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# ***ABBREVIATED NOTICE OF RESOURCE AREA DELINEATION***

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*Filing Under the Massachusetts Wetlands Protection Act  
M.G.L. Chapter 131, Section 40 and the Town of Shutesbury Wetland Bylaw*

## **Baker Road Project West Pelham Road (Parcel ID ZQ-6) Shutesbury, Massachusetts**

*Submitted to:*

**Shutesbury Conservation Commission**  
Shutesbury Town Hall  
1 Cooleyville Road  
Shutesbury, Massachusetts 01072

*Filed by:*

**W.D. Cows, Inc.**  
P.O. Box 9677  
North Amherst, Massachusetts 01059

*Prepared by:*

**TRC Companies**  
650 Suffolk Street  
Lowell, Massachusetts 01854

**February 2021**

February 25, 2021

Town of Shutesbury Conservation Commission  
Shutesbury Town Hall  
1 Cooleyville Road  
Shutesbury, MA 01072

**RE: Baker Road Project – West Pelham Road (Parcel ID ZQ-6)  
Abbreviated Notice of Resource Area Delineation (ANRAD)  
Updated Plans & Other Requested Items**

Dear Commissioners:

On behalf of W.D. Cowsls, Inc., TRC Companies (TRC) is pleased to submit updated wetland resource delineation plans and other materials related to the ANRAD for an approximately 47-acre portion of the parcel off Pratt Corner Road listed by the Shutesbury tax assessor as Parcel ID ZG-2 in Shutesbury, MA (Site). The attached materials are based on the following meetings, site visits, documents, and emails:

- Shutesbury Conservation Commission (SCC) meetings – January 9, 2020 and February 11, 2021;
- Site visits with Stockman Associates on April 1 and May 7, 2020;
- Stockman Associates Peer Review Comments dated April 10 and June 25, 2020; and
- SCC email dated July 25, 2020.

The following items are attached:

1. Attachment A – Figure 1: Delineated Resources Map (February 2021)
2. Attachment B – Wetland 8 & 9 Delineation Data Forms

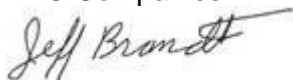
Attachment A shows the delineated wetland resources at the Site based on the site visits with Stockman Associates. Per the discussion at the February 11, 2021 meeting, several flags associated with wetland W-MJR-3 were correct in the field but the adjustments were not shown on the plans. These flags were re-surveyed following the meeting and the locations have been updated. Other minor edits have been made as discussed with the SCC and the peer reviewer at the February 11, 2021 SCC meeting.

Attachment B includes wetland determination data forms for the two new wetlands (W-MJR-8 and W-MJR-9) identified during the review process.

We very much appreciate your review of this information and trust this letter and the attached documents meet the needs of the SCC to issue and Order of Resource Area Delineation. If you should have any questions, please do not hesitate to contact Maria Firstenberg at 978-735-3425 or via email at [MFirstenberg@trccompanies.com](mailto:MFirstenberg@trccompanies.com) or Jeff Brandt at 978-656-3662 or via email at [JBrandt@TRCcompanies.com](mailto:JBrandt@TRCcompanies.com).

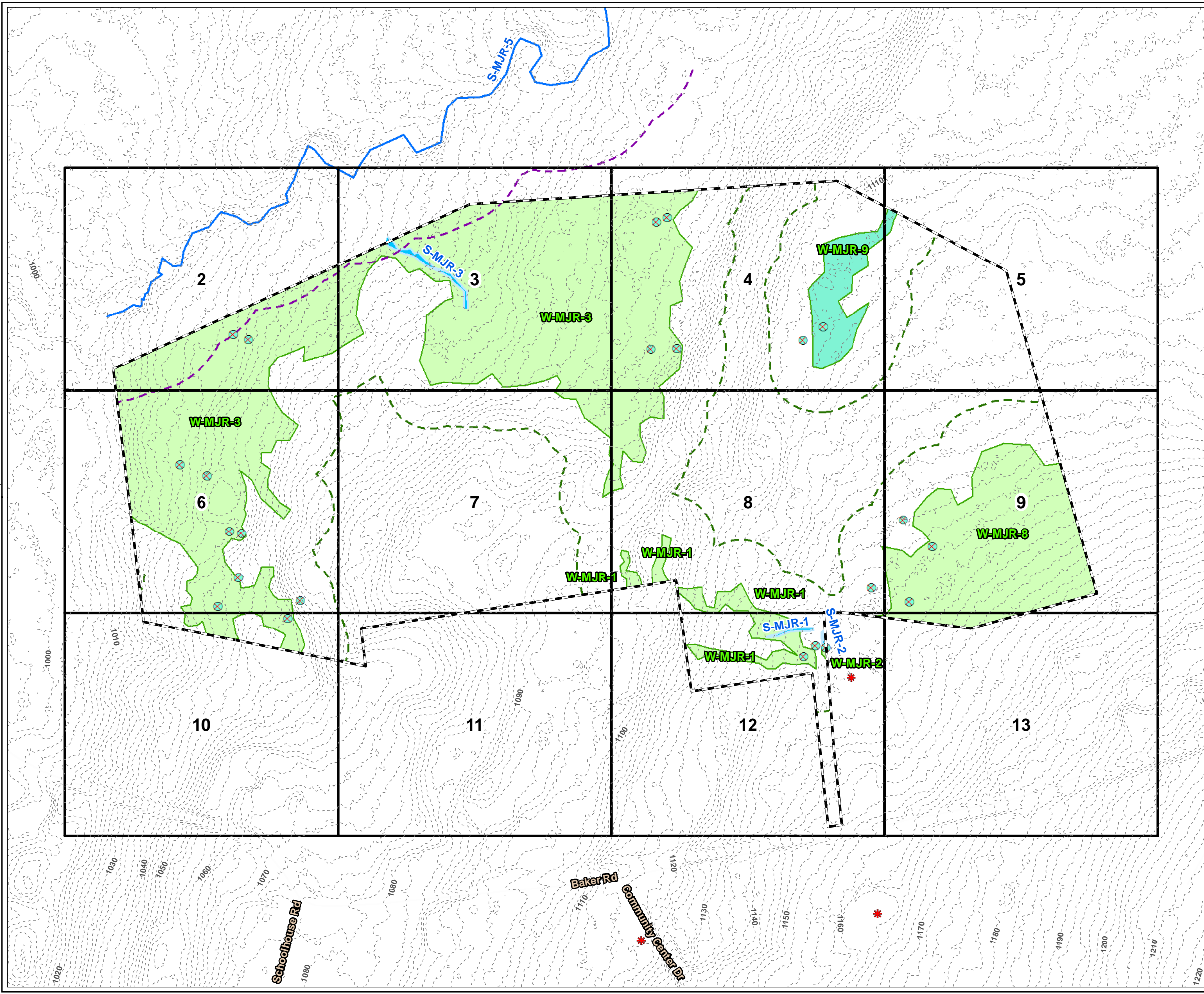
Sincerely,

TRC Companies



Jeff Brandt  
Senior Project Manager

**ATTACHMENT A**  
**Figure 1: Delineated Resources Map**  
**(February 2021)**



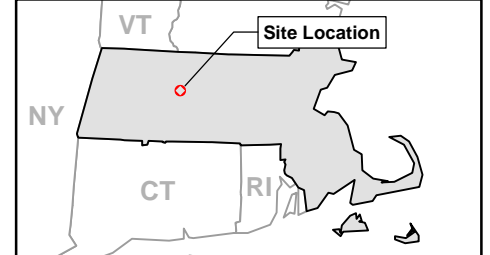
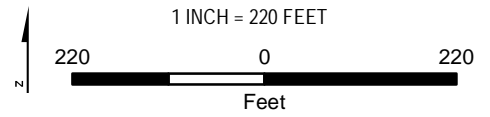
**LEGEND**

- PROJECT BOUNDARY
- 1:50' MAP PAGE
- NHESP POTENTIAL VERNAL POOL
- USACE PLOT
- DELINEATED INTERMITTENT STREAM BANK
- DELINEATED PERENNIAL STREAM BANK AND MAHW
- DELINEATED INTERMITTENT STREAM AREA
- DELINEATED WETLAND BOUNDARY LINE
- MASSDEP/SHUTESBURY BYLAW JURISDICTIONAL WETLAND
- SHUTESBURY BYLAW JURISDICTIONAL WETLAND
- 100-FT WETLAND BUFFER
- 200-FT RIVERFRONT AREA
- 2-FT CONTOUR

**NOTES**

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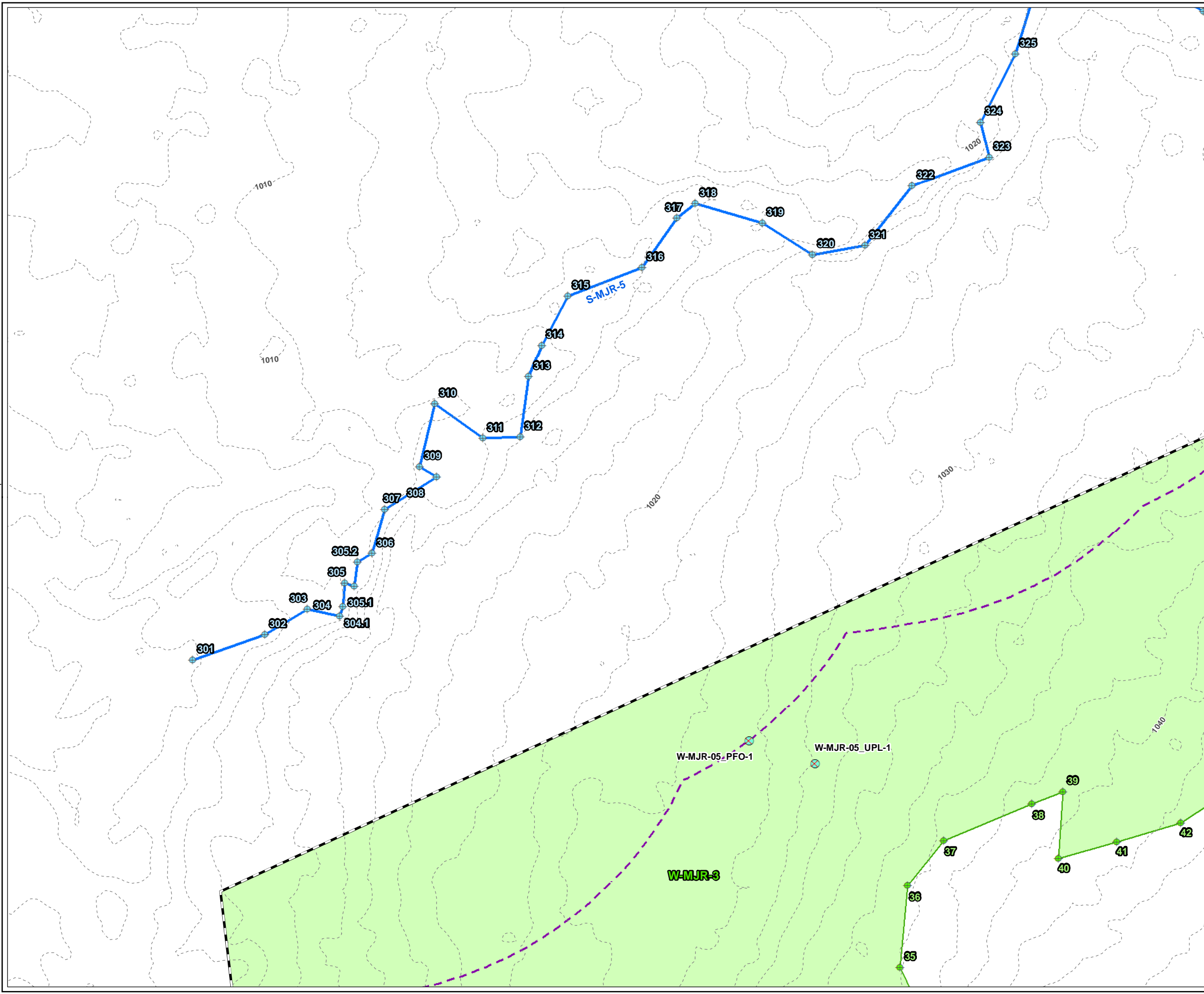
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FRANKLIN COUNTY, MASSACHUSETTS**

TITLE: **DELINEATED  
RESOURCES MAP**

DRAWN BY: S. MOTURI	PROJ NO.: 336892
CHECKED BY: M. LENNON	<b>FIGURE 1</b> Page 1 of 13
APPROVED BY: M. FIRSTENBERG	
DATE: FEBRUARY 2021	



650 SUFFOLK STREET  
LOWELL, MA 01854



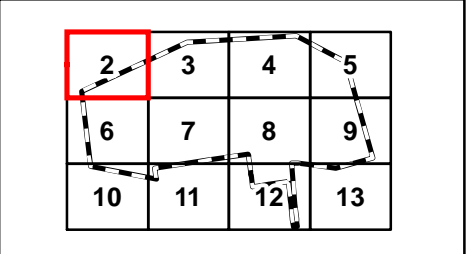
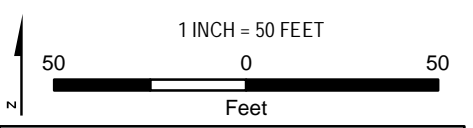
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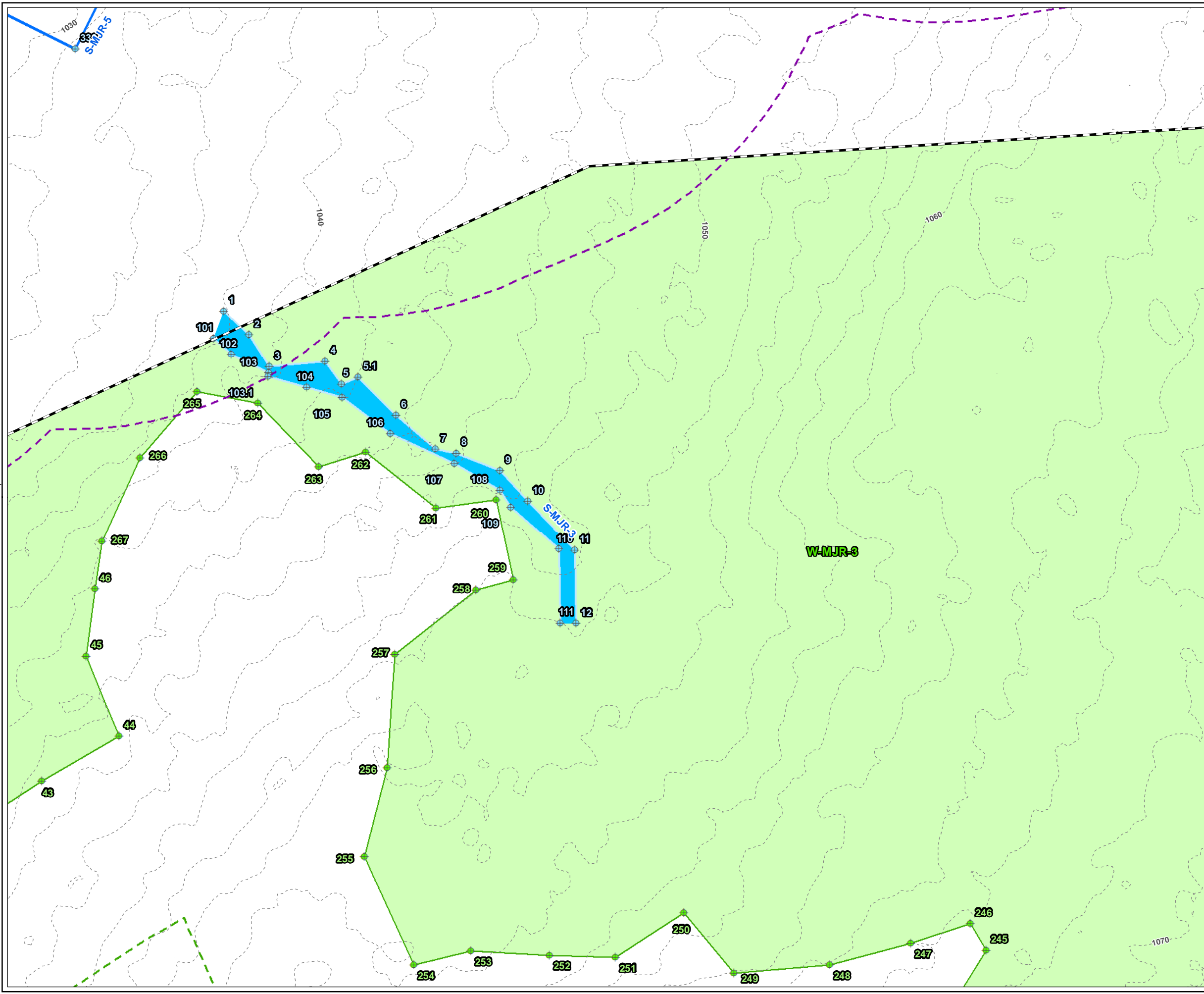
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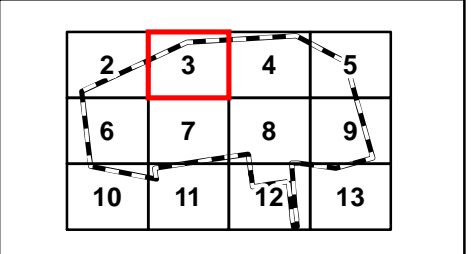
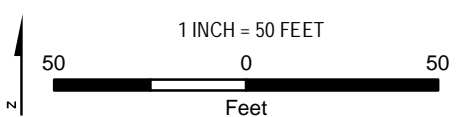
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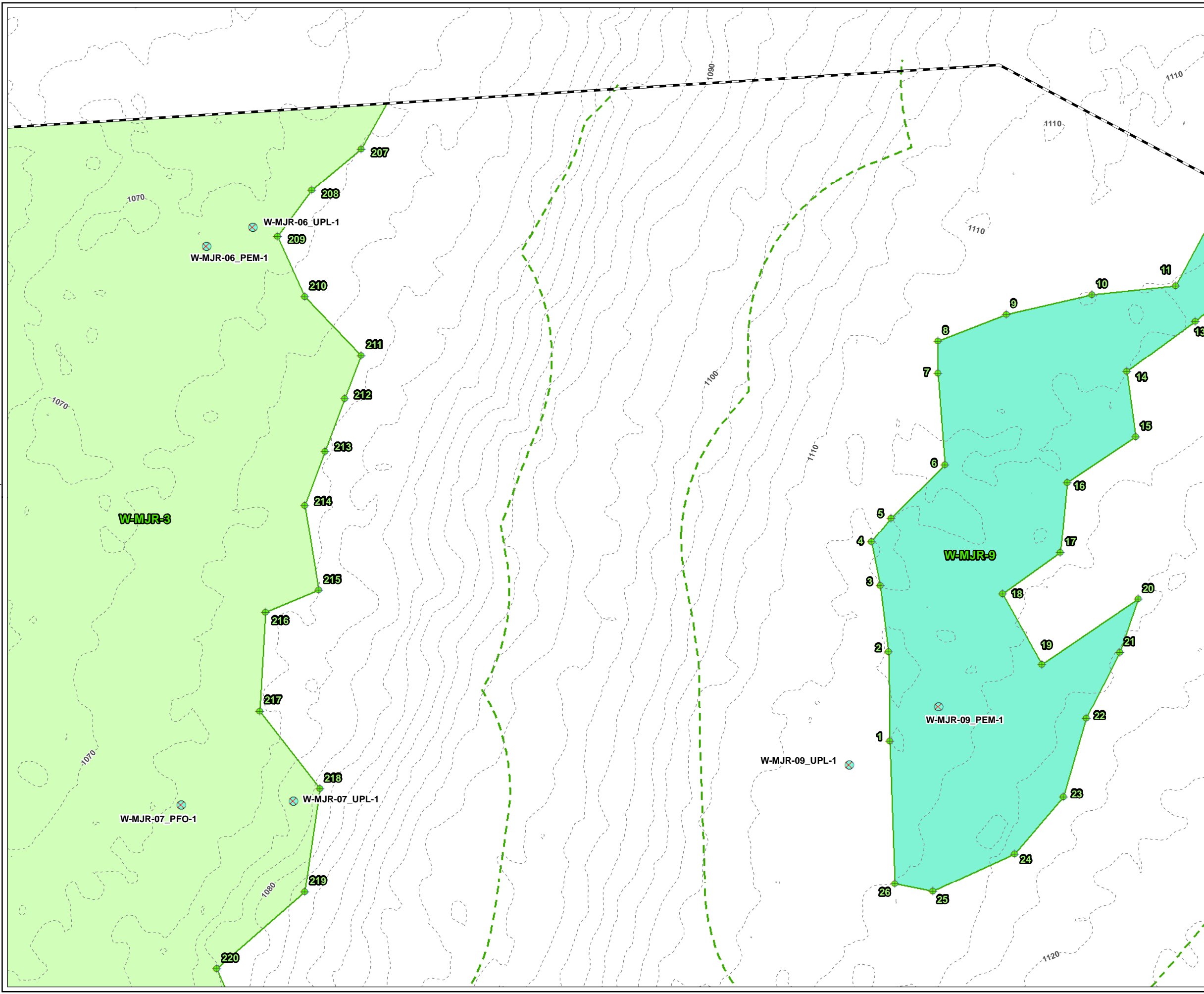
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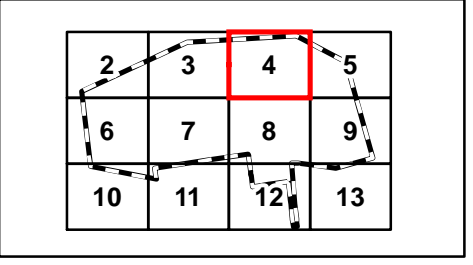
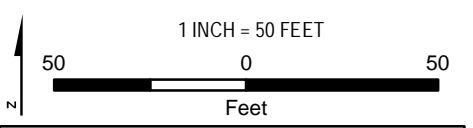
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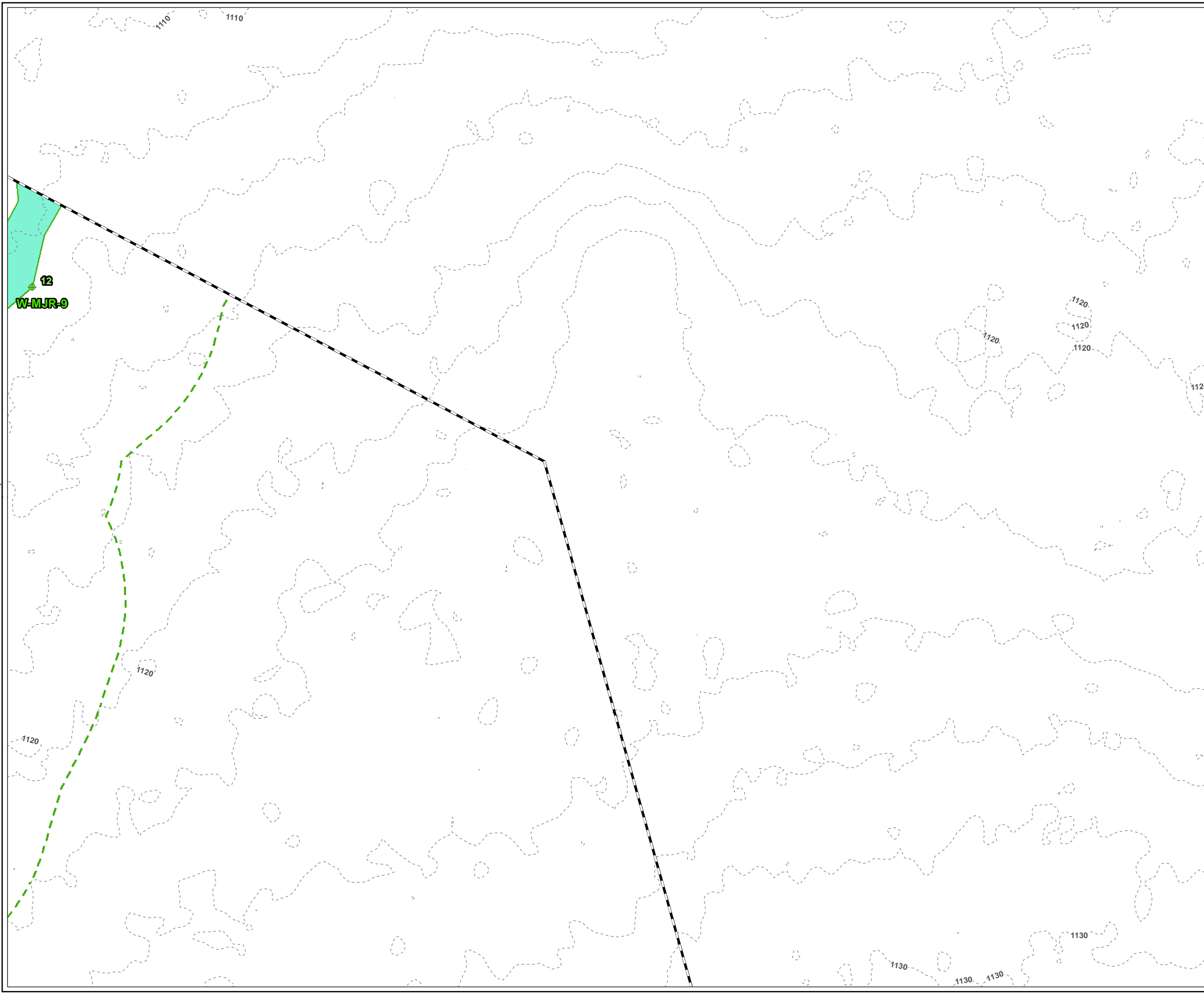
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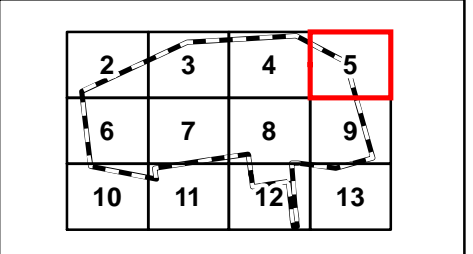
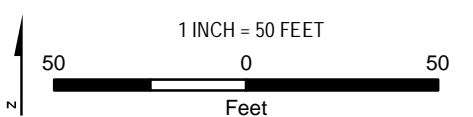
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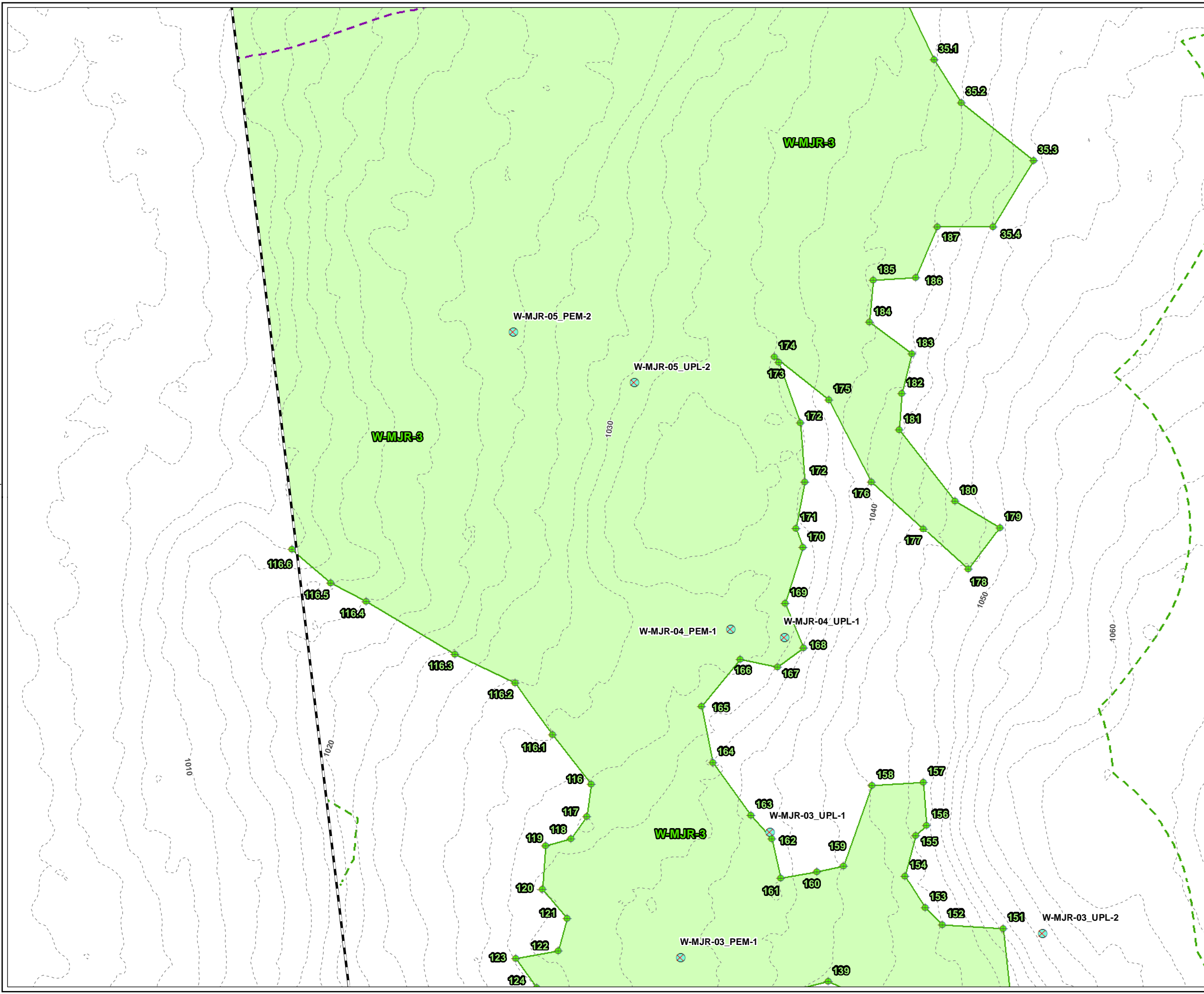
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CHECKED BY: M. REEGAN	<b>FIGURE 1</b> Page 5 of 13
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**TRC**

650 SUFFOLK STREET  
LOWELL, MA 01854

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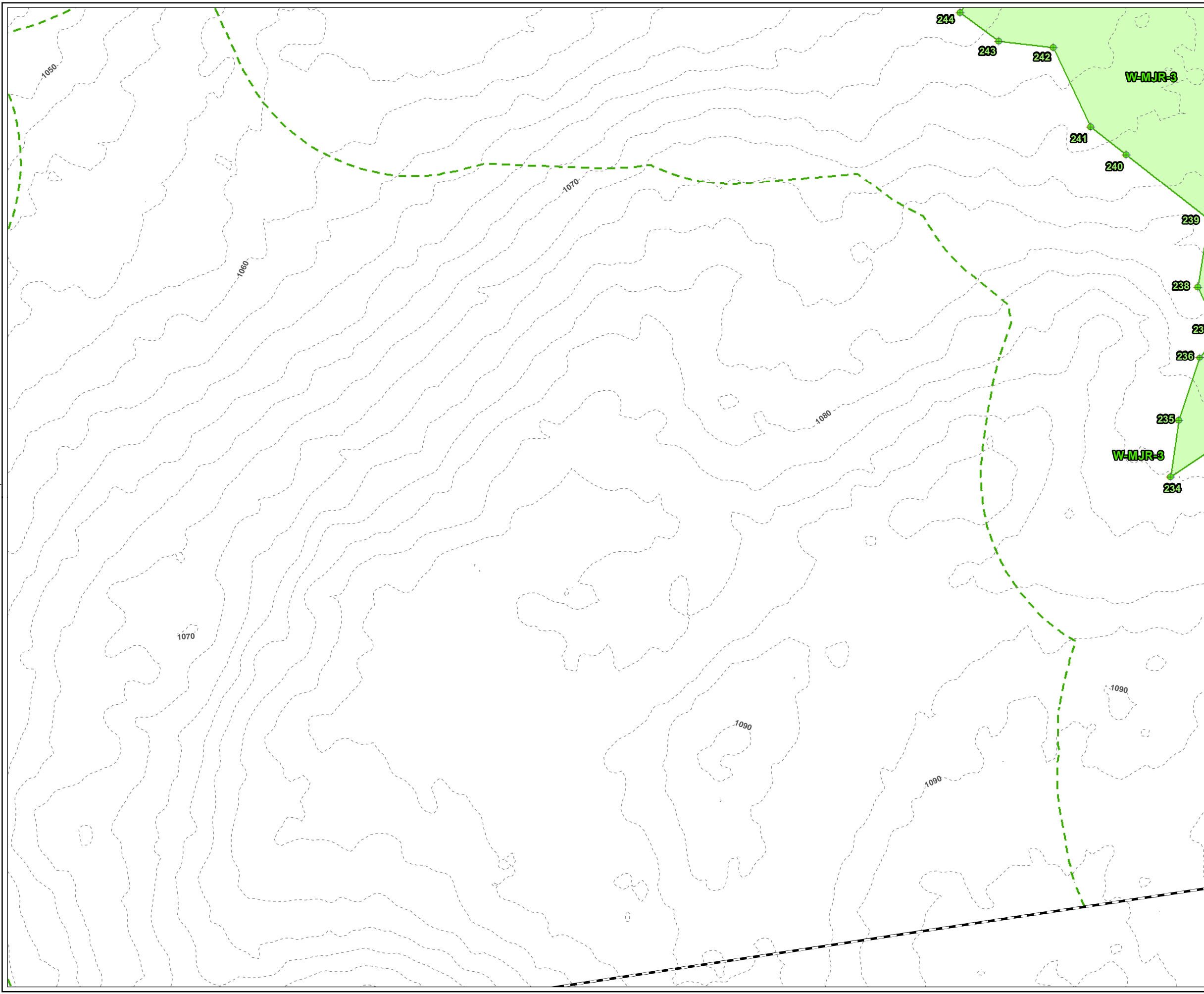
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1 INCH = 50 FEET

Feet

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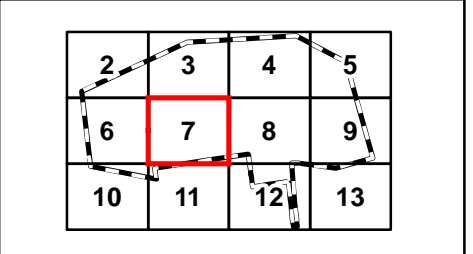
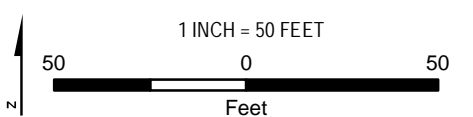
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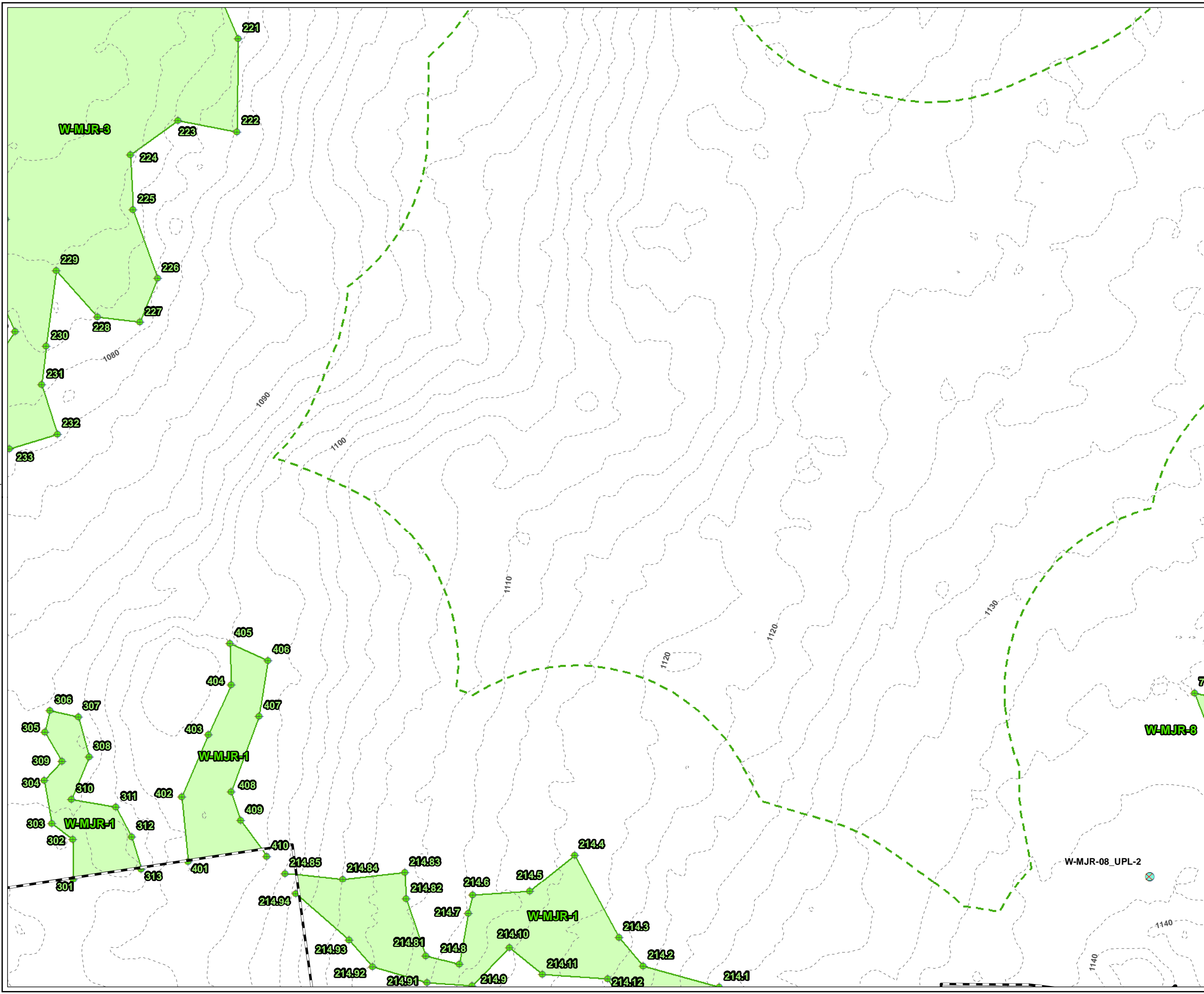
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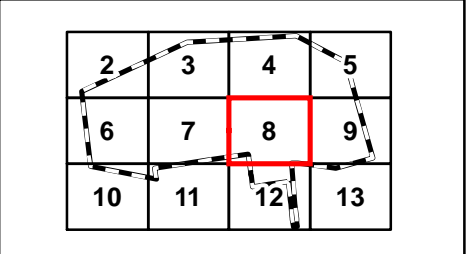
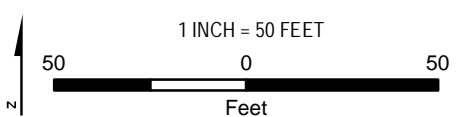
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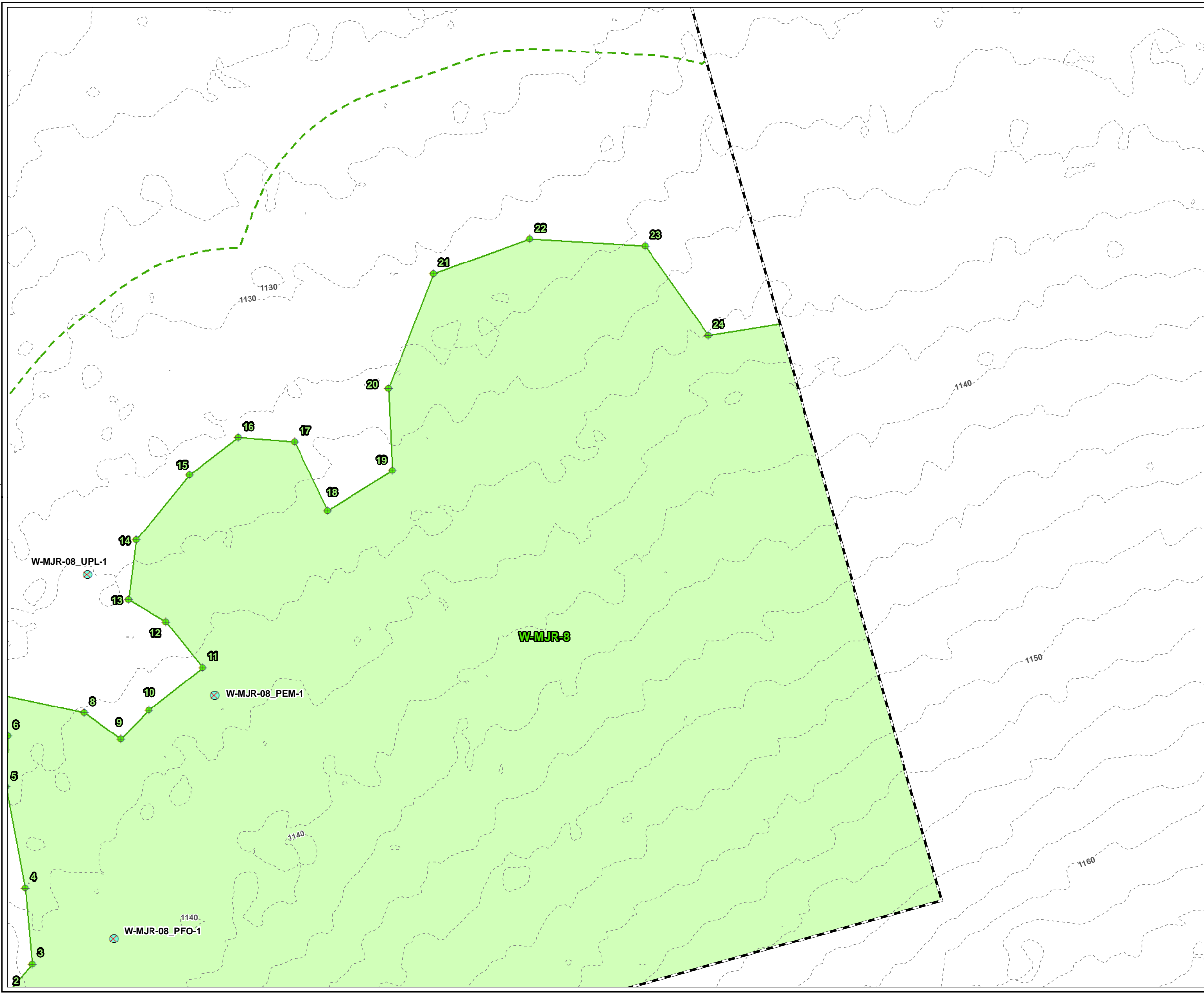
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DRAWN BY: S. MOTURI	PROJ NO: 336892
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**TRC**

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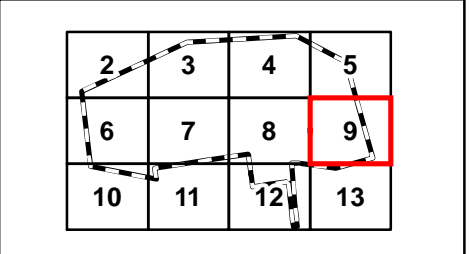
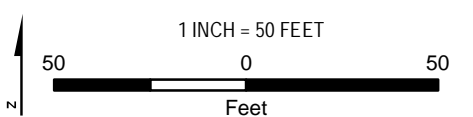
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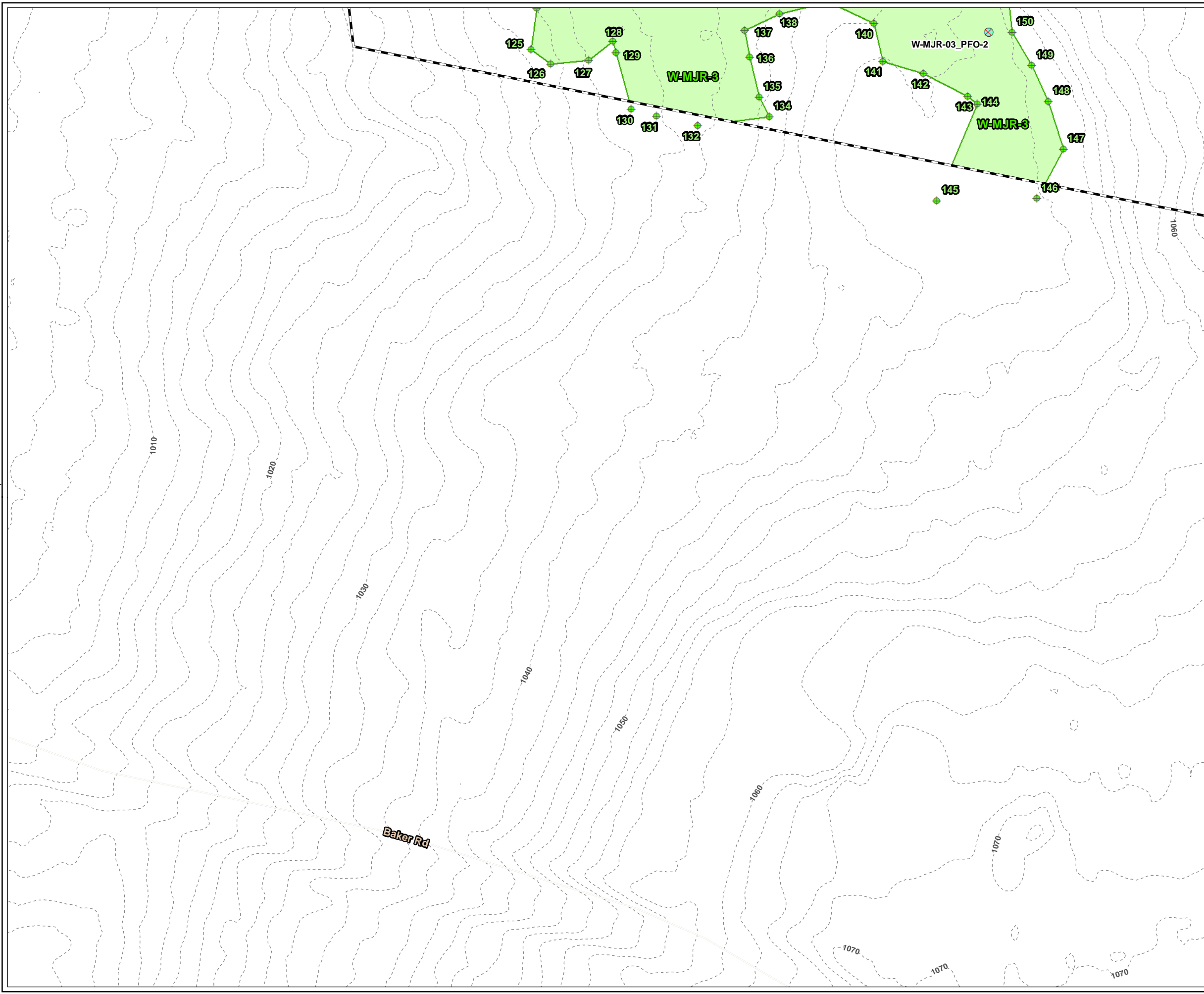
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FILE NO: Baker\_ANRAD\_Series\_11x17\_20210223.mxd



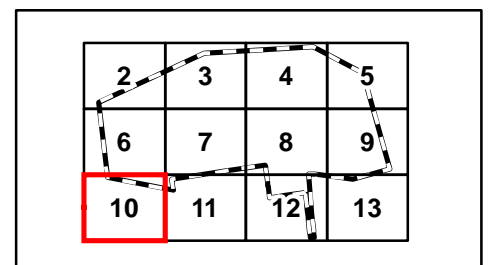
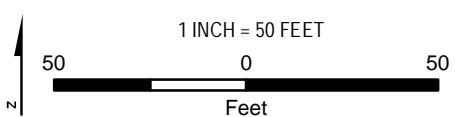
**LEGEND**

- PROJECT BOUNDARY
- WETLAND FLAG
- USACE PLOT
- MASSDEP/SHUTESBURY BYLAW JURISDICTIONAL WETLAND
- DELINEATED WETLAND BOUNDARY LINE
- 2-FT CONTOUR

**NOTES**

1. PLAN REVISED ON 02/23/2020.
2. PARCEL BOUNDARIES ARE ACCESSED FROM MASSGIS SHUTESBURY LEVEL3 PARCEL DATABASE, 2018.
3. WETLAND AND STREAM FLAGS ARE DELINEATED BY TRC WETLAND SCIENTISTS ON OCTOBER 24, 2019 AND ON APRIL 15 AND MAY 7, 2020. SEVERAL WETLAND FLAGS WERE RE-SURVEYED ON FEBRUARY 22, 2021. FLAGS SURVEYED VIA GEODE WITH SUBMETER ACCURACY. DATA IS COLLECTED IN WGS 1984 HORIZONTAL DATUM. STREAM AND WETLAND BOUNDARIES ARE GENERATED BY TRC ON DESKTOP UTILIZING DELINEATED FLAGS.
4. 100-FT BUFFER ZONE IS GENERATED BY TRC FROM DELINEATED WETLAND RESOURCE AREAS.
5. 200-FT RIVERFRONT AREA IS GENERATED BY TRC FROM DELINEATED PERENNIAL STREAM
6. CONTOURS GENERATED FROM 1-METER USGS NED, 2015 (NORTH AMERICAN VERTICAL DATUM OF 1988), MASSGIS.

PLANS NOT FOR CONSTRUCTION



PROJECT: **BAKER ROAD PROJECT  
FRANKLIN COUNTY, MASSACHUSETTS**

TITLE: **DELINEATED  
RESOURCES MAP**

DRAWN BY: S. MOTURI	PROJ NO.: 336892
CHECKED BY: M. REEGAN	<b>FIGURE 1</b> Page 10 of 13
APPROVED BY: M. FIRSTENBERG	
DATE: FEBRUARY 2021	




**TRC**

650 SUFFOLK STREET  
LOWELL, MA 01854

FILE NO.: Baker\_ANRAD\_Series\_11x17\_20210223.mxd



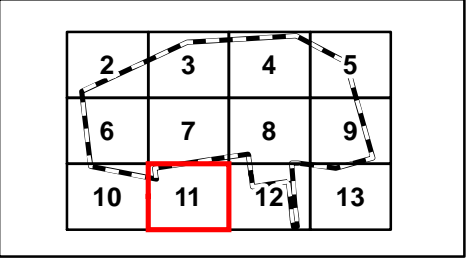
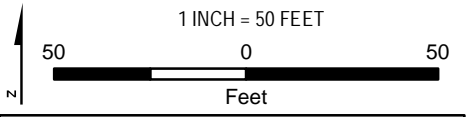
**LEGEND**

-  PROJECT BOUNDARY
-  100-FT WETLAND BUFFER
-  2-FT CONTOUR

**NOTES**

1. PLAN REVISED ON 02/23/2020.
2. PARCEL BOUNDARIES ARE ACCESSED FROM MASSGIS SHUTESBURY LEVEL3 PARCEL DATABASE, 2018.
3. WETLAND AND STREAM FLAGS ARE DELINEATED BY TRC WETLAND SCIENTISTS ON OCTOBER 24, 2019 AND ON APRIL 15 AND MAY 7, 2020. SEVERAL WETLAND FLAGS WERE RE-SURVEYED ON FEBRUARY 22, 2021. FLAGS SURVEYED VIA GEODE WITH SUBMETER ACCURACY. DATA IS COLLECTED IN WGS 1984 HORIZONTAL DATUM. STREAM AND WETLAND BOUNDARIES ARE GENERATED BY TRC ON DESKTOP UTILIZING DELINEATED FLAGS.
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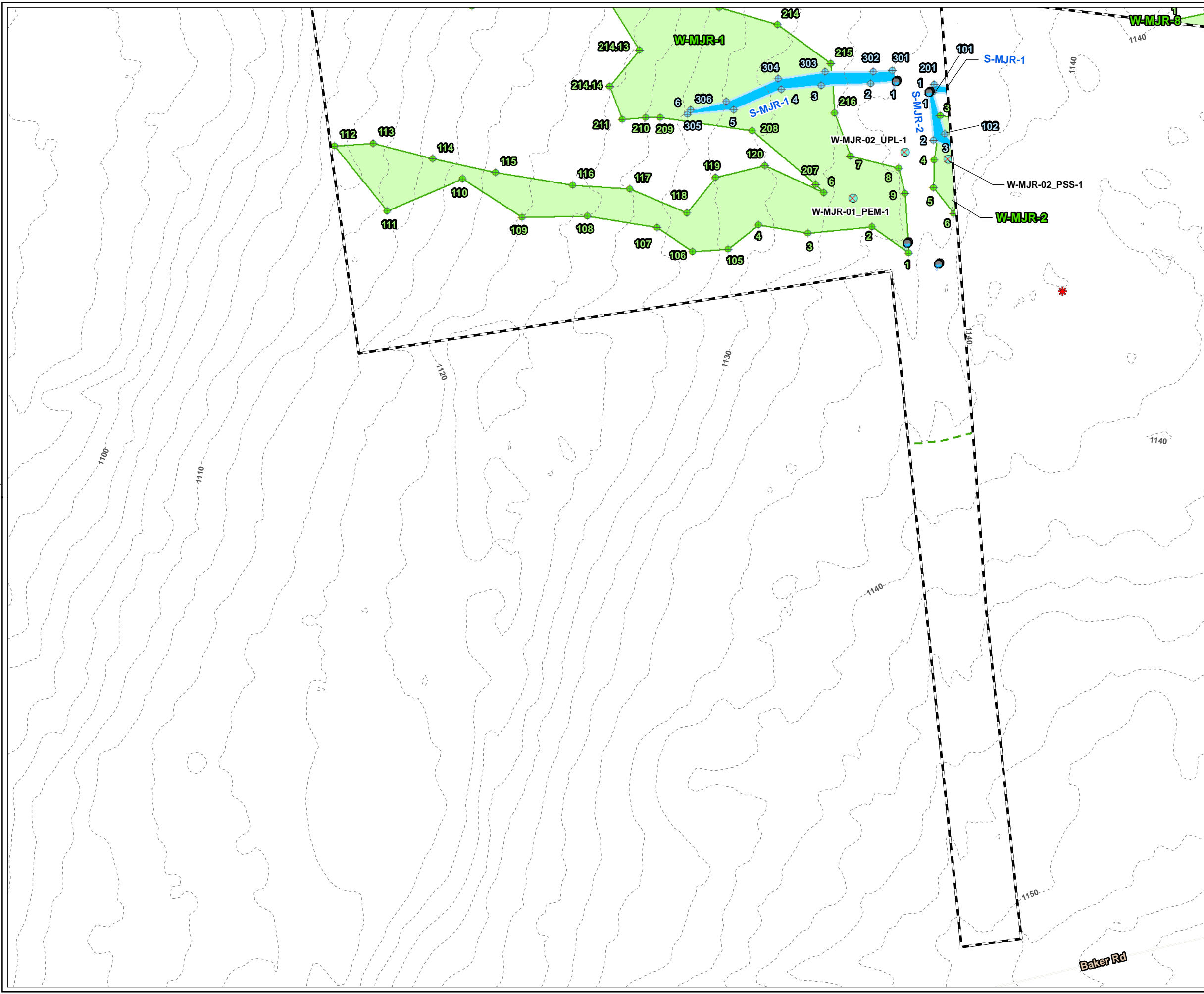
PLANS NOT FOR CONSTRUCTION



PROJECT:		<b>BAKER ROAD PROJECT FRANKLIN COUNTY, MASSACHUSETTS</b>	
TITLE:		<b>DELINEATED RESOURCES MAP</b>	
DRAWN BY:	S. MOTURI	PROJ NO.:	336892
CHECKED BY:	M. REEGAN	<b>FIGURE 1</b> Page 11 of 13	
APPROVED BY:	M. FIRSTENBERG		
DATE:	FEBRUARY 2021		



650 SUFFOLK STREET  
LOWELL, MA 01854



**LEGEND**

- PROJECT BOUNDARY
- NHESP POTENTIAL VERNAL POOL
- CULVERT
- WETLAND FLAG
- STREAM FLAG
- USACE PLOT
- DELINEATED INTERMITTENT STREAM BANK
- DELINEATED INTERMITTENT STREAM AREA
- MASSDEP/SHUTESBURY BYLAW JURISDICTIONAL WETLAND
- DELINEATED WETLAND BOUNDARY LINE
- 100-FT WETLAND BUFFER
- 2-FT CONTOUR

**NOTES**

1. PLAN REVISED ON 02/23/2020.
2. PARCEL BOUNDARIES ARE ACCESSED FROM MASSGIS SHUTESBURY LEVEL3 PARCEL DATABASE, 2018.
3. WETLAND AND STREAM FLAGS ARE DELINEATED BY TRC WETLAND SCIENTISTS ON OCTOBER 24, 2019 AND ON APRIL 15 AND MAY 7, 2020. SEVERAL WETLAND FLAGS WERE RE-SURVEYED ON FEBRUARY 22, 2021. FLAGS SURVEYED VIA GEODE WITH SUBMETER ACCURACY. DATA IS COLLECTED IN WGS 1984 HORIZONTAL DATUM. STREAM AND WETLAND BOUNDARIES ARE GENERATED BY TRC ON DESKTOP UTILIZING DELINEATED FLAGS.
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6. CONTOURS GENERATED FROM 1-METER USGS NED, 2015 (NORTH AMERICAN VERTICAL DATUM OF 1988), MASSGIS.

**PLANS NOT FOR CONSTRUCTION**

1 INCH = 50 FEET

50 0 50  
Feet

2	3	4	5
6	7	8	9
10	11	12	13

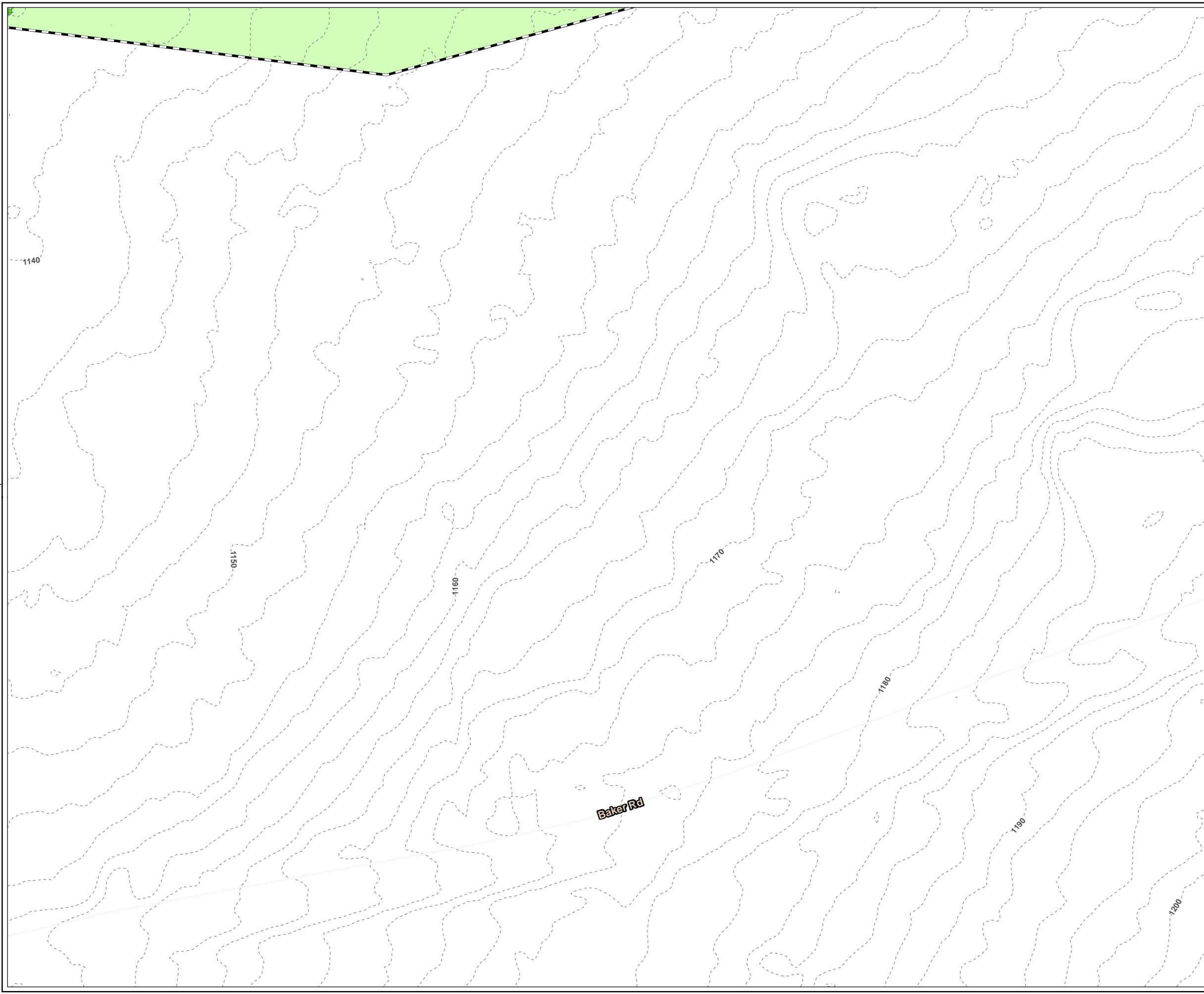
PROJECT: **BAKER ROAD PROJECT  
FRANKLIN COUNTY, MASSACHUSETTS**

TITLE: **DELINEATED  
RESOURCES MAP**

DRAWN BY: S. MOTURI	PROJ NO.: 336892
CHECKED BY: M. REEGAN	<b>FIGURE 1</b> Page 12 of 13
APPROVED BY: M. FIRSTENBERG	
DATE: FEBRUARY 2021	

650 SUFFOLK STREET  
LOWELL, MA 01854

FILE NO: Baker\_ANRAD\_Series\_11x17\_20210223.mxd



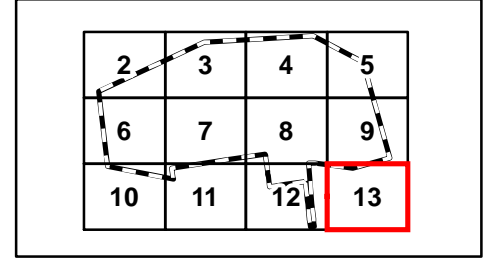
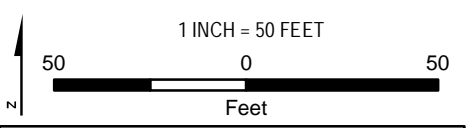
**LEGEND**

- PROJECT BOUNDARY
- WETLAND FLAG
- MASSDEP/SHUTESBURY BYLAW JURISDICTIONAL WETLAND
- DELINEATED WETLAND BOUNDARY LINE
- 2-FT CONTOUR

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PLANS NOT FOR CONSTRUCTION



PROJECT:		<b>BAKER ROAD PROJECT FRANKLIN COUNTY, MASSACHUSETTS</b>	
TITLE:		<b>DELINEATED RESOURCES MAP</b>	
DRAWN BY:	S. MOTURI	PROJ NO.:	336892
CHECKED BY:	M. REEGAN	<b>FIGURE 1</b> Page 13 of 13	
APPROVED BY:	M. FIRSTENBERG		
DATE:	FEBRUARY 2021		



650 SUFFOLK STREET  
LOWELL, MA 01854



**ATTACHMENT B**  
**Figure 2: Wetland 8 & 9 Delineation Data Forms**

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-MJR-08\_PEM-1  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): LRR R Lat: 42.4221190252 Long: -72.4274021108 Datum: WGS84  
 Soil Map Unit Name: Chichester fine sandy loam, 8 to 15 percent slopes NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID:	W-MJR-08
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Remarks: (Explain alternative procedures here or in a separate report)	
Coverttype is PEM. Cleared for timber.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present?                      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?                         Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>
Saturation Present?                            Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>
(includes capillary fringe)	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>	
Remarks:	

VEGETATION -- Use scientific names of plants.

Sampling Point: W-MJR-08\_PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum (Plot size: <u>30 ft</u> )</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
0 = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>				
1. <u>Acer rubrum</u>	15	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
15 = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>				
1. <u>Juncus effusus</u>	65	Yes	OBL	
2. <u>Schoenoplectus tabernaemontani</u>	30	Yes	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
95 = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u> )</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 = Total Cover				
Prevalence Index = B/A = <u>1.3</u>				
<b>Hydrophytic Vegetation Indicators:</b>				
___ 1 - Rapid Test for Hydrophytic Vegetation				
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%				
<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>				
___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)				
___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic				
<b>Definitions of Vegetation Strata:</b>				
<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No ___				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>				

SOIL

Sampling Point: W-MJR-08\_PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 6	10YR 2/1	100					Silty Clay Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

- |  |  |  |
|--|--|--|
| <p><b>Hydric Soil Indicators:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</li> <li><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</li> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li><input type="checkbox"/> Red Parent Material (F21)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input checked="" type="checkbox"/> Other (Explain in Remarks)</li> </ul> |
|--|--|--|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
Type:	Rock		
Depth (inches):	6		

**Remarks:**  
Soils were assumed to be hydric due to the presence of inundation, FACW and OBL vegetation species, and a definitive wetland boundary. Refusal due to coarse fragments.

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-MJR\_08\_PFO-2  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): LRR R Lat: 42.4218334956 Long: -72.4275588524 Datum: WGS84  
 Soil Map Unit Name: Chichester fine sandy loam, 8 to 15 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID:	W-MJR_08
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Remarks: (Explain alternative procedures here or in a separate report)	
Covertypes is PFO.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>8</u>
Saturation Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>4</u>
(includes capillary fringe)	
<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION -- Use scientific names of plants.

Sampling Point: W-MJR\_08\_PFO-2

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: 30 ft )</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.67</u> (A/B)																																								
1. <i>Tsuga canadensis</i>	70	Yes	FAC																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
70 = Total Cover																																												
<b>Sapling/Shrub Stratum (Plot size: 15 ft )</b>																																												
1. <i>Tsuga canadensis</i>	20	Yes	FAC	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;"></th> <th style="width:10%; text-align: center;">Total % Cover of:</th> <th style="width:10%;"></th> <th style="width:10%; text-align: center;">Multiply By:</th> <th style="width:10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">90</td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">270</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">7</td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">28</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;">97</td> <td></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">298 (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>3.1</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1- Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is > 50% ___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		Total % Cover of:		Multiply By:		OBL species	0		x 1 =	0	FACW species	0		x 2 =	0	FAC species	90		x 3 =	270	FACU species	7		x 4 =	28	UPL species	0		x 5 =	0	Column Totals	97		(A)	298 (B)	Prevalence Index = B/A =				<u>3.1</u>
	Total % Cover of:		Multiply By:																																									
OBL species	0		x 1 =		0																																							
FACW species	0		x 2 =		0																																							
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FACU species	7		x 4 =		28																																							
UPL species	0		x 5 =		0																																							
Column Totals	97		(A)		298 (B)																																							
Prevalence Index = B/A =					<u>3.1</u>																																							
2. <i>Kalmia latifolia</i>	7	Yes	FACU																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
27 = Total Cover																																												
<b>Herb Stratum (Plot size: 5 ft )</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
12. _____	_____	_____	_____																																									
0 = Total Cover																																												
<b>Woody Vine Stratum (Plot size: 30 ft )</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
0 = Total Cover																																												
<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																												
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/>																																												
<b>Remarks:(Include photonumbers here on a separate sheet.)</b>  Eastern hemlock is considered a wetland indicator plant under the MA WPA. Therefore, it has been considered as having an indicator status of FAC for this delineation rather than of FACU as listed by the U.S. Army Corps of Engineers.																																												

**SOIL**

Sampling Point: W-MJR\_08\_PFO-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 6	10YR 2/2	100					Silt Loam	
6 - 10	10YR 5/1	100						

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

<p><b>Hydric Soil Indicators:</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
Type:	<u>Coarse Fragments</u>		
Depth (inches):	<u>10</u>		

**Remarks:**  
Refusal due to coarse fragments.

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-MJR-08\_UPL-1  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): LRR R Lat: 42.4224425247 Long: -72.4277730101 Datum: WGS84  
 Soil Map Unit Name: Chichester fine sandy loam, 8 to 15 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report)		
Covertypes is UPL.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>5</u>
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>5</u>
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



VEGETATION -- Use scientific names of plants.

Sampling Point: W-MJR-08\_UPL-1

<u>Tree Stratum</u> (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Tsuga canadensis</i>	25	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <i>Pinus strobus</i>	20	Yes	FACU	Total Number of Dominant Species Across All Strata:	5 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	20 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<b>Total % Cover of:</b>	<b>Multiply By:</b>
6. _____				OBL species	0 x 1 = 0
7. _____				FACW species	0 x 2 = 0
	45	= Total Cover		FAC species	25 x 3 = 75
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				FACU species	135 x 4 = 540
1. <i>Kalmia latifolia</i>	65	Yes	FACU	UPL species	0 x 5 = 0
2. _____				Column Totals	155 (A) 615 (B)
3. _____				Prevalence Index = B/A =	4.0
4. _____				<b>Hydrophytic Vegetation Indicators:</b>	
5. _____				___ 1 - Rapid Test for Hydrophytic Vegetation	
6. _____				___ 2 - Dominance Test is > 50%	
7. _____				___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
8. _____				___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
9. _____				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
10. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
11. _____				<b>Definitions of Vegetation Strata:</b>	
12. _____				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
	65	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes ___ No <input checked="" type="checkbox"/>	
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )					
1. <i>Kalmia latifolia</i>	35	Yes	FACU		
2. <i>Mitchella repens</i>	10	Yes	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	45	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
	0	= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)

Eastern hemlock is considered a wetland indicator plant under the MA WPA. Therefore, it has been considered as having an indicator status of FAC for this delineation rather than of FACU as listed by the U.S. Army Corps of Engineers.

SOIL

Sampling Point: W-MJR-08\_UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 5	10YR 2/2	100					Silt Loam	
5 - 6	10YR 3/3	100					Silt Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

- |  |  |   |
|--|--|---|
| <p><b>Hydric Soil Indicators:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</li> <li><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</li> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li><input type="checkbox"/> Red Parent Material (F21)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul> |
|--|--|---|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	
Type:	Rock	Yes	No <input checked="" type="checkbox"/>
Depth (inches):	6		

Remarks:

Photo of Sample Plot  
North



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-MJR-08\_UPL-2  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0 to 1  
 Subregion (LRR or MLRA): LRR R Lat: 42.4219957693 Long: -72.4280566537 Datum: WGS84  
 Soil Map Unit Name: Chichester fine sandy loam, 8 to 15 percent slopes NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Remarks: (Explain alternative procedures here or in a separate report)	
Covertypes is UPL.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)	
<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION -- Use scientific names of plants.

Sampling Point: W-MJR-08\_UPL-2

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum (Plot size: <u>30 ft</u> )</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u><i>Tsuga canadensis</i></u>	20	Yes	FAC	
2. <u><i>Pinus strobus</i></u>	10	Yes	FACU	
3. <u><i>Quercus rubra</i></u>	5	No	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
_____	35	= Total Cover		
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>				
1. <u><i>Kalmia latifolia</i></u>	10	Yes	FACU	
2. <u><i>Tsuga canadensis</i></u>	10	Yes	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____	20	= Total Cover		
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____	0	= Total Cover		
<b>Woody Vine Stratum (Plot size: <u>30 ft</u> )</b>				
1. _____				
2. _____				
3. _____				
4. _____				
_____	0	= Total Cover		

<b>Prevalence Index worksheet:</b>	
Total % Cover of:	Multiply By:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals <u>55</u>	(A) <u>190</u> (B)
Prevalence Index = B/A = <u>3.5</u>	

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is > 50%

\_\_\_ 3 - Prevalence Index is ≤ 3.0<sup>1</sup>

\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes \_\_\_ No

**Remarks: (Include photo numbers here or on a separate sheet.)**

Eastern hemlock is considered a wetland indicator plant under the MA WPA. Therefore, it has been considered as having an indicator status of FAC for this delineation rather than of FACU as listed by the U.S. Army Corps of Engineers.

SOIL

Sampling Point: W-MJR-08\_UPL-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 8	10YR 2/2	100					Sandy Loam	
8 - 18	10YR 4/6	100					Sandy Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

<b>Hydric Soil Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes ___ No <input checked="" type="checkbox"/>
Type:	None		
Depth (inches):			

Remarks:

Photo of Sample Plot  
North



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-BAK-09\_PSS-1  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion(LRRorMLRA): LRR R Lat: 42.4236369878 Long: -72.4284350128 Datum: WGS84  
 Soil Map Unit Name: Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony NWI classification: \_\_\_\_\_  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report)		If yes, optional Wetland Site ID: <u>W-BAK-09</u>	
Coverttype is PSS. Cleared for timber.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present?                    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?                      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>
Saturation Present?                        Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>
(includes capillary fringe)	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>	
<b>Remarks:</b>	



VEGETATION -- Use scientific names of plants.

Sampling Point: W-BAK-09 PSS-1

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum (Plot size: 30 ft )</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">Total % Cover of:</th> <th style="width: 25%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">90</td> <td style="text-align: center;">x 1 = 90</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">10</td> <td style="text-align: center;">x 2 = 20</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">35</td> <td style="text-align: center;">x 3 = 105</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">20</td> <td style="text-align: center;">x 4 = 80</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 5 = 0</td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;">155</td> <td style="text-align: center;">(A) 295 (B)</td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.9</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Total % Cover of:	Multiply By:	OBL species	90	x 1 = 90	FACW species	10	x 2 = 20	FAC species	35	x 3 = 105	FACU species	20	x 4 = 80	UPL species	0	x 5 = 0	Column Totals	155	(A) 295 (B)	Prevalence Index = B/A =		<u>1.9</u>
	Total % Cover of:	Multiply By:																										
OBL species	90	x 1 = 90																										
FACW species	10	x 2 = 20																										
FAC species	35	x 3 = 105																										
FACU species	20	x 4 = 80																										
UPL species	0	x 5 = 0																										
Column Totals	155	(A) 295 (B)																										
Prevalence Index = B/A =		<u>1.9</u>																										
1. <i>Pinus strobus</i>	10	Yes	FACU																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
10 = Total Cover																												
<b>Sapling/Shrub Stratum (Plot size: 15 ft )</b>																												
1. <i>Acer rubrum</i>	35	Yes	FAC																									
2. <i>Kalmia latifolia</i>	10	Yes	FACU																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
45 = Total Cover																												
<b>Herb Stratum (Plot size: 5 ft )</b>																												
1. <i>Juncus effusus</i>	70	Yes	OBL																									
2. <i>Schoenoplectus tabernaemontani</i>	20	Yes	OBL																									
3. <i>Coptis trifolia</i>	10	No	FACW																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
100 = Total Cover																												
<b>Woody Vine Stratum (Plot size: 30 ft )</b>																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
0 = Total Cover																												
Remarks: (Include photo numbers here or on a separate sheet.)																												



Photo of Sample Plot  
North



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Baker City/County: Shutesbury, Franklin Sampling Date: 2020-April-15  
 Applicant/Owner: W.D. Cows State: MA Sampling Point: W-MJR-09\_UPL-1  
 Investigator(s): Matt Regan, Molly Lennon Section, Township, Range: \_\_\_\_\_  
 Landform(hillslope,terrace,etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0 to 1  
 Subregion(LRRorMLRA): LRR R Lat: 42.4236258818 Long: -72.4283759203 Datum: WGS84  
 Soil Map Unit Name: Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks: (Explain alternative procedures here or in a separate report)</b>			
Coverttype is UPL. Cleared for timber.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>	
<b>Remarks:</b>	

VEGETATION -- Use scientific names of plants.

Sampling Point: W-MJR-09\_UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum (Plot size: <u>30 ft</u> )</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9</u> (A/B)
1. <i>Pinus strobus</i>	40	Yes	FACU	
2. <i>Not Listed Plant</i>	10	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			50 = Total Cover	
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>				
1. <i>Not Listed Plant</i>	10	Yes	FAC	
2. <i>Acer rubrum</i>	10	Yes	FAC	
3. <i>Kalmia angustifolia</i>	10	Yes	FAC	
4. <i>Pinus strobus</i>	10	Yes	FACU	
5. <i>Quercus rubra</i>	0	No	FACU	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			40 = Total Cover	
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>				
1. <i>Kalmia latifolia</i>	40	Yes	FACU	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
			40 = Total Cover	
<b>Woody Vine Stratum (Plot size: <u>30 ft</u> )</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
			0 = Total Cover	

<b>Prevalence Index worksheet:</b>	
Total % Cover of:	Multiply By:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>0</u> x 2 = <u>0</u>
FAC species	<u>30</u> x 3 = <u>90</u>
FACU species	<u>90</u> x 4 = <u>360</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals	<u>120</u> (A) <u>450</u> (B)
Prevalence Index = B/A = <u>3.8</u>	

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1- Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is > 50%

\_\_\_ 3 - Prevalence Index is ≤ 3.0<sup>1</sup>

\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

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**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

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Hydrophytic Vegetation Present? Yes \_\_\_ No

Remarks: (Include photo numbers here or on a separate sheet.)

Unidentified plant species have been conservatively assumed to be wetland indicator plants and have been assigned an indicator status of FAC.

SOIL

Sampling Point: W-MJR-09\_UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 6	10YR 2/2	100					Sandy Loam	
6 - 18	10YR 5/6	100					Sandy Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

- Hydric Soil Indicators:**
- Histosol (A1)
  - Histic Epipedon (A2)
  - Black Histic (A3)
  - Hydrogen Sulfide (A4)
  - Stratified Layers (A5)
  - Depleted Below Dark Surface (A11)
  - Thick Dark Surface (A12)
  - Sandy Mucky Mineral (S1)
  - Sandy Gleyed Matrix (S4)
  - Sandy Redox (S5)
  - Stripped Matrix (S6)
  - Dark Surface (S7) (LRR R, MLRA 149B)
  - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
  - Thin Dark Surface (S9) (LRR R, MLRA 149B)
  - Loamy Mucky Mineral (F1) (LRR K, L)
  - Loamy Gleyed Matrix (F2)
  - Depleted Matrix (F3)
  - Redox Dark Surface (F6)
  - Depleted Dark Surface (F7)
  - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils<sup>3</sup>:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
  - Coast Prairie Redox (A16) (LRR K, L, R)
  - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
  - Dark Surface (S7) (LRR K, L)
  - Polyvalue Below Surface (S8) (LRR K, L)
  - Thin Dark Surface (S9) (LRR K, L)
  - Iron-Manganese Masses (F12) (LRR K, L, R)
  - Piedmont Floodplain Soils (F19) (MLRA 149B)
  - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
  - Red Parent Material (F21)
  - Very Shallow Dark Surface (TF12)
  - Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b>
Type: <u>None</u>	Yes ___ No <input checked="" type="checkbox"/>
Depth (inches): _____	

Remarks: