

Yearly Operational Plan

2020

PROVIDENCE & WORCESTER RAILROAD COMPANY



**75 HAMMOND STREET
WORCESTER, MA 01610**

Prepared by:

**TEC ASSOCIATES
46 SAWYER STREET
SOUTH PORTLAND, MAINE 04106**

ABSTRACT:

This Yearly Operational Plan (YOP) describes the vegetation management operations for the Railroad's rights-of-way scheduled for vegetation maintenance during this calendar year in compliance with the Commonwealth of Massachusetts Rights-of-Way Management Regulations 333 CMR 11.00.

This YOP is a companion document to the Vegetation Management Plan (VMP) which has been approved by the Department of Agricultural Resources.

INTRODUCTION

Both Federal and State laws require railroads to manage vegetation to help ensure the safe passage of people, material, and goods.

The Code of Federal Regulations mandates the safety of the railroad must be guaranteed by regular inspection and maintenance. Vegetation must be controlled so that it does not become a fire hazard, does not interfere with visibility, or impede direct visual inspections of the track structure. Vegetation must also be managed to allow for proper drainage of the track and ballast structure, to prevent tree and branch damage to cargo, and to provide safe footing and working conditions for trackside personnel. Vegetation growing along side the rails can prevent effective and adequate braking, especially in emergency situations.

The purpose of 333 CMR 11.00, Rights of Way Management, is to promote the implementation of Integrated Pest Management techniques and to establish standards, requirements, and procedures necessary to minimize the risk of unreasonable adverse effects on human health and the environment associated with the use of herbicides to maintain rights-of-way. These regulations establish procedures which guarantee ample opportunity for public and municipal agency review and input on rights-of-way maintenance plans.

A Yearly Operational Plan or YOP must be submitted to the Department of Agricultural Resources every year herbicides are intended for use to maintain rights-of-way. The YOP provides a detailed program for vegetation management for the year. This YOP is a companion document to the Vegetation Management Plan (VMP) approved by the Department. The VMP is the long term management plan for the railroad which describes the intended program for vegetation control over a five year period.

Upon receipt of this YOP, the Department publishes a notice in the Environmental Monitor. The applicant has provided a copy of the YOP and Environmental Monitor notice to the Board of Health, Conservation Commission, and the chief elected municipal official for the city or town in which the herbicide treatment is proposed.

The Department allows a 45 day comment period on the proposed YOP beginning with publication of the notice in the Environmental Monitor and receipt of the YOP and Environmental Monitor notice by each municipality.

Public notification of herbicide applications to the right-of-way is made by certified mail under separate cover at least 21 days in advance of the treatment. Notice is made to the Department of Agricultural Resources; the Mayor, City Manager or chairman of the Board of Selectman; the Board of Health; and the Conservation Commission of the municipality where the right-of-way lies.

Any comments on this YOP should be directed to:

Thomas W. Lewis
TEC Associates
46 Sawyer Street
South Portland, ME 04106
(207) 767-6068

MUNICIPALITIES WHERE TREATMENT DESCRIBED IN THIS YOP WILL BE MADE

Auburn
Blackstone
Dudley
Gardner
Grafton
Holden
Hubbardston
Millbury
Millville
Northbridge
Oxford
Princeton
Seekonk
Sutton
Uxbridge
Webster
Worcester

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- B. Maps locating the ROW and sensitive areas not readily identifiable in the field.

I. THE COMPANY WHICH WILL PERFORM ANY HERBICIDE TREATMENT

This company or contractor will perform the herbicide treatment. Applicators are certified by the Department of Agricultural Resources in the applicator category Right-of-Way Pest Control.

Company Name Asplundh Tree Expert, LLC – Railroad Div.

Address 720 County Road 400

Ironton, OH 45638

Telephone # (740) 532-7035

Contact Person(s) Raymond Young or Anton Alvey

II. INDIVIDUAL REPRESENTING APPLICANT AND SUPERVISING THE YOP

Individual supervising execution of the YOP and representing the railroad.

Name & Title Chad Boutet, AVP Engineering

Address Providence & Worcester Railroad

75 Hammond Street

Worcester, MA 01610

Telephone # (508) 755-4000

III. HERBICIDES PROPOSED INCLUDING APPLICATION RATES, CARRIERS, ADJUVANTS, AND APPLICATION TECHNIQUES

Weed Control Herbicide Program for the Roadbed

The post-emergent herbicide program is aimed primarily toward keeping the ballast section and shoulder, yards, switches, signals, and highway grade crossings weed free. Areas scheduled for weed control treatments have been inspected for density of target vegetation to determine appropriate control methods. Herbicide Fact Sheets for the herbicides proposed are found in Appendix A.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Sensitive area buffer zone	Round Up Pro	Hot Mes Control	Foliar	2 pts/acre
	Opensight		Foliar	3 oz/acre
	Polaris AC Complete		Foliar	1 pt/acre
	Oust Extra		Foliar	3 oz/acre
			Foliar	2 oz/acre
			Foliar	0.8 oz/acre
Non-sensitive areas	Round Up Pro	Hot Mes Control	Foliar	2 pts/acre
	Opensight		Foliar	3 oz/acre
	Polaris AC Complete		Foliar	1 pt/acre
	Oust Extra		Foliar	3 oz/acre
			Foliar	2 oz/acre
			Foliar	0.8 oz/acre
Touch-up applications	Round Up Pro	Hot Mes Control	Foliar	2 pts/acre
	Opensight		Foliar	3 oz/acre
	Polaris AC Complete		Foliar	1 pt/acre
	Oust Extra		Foliar	3 oz/acre
			Foliar	2 oz/acre
			Foliar	0.8 oz/acre

Brush Control Program for Areas Adjacent to the Roadbed

The brush control program is designed to prevent the re-growth of trees and other woody vegetation in areas adjacent to the roadbed. Areas scheduled for brush control treatments are limited to target vegetation which obscures visibility or interferes with railroad signs, signals, or communication wires. Herbicide Fact Sheets for herbicides proposed may be found in Appendix A.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Non-sensitive areas	None	N/A	N/A	N/A
Touch-up applications	None	N/A	N/A	N/A

IV. HERBICIDE APPLICATION TECHNIQUES AND ALTERNATIVE CONTROL PROCEDURES

Herbicide applications within the Railroad right-of-way will be performed using low pressure application from a specialized hy-rail truck equipped with a spray boom. This method is suitable for application within the buffer zone, or restricted application zone of sensitive areas, as defined in 333 CMR 11.04. The spray vehicle is equipped with spray nozzles and controls to allow for treatment of the entire roadbed, or to selectively treat individual sections of the ballast and ballast shoulders. Within sensitive areas, a container will be used to catch any accidental dripping of herbicide. It is a trough-shaped apparatus mounted just behind and above the boom, and will be hydraulically lowered to sit underneath the spray nozzles while the vehicle is traveling through areas where herbicide spraying is prohibited.

In order to assist in rapid identification of sensitive areas in the field, a pilot vehicle will proceed approximately 1/4 mile ahead of the applicator vehicle in order to signal ahead the location of sensitive areas.

In order to provide greater mobility and decrease the amount of time required to apply the herbicide mixture in the railroad yard areas, a vehicle equipped with hoses will be used in these areas. In compliance with the Regulations for herbicide application in sensitive areas, the spray pressure from the hoses will not exceed 60 psi.

ALTERNATIVE CONTROL PROCEDURES

No alternative vegetation control methods are feasible within the track areas of the right-of-way. No vegetation control is proposed in ballast areas where herbicide use is prohibited.

Touch-up techniques controls any target vegetation within the ballast that may have been missed or not treated during the initial phase. Control of vines and other vegetation that might creep onto the ballast from roots growing outside the original treatment boundaries can be managed as a selective, foliage, or spot spray. No more than 10% of the initially identified target vegetation on the right-of-way in any municipality may be treated during a touch-up application and the total amount of herbicide applied in any one year shall not exceed the limits specified by the label or YOP in accordance with 333 CMR 11.03(8)(c).

V. IDENTIFICATION OF TARGET VEGETATION

Whenever and wherever possible an integrated approach to vegetation management will be implemented by encouraging plant communities that hinder the growth of target vegetation. Prior to an herbicide application, a review will be made noting location, density, and type of vegetation present. This information will be used to develop an herbicide application program that will be effective against target vegetation and minimize the amount of herbicide used.

In accordance with the Code of Federal Regulations, 49 Part 213 - Track Safety Standards, all vegetation growing in the ballast and ballast shoulder; in yards; and around switches, signals, signs and highway grade crossings is considered target vegetation and must be controlled so that it does not:

- a) become a fire hazard to track-carrying structures;
- b) obstruct visibility of railroad signs and signals;
- c) interfere with railroad employees performing normal trackside duties;
- d) prevent proper functioning of signal and communication lines; and
- e) prevent railroad employees from visually inspecting moving equipment from their normal duty stations.

Woody vegetation growing in areas adjacent to the shoulder will be managed to promote the growth of low growing shrubs. Targeted tall woody vegetation will be that which has the potential to block visibility or invade the roadbed and/or overhead communication lines. Target vegetation will include but not be limited to the following:

Ailanthus	Black Walnut	Honey Locust
American Basswood	Buckthorn	Maple
American Beech	Butternut	Northern Catalpa
American Hornbeam	Cherry	Oak
Apple	Eastern Hornbeam	Pine
Ash	Eastern Red Cedar	Poplar
Aspen	Elm	Sassafras
Birch	Flowering Dogwood	Shadbush
Black Locust	Hawthorn	Spruce
Black Tupelo	Hickory	Sumac

VI. FLAGGING METHODS TO DESIGNATE SENSITIVE AREAS ON THE ROW

Sensitive areas are defined in the Rights-Of-Way Management Regulations (333 CMR 11.02) are as defined in 333 CMR 11.04, any areas within the Right-of-Way, including No-Spray and Limited-Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects. These include but are not limited to the following:

No Spray Area, any area that is both within a Right-of-Way and within:

- (a) any Zone I;
- (b) 100 feet of any Class A Surface Water Source;
- (c) 100 feet of any tributary or associated surface water body where the tributary or associated surface water body runs within 400 feet of a Class A surface water source;
- (d) 10 feet of any tributary or associated surface water body where the tributary or associated surface water body is at a distance greater than 400 feet from a Class A surface water source;
- (e) a lateral distance of 100 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
- (f) 50 feet of any identified Private Well;
- (g) 10 feet of any Wetlands or Water Over Wetlands;
- (h) 10 feet of the mean annual high-water line of any river; and
- (i) 10 feet of any Certified Vernal Pool.

Limited Spray Area, any area that is both within a Right-of-Way and within:

- (a) any Zone II or IWPA;
- (b) a distance of between 100 feet and 400 feet of any Class A Surface Water source;
- (c) a distance of between 10 and 200 feet of any tributary or associated surface water body where the tributary or associated surface water body runs outside the Zone A for the Class A surface water source;
- (d) a lateral distance of between 100 and 200 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
- (e) a distance of between 50 and 100 feet of any identified Private Well;
- (f) a distance of between 10 and 100 feet of any Wetlands or Water Over Wetlands;
- (g) a distance of between 10 feet from the mean annual high water line of any river and the outer boundary of the Riverfront Area;
- (h) a distance of between 10 feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat; and
- (i) a distance of 100 feet of any Agricultural or Inhabited Area.

Non-Sensitive Areas are upland areas and/or track not in proximity to sensitive areas and do not require specific precautions or herbicide restrictions.

Sensitive areas, no-spray areas, limited-spray areas, and non-sensitive areas will be marked at their boundaries with permanent color-coded markers. Sensitive areas considered to be readily identifiable in the field (i.e. agricultural and inhabited areas) will not be marked. The markers will be one or any combination of the following:

- color-coded signs attached to posts
- color-coded signs attached to the railroad ties
- color-coded painted rail sections

Sensitive and non-sensitive areas will be designated by the following color-codes:

white	non-sensitive areas
blue	sensitive area in which a minimum of 12 months shall elapse between herbicide applications
double blue	sensitive areas in which a minimum of 24 months shall elapse between herbicide applications.
yellow	no spray zone

VII. PROCEDURES AND LOCATIONS FOR HANDLING, MIXING, AND LOADING OF HERBICIDE CONCENTRATES

The herbicide application crew will wear protective clothing and personal safety equipment when mixing, handling, loading, or applying herbicide, including standard work clothing or coveralls, work gloves, and work boots. Latex or nitrile rubber gloves, as well as eye goggles are recommended to be worn during mixing of herbicide concentrate as some herbicides may cause mild eye and skin irritations.

Mixing and use of herbicide shall be consistent with the labeling instructions included on the packaging. The herbicide mix will be prepared from herbicide concentrate and water. In compliance with the regulations, the handling, mixing and/or loading of this material will not occur within 100 feet of any sensitive area. Wherever and whenever possible, the herbicide applicator will prepare the herbicide mix on non-porous surfaces, such as pavement or concrete.

Sources of Water and Safeguards to Prevent Contamination

Water used for herbicide mix will be obtained from hydrants and freshwater sources. During the herbicide mix preparations and during herbicide application, strict adherence to the following safeguards will be maintained:

- 1) Water will be obtained using hoses equipped with anti-siphon devices to eliminate herbicide backflow.
 - a) Hoses used to extract water from water bodies will be equipped with two such devices: one will be found directly behind the mouth of the hose and another will be at the coupling that joins the hose to the mix tank.
 - b) Hoses used to extract water from the hydrant will utilize the same setup as described above, except that a third anti-siphon device will be found within the coupling joining the hose to the hydrant.
- 2) The herbicide concentrate will not be added to the tank until the water has been obtained and the application apparatus is at least 100 feet outside a sensitive area.

Disposal of Herbicide Waste

Disposal of all herbicidal wastes will be the responsibility of the licensed applicator. It is the applicator's responsibility to ensure that such disposal will be carried out in an environmentally sensitive manner, in compliance with all Federal and State regulations and guidelines.

VIII. EMERGENCY CONTACTS

In the event of a spill or emergency, information on safety precautions and cleanup procedures may be gathered from the following sources:

Herbicide Label

Herbicide Fact Sheet

Herbicide Material Safety Data Sheet

Herbicide Manufacturer

Bayer Environmental Science	(800) 331-2867
Corteva Agriscience	(800) 258-3033
Monsanto	(800) 332-3111
Nufarm Americas	(800) 345-3330

Massachusetts Pesticide Bureau	(617) 626-1700
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Massachusetts DEP Emergency Response	(888) 304-1133
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ChemTrec	(800) 424-9300
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EPA National Pesticide Information Center	(800) 858-7378
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Massachusetts Poison Control Center	(800) 222-1222
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Local Community Chief of Police and/or Fire Chief

Auburn	(508) 832-7777
Blackstone	(508) 883-1212
Dudley	(508) 943-4411
Gardner	(978) 632-5600
Grafton	(508) 839-2858
Holden	(508) 210-5600
Hubbardston	(978) 928-1405
Millbury	(508) 865-3521
Millville	(508) 883-3117
Northbridge	(508) 234-6211
Oxford	(508) 987-0156
Princeton	(978) 464-2928
Seekonk	(508) 336-8123
Sutton	(508) 865-4449
Uxbridge	(508) 278-7755
Webster	(508) 943-1212
Worcester	(508) 799-8600

APPENDICES

- A. Herbicide Fact Sheets as approved by the Department, herbicide labels, and SDS.
- B. Maps locating the ROW and Sensitive areas not readily identifiable in the field.

Maps provided with the Yearly Operational Plan shall remain effective for the duration of the YOP unless modified. Subsequent YOP's will contain any modifications to the maps made during the previous year.

APPENDIX A

Below find a list of herbicides potentially in use by this Yearly Operational Plan. For a list of the exact products and rates of application to be used in this year's program please refer to page 2 of this document.

MANUF.	PRODUCT NAME	ACTIVE INGREDIENT(S)	EPA REGISTRATION #
NUFARM AMERICAS	AQUANEAT	GLYPHOSATE	228-365
BAYER ENVIRONMENTAL SCIENCE	OUST EXTRA	SULFOMETURON METHYL METSULFURON METHYL	432-1557
MONSANTO	ROUND UP PRO	GLYPHOSATE	524-475
BAYER ENVIRONMENTAL SCIENCE	ESCORT XP	METSULFURON METHYL	432-1549
NUFARM AMERICAS	POLARIS AC COMPLETE	IMAZAPYR	228-570
CORTEVA AGRISCIENCE	MILESTONE	AMINOPYRALID	62719-519
BAYER ENVIRONMENTAL SCIENCE	OUST XP	SULFOMETURON METHYL	432-1552
CORTEVA AGRISCIENCE	OPENSIGHT	AMINOPYRALID METSULFURON METHYL	62719-597

LABELS & SDS SHEETS:

To access the labels and SDS sheets for any of the above products please follow the directions below:

1. Open your internet browser and enter the following address in the **Address bar**: www.cdms.net/label-database
2. On the Product Search bar enter the desired **Product Name** (as found above) into the **Search bar** and hit the **Search button**.
3. A list of products will appear. Please be sure to reference the **Manufacture and Product Name** to locate the correct information.

HERBICIDE FACT SHEET:

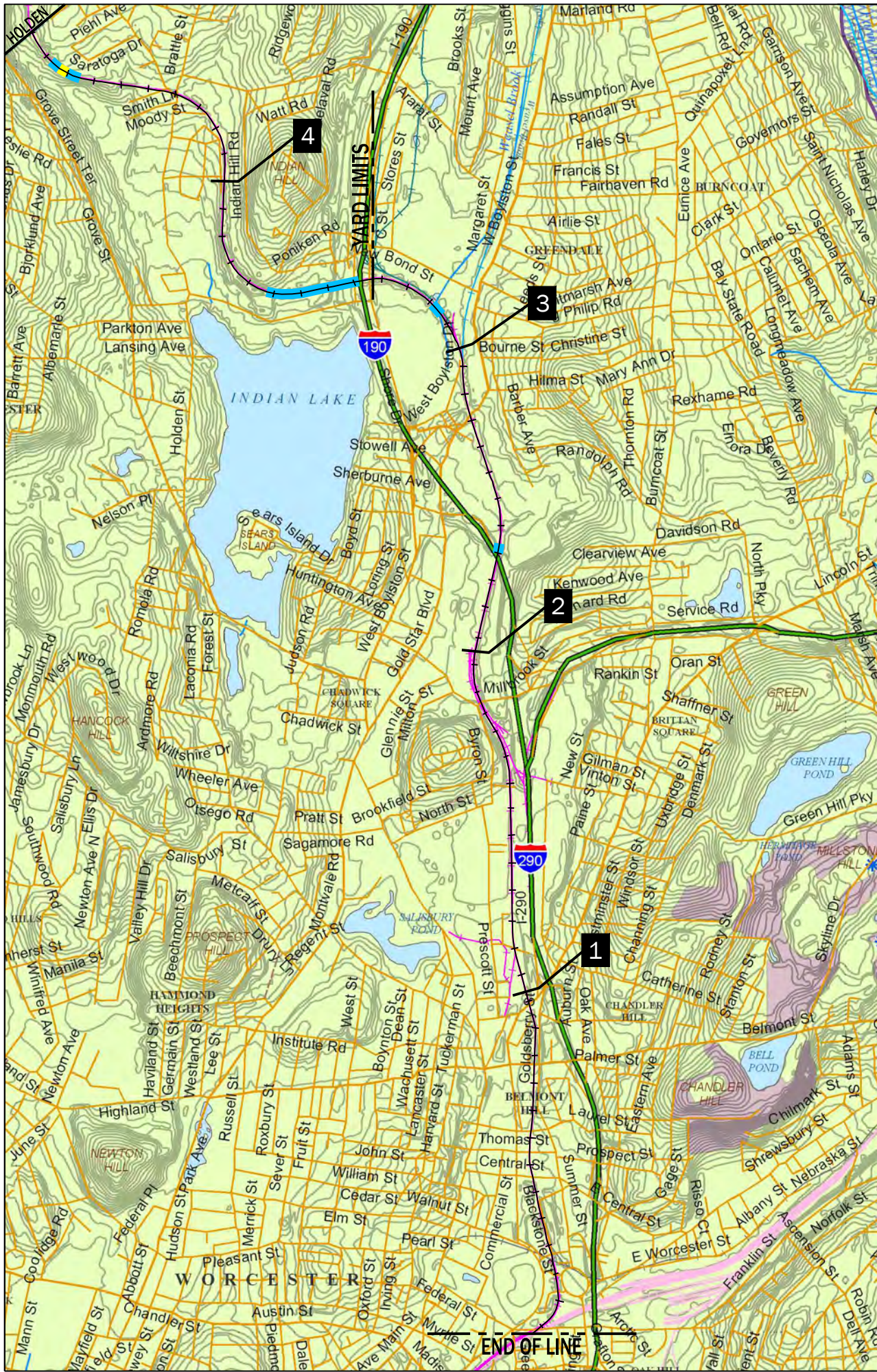
To access the herbicide fact sheets for any of the above products please follow the directions below:

1. Open your internet browser and enter the following address in the **Address bar**: <http://www.mass.gov/eea/agencies/agr/pesticides/rights-of-way-sensitive-area-materials-list.html>
2. Choose the link that corresponds to the **Active Ingredient** present in the product you are interested in.

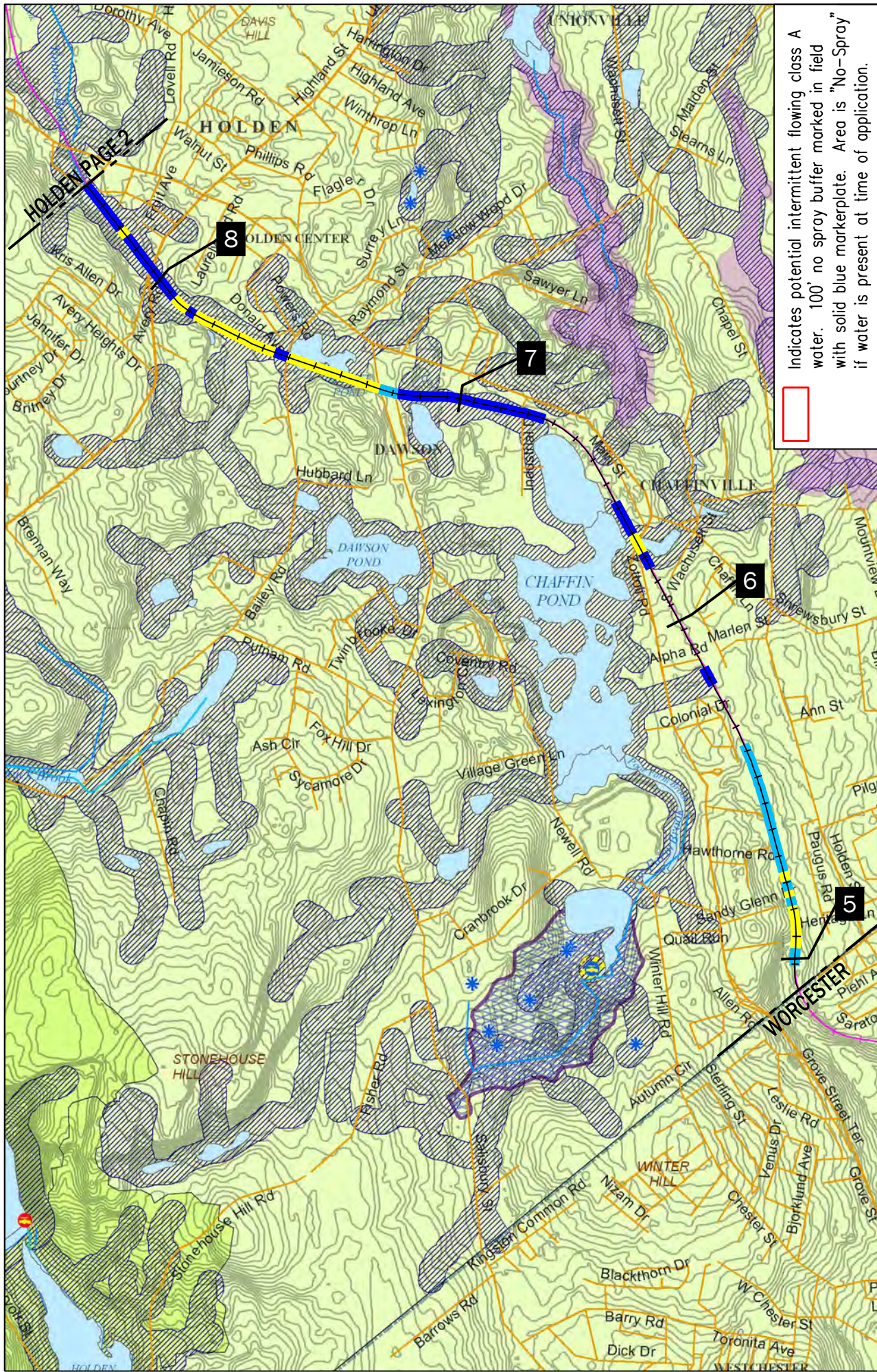
Hard copies of these documents may also be obtained by calling TEC Associates at (207) 767-6068.

APPENDIX B

MAPS

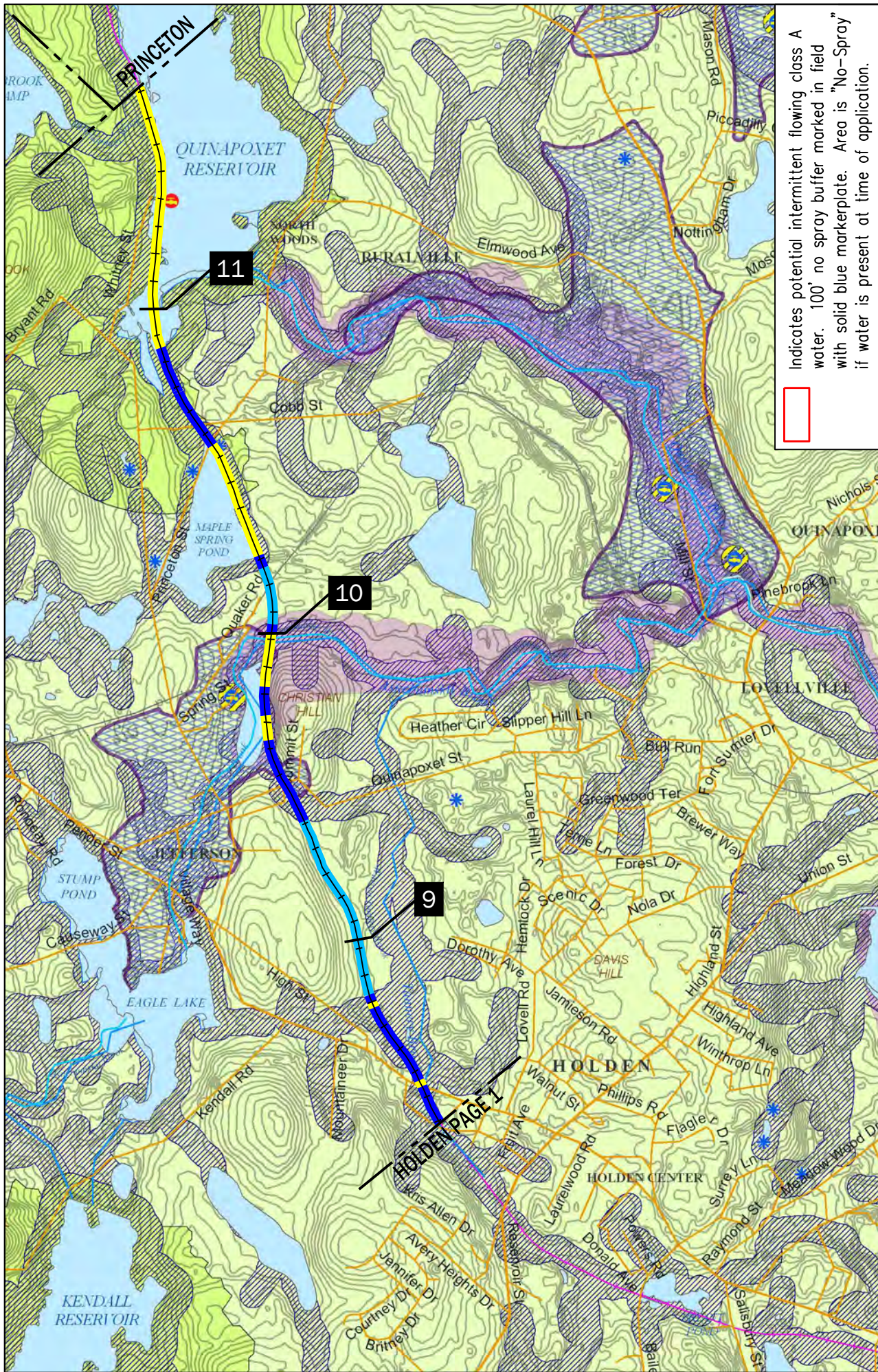


SCALE: 1:25,000	SHEET 1 OF 1	TOWN OF: WORCESTER	BRANCH: GARDNER BRANCH	DATE: 2/14/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA	Zone A Zone B NHESP Priority Habitat

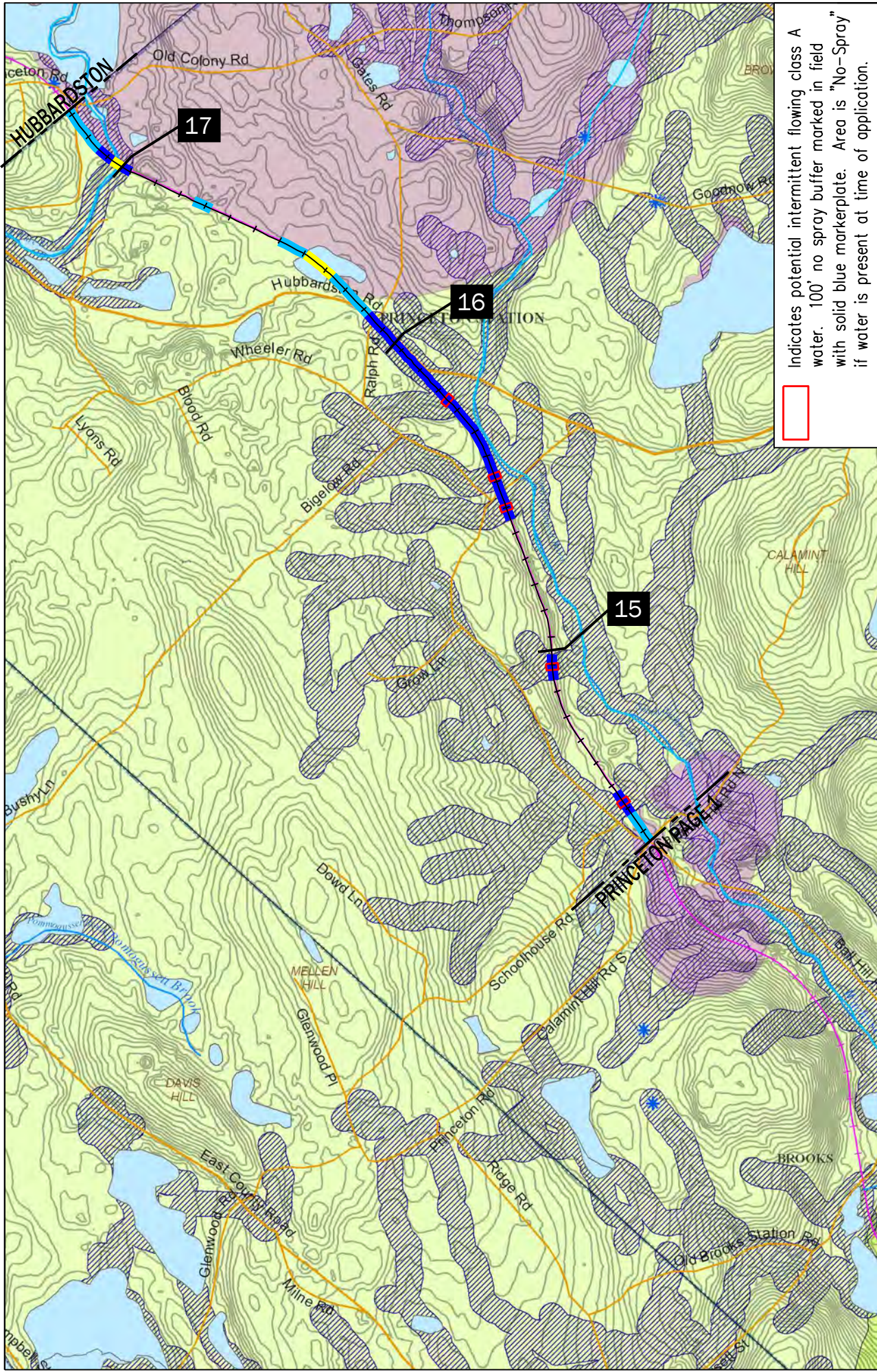




Indicates potential intermittent flowing class A water. 100' no spray buffer marked in field with solid blue markerplate. Area is "No-Spray" if water is present at time of application.

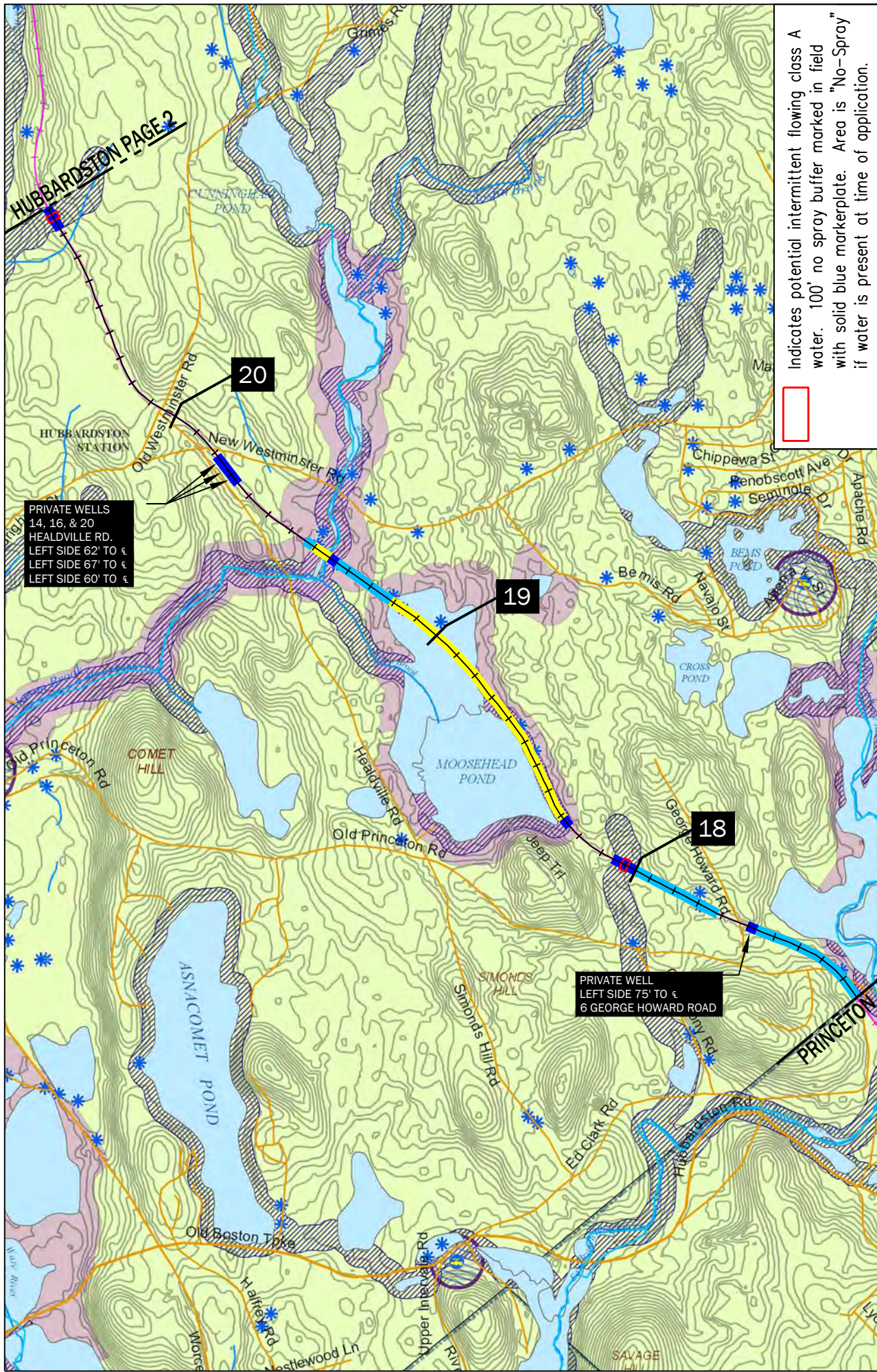
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PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	 Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA



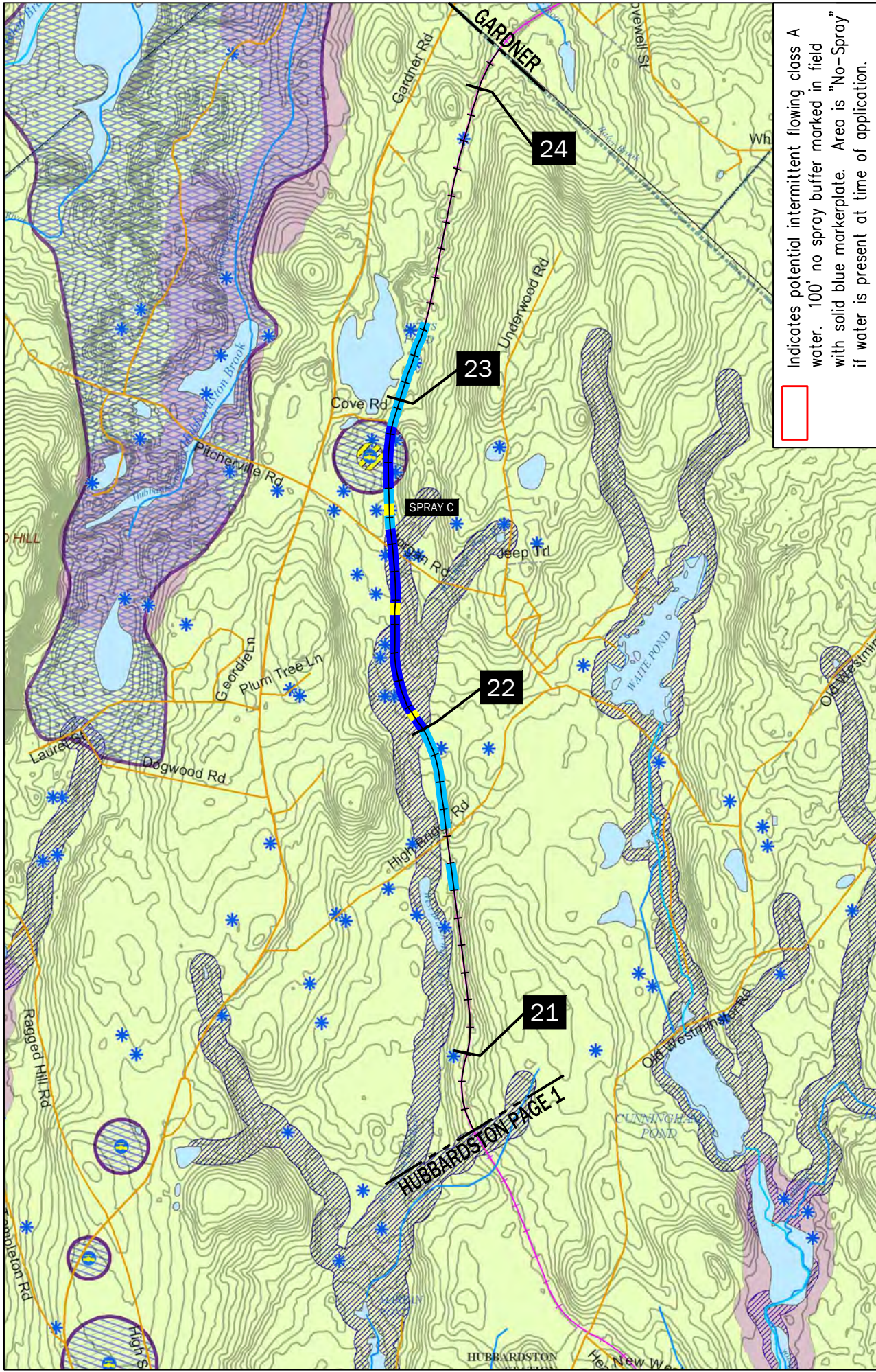
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PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		Groundwater Source Surface Water Intake NHESP Vernal Pool		
TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		DEP Approved Zone I DEP Approved Zone II / IWPA Zone A Zone B NHESP Priority Habitat		



SCALE: 1:25,000		SHEET 2 OF 2		TOWN OF: PRINCETON		BRANCH: GARDNER BRANCH		DATE: 5/18/2011			
<div>PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610</div> <div>TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106</div>				LIMITED SPRAY ZONE (1 YEAR INTERVAL)		Groundwater Source		DEP Approved Zone I		Zone A	
				LIMITED SPRAY ZONE (2 YEAR INTERVAL)		Surface Water Intake		DEP Approved Zone II / IWPA		Zone B	
				NO SPRAY ZONE		NHESP Vernal Pool				NHESP Priority Habitat	

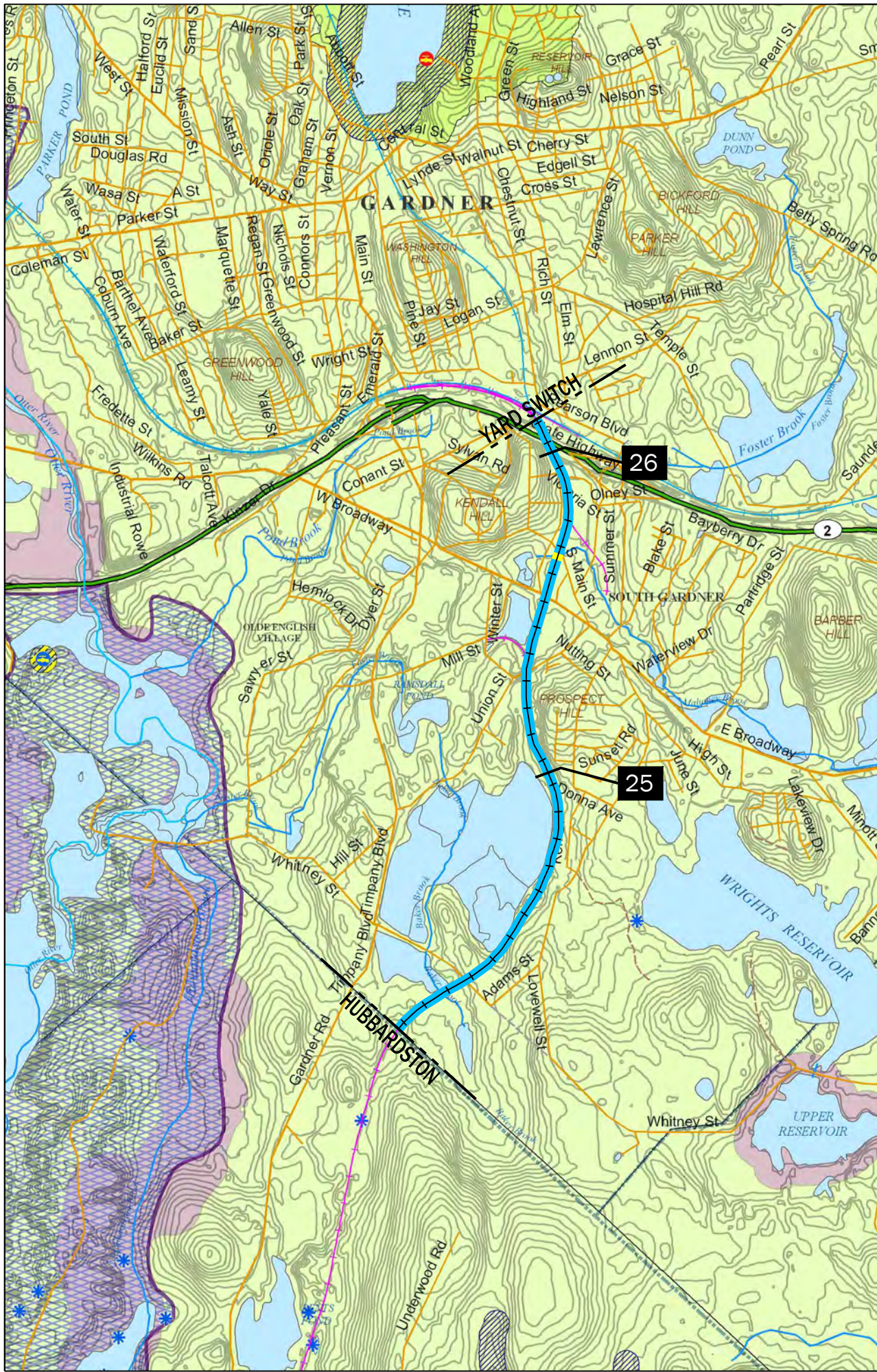


SCALE: 1:25,000	SHEET 1 OF 2	TOWN OF: HUBBARDSTON	BRANCH: GARDNER BRANCH	DATE: 5/19/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		DEP Approved Zone I DEP Approved Zone II / IWPA
LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE		Groundwater Source Surface Water Intake NHESP Vernal Pool		Zone A Zone B NHESP Priority Habitat

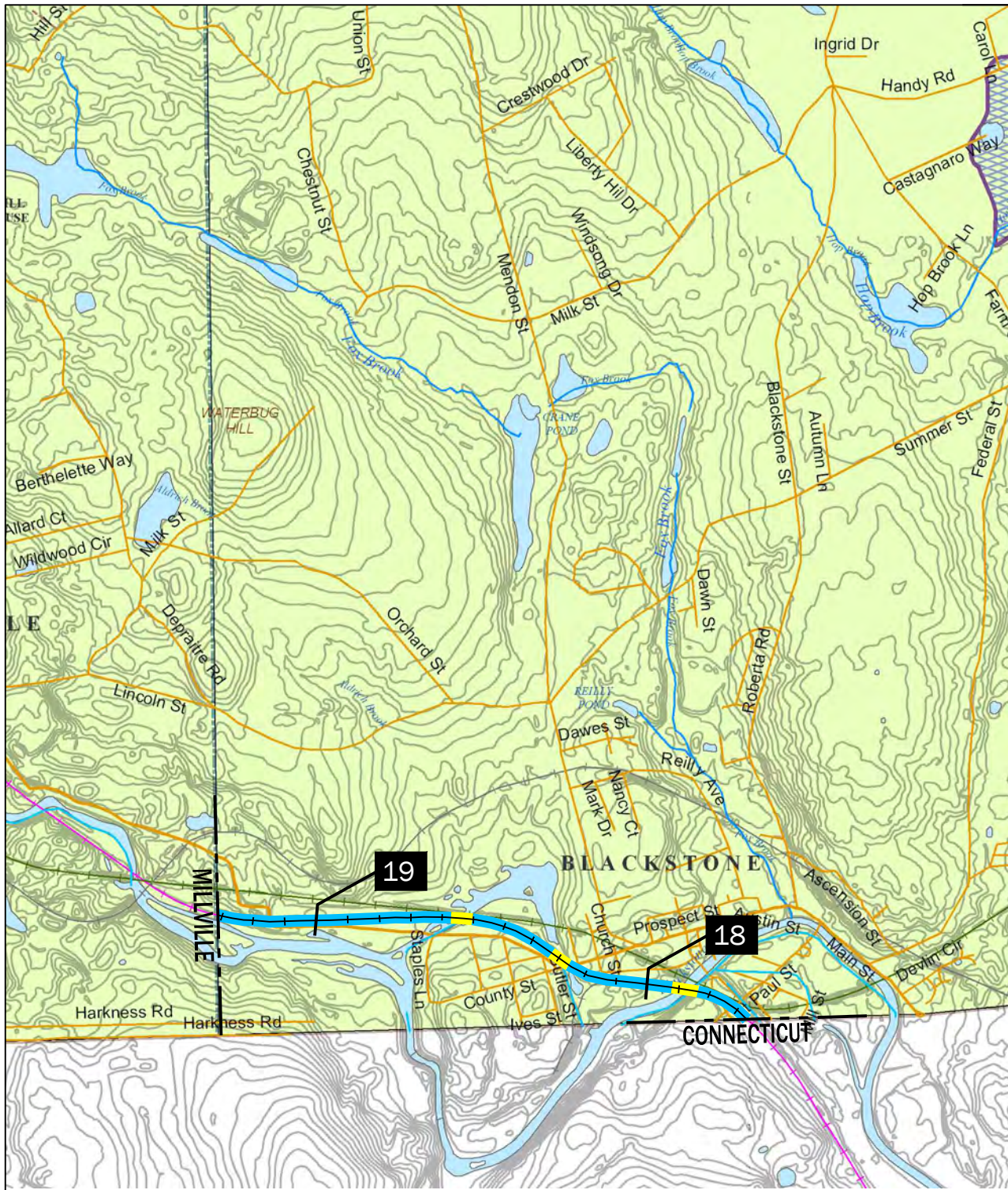


SCALE: 1:25,000	SHEET 2 OF 2	TOWN OF: HUBBARDSTON	BRANCH: GARDNER BRANCH	DATE: 5/19/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		DEP Approved Zone I DEP Approved Zone II / IWPA		Zone A Zone B NHESP Priority Habitat
TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		Groundwater Source Surface Water Intake NHESP Vernal Pool		
LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE				

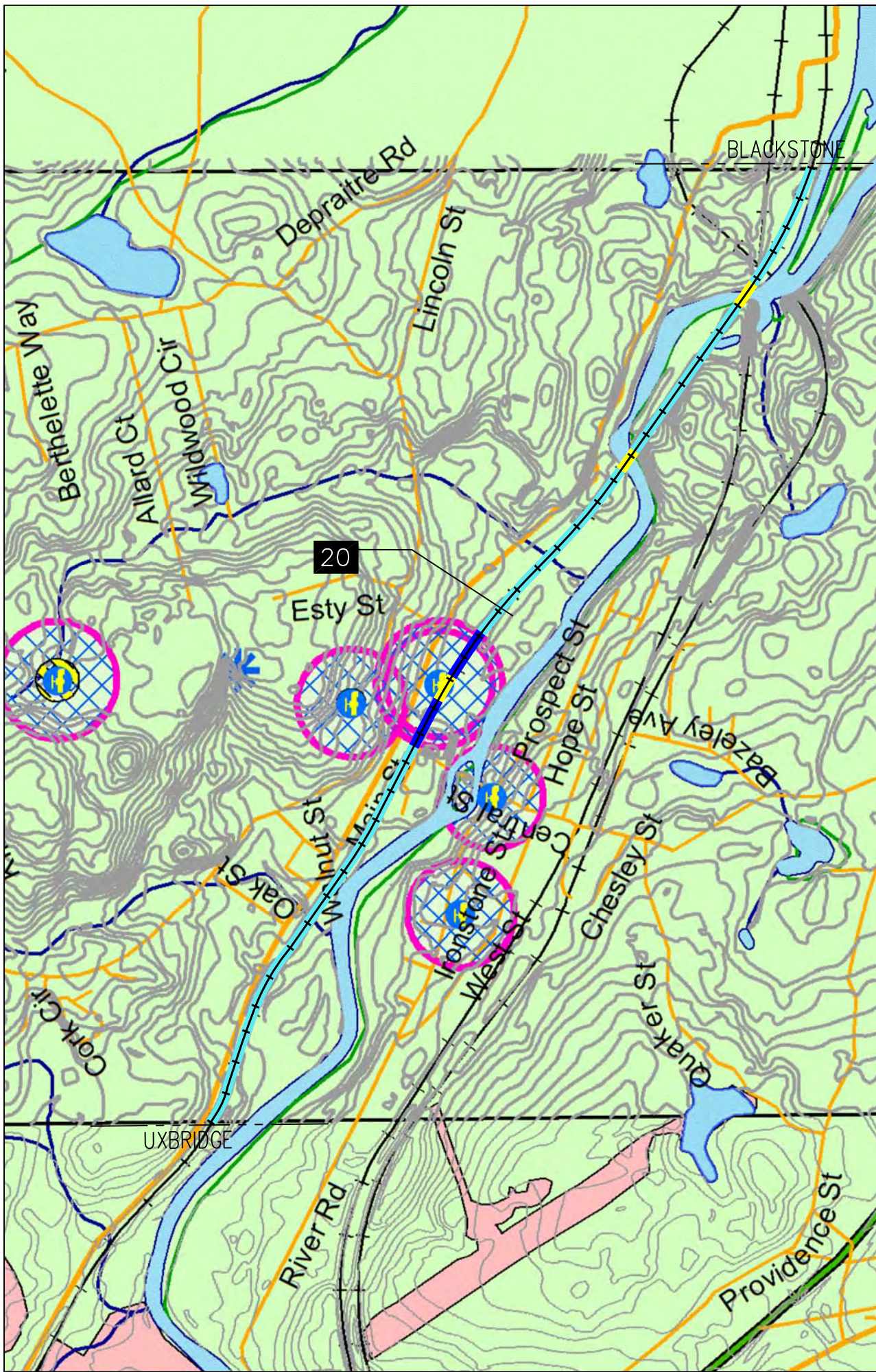
HUBBARDSTON PAGE 1



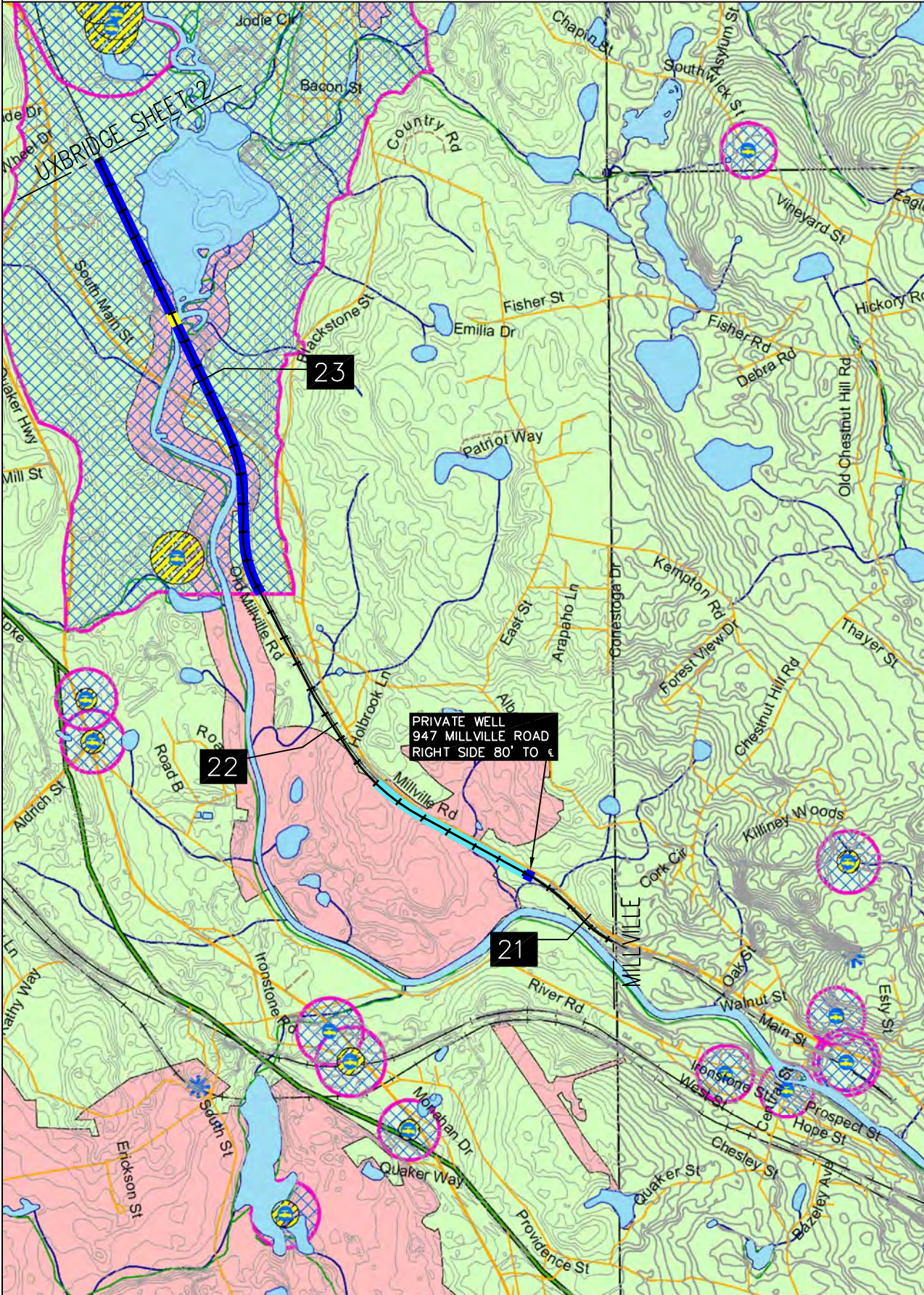
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TOWN OF: GARDNER	BRANCH: GARDNER BRANCH	DATE: 2/14/2011
<div data-bbox="1404 1144 1437 1249">LIMITED SPRAY ZONE (1 YEAR INTERVAL)</div> <div data-bbox="1453 1144 1485 1249">LIMITED SPRAY ZONE (2 YEAR INTERVAL)</div> <div data-bbox="1502 1144 1534 1249">NO SPRAY ZONE</div>	<div data-bbox="1404 850 1437 955">Groundwater Source</div> <div data-bbox="1453 850 1485 955">Surface Water Intake</div> <div data-bbox="1502 850 1534 955">NHESP Vernal Pool</div>	<div data-bbox="1404 661 1437 766">DEP Approved Zone I</div> <div data-bbox="1453 661 1485 766">DEP Approved Zone II / IWPA</div> <div data-bbox="1404 304 1437 409">Zone A</div> <div data-bbox="1453 304 1485 409">Zone B</div> <div data-bbox="1502 304 1534 409">NHESP Priority Habitat</div>



SCALE: 1:25,000	SHEET 1 OF 1	TOWN OF: BLACKSTONE	BRANCH: MAIN LINE	DATE: 2/14/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE		
TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		Groundwater Source Surface Water Intake NHESP Vernal Pool		
		DEP Approved Zone I DEP Approved Zone II / IWPA		
		Zone A Zone B NHESP Priority Habitat		



<p>SCALE: 1:12,500</p> <p>TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106</p>	<p>SHEET 1 OF 1</p> <p>75 HAMMOND STREET WORCESTER, MA 01610</p>	<p>TOWN OF: MILLVILLE</p> <p>LIMITED SPRAY ZONE (1 YEAR INTERVAL)</p> <p>LIMITED SPRAY ZONE (2 YEAR INTERVAL)</p> <p>NO SPRAY ZONE</p>	<p>BRANCH: MAIN LINE</p> <p>Groundwater Source Surface Water Intake NHEP Vernal Pool</p>	<p>DEP Approved Zone I DEP Approved Zone II / IOWA</p>	<p>DATE: 7/9/2016</p> <p>Zone A Zone B NHEP Priority Habitat</p>
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DATE: 4/15/2016

BRANCH: MAIN LINE

TOWN OF: UXBRIDGE

SHEET 1 OF 2

SCALE: 1:25,000

75 HAMMOND STREET
WORCESTER, MA 01610

TEC ASSOCIATES
CONSULTING ENGINEERS
46 SAWYER STREET
SOUTH PORTLAND, MAINE 04106

LIMITED SPRAY ZONE
(1 YEAR INTERVAL)

LIMITED SPRAY ZONE
(2 YEAR INTERVAL)

NO SPRAY ZONE

Groundwater Source

Surface Water Intake

NHEP Vernal Pool

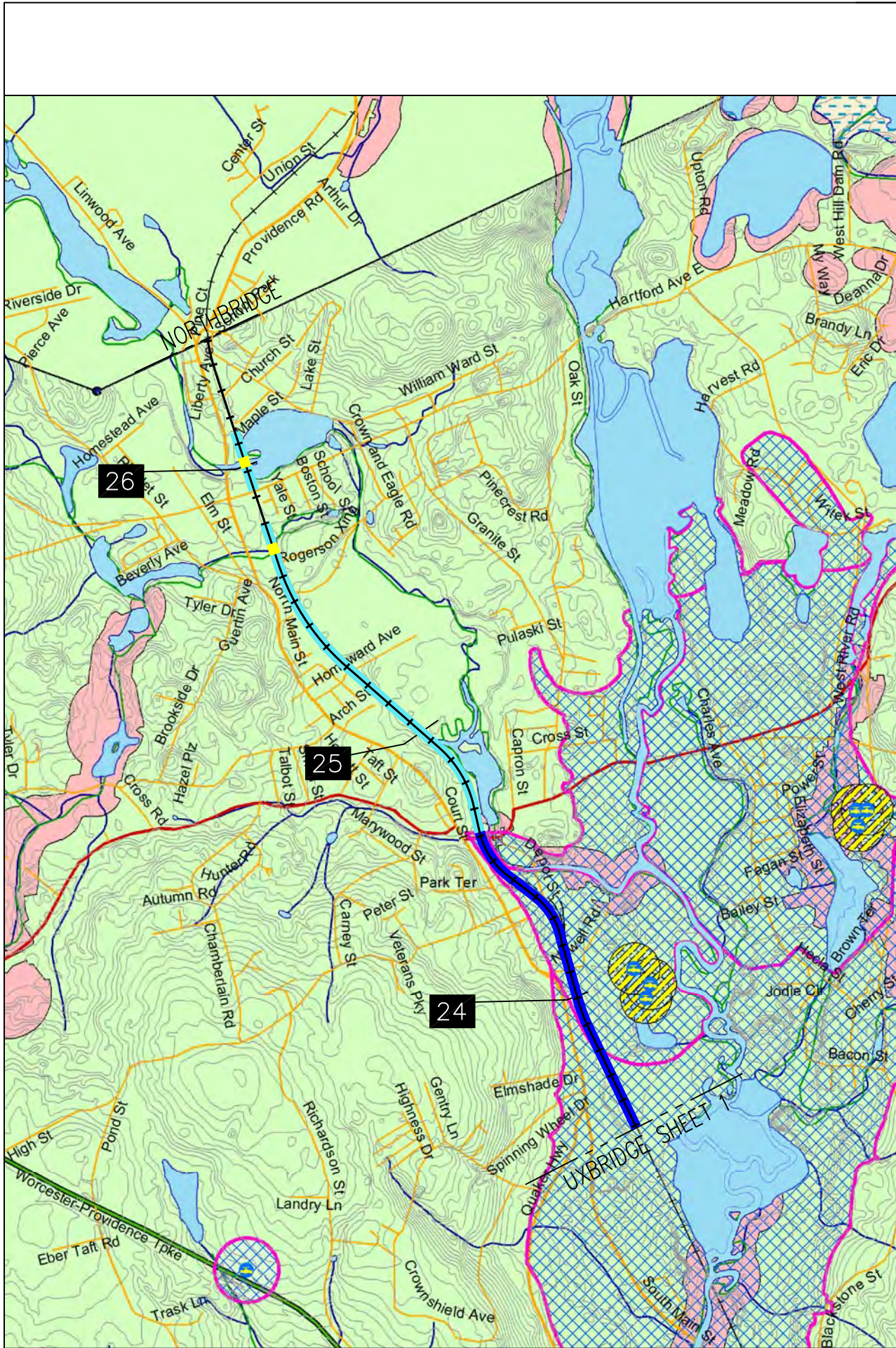
DEP Approved
Zone I

DEP Approved
Zone II / IWPA

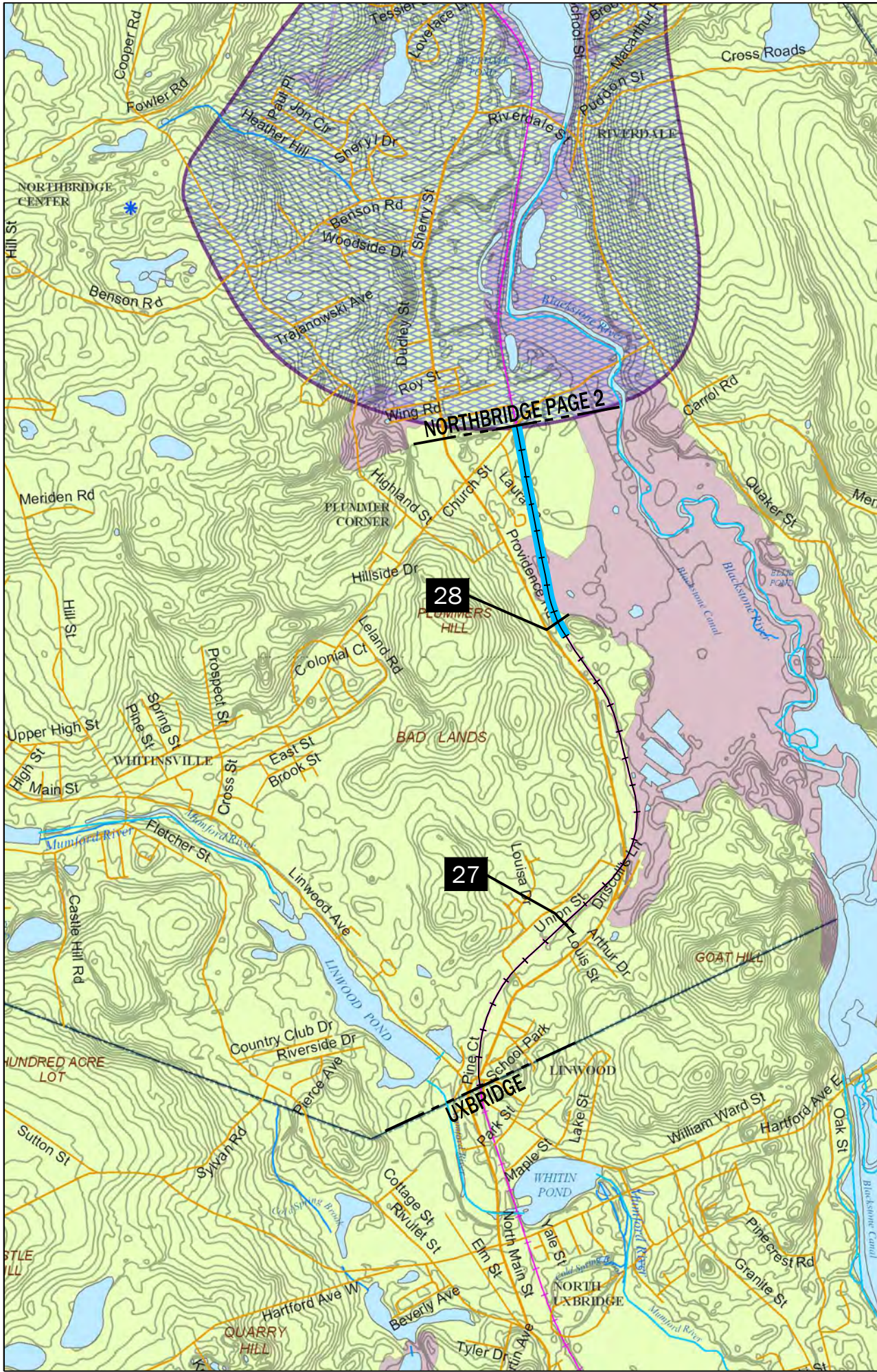
Zone A


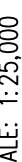



Zone B

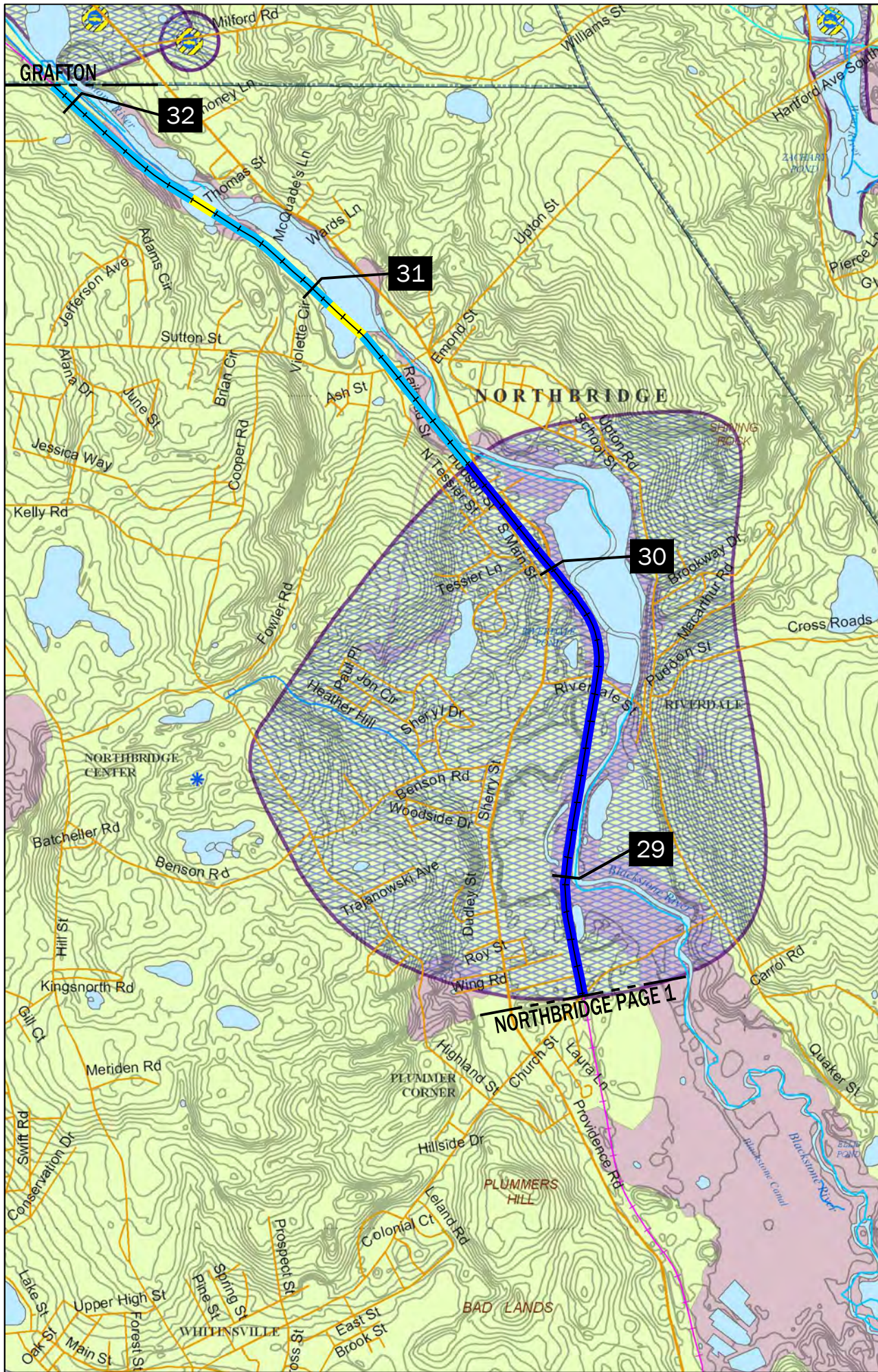
NHEP Priority
Habitat











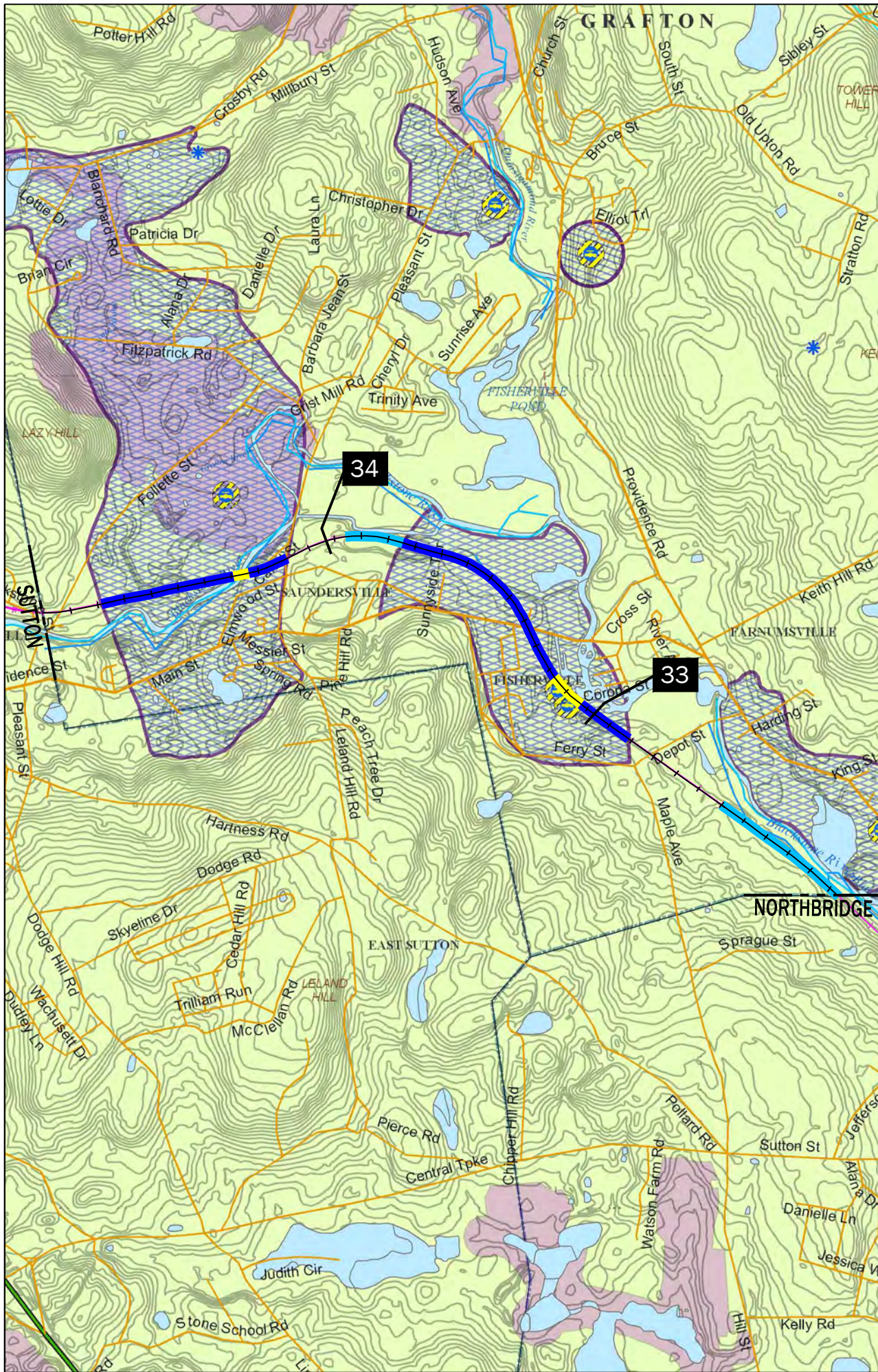
SCALE: 1:25,000	SHEET 2 OF 2	75 HAMMOND STREET WORCESTER, MA 01610 TECASSOCIATES CONSULTING ENGINEERS SOUTH PORTLAND, MAINE 04106 46 SAWYER STREET
TOWN OF: UXBRIDGE	BRANCH: MAIN LINE	DATE: 4/15/2016
LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA
	Zone A Zone B NHESP Priority Habitat	Zone A Zone B NHESP Priority Habitat



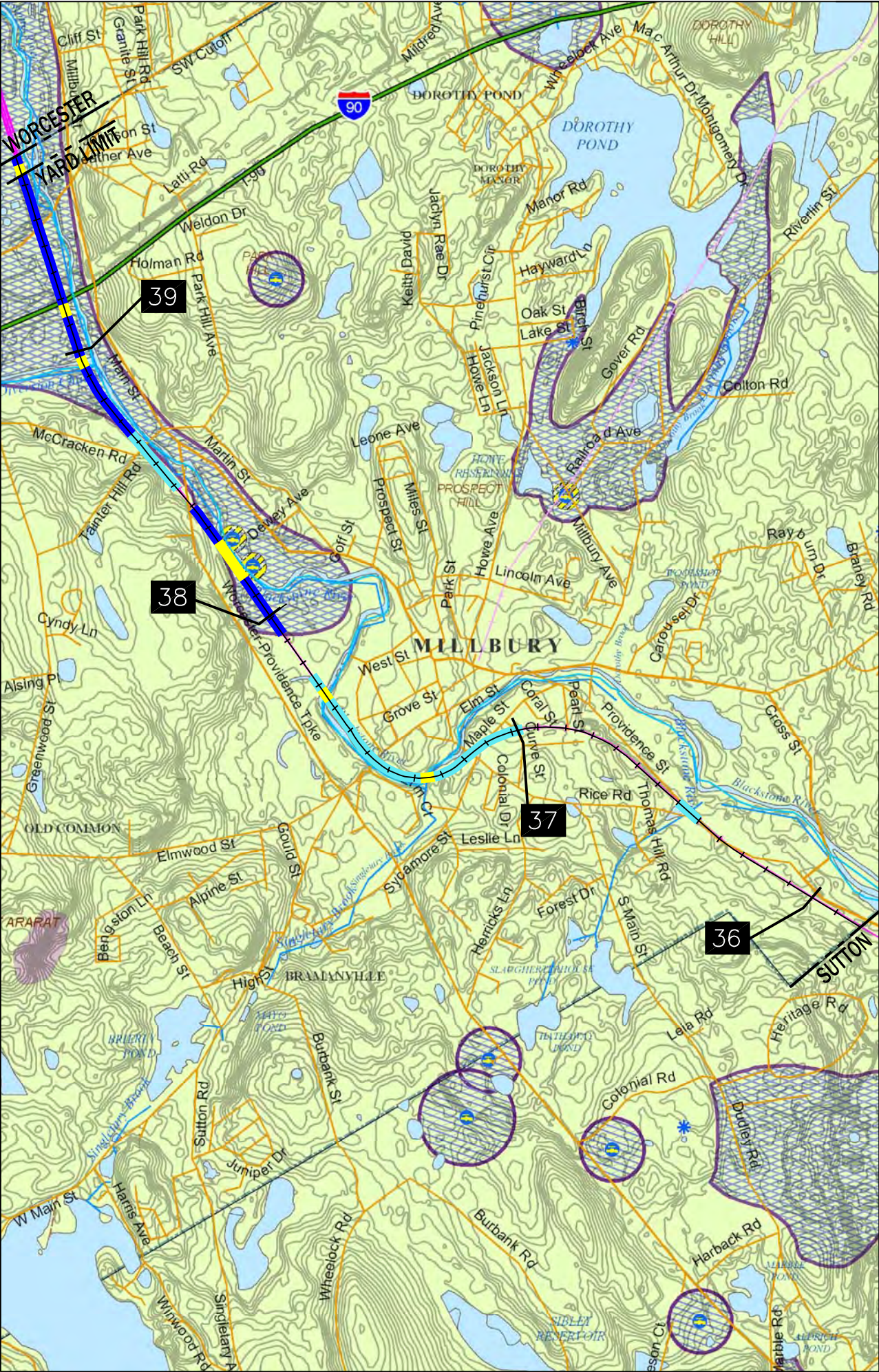
SCALE: 1:25,000		SHEET 1 OF 2		TOWN OF: NORTHBRIDGE		BRANCH: MAIN LINE		DATE: 04/04/2011	
		PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		 LIMITED SPRAY ZONE (1 YEAR INTERVAL)		 Groundwater Source		 Zone A	
		TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		 LIMITED SPRAY ZONE (2 YEAR INTERVAL)		 Surface Water Intake		 Zone B	
				 NO SPRAY ZONE		 NHESP Vernal Pool		 NHESP Priority Habitat	










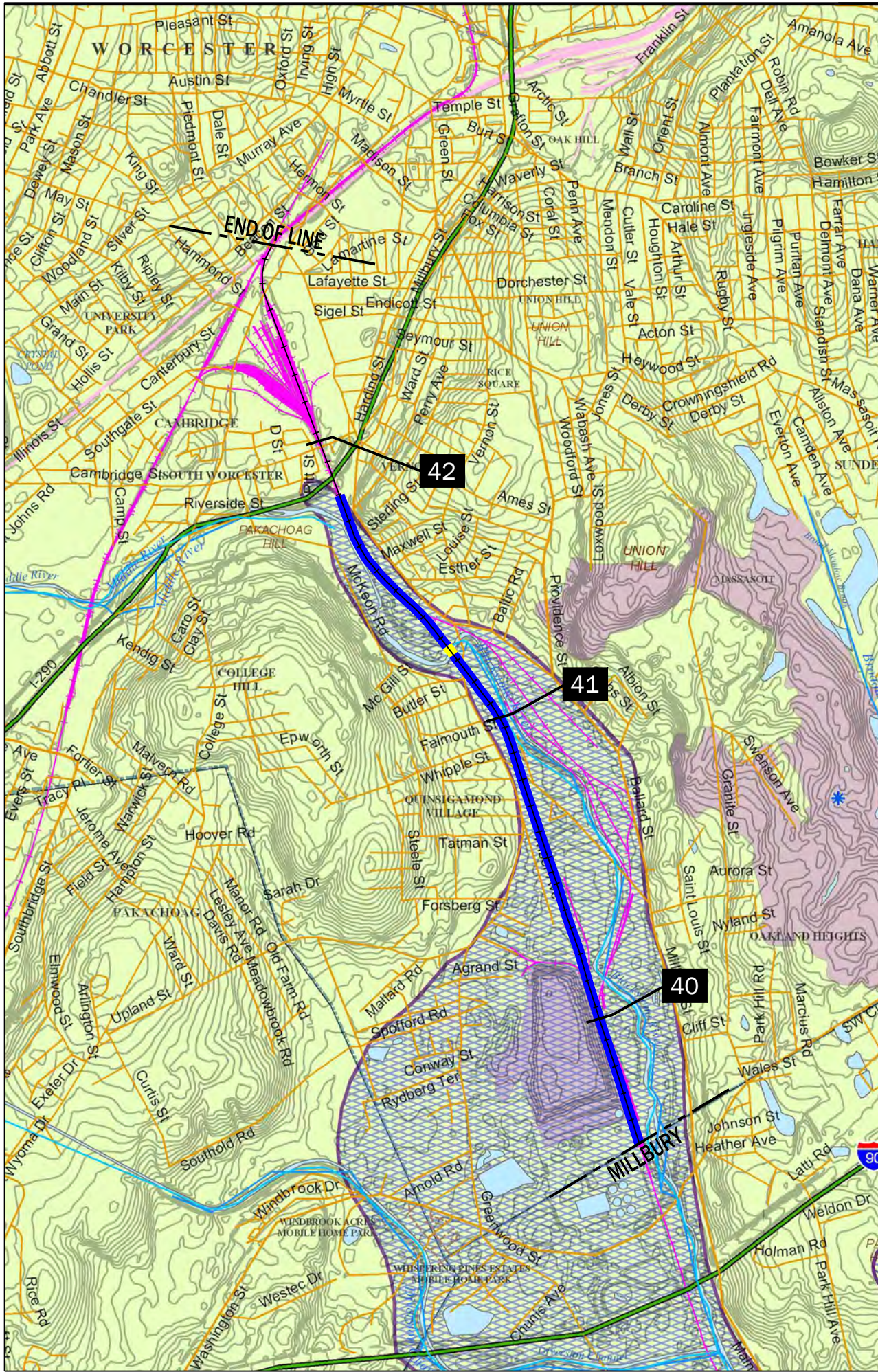
SCALE: 1:25,000	SHEET 2 OF 2	TOWN OF: NORTHBRIDGE	BRANCH: MAIN LINE	DATE: 04/04/2011
 PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	 TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106	LIMITED SPRAY ZONE (1 YEAR INTERVAL)	 Groundwater Source	 Zone A
		LIMITED SPRAY ZONE (2 YEAR INTERVAL)	 Surface Water Intake	 Zone B
		NO SPRAY ZONE	 NHESP Vernal Pool	 NHESP Priority Habitat



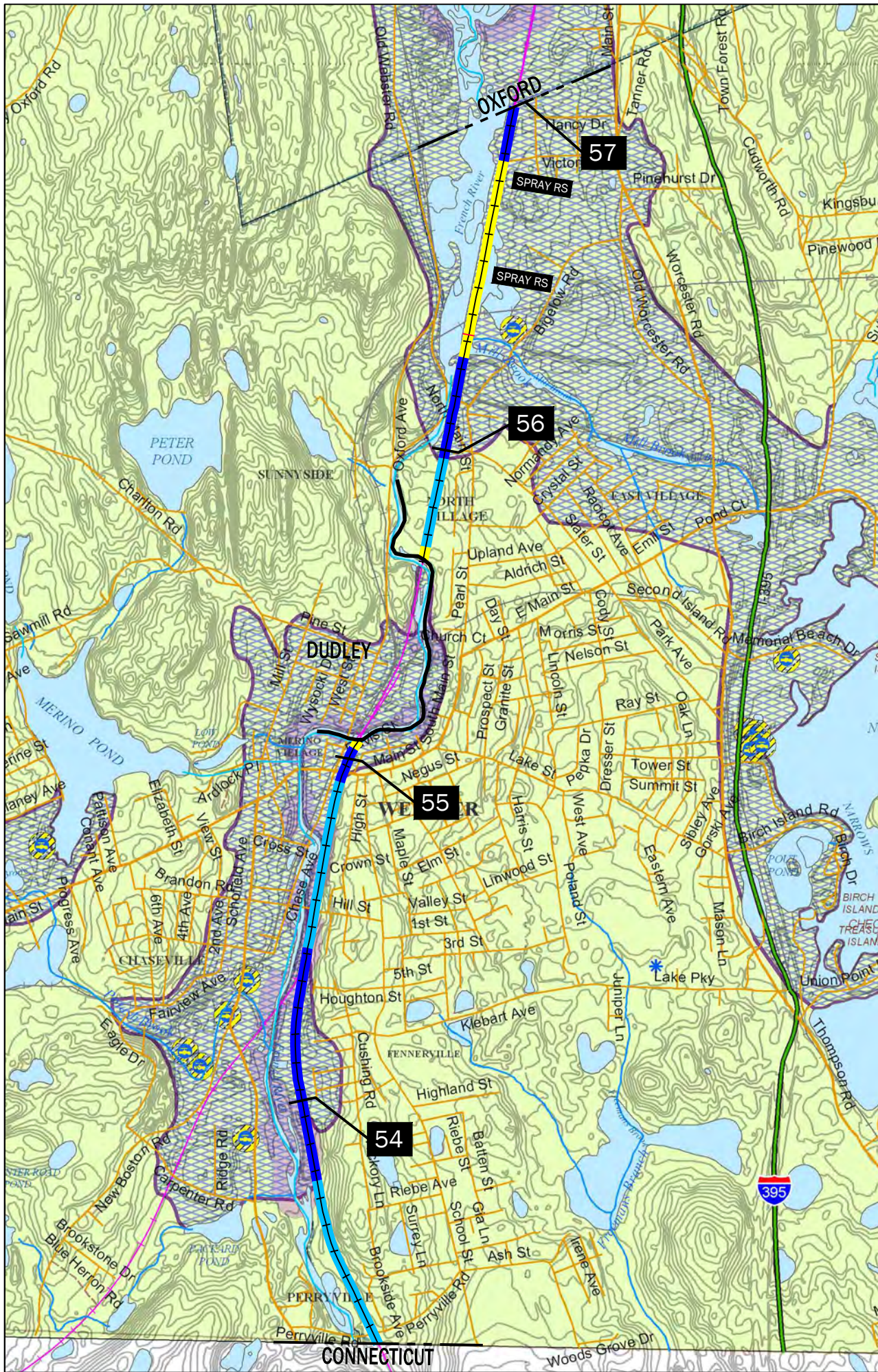
SCALE: 1:25,000	SHEET 1 OF 1	TOWN OF: GRAFTON	BRANCH: MAIN LINE	DATE: 04/04/2011
	PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA
Zone A Zone B NHESP Priority Habitat				
TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106				



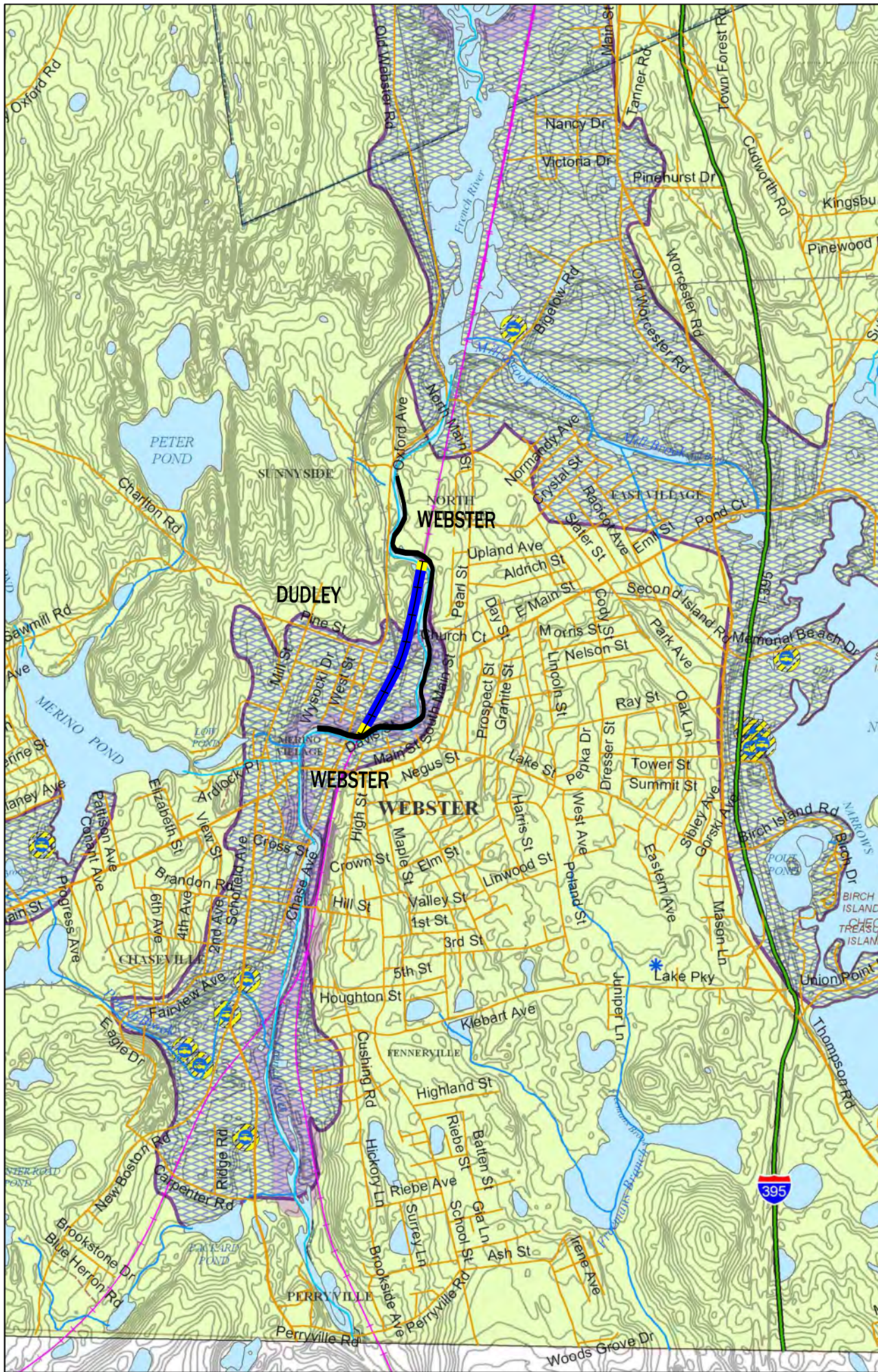
SCALE: 1:25,000		SHEET 1 OF 1		TOWN OF: MILLBURY	BRANCH: MAIN LINE	DATE: 7/9/2016
		PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610				
		TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106				
		LIMITED SPRAY ZONE (1 YEAR INTERVAL)	 Groundwater Source	 DEP Approved Zone I	 Zone A	
		LIMITED SPRAY ZONE (2 YEAR INTERVAL)	 Surface Water Intake	 DEP Approved Zone II / IWPA	 Zone B	
		NO SPRAY ZONE	 NHESP Vernal Pool		 NHESP Priority Habitat	



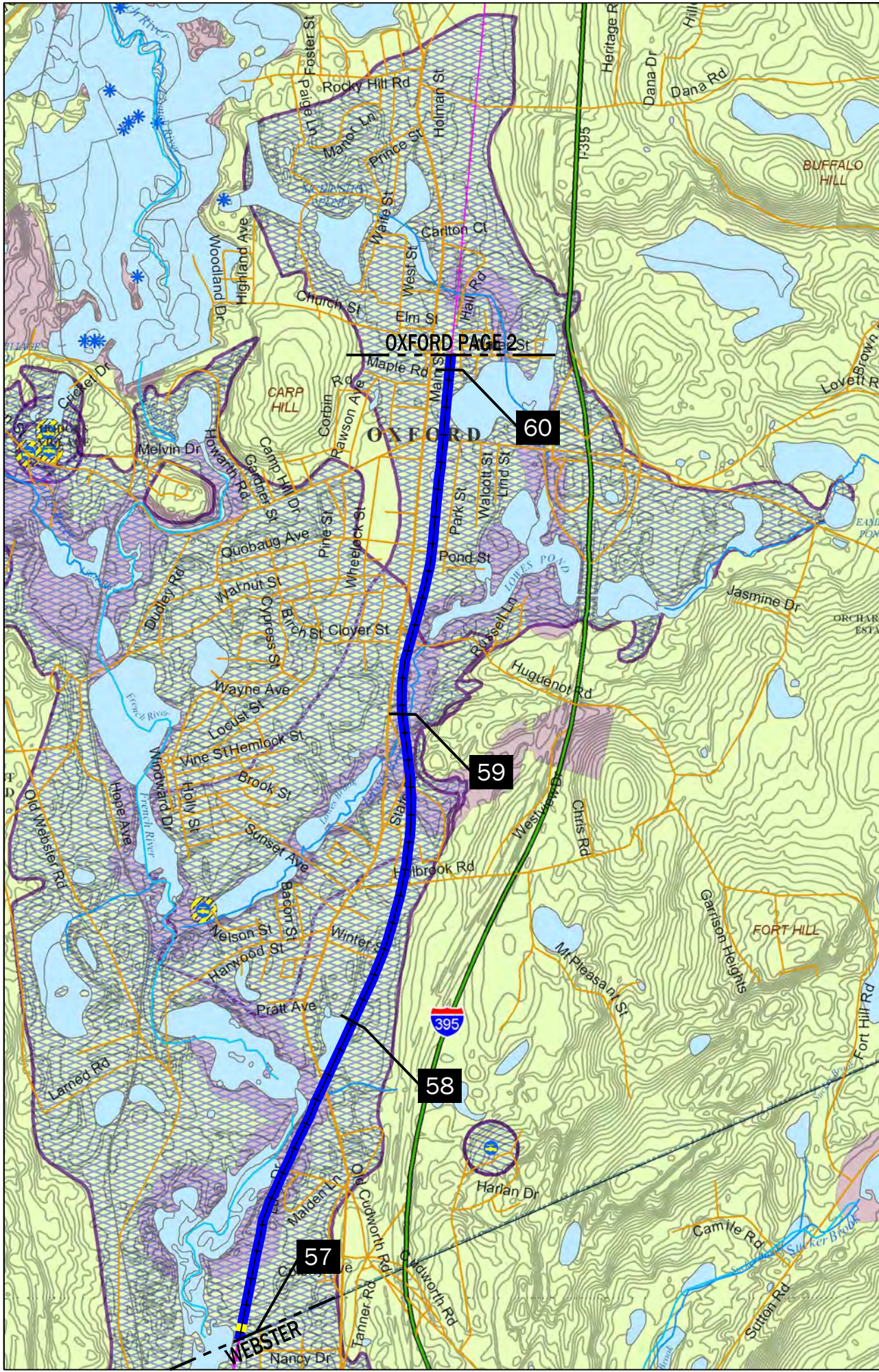
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TOWN OF: WORCESTER	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	 Groundwater Source  Surface Water Intake  NHESP Vernal Pool
BRANCH: MAIN LINE	 DEP Approved Zone I  DEP Approved Zone II / IWPA	 Zone A  Zone B  NHESP Priority Habitat
DATE: 2/14/2011		














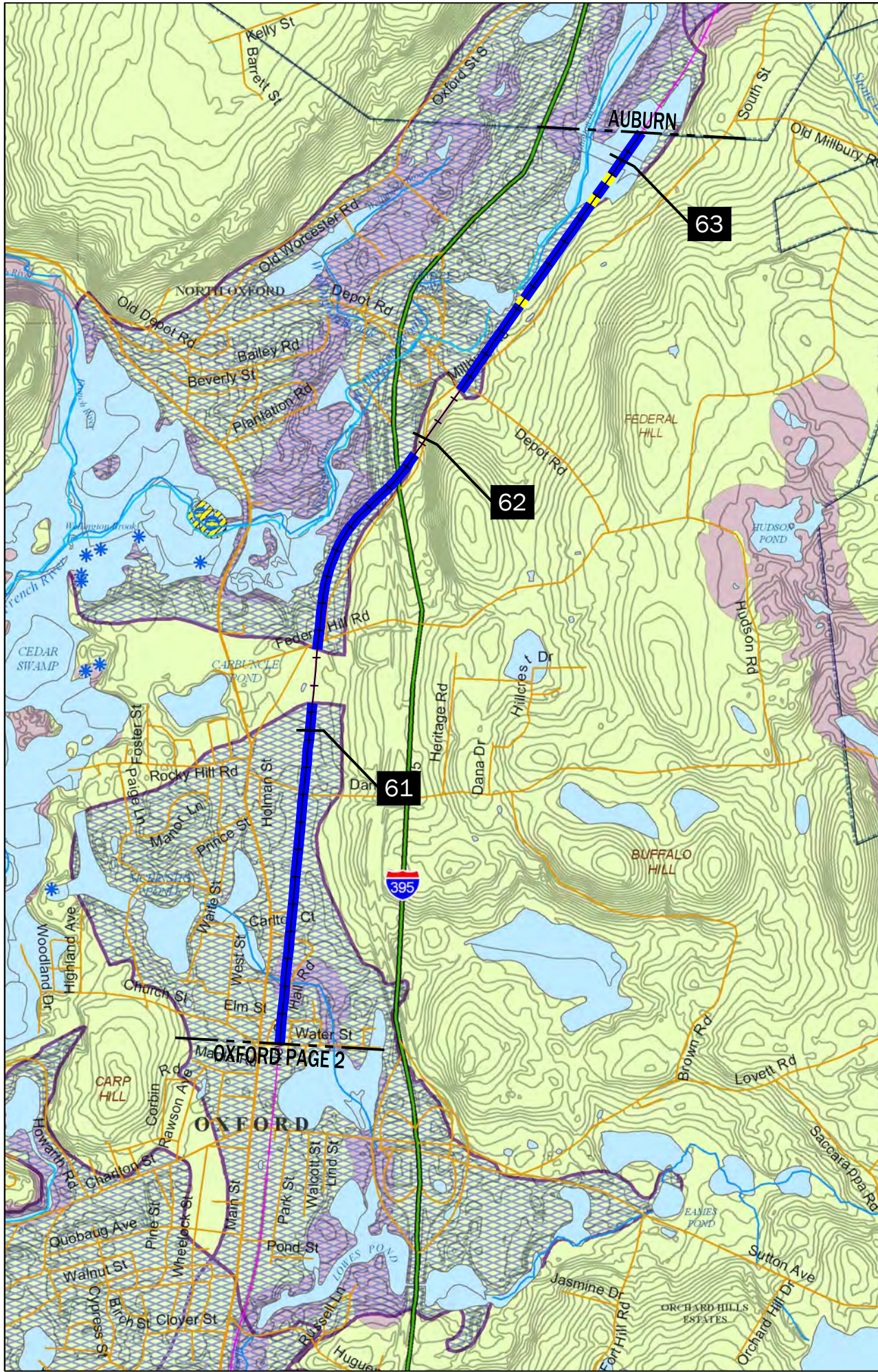
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	PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA
	TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106	Zone A Zone B NHESP Priority Habitat		



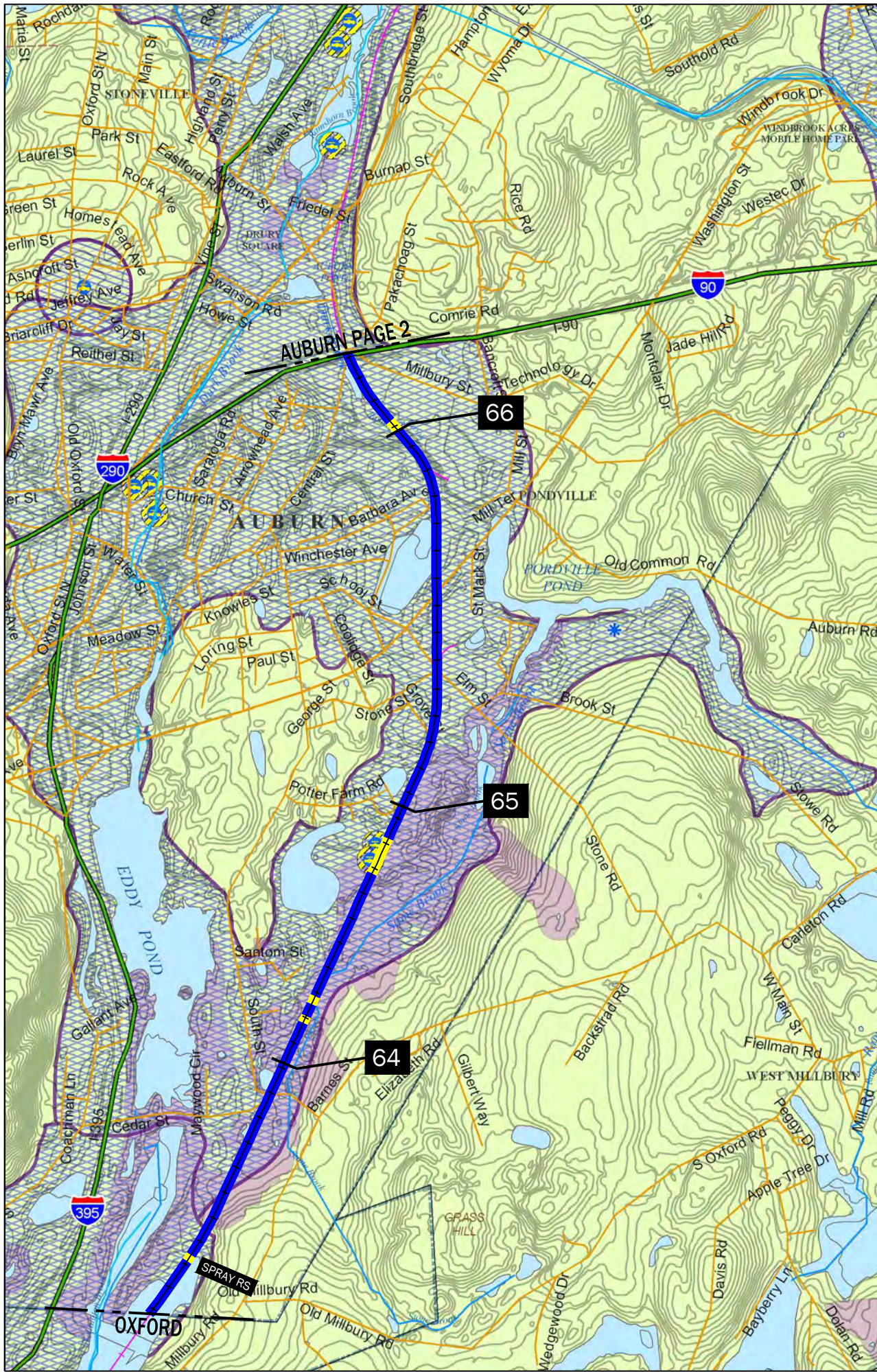
SCALE: 1:25,000 SHEET 1 OF 1	PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610 	TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106
TOWN OF: DUDLEY	BRANCH: NORWICH BRANCH	DATE: 2/14/2011
LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA
		Zone A Zone B NHESP Priority Habitat



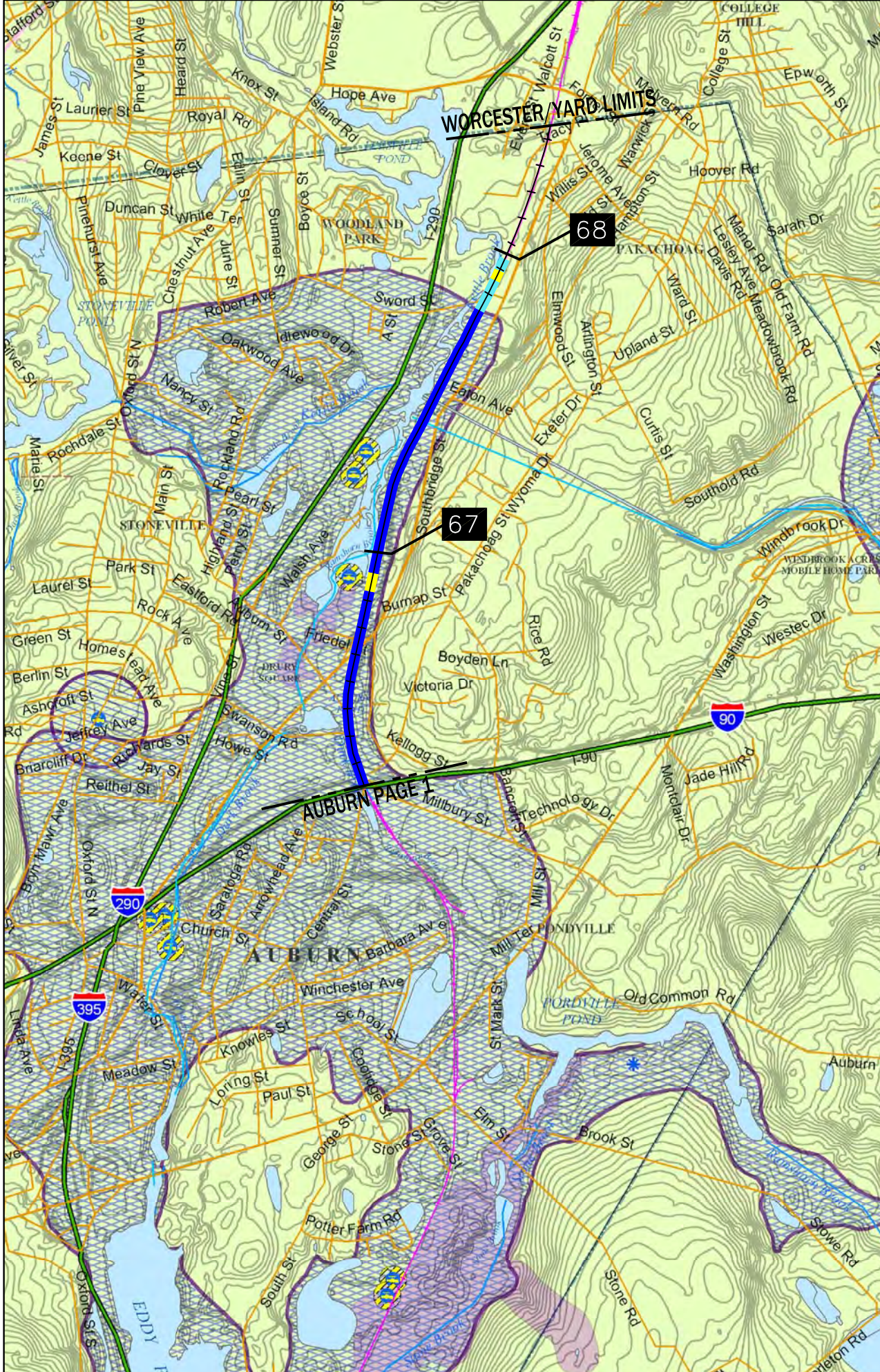
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		PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		LIMITED SPRAY ZONE (1 YEAR INTERVAL)		Groundwater Source 		 Zone A	
		TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		LIMITED SPRAY ZONE (2 YEAR INTERVAL)		Surface Water Intake 		 Zone B	
				NO SPRAY ZONE		NHESP Vernal Pool 		 NHESP Priority	
								 Habitat	
								 DEP Approved Zone I	
								 DEP Approved Zone II / IWPA	



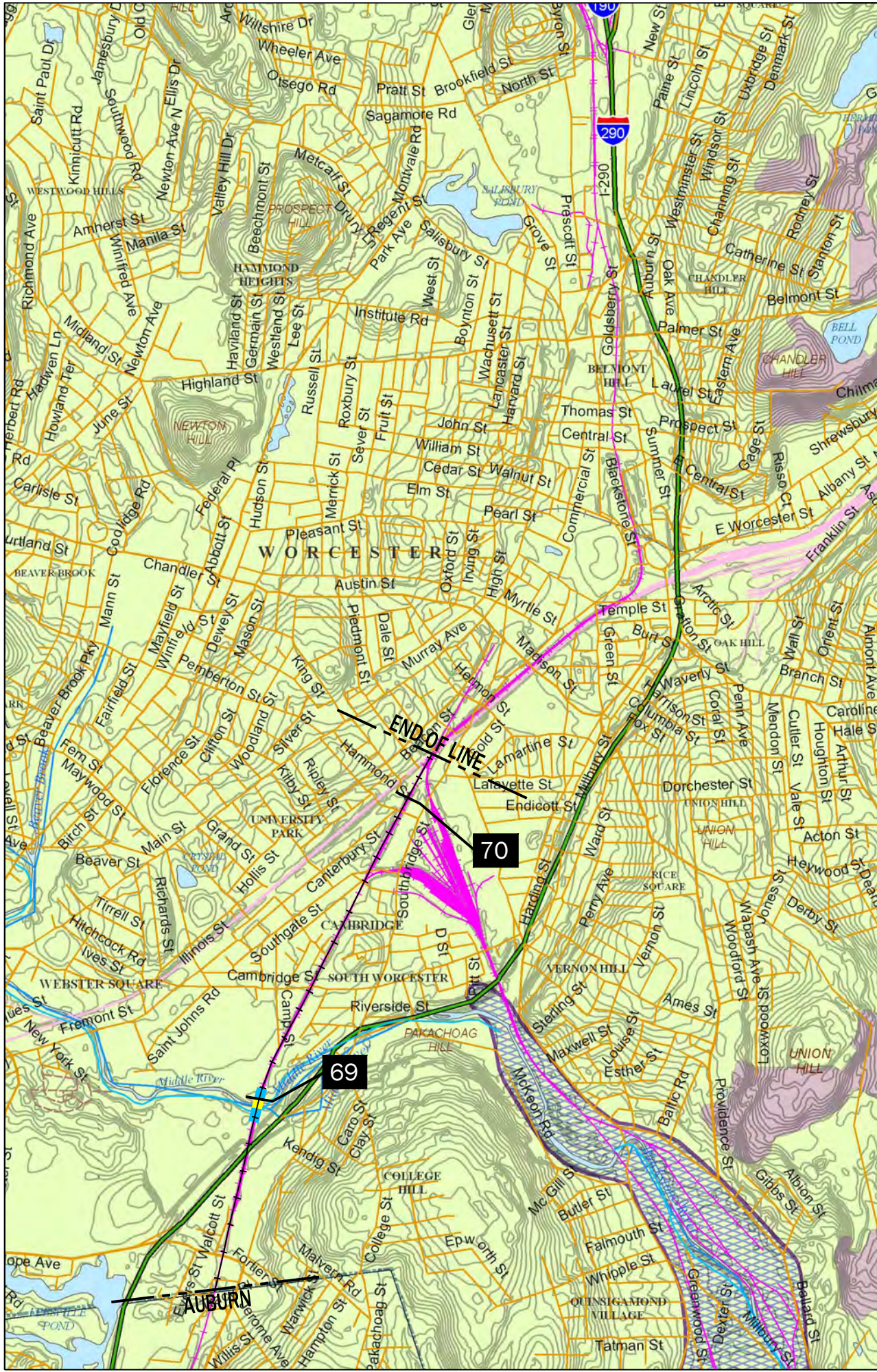
SCALE: 1:25,000	SHEET 2 OF 2	TOWN OF: OXFORD	BRANCH: NORWICH BRANCH	DATE: 05/04/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	DEP Approved Zone I DEP Approved Zone II / IWPA	Zone A Zone B NHESP Priority Habitat
		Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA	Zone A Zone B NHESP Priority Habitat



SCALE: 1:25,000	SHEET 1 OF 2	TOWN OF: AUBURN	BRANCH: NORWICH BRANCH	DATE: 04/04/2011
PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610	TEC ASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106	LIMITED SPRAY ZONE (1 YEAR INTERVAL) LIMITED SPRAY ZONE (2 YEAR INTERVAL) NO SPRAY ZONE	Groundwater Source Surface Water Intake NHESP Vernal Pool	DEP Approved Zone I DEP Approved Zone II / IWPA



SCALE: 1:25,000		SHEET 2 OF 2		TOWN OF: AUBURN		BRANCH: NORWICH BRANCH		DATE: 06/01/2016			
 PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610		 TECASSOCIATES CONSULTING ENGINEERS 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106		LIMITED SPRAY ZONE (1 YEAR INTERVAL)		Groundwater Source		DEP Approved Zone I		Zone A	
				LIMITED SPRAY ZONE (2 YEAR INTERVAL)		Surface Water Intake		DEP Approved Zone II / IWPA		Zone B	
				NO SPRAY ZONE		NHESP Vernal Pool				NHESP Priority Habitat	



SCALE: 1:25,000		SHEET 1 OF 1		TOWN OF: WORCESTER		BRANCH: NORWICH BRANCH		DATE: 2/14/2011							
<div></div> <div>PROVIDENCE & WORCESTER 75 HAMMOND STREET WORCESTER MA 01610</div>				<div>LIMITED SPRAY ZONE (1 YEAR INTERVAL)</div> <div>LIMITED SPRAY ZONE (2 YEAR INTERVAL)</div> <div>NO SPRAY ZONE</div>						<div> Groundwater Source</div> <div> Surface Water Intake</div> <div> NHESP Vernal Pool</div>		<div> DEP Approved Zone I</div> <div> DEP Approved Zone II / IWPA</div> <div></div>		<div>Zone A</div> <div>Zone B</div> <div>NHESP Priority</div> <div>Habitat</div>	
<div></div> <div>TEC ASSOCIATES 46 SAWYER STREET SOUTH PORTLAND, MAINE 04106</div>															

