
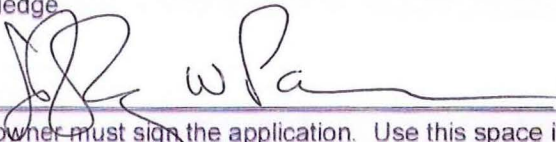



## Vermont Wetland Section Wetland Application Database Form (AFFIX TO THE FRONT OF THE APPLICATION)

<b>Applicant Name: Kael Hanak</b>		<b>Representative Name: Jeffrey Parsons</b>	
<b>Town where project is located: Troy</b>		<b>County: Orleans</b>	
<b>Project Location Description: 6301 River Road, Troy</b> <i>911 Street Address or direction from nearest intersection</i>			
<b>Project Summary: Driveway, 1 house, 1 cabin</b>			
<b>Permit Type Requested</b> (check all that apply)			
<input type="checkbox"/> Vermont General Permit Coverage		<input type="checkbox"/> Wetland Determination	
		<input checked="" type="checkbox"/> Vermont Wetland Permit	
<b>Impact Calculations:</b> Total up proposed impacts from wetland tables listed below			
Total Wetland Impact		Total Buffer Zone Impact	
1582 square feet (s.f.)		7955 square feet (s.f.)	
Total Wetland Clearing (qualified linear projects only)		Total Buffer Zone Clearing (qualified linear projects only)	
square feet (s.f.)		square feet (s.f.)	
<b>Permit Fees: Make check payable to - State of Vermont</b>			
Wetland Impact Fee: (\$0.75/sf)		Administrative Fee:	
\$1,186.50		\$120	
Buffer Impact Fee: (\$0.25/sf)		Total Check Amount:	
\$1,988.75		\$3,295.25	
Clearing Fee: (\$0.25/sf)		\$	
<b>Existing Land Use Type:</b> (check all that apply)			
<input checked="" type="checkbox"/> Forestry		<input type="checkbox"/> Residential (Subdivision)	
<input type="checkbox"/> Agriculture		<input type="checkbox"/> Industrial/ commercial	
<input type="checkbox"/> Transportation		<input type="checkbox"/> Residential (Single Family)	
<input type="checkbox"/> Parks/Rec/Trail		<input type="checkbox"/> Institutional	
		<input type="checkbox"/> Undeveloped	
<b>Proposed Land Use Type:</b> (check all that apply)			
<input checked="" type="checkbox"/> Forestry		<input type="checkbox"/> Residential (Subdivision)	
<input type="checkbox"/> Agriculture		<input type="checkbox"/> Industrial/ commercial	
<input type="checkbox"/> Transportation		<input type="checkbox"/> Residential (Single Family)	
<input type="checkbox"/> Parks/Rec/Trail		<input checked="" type="checkbox"/> Residential (Single Family)	
		<input type="checkbox"/> Institutional	
		<input type="checkbox"/> No Change	
<b>Proposed Impact Type:</b> (check all that apply)			
<input checked="" type="checkbox"/> Driveway		<input type="checkbox"/> Buildings	
<input type="checkbox"/> Road		<input type="checkbox"/> Utilities	
<input type="checkbox"/> Parks/Path		<input type="checkbox"/> Parking	
<input type="checkbox"/> Agriculture		<input type="checkbox"/> Septic/Well	
<input type="checkbox"/> Pond		<input type="checkbox"/> Stormwater	
<input type="checkbox"/> Lawn			
<input type="checkbox"/> Dry Hydrant		<input type="checkbox"/> Beaver dam alteration	
<input type="checkbox"/> Silviculture		<input type="checkbox"/> Aesthetics	
		<input type="checkbox"/> Other	
		<input type="checkbox"/> No Impact	
<b>Wetland 1: A</b> (Label using Wetland ID from application if applicable, use supplemental sheets if more than one wetland is being impacted)			
Location: <b>River Road</b>			
Wetland Type: <b>PEM/PFO - Emergent aWL</b> Size Class : <b>1-5 acres</b>			
<b>Proposed Alterations</b>			
<b>Wetland Alteration:</b>		<b>Buffer Zone Alteration:</b>	
<b>Wetland Alteration Type</b> (check all that apply)			
Wetland Fill: 1582 s.f.		<input type="checkbox"/> Dredge	
Temporary: 1277 s.f.		<input type="checkbox"/> Drain	
Permanent: 305 s.f.		Temporary: 2660 s.f.	
		<input type="checkbox"/> Cut Vegetation	
Permanent: 5295 s.f.		Permanent: 5295 s.f.	
		<input checked="" type="checkbox"/> Trench/Fill	
		<input type="checkbox"/> Stormwater	
		<input type="checkbox"/> Other	
<b>Mitigation</b>			
<b>Avoidance and Minimization</b> (s.f. of wetland NOT impacted):			
Wetland: majority s.f.		Buffer Zone majority s.f.	
<b>Wetland Mitigation: (s.f. Gained)</b>			
Restoration s.f.		Enhancement s.f.	
Creation s.f.		Conservation s.f.	
<b>Reason for Mitigation:</b>			
<input type="checkbox"/> Correction of Violation		<input type="checkbox"/> Mitigation to offset permit impacts	
		<input type="checkbox"/> Voluntary	

## Vermont Wetland Permit Application/Determination Petition

QUESTION	INSTRUCTIONS AND APPLICANT ANSWER	STAFF NOTE
1. Applicant	If the applicant is someone other than the landowner, the landowner information must also be included below.	
1.1. Applicant Name	Kael Hanak	
1.2. Applicant Address	PO Box #875 Tumbler Ridge, British Columbia	
1.3. Applicant Phone Number	1-250-257-6598 Canada V0C 2W0	
1.4. Applicant Email	kaelhanak77@hotmail.com	
1.5. Applicant Signature (original signature required)	By signing this application you are certifying that all the information contained within is true, accurate, and complete to the best of your knowledge.  <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <input checked="" type="checkbox"/>  </div> <div style="border-left: 1px solid black; padding-left: 10px;">                     Date: 6-29-2015                 </div> </div>	
2. Representative	Consultant, engineer, or other representative that is responsible for filling out this application, if other than the applicant or landowner	
2.1. Representative Name	Jeff Parsons	
2.2. Representative Address	PO Box 34, Lowell, Vermont 05847	
2.3. Representative Phone Number	9027442043 602	
2.4. Applicant Email	jeff@arrowwoodvt.com	
2.5. Representative Signature (original signature required)	By signing this application you are certifying that all the information contained within is true, accurate, and complete to the best of your knowledge.  <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <input checked="" type="checkbox"/>  </div> <div style="border-left: 1px solid black; padding-left: 10px;">                     Date: 6-29-2015                 </div> </div>	
3. Landowner	Landowner must sign the application. Use this space if landowner is different from the applicant	
3.1. Landowner Name		
3.2. Landowner Address		
3.3. Landowner Phone Number		
3.4. Landowner Email		
3.5. Landowner Easement	Attach copies of any easements, agreements or other documents conveying permission, and agreement with the landowner stating who will be responsible for meeting the terms and conditions of the permit. List the attachment for this information in this section.	
3.6. Landowner Signature (original signature required)	By signing this application you are certifying that all the information contained within is true, accurate, and complete to the best of your knowledge.  <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <input checked="" type="checkbox"/>  </div> <div style="border-left: 1px solid black; padding-left: 10px;">                     Date: 6-29-2015                 </div> </div>	
4. Location of Wetland and Project	Location description should include the road the wetland is located on, the compass direction of the wetland in relation to the road, 911 street address if available, and any other distinguishing geographic features. To the East of River Road in Troy, Vermont. Approximately 1.3 miles north of Route 100.	



## Vermont Wetland Permit Application/Determination Petition

QUESTION	INSTRUCTIONS AND APPLICANT ANSWER	STAFF NOTE
1. Applicant	If the applicant is someone other than the landowner, the landowner information must also be included below.	
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1.2. Applicant Address		
1.3. Applicant Phone Number		
1.4. Applicant Email		
1.5. Applicant Signature (original signature required)	<p>By signing this application you are certifying that all the information contained within is true, accurate, and complete to the best of your knowledge.</p> <div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 5px;"> <span style="border-bottom: 1px solid black; width: 70%; margin-bottom: 5px;">X _____</span> <span style="border-bottom: 1px solid black; width: 25%; margin-bottom: 5px;">Date: _____</span> </div>	
2. Representative	Consultant, engineer, or other representative that is responsible for filling out this application, if other than the applicant or landowner	
2.1. Representative Name	Jeff Parsons	
2.2. Representative Address	PO Box 34, Lowell, Vermont 05847	
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4. Location of Wetland and Project	<p>Location description should include the road the wetland is located on, the compass direction of the wetland in relation to the road, 911 street address if available, and any other distinguishing geographic features.</p> <p>To the East of River Road in Troy, Vermont. Approximately 1.3 miles north of Route 100.</p>	

5. Site Visit Date and Attendees	Date of visit with District Wetlands Ecologist 5/2014	List people present for site visits including Ecologist, landowner, and representatives. Shannon Morisson, Matt Houghton	
6. Wetland Classification	The wetland is a Class II wetland because (Choose one): The wetland meets the presumption of significance		
7. Description of Entire Wetland or Wetland Complex	Answer the following questions regarding the entire wetland or wetland complex. A wetland complex is generally defined as two or more wetland types that are contiguous and interrelated. Specific questions about the wetland in the project area will follow.		
7.1. Size of Wetland Complex in Acres	Can be obtained from the Environmental Interest Locator Map for mapped wetlands 2-3 acres		
7.2. Natural Community Types Present	List all wetland types in the wetland or wetland complex and their abundance or relative abundance. For example: 50 acres of softwood forested swamp; or 30% scrub swamp, 70% emergent wetland Wetland A on Site Plan: Scrub swamp 70%, Softwood forested swamp 30% Wetland B (near Missisquoi River on Supplemental Wetland Form) Wetland C 100% emergent marsh (spotted touch me not)		
7.3. Landscape Position	Where is the wetland located on the landscape? Examples: bottom of a basin, edge of a stream, shore of a lake, etc. Wetland A Relatively isolated, very small stream present, Wetland B near Missisquoi River, Wetland C on small stream draining Wetland A		
7.4. Wetland Hydrology	Describe the main source of wetland hydrology for the wetland complex. List any river, streams, lakes and ponds.  Very small stream (5-8 inches) present at the eastern extreme edge of wetland. During most observations of the site, the stream is 1-3 inches in size. Include answers to the following where appropriate:		
7.4.1. Direction of flow	For example: stream flows from north to south through the wetland complex. East towards the Missisquoi River		
7.4.2. Influence of hydrology on wetland complex	For example: The river provides flood water to the wetland in the spring.  Minor, stream really only present at point where it exits wetland.		
7.4.3. Relation to the project area	Distance between the project area and any nearby surface waters. Missisquoi River is located 150 feet to the east.		
7.4.4. Hydroperiod	Discuss frequency and duration of flooding, ponding, and/or soil saturation. Seasonally saturated.		
7.5. Surrounding Landuse of the Wetland Complex	For example: rural residential and forested; agricultural and undeveloped, Agricultural, forested, rural residential		
7.6. Relation to Other Nearby Wetlands	Provide any information on wetlands or wetland complexes that are close enough to contribute to the overall function of the wetland in question. This wetland is well above the Missisquoi River and it's wetlands and it most likely does not act, to any significant degree, as a complex with these wetlands.		
7.7. Pre-project Cumulative Impacts to the Wetland	Identify any cumulative ongoing impacts outside of the project that may influence the wetland. Examples include but are not limited to wetland encroachments off the subject property, land management in or surrounding the wetland, or development that influences hydrology or water quality. A flat grassed area near the northern loop of the driveway and close to River Road was within the buffer of the wetland previous to the Hanak's purchase of the property.		
8. Description of Subject Wetland	Subject Wetland is defined as the area of wetland in the project area, but not limited to the portion of the wetland to be directly impacted by the project. For the purposes of this application, the subject wetland should encompass any portion of the larger wetland or wetland complex that could be directly or indirectly impacted by the project, as defined by hydrology, vegetation and/or		

	physical characteristics.	
8.1. Context of Subject Wetland	Describe where the subject wetland is in the context of the larger wetland or wetland complex described above. The subject wetland A has buffer and wetland impacts in several areas (see site plan)	
8.2. Wetland Landuse	For example: mowed lawn; old field; naturally vegetated. Describe any previous and ongoing disturbance in the subject wetland. Lawn within the wetland buffer.	
8.3. Wetland Vegetation	List dominant wetland community type and associated dominant plant species. There are 3 wetlands involved with this project: Wetland A (which includes most the impact areas) and Wetland B (Missisquoi River wetland), and Wetland C.  Wetland A: Speckled alder swamp, Balsam Fir-Red Maple swamp Wetland B: See Supplemental Wetland Form Wetland C-spotted-touch-me-not seepage wetland	
8.4. Wetland Soils	Use USDA NRCS information where possible and use the ACOE Delineation Manual soil description Moosilauke very fine sandy loam	
8.5. Wetland Hydrology	Use descriptions from the ACOE Delineation Manual. Seasonally saturated	
8.6. Buffer Zone	Describe the buffer zone of the subject wetland including:	
8.6.1. General landuse	For example: mowed road shoulder; forested; old field; paved road and residential lawns etc. Describe any previous and ongoing disturbance in the buffer zone. Lawn, roadside, forest	
8.6.2. Buffer vegetation	List community type and dominant plant species Forest, lawn	
8.6.3. Buffer soils	Use USDA NRCS information where possible, and the ACOE Delineation Manual soil description Mossilauke very fine sandy loam	

<b>9. Wetland Determination</b>	If the application involves a wetland determination please answer the following. <b>If not, skip to Section 10.</b>	
9.1. Reason for Petition	Please choose one from the dropdown menu:  Add a Section 4.6 presumed wetland to the VSWI map	
9.2. Previous Decisions	Please list all determinations and decisions, if any, issued by the Secretary, Panel or former Water Resources Board, pertaining to the wetland or buffer at issue:	
9.3. Narrative	Please provide any narrative to support the petition for a wetland determination here. This section is not required for petitions to add a Section 4.6 presumed wetland to the VSWI map, but is required for all other petitions.	

**If the application is only for a Wetland Determination only, skip to Section 13**

10. Project Description		
10.1. Overall Project	Description of the project. For example: six-lot residential subdivision; expansion of an existing commercial building, access drive to a single family residence.	

10.2. Project Purpose	For example: To construct a residential subdivision, upgrade existing road to improve access, extend a trail system To provide access to 1 house and 1 cabin.									
10.3. Acres Owned by Applicant	Acreage of subject property. 5.8 acres									
10.4. Acres Involved in the Project	Acreage of area involved in the project. 1-2 acres									
11. Project Details	Provide details regarding specific impacts to the wetland and buffer zone									
11.1. Specific Impacts to Wetland and Buffer Zone	List portions of the project that will specifically impact the wetland or buffer zone. The half-circle driveway; and part of the access road to Missisquoi River will impact the wetland and buffer zone.									
11.2. Dimension Details	Square footage of buildings, dimension of roads including fill footprint. Access roads are 10-11 feet wide.									
11.3. Bridges and Culverts	Culvert circumference, length, placement and shapes, or bridge details. Areas where culverts did occur are being restored (fill removed). A small bridge will occur across the small drainage where Wetland A drains east to the Missisquoi River.									
11.4. Construction Sequence	Describe any details pertaining to the worked planned in the wetland and buffer in terms of sequence or phasing that is relevant									
11.5. Stormwater Design	List any stormwater permits obtained or applied for. Describe any stormwater and/or erosion controls proposed to prevent discharges to the wetland and buffer zone. Any area restored will have silt fences placed in areas where erosio may occur.									
11.6. Permanent Demarcation of Limits of Impact	Describe any plantings, fencing, signage, or other memorialization that provides permanent on-the-ground boundaries for the limits of disturbance for ongoing uses.									
12. Wetland and Buffer Zone Impacts										
12.1. Wetland Impacts	<p>Summarize the square footage of impact in the appropriate category. If more than one wetland is impacted, provide that information and use the supplemental wetland sheets.</p> <table border="1" data-bbox="560 1528 1385 1661"> <tr> <td colspan="2"><b>Totals</b></td> </tr> <tr> <td>Wetland Fill</td> <td>305 s.f.</td> </tr> <tr> <td>Temporary Wetland Impact</td> <td>1277 s.f.</td> </tr> <tr> <td>Other Permanent Wetland Impact</td> <td>s.f.</td> </tr> </table> <p>Describe in detail the proposed impact.</p> <p>1277 is as follows: The 1273 sq. ft. is the wetland area impacted by the circular driveway. This area was restored in the fall and spring of 2014-15. The 4 sq. ft. of impact is the area of the existing Missisquoi River access road fill that will have fill removed in the summer/fall of 2015 (as part of this permit, temporary impact) 305 sq. ft. is as follows: 160 sq. ft. is the open water area of the wetland impacted by this project. The 145 sq. ft of perm impact is the impact of the existing driveway which will remain in post-construction condition (bridge).</p>	<b>Totals</b>		Wetland Fill	305 s.f.	Temporary Wetland Impact	1277 s.f.	Other Permanent Wetland Impact	s.f.	
<b>Totals</b>										
Wetland Fill	305 s.f.									
Temporary Wetland Impact	1277 s.f.									
Other Permanent Wetland Impact	s.f.									

<p><b>12.2. Buffer Zone Impacts</b></p>	<p>Summarize the square footage of impact in the appropriate category. If more than one wetland is impacted, provide that information and use the supplemental wetland sheets.</p> <table border="1" data-bbox="560 283 1385 380"> <tr> <td colspan="2"><b>Totals</b></td> </tr> <tr> <td>Temporary Buffer Impact</td> <td>2660 s.f.</td> </tr> <tr> <td>Permanent Buffer Impact</td> <td>5295 s.f.</td> </tr> </table> <p>Describe in detail the proposed impact.</p> <p>Most of the impact areas are roads. Most areas of fill are being removed.</p> <p>The Permanent Buffer Impact areas include the following: 1157 sq. ft. (Wetland B); 338, 266, 1533, 1198, 803 sq. ft. impacts to Wetland A.</p> <p>Temporary Buffer Impacts are as follows: 636, 851, 557 Wetland A; and 616 Wetland B.</p>	<b>Totals</b>		Temporary Buffer Impact	2660 s.f.	Permanent Buffer Impact	5295 s.f.	
<b>Totals</b>								
Temporary Buffer Impact	2660 s.f.							
Permanent Buffer Impact	5295 s.f.							
<p><b>12.3. Cumulative Impacts</b></p>	<p>List any potential cumulative or ongoing, direct and indirect impacts on the functions of the wetland that could result from the proposed project.</p> <p>None</p>							
<p><b>12.4. Avoidance and Minimization</b></p>	<p>Please refer to Section 9.5b of the rules on Mitigation Sequencing for this section.</p>							
<p><b>12.4.1. Avoidance</b></p>	<p>Can the proposed activity be practicably located outside the wetland/buffer zone, or on another site owned or controlled by the applicant or reasonably available to satisfy the basic project purpose? If not, indicate why. This answer should include any examination of alternatives that you have explored including using other properties, requesting easements, and altering the project design.</p> <p>The project avoids wetlands as much as possible. Large areas of the access road and fill were removed in the spring of 2015. Additional areas of fill will be removed upon the issuance of this permit (summer/fall 2015).</p>							
<p><b>12.4.2. Minimization</b></p>	<p>If the proposed activity cannot practicably be located outside the wetland/buffer zone, have all practicable measures have been taken to avoid adverse impacts on protected functions? Please include any information on on-site alternatives that have been examined; minimizing the size and scope of the project to avoid impacts; or relocating portions of the project to avoid impacts</p> <p>Areas of the access road have been removed and replanted and reseeded in wetland plants.</p>							
<p><b>12.4.3. Mitigation</b></p>	<p>If avoidance of adverse effects on protected functions cannot be practically achieved, has the proposed activity has been planned to minimize adverse impacts on the protected functions and a plan has been developed for the prompt restoration of any adverse impacts on protected functions? Include any information on best management practices to be used for the project both for the initial construction and ongoing use. Also include any proposed restoration of temporary impacts, previously disturbed wetland or buffer zones or proposed conservation that are being used to offset the proposed impacts.</p> <p>See restoration plans and maps.</p>							
<p><b>12.4.4. Compensation</b></p>	<p>Please refer to Section 9.5c of the rules for compensation, which is appropriate when the project will result in an undue adverse impact. If compensation is proposed please include a summary here.</p> <p>N.A.</p>							

13. Supporting materials	Where appropriate list the accompanying material by title, author, date and last revision date. Submit these documents and plans with the application.					
13.1. Location map	Provide a project location map that is 8 ½" x 11" and reproducible in black and white. An Environmental Interest Locator Map is appropriate using the USGS topography map base layer, roads, and VSWI wetlands at minimum. See location map					
13.2. Site Plans	List by title, author, date and last revision date. Plans should include wetland delineation and buffer zones, limits of disturbance, erosion controls, building envelopes and permanent memorialization. Refer to Site Plans dated 6/23/2015.					
13.3. ACOE Delineation Forms	List by author, location, and date. Required only for Individual Permits. Jeff Parsons/both wetland A & B and adjacent uplands 8/20/2014					
13.4. Other Supporting Documents	Provide any other documentation that supports the application. List photographs; easements; agreements; may include a GIS-compatible wetland submittal for determinations; etc.					
13.5. List of Abutters (Neighbors with land adjoining wetland or buffer zone)	Attach list of names and mailing addresses or submit as word mailing document.					
13.5.1. Newspaper Notification	If choosing the option to fulfill the notice requirement with a newspaper notice, list the newspaper to be used here. A list of names and addresses for immediately adjacent landowners (500 foot radius) of the project area is required for the List of Abutters. <b>***NOTE: The applicant will be billed directly by the newspaper you list here. Use of newspaper notification may extend the notice period, depending on when the notice posts in the newspaper.</b>					
14. Check Which Functions are Present in the Subject Wetland and in the Wetland Complex.	<b>Wetland Function Summary:</b> (if more than one wetland use supplemental wetland sheets)					
	Functions & Values	Subject Wetland	Wetland Complex	Functions & Values	Subject Wetland	Wetland Complex
	Flood/Storm Storage	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RTE Species	<input type="checkbox"/>	<input type="checkbox"/>
	Surface & Groundwater Protection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Education & Research	<input type="checkbox"/>	<input type="checkbox"/>
	Fish Habitat	<input type="checkbox"/>	<input type="checkbox"/>	Recreation/Economic	<input type="checkbox"/>	<input type="checkbox"/>
	Wildlife Habitat	<input type="checkbox"/>	<input type="checkbox"/>	Open Space/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>
Exemplary Natural Community	<input type="checkbox"/>	<input type="checkbox"/>	Erosion Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
15. Coverage under Vermont General Wetland Permit	<p><b>If applying for an Individual Vermont Wetland Permit or Determination, please proceed to number 16 and answer the remaining application questions.</b></p> <p><b>If applying for Coverage under the Vermont General Wetland Permit, please complete question 15.1 prior to submitting application.</b></p>					
15.1. VWP Vermont General	If applying for coverage under the Vermont General Wetland Permit, please					



<p>Permit eligibility checklist</p>	<p>verify the following to complete the application:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The activity qualifies as an eligible activity for coverage under the Vermont General Wetland Permit</li> <li><input type="checkbox"/> The proposed project will meet the conditions applicable to the proposed project in the Vermont Wetland General Permit</li> <li><input type="checkbox"/> The activity does not qualify as an Allowed Use under Section 6 of the Vermont Wetland Rules.</li> <li><input type="checkbox"/> The activity will not result in an undue adverse impact on protected wetland functions and values, nor does it need additional conditions to protect functions and values.</li> <li><input type="checkbox"/> All impacts have been avoided and minimized to the greatest extent possible.</li> <li><input type="checkbox"/> The wetland complex is not significant for Function 5.5 Exemplary Wetland Natural Community or 5.6 Rare, Threatened and Endangered Species Habitat.</li> <li><input type="checkbox"/> The activity is not located in or adjacent to a vernal pool, fen, or bog.</li> <li><input type="checkbox"/> The wetland is not at or above 2,500' in elevation (headwaters wetland).</li> <li><input type="checkbox"/> The project is not located in a Class I wetland or associated buffer zone.</li> <li><input type="checkbox"/> The activity is not an as-built project that constitutes a violation of the Vermont Wetland Rules.</li> </ul>	
<p><b>Stop here if applying for Coverage under the Vermont General Wetland Permit</b></p>		

<p><b>Complete the following Functions and Values checklist if applying for an Individual Wetland Permit and/or a Wetland Determination</b></p>		
<p>Functions and Values</p>	<p>For each Function and Value, first evaluate the entire wetland or <b>wetland complex</b> and check all that apply. Secondly, evaluate how the wetland in the project area contributes to that function. Thirdly explain how the project will not result in adverse impacts to this function. Include any information on specific avoidance and minimization measures.</p> <p>If more than one wetland complex is involved, use the Supplemental Wetland Forms.</p>	
<p>16. Storage for Flood Water and Storm Runoff</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Constricted outlet or no outlet and an unconstricted inlet.</li> <li><input checked="" type="checkbox"/> Physical space for floodwater expansion and dense, persistent, emergent vegetation or dense woody vegetation that slows down flood waters or stormwater runoff during peak flows and facilitates water removal by evaporation and transpiration.</li> <li><input type="checkbox"/> If a stream is present, its course is sinuous and there is sufficient woody vegetation to intercept surface flows in the portion of the wetland that floods.</li> <li><input type="checkbox"/> Physical evidence of seasonal flooding or ponding such as water stained leaves, water marks on trees, drift rows,</li> </ul> </li> </ul>	

	<p>debris deposits, or standing water.</p> <p><input type="checkbox"/> Hydrologic or hydraulic study indicates wetland attenuates flooding.</p> <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.</p> <p><input type="checkbox"/> Significant flood storage capacity upstream of the wetland, and the wetland in question provides this function at a negligible level in comparison to upstream storage (unless the upstream storage is temporary such as a beaver impoundment).</p> <p><input type="checkbox"/> Wetland is contiguous to a major lake or pond that provides storage benefits independently of the wetland.</p> <p><input type="checkbox"/> Wetland's storage capacity is created primarily by recent beaver dams or other temporary structures.</p> <p><input type="checkbox"/> Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.</p> <p><input type="checkbox"/> History of downstream flood damage to public or private property.</p> <p><input type="checkbox"/> Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by a loss or reduction of the water storage function.</p> <p><input type="checkbox"/> 1. Developed public or private property.</p> <p><input type="checkbox"/> 2. Stream banks susceptible to scouring and erosion.</p> <p><input type="checkbox"/> 3. Important habitat for aquatic life.</p> <p><input type="checkbox"/> The wetland is large in size and naturally vegetated.</p> <p><input type="checkbox"/> Any of the following conditions present upstream of the wetland may indicate a large volume of runoff may reach the wetland.</p> <p><input type="checkbox"/> 1. A large amount of impervious surface in urbanized areas.</p> <p><input type="checkbox"/> 2. Relatively impervious soils.</p> <p><input type="checkbox"/> 3. Steep slopes in the adjacent areas.</p>	
<p>16.1.Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The remaining wetland impact area (after restoration) is 145 sq. ft. and is located at the outlet of the wetland (adjacent to the culvert which is being re-done and a bridge built), is very small, and may not have fulfilled this function</p>	

	anyways.	
<p>16.2.Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The buffer impacts are out of the area where wetland expansion could occur, and the wetland impact area will not affect this function (a bridge is being built in this area).</p>	
<p>17.Surface and Ground Water Protection</p>	<p><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Constricted or no outlets.</li> <li><input checked="" type="checkbox"/> Low water velocity through dense, persistent vegetation.</li> <li><input type="checkbox"/> Hydroperiod permanently flooded or saturated.</li> <li><input type="checkbox"/> Wetlands in depositional environments with persistent vegetation wider than 20 feet.</li> <li><input type="checkbox"/> Wetlands with persistent vegetation comprising a defined delta, island, bar or peninsula.</li> <li><input type="checkbox"/> Presence of seeps or springs.</li> <li><input checked="" type="checkbox"/> Wetland contains a high amount of microtopography that helps slow and filter surface water.</li> <li><input type="checkbox"/> Position in the landscape indicates the wetland is a headwaters area.</li> <li><input type="checkbox"/> Wetland is adjacent to surface waters.</li> <li><input type="checkbox"/> Wetland recharges a drinking water source.</li> <li><input type="checkbox"/> Water sampling indicates removal of pollutants or nutrients.</li> <li><input type="checkbox"/> Water sampling indicates retention of sediments or organic matter.</li> <li><input checked="" type="checkbox"/> Fine mineral soils and alkalinity not low.</li> <li><input type="checkbox"/> The wetland provides an obvious filter between surface water or ground water and land uses that may contribute point or nonpoint sources of sediments, toxic substances or nutrients to the wetland, such as: steep erodible slopes; row crops; dumps; areas of pesticide, herbicide or fertilizer application; feed lots; parking lots or heavily traveled road; and septic systems.</li> </ul> <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Presence of dead forest or shrub areas in sufficient amounts to result in diminished nutrient uptake.</li> <li><input type="checkbox"/> Presence of ditches or channels that confine water and restrict contact of water with vegetation.</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.</li> <li><input type="checkbox"/> Current use in the wetland results in disturbance that compromises this function.</li> <li><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.             <ul style="list-style-type: none"> <li><input type="checkbox"/> The wetland is adjacent to a well head or source protection area, and provides ground water recharge.</li> <li><input type="checkbox"/> The wetland provides flows to Class A surface waters.</li> <li><input type="checkbox"/> The wetland contributes to the protection or improvement of water quality of any impaired waters.</li> <li><input type="checkbox"/> The wetland is large in size and naturally vegetated.</li> </ul> </li> </ul>	
<p>17.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The wetland buffer area affected is stabilized with no erosion and outside of flooded areas and will not affect this function. The impact area and bridge helps create any surface water settling that would facilitate this function. Streamflow for most of the year is very limited -- if present at all.</p>	
<p>17.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>This function should not be negatively impacted by this project.</p>	
<p>18. Fish Habitat</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Contains woody vegetation that overhangs the banks of a stream or river and provides any of the following: shading that controls summer water temperature; cover including refuges created by overhanging branches or undercut banks; source of terrestrial insects as fish food; or streambank stability.</li> <li><input type="checkbox"/> Provides spawning, nursery, feeding or cover habitat for fish (documented or professionally judged). Common habitat includes deep marsh and shallow marsh associates with lakes and streams, and seasonally flooded wetlands associated with streams and rivers.</li> <li><input type="checkbox"/> Documented or professionally judged spawning habitat for northern pike.</li> <li><input type="checkbox"/> Provides cold spring discharge that lowers the temperature of receiving waters and creates summer habitat for salmonoid species.</li> </ul> </li> <li><input checked="" type="checkbox"/> The wetland is located along a tributary that does not support fish, but contributes to a larger body of water that does support fish. The tributary supports downstream fish by providing cooler water, and food sources.</li> </ul>	
<p>18.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p>	

	<p>The buffer vegetation providing the shading will remain in place over 99% of the area in question.</p>	
<p>18.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>There will still be forested cover close enough to the small stream to maintain cool water temperatures.</p>	
<p>19. Wildlife Habitat</p>	<p><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Provides resting, feeding staging or roosting habitat to support waterfowl migration, and feeding habitat for wading birds. Good habitats for these species include open water wetlands.</li> <li><input type="checkbox"/> Habitat to support one or more breeding pairs or broods of waterfowl including all species of ducks, geese, and swans. Good habitats for these species include open water habitats adjacent shallow marsh, deep marsh, shrub wetland, forested wetland, or naturally vegetated buffer zone.</li> <li><input type="checkbox"/> Provides a nest site, a buffer for a nest site or feeding habitat for wading birds including but not limited to: great blue heron, black-crowned night heron, green-backed heron, cattle egret, or snowy egret. Good habitats for these species include open water or deep marsh adjacent to forested wetlands, or standing dead trees.</li> <li><input type="checkbox"/> Supports or has the habitat to support one or more breeding pairs of any migratory bird that requires wetland habitat for breeding, nesting, rearing of young, feeding, staging roosting, or migration, including: Virginia rail, common snipe, marsh wren, American bittern, northern water thrush, northern harrier, spruce grouse, Cerulean warbler, and common loon.</li> <li><input type="checkbox"/> Supports winter habitat for white-tailed deer. Good habitats for these species include softwood swamps. Evidence of use includes deer browsing, bark stripping, worn trails, or pellet piles.</li> <li><input type="checkbox"/> Provides important feeding habitat for black bear, bobcat, or moose based on an assessment of use. Good habitat for these types of species includes wetlands located in a forested mosaic.</li> <li><input type="checkbox"/> Has the habitat to support muskrat, otter or mink. Good habitats for these species include deep marshes, wetlands adjacent to bodies of water including lakes, ponds, rivers and streams.</li> <li><input type="checkbox"/> Supports an active beaver dam, one or more lodges, or evidence of use in two or more consecutive years by an adult beaver population.</li> <li><input type="checkbox"/> Provides the following habitats that support the reproduction of Uncommon Vermont amphibian species including:             <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. Wood Frog, Jefferson Salamander, Blue-spotted</li> </ul> </li> </ul>	

Salamander, or Spotted Salamander. Breeding habitat for these species includes vernal pools and small ponds.

- 2. Northern Dusky Salamander and the Spring Salamander. Habitat for these species includes headwater seeps, springs, and streams.
- 3. The Four-toed salamander; Fowler's Toad; Western or Boreal Chorus frog, or other amphibians found in Vermont of similar significance.
- Supports or has the habitat to support significant populations of Vermont amphibian species including, but not limited to Pickerel Frog, Northern Leopard Frog, Mink Frog, and others found in Vermont of similar significance. Good habitat for these types of species includes large marsh systems with open water components.
- Supports or has the habitat to support populations of uncommon Vermont reptile species including: Wood Turtle, Northern Map Turtle, Eastern Musk Turtle, Spotted Turtle, Spiny Softshell, Eastern Ribbonsnake, Northern Watersnake, and others found in Vermont of similar significance.
- Supports or has the habitat to support significant populations of Vermont reptile species, including Smooth Greensnake, DeKay's Brownsnake, or other more common wetland-associated species.
- Meets four or more of the following conditions indicative of wildlife habitat diversity:
  - 1. Three or more wetland vegetation classes (greater than 1/2 acre) present including but not limited to: open water contiguous to, but not necessarily part of, the wetland, deep marsh, shallow marsh, shrub swamp, forested swamp, fen, or bog;
  - 2. The dominant vegetation class is one of the following types: deep marsh, shallow marsh, shrub swamp or, forested swamp;
  - 3. Located adjacent to a lake, pond, river or stream;
  - 4. Fifty percent or more of surrounding habitat type is one or more of the following: forest, agricultural land, old field or open land;
  - 5. Emergent or woody vegetation occupies 26 to 75 percent of wetland, the rest is open water;
  - 6. One of the following:
    - i. hydrologically connected to other wetlands of different dominant classes or open water within 1 mile;
    - ii. hydrologically connected to other wetlands of same dominant class within 1/2 mile;
    - iii. within 1/4 mile of other wetlands of different

	<p style="text-align: center;">dominant classes or open water, but not hydrologically connected;</p> <p><input type="checkbox"/> Wetland or wetland complex is owned in whole or in part by state or federal government and managed for wildlife and habitat conservation; and</p> <p><input type="checkbox"/> Contains evidence that it is used by wetland dependent wildlife species.</p> <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.</p> <p><input type="checkbox"/> The wetland is small in size for its type and does not represent fugitive habitat in developed areas (vernal pools and seeps are generally small in size, so this does not apply).</p> <p><input type="checkbox"/> The surrounding land use is densely developed enough to limit use by wildlife species (with the exception of wetlands with open water habitat). Can be negated by evidence of use.</p> <p><input type="checkbox"/> The current use in the wetland results in frequent cutting, mowing or other disturbance.</p> <p><input type="checkbox"/> The wetland hydrology and character is at a drier end of the scale and does not support wetland dependent species.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.</p> <p><input type="checkbox"/> The wetland complex is large in size and high in quality.</p> <p><input type="checkbox"/> The habitat has the potential to support several species based on the assessment above.</p> <p><input type="checkbox"/> Wetland is associated with an important wildlife corridor.</p> <p><input type="checkbox"/> The wetland has been identified as a locally important wildlife habitat by an ANR Wildlife Biologist.</p>	
<p>19.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>This function is very low in this location. It is surrounded by open land, houses, and a road (River Road). In addition the stream is very small and would not support fish, mink or otter, or aquatic bird life. and the hydrological connection is likely seasonal only.</p>	
<p>19.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The addition of 1 seasonal cabin and a seasonal house should not disrupt wildlife habitat of a sensitive nature in the wetland. The 9-10 times I've been in the wetland there has been no sign of wetland dependent wildlife.</p>	
<p>20. Exemplary Wetland Natural Community</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p>	

	<p><input type="checkbox"/> Wetlands that are identified as high quality examples of Vermont’s natural community types recognized by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department, including rare types such as dwarf shrub bogs, rich fens, alpine peatlands, red maple-black gum swamps and the more common types including deep bulrush marshes, cattail marshes, northern white cedar swamps, spruce-fir-tamarack swamps, and red maple-black ash seepage swamps are automatically significant for this function.</p> <p>The wetland is also likely to be significant if any of the following conditions are met:</p> <p><input type="checkbox"/> Is an example of a wetland natural community type that has been identified and mapped by, or meets the ranking and mapping standards of, the Natural Heritage Information Project of the Vermont Fish and Wildlife Department.</p> <p><input type="checkbox"/> Contains ecological features that contribute to Vermont’s natural heritage, including, but not limited to:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Deep peat accumulation reflecting a long history of wetland formation;</li> <li><input type="checkbox"/> Forested wetlands displaying very old trees and other old growth characteristics;</li> <li><input type="checkbox"/> A wetland natural community that is at the edge of the normal range for that type;</li> <li><input type="checkbox"/> A wetland mosaic containing examples of several to many wetland community types; or</li> <li><input type="checkbox"/> A large wetland complex containing examples of several wetland community types.</li> </ul> <p>List species or communities of concern:</p>	
<p>20.1.Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The wetland does not convey this function.</p>	
<p>20.2.Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>N.A.</p>	
<p>21.Rare, Threatened, and Endangered Species Habitat</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p> <p><input type="checkbox"/> Wetlands that contain one or more species on the federal or state threatened or endangered lists, as well as species that are rare in Vermont, are automatically significant for this function.</p> <p>The wetland is also likely to be significant if any of the following apply:</p> <p><input type="checkbox"/> There is credible documentation that the wetland provides important habitat for any species on the federal or state</p>	



	<p>threatened or endangered species lists;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> There is credible documentation that threatened or endangered species have been present in past 10 years;</li> <li><input type="checkbox"/> There is credible documentation that the wetland provides important habitat for any species listed as rare in Vermont (S1 or S2 ranks), state historic (SH rank), or rare to uncommon globally (G1, G2, or G3 ranks) by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department;</li> <li><input type="checkbox"/> There is credible documentation that the wetland provides habitat for multiple uncommon species of plants or animals (S3 rank).</li> </ul> <p>List name of species and ranking:</p>	
<p>21.1.Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above The wetland does not convey this function. There are no listed state or federal endangered or threatened species listed by the Vermont Natural Heritage Program.</p>	
<p>21.2.Statement of no adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.</p>	
<p>22. Education and Research in Natural Sciences</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by or leased to a public entity dedicated to education or research.</li> <li><input type="checkbox"/> History of use for education or research.</li> <li><input type="checkbox"/> Has one or more characteristics making it valuable for education or research.</li> </ul> </li> </ul>	
<p>22.1.Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above The wetland does not convey this function.</p>	
<p>22.2.Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.</p>	
<p>23.Recreational Value and Economic Benefits</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Used for, or contributes to, recreational activities.</li> <li><input type="checkbox"/> Provides economic benefits.</li> <li><input type="checkbox"/> Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law.</li> <li><input type="checkbox"/> Used for harvesting of wild foods.</li> </ul> </li> </ul>	

	Comments:	
23.1. Subject Wetland	Please explain how the subject wetland contributes to the function listed above The wetland does not convey this function.	
23.2. Statement of no undue adverse impact	Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.	
24. Open Space and Aesthetics	<input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function. <ul style="list-style-type: none"> <li><input type="checkbox"/> Can be readily observed by the public; and                             <ul style="list-style-type: none"> <li><input type="checkbox"/> Possesses special or unique aesthetic qualities; or</li> <li><input type="checkbox"/> Has prominence as a distinct feature in the surrounding landscape;</li> </ul> </li> <li><input type="checkbox"/> Has been identified as important open space in a municipal, regional or state plan.</li> </ul> Comments:	
24.1. Subject Wetland	Please explain how the subject wetland contributes to the function listed above The wetland does not convey this function.	
24.2. Statement of no undue adverse impact	Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.	
25. Erosion Control through Binding and Stabilizing the Soil	<input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function. <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Erosive forces such as wave or current energy are present and any of the following are present as well:                             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Dense, persistent vegetation along a shoreline or stream bank that reduces an adjacent erosive force.</li> <li><input checked="" type="checkbox"/> Good interspersion of persistent emergent vegetation and water along course of water flow.</li> <li><input type="checkbox"/> Studies show that wetlands of similar size, vegetation type, and hydrology are important for erosion control.</li> </ul> </li> </ul> What type of erosive forces are present: <ul style="list-style-type: none"> <li><input type="checkbox"/> Lake fetch and waves</li> <li><input checked="" type="checkbox"/> High current velocities:</li> <li><input type="checkbox"/> Water level influenced by upstream impoundment</li> </ul> If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a	

	<p>moderate level.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.</p> <p><input type="checkbox"/> The stream is artificially channelized and/or lacks vegetation that contributes to controlling the erosive force.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.</p> <p><input type="checkbox"/> The stream contains high sinuosity.</p> <p><input type="checkbox"/> Has been identified through fluvial geomorphic assessment to be important in maintaining the natural condition of the stream or river corridor.</p>	
<p>25.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>At the wetland impact area the existing vegetation already and currently conveys this function.</p>	
<p>25.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>There will be no undue adverse impact to this function as a result of this project.</p>	

**All Applications Should be Mailed To:**

**Vermont Wetlands Program  
 Watershed Management Division  
 One National Life Drive, Main 2  
 Montpelier, VT 05620-3522**

**Staff To Complete**

<b>Wetland Project Number:</b>			
<b>Wetland Project Name:</b>		<b>DEC ID#:</b>	
<b>Date Application Received:</b>			
<b>Request for Information Date:</b>		<b>Information Received Date:</b>	
<b>Request for Information Date:</b>		<b>Information Received Date:</b>	
<b>Date Application Complete:</b>		<b>Distribution Complete Date:</b>	
<b>Notice Begin Date:</b>		<b>Notice End Date:</b>	
<b>Final Action Date:</b>		<b>Public Meeting Date:</b>	
<b>Check#</b>	<b>Check Amount</b>	<b>Date Check Received</b>	
<b>Check#</b>	<b>Check Amount</b>	<b>Date Check Received</b>	

## Vermont Wetland Section Supplemental Wetland Application Database Form

<b>Applicant Name: Kael Hanak</b>		<b>Representative Name: Jeff Parsons</b>	
<b>Existing Land Use Type:</b> (check all that apply)			
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Transportation	<input checked="" type="checkbox"/> Forestry	<input type="checkbox"/> Parks/Rec/Trail
		<input type="checkbox"/> Residential (Subdivision)	<input type="checkbox"/> Industrial/ commercial
		<input checked="" type="checkbox"/> Residential (Single Family)	<input type="checkbox"/> Institutional
		<input checked="" type="checkbox"/> Undeveloped	
<b>Proposed Land Use Type:</b> (check all that apply)			
<input type="checkbox"/> Agriculture	<input checked="" type="checkbox"/> Transportation	<input type="checkbox"/> Parks/Rec/Trail	<input type="checkbox"/> Residential (Subdivision)
		<input type="checkbox"/> Residential (Single Family)	<input type="checkbox"/> Industrial/ commercial
		<input type="checkbox"/> Institutional	<input type="checkbox"/> No Change
<b>Proposed Impact Type:</b> (check all that apply)			
<input checked="" type="checkbox"/> Driveway	<input type="checkbox"/> Road	<input type="checkbox"/> Buildings	<input type="checkbox"/> Utilities
<input type="checkbox"/> Dry Hydrant	<input type="checkbox"/> Beaver dam alteration	<input type="checkbox"/> Parks/Path	<input type="checkbox"/> Agriculture
		<input type="checkbox"/> Parking	<input type="checkbox"/> Septic/Well
		<input type="checkbox"/> Stormwater	<input type="checkbox"/> Pond
		<input type="checkbox"/> Lawn	<input type="checkbox"/> Other
		<input type="checkbox"/> No Impact	
<b>Wetland #: B</b> (Label using Wetland ID from application if applicable)		<b>Location: Access road to Missisquoi River</b>	
Wetland Type: <b>PEM/PSS/PFO</b>		WL Size Class : <b>1-5 acres</b>	
<b>Proposed Alterations</b>			
<b>Wetland Alteration:</b>		<b>Buffer Zone Alteration:</b>	
<b>Wetland Alteration Type</b> (check all that apply)			
Wetland Fill: 00s.f.	<input type="checkbox"/> Dredge	<input type="checkbox"/> Drain	
Temporary: 4s.f.	Temporary: 616 s.f.	<input type="checkbox"/> Cut Vegetation	
Permanent: 00s.f.	Permanent: 1157 s.f.	<input checked="" type="checkbox"/> Trench/Fill	
		<input type="checkbox"/> Stormwater	
		<input type="checkbox"/> Other	
<b>Mitigation</b>			
<b>Avoidance and Minimization</b> (s.f. of wetland NOT impacted):		Wetland: majority s.f.	Buffer Zone majority s.f.
<b>Wetland Mitigation: (s.f. Gained)</b>		<b>Buffer Zone Mitigation (s.f. Gained):</b>	
Restoration s.f.	Enhancement s.f.	Restoration s.f.	Enhancement s.f.
Creation s.f.	Conservation s.f.	Creation s.f.	Conservation s.f.
<b>Reason for Mitigation:</b>			
<input type="checkbox"/> Correction of Violation		<input type="checkbox"/> Mitigation to offset permit	
		<input type="checkbox"/> Voluntary impacts	

## Vermont Wetland Permit/Determination Application Supplement for Additional Wetlands

QUESTION	INSTRUCTIONS AND APPLICANT ANSWER	STAFF NOTE				
1.1. Applicant Name	Kael Hanak					
4. Location of Wetland and Project Wetland ID Name/No. B  <i>Wetland B</i>	Location description should include the road the wetland is located on, the compass direction of the wetland in relation to the road, 911 street address if available, and any other distinguishing geographic features.  East of River Road, approximately 1.3 miles north of Rte. 100					
5. Site Visit Date and Attendees	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Date of visit with District Wetlands Ecologist</td> <td style="width: 50%;">List people present for site visits including Ecologist, landowner, representatives.</td> </tr> <tr> <td>5/2014</td> <td>Shannon Morisson, Matt Houghton</td> </tr> </table>	Date of visit with District Wetlands Ecologist	List people present for site visits including Ecologist, landowner, representatives.	5/2014	Shannon Morisson, Matt Houghton	
Date of visit with District Wetlands Ecologist	List people present for site visits including Ecologist, landowner, representatives.					
5/2014	Shannon Morisson, Matt Houghton					
6. Wetland Classification	The wetland is a Class II wetland because (Choose one):  The wetland meets the presumption of significance					
7. Description of Entire Wetland or Wetland Complex	Answer the following questions regarding the entire wetland or wetland complex. A wetland complex is generally defined as two or more wetland types that are contiguous and interrelated. Specific questions about the wetland in the project area will follow.					
7.1. Size of Wetland Complex in Acres	Can be obtained from the Environmental Interest Locator Map for mapped wetlands  1-2 acre					
7.2. Natural Community Types Present	List all wetland types in the wetland or wetland complex and their abundance or relative abundance. For example: 50 acres of softwood forested swamp; or 30% scrub swamp, 70% emergent wetland  Wetland B: 70 % mixed forested (B fir, S alder) 30 % shallow marsh					
7.3. Landscape Position	Where is the wetland located on the landscape? Examples: bottom of a basin, edge of a stream, shore of a lake, etc.  Edge of Missisquoi River					
7.4. Wetland Hydrology	Describe the main source of wetland hydrology for the wetland complex. List any river, streams, lakes and ponds.  High seasonal groundwater, Adams Soils do not flood from Missisquoi River Include answers to the following where appropriate:					
7.4.1. Direction of flow	For example: stream flows from north to south through the wetland complex.  Missisquoi River flows north, wetland has no flow					
7.4.2. Influence of hydrology on wetland complex	For example: The river provides flood water to the wetland in the spring.  In Spring there is seasonal high water table					
7.4.3. Relation to the project area	Distance between the project area and any nearby surface waters.  25+ ft from fill to Missisquoi River					
7.4.4. Hydroperiod	Discuss frequency and duration of flooding, ponding, and/or soil saturation.  Soil is seasonally saturated					
7.5. Surrounding Landuse of the Wetland Complex	For example: rural residential and forested; agricultural and undeveloped,  River, forest, fields, rural residential There are other wetlands both upstream and downstream on the Missisquoi River.					
7.6. Relation to Other	Provide any information on wetlands or wetland complexes that are close					

Applicant name and town where project is located:

<p>Nearby Wetlands</p>	<p>enough to contribute to the overall function of the wetland in question.</p> <p>This wetland may serve as a complex with other Missisquoi River wetlands</p>	
<p>7.7. Pre-project Cumulative Impacts to the Wetland</p>	<p>Identify any cumulative ongoing impacts outside of the project that may influence the wetland. Examples include but are not limited to wetland encroachments off the subject property, land management in or surrounding the wetland, or development that influences hydrology or water quality.</p> <p>None.</p>	
<p>8. Description of Subject Wetland</p>	<p>Subject Wetland is defined as the area of wetland in the project area, but not limited to the portion of the wetland to be directly impacted by the project. For the purposes of this application, the subject wetland should encompass any portion of the larger wetland or wetland complex that could be directly or indirectly impacted by the project, as defined by hydrology, vegetation and/or physical characteristics.</p>	
<p>8.1. Context of Subject Wetland</p>	<p>Describe where the subject wetland is in the context of the larger wetland or wetland complex described above.</p> <p>As stated, there are wetlands both upstream and downstream of the Hanak wetland.</p>	
<p>8.2. Wetland Landuse</p>	<p>For example: mowed lawn; old field; naturally vegetated. Describe any previous and ongoing disturbance in the subject wetland.</p> <p>None.</p>	
<p>8.3. Wetland Vegetation</p>	<p>List dominant wetland community type and associated dominant plant species.</p> <p>Balsam fir, Eastern hemlock, speckled alder, red maple, sensitive fern</p>	
<p>8.4. Wetland Soils</p>	<p>Use USDA NRCS information where possible and use the ACOE Delineation Manual soil description</p> <p>Adams loamy fine sand</p>	
<p>8.5. Wetland Hydrology</p>	<p>Use descriptions from the ACOE Delineation Manual.</p> <p>Seasonally saturated.</p>	
<p>8.6. Buffer Zone</p>	<p>Describe the buffer zone of the subject wetland including:</p>	
<p>8.6.1. General landuse</p>	<p>For example: mowed road shoulder; forested; old field; paved road and residential lawns etc. Describe any previous and ongoing disturbance in the buffer zone.</p> <p>Forest and river.</p>	
<p>8.6.2. Buffer vegetation</p>	<p>List community type and dominant plant species</p> <p>Northern hardwood trees and shrubs.</p>	
<p>8.6.3. Buffer soils</p>	<p>Use USDA NRCS information where possible, and the ACOE Delineation Manual soil description</p> <p>Adams loamy fine sand.</p>	
<p>11. Project Details</p>	<p>Provide details regarding specific impacts to the wetland and buffer zone</p>	
<p>11.1. Specific Impacts to Wetland and Buffer Zone</p>	<p>List portions of the project that will specifically impact the wetland or buffer zone.</p> <p>An access road was constructed in 2014. The road is both in the wetland and in the buffer.</p>	

<p>11.2. Dimension Details</p>	<p>Square footage of buildings, dimension of roads including fill footprint.</p> <p>The road is approximately 12 feet wide.</p>													
<p>11.3. Bridges and Culverts</p>	<p>Culvert circumference, length, placement and shapes, or bridge details.</p> <p>A 6" culvert is under the fill in the lowest section of the fill.</p>													
<p>11.4. Construction Sequence</p>	<p>Describe any details pertaining to the worked planned in the wetland and buffer in terms of sequence or phasing that is relevant</p> <p>The lower 25 feet of the road to the Missisquoi River will be restored. The upper portion of the fill material that will remain will be supported by a rock retaining wall constructed out of large boulders and built against a geotextile filter fabric to prevent erosion around the retaining wall. All fill material will be removed from the site, except material needed to construct and support the retaining wall. Further up the road 24 inch high water diversion bars will be installed to capture, divert, and reduce the velocity of water runoff. Prior to any construction silt fencing will be installed at the furthest downhill point of construction. Upon completion of construction and prior to any significant rainfall all disturbed areas are to be seeded and mulched.</p>													
<p>11.5. Stormwater Design</p>	<p>List any stormwater permits obtained or applied for. Describe any stormwater and/or erosion controls proposed to prevent discharges to the wetland and buffer zone.</p> <p>A silt fence will be put in place before removal of the fill occurs. The site will be seeded and mulched immediately after the fill is removed. A retaining wall is to be left in place after the removal of fill in the floodplain.</p>													
<p>11.6. Permanent Demarcation of Limits of Impact</p>	<p>Describe any plantings, fencing, signage, or other memorialization that provides permanent on-the-ground boundaries for the limits of disturbance for ongoing uses.</p> <p>None.</p>													
<p>12. Wetland and Buffer Zone Impacts</p>														
<p>12.1. Wetland Impacts</p>	<p>Summarize the square footage of impact in the appropriate category. If more than one wetland is impacted, provide that information and use the supplemental wetland sheets.</p> <table border="1" data-bbox="553 1360 1377 1493"> <tr> <td colspan="3">Totals</td> </tr> <tr> <td>Wetland Fill</td> <td></td> <td>s.f.</td> </tr> <tr> <td>Temporary Wetland Impact</td> <td>4</td> <td>s.f.</td> </tr> <tr> <td>Other Permanent Wetland Impact</td> <td></td> <td>s.f.</td> </tr> </table> <p>Describe in detail the proposed impact.</p> <p>Part of the access road entered the wetland (4 sq ft).</p>	Totals			Wetland Fill		s.f.	Temporary Wetland Impact	4	s.f.	Other Permanent Wetland Impact		s.f.	
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	Gravel fill was used to access the Missisquoi River area of the property.					
12.3. Cumulative Impacts	List any potential cumulative or ongoing, direct and indirect impacts on the functions of the wetland that could result from the proposed project. None.					
12.4. Avoidance and minimization	Please refer to Section 9.5b of the rules on Mitigation Sequencing for this section.					
12.4.1. Avoidance	Can the proposed activity be practicably located outside the wetland/buffer zone, or on another site owned or controlled by the applicant or reasonably available to satisfy the basic project purpose? If not, indicate why. This answer should include any examination of alternatives that you have explored including using other properties, requesting easements, and altering the project design. To access the River this was the best path on the property.					
12.4.2. Minimization	If the proposed activity cannot practicably be located outside the wetland/buffer zone, have all practicable measures have been taken to avoid adverse impacts on protected functions? Please include any information on on-site alternatives that have been examined; minimizing the size and scope of the project to avoid impacts; or relocating portions of the project to avoid impacts Restoation activities will occur if and when this permit is granted.					
12.4.3. Mitigation	If avoidance of adverse effects on protected functions cannot be practically achieved, has the proposed activity has been planned to minimize adverse impacts on the protected functions and a plan has been developed for the prompt restoration of any adverse impacts on protected functions? Include any information on best management practices to be used for the project both for the initial construction and ongoing use. Also include any proposed restoration of temporary impacts, previously disturbed wetland or buffer zones or proposed conservation that are being used to offset the proposed impacts. None.					
12.4.4. Compensation	Please refer to Section 9.5c of the rules for compensation, which is appropriate when the project will result in an undue adverse impact. If compensation is proposed please include a summary here.					
14. Check Which Functions are Present in the Subject Wetland and in the Wetland Complex.	<b>Wetland Function Summary:</b> (if more than one wetland use supplemental wetland sheets)					
	Functions & Values	Subject Wetland	Wetland Complex	Functions & Values	Subject Wetland	Wetland Complex
	Flood/Storm Storage	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RTE Species	<input type="checkbox"/>	<input type="checkbox"/>
	Surface & Groundwater Protection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Education & Research	<input type="checkbox"/>	<input type="checkbox"/>
	Fish Habitat	<input type="checkbox"/>	<input type="checkbox"/>	Recreation/Economic	<input type="checkbox"/>	<input type="checkbox"/>
	Wildlife Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Open Space/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>
Exemplary Natural Community	<input type="checkbox"/>	<input type="checkbox"/>	Erosion Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Functions and Values	For each Function and Value, first evaluate the entire wetland or <b>wetland complex</b> and check all that apply. Secondly, evaluate how the wetland in the project area contributes to that function. Thirdly explain how the project will not result in adverse impacts to this function. Include any information on specific avoidance and minimization measures.	
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If more than one wetland complex is involved, use the Supplemental Wetland Forms.

16. Storage for Flood Water and Storm Runoff

- Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
  - Constricted outlet or no outlet and an unconstricted inlet.
  - Physical space for floodwater expansion and dense, persistent, emergent vegetation or dense woody vegetation that slows down flood waters or stormwater runoff during peak flows and facilitates water removal by evaporation and transpiration.
  - If a stream is present, its course is sinuous and there is sufficient woody vegetation to intercept surface flows in the portion of the wetland that floods.
  - Physical evidence of seasonal flooding or ponding such as water stained leaves, water marks on trees, drift rows, debris deposits, or standing water.
  - Hydrologic or hydraulic study indicates wetland attenuates flooding.

If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.
- Check box if any of the following conditions apply that may indicate the wetland provides this function at a *lower* level.
  - Significant flood storage capacity upstream of the wetland, and the wetland in question provides this function at a negligible level in comparison to upstream storage (unless the upstream storage is temporary such as a beaver impoundment).
  - Wetland is contiguous to a major lake or pond that provides storage benefits independently of the wetland.
  - Wetland's storage capacity is created primarily by recent beaver dams or other temporary structures.
  - Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.
- Check box if any of the following conditions apply that may indicate the wetland provides this function at a *higher* level.
  - History of downstream flood damage to public or private property.
  - Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by a loss or reduction of the water storage function.
    - 1. Developed public or private property.

	<ul style="list-style-type: none"> <li><input type="checkbox"/> 2. Stream banks susceptible to scouring and erosion.</li> <li><input type="checkbox"/> 3. Important habitat for aquatic life.</li> <li><input type="checkbox"/> The wetland is large in size and naturally vegetated.</li> <li><input type="checkbox"/> Any of the following conditions present upstream of the wetland may indicate a large volume of runoff may reach the wetland.             <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. A large amount of impervious surface in urbanized areas.</li> <li><input type="checkbox"/> 2. Relatively impervious soils.</li> <li><input type="checkbox"/> 3. Steep slopes in the adjacent areas.</li> </ul> </li> </ul>	
<p>16.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland is comprised of an area that does not have surface water and is characterized by Adams loamy sandy soils that do not flood. A soils investigation adjacent to the existing fill area revealed no soil mottling within 24" of the surface, bright colors, and little organic content in the soils. The Missisquoi River is 15-20 feet to the east but this site shows very little evidence of flooding from the River. It is likely that this site must flood only in rare circumstances.</p>	
<p>16.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The buffer area does not flood and after 8-9 observations the wetland complex in the area of the impact does not flood, therefore this function will not be affected by this project. Fill in the low-lying area will be removed as part of this Permit Application.</p>	
<p>17. Surface and Ground Water Protection</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Constricted or no outlets.</li> <li><input checked="" type="checkbox"/> Low water velocity through dense, persistent vegetation.</li> <li><input type="checkbox"/> Hydroperiod permanently flooded or saturated.</li> <li><input checked="" type="checkbox"/> Wetlands in depositional environments with persistent vegetation wider than 20 feet.</li> <li><input type="checkbox"/> Wetlands with persistent vegetation comprising a defined delta, island, bar or peninsula.</li> <li><input type="checkbox"/> Presence of seeps or springs.</li> <li><input checked="" type="checkbox"/> Wetland contains a high amount of microtopography that helps slow and filter surface water.</li> <li><input type="checkbox"/> Position in the landscape indicates the wetland is a headwaters area.</li> <li><input type="checkbox"/> Wetland is adjacent to surface waters.</li> <li><input type="checkbox"/> Wetland recharges a drinking water source.</li> <li><input type="checkbox"/> Water sampling indicates removal of pollutants or nutrients.</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Water sampling indicates retention of sediments or organic matter.</li> <li><input type="checkbox"/> Fine mineral soils and alkalinity not low.</li> <li><input type="checkbox"/> The wetland provides an obvious filter between surface water or ground water and land uses that may contribute point or nonpoint sources of sediments, toxic substances or nutrients to the wetland, such as: steep erodible slopes; row crops; dumps; areas of pesticide, herbicide or fertilizer application; feed lots; parking lots or heavily traveled road; and septic systems.</li> </ul> <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Presence of dead forest or shrub areas in sufficient amounts to result in diminished nutrient uptake.</li> <li><input type="checkbox"/> Presence of ditches or channels that confine water and restrict contact of water with vegetation.</li> <li><input type="checkbox"/> Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.</li> <li><input type="checkbox"/> Current use in the wetland results in disturbance that compromises this function.</li> </ul> </li> <li><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.             <ul style="list-style-type: none"> <li><input type="checkbox"/> The wetland is adjacent to a well head or source protection area, and provides ground water recharge.</li> <li><input type="checkbox"/> The wetland provides flows to Class A surface waters.</li> <li><input type="checkbox"/> The wetland contributes to the protection or improvement of water quality of any impaired waters.</li> <li><input type="checkbox"/> The wetland is large in size and naturally vegetated.</li> </ul> </li> </ul>	
<p>17.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The wetland receives flood waters from the Missisquoi River in lower elevation areas approximately 100 feet to the south. These low areas are not connected through surface waters to the Subject Wetland. The subject wetland may convey this function during the unusually high water years when it floods.</p>	
<p>17.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The fill area is outside of the wetland and this function of the wetland will not be negatively impacted by this project. Fill is being removed from the low-lying areas as part of this Permit Application.</p>	
<p>18. Fish Habitat</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the</p>	

	<p>following physical and vegetative characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Contains woody vegetation that overhangs the banks of a stream or river and provides any of the following: shading that controls summer water temperature; cover including refuges created by overhanging branches or undercut banks; source of terrestrial insects as fish food; or streambank stability.</li> <li><input type="checkbox"/> Provides spawning, nursery, feeding or cover habitat for fish (documented or professionally judged). Common habitat includes deep marsh and shallow marsh associates with lakes and streams, and seasonally flooded wetlands associated with streams and rivers.</li> <li><input type="checkbox"/> Documented or professionally judged spawning habitat for northern pike.</li> <li><input type="checkbox"/> Provides cold spring discharge that lowers the temperature of receiving waters and creates summer habitat for salmonoid species.</li> <li><input type="checkbox"/> The wetland is located along a tributary that does not support fish, but contributes to a larger body of water that does support fish. The tributary supports downstream fish by providing cooler water, and food sources.</li> </ul>	
<p>18.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland does not convey this function.</p>	
<p>18.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>As the Subject Wetland does not convey this function, this function will not be negatively affected by this proposal. Fill is being removed from the low-lying areas as part of this Wetland Application.</p>	
<p>19. Wildlife Habitat</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Provides resting, feeding staging or roosting habitat to support waterfowl migration, and feeding habitat for wading birds. Good habitats for these species include open water wetlands.</li> <li><input type="checkbox"/> Habitat to support one or more breeding pairs or broods of waterfowl including all species of ducks, geese, and swans. Good habitats for these species include open water habitats adjacent shallow marsh, deep marsh, shrub wetland, forested wetland, or naturally vegetated buffer zone.</li> <li><input type="checkbox"/> Provides a nest site, a buffer for a nest site or feeding habitat for wading birds including but not limited to: great blue heron, black-crowned night heron, green-backed heron, cattle egret, or snowy egret. Good habitats for these species include open water or deep marsh adjacent to</li> </ul> </li> </ul>	

forested wetlands, or standing dead trees.

- Supports or has the habitat to support one or more breeding pairs of any migratory bird that requires wetland habitat for breeding, nesting, rearing of young, feeding, staging roosting, or migration, including: Virginia rail, common snipe, marsh wren, American bittern, northern water thrush, northern harrier, spruce grouse, Cerulean warbler, and common loon.
- Supports winter habitat for white-tailed deer. Good habitats for these species include softwood swamps. Evidence of use includes deer browsing, bark stripping, worn trails, or pellet piles.
- Provides important feeding habitat for black bear, bobcat, or moose based on an assessment of use. Good habitat for these types of species includes wetlands located in a forested mosaic.
- Has the habitat to support muskrat, otter or mink. Good habitats for these species include deep marshes, wetlands adjacent to bodies of water including lakes, ponds, rivers and streams.
- Supports an active beaver dam, one or more lodges, or evidence of use in two or more consecutive years by an adult beaver population.
- Provides the following habitats that support the reproduction of Uncommon Vermont amphibian species including:
  - 1. Wood Frog, Jefferson Salamander, Blue-spotted Salamander, or Spotted Salamander. Breeding habitat for these species includes vernal pools and small ponds.
  - 2. Northern Dusky Salamander and the Spring Salamander. Habitat for these species includes headwater seeps, springs, and streams.
  - 3. The Four-toed salamander; Fowler's Toad; Western or Boreal Chorus frog, or other amphibians found in Vermont of similar significance.
- Supports or has the habitat to support significant populations of Vermont amphibian species including, but not limited to Pickerel Frog, Northern Leopard Frog, Mink Frog, and others found in Vermont of similar significance. Good habitat for these types of species includes large marsh systems with open water components.
- Supports or has the habitat to support populations of uncommon Vermont reptile species including: Wood Turtle, Northern Map Turtle, Eastern Musk Turtle, Spotted Turtle, Spiny Softshell, Eastern Ribbonsnake, Northern Watersnake, and others found in Vermont of similar significance.
- Supports or has the habitat to support significant populations of Vermont reptile species, including Smooth

Greensnake, DeKay's Brownsnake, or other more common wetland-associated species.

- Meets four or more of the following conditions indicative of wildlife habitat diversity:
  - 1. Three or more wetland vegetation classes (greater than 1/2 acre) present including but not limited to: open water contiguous to, but not necessarily part of, the wetland, deep marsh, shallow marsh, shrub swamp, forested swamp, fen, or bog;
  - 2. The dominant vegetation class is one of the following types: deep marsh, shallow marsh, shrub swamp or, forested swamp;
  - 3. Located adjacent to a lake, pond, river or stream;
  - 4. Fifty percent or more of surrounding habitat type is one or more of the following: forest, agricultural land, old field or open land;
  - 5. Emergent or woody vegetation occupies 26 to 75 percent of wetland, the rest is open water;
  - 6. One of the following:
    - i. hydrologically connected to other wetlands of different dominant classes or open water within 1 mile;
    - ii. hydrologically connected to other wetlands of same dominant class within 1/2 mile;
    - iii. within 1/4 mile of other wetlands of different dominant classes or open water, but not hydrologically connected;
- Wetland or wetland complex is owned in whole or in part by state or federal government and managed for wildlife and habitat conservation; and
- Contains evidence that it is used by wetland dependent wildlife species.

If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.

- Check box if any of the following conditions apply that may indicate the wetland provides this function at a *lower* level.
  - The wetland is small in size for its type and does not represent fugitive habitat in developed areas (vernal pools and seeps are generally small in size, so this does not apply).
  - The surrounding land use is densely developed enough to limit use by wildlife species (with the exception of wetlands with open water habitat). Can be negated by evidence of use.

	<ul style="list-style-type: none"> <li><input type="checkbox"/> The current use in the wetland results in frequent cutting, mowing or other disturbance.</li> <li><input type="checkbox"/> The wetland hydrology and character is at a drier end of the scale and does not support wetland dependent species.</li> <li><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.             <ul style="list-style-type: none"> <li><input type="checkbox"/> The wetland complex is large in size and high in quality.</li> <li><input type="checkbox"/> The habitat has the potential to support several species based on the assessment above.</li> <li><input type="checkbox"/> Wetland is associated with an important wildlife corridor.</li> <li><input type="checkbox"/> The wetland has been identified as a locally important wildlife habitat by an ANR Wildlife Biologist.</li> </ul> </li> </ul>	
<p>19.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland conveys this function in the location of the fill/impact to a small degree. The open water and floodplain sections of this wetland further to the north may convey this function to a greater degree. Mink tracks were observed 75-100 feet south</p>	
<p>19.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>This area is already subject to the disturbances associated with the Route 100 corridor. The fill down to the river will be utilized only seasonally, and mink use of the Missisquoi River corridor should not be negatively impacted. Fill is being removed and access is being removed as part of this Wetland Application.</p>	
<p>20. Exemplary Wetland Natural Community</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Wetlands that are identified as high quality examples of Vermont's natural community types recognized by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department, including rare types such as dwarf shrub bogs, rich fens, alpine peatlands, red maple-black gum swamps and the more common types including deep bulrush marshes, cattail marshes, northern white cedar swamps, spruce-fir-tamarack swamps, and red maple-black ash seepage swamps are automatically significant for this function.</li> </ul> </li> <li>The wetland is also likely to be significant if any of the following conditions are met:             <ul style="list-style-type: none"> <li><input type="checkbox"/> Is an example of a wetland natural community type that has been identified and mapped by, or meets the ranking and mapping standards of, the Natural Heritage Information Project of the Vermont Fish and Wildlife Department.</li> <li><input type="checkbox"/> Contains ecological features that contribute to Vermont's natural heritage, including, but not limited to:                 <ul style="list-style-type: none"> <li><input type="checkbox"/> Deep peat accumulation reflecting a long history of wetland formation;</li> </ul> </li> </ul> </li> </ul>	



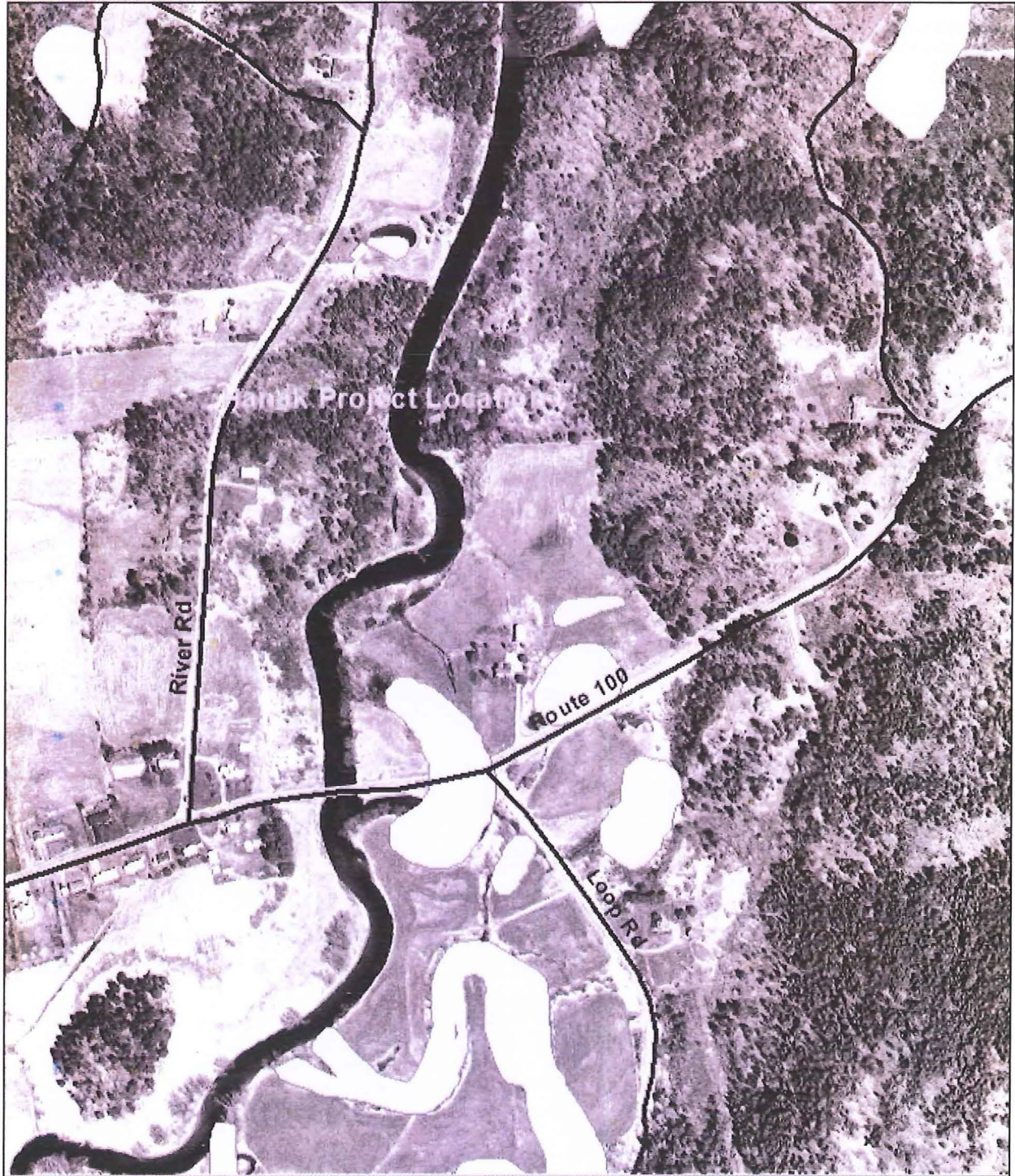
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Forested wetlands displaying very old trees and other old growth characteristics;</li> <li><input type="checkbox"/> A wetland natural community that is at the edge of the normal range for that type;</li> <li><input type="checkbox"/> A wetland mosaic containing examples of several to many wetland community types; or</li> <li><input type="checkbox"/> A large wetland complex containing examples of several wetland community types.</li> </ul> <p>List species or communities of concern:</p>	
<p>20.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland does not convey this function.</p>	
<p>20.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>N.A.</p>	
<p>21. Rare, Threatened, and Endangered Species Habitat</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.             <ul style="list-style-type: none"> <li><input type="checkbox"/> Wetlands that contain one or more species on the federal or state threatened or endangered lists, as well as species that are rare in Vermont, are automatically significant for this function.</li> </ul> </li> </ul> <p>The wetland is also likely to be significant if any of the following apply:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> There is credible documentation that the wetland provides important habitat for any species on the federal or state threatened or endangered species lists;</li> <li><input type="checkbox"/> There is credible documentation that threatened or endangered species have been present in past 10 years;</li> <li><input type="checkbox"/> There is credible documentation that the wetland provides important habitat for any species listed as rare in Vermont (S1 or S2 ranks), state historic (SH rank), or rare to uncommon globally (G1, G2, or G3 ranks) by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department;</li> <li><input type="checkbox"/> There is credible documentation that the wetland provides habitat for multiple uncommon species of plants or animals (S3 rank).</li> </ul> <p>List name of species and ranking:</p>	
<p>21.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>There are no Rare, Threatened, or Endangered species listed by the Vermont Natural Heritage program in the project area.</p>	

<p>21.2. Statement of no adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.</p>	
<p>22. Education and Research in Natural Sciences</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by or leased to a public entity dedicated to education or research.</li> <li><input type="checkbox"/> History of use for education or research.</li> <li><input type="checkbox"/> Has one or more characteristics making it valuable for education or research.</li> </ul>	
<p>22.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland does not convey this function.</p>	
<p>22.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function. N.A.</p>	
<p>23. Recreational Value and Economic Benefits</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Used for, or contributes to, recreational activities.</li> <li><input type="checkbox"/> Provides economic benefits.</li> <li><input checked="" type="checkbox"/> Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law.</li> <li><input type="checkbox"/> Used for harvesting of wild foods.</li> </ul> <p>Comments:</p>	
<p>23.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland further south contained mink, raccoon, and deer tracks.</p>	
<p>23.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The project is proposed 100 feet to the north of the area utilized by these animals and will continue to be used by animals along the Missisquoi River. The fill and access will be removed as part of this Wetland Application.</p>	
<p>24. Open Space and Aesthetics</p>	<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Can be readily observed by the public; and             <ul style="list-style-type: none"> <li><input type="checkbox"/> Possesses special or unique aesthetic qualities; or</li> <li><input type="checkbox"/> Has prominence as a distinct feature in the surrounding landscape;</li> </ul> </li> <li><input type="checkbox"/> Has been identified as important open space in a municipal,</li> </ul>	

	<p>regional or state plan.</p> <p>Comments: This site can really only be seen by other people across or within the River.</p>	
<p>24.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p> <p>The Subject Wetland can not be readily or easily seen by the general public unless in a boat on the Missisquoi River.</p>	
<p>24.2. Statement of no undue adverse impact</p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>The existing fill and access will be removed as part of this Wetland Application.</p>	
<p>25. Erosion Control through Binding and Stabilizing the Soil</p>	<p><input checked="" type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.</p> <p><input checked="" type="checkbox"/> Erosive forces such as wave or current energy are present and any of the following are present as well:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Dense, persistent vegetation along a shoreline or stream bank that reduces an adjacent erosive force.</li> <li><input type="checkbox"/> Good interspersion of persistent emergent vegetation and water along course of water flow.</li> <li><input type="checkbox"/> Studies show that wetlands of similar size, vegetation type, and hydrology are important for erosion control.</li> </ul> <p>What type of erosive forces are present:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lake fetch and waves</li> <li><input checked="" type="checkbox"/> High current velocities:</li> <li><input type="checkbox"/> Water level influenced by upstream impoundment</li> </ul> <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The stream is artificially channelized and/or lacks vegetation that contributes to controlling the erosive force.</li> </ul> <p><input type="checkbox"/> Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The stream contains high sinuosity.</li> <li><input type="checkbox"/> Has been identified through fluvial geomorphic assessment to be important in maintaining the natural condition of the stream or river corridor.</li> </ul>	
<p>25.1. Subject Wetland</p>	<p>Please explain how the subject wetland contributes to the function listed above</p>	

	<p>The wetlands Adam soils do not regularly flood and in most years, and in most conditions this wetland does not convey this function. In periods of extremely high water levels this wetland may perform this function.</p>	
<p><b>25.2. Statement of no undue adverse impact</b></p>	<p>Please explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance and minimization measures relevant to this function.</p> <p>This function will not be impacted by this project. The project is only in the wetland buffer, not in the wetland, and this function will continue to expressed in those rare years. The low-lying fill will be removed as part of this Wetland Application.</p>	

# Hanak Project Location



0 160 320 640 960 1,280 Feet

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

Project/Site: \_\_\_\_\_ Riverbank City/County: \_\_\_\_\_ Sampling Date: Feb-2007  
 Applicant/Owner: Kyle House State: \_\_\_\_\_ Sampling Point: W11 2  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      ___ Marl Deposits (B15) ___ Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:   	

**VEGETATION – Use scientific names of plants.**

Sampling Point: Kal 3 WS

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1. <u>Alnus balsamea</u>	<u>50</u>	<u>D</u>	<u>Fac</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1/1/1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <u>Quercus bicolor</u>	<u>5</u>	<u>D</u>	<u>Fac</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>35</u> = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1. <u>SPR</u>	<u>50</u>	<u>D</u>	<u>Fac</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
2. <u>YBR</u>	<u>10</u>			
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>60</u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1. <u>SPR</u>	<u>15</u>	<u>D</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 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.
2. <u>ambrosia (ambrosia)</u>	<u>25</u>	<u>D</u>	<u>Fac</u>	
3. _____				
4. <u>Sphagnum</u>				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>40</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____				<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 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.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: Rep1 WST1

**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>		
0-2	2.5Y 5/2	100					8.5 brown	
2-20	2.5Y 4/2	60	5Y 4/6	40	CS	M	8.5 brown	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 (TF2)
- 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.

**Restrictive Layer (if observed):**

Type: None  
 Depth (inches): None

Hydric Soil Present? Yes  No

Remarks:



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

Project/Site: 10.11 City/County: \_\_\_\_\_ Sampling Date: 8/10/02  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: up 3  
 Investigator(s): W. J. ... Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ 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 _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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 _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>710</u> Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ 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: Back up 1

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Pinus strobus</u>	<u>40</u>	<u>(D)</u>	<u>tree</u>
2. <u>Quercus (low)</u>	<u>20</u>	<u>(D)</u>	<u>tree</u>
3. <u>Y. (low)</u>	<u>15</u>		
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>S. (low)</u>	<u>15</u>	<u>(D)</u>	<u>facu</u>
2. <u>Y. (low)</u>	<u>15</u>	<u>(D)</u>	<u>facu</u>
3. <u>B. (low)</u>	<u>15</u>	<u>(D)</u>	<u>facu</u>
4. <u>A. (low)</u>	<u>0</u>		
5. <u>C. (low)</u>	<u>10</u>		
6. _____			
7. _____			

**Prevalence Index worksheet:**

Total % Cover of: 75 = Total Cover

Multiply by:

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species 6 x 4 = 24

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = 24/3 = 8

Herb Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>D. (low)</u>	<u>20</u>	<u>(D)</u>	<u>facu</u>
2. <u>W. (low)</u>	<u>0</u>		
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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.

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
_____ = Total Cover			

**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 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.)





**VEGETATION – Use scientific names of plants.**

Sampling Point: 401W Missis LA

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>S. flor</u>	<u>20</u>	<u>D</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>y. Rich</u>	<u>20</u>	<u>D</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>40</u> = Total Cover <u>DT 20</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>11</u> x 2 = <u>4</u> FAC species <u>1111</u> x 3 = <u>12</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = <u>16/6</u> ( <u>2.6</u> )
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>				
1. <u>Erlem Trees</u>	<u>20</u>	<u>D</u>	<u>FAC</u>	
2. <u>B. fr. (over hill)</u>	<u>20</u>	<u>D</u>	<u>FAC</u>	
3. <u>Malus sp</u>	<u>30</u>	<u>D</u>		
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>70</u> = Total Cover <u>DT 35</u>				
<b>Herb Stratum (Plot size: <u>6</u>)</b>				
1. <u>Astragalus</u>	<u>40</u>		<u>FAC</u>	
2. <u>S. fr. (over hill)</u>	<u>20</u>		<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>60</u> = Total Cover <u>DT 30</u>				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Prevalence Index = B/A = 16/6 (2.6)

- Hydrophytic Vegetation Indicators:**
- Rapid Test for Hydrophytic Vegetation
  - Dominance Test is >50%
  - Prevalence Index is ≤3.0<sup>1</sup>
  - 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 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



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

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_ *10/11/88*  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: *10*  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): *Roll slope* Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): *5%* Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ 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 _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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 _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: Upper 15

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Acacia saligna</i> 40		(D)	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>2/6</u> (A/B)
2. <i>Betula edulis</i> 20		(D)	FAC	
3. <i>Begonia</i> 40		(D)	FACW	
4. _____				
5. _____				
6. _____				
7. _____				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>11</u> x 3 = <u>6</u> FACU species <u>1111</u> x 4 = <u>16</u> UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = <u>22/6</u>
1. <i>Alnus</i> 25	100 = Total Cover	(D) 50	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <u>NO</u> <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 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.
2. <i>Stachys</i> 5		(D)	FACW	
3. <i>Morone</i> 10		(D)	FACW	
4. _____				
5. _____				
6. _____				
7. _____				
Herb Stratum (Plot size: <u>15</u> )				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 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.
1. <i>Acacia Saccubus</i> 80	40 = Total Cover	(D) 20	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				



SOIL

Sampling Point: 18 Miss Manly

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	10YR3/2	100	NONE				f 5 storm	
6-22	2.5Y 5/6	100	NONE				f 5 storm	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 (TF2)
- 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.

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): NONE

Hydric Soil Present? Yes \_\_\_\_\_ No

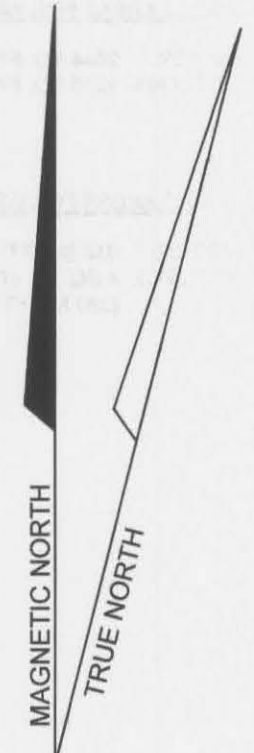
Remarks:

**IMPACT AREAS FOR WETLAND 'A'**

BUFFER: 2044 SQ. FT. (TEMPORARY) 4139 SQ. FT. (PERMANENT)  
 WETLAND: 1273 SQ. FT. (TEMPORARY) 146 SQ. FT. (PERMANENT)

**IMPACT AREAS FOR WETLAND 'B'**

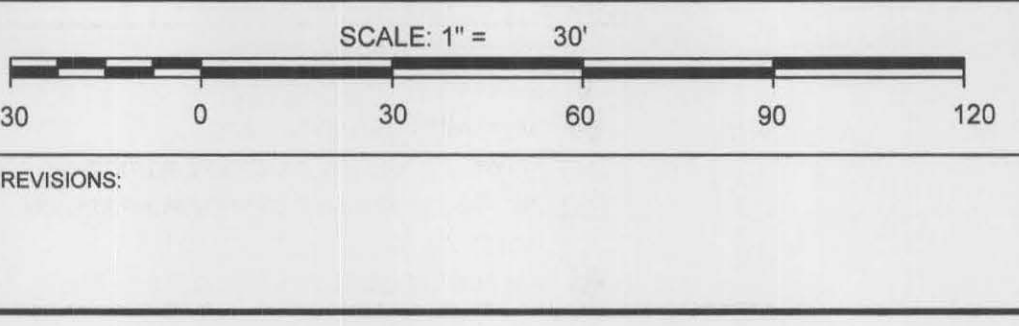
BUFFER: 616 SQ. FT. (TEMPORARY) 1157 SQ. FT. (PERMANENT)  
 WETLAND: 4 SQ. FT. (TEMPORARY)  
 (330 SQ. FT. WITHIN FLOODPLAIN)



- SITE NOTES -**
1. TOPOGRAPHY AND CONTOURS ARE BASED ON ELECTRONIC TOTAL STATION FIELD MEASUREMENTS. ELEVATION DATUM IS APPROXIMATE N.G.V.D. 29 AS ESTIMATED FROM U.S.G.S. TOPO SHEET. CONTOUR INTERVALS ARE 2'.
  2. SILT FENCING IS TO BE INSTALLED AT THE FURTHEST DOWNHILL POINT OF ALL DISTURBED AREAS. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ANY SIGNIFICANT RAIN FALL ALL DISTURBED AREAS ARE TO BE SEEDED AND MULCHED AND AREAS THAT EXCEED 20 PERCENT SLOPE EROSION CONTROL BLANKETS ARE TO BE APPLIED.
  3. PERIMETER BOUNDARIES WERE TAKEN FROM LAWRENCE P. BROW'S SURVEY MAP NO. 1021, PREPARED FOR CECILE C. OLDEN, RENA ABAIR, CONRAD & PATRICK COULOMBE, DATED SEPTEMBER 27, 2010.
  4. THIS PLAN IS FOR USE SOLELY IN THE PERMIT PROCESS AND IS NOT INTENDED FOR LEGAL DESCRIPTION.

**LEGEND**

△ UNIDENTIFIED POINT/CORNER	▨ WETLAND BUFFER	→ 24" WATER BAR
● IRON PIPE	— WETLAND BOUNDARY	
⊙ APPROVED DRILLED WELL SITE	- - - WETLAND BUFFER BOUNDARY	
☐ PROPOSED 1000 GAL. CONCRETE SEPTIC TANK	- - -780- EXISTING CONTOUR	
☐ PROPOSED 1000 GAL. CONCRETE PUMP STATION	— SILT FENCE	
W WETLANDS	— W PROPOSED WATERLINE	
✱ PROPOSED TREE	— FM PROPOSED FORCEMAIN	



PREPARED FOR: KAEI D. HANAK & JENNIFER E. DOBBIE  
 LOCATED ON: 6301 RIVER ROAD, TROY, VT

**SITE PLAN**

SCALE: 1" = 30'  
 DATE: 06/23/2015

SITE WORK: M.H., C.M.  
 DRAWN: M.H.

S-1  
 SHEET 1 OF 1

FILE NO.  
 20-2013

**ALL SYSTEMS SEPTIC DESIGN**

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