



# Natural Resource Consulting Services

July 31, 2008

Mr. Tad Nunez, CPRP  
Town of Hartford Parks and Rec. Dept.  
171 Bridge St.  
White River Junction, VT 05001

**RE: Wetland Delineation Report, Melisi Road Hartford, VT**

Dear Mr. Nunez:

This letter reports on a wetland investigation performed at the above-referenced site in Hartford, VT by Natural Resource Consulting Services (NRCS).

## **Wetland Investigation**

We delineated the wetlands on the north end of Lot 3 of the Town of Hartford's Sports Park on July 8-12, 2008, to Vermont standards as defined in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (Federal Interagency Committee for Wetland Delineation, 1987). Vermont statute defines wetlands as "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

The three parameters diagnostic for wetlands are the presence of hydric (wetland) soils, a preponderance of hydrophytic vegetation (plants adapted for growth in saturated conditions), and wetland hydrology. Generally, to be considered a wetland all three criteria must be met.

The standard reference for determination of whether or not a plant is a wetland species is: Reed, Porter B., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northeast (Region 1) Biological Report 88 (26.1), USDA Fish and Wildlife Service, Research and Development, Washington, DC. This report classifies all local plants into five indicator categories based upon their frequency of occurrence in various habitat types.

The wetland was flagged with sequential alpha-numerically coded blue surveyor's flagging labeled A1-A26. The wetland was a Palustrine forest, dominated by deciduous trees, with an understory of emergent non-persistent ground cover, classified as PFO1/EM2. The dominant species in the wetlands are Red Maple, and Green Ash, with limited Spice Bush, and Speckled Alder, and a dense growth of Cinnamon and Sensitive Fern. Typical wetland and upland vegetation species observed on the site are listed in Table 1.

## Soils

We checked the Windsor County USDA Natural Resources Conservation Service website for soil information [see attached map]. The native on-site soils consist of, Hinkley (sandy loam) which is excessively drained, Ninigret (fine sandy loam) which is moderately well drained, both of which are in the southern side of Lot 3. On the northern end of Lot 3 there is Pondicherry and Wonsqueak (mucks and ponded) which are very poorly drained soils. The Lot is gently sloping to the north and parts are man-modified [including a recently constructed detention pond, an emergency gravel access road]. Lot 3 is largely well drained field in the south and a poorly drained forest thicket in the north.

Hinckley soils are very deep, excessively well-drained and formed in water sorted glacial material, so they drain very well, surface run-off is nil. Ninigret soils are also very deep, moderately well-drained and are formed in loamy areas over sand and gravel glacial outwashes. Pondicherry and Wonsqueak soils are lumped together on the Federal Soils Map; they are nearly level soils hydric soils. They are formed in depressions or similar fluvial situations and do not drain well, unless under-drained or ditched.

**Table 1. Vegetation Observed at Melisi Road Hartford, VT**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<b>Wetland Species</b>		
<i>Typha latifolia</i>	Cattail, Broad Leaf	OBL
<i>Phalaris arundinacea</i>	Reed Canary Grass	FACW
<i>Equisetum arvense</i>	Horsetail	FAC
<i>Salix discolor</i>	Pussy willow	FACW
<i>Populus deltoides</i>	Cotton-wood	FAC
<i>Acer rubrum</i>	Red Maple	FAC
<i>Betula allegheniensis</i>	Yellow Birch	FAC
<i>Osmunda cinnamomea</i>	Cinnamon Fern	FACW
<i>Onoclea sensibilis</i>	Sensitive Fern	FACW
<i>Osmunda claytoniana</i>	Interrupted Fern	FAC
<i>Impatiens capensis</i>	Jewel Weed	FACW
<i>Carex spp.</i>	Sedge	FACW
<i>Ulmus americana</i>	American Elm	FACW-
<i>Fraxinus pennsylvanica</i>	Green Ash	FACW
<i>Viburnum trilobum</i>	High Bush Cranberry	FACW
<i>Rhamnus frangula</i>	Buckthorn	FAC

### Upland species

<i>Tsuga canadensis</i>	Eastern Hemlock	FACU
<i>Pinus strobes</i>	Eastern white pine	FACU
<i>Fraxinus americana</i>	White Ash	FACU
<i>Acer saccharinum</i>	Sugar Maple	FACU
<i>Hamamelis virginiana</i>	Witch-Hazel	FAC-
<i>Quercus rubra</i>	Red Oak	FACU-
<i>Fagus grandifolia</i>	American Beech	FACU
<i>Carpinus caroliniana</i>	Muscle Wood	FAC
<i>Prunus serotina</i>	Black Cherry	FACU
<i>Lonicera japonica</i>	Japanese Honeysuckle	FAC-
<i>Parthenocicis quinquefolia</i>	Virginia Creeper	FACU
<i>Rubus strigosus</i>	Red Raspberry	FAC-
<i>Sassafras albidum</i>	Sassafras	FACU-
<i>Populus tremula</i>	Quaking Aspen	FACU
<i>Taraxacum officinale</i>	Dandelion, Common	FACU-
<i>Asclepias variegata</i>	White Milkweed	FACU
<i>Poa pratense</i>	Kentucky Blue Grass	FACU
<i>Phloem pratense</i>	Timothy	FACU
<i>Festuca ovina</i>	Sheep Fescue	FACU

**Obligate (OBL)** - Always found in wetlands under natural conditions (frequency greater than 99%).

**Facultative wetland (FACW)** - Usually found in wetlands (67-99% frequency) but occasionally found in non-wetlands.

**Facultative (FAC)** - Sometimes found in wetlands (34-66% frequency) but also occurs in non-wetlands.

**Facultative upland (FACU)** - Seldom found in wetlands (1-33% frequency) and usually occurs in non-wetlands.

A positive (+) or negative (-) symbol is used with the facultative indicator to more specifically define the regional frequency of occurrence in wetlands. A positive sign indicates a frequency towards the higher end of the category (more frequently found in wetlands), and a negative sign indicates a frequency toward the lower end of the category (less frequently found in wetlands).

\*\* = not classified

NI = no information

NR = not rated

Source = Biological Report 88 (26.1) May 1988. National List of Plant Species that Occur in Wetlands: Northeast (Region 1).

### Wetland Jurisdiction

We have reviewed the National Wetland Inventory Map, the Vermont Significant Wetland Map, and the USDA Soil Conservation Service soil map. We also checked the Town of Hartford's wetland map, but it appears to be a duplicate of the NWI map. Each of these maps shows a large wetland complex consistently shown on the east of Route 5 and south of I-89, indicating that the wetland is large, diverse and has been in existence for at least the 25 history of the above-referenced maps.

Bruno Associates filed a VANR Conditional Use determination application for Class II wetland and buffer impacts for the road and infrastructure for the Town's Sports Park. So, there is local precedent for the wetland complex to be categorized as Class II, and therefore, subject to the State of Vermont's Wetland Law. We have looked along the wetland between the main down-gradient access road crossing of the wetland and the wetland on Lot 3. I have not found any break in contiguity along the wetland, north to south, or east to west.

The wetlands were mapped in 1997, and 2005 by others. We have produced a composite map of all three delineations for your review [attached]. Remember that our wetland line also needs to have a 50-foot upland buffer around it for permitting purposes.

It is our conclusion that the wetlands on the north end of Lot 3 are jurisdictional under Vermont State Department of Conservation rules. The site's wetlands are within Federal jurisdictional.

If you have any questions regarding this report, please do not hesitate to contact me. Thanking you in advance for your continued confidence in Natural Resource Consulting Services, I remain,

Very truly yours,

Peter W. Spear  
Certified Wildlife Biologist (The Wildlife Society)  
Professional Development Certificate (The Wildlife Society)  
Professional Wetland Scientist (Society of Wetland Scientist)  
Certified Environmental Professional (National Association of Environmental Professionals)  
Certified in Habitat Evaluation Procedures (US Fish and Wildlife Service)  
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Attachments