

Procedural Documentation for Putney Wetlands Map

- this work was performed by Kathy Urffer as part of a practicum through Antioch New England under the supervision of Jeff Nugent of Windham Regional Commission, last updated 10/30/08

Background:

The Putney Wetlands Map is designed to illustrate wetlands in the Town of Putney that are currently on National Wetlands Inventory (NWI) and Vermont Significant Wetlands Inventory (VSWI) maps, as well as to allow for the addition of locally identified wetlands as that information becomes available. Data from both the NWI and VSWI maps were used in an effort to accurately identify as many wetlands as possible in the town. The Putney Wetlands map does not show all wetlands in the town, it likely does not reflect vernal pools or many wetlands that are under 2-3 acres.

In general, if a wetland is shown on the NWI or VSWI map, it is very likely that there is a wetland at that location on the ground. However, many wetlands are not depicted on the NWI or VSWI maps, and therefore not depicted on the Putney wetlands map. One estimate puts the percentage of wetlands that are mapped at only 50 percent.

Most all wetlands (including most all wetlands on this map) are under the jurisdiction of the US Army Corps of Engineers, and are regulated under Section 404 of the federal Clean Water Act. There are many wetlands that are not shown on the Putney wetlands map, and these likely are under Federal jurisdiction as well.

The State of Vermont has developed a classification system for wetland regulation. Class One and Class Two wetlands are considered significant. Class Three wetlands are not regulated under State wetland rules, but in most cases are under the jurisdiction of the US Army Corps of Engineers, and may be protected by other State or Federal regulations. All of the “significant” wetlands in the Town of Putney are Class Two wetlands. These require a 50-foot buffer.

In addition, Class Two wetlands include not only areas mapped on the VSWI map as Class Two but also those wetlands that are *contiguous* to the mapped wetland. So, although a wetland may not be represented as “significant” on the attached map, it may be regulated by the State if it is contiguous to a Class Two wetland. Contiguity is determined in the field by ANR Wetlands Program staff or upon review by the Natural Resources Board. Anyone may request a visit by the District Wetlands Ecologist to determine the classification of wetlands on one’s property.

How the map was developed:

WRC has found that the NWI map data are in general a more accurate depiction of wetland location; these data were used as the base for the Putney wetlands map. The VSWI data map provided information on additional wetlands identified by the Vermont Agency of Natural Resources (ANR) which did not appear on the NWI map. VSWI data were also used to identify those wetlands which been identified by the state as Significant wetlands.

In addition to currently known wetlands, hydric soils have been identified on the map as an indicator of the possible unmapped wetlands. Wetlands are generally defined as areas that have hydric soils, hydrophytic (water loving) plants, and are frequently saturated at or above the

soil layer. The presence of hydric soils indicates a long period of standing water or saturation at or above the soil layer, so there is a high likelihood that wetlands may be present in these areas.

How to continue to develop the map:

This map should be used as a guideline to identify areas that have a high likelihood of the presence of wetlands. It is not a regulatory document, but it may assist in identifying areas of the town that need scrutiny as development plans are proposed, as well as areas that should be preserved or protected due to ecological significance.

Boundaries of existing mapped wetlands could be clarified and additional wetlands could be added as local information is gathered. For instance, five of the wetlands on the map are from GPS data collected by staff of the Windham Regional Commission in the field. If local knowledge is provided to the Conservation Commission, this information should be added to the map to assist in future planning.

Better boundaries that have been clarified through field visits should be submitted to the Windham Regional Commission to update the wetland map. In addition, local identification of wetlands that currently aren't on the map should be referred to the Putney Conservation Commission for preliminary identification. The Conservation Commission could then make a site visit and add these additional wetlands to the map by drawing them in. As more information is added it may then be provided to VT ANR and the Windham Regional Commission to update the appropriate data layers.

GIS data details:

The GIS dataset behind this map was created to be a comprehensive source for wetlands information for Putney. The following wetlands are included:

- All of the wetlands shown on the Vermont Significant Wetlands Inventory (VSWI) maps are represented and are coded as such. In many cases, the location of the boundaries of these wetlands are from the National Wetlands Inventory (NWI) maps, as we believe these maps to provide a more accurate boundary description.
- Any wetland shown on the NWI map but not on the VSWI map is also included. These wetlands may be "significant," but that determination has not been made. There is possibly one wetland that has been designated a Class 3 by Vt. ANR, meaning an actual determination has been made that the wetland is not "significant."
- Any other wetlands not on the VSWI or NWI maps can be added to the map, but this has not happened yet. The Conservation Commission encourages the addition of such locally identified wetlands on this map. The data fields may have to be altered to note locally identified wetlands

The source of the wetlands boundary is noted in the data. In most cases, the source is either the NWI or VSWI data (as stated above, where a wetland is represented in both data sets, the NWI data are generally used as they seem more accurate). Both data sets were developed from intermediate-scale aerial photos. In some instances, WRC has edited slightly these boundaries using large scale orthophotos. Wetland boundaries may also be from field mapping, most often using GPS. Note that these boundaries may or may not be part of an

official delineation performed by a wetland scientist. Regardless, the boundaries are likely more precise than those from NWI or VSWI sources. Boundaries of locally identified wetlands may also be rough approximations in order to, as a first step, get them represented on the map.

The chart below outlines the coding of wetlands in the data set.

Data layer fields:

VT_Sig_Wet	if the wetland has been designated a “significant wetland” by ANR (usually if it shows up on the Vt. Significant Wetlands Inventory) Y = yes, significant wetland (on VSWI map, Class 2) U = unknown (not on map, significance not determined) N = no, not significant as per ANR (rarely used, Class 3 wetland)
Bound_Srce	Source of wetland boundary NWI – from NWI GIS data VSWI – from VSWI GIS data Fieldapprox – mapped in field, not official delineation * see SRC_notes for more information
SRC_notes	Notes on source of boundary; indicates if VSWI or NWI data were edited using orthos, source of field mapping, etc.
ATTRIBUTE	Type (or classification) of wetland based on US Fish and Wildlife Service; data are from NWI maps; ‘P?’ is used for wetlands whose type are not known (generally not shown on NWI maps)
Manmade	Is the wetland manmade or altered; data from US Fish and Wildlife Service/NWI maps, supplemented by WRC from orthos if known (most manmade or altered wetlands <2 acres do not fall under Vt. Wetland Regs.)
Beaver	Is wetland a beaver pond; data from US Fish and Wildlife Service/NWI maps, supplemented by WRC from orthos if known
WRC_notes	Other notes as needed