

**State of Vermont  
Water Resources Board**

**Re: Whipstock Wetlands  
Town of Bennington, Vermont**

**Docket No. WET-05-02**

**ADMINISTRATIVE DETERMINATION**

(Issued April 29, 2005)

This decision pertains to a petition filed with the Water Resources Board (Board) requesting the Board to amend the Vermont Significant Wetland Inventory (VSWI) Map for the Town of Bennington to reflect the actual current boundaries of two Class Two wetland complexes (Whipstock Wetlands). As explained below, the Board grants the requested relief and orders that the subject VSWI map be amended to reflect the boundary delineation submitted by the Petitioners.

**I. PROCEDURAL HISTORY AND JURISDICTIONAL STATEMENT**

On January 14, 2005, the Whipstock Hill Preservation Society, Inc. (WHPS) and Anne Hymee Allen (collectively, Petitioners), represented by William Bartlett, consultant, filed a petition with the Board asking it to amend the applicable Vermont Significant Wetland Inventory (VSWI) Map to more accurately reflect the current boundaries of the Whipstock Wetlands (Petition).

On January 21, 2005, the Board Chair determined that the petition was in substantial compliance with VWR § 7 of the Vermont Wetland Rules (eff. Jan. 1, 2002) (VWR) and the Board's Rules of Procedure (Procedural Rules). On January 21, 2005, the Chair sent a letter to the Petitioners's representative acknowledging receipt of the petition and enclosing a Notice of Petition. He also sent the Notice of Petition to all persons required to receive notice pursuant to VWR § 7.

The Notice of Petition was published by the Board in the *Bennington Banner* on January 22, 2005. It provided a deadline of 4:30 p.m., Wednesday, February 23, 2005, for the filing of public comment and requests for a hearing. The Board received no written comment and only one request for a hearing, this from Albert and Virginia Ray of Bennington.

The Board held a public hearing, starting at 11:00 a.m., on April 12, 2005, at the Inn of the Six Mountains, 2617 Killington Road, Killington, Vermont. Those offering testimony in support of the Petition were: William Bartlett, consultant; Leik Myrabo, President of WHPS, Jim Henderson of the Bennington County Regional Commission (BCRC); and Alan Quackenbush of the Wetlands Office, ANR. Offering testimony in opposition to the Petition was Albert Ray of

Bennington.<sup>1</sup>

The Board deliberated on April 12, 2005. It considered the Petition pursuant to 10 V.S.A. § 905(7)-(9) and Vermont Wetland Rule (VWR) § 7.1(d), which allows the Board to determine the boundaries of a significant wetland.<sup>2</sup> Based on its review of the Petition, the testimony and exhibits from the public hearing, and wetland inventory maps in the public records of the Board, the Board reached the following decision.

## II. FINDINGS

1. The Whipstock Wetlands are shown on the National Wetland Inventory (NWI) Maps 9(C) and 19(A) as two wetland polygons located west of the W.H. Morse State Airport, north of Walloomsac Road, and east of Whipstock Road. The northerly polygon is identified, in part, as a Palustrine, intermittently-exposed, permanent wetland with open water (POWZ) and, in part, as a Palustrine, emergent wetland, which has at least seasonally saturated soils (PEMY). The southerly wetland is identified as a Palustrine, scrub/shrub wetland with saturated soils (PSSIY).
2. NWI Maps 9(C) and 19(A) were developed in the 1970s using high altitude and aerial photographs. The wetlands were identified using stereoscopic analysis of the photographs based on vegetation, visible hydrology, and geography. Accordingly, the polygons identified on NWI Maps 9(C) and 19(A) may or may not identify the size and configuration of the wetlands as they exist today.
3. The combined area of the two NWI-mapped polygons representing the Whipstock Wetlands is approximately 8 acres in combined surface area, applying a dot grid methodology for calculating surface area.
4. The two NWI-mapped polygons appear on the Vermont Significant Wetland Inventory (VSWI) map for the Town of Bennington developed by ANR staff pursuant to VWR § 4.5(a).

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<sup>1</sup> Also present were: Harvey Carter, Esq., counsel for the Petitioners; Kate McQuerrey, Program Director, WHPS; Virginia Ray of Bennington; and Tom Mitchell, reporter, *Rutland Herald*.

<sup>2</sup> Because the Petition was docketed and publicly noticed prior to January 31, 2005, it was considered under 10 V.S.A. § 905(7)-(9) in accordance with the Board's transitional authority under Act No. 115, Sec. 121(b)(2)(A). (Adj. Sess. 2003).

5. Recognizing that the depiction of the Whipstock Wetlands on the VSWI map for Bennington County did not accurately reflect the size and configuration of the wetlands as they currently exist, Jim Henderson, Senior Geographic Information System (GIS) Planner at BCRC conducted a field delineation of the Whipstock Wetlands with technical assistance from Alan Quackenbush, District Wetlands Ecologist with the Wetlands Office, ANR.
6. Mr. Quackenbush instructed Mr. Henderson regarding the relevant wetland parameters that need to be considered in distinguishing upland areas from wetland areas. These are vegetation type and occurrence, soils, and hydrology.
7. Mr. Henderson then spent two days in the field with a global positioning system (GPS) instrument. With this GPS unit, he walked the perimeters of the two wetland complexes, plotting the coordinates for the boundaries between upland and wetland areas as he proceeded.
8. Mr. Henderson visited most of the properties within or contiguous of the Whipstock Wetlands, by permission of the landowners. The only property where Mr. Henderson was not able to complete his boundary determination work was real property owned by Kevin and Sandra Dunican, Sr., on the south side of Walloomsac Road. The Dunicans's address is 2100 Walloomsac Road, Bennington. The Dunicans declined to grant access to their real property, which includes the southwestern portion of the southerly wetland complex. This wetland area is associated with two streams that flow through the Dunican property. The southeasterly portion of the southern wetland complex that extends south of Walloomsac Road is located on real property owned by WHPS President, Leik Myrabo. Mr. Myrabo's address is 1914 Walloomsac Road, Bennington. Mr. Henderson was able to determine the wetland boundary on Mr. Myrabo's real property.
9. The GPS coordinates recorded by Mr. Henderson were used by him to develop a computer-generated map, using Arcinfo™ GIS software to generate a wetlands boundary data layer based on Mr. Henderson's GPS coordinates. The map prepared by Mr. Henderson is referred to in the Petition as Attachment 5. This map depicts the wetland boundary determination that the Petitioners would have the Board adopt, in lieu of the present NWI-mapped polygons, and direct the ANR to use in revising the applicable VSWI map for the Town of Bennington.
10. Mr. Quackenbush accompanied Mr. Henderson during at least part of his field work and reviewed Attachment 5. This allowed Mr. Quackenbush to field-verify the accuracy of Mr. Henderson's work. Based on his review, Mr. Quackenbush believes that the map generated by Mr. Henderson, Attachment 5, represents a reasonable approximation of the

mapped and unmapped contiguous wetland areas comprising the two Whipstock Wetlands. He determined that the boundaries between wetland areas and upland are quite distinct, with the change in topography and vegetation types (principally honeysuckle) being an indicator of upland areas. Mr. Quackenbush also confirmed that the un-mapped wetlands contiguous with the mapped wetland areas are significant for a number of wetland functions.

11. Field evaluation of the wetland complexes reveals that the Whipstock Wetlands actually include a mix of the following wetland types: forested swamps, shrub swamps, emergent marshes and open water wetlands. The northern wetland complex consists of Alan's Pond, a man-made water body, surrounded by various wetland types. Beaver impoundments constructed since the 1970s have contributed to the expansion of this wetlands complex to areas that were previously used for agriculture. These areas are now largely emergent marshes dominated by cattails, with forested wetlands along the margins. The southern wetland complex is composed of a small pond with associated scrub/shrub swamp. While the NWI polygon representing this wetland is located north of Walloomsac Road, the wetland complex in fact extends south of this town highway onto
12. Based on Mr. Henderson's analysis, the Whipstock Wetlands comprise an estimated total of 80 acres in contiguous wetland surface area. Mr. Henderson calculated this acreage using GIS Arcinfo™ software and the GPS coordinates he was able to collect in the field, rather than the dot grid methodology previously used by Mr. Quackenbush. The discrepancy between the surface area of the NWI-mapped polygons and the field delineated wetlands surface area is ten-fold. This discrepancy is due in part because of the difficulty of accurately interpreting certain forested wetlands and other features at the time of the initial development of the NWI maps, given the scale of the aerial photography used, and also because the hydrology of the wetland complexes have changed over time due to beaver activity. Because there is an unusual but significant discrepancy between the NWI / VSWI maps and the map generated by Mr. Henderson, ANR supports the Petitioners's request for a modification of the VSWI map to reflect the current wetland boundaries identified by Mr. Henderson.
13. The largest tract of real property within the Whipstock Wetlands Complex is owned by the Vermont Agency of Transportation (VTrans), which owns and operates the W.H. Morse State Airport. WHPS has worked with staff from VTrans, and also with ANR, area conservationists and sportsmen, to secure the long-term protection of the Whipstock Wetlands.
14. Albert and Virginia Ray own an approximately 1.5 acre parcel and residence just west of Airport Road. Their address is 106 Airport Road, Bennington. They estimate that one-third of their real property falls within the southerly wetland complex delineated by Mr.

Henderson. The Rays acquired this property twenty-five years ago. Beaver activity on adjacent property in the past four or five years has changed the hydrology of the area. This is responsible for the current inundation of the area adjacent to the Ray's property, thereby creating two ponds that do not appear on Mr. Henderson's map. This activity may also be responsible for the creation of saturated soils on the Ray's property. The Rays fear that if such beaver activity continues, the area of inundation could increase to consume part of their real property.

15. The Rays are concerned that the beaver activity will create water quality problems with their well, principally E. coli contamination, and also possible adverse impacts on their septic system leach field. The Rays oppose Board adoption of the proposed wetland boundary determination because it would memorialize the existence of a wetland on their real property and reduce their property values. The Rays will be meeting in May with Mr. Quackenbush and another member of the ANR staff to discuss how the Rays may lawfully address the impacts of beaver activity upon their real property.
16. The wetland boundary determination prepared by Mr. Henderson has been proposed by Petitioners for Board adoption so as to provide property owners and regulators with reasonable notice of the current location of the Whipstock Wetlands boundaries. The proposed wetland delineation is intended to be *advisory* only. A more detailed and accurate wetland boundary determination, having jurisdictional effect, would need to be performed at such time as any real property owner within or adjacent to the mapped wetlands proposes to develop his or her property or conduct other activities that are not treated as "allowed uses" under the VWR.

### III. CONCLUSIONS OF LAW

This is the first instance in the Board's fifteen years of administering the Vermont Wetlands Program that it has been asked to determine the boundaries of significant wetlands and direct the amendment of the applicable Vermont Significant Wetland Inventory map to reflect the Board's determination.

The power to make such rulings is derived from 10 V.S.A. § 905(7)-(9). Section 905(9) specifically authorizes the Board to adopt rules protecting wetlands which have been determined to be significant wetlands. In 1990, the Board adopted the Vermont Wetland Rules (VWR) to implement its statutory authority. Under VWR § 4.2(b), "[a]ll wetlands shown on the NWI maps for the State of Vermont (1978) published by the U.S. Fish and Wildlife Service, and all wetlands contiguous to such mapped wetlands, are presumed to be Class Two wetlands, unless determined otherwise by the Board. . . ." The two Whipstock Wetlands appear on the NWI maps covering the Town of Bennington and therefore are presumed to be Class Two significant wetlands. No

petition has been filed pursuant to VWR § 7 to challenge the presumptive significance of these wetlands. Accordingly, in order to assure protection of the mapped wetlands and those contiguous to them, the Board may, on its own motion or upon the filing of a proper petition pursuant to VWR § 7.1(d), determine the boundaries of the Whipstock Wetlands. In this instance, WHPS and Anne Hymee Allen have petitioned the Board for such a determination.

A. “Standing” of the Petitioners

The present Petition was filed pursuant to VWR § 7.1. That provision states in relevant part:

The Board, upon receipt of a petition from a state agency . . . an affected landowner, 15 or more persons in interest, an organization in interest with 15 or more members, or on its own motions, shall: . . . (d) Determine the boundaries of a significant wetland.

Anne Hymee Allen qualifies as “an affected landowner,” since Ms. Allen owns real property which encompasses most of the northerly of the two wetland complexes constituting the Whipstock Wetlands.

The wetlands are located in the vicinity of Whipstock Hill. WHPS is a non-profit organization with 15 or more members, incorporated by the State of Vermont for the purposes of, among other things, protecting and preserving the scenic and natural resources of Whipstock Hill and environs, including wetlands. See Petition, Appendix C, and Attachments 6 and 7. Based on the documents filed with the Petition, the Board concludes that WHPS is an organization “in interest” with 15 or more members and therefore has the requisite standing to file a petition pursuant to VWR § 7.1(d). Compare with, Re: Residents of Northeast Kingdom Preservation, LTD, WET-98-03, Dismissal Order (May 13, 1999) (petitioner failed to demonstrate that it was an organization “in interest,” pursuant to VWR § 7.1.)

B. Wetlands Boundary Determination

The Petitioners assert that the areas shown on the applicable NWI maps and therefore the present VSWI map for the Town of Bennington do not accurately reflect the boundaries of the two Class Two wetlands in question. They ask the Board to approve the boundary determination prepared by Mr. Henderson and to direct ANR to amend the applicable VSWI map to reflect their more accurate depiction of the wetland complexes constituting the two Whipstock Wetlands.

VWR § 4.5(a) states that NWI maps which are “revised to conform with these rules,” including subsequent determinations of the Board, are to be known as the “VSWI maps.” Pursuant to VWR § 4.5(a), the Secretary of ANR is required to publish VSWI maps for each town, using the Geographical Information System (GIS) format, and “[o]ne year from the

effective date of these rules and annually thereafter, the Secretary must revise the affected VSWI maps to: reflect the actions of the Board in the preceding calendar year pertaining to the classification of wetlands. . . .”

In the present matter, the Board has found that there is a ten-fold difference in the total acreage of the two Whipstock Wetlands represented on the applicable NWI maps (Maps #19(A) and 9(C)) and the more refined delineation of the wetland complexes prepared by Mr. Henderson under the direction of ANR staff. This difference is significant, but not surprising, given the limitations of the mapping technology available at the time the NWI maps were generated for the Bennington area and also due to the dynamic nature of wetlands, including the influence of beaver activity. It is precisely because the NWI maps, and therefore the current VSWI map for the Town of Bennington, do not accurately reflect the actual boundaries of these wetlands that the Board cautions regulators and the public from using such maps for other than advisory purposes. VWR § 4.5(b), entitled “Use and Limitations of VSWI maps,” specifically states:

All Class One or Class Two wetlands shown on the VSWI maps and all wetlands contiguous to such mapped wetlands are protected as significant wetlands under these rules. The VSWI maps should not be relied upon to provide precise information regarding the location or configuration of significant wetlands (see Section 3.2). They are intended to denote the *approximate* location and configuration of significant wetlands.

(Emphasis added.)

To obtain a more precise determination of the location or configuration of a significant wetland, VWR § 4.5(b) refers the reader to the methodology set forth in VWR § 3.2. VWR § 3.2(a) states that the boundary between a wetland and an upland shall be delineated by the methodology set forth in the 1987 edition of the Federal Manual for Identifying and Delineating Jurisdictional Wetlands. This methodology employs three parameters: vegetation, soils and hydrology. VWR § 4.5(b) clearly states, in relevant part, that “The actual boundaries of wetlands shown on the VSWI maps shall be determined *in the field* in accordance with the methodology provided for in Section 3.2(a).” (Emphasis added).

The Board is satisfied that the boundary determination prepared by Mr. Henderson, under the direction of Mr. Quackenbush, minimally satisfies the methodology requirements of VWR § 3.2(a). While Mr. Henderson’s field work did not involve the degree of detail that would be required for a boundary determination in connection with a specific development proposal (such as the use of transects identifying representative areas where wetland soils, plants, and hydrology are present), it nonetheless comports with the requirements of VWR § 3.2(a) in that Mr. Henderson took into consideration the three parameters of vegetation, soils and hydrology in making field determinations of the boundary between wetland and upland areas. Based on his evaluation of Mr. Henderson’s work, Mr. Quackenbush believes that the map provided to the

Board by the Petitioners is an accurate representation of the current wetland boundaries for the Whipstock Wetlands for the limited purpose for which it is intended – that is, to provide notice of the *approximate* locations and configurations of the two Class Two wetland complexes.

As noted previously, this is the first time that the Board has been asked to amend a VSWI map to more accurately reflect the boundaries of a wetlands complex. In the past, the Board has relied on the general rule, VWR § 4.2(b), to assure that all un-mapped wetlands contiguous to NWI-mapped wetlands are presumed to be Class Two wetlands and therefore merit the protection of Vermont law. See Re: Calvin Murray, Docket No. WET-03-03, Administrative Determination (October 27, 2003) (hereinafter Murray). This approach to wetlands mapping and interpretation has survived legal challenge. Secretary, Vermont Agency of Natural Resources v. Irish, 169 Vt. 407 (1999) (Supreme Court upheld enforcement action by Secretary of ANR for an unauthorized encroachment into an unmapped wetland that was contiguous to a mapped wetland.) However, as the Board has previously concluded, there is merit in updating VSWI maps to correct errors or more accurately reflect wetland complexes when the opportunity arises to prepare a more accurate delineation. This is why the Board decided in the Murray case to instruct ANR to modify an inaccurate VSWI map to: (1) reflect that some of an existing mapped polygon was not a wetland at all and that the remainder of that polygon was a forested wetland rather than an open water wetland; and (2) “depict the larger wetland complex on the petitioner’s property that is contiguous to the wetlands within the currently mapped polygon for his property.” Murray at 11. In the present case, it is the *Petitioners*, rather than ANR, who have provided the Board with a depiction of the wetland complexes constituting the Whipstock Wetlands.

Albert and Virginia Ray have asserted that the wetland boundary determination map prepared by Mr. Henderson is not accurate enough in that it does not show two beaver-constructed ponds in the southern wetland complex adjacent to their real property. Mr. Henderson concedes that the surface waters on the map included with the Petition does not show these ponds, because BCRC used orthophotos from May 1990 to prepare computer-generated maps for stream and ponds in Bennington County, the methodology that was used was limited to a mapping unit of three acres, and the beaver ponds are of relatively recent origin. Nevertheless, the Board is satisfied that for the limited purpose of showing the approximate location and configuration of the current *wetland* boundaries, Mr. Henderson’s map is sufficiently accurate.

The Rays also have expressed concern that the southern wetland complex may in fact either expand or retract over time, depending on whether beaver activities are allowed to continue within this wetland. The Board agrees with the Rays that wetlands are dynamic natural systems and therefore, over time, wetland boundaries can and often do change. As the Board stated in one proceeding:

It is important to note that wetlands are non-static ecosystems. A wetland’s boundaries are constantly in flux, as a result of both natural and man-made forces. Therefore,



although the Board is empowered to make “final” boundary determinations, based on such considerations as hydrology, soil types and wetland vegetation, such boundaries can be expected to change over time.

Re: Reclassification Moon Brook Wetland, Docket No. WET-94-02, Memorandum of Decision at 4 (Apr. 3, 1996).

It is precisely because wetlands are so dynamic that ANR and the Board have required applicants for conditional use determinations (CUDs) to file current, detailed, parcel-specific wetland delineations as part of their CUD applications when a particular development project may encroach upon a significant wetland or its protected buffer zone. It is *this* site-specific wetland delineation, rather than the polygons on an NWI or VSWI map whether or not revised, which has jurisdictional consequences and regulatory effect.

While the Board is sympathetic to Rays’s concerns about potential beaver damage to their well and septic system, the proper forum for resolving how best to address these concerns is not in the context of a boundary determination proceeding under VWR § 7.1(d). Rather, consultation with representatives from ANR about how to apply the agency’s “Beaver Policy” is the appropriate means for obtaining such relief. Nevertheless, the Rays are forewarned that, whether or not the outcome of this consultation is the removal of the beaver impoundment(s) or other measures to reduce the impacts of beaver activities, a wetland may still exist on a portion of their real property, not because of the map prepared by Mr. Henderson, but because of the continuing presence of hydric soils, wetlands vegetation, and at least seasonal saturation.

In conclusion, the Petitioners have satisfied the Board that, given the significant discrepancy that exists between the polygons represented on the current VSWI map and the map generated by Mr. Henderson, it is prudent that the Board grant the Petition and direct ANR to amend the VSWI map for the Town of Bennington to reflect the wetland boundaries mapped by Mr. Henderson. The Board is cognizant that boundary coordinates for a portion of the southern wetland, located on the Dunican property, are not available. Accordingly, the Board instructs ANR to include on the applicable VSWI map a note, beside the revised polygon for this wetland complex, that cautions the viewer that the boundary determination for this area is not complete but that the southern wetland complex extends into this area.

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**IV. ORDER**

It is hereby ordered:

1. The Petition filed by the Whipstock Hill Preservation Society, Inc. and Anne Hymee Allen is granted.
2. The Wetlands Office, Water Quality Division, Department of Environmental Conservation, ANR, is directed to revise the Vermont Significant Wetland Inventory Map for the Town of Bennington to reflect the boundary determination for the Whipstock Wetlands prepared by Jim Henderson of the Bennington County Regional Commission, included as an attachment to this decision. A note shall be placed on the VSWI map indicating the date of this order and, with respect to that portion of the southern wetland complex located on real property currently owned by Kevin and Sandra Dunican, Sr., the Wetlands Office shall indicate that the wetland boundary has not been determined, but that the wetland complex extends onto the Dunican property.

Dated at Montpelier, Vermont, this 29th day of April, 2005.

WATER RESOURCES BOARD

/s/ John F. Nicholls

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John F. Nicholls, Chair

Concurring:

Lawrence H. Bruce, Jr.  
Michael Hebert  
Joan Nagy  
John D.E. Roberts

**Whipstock Rd**

Route 279  
Mitigation Parcel

W.H. Morse  
State Airport

**Walloomsac Rd**

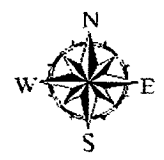
850  
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- Parcel Lines
- ROWs
- Air Strip
- 50 Foot Contours
- Rivers and Streams
- Ponds
- NWI Wetlands
- GP-Sed Wetland
- Conserved Lands

600 0 600 1200 Feet



Map produced December 16, 2004 by BCRC