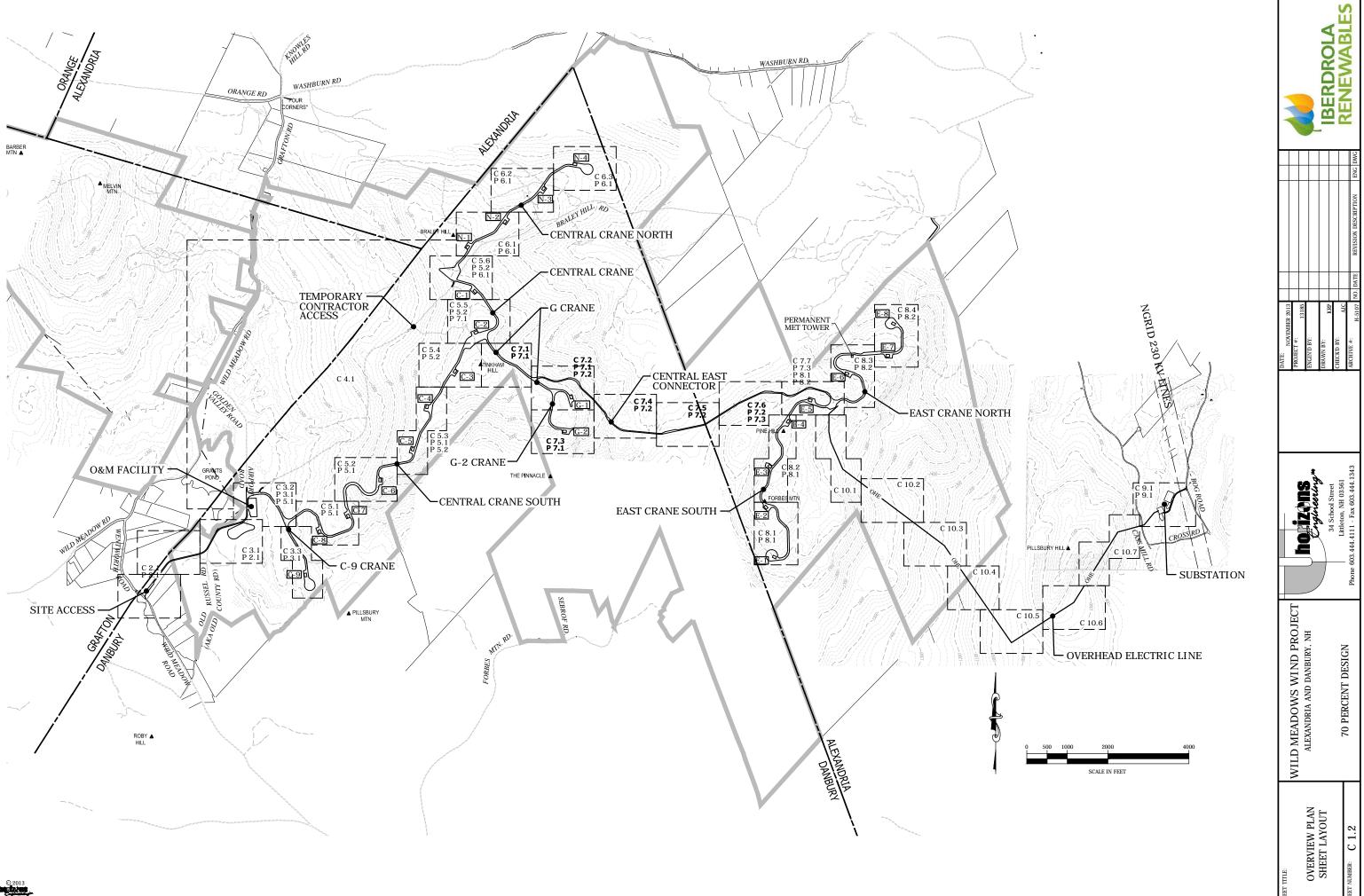
Signature – MUST BE SIGNED AND DATED BY APPLICANT

"To the best of my knowledge, the data and information described above, which I have submitted to the New Hampshire Department of Environmental Services, is true and correct. I understand that an approval of the requested 401 Certification based upon incorrect data may be subject to revocation of the 401 Certification. I have complied with all local regulations or ordinances relative to the proposed activity and have obtained or will obtain, prior to the commencement of any work, all other approvals that may be required."

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## ATTACHMENT A OVERVIEW PLAN



## ATTACHMENT B WATERSHED REPORT CARDS

## WATERSHED 305(b) ASSESSMENT SUMMARY REPORT:

**HUC 12** 010700010602

HUC 12 NAME HORNET COVE

(Locator map on next page only applies to this HUC12)

#### Assessment Cycle 2010

11000001110 07010 2010						
Good	Full Support Good					
Marginal	Full Support Marginal					
Likely Good	Insufficient Information – Potentially Full Support					
No Data	No Data					
Likely Bad	Insufficient Information – Potentially Not Support					
Poor	Not Support Marginal					
Severe	Not Support Severe					



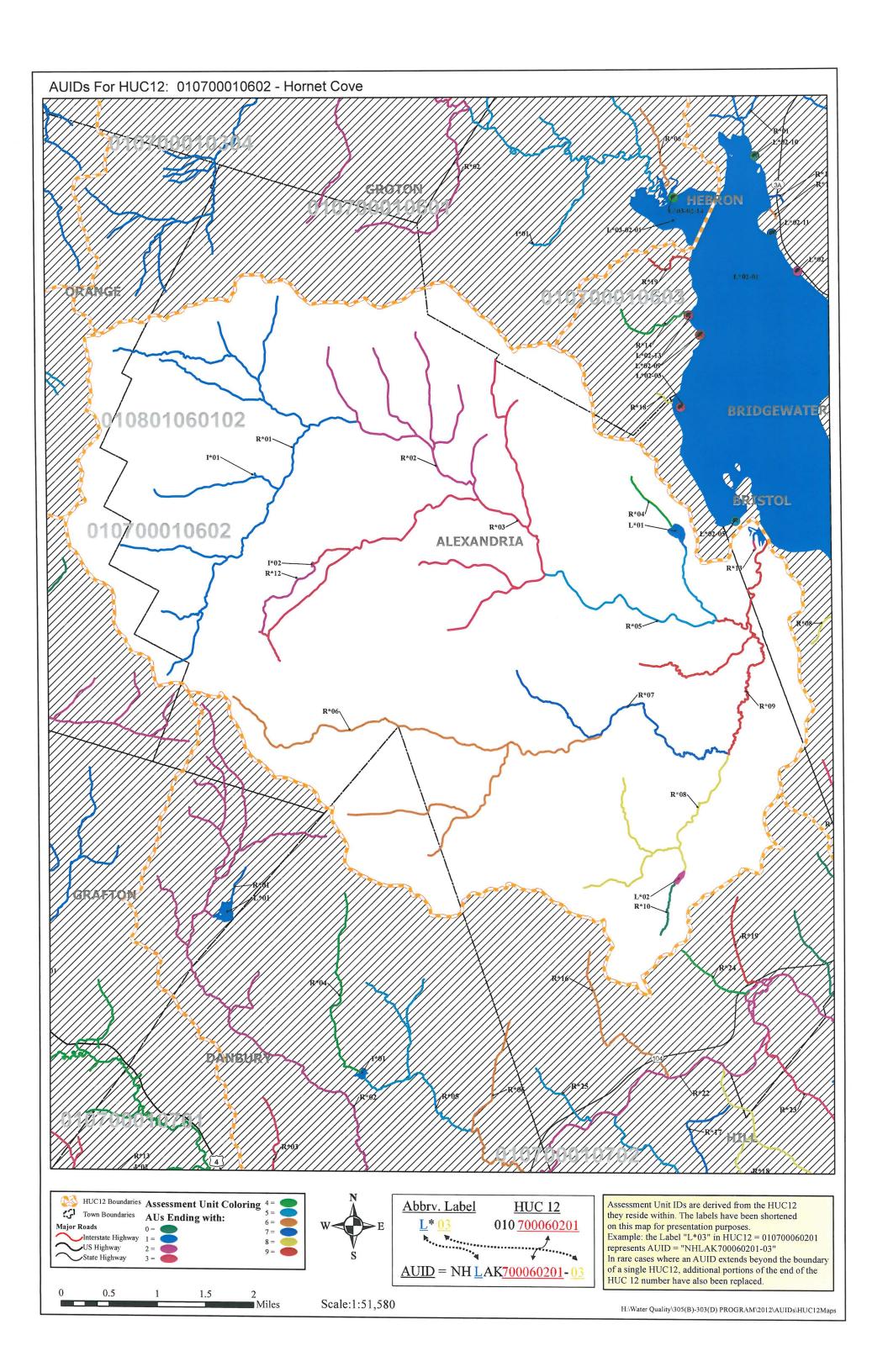






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ASSESSMENT UNIT ID	MAP LABEL	ASSESSMENT UNIT NAME	AQUATIC LIFE	SWIMMING	BOATING	FISH CONSUMP.
NHIMP700010602-01	I*01	UNNAMED BROOK	3-ND	3-ND	3-90	4A-M
NHIMP700010602-02	I*02	UNNAMED BROOK	3-00	3-1VD	3-MD	4A-M
NHLAK700010602-01	L*01	GOOSE POND	3-00	3-1VD	3-MD	4A-M
NHLAK700010602-02	L*02	FOSTER POND	3-00	3-1VD	3-MD	4A-M
NHRIV700010602-01	R*01	BAILEY BROOK	3-PNS	3-1VD	3-MD	4A-M
NHRIV700010602-02	R*02	CHESLEY BROOK - TEMPLETON BROOK	3-ND	3-WD	3-ND	4A-M
NHRIV700010602-03	R*03	BROCK BROOK - TOWN BROOK	3-00	3-1VD	3-MD	4A-M
NHRIV700010602-04	R*04	UNNAMED BROOK - TO GOOSE POND	3-00	3-1VD	3-MD	4A-M
NHRIV700010602-05	R*05	FOWLER RIVER - UNNAMED BROOK	5-M	2-G	2-G	4A-M
NHRIV700010602-06	R*06	PATTEN BROOK	3-ND	3-WD	3-ND	4A-M
NHRIV700010602-07	R*07	PATTEN BROOK - UNNAMED BROOK	3-00	3-1VD	3-MD	4A-M
NHRIV700010602-08	R*08	BOG BROOK	3-00	3-1VD	3-MD	4A-M
NHRIV700010602-09	R*09	BOG BROOK	5-P	5-M	2-G	4A-M
NHRIV700010602-10	R*10	BOG BROOK	3-100	3-100	3-MD	4A-M
NHRIV700010602-12	R*12	UNNAMED BROOK	3-100	3-1VD	3-00	4A-M
NHRIV700010602-13	R*13	UNNAMED BROOK	3-80	3-100	3-ND	4A-M

Watershed Report Page 1 Date: 6/11/10



NHRIV700010602-06

Assessment Unit Name

PATTEN BROOK

Primary Town ALEXANDRIA

<u>Size</u> 7.7060

Beach N

Assessment Unit Category\*~ 3-ND

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

> Page 10 of 16 Date: 8/25/10

*Desig. Desig. Designated Use Use Use Parameter Description Category Threat Name		Parameter Threatened (Y/N)	Parameter Category*		Expected To Attair Date	Source Name (Impairments only)	
Aquatic Life	3-ND	Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
		Dissolved oxygen saturation		3-ND			
		Fishes Bioassessments (Streams)		3-ND			
		Oxygen, Dissolved		3-ND			
		На		3-ND			
Drinking Water After Adequate Treatment	2-G						
Fish Consumption	4A-M	Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND	Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND	Escherichia coli		3-ND			
Wildlife	3-ND						

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

<u>Assessment Unit ID</u> Assessment Unit Name NHRIV700010602-08

BOG BROOK

Primary Town ALEXANDRIA

<u>Size</u> 3.8290

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

> Page 12 of 16 Date: 8/25/10

Beach N

Assessment Unit Category\*~ 3-ND

*Designated Use Use Use Category Threat		Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)	
Aquatic Life	3-ND		Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			рн		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

<u>Assessment Unit ID</u> Assessment Unit Name NHRIV700010602-10

BOG BROOK

Primary Town ALEXANDRIA

<u>Size</u> 0.5860 MILES

Beach N

Assessment Unit Category\*~ 3-ND

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

> Page 14 of 16 Date: 8/25/10

Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)
Aquatic Life	3-ND		Benthic+Macroinvertebrate Bioassessments (Streams)		3-ND			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			рн		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M			Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

## WATERSHED 305(b) ASSESSMENT SUMMARY REPORT:

**HUC 12** 010700010702

HUC 12 NAME SMITH RIVER LOWER

(Locator map on next page only applies to this HUC12)

#### Assessment Cycle 2010

Good	Full Support Good
Marginal	Full Support Marginal
Likely Good	Insufficient Information – Potentially Full Support
No Data	No Data
Likely Bad	Insufficient Information – Potentially Not Support
Poor	Not Support Marginal
Severe	Not Support Severe









			Energy !			
ASSESSMENT UNIT ID	MAP LABEL	ASSESSMENT UNIT NAME	AQUATIC LIFE	SWIMMING	BOATING	FISH CONSUMP.
NHIMP700010702-01	I*01	TAYLOR BROOK - BROWNELL RECREATION DAM	3-MD	3-ND	3-MD	4A-M
NHIMP700010702-02	I*02	GULF BROOK - BOG POND DAM	3-ND	3-ND	3-ND	4A-M
NHIMP700010702-03	I*03	BOG BROOK	3-100	3-ND	3-MD	4A-M
NHIMP700010702-04	I*04	UNNAMED BROOK	3-100	3-ND	3-MD	4A-M
NHLAK700010702-01	L*01	GRANTS POND	3-ND	3-ND	3-MD	4A-M
NHLAK700010702-02	L*02	SCHOOL POND	4 A -M	3-ND	3-ND	4A-M
NHLAK700010702-03	L*03	MARCH POND	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-01	R*01	WILD MEADOW BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-02	R*02	WILD MEADOW BROOK	.5 <b>-</b> M	3-PNS	2-G	4A-M
NHRIV700010702-03	R*03	UNNAMED BROOK	3-MD	3-ND	3-MD	4A-M
NHRIV700010702-04	R*04	TAYLOR BROOK	3-PNS	3-ND	3-ND	4A-M
NHRIV700010702-05	R*05	TAYLOR BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-06	R*06	TAYLOR BROOK	3-ND	2-G	2-G	4A-M
NHRIV700010702-07	R*07	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-08	R*08	GULF BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-09	R*09	GULF BROOK - UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-10	R*10	SMITH RIVER	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-11	R*11	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-12	R*12	TIOGA BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-13	R*13	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-14	R*02-14	SMITH RIVER	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-15	R*15	DICKINSON BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-16	R*16	PINE HILL BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-17	R*17	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-18	R*18	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-19	R*19	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-20	R*20	UNNAMED BROOK	3-ND	3-ND	3-ND	4A-M
NHRIV700010702-21	R*21	UNNAMED BROOK	3-ND	3-100	3-ND	4 <i>A</i> - <i>M</i>

Watershed Report Page 1 Date: 6/11/10

## WATERSHED 305(b) ASSESSMENT SUMMARY REPORT:

**HUC 12** 010700010702

HUC 12 NAME SMITH RIVER LOWER

(Locator map on next page only applies to this HUC12)

#### Assessment Cycle 2010

	11222221112112 0,7012 2010
Good	Full Support Good
Marginal	Full Support Marginal
Likely Good	Insufficient Information – Potentially Full Support
No Data	No Data
Likely Bad	Insufficient Information – Potentially Not Support
Poor	Not Support Marginal
Severe	Not Support Severe



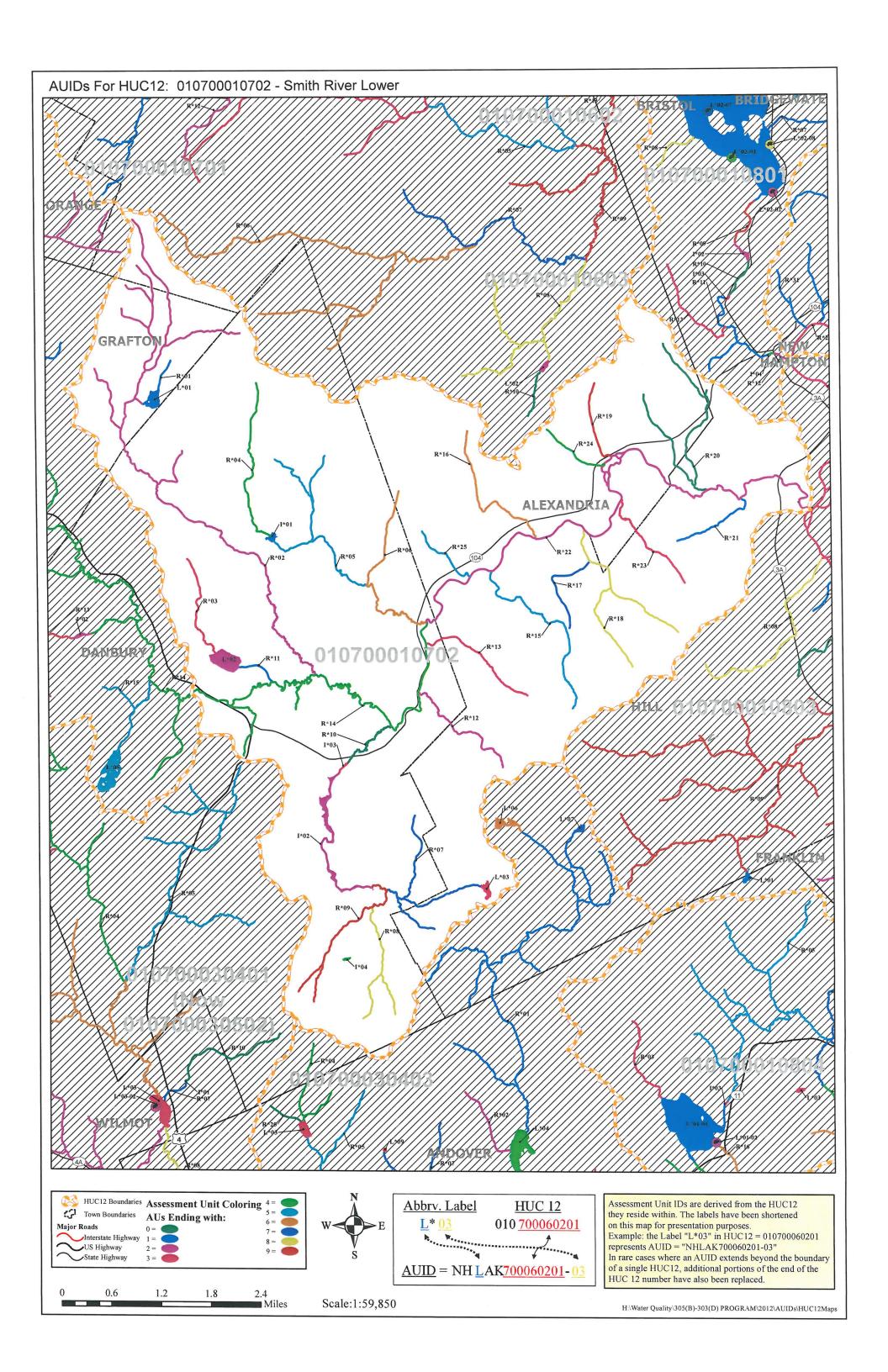






			-			
ASSESSMENT UNIT ID	MAP LABEL	ASSESSMENT UNIT NAME	AQUATIC LIFE	SWIMMING	BOATING	FISH CONSUMP.
NHRIV700010702-22	R*22	SMITH RIVER	5-P	2-G	2-G	4A-M
NHRIV700010702-23	R*23	UNNAMED BROOK	3-ND	3+ND	3-MD	4A-M
NHRIV700010702-24	R*24	UNNAMED BROOK	3-ND	3-ND	3-MD	4A-M
NHRIV700010702-25	R*25	UNNAMED BROOK	3-ND	3-ND	3-MD	4A-M

Watershed Report Page 2 Date: 6/11/10



NHLAK700010702-01

Assessment Unit Name

GRANTS POND

Primary Town GRAFTON

<u>Size</u> 19.4570

Beach N

Assessment Unit Category\*~ 3-ND

ACRES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	
Aquatic Life	3-ND		Chlorophyll-a		3-ND			
			Dissolved oxygen saturation		3-ND			
			Oxygen, Dissolved		3-ND			
			рн		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

NHRIV700010702-01

Assessment Unit Name

WILD MEADOW BROOK

Primary Town

GRAFTON

<u>Size</u> 0.3720

Beach N

0.572

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Assessment Unit Category\*~ 3-ND

Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)
Aquatic Life	3-ND	*	Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			рН		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

NHRIV700010702-02

Assessment Unit Name

WILD MEADOW BROOK

Primary Town

GRAFTON

<u>Size</u> 12.6690 MILES

Beach N

Assessment Unit Category\*~ 5-M

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)
Aquatic Life	5-M		ALKALINITY, CARBONATE AS CACO3	N	3-PAS			
			ALUMINUM	N	3-PNS			
			Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			CHLORIDE	N	3-PAS			
			DISSOLVED OXYGEN SATURATION	N	3-PAS			
			Fishes Bioassessments (Streams)		3-PAS			
			OXYGEN, DISSOLVED	N	3-PAS			
			РН	N	5-M	2023		Source Unknown
Drinking Water After Adequate Treatment	2-G		ESCHERICHIA COLI	N	3-PNS			
			POTASSIUM	N	3-PAS			
			SULFATES	N	3-PAS			
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-PNS		ESCHERICHIA COLI	N	3-PNS			
Secondary Contact Recreation	2-G		ESCHERICHIA COLI	N	2-G			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

Assessment Unit ID Assessment Unit Name NHRIV700010702-04

TAYLOR BROOK

Primary Town

DANBURY

Size

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Beach N

Assessment Unit Category\*~ 3-PNS

2.1310

Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)
Aquatic Life	3-PNS		Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			CHLORIDE	N	3-PAS			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			РН	N	3-PNS			
Drinking Water After Adequate Treatment	2-G		POTASSIUM	N	3-PAS			
			SULFATES	N	3-PAS			
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

NHRIV700010702-05

Assessment Unit Name

TAYLOR BROOK

Primary Town DANBURY

<u>Size</u> 3.6020

Beach N

Assessment Unit Category\*~ 3-ND

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	
Aquatic Life	3-ND		Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			рн		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

NHRIV700010702-16

Assessment Unit Name

Primary Town

PINE HILL BROOK

ALEXANDRIA

Size

MILES

2010, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

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Beach N

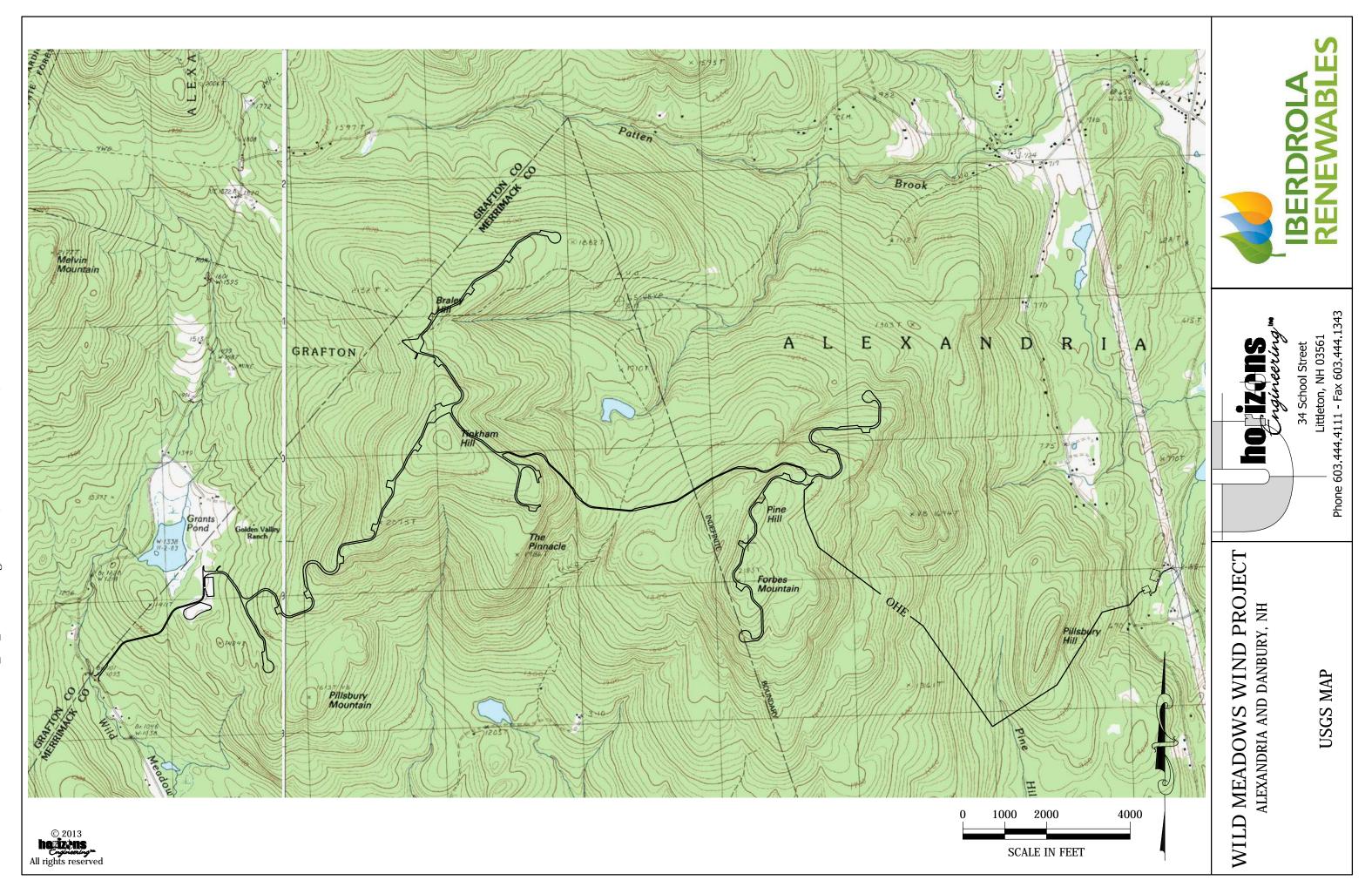
Assessment Unit Category \*~ 3-ND

1.9640

Designated Use Description	*Desig. Use Category	Desig. Use Threat	Parameter Name	Parameter Threatened (Y/N)	Parameter Category*	TMDL Schedule	Expected To Attain Date	Source Name (Impairments only)
Aquatic Life	3-ND		Benthic-Macroinvertebrate Bioassessments (Streams)		3-ND			
			Dissolved oxygen saturation		3-ND			
			Fishes Bioassessments (Streams)		3-ND			
			Oxygen, Dissolved		3-ND			
			рн		3-ND			
Drinking Water After Adequate Treatment	2-G							
Fish Consumption	4A-M		Mercury	N	4A-M	2017		Atmospheric Deposition - Toxics
Primary Contact Recreation	3-ND		Escherichia coli		3-ND			
Secondary Contact Recreation	3-ND		Escherichia coli		3-ND			
Wildlife	3-ND							

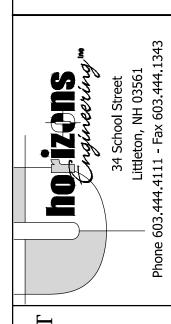
Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good	
Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good	

# ATTACHMENT C USGS MAP



## ATTACHMENT D ABUTTERS LIST

Land Owner	Lot Number	Parcel ID	Town	Street Address	Town	State	Zip Code
ART C CONKEY	13-568		Grafton	PO Box 85	Enfield Center	NH	03749
DONALD R. LARIVIERE & CAROL J. LARIVIERE	417-14	1497/165	Alexandria	15 King Street	Grafton	MA	01560
DOUGLAS C AND MICHELE M FAIRBROTHER	13-930	2362/339	Grafton	631 Wild Meadow Road	Grafton	NH	03240
EDGAR J & NANCY H MICHELS	403-24	2983/991	Danbury	438 Penwood Drive	Edgewater	MD	21037
H & H INVESTMENTS LLC	416-4	3304/152	Alexandria	PO Box 519	Antrim	NH	03440
H & H INVESTMENTS LLC	8-923	3304/183	Grafton	PO Box 519	Antrim	NH	03440
H&H INVESTMENTS, LLC	403-18	2910/1262	Danbury	PO Box 519	Antrim	NH	03440
H. & H. INVESTMENTS, LLC	415-17	3727/990	Alexandria	PO Box 519	Antrim	NH	03440
H. & H. INVESTMENTS, LLC	416-4	3304/152	Alexandria	PO Box 519	Antrim	NH	03440
H. & H. INVESTMENTS, LLC	410-18	3304/152	Alexandria	PO Box 519	Antrim	NH	03440
JAMES KEAY AND JANET A KEAY	13-883		Grafton	22 Temi Road	Raynham	MA	02767
JEFFREY T. CHARTIER	417-44	3005/884	Alexandria	114 Cross Road	Alexandria	NH	03222
JESSE & LORRAINE LAMOS	403-12		Danbury	244 Wild Meadow Road	Danbury	NH	03230
JMK REALTY TRUST, JEAN M KNIGHT TRUSTEE	403-8		Danbury	2483 Main Street	Tewksbury	MA	01876
JODY TROIANO	403-5		Danbury	75 Woodland Drive	Hanover	MA	02339
JOSHUA W & JESSICA L HATCH	403-11		Danbury	250 Wild Meadow Road	Danbury	NH	03230
JOSHUA W & JESSICA L HATCH	403-4		Danbury	250 Wild Meadow Road	Danbury	NH	03230
KARL STUART AND DARCEY SEANOR	8-959	2940/68	Grafton	203 Hampton Road	Haddon Township	NJ	08108
KATHLEEN MESSERSMITH	417-38	1993/82	Alexandria	961 Cass Mill Road	Alexandria	NH	03222
KENNETH E YEOMANS AND LINDA J YEOMANS	13-99		Grafton	17 Putting Green Lane	Prospect	CT	06712
KENNETH, KENNETH JR, AND KEITH MUNCK	403-6		Danbury	169 Salisbury Road	Canaan	ME	04924
LIEBERMANN-ALEXANDRIA TRUST ERICA V. MAWN, TRUSTEE	417-15	1988/441	Alexandria	80 Spring Road	Concord	MA	01742
LOIS MINER	13-1051 (13-1031 accordi		Grafton	28 Wentworth Road	Grafton	NH	03240
MAURICE M. DOW	410-21	978/334	Alexandria	P.O. Box 308	Bradford	NH	03221-0308
NELSON R. SHALLER	417-4	1770/314	Alexandria	506 Bayshore Drive	Osprey	FL	34229-9580
PAMELA M HARTWELL	403-13		Danbury	5 Elm Park	Scituate	MA	02066
PATRICIA B. AGRI	406-186	2135/269	Danbury	6276 Dickinson Road	Placerville	CA	95667
PHILIP M. KING	417-39	3262/334	Alexandria	973 Cass Mill Road	Alexandria	NH	03222-6519
RAYMOND C. GAUTHIER & GEORGE H. RICKER, JR.	417-1	3206/722	Alexandria	P.O. Box 2614	South Hamilton	MA	01982
ROBERT R. BELANGER	13-98	590/443	Grafton	369 Sherburne Road	Pelham	NH	03076
RONALD C KANE	403-10		Danbury	P.O. Box 310	Danbury	NH	03230
RONALD L SHORTER AND DEBORAH J SHORTER	13-540-1		Grafton	58 Wentworth Road	Grafton	NH	03240
RUSSELL W & MARYANN AYER	403-7		Danbury	15 Hunter Drive	Bow	NH	03304
SANDRA PAGANI & MARK C. PAGANI	417-40	2347/887	Alexandria	991 Cass Mill Road	Alexandria	NH	03222
SEAN A FROST	13-886-3		Grafton	576 Wild Meadow Road	Grafton	NH	03240
SEAN A FROST	13-886-4		Grafton	576 Wild Meadow Road	Grafton	NH	03240
SHANE R & SETH J OFFEN	403-21	2734/937	Danbury	40 Old County Road	Danbury	NH	03230
SHARON A. POIRIER & THOMAS H. POIRIER	417-41	3176/888	Alexandria	22 Gilbert Street	Dracut	MA	01828
STEVEN R. GARON AND PAULA J CARTER	417-12	1055/154	Alexandria	425 Raymond Road	Chester	NH	03028
TIMOTHY G DONOGHUE AND PAMELA J DONOGHUE	13-886-1		Grafton	16 Briggs Street	Hillsborough	NH	03244
TIMOTHY G DONOGHUE AND PAMELA J DONOGHUE	13-886-2		Grafton	16 Briggs Street	Hillsborough	NH	03244
TIMOTHY TRONCONE	414-145	2354/557	Alexandria	24 Hogg Hill Road	Bradford	NH	03221-3305
TOWN OF ALEXANDRIA	417-42	3548/484	Alexandria	47 Washburn Road	Alexandria	NH	03222
WILLIAM E. ROBIE & KENNETH ROBIE	414-53	801/185	Alexandria	417 Fowler River Road	Alexandria	NH	03222
WILLIAM E. NODIL & MENNETH NODIL	111 00	001/100	nicaniuna	117 1 O WICI INVCI IWAU	1 II CAUTIUI II	1411	00222



IBERDROL

RENE

WILD MEADOWS WIND PROJECT ALEXANDRIA AND DANBURY, NH

ABUTTERS LIST

