Vermont Agency of Natural Resources
Department of Environmental Conservation
Watershed Management Division

Class I Determination Rulemaking Decision
Issued Pursuant to Section 4.3 of the Vermont Wetland Rules

In the matter of:

Agency of Natural Resources
For the reclassification of the Sandbar Wetland Complex from Class II to Class I with a 100-foot buffer zone.
Located on both sides of Rte. 2 in Milton, Colchester, Vermont

File #: 2016-346

The Secretary may, upon a petition or on his or her own motion, determine whether any wetland is a Class I wetland, pursuant to 29 V.S.A. § 410. The Secretary may establish the necessary width of a buffer zone of any Class I wetland as part of any wetland determination pursuant to the Rules. Section 4.2 of the VWR

As required under 29 V.S.A. § 410 and Section 7 VWR, this wetland determination is based on an evaluation of the extent to which the wetland serves the functions and values of Rules, is **exceptional or irreplaceable in its contribution to Vermont's natural heritage** and, therefore, merits the highest level of protection. Public notice of this wetland determination has been given in accordance with Section 8.3 of the VWR.

Summary:

1. The State of Vermont's Wetlands Program initiated this determination process in May of 2016. The Wetlands Program, acting under its own motion, has gathered various documentation and data for a Wetland Determination. Because there was no petition submitted by a third party, no petition was placed on notice. The draft determination and informational materials were sent to all landowners on July 11, 2016, a meeting with landowners was held July 19th, 2016, and VTrans officials were briefed on the determination intent August 1, 2016.

2. The subject wetland is located within the towns of Milton and Colchester along the north and south sides of U.S. Route 2, just east of the road causeway that crosses Lake Champlain and provides access to the islands. Much of the complex is owned by the State of Vermont (Fish & Wildlife). The wetland is found along the delta of the Lamoille River as it flows into Lake Champlain. The Sandbar State Park is adjacent to the wetland complex, and the

Sandbar Wildlife Management Area encompasses a large area of the wetland. The Sandbar wetland complex is over 1,200 acres in size and is located on a large delta between the mouth of the Lamoille River and Lake Champlain. A variety of wetland types such as riverine floodplain forests, lakeside floodplain forests, emergent marshes, vernal pools and shrub wetlands persist throughout the complex. A map showing the approximate location of the proposed Class I wetland is attached.

3. District Wetland Ecologists Shannon Morrison, Julie Foley, and Danielle Owczarski conducted a site visit to the subject property with Everett Marshall and John Gobeille on July 7, 2013.

   The wetland in question is currently identified as a Class II wetland on the Vermont Significant Wetlands Inventory (VSWI) map. This review is to reclassify this wetland from Class II to Class I, change the buffer zone with to the default 100-foot buffer zone established under Section 4.2 of the VWR, and to update the VSWI map to define the general location of the Class I wetland.

4. The wetland in question is described by the Natural Heritage Inventory of the Vermont Department of Fish and Wildlife as a large delta wetland complex approximately 1,359 acres in size (Engstrom, 1997). It hosts a mosaic of natural communities, including Silver Maple-Ostrich Fern Riverine Floodplain Forests, Silver Maple-Sensitive Fern Riverine Floodplain Forests, Lakeside Floodplain Forests, Wet-Sand-Over-Clay Forests, Red or Silver Maple-Green Ash Swamps, Alder Swamps, and Deep Bulrush Marshes. The wetland complex sits along a large delta between the Lamoille River and Lake Champlain and serves as a transitional environmental between the two waterbodies. The wetlands provide pristine habitat for many wildlife and fish species to breed, spawn, and feed, and also provides shelter and food for a variety of migratory waterfowl. Twenty-nine rare, threatened, and endangered species have been documented within the Sandbar wetland complex and include both wildlife and plants. This large delta wetland serves important functions that help to store and filter water before entering Lake Champlain, and also provides erosion protection by slowing down the erosive forces of the lake. The wetland complex hosts the oldest Wildlife Management Area (WMA) in the state, and access to some limited portions of the complex are possible through the WMA, the Lamoille River, and Lake Champlain. Additionally, the public can visually enjoy the wetlands from pull-offs along Route 2. The wetland complex also supports long-term monitoring experiments and educational research. Overall, the Sandbar wetland complex is exceptional and irreplaceable to Vermont's natural heritage because it provides significant water quality protection for Lake Champlain, hosts extensive and uncommon natural communities, is home to a number of rare, threatened and endangered species, and considered a valuable research site for long-term scientific monitoring.

Findings

As required by 10 V.S.A. § 914 and Section 7 of the VWR, this wetland determination is based on an evaluation of the functions and values of the subject wetland as described in Section 5 of the VWR. Section 5 provides that in evaluating whether a wetland is a Class II or a Class I wetland, the Secretary shall evaluate the functions that the wetland serves both as a discrete wetland and in

conjunction with other wetlands by considering detailed functional criteria. Consideration shall be given to the number of and/or extent to which protected functions and values are provided by a wetland or wetland complex.

1. The protected functions of the subject wetland include the following: water storage for flood water and storm runoff as described in Section 5.1 of the VWR; surface and groundwater protection (Section 5.2); fisheries habitat (Section 5.3); wildlife and migratory bird habitat (Section 5.4); exemplary wetland natural community (Section 5.5); rare, threatened and endangered species habitat (Section 5.6); education and research in natural science (Section 5.7); recreational value and economic benefits (Section 5.8); open space and aesthetics (Section 5.9); and erosion control through binding and stabilizing the soil (Section 5.10).

2. The following protected functions are considered exemplary or irreplaceable: water storage for flood water and storm runoff as described in Section 5.1 of the VWR; surface and groundwater protection (Section 5.2); fisheries habitat (5.3), wildlife and migratory bird habitat (Section 5.4); exemplary wetland natural community (Section 5.5); rare, threatened and endangered species habitat (Section 5.6), education and research in natural science (Section 5.7), and erosion control through binding and stabilizing the soil (Section 5.10).

3. **Water Storage for Flood Water and Storm Runoff**
   Wetlands that provide for the temporary storage of floodwater or stormwater runoff to the extent that they make an important contribution to reducing risks to public safety, reducing damage to public or private property reducing downstream erosion or enhancing the stability of habitat for aquatic life are significant wetlands.

   The delta wetland complex serves as a transitional environment between two major waterbodies, the Lamoille River and Lake Champlain. Lakeside Floodplain Forests and emergent marshes adjacent to Lake Champlain and Riverine Floodplain Forests adjacent to the Lamoille River provide physical space for floodwater expansion and retention that intercepts and holds surface waters while decreasing flow velocities. The complex is exceptionally large in size (over 1,000 acres) and can significantly slow down and hold floodwaters that may damage lakeside and downstream properties.

   This wetland's exceptional water storage buffering ability during large-scale lake flooding is becoming more important and necessary, as the average mean level of Lake Champlain has been increasing over time. Vermont has also been experiencing larger and flashier flood events in-land due to climate change, so the function of this delta wetland to help store and depress the runoff peak of floodwaters being carried out into the Lake is critically important.

   The floodwater storage is significant when looking at the impacts to private property and public safety. The exceptionally large wetland complex helps to store flood water that would otherwise be stored on and diverted onto other properties. When looking at the high water marks (HWM) that were surveyed by the U.S. Geological Survey (USGS) in the aftermath of the 2011 lake flooding, the surveyed high water in this wetland complex is the

second highest observed in the entire Vermont lakeshore of Lake Champlain (102.78', while the Rock River confluence was surveyed in at 102.99') as described by USGS and the Federal Emergency Management Agency (FEMA). The HWM was surveyed from the eastern edge where Route 2 enters the oxbow channel of the large confluence area and helps to demonstrate how much water is observed and stored in this area in the historic, highest-ever recorded lake levels in 2011. If this wetland was impacted or further altered, it would affect the ability of the wetland complex to store floodwaters that would be diverted to other neighboring properties.

The wetland is exceptional and irreplaceable for the water storage of flood water and storm runoff function.

4. Surface and Ground Water Protection

Wetlands that make an important contribution to the protection or enhancement of the quality of surface or of ground water are significant wetlands.

The Sandbar complex's hydroperiod remains permanently flooded or saturated through most of the year being a transitional ecosystem between land, river, and lake. The deltas contain a high amount of microtopography created by the dense persistent vegetation which provides an obvious filter between slow-moving water and sediments, nutrients, and toxins. The wetlands are also exceptional in trapping and slowing down high-velocity flows during flashy storm events and capture sediment and debris that would otherwise add to water quality impairment. By significantly slowing down the velocity of floodwater transitioning to the lake, it allows for the sediment and debris carried in the floodwaters to settle and be stored in addition to the water itself. The capture and storage of fine sediment that may contain phosphorus can be used by the dense wetland vegetation rather than be carried out into the open lake. The complex's water quality function is significant due to its 1,359-acre size and natural vegetation, and its position as a delta between two large waterbodies.

The wetland is exceptional and irreplaceable for the surface and ground water protection function.

5. Fish Habitat

Wetlands that are used for spawning by northern pike or that are important for providing fish habitat are significant wetlands.

The Sandbar wetland complex provides spawning, feeding, nursery and cover habitat for fish species based on its landscape position between Lake Champlain and the Lamoille River. The complex includes both deep and shallow marshes and seasonally flooded wetlands like lakeside floodplain forests that are significant for fish spawning and survival. Several fish species use parts of this complex for spawning, including northern pike, chain pickerel, redfin pickerel, largemouth bass, sunfish, bowfin, and bullhead.

The wetland is exceptional and irreplaceable for the fish habitat function.

6. Wildlife Habitat

Wetlands that support a significant number of breeding waterfowl, including all species of ducks, geese and swans, or broods of waterfowl or that provide important habitat for other wildlife and migratory birds are significant wetlands.

The Sandbar wetland complex offers breeding, staging, and stopover habitat for many waterfowl species that either breed in the wetlands or pass through during migration. The delta wetlands provide a mosaic of feeding and breeding habitats for many different wildlife species. Wading birds such as the Great blue heron and American bittern breed and thrive in these wetland communities. The wetland is important for a variety of migratory waterfowl species that use the wetlands for feeding, breeding, and resting. Breeding waterfowl include Black Duck, Wood Duck, Ring-Necked Duck, Mallard Duck, Goldeneye, and Hooded Merganser. The Vermont Fish and Wildlife Department's wood duck nest box program began in 1948, operates to this day, and significantly adds to the local waterfowl hunting experience.

Other species such as Common Snipe, Pied-billed Grebe, Marsh Wren, American Bittern, Least Bittern, Green Heron, Virginia Rail, Sora, Northern Harrier, Bald Eagle, Eastern Screech Owl, and Osprey can also be found feeding and nesting in these wetlands. One of the state's largest concentrations of nesting ospreys is found at the Sandbar. The Sandbar complex also hosts as a nesting site for a rare warbler species.

Amphibian breeding habitat is abundant through the various marshes and vernal pools. Amphibian species present include the blue-spotted salamander, spotted salamander, red-backed salamander, gray tree frog, green frog, northern leopard frog, bullfrog, American toad, and spring peeper. The Sandbar complex hosts one of only two populations of the eastern spiny softshell turtle identified in the state.

Additionally, the deep bulrush and cattail marshes provide habitat for muskrat, otter, and mink and are fairly common through the wetland complex. The wetlands are also adjacent to deer wintering yards in two areas of the complex.

The Sandbar wetlands have excellent habitat structure to support an abundance of wildlife. It contains multiple vegetation classes that includes open water contiguous to wetland, deep marsh, shallow marsh, shrub swamp and wooded swamp; the dominant classes are marsh and wooded swamp. The presence of large stands of wild rice provides an abundant food source and is highly attractive to many waterfowl species especially during the fall migration. Several managed dikes on the complex assist in maintaining open water conditions for waterfowl habitat, as well as feeding areas for many other birds such as herons, egrets, and osprey. The wetland is contiguous to two major waterbodies and more than fifty percent of the surrounding habitat is forest and open land. A large portion of the wetland complex is owned by the State of Vermont and managed as a wildlife area using various management plans that have been approved by the Secretary.

The wetland is exceptional and irreplaceable for the wildlife habitat function.

7. Exemplary Wetland Natural Community

Wetlands that make an important contribution to Vermont's natural heritage are significant wetlands. These include wetlands that are identified as high quality examples of one or more of Vermont's recognized wetland natural community types.

The Sandbar wetland complex hosts some of the largest and most intact wetland natural communities in the state that are restricted to the Champlain Valley. These wetland communities, as mapped and tracked by Vermont Fish and Wildlife Department's Natural Heritage Inventory, include the Lakeside Floodplain Forests, Silver Maple-Ostrich Fern Riverine Floodplain Forests, Silver Maple-Sensitive Fern Riverine Floodplain Forests, and Wet Sand-Over-Clay Forests. Other high quality wetland natural community examples exist within the complex, such as Silver or Red Maple- Green Ash Swamps, Alder Swamps, and Deep Bulrush Marshes. Although none of the above natural communities are rare, the combination of multiple high quality communities in a large wetland complex

From: "The Significant Floodplain Forests of Vermont, Vermont Nongame and Natural Heritage Program: Lamoille Delta" prepared by B. Engstrom dated October 17, 1997:

> "The mouth of the Lamoille River in Lake Champlain has a well-developed delta, second only in size within the Champlain basin to the Missisquoi delta. Built upon river transported sediments, the delta is a very large (1000+ acres) wetland complex composed of a variety of emergent marshes, shrub and forested swamps, and floodplain forests. As a delta on a large lake, these wetlands are subject to flood waters of both the river and the lake.
>
> The delta forests occupy the levees, which are the highest land in this flood-prone landscape. While there is substantial forest developed on the scroll levees associated with the abandoned river channel that arcs north under the Rt. 2, the largest section of floodplain forest is found on both shores of the main channel. During this inventory, only the north shore forest was surveyed. Without a doubt, it is one of the most impressive floodplain forests in Vermont, both in terms of large, relatively old trees, and in terms of lack of exotic plant species. The forest here is a combination of silver maple (*Acer saccharinum*) and cottonwood (*Populus deltoides*), with a generous amount of green ash (*Fraxinus pensylvanica*), especially in the lower ground, and an occasional swamp white oak (*Quercus bicolor*), American elm (*Ulmus americana*), and others. Though scattered throughout, the largest cottonwood occurs in several small groves. Many of these cottonwood are 2-3 feet in diameter-at-breast-height, with the largest tree measuring just over 4 feet. Heights of these trees range up to 115 feet. Unfortunately, many of these large cottonwoods have been felled, or are in the process of being felled by beaver. While not as large, the more common silver maple is large relative to other floodplain forests, diameters from 16 to 24 inches being common. Although differing in size, both cottonwoods and silver maple appear to be in the same 80-90-year age class based on several tree cores. While not exceptionally old compared to some upland trees, trees getting towards 100 years are definitely old for floodplain forests in Vermont.
>
> Characteristic of most large river floodplain forests, and especially true for the Lamoille delta floodplain forest, is the lack of understory trees and shrubs. This makes for a very comely

> forest, especially when combined with the dense groundcover of sensitive and ostrich ferns (*Onoclea sensibilis* and *Matteuccia struthiopteris*). What is unusual about the groundcover vegetation in this delta forest, and also observed at the Missisquoi delta, is its overall lack of alien species and overall lack of diversity."

The wetland is exceptional and irreplaceable for the exemplary wetland natural community function.

8. **Rare, Threatened, and Endangered Species Habitat**

Wetlands that contain rare, threatened, or endangered species of plants or animals are significant wetlands. The Sandbar wetland complex supports 29 rare, threatened, and endangered wildlife and plant species. Some wildlife species include a threatened reptile (G5/S1), cerulean warbler (*Setophaga cerulea*)(G4/S1B), osprey (*Pandion haliaetus*)(G5/S2B), pied-billed grebe *(Podilymbus podiceps*)(G5/S2B), least bittern (*Ixobrychus exilis*)(G5/S2B), and common musk turtle (*Sternotherus odoratus*), and Sora (*Porzana Carolina*). The complex also hosts a number of rare plant species, including guadalupe naiad (*Najas guadalupensis*) (G5/S1), slender bulrush (*Schoenoplectus heterochaetus*)(G5/S2), and Vasey's pondweed (*Potamogeton vaseyi*)(G4/S2). Endangered species present include three mollusks and one fish.

The number of rare, threatened, and endangered species within the Sandbar complex suggest that the wetlands support diverse and critical wildlife habitat that is irreplaceable to Vermont's natural heritage. The wetland is exceptional and irreplaceable for the rare, threatened and endangered species habitat.

9. **Education and Research in Natural Sciences**

Wetlands that provide, or are likely to provide valuable resources for education or scientific research are significant wetlands.

Most of the wetland complex is owned by the State of Vermont and thus creates education and research opportunities. Through partnership and cooperation with the Department of Fish and Wildlife, there are long-term monitoring plots established currently for VINS, the Audubon Society, and the New England Wildflower Society. Additionally, the University of Vermont takes advantage of the relative close proximity to the wetlands and have had students participate in a number of field trips to the Sandbar.

The wetland is significant and exceptional for the education and research in natural sciences function.

10. **Recreational Value and Economic Benefits**

Wetlands that provide substantial recreational values or economic benefits are significant wetlands.

Although most of the wetlands in the Sandbar Wildlife Management Area is a refuge for wildlife and closed to the public, there are several areas of the WMA that remain open for accessibility. Additionally, the Sandbar State Park offers paddling access via boat launches to Lake Champlain. There are also several viewing areas along Route 2.

From the Department of Fish and Wildlife's webpage on the Sandbar WMA:

> "Sandbar Wildlife Management Area (WMA) is located in the town of Milton and borders Lake Champlain on either side of Route 2. Most of its 1,560 acres are a refuge with no public access. However, the upland portion of the WMA northeast of Route 2 is open for public use, as is Delta Island. One may also boat along the Lamoille River and in nearby Lake Champlain, or drive along Route 2 and stop at pull-offs there. Sandbar State Park and the Sandbar Causeway to South Hero are other areas from which one may observe wildlife in the refuge. Boats may be put into the Lamoille River at the boat access off Cub Road, or into the Lake across from Sandbar State Park. Sandbar WMA is open to regulated hunting, trapping, fishing, hiking and wildlife viewing, except in the refuge."

The wetland is significant for the recreational value and economic benefits function.

11. Open Space and Aesthetics

Wetlands that contribute substantially to the open-space and aesthetic character of the landscape are significant wetlands.

The Sandbar Complex is a distinct ecological feature in the landscape between the Lamoille River, terrestrial land, and Lake Champlain. It is easily viewed and accessible by driving U.S. Route 2, boating on Lake Champlain and visually at Sandbar State Park.

The wetland is significant for the open space and aesthetics function.

12. Erosion Control through Binding and Stabilizing Soil

Wetlands that are important for erosion control are significant wetlands. Such wetlands are typically located along stream, river, pond or lake shorelines, where erosive forces are present.

The Sandbar delta wetlands composes hundreds of acres of shoreline along Lake Champlain and the Lamoille River. And while the large volume of flood water that this large complex can store is extremely important to neighboring properties, the role the wetland habitat plays is especially important on this transition area of Lake Champlain in attenuating wave action during high water. The lakeside forests, riverine forests, and marshes adjacent to these waterbodies provide dense vegetation that helps to slow down and break up waves, thus providing a protective buffer along the shoreline from erosion. The presence of this wetland at this naturally constricted area of the lake is significant in helping to protect other surrounding lakeshore properties along U.S. Route 2, as it creates a buffer to shoreline erosion by dampening wave effects as they run-up onto the shoreline.

During the historic Lake Champlain floods of 2011, 3-foot waves were seen along this area of the lake. This large wetland complex helped to absorb wave action along its shoreline area, as well as help to capture large-scale debris. This section of U.S. Route 2 that bisects the wetland experienced major washouts and flood damage, including loss of guardrails and side slopes, and resulted in one travel lane being closed to through traffic at the height of the flooding. In addition to the losses along the road, the amount of rocks and debris being deposited onto the roadway were significant. If the surrounding wetlands had not

been present, flood damage from waves and debris could have been much more significant, and costs to repair the road would have been much greater.

The wetland is exceptional and irreplaceable for the erosion control through binding and stabilizing soil function.

The Secretary shall also determine whether the wetland is exceptional or irreplaceable based on an evaluation of the extent to which the wetland contributes to Vermont's natural heritage. In determining whether a wetland is exceptional and/or irreplaceable in its contribution to Vermont's natural heritage the Secretary shall, at a minimum, consider the whether the wetland is categorized as one or more of the following: Representative example of wetland type; rare community type; community assemblage/wetland complex; and landscape association.

The exceptional or irreplaceable characteristics of the wetland include the following: Representative Example of Wetland Type; Community Assemblage/Wetland Complex; and Landscape Association.

13. Representative Example of Wetland Type

Wetlands that are considered exceptional for this criteria exhibit a reference condition for the wetland type(s) with minimal evidence of human disturbance. Based on size, condition, quality and function, these wetlands represent a reference condition for wetland type, and are therefore exceptional.

The wetlands are a representative example of the Lakeside Floodplain Forests and Riverine Floodplain Forests and are in reference condition. The floodplain forest mosaics across the delta total approximately 100 acres in size and scored 91/100 on the Vermont Rapid Assessment Method (VRAM) with very little human disturbance. The Sandbar wetland complex hosts Silver Maple-Ostrich Fern Riverine Floodplain Forests along the Lamoille River in moderate gradient areas where seasonal flooding is less frequent with shorter durations. Silver Maple-Sensitive Riverine Floodplain Forests occur in areas along the Lamoille River in low gradient areas where flooding occurs more often and lasts for longer periods. Lakeside Floodplain Forests are found along the flooding zone of Lake Champlain and serves as a transitional zone between terrestrial and aquatic ecosystems.

14. **Community Assemblage/Wetland Complex**

Wetlands that are considered exceptional for this criteria are larger wetland complexes usually associated with multiple wetland community types and bodies of water, which have high species diversity and function. These provide exceptional function and value.

The Sandbar Delta is a 1,359 acre wetland complex comprised of Lakeside Floodplain Forests, Silver Maple-Sensitive Fern Riverine Floodplain Forests, Silver Maple- Ostrich Fern Riverine Floodplain Forests, Red or Silver Maple- Green Ash Swamps, Wet-Sand-

Over-Clay-Forests, Alder Swamps, Deep Bulrush Marshes and shallow marshes, and vernal pools. The Sandbar delta wetlands host stretches of Lakeside Floodplain Forests that have very little human disturbance. The intact floodplain forests total up to 100 acres in size across the delta. The Lakeside Floodplain Forests are considered unique and uncommon in Vermont due to their association and distribution limitations to Lake Champlain and Lake Memphremagog. It is the largest floodplain forest type on the Lamoille Delta and gradually grades into the large extensive marshes. The quality, age, and size of the trees are exceptional with very little invasive species present. These wetlands provide important connectivity to lake and river and moderate connectivity to uplands in the Niquette Bay area (F&W Natural Heritage Inventory, 2008). The mosaic of wetlands across the delta serve as important wildlife corridors and provide connections between the Lamoille River and Lake Champlain, as well as the surrounding upland communities. As an interface between river and lake the delta wetlands are rich in biological diversity. The wetlands serve as critical habitat for the partial or complete lifecycles of many rare, threatened and endangered species, and also provides shelter and food for many migratory waterfowl species.

15. Landscape Association

These wetlands are irreplaceable because of the critical nature of their landscape position, and the corresponding functions in that landscape. They are often exceptional because of their size, function and value.

The Sandbar Delta is a 1,359 acre wetland complex comprised of Lakeside Floodplain Forests, Silver Maple-Sensitive Fern Riverine Floodplain Forests, Silver Maple- Ostrich Fern Riverine Floodplain Forests, Red or Silver Maple- Green Ash Swamps, Wet-Sand-Over-Clay-Forests, Alder Swamps, Deep Bulrush Marshes and shallow marshes, and vernal pools. The wetland provides critical function(s) that is unique due to landscape association with the Lamoille River and Lake Champlain. The wetland complex is located at the mouth of the Lamoille River in Lake Champlain and has the second largest developed delta in Lake Champlain.

The Secretary has determined that the wetland's functions are exceptional or irreplaceable based on an evaluation of the extent to which it is in an undisturbed condition, within an intact landscape, and provides ecological connectivity.

16. **Undisturbed Condition**

The wetland and buffer zone is undisturbed or minimally disturbed as demonstrated by the VRAM and current distances from development averaging between 80 and 150 feet. Existing disturbances include U.S. Route 2 that intersects the complex and rural development and agriculture parsed throughout the complex's buffer. However, due to the

large size of the wetland, the existing encroachments do not significantly lower the condition.

17. **Intact Landscape**
    The wetland is within a landscape which is intact and in a high quality condition. The Sandbar delta wetland complex hosts some of the largest and most intact floodplain forests in the state, with approximately 100 acres of floodplain forest surrounding the shores and delta of the Lamoille River.

18. **Connectivity**
    The wetland is used as a corridor connecting natural areas and serves as a migratory stop-over. The Sandbar delta wetlands serve as a connection between the Lamoille River and Lake Champlain, and nearby upland areas such as Niquette Bay.

Determination of Wetland Classification

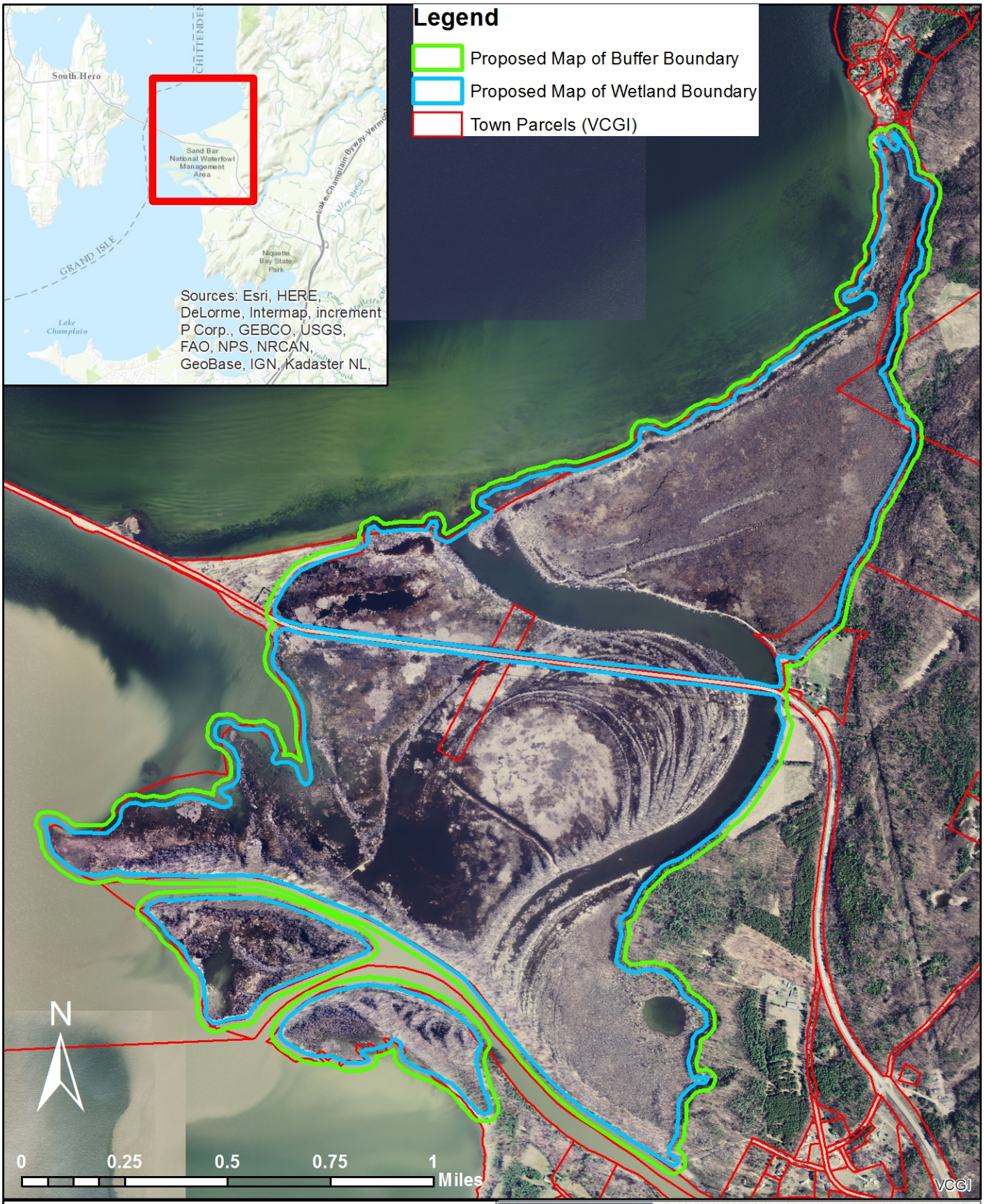
Based on information gathered by the Wetlands Program, input from The Vermont Department of Fish and Wildlife, and information from the Nongame Natural Heritage Program of the Vermont Department of Fish and Wildlife, the Secretary has determined that the wetland under consideration is a Class I wetland.

Required Buffer Zone

The Wetlands Program has received suggestions or compelling evidence for extending the buffer zone beyond the default 100 foot buffer for Class I wetlands. Therefore, a 100 foot buffer zone is appropriate for the wetland.

Effect of Class I Wetland Determination

Activity in a Class I wetland or its associated buffer zone is prohibited unless it is an allowed use under the VWR, or unless it is authorized by a permit, conditional use determination or order issued by the Secretary. The Secretary may impose any permit conditions as necessary to achieve the purposes of the VWR. Section 9.1 of the VWR. This Determination does not relieve the petitioner or any other person of the responsibility to comply with all other applicable federal, state or local laws.



Proposed Mapping of Class I Wetland
and 100-foot Buffer
Sandbar Wetland, Milton & Colchester

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
WETLANDS PROGRAM

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