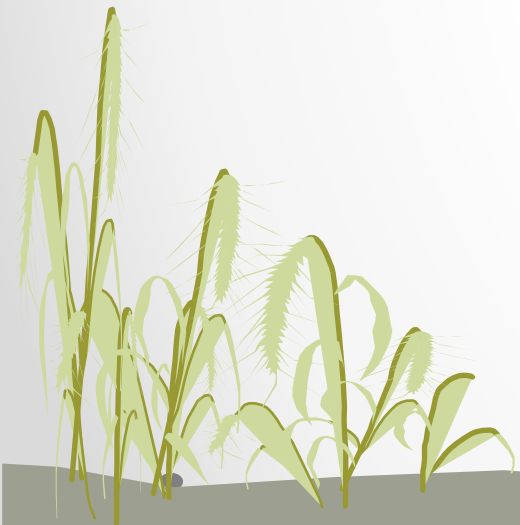


# Wetland Screening Tool

Shannon Morrison  
Vermont Department of Environmental Conservation  
Wetlands Program



# Overview

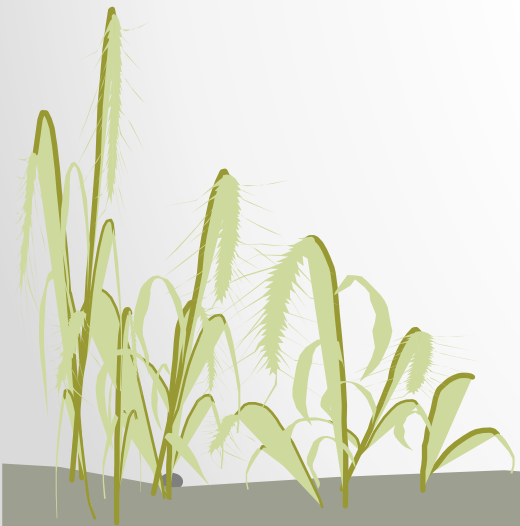
- Purpose and Need
- Mapping History and Components
- Screening Tool



# Purpose and Need

Purpose of the Wetland Screening Tool:

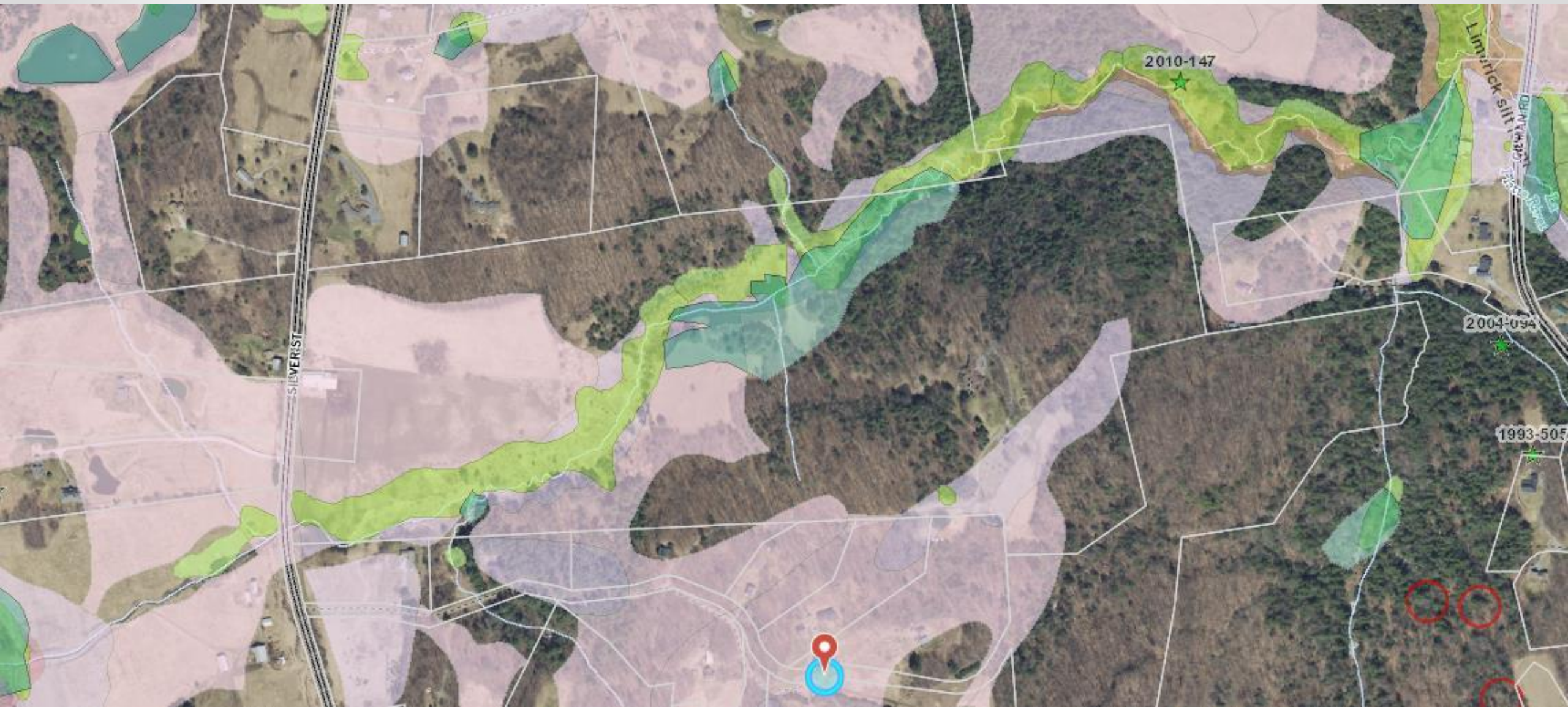
To provide the best mapping information available to predict the potential presence of wetlands on a parcel basis. To provide “next step” recommendations based on the mapping.







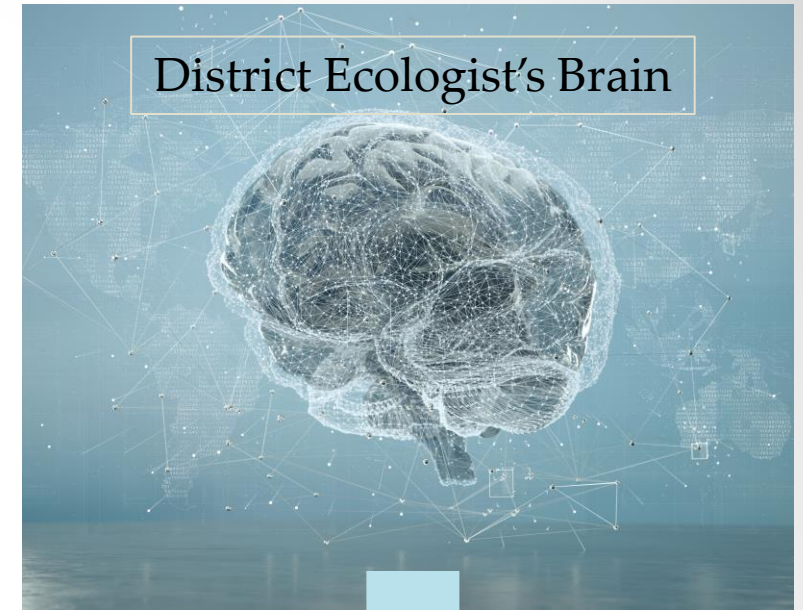






# Needs

- 2010 VWR Rule Change
  - How does the public find non-VSWI mapped wetlands?
- Improve Information Accessibility
  - Mapping Skills
  - Knowing what layers to turn on
  - Interpreting layers
  - Inherent inaccuracy in mapping
  - Photo interpretation and use of new tools like Lidar



Direct

Download

## Public

- Realtors
- Town officials
- Landowners
- Property Buyers



# Opportunities

- Erik Engstrom and Danielle Owczarski developed parcel-based resource tool
- Mapping and database resources on hand
- New wetland mapping products being developed on a watershed basis with EPA funding

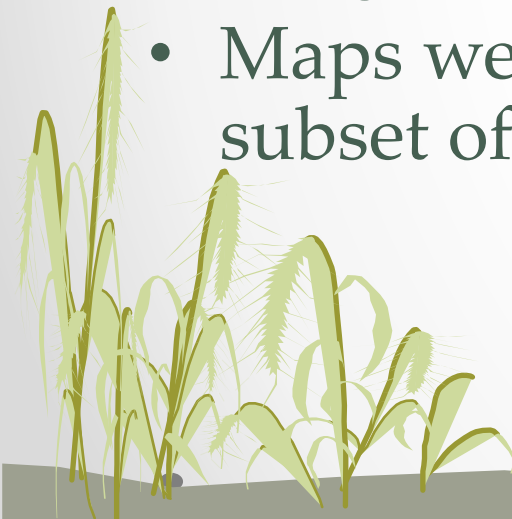






# VSWI Origin

- NWI maps were originally created to identify wetlands for tracking status and trends of wetland loss
- Study showed that over 93% of the wetlands shown on the NWI for Vermont were “significant”
  - There was no study to show whether unmapped wetlands were significant
- Maps were adopted to identify and take jurisdiction over at least a subset of significant wetlands in VT (1990-2010)



# VT Wetland Classification

∞ Based on an evaluation of the extent to which the wetland provides functions and values:

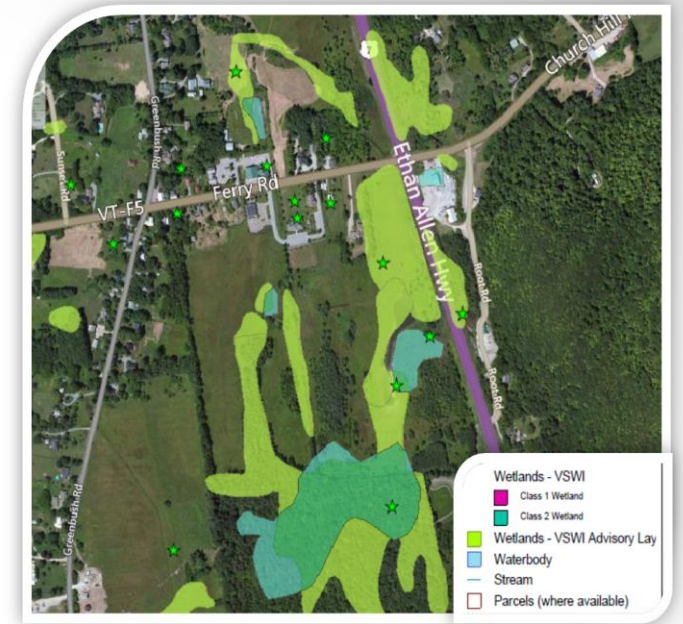


- *Class I Wetland*: Exceptional or irreplaceable. Highest level of protection
- *Class II Wetland*: **Merits protection**
- *Class III Wetland*: Neither Class I or Class II wetland



# Jurisdictional Wetlands

- VSWI Mapped or Contiguous
- Any wetlands greater than half acre



- Wetlands over or under a half acre that are:
  - adjacent to a stream, lake, pond, or river
  - vernal pools
  - special and unique wetlands like bogs or fens
  - headwaters above 2,500 feet elevation
  - adjacent to impaired waters



# Beyond VSWI

## Wetland Mapping for Jurisdiction

VSWI maps synonymous with “significant wetland” in statute, rule and culture

Ongoing issues with:

- False sense of assurance
- Fairly static mapping product
- Misuse of VSWI for projects
  - Aged Mapping Products
  - Cumbersome map updates

## Wetland Mapping for Identification

- VSWI maps plus whatever else is available and good quality
- Ability for instant mass updates if better information becomes available
- Ability to instantly update, add, and adjust without regulatory process

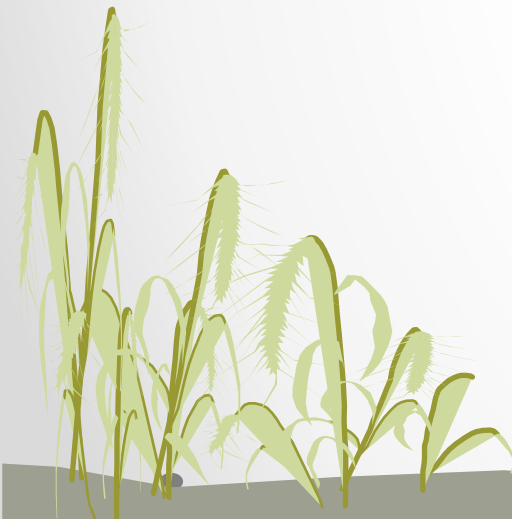


# Wetland Advisory Layer

Contains:

- Town mapping products
- Watershed mapping products NWI+
- Wetland Program Mapping
  - Site visits
  - Bioassessments

Wetland Advisory Layer in light green

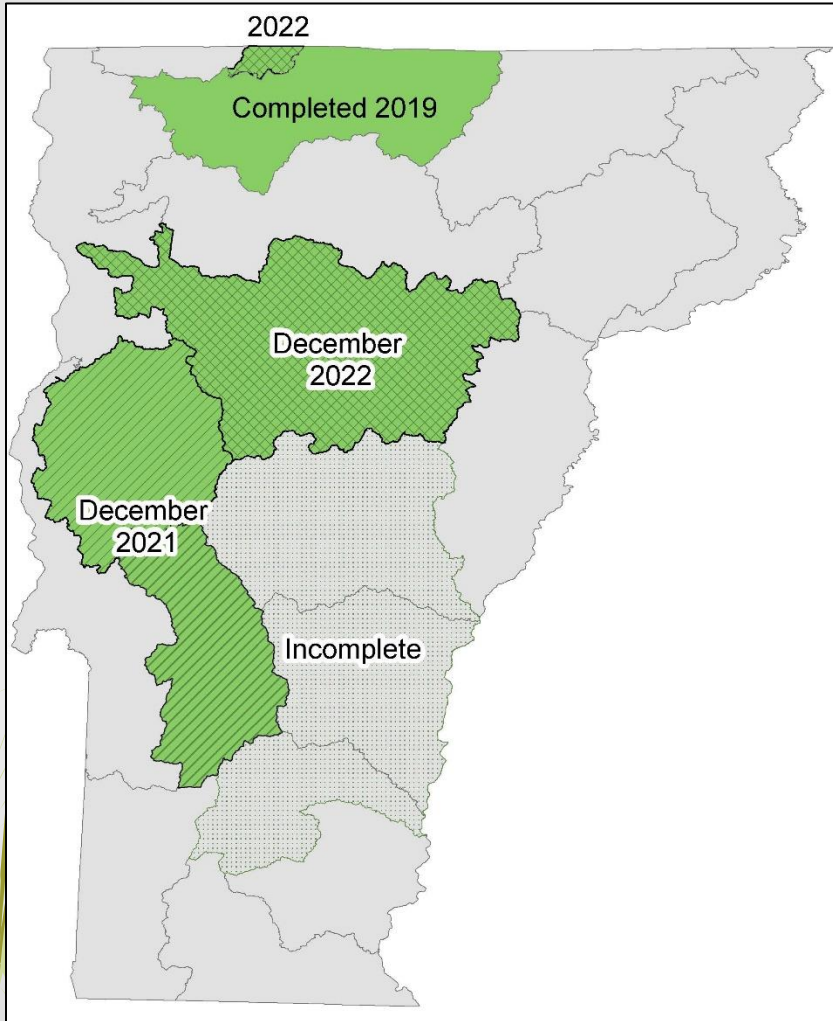








# Updating Wetland Mapping



## Mapping Model Using:

- Imagery/CIR
- LiDAR
- Soils
- Field Data
- NWI+ Coding



# NRCS Soil Maps

- Natural Resource Conservation Service Soils mapping for the USDA
- “Hydric Soil” further split into “Very Hydric Soil” (mucks, peats, ponded) down the wetness gradient

Hydric soil layer in purple – number refers to NRCS soil designation. Clicking on “see additional details” will provide name of soil unit

Hydric Soils (OBL)	These soils are very hydric and have descriptors in the NRCS soil descriptions of mucks, peats, ponded, flooded, marsh, emergent wetland.
Hydric Soils (FACW)	These types of soils are often found in wetland conditions.
Hydric Soils	These types of soils are commonly associated with wetlands where there are other parameters, in topographic lowlands, or associated with open water margins.





# Wetland Projects

## Program Information from 1990-present

- Permits
- Wetland Classification
- Pre-2010 Class III Classification
- Delineations
- Decisions

Clicking here will give you more information.

Quick Tools... Search...

Wetland Project: 2015-332

☆ Wetland Project: 2015-332

Project Number: 2015-332  
Ecologist: Laura Lapierre  
Issued Date:

[View Additional Details](#) [Add to Results](#)

VERMONT Vermont Agency of Natural Resources

Map Tools Navigation Map Data Draw Identify Query Select

Point Freehand Line Polygon Rectangle

Wetland Project: 2015-332

Description

Project Number: 2015-332  
Ecologist: Laura Lapierre  
Issued Date:

Details

Project Name  
**Mekkelsen Herbicide**

Project Number  
2015-332

Ecologist  
**Laura Lapierre**

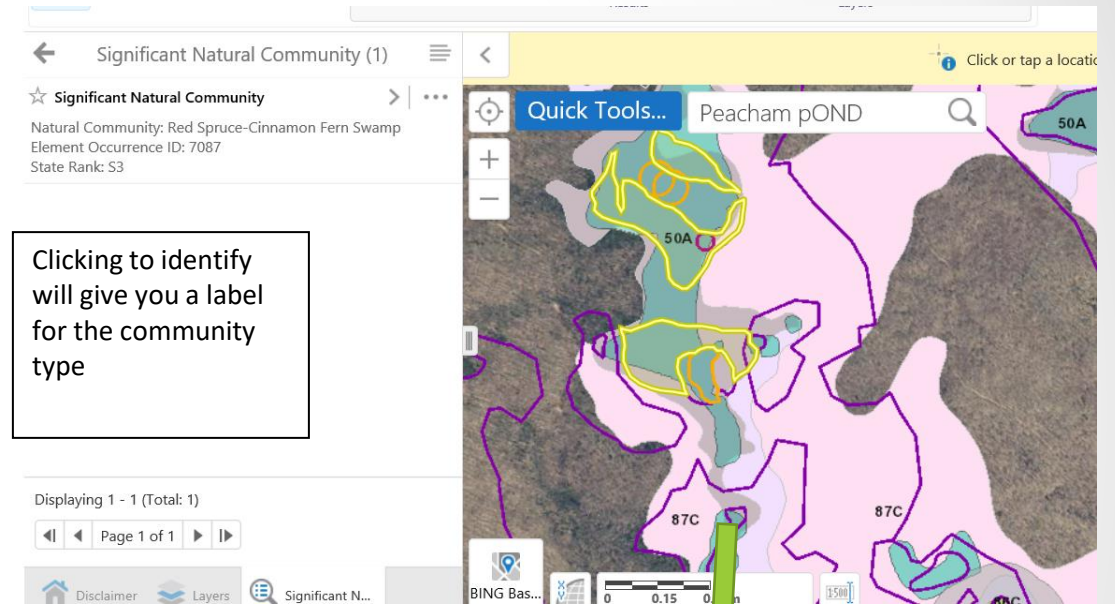
Issued Date  
N/A

Classification  
Class II

Disclaimer Layers Wetland Proj... BING Bas...

# Natural Community Mapping

- Wetland Community Mapping from VTFW Nongame Natural Heritage Program
- Mostly State Owned Land
- Private Land with permission



Clicking to identify will give you a label for the community type

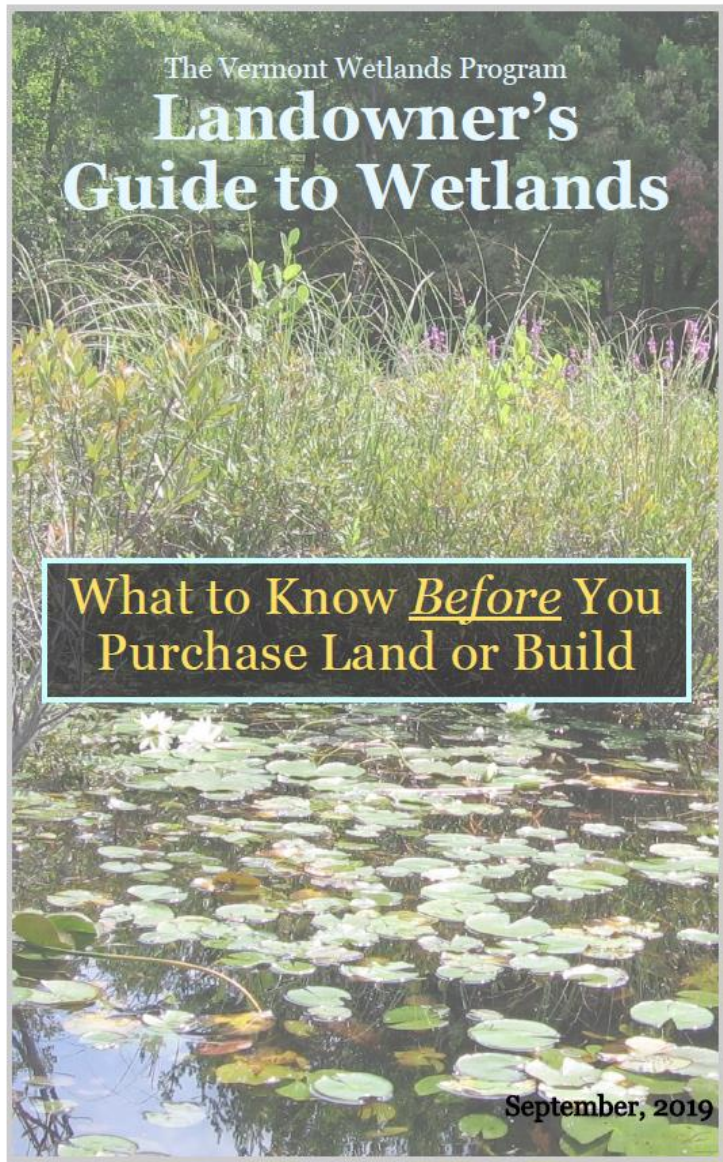
Significant Natural Communities are outlined in purple – you can use the “identify tool” to determine the community type (highlighted in yellow)



# No Mapping No Problem?







## Wetland Identification

Vermont has many types of wetlands, and some are not obvious at first glance. To help decide if your building project or potential land purchase involves a wetland, simply follow the steps below to assess the site in question.

### Step 1: Review Maps

All wetlands depicted on the Vermont Significant Wetland Inventory Maps (VSWI), are under the jurisdiction of the Vermont Wetland Rules (VWR). However, wetlands not on the VSWI maps may also be subject to state, federal or local regulation. Other maps to check include National Wetland Inventory Map, USGS Topographic Maps, and town Natural Heritage and Wetland Maps. NRCS Soil maps show where hydric (aka wetland) soils are located. For those wetlands that are not on the VSWI maps, review the presumptions in Step 3 to see if the wetland is regulated by the State.

### Step 2: Wetland Indicators\*

Take this flyer with you and walk the property using the wetland indicators checklist on this pamphlet to identify evidence of wetland plants, soils, and hydrology. Bring a shovel & plant guides to help you determine if a wetland exists.

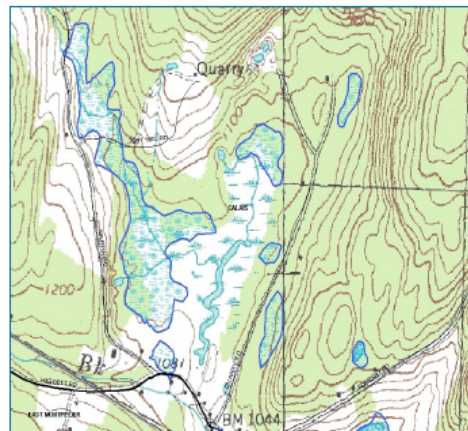
*\*This checklist is a guide. Wetland professionals are required to delineate wetland boundaries in VT.*

### Step 3: Wetland Regulations

State wetland regulations require that wetlands provide significant function and value to Vermonters in order to be protected. Both the wetland and at least a 50-foot buffer zone are protected. The following wetlands are presumed to provide function and value, and so are subject to the Vermont Wetland Rules:

- Any wetland on the VSWI map
- Any wetland contiguous or connected to the VSWI mapped wetland (so look for VSWI wetlands in close proximity to your property)
- Any wetland that is the same type and size as what is on the VSWI maps (1/2 acre or larger)
- Wetlands over or under a half acre that:
  - Are adjacent to a stream, lake, pond, or river
  - Are vernal pools
  - Are special and unique wetlands like bogs or fens
  - Are headwaters above 2500' in elevation
  - Are adjacent to impaired waters

*Not sure? Contact us (see back).*



Vermont Wetland Maps can be viewed at:  
<https://anrmaps.vermont.gov/websites/WetlandProjects/default.html>



### Ask Yourself This:

- Are there places you don't mow because it is too wet?
- Do you think to yourself, "That's a good place for a pond"?
- Are there places you wouldn't drive heavy equipment for fear of sinking?
- Do the trees tip over frequently in your woods?
- Is there an area that is wet only part of the year?
- Does the vegetation look different in a spot lower than the surrounding areas?
- Do you hear frogs in the spring from that wet area?

**If the answer is YES to any of these you may have a wetland!**

## Wetland Indicators Checklist

### Is water present?

- Are there ponds, streams, lakes, springs or seeps present?
- Are depressions present where water pools during wet periods in the growing season?
- Is the ground often soggy under foot?
- Do trees have shallow roots, water marks on the trunks, or forest debris deposited on their trunks?

### Are wetland plants present?

- Are cattails, sedges, rushes, New England aster, sphagnum moss, skunk cabbage, dwarf raspberry, blueberry, or marsh marigold present?
- Are sensitive, ostrich, or cinnamon ferns present?
- Are willow, red maple, tamarack, white cedar, balsam fir, black spruce, alder, green or black ash trees or saplings present?
- Are meadowsweet, leatherleaf, steplebush, arrowwood, or wild raisin present?
- Do trees in the area have roots growing across the ground, swollen trunk bases, or flat root bases when wind thrown or tipped over?

### Is your soil a wetland soil?

\* Dig a hole 20 inches down to answer the questions below

- Is the soil dark brown, black, gray, gray-blue or gray-green, does it have rusty, red, or dark streaks?
- Does the soil smell like rotten eggs, feel greasy, mushy, or wet? Can you squeeze out water?
- Does water enter the hole after a few minutes?

It is likely you have a wetland if you checked any of the above, or answered yes to the "Ask Yourself This" questions.

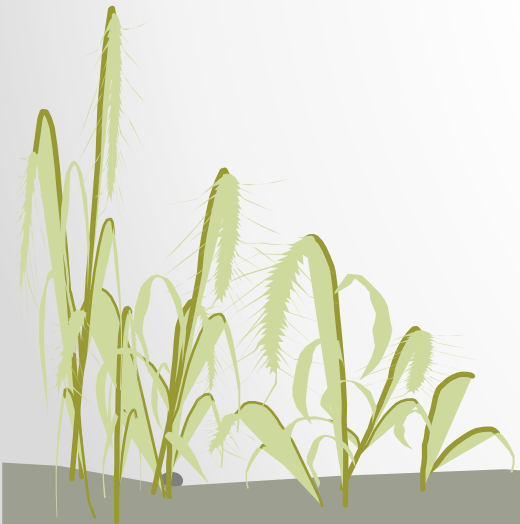
### What happens next?

In most cases, if you can stay 50 feet away or more from the edge of the wetland, you won't need to do anything. If you don't know where the edge of the wetland is, you may need to contact a wetland professional to determine the edge of that wetland. If there is no way to avoid doing work in the wetland or buffer zone, you may need a permit from the State and/or the Army Corps of Engineers.



# And even with the best mapping...

1. Remote mapping will never replace ground-proofing for wetland boundaries
2. Wetland boundaries can change over time – delineations are updated every 5 years
3. 30% of our current workload is for unmapped significant wetlands
4. Areas are routinely mismapped as wetlands



<http://dec.vermont.gov/watershed/wetlands/contact>

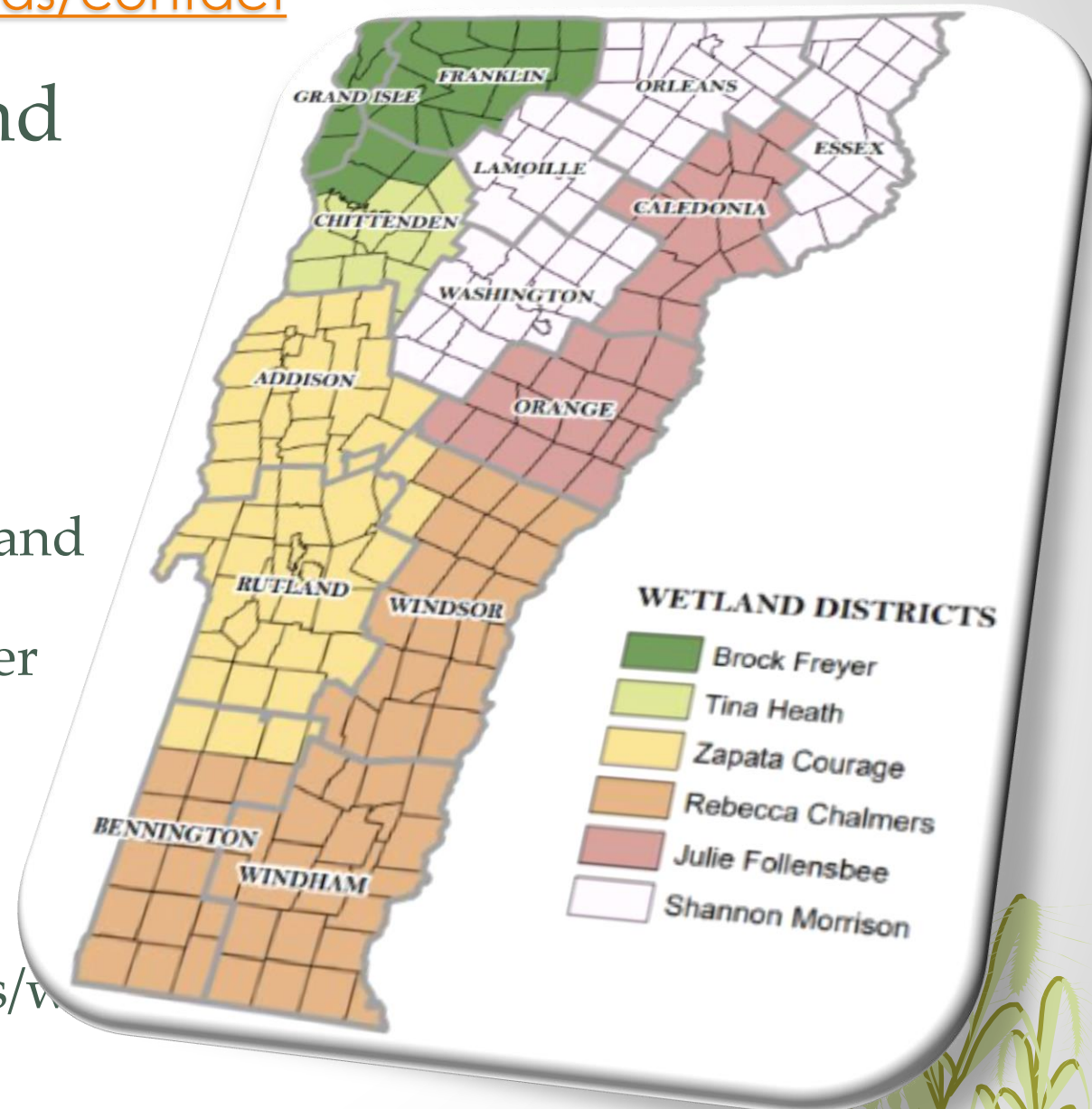
# Contact your District Wetland Ecologist

**Our Services are Free!**

- Desktop reviews
- Site Visits
- Pre-application material review for a wetland permit
- Address violations in a cooperative manner
- Or just answer questions!

Or Hire a Wetland Consultant:

<https://dec.vermont.gov/watershed/wetlands/wetland-consultant-list>





# Navigating the Wetland Screening Tool

- 911 Address
- SPAN Number

