Comparing Mapped vs. Field-Identified Wetlands at Proposed Vermont Housing Sites

Introduction: Vermont's Executive Order 06-25 includes a change to how wetlands are regulated for new residential housing in certain designated growth areas.

Under this change, developers only need a state wetland permit if they want to develop in a wetland shown on the Vermont Significant Wetlands Inventory (VSWI) map, or the 25-foot buffer around it.

This report compares the Order's approach with the current 2023 Vermont Wetland Rules (Rules), which require permits for any Class II wetlands and a 50-foot buffer, based on actual site inspections.

Background: The State of Vermont passed the Wetland Rules in order to protect wetlands because they provide important environmental benefits like flood control; clean water; and wildlife, fish, and plant habitat.

Class II wetlands, as defined by law, are protected under the Rules because of their significant value. These rules also protect the 50-foot buffer zone around them.

Under the current 2023 Rules:

- Wetlands must be identified through in-field delineation, using federal methods by trained professionals.
- The VSWI map shows an approximate location of wetlands, based on aerial imagery and desktop review.

Main difference between the current rules and the Executive Order:

- **Current Rules**: Wetlands are regulated based on what's found in the field and the function and values the wetland provides. Includes a 50-foot regulated buffer.
- **Executive Order**: Only wetlands shown on the VSWI map and a 25 foot buffer would be regulated.

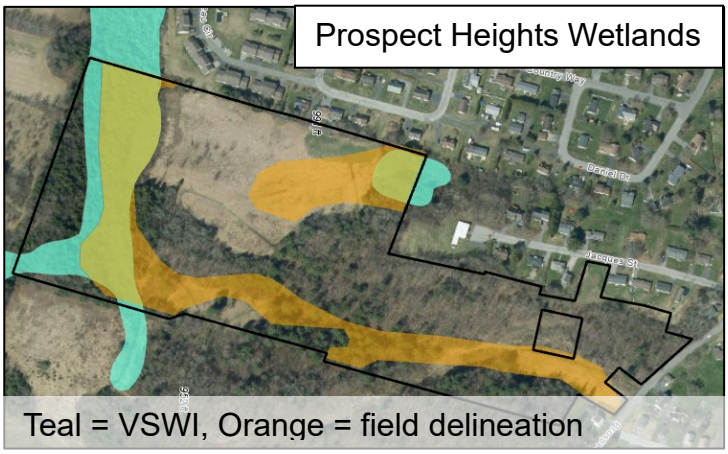
Purpose of This Report: This report compares VSWI mapped wetlands with wetlands identified through field inspections (called **delineation**) at three proposed housing development sites:

1. Prospect Heights (Barre)
2. East Village (Plainfield)
3. Elks Lodge (Montpelier)

These areas have VSWI map updates in 2025. However, many parts of the state still use older, less accurate maps. These three sites also had in-field delineations completed by environmental consultants hired by the developers.

Methods: Staff used GIS mapping tools to:

- Measure wetland areas from both VSWI maps and field delineations
- Compare how much they overlap
- Estimate how much wetland is missed by the map
- Calculate how much of the project area would not require a permit under the Executive Order



Results: On average across the three sites, 85% of actual wetland areas were not shown on the VSWI map. Unmapped wetland areas range from 3.5 acres to 8 acres, with some wetlands on the Elks Lodge site missing from the map entirely.

Site	VSWI Mapped (sq. ft.)	Field-Identified (sq. ft.)	Unmapped Wetlands (sq. ft.)	Percent (%) Not Shown on Map
Prospect Heights	223,144	469,123	308,777	66%
East Village	1,077	351,619	350,614	>99%
Elks Lodge	14,008	169,627	154,376	91%
Average	_____	_____	_____	**85%**

Discussion: None of the three sites had recent wetland permits, so their VSWI maps weren't updated with field data. However, they are located in the Winooski River Basin, where mapping has recently improved. In other parts of Vermont, mapping may be less or more accurate.

This analysis looked only at how much wetland area was missed—not the quality or importance of those wetlands.

The impact of using the VSWI map to determine permit needs for these housing projects includes:

- Fewer wetlands and buffer zones found in the field would be protected
- Developers could build on unmapped wetlands without a state wetland permit
- Key environmental benefits like clean water and flood control could be reduced

With either scenario, mapping or field delineation, all three sites have enough non-wetland area to support housing development on the sites selected for the study.

Conclusion & Next Steps: This study shows that relying only on wetland maps (VSWI) could result in major losses in wetland protection—with over 50% of wetlands at many sites left unregulated.

To better understand the full impact of the Executive Order modification:

- More housing sites across Vermont should be studied
- Wetland functions and values (not just size and location) need to be considered
- The accuracy of VSWI mapping should be evaluated in areas that haven't been recently updated