

# **Management Plan for Mud Pond Conservation Area**

**Town of Williston, Vermont**



**Approved by the Williston Conservation Commission  
(September 15, 2021)**

**Approved by the Williston Selectboard (November 16, 2021)**

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## Introduction

Mud Pond Conservation Area is a 158 acre publicly accessible natural area located in eastern Williston, Vermont. Mud Pond, recognized by Sargent et al (1971)<sup>1</sup> and Engstrom (1991)<sup>2</sup> as a significant natural area, is a shallow six-acre pond amidst an eighty-acre wetland complex and surrounded by 140 acres of forested uplands. The Mud Pond area provides diverse habitat for plants and animals and natural refuge for people. In 1992 the town of Williston acquired the Mud Pond Conservation Area from the Nature Conservancy.

## Purpose, Planning Process and Public Participation

### Goal of the Management Plan

This plan is intended to be a guiding document for the management of the Conservation Area. Williston's Comprehensive Plan 13.1 states the goal to "protect conservation areas that provide significant benefits for soil conservation, water quality, groundwater recharge, biological diversity and the well-being of residents" and that limited recreation (hiking, cross-country skiing, birding), environmental education, and scientific research are acceptable in conservation areas as long as they are compatible with the goal of protecting the physical features, ecological functions, and biodiversity the conservation area provides. Although the property is not subject to a conservation easement that would normally require a management plan to be developed, nonetheless it is good practice and supported in the town's Comprehensive Plan (Objective 9.4.3).

### Authority for Management

The Selectboard must approve the management plan before it can be implemented. Approval of large appropriations to make improvements on the property comes from the Selectboard. The Williston Conservation Commission is responsible for general management issues and maintenance of the conservation area, with limited assistance from the Department of Public Works.

### Process of Management Plan Development

The management plan was drafted by the Williston Planning and Zoning Department staff and Williston Conservation Commission (WCC). The following stakeholders were consulted and had input into the Plan:

- Williston Department of Public Works
- Williston Recreation Department and Recreation Committee
- Williston Selectboard
- Vermont Association of Snow Travelers (VAST)
- Vermont Department of Forests, Parks and Recreation
- Chittenden County Forester
- Vermont DEC Wetlands Program

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<sup>1</sup> Sargent, F.O., H.W. Vogelmann, and R.S. Stanley. 1970. Natural Areas in Chittenden County. Study No.6 in Sargent, F.O., A.H. Gilbert, and M.Y. Gratton (eds.) Lake Champlain Basin Studies. Department of Resource Economics, University of Vermont, Burlington.

<sup>2</sup> Engstrom, B. 1991. Biological Natural Areas of Chittenden County.

In 1993, the Williston Conservation Commission contracted with RCMB Associates (Jessica Rykken, Valerie Colegrove, Brad Meiklejohn and Lisa Bardack) of the University of Vermont to draft a joint Management Plan for the Mud Pond Conservation Lands and Mud Pond Country Park. Recognizing that different management goals and strategies would be employed for each of the two natural areas, the WCC decided to draft separate plans for the distinct areas. The Management Plan for Mud Pond Country Park was adopted by the Selectboard on April 18, 2002 and last updated in 2017. The WCC initiated this plan for Mud Pond Conservation Area (MPCA) in summer of 2021. On July 13, 2021 a first draft of the Plan was distributed to local and regional stakeholders (see list above) for comment. The draft Plan was posted on the Town website and public comment was solicited through Front Porch Forum and the Williston local newspaper. Written comments are attached as Appendix E. On August 4, 2021 the WCC conducted a site walk through the Conservation Area with interested members of the public. The purpose of the site walk was to assess the condition of the MPCA and its trails to better inform future management strategies, and to hear input from members of the public. The Selectboard held a public hearing for additional public comment, and the Plan was adopted on (DATE).

### Responsibilities

1. The Town of Williston, Vermont took fee title to the Mud Pond Conservation Area on July 1, 1992.
2. The Williston Conservation Commission took the lead in drafting the management plan and will be primarily responsible for implementing the management of the property. (Contact Conservation Planner at the Planning Office: 878-6704)
3. The Williston Conservation Commission is responsible for maintenance of the property. Local police provide security patrols as needed. The Conservation Commission should be contacted to resolve any issues or to discuss current policy at Mud Pond.

### **Importance of Conservation Areas to the Town of Williston**

The 2016-2024 Williston Comprehensive Plan (13.1) defines Conservation Areas as those areas that provide significant benefits for soil conservation, water quality, groundwater recharge, biological diversity and the well-being of residents.<sup>3</sup>

There are seven distinct types of Conservation Areas in Williston:

- 1) significant wildlife habitat areas, including large meadows, forest blocks and habitat connectors;
- 2) areas containing uncommon, rare, threatened, or endangered species;

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<sup>3</sup> Town of Williston (2016). Vermont Comprehensive Plan 2016-2024. Available at <http://www.town.williston.vt.us>

- 3) unique natural communities;
- 4) farmlands of local importance;
- 5) scenic viewsheds;
- 6) special flood hazard areas; and
- 7) streams, wetlands, lakes and ponds.

Mud Pond is one of six conservation areas owned by the town and is listed in the Williston Unified Development Bylaw (Table 27.A) as one of thirteen unique natural communities.<sup>4</sup>

Objective 13.1.3 relates specifically to Management Plans:

**13.1.3 Develop Conservation Area Management Plans.** The Conservation Commission should continue to develop and update management plans for the conservation areas owned by the town, as it does for the country parks. The commission should also work with the landowners and the Vermont Land Trust in developing management plans for the conservation areas that are under easement. These plans should emphasize the maintenance of water quality, biodiversity, and other conservation values.

**Land Use History** (from RCMB Field Associates, 1993. Mud Pond Conservation Lands and Country Park: A Management Plan)

In the mid 1980's, before adoption of an Open Space Plan, Williston recognized the significance of the Mud Pond area. Given the substantial acreage involved, its relatively undisturbed state, its ecological significance, and increasing growth pressures, the town recognized Mud Pond as a prime candidate for conservation.

At the time, the property was owned by Kleen Moss Co. Back in the 1960's, Kleen Moss Co. had purchased the land with the intent of extracting the peat and lining the pond with gravel to then build lakeshore housing. Due to the cost of extraction, Kleen Moss never followed through with its plans. By the mid 1980's Kleen Moss was looking to sell the land. According to town records, The Nature Conservancy (TNC) purchased the entire property in 1987 at the request of the town. The cost of the purchase was \$275, 000. Most of that money came from TNC; although \$63,000 came in the form of Act 250 mitigation fees from Taft Corners Associates, a major development company in town. The immediate intent was to take the land off the market to remove development pressures. Over time, the lands were to be conveyed to the town and a neighboring dairy farm for conservation. The town promised to repay TNC for the purchase by 1992.

In 1990, the town purchased in fee simple the acres that were to comprise the Mud Pond Conservation Area. Funding for this purchase came from the town's environmental reserve fund and grants from the federal Land and Water Conservation Fund (LWCF) and the Vermont Housing and Conservation Board (VHCB). Although no restrictions were included in that transfer from TNC to the town, the funding from LWCF and VCHB

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<sup>4</sup> Williston Unified Development Bylaw, adopted 2009. Available at <http://www.town.williston.vt.us>

required that the lands be conserved. While there is no conservation easement on these lands, the restrictions associated with LWCF have essentially the same effect of prohibiting development, mining, tree clearing, etc. With the adoption of the Open Space Plan in 1989, the area was formally recognized as a Conservation Area.

In 1990, 75 acres were conveyed by TNC to the neighboring dairy farm with conservation restrictions (note that the existing farmland was already protected with conservation restrictions). In 1992, the town purchased in fee simple the remaining 74 acres that were to comprise the country park area. Funding for this purchase came from the town's environmental reserve fund and a grant from VHCB. The development rights and a perpetual conservation easement and restrictions were conveyed in 2000 to the Vermont Housing and Conservation Board (VHCB) in a Grant of Development Rights, Conservation Restrictions, and Public Access Easement.<sup>5</sup>

## **General Description and Landscape Context**

*The following text has been largely adapted from A Rapid Ecological Assessment of the Mud Pond Country Park – Williston, Vermont that is based on a landscape inventory and assessment conducted by Field Naturalist student, Ellen Gawarkiewicz, during the summer of 2016.*<sup>6</sup>

Williston spans the foothills of the Green Mountains to the Champlain valley. Over the past 50 years, the Williston population has more than quadrupled and has absorbed nearly one-fifth of Chittenden County's growth. Since the 1960s, the town landscape has changed from a patchwork of working farms to a suburban mosaic residential, commercial, and industrial activity. While forest cover has increased on abandoned fields since the late 1800s, parking lots, homes, and commercial buildings have replaced Williston's fields and forests at a rapid pace in recent years. The 9,700 acres of active or potential Williston farmland in 1988 dropped by roughly 2,600 acres by 2006.

A 2005 build-out analysis showed the number of housing units in Williston could double, growing from around 3,200 to almost 7,000, and the amount of commercial and industrial space could expand by roughly 25%, resulting in another 1.8 million square feet of development. (This analysis has no time dimension, simply states what could happen). With the rapid recent change, Williston's Comprehensive Plan is mindful to strive for balance. Williston's Vision for the Future states: "Williston will strive to balance responsible, livable suburban growth with rural character and conservation. To do this, the town will ... (among others) use regulatory and non-regulatory tools, including funding for the acquisition of development rights or land, to protect water quality, wildlife habitat, scenic views, and other natural and cultural resources."<sup>7</sup>

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<sup>5</sup> RCMB Field Associates, University of Vermont (1993). Mud Pond Conservation Lands and Country Park: A Management Plan.

<sup>6</sup> Gawarkiewicz, Ellen (2016). A Rapid Ecological Assessment of the Mud Pond Country Park – Williston, Vermont.

<sup>7</sup> Town of Williston (2016). Comprehensive Plan 2016-2024. Available at <http://www.town.williston.vt.us>

The 158-acre Mud Pond Conservation Area represents a significant portion of conserved, publicly accessible open space in Williston. Combined with the adjacent 113-acre Mud Pond Country Park, the Mud Pond lands total 276 acres +/- within a contiguous block of 600 acres of conserved land. The Mud Pond Conservation Area is bordered on the north by the Siple Farm, a 322-acre active farm with Conservation Restrictions. Other surrounding land uses are residential.

The land is located along South Road and Mud Pond Road in Williston Vermont. Since the drafting of the original Management Plan for the Mud Pond Conservation Area and Country Park, an extensive trail system has been developed on the property, accessed from a small parking area on Mud Pond Road and an informal pull-off on Oak Hill Road. A current trail map is attached as an appendix to this Plan. The trails are used for passive recreation such as walking, skiing, and birdwatching.

The trails are part of a larger trail system, which is shown in the Williston Comprehensive Plan. The Schmoker Connection is a 1-mile west-east trail which connects the Mud Pond Area to Five Tree Hill Country Park. In 2012-2013, the Sucker Brook Hollow trail was developed, providing access from Rt. 2A to the top of Five Tree Hill.<sup>8</sup> Collectively, this “cross-town” trail is part of the WCC’s vision of an interconnected Town-wide trail system. The WCC is actively pursuing trail easements to make this system a reality. Portions of the cross-town trail utilize the Vermont Association of Snow Travelers (VAST) system, where winter use is shared by walkers, skiers and snowmobilers.

The MPCA is also in an area that has been identified for its importance for wildlife. A 2005 University of Vermont report entitled, “Assessment of Wildlife Habitat in Williston, Vermont” identifies the “particularly diverse” Mud Pond area and the “largest extent of core forest in the area” on nearby “Richmond Ridge” to the east.<sup>9</sup>

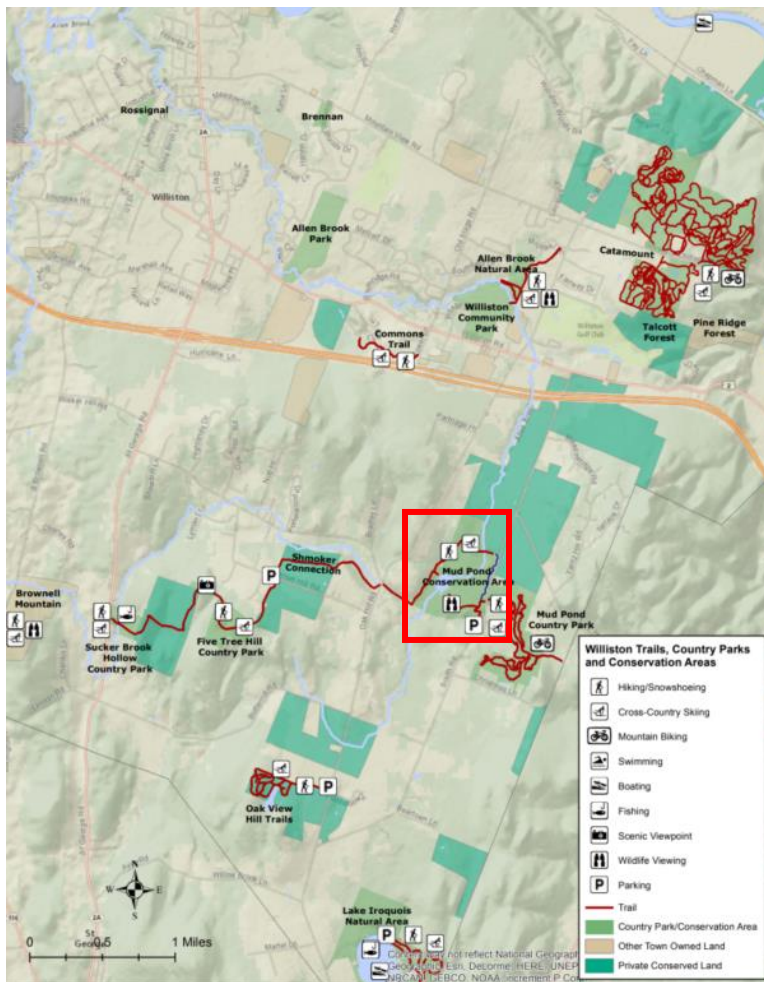


Figure 1: Mud Pond Conservation Area outlined in red.

<sup>8</sup> Town of Williston, 2019. Sucker Brook Hollow Country Park Management Plan.

<sup>9</sup> Capen, D., Scharf, T., MacFaden, S., and Buford, E. (2005). An Assessment of Wildlife Habitat in Williston, Vermont. UVM Spatial Analysis Laboratory.

The Town has conducted a natural resource inventory, Winooski Valley Park District (WVPD) has done additional monitoring, and University of Vermont classes visit the site regularly for hands-on field data collection and observation. Vermont Master Naturalist Program has also utilized the site for field classes and student led projects.<sup>10</sup>

**Natural History** (from RCMB Field Associates, 1993. Mud Pond Conservation Lands and Country Park: A Management Plan)<sup>11</sup>

### **Geology/Hydrology**

The open water of Mud Pond is less than ten feet deep, and muck and peat underlie the pond and wetlands, making treacherous footing for unwary visitors. Horses, carts, cars, and kids have all gotten stuck in the legendary mire that gives Mud Pond its name. These hydric soils consist of partially decomposed organic material accumulated to a depth of over forty feet.<sup>12</sup> Mud Pond occupies a glacial kettle hole which formed along the margin of the stagnant Laurentide ice sheet approximately 13,000 years ago. Kame moraine, an ice-contact feature, surrounds Mud Pond and is responsible for the hummocky terrain in and around the wetlands.

Glacial till derived from schists and phyllites covers the Mud Pond uplands to varying depths and probably forms the basement of the wetlands.<sup>13</sup> The local bedrock, a quartzitic schist of the Underhill formation, outcrops in few places in the Mud Pond watershed.<sup>14</sup> Marlow, Lyman, and Peru soils of the uplands formed in the acidic glacial till and stony or extremely stony loams low in natural fertility.<sup>15</sup>

Both the Conservation Lands and the Country Park lie within the 1600-acre Mud Pond watershed (Figure 3). Allen Brook, four seasonal streams, and numerous seeps feed into Mud Pond from east, south, and west; Allen Brook drains the pond and flows north to the Winooski River. Heindel (1980) reports that the outflow via Allen Brook is considerably higher than the total of all surface inflow, indicating that Mud Pond is a groundwater discharge area. The U.S. Fish and Wildlife Service and the Vermont Wetlands Program categorize Mud Pond and the immediate surroundings as Class II wetlands. The Mud Pond wetlands are known to provide storm and flood water retention, erosion control, and a variety of habitats for plants and wildlife.

### **Natural Communities**

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<sup>10</sup> Vermont Master Naturalist Program (<https://vermontmasternaturalist.org/>)

<sup>11</sup> RCMB Associates, 1993. Mud Pond Conservation Lands and Country Park: A Management Plan. Rubenstein School of Natural Resources, University of Vermont.

<sup>12</sup> Dorney, J. 1987. Palynology of Mud Pond Bog in Williston Vermont. University of Vermont, Burlington.

<sup>13</sup> Heindel, C. 1980. Glacial geology, hydrology, and road salt effects on groundwater in the Williston Area, VT. Master's thesis, University of Vermont.

<sup>14</sup> Doll, C. 1961. Centennial Geologic Map of Vermont. Vermont Geological Survey. Montpelier, VT.

<sup>15</sup> U.S.D.A. Soil Conservation Service. 1989. Soil Survey of Chittenden County, Vermont. U.S.D.A., Washington, D.C.

Despite the considerable flow of water into and through the wetlands, the acidic soils of the watershed contribute few nutrients. The extensive muck and peat deposits of the Mud Pond area reflect a nutrient-poor environment where decomposition is slow. Mud Pond is not a true bog but is a transitional peatland with characteristics intermediate between those of a bog and a fen. A forested peat mat bordering the northwest corner of the pond supports typical bog and fen vegetation. An open canopy of black spruce (*Picea mariana*), tamarack (*Larix laricina*), and northern white cedar (*Thuja occidentalis*) is combined with an understory of winterberry (*Ilex verticillata*), hummocks of Sphagnum mosses, ericaceous shrubs including leatherleaf (*Chamaedaphne calyculata*), bog rosemary (*Andromeda glaucophylla*), black huckleberry (*Gaylussacia baccata*), bog laurel (*Kalmia polifolia*), Labrador tea (*Ledum groenlandicum*), large cranberry (*Vaccinium macrocarpon*), and various herbaceous species such as pitcher plant (*Sarracenia purpurea*) and purple-fringed orchis (*Habenaria psycodes*).

A quaking mat of leatherleaf, cattails (*Typha latifolia*), sedges (*Carex* spp.), and mosses surrounds the remainder of the pond and grades into cattail-alder shrub marsh and red maple-black ash-american elm swamp. Exclusive, dense stands of eastern hemlock (*Tsuga canadensis*) occupy the rocky hummocks at the margins of the wetland.

Uplands in the Conservation Area are forested by early- to late-successional northern hardwoods (beech-birch-maple-hemlock). Red oak (*Quercus rubra*), black cherry (*Prunus serotina*), and white pine (*Pinus strobus*) make significant contributions to the canopy. The understory includes ironwood (*Carpinus caroliniana*), hop hornbeam (*Ostrya Virginia*), striped maple (*Acer pennsylvanicum*), and various herbs. Common buckthorn (*Rhamnus cathartica*), an invasive exotic thorn shrub, is prevalent along the southwestern boundary of the Conservation Area. The northwestern portion of the Conservation Area was mined for gravel over 30 years ago, and the site is now occupied by early successional white pine, quaking aspen (*Populus tremuloides*), and paper birch (*Betula papyrifera*). No stands of old-growth forest exist in either the Conservation Lands or the Country Park, although a massive red oak grows on a bluff near the southeast corner of Mud Pond.

### **Wildlife Habitat**

The Mud Pond area provides diverse habitat for wildlife, including the four-toed salamander (*Hemidactylium scutatum*). This species, collected at Mud Pond in 1960<sup>16</sup> is known from fewer than five sites in Vermont and is considered a "species of special concern" by the U.S. Fish and Wildlife Service. The four-toed salamander inhabits wet, acidic woodlands adjacent to bogs or swamps and nests in Sphagnum hummocks. This nocturnal species spends much of its life below the ground surface and is therefore difficult to find.<sup>17</sup>

The long list of fauna inhabiting the Conservation Area includes beaver, coyote, fisher, river otter and, northern goshawk. The open water of the pond is used as a stopover for

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<sup>16</sup> Kilpatrick, C.W. 1982. *Hemidactylium scutatum* (Four-toed salamander). *Herpetological Review* 13(1): 23-24.

<sup>17</sup> Johnson, C.W. 1985. *Bogs of the Northeast*. University Press of New England. Hanover, New Hampshire.

migrating waterfowl. Based on limited surveys, no species listed federally or by the state of Vermont as threatened or endangered reside in the Conservation Area. Osprey (federal listing-endangered) and sora (state listing-species of special concern) have been sighted at Mud Pond.

Seasonal and beaver-caused flooding are the primary natural disturbances at Mud Pond. Flooding can inundate trails and adjacent fields, aggravating the public and local landowners. Extended flooding of the surrounding forests can cause tree mortality, which, when coupled with tree-cutting by beavers, may appear unattractive to human sensibilities.

A 2005 UVM Spatial Analysis Lab Williston wildlife habitat report designated Mud Pond Conservation Area in a wildlife unit making up the southeast corner of Williston, just north of Mud Pond south to Lake Iroquois<sup>18</sup>. In their study, this was the only unit where black bears and snowshoe hares were confirmed during field surveys. They suspect the black bears enter Williston from Richmond Ridge and go down to Mud Pond to forage in the spring. Thus, Mud Pond Conservation Area provides linkage between these areas. They state, “The connection of forested habitat between Mud Pond and Lake Iroquois still is being fragmented by residential development, however, so additional conservation projects to maintain core forest in this area should have high priority.” Coyotes, red foxes, fishers, bobcat, moose and mink also were reported in this unit.

In 2018 the Vermont Department of Fish and Wildlife, working with other state partners, developed a plan to protect the integrity and biological diversity of ecosystems across the state. Habitat loss and fragmentation, non-native species, and a rapidly changing climate all pose grave threats to species and ecosystems. The future of Vermont’s forests, waters, and wildlife is uncertain. Vermont Conservation Design is a practical and efficient plan to address that uncertainty and sustain the state’s valued natural areas, forests, waters, wildlife, and plants for future generations. Using a “coarse-filter” approach, Vermont Conservation Design targets those features of the landscape that support the most species and ecological processes, and for each feature type identifies areas on the ground that are of highest priority.

Vermont Conservation Design identifies the Mud Pond Conservation Area as highest priority at a landscape scale for surface water and riparian areas, riparian and wildlife connectivity, and physical landscape diversity. At a finer scale, Mud Pond is identified as a highest priority wetland and highest priority for rare/uncommon species.<sup>19</sup>

## **Current Uses and Physical Improvements**

### **Recreational Trails**

The VAST snowmobile trail was constructed prior to 1990. The trail runs in an east-west direction from South Road, crossing over the Allen Brook, and then to the western

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<sup>18</sup> Capen, D., Scharf, T., MacFaden, S., and Buford, E. (2005). An Assessment of Wildlife Habitat in Williston, Vermont. UVM Spatial Analysis Laboratory.

<sup>19</sup> [Vermont Conservation Design - Summary Report - February 2018.pdf](#)

boundary, where it turns 90 degrees and runs north-south along the western boundary to the discontinued section of Mud Pond Road. It follows the old road to its intersection with Oak Hill Rd. The Town has an agreement with VAST governing the use of Town-owned lands, including MPCA, for snowmobiling. The local VAST chapter Williston Hill Hawks is responsible for maintenance of this trail.

Portions of the VAST trail are used as part of the Mud Pond Circumferential Trail, completed in 2017. The Circumferential Trail traverses around Mud Pond except for a short section south of the pond that is perennially flooded. This trail is part of the cross-town trail connecting Mud Pond to Five Tree Hill.

From the parking area on Mud Pond Road, there is a ½ mile trail leading down to the pond. There is an overlook platform that provides views of the pond. There is also a short section of trail that provides a direct connection to the Mud Pond Country Park trailhead.

### **Access**

Designated access is provided by a six-car gravel parking lot on Mud Pond Road, which provides parking for both Mud Pond Conservation Area and Country Park. This single formal trailhead access has a large sign denoting the Mud Pond Conservation Area, along with a trail map box containing printed map brochures. The brochures are regularly restocked by town staff and volunteers. A QR code is also displayed providing a link to electronic copies of the trail map.

Secondary access to the west of Mud Pond is provided via an informal pull-off along Oak Hill Road. Signage directs trail users to Mud Pond Conservation Area via the discontinued section of Mud Pond Road. Although the pull-off accommodates no more than two cars, this access has become increasingly popular, with reports of cars parked along the side of Oak Hill Rd. The town should explore the feasibility of formalizing this access by the development of a small parking lot with an access drive.

### **Site Monitoring and Education**

The proximity of the Mud Pond Conservation Area to the several universities and colleges of Chittenden County makes it ideal for environmental field study sites. Inventory and monitoring projects provide real-world educational experiences for students while also providing important information for area management, at minimal cost.

The Town has conducted a natural resource inventory and University of Vermont classes visit the site regularly for hands-on field data collection and observation. The MPCA has also been used as a fieldtrip site for local school children, the Vermont Master Naturalist Program and as a site for public walks and talks on local natural and cultural history topics. Educational uses are encouraged and are a primary component of the vision for the MPCA. The town should continue to partner with local schools and colleges to complete updated natural resources and wildlife inventories.

## **Management Objectives and Recommendations**

### **Proposed Physical Improvements to Property**

## Trails

Hikers, cross-country skiers, and nature enthusiasts have for years enjoyed the Mud Pond Conservation Area trails. Since the town's acquisition of MPCA in 1992, an extensive trail system has gradually been built out (Figure 2 below), starting with the ½ mile trail from the parking area to the pond. In the early 2000's, a connecting trail was constructed from the parking lot to a location on South Rd opposite the MPCP trailhead. In 2013, a UVM class developed a portion of the Circumferential Trail including the boardwalk to the west side overlook and a section of puncheon along South Rd. In 2014, Vermont Youth Conservation Corps constructed a section of trail and a long boardwalk northwest of the pond, connecting to previously built sections of trail. In 2018, the remaining section along South Rd was constructed by Vermont Youth Conservation Corps.

**MAP A: Mud Pond Circumferential Trail**

Location: 73°4'40.143"W 44°25'2.367"N

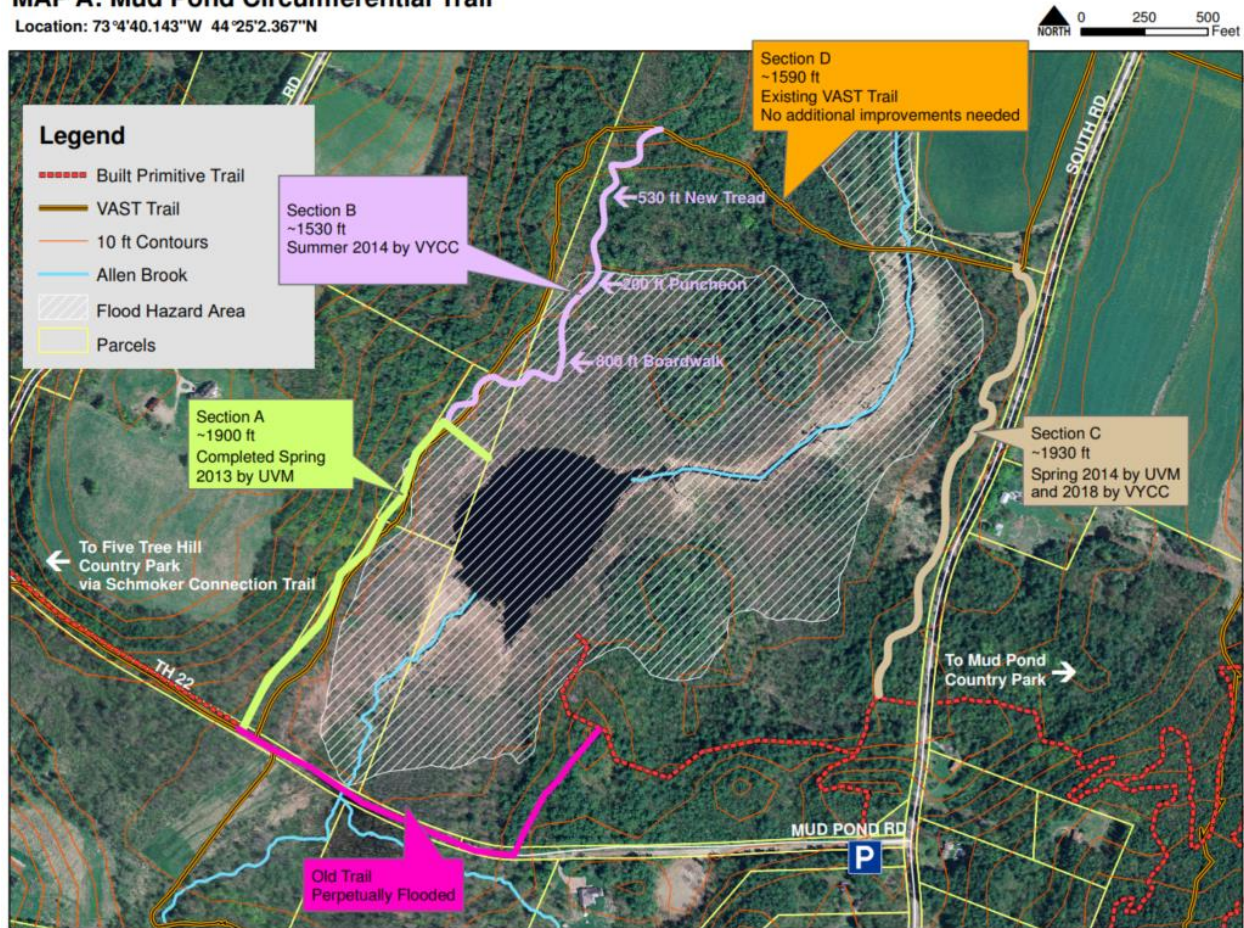
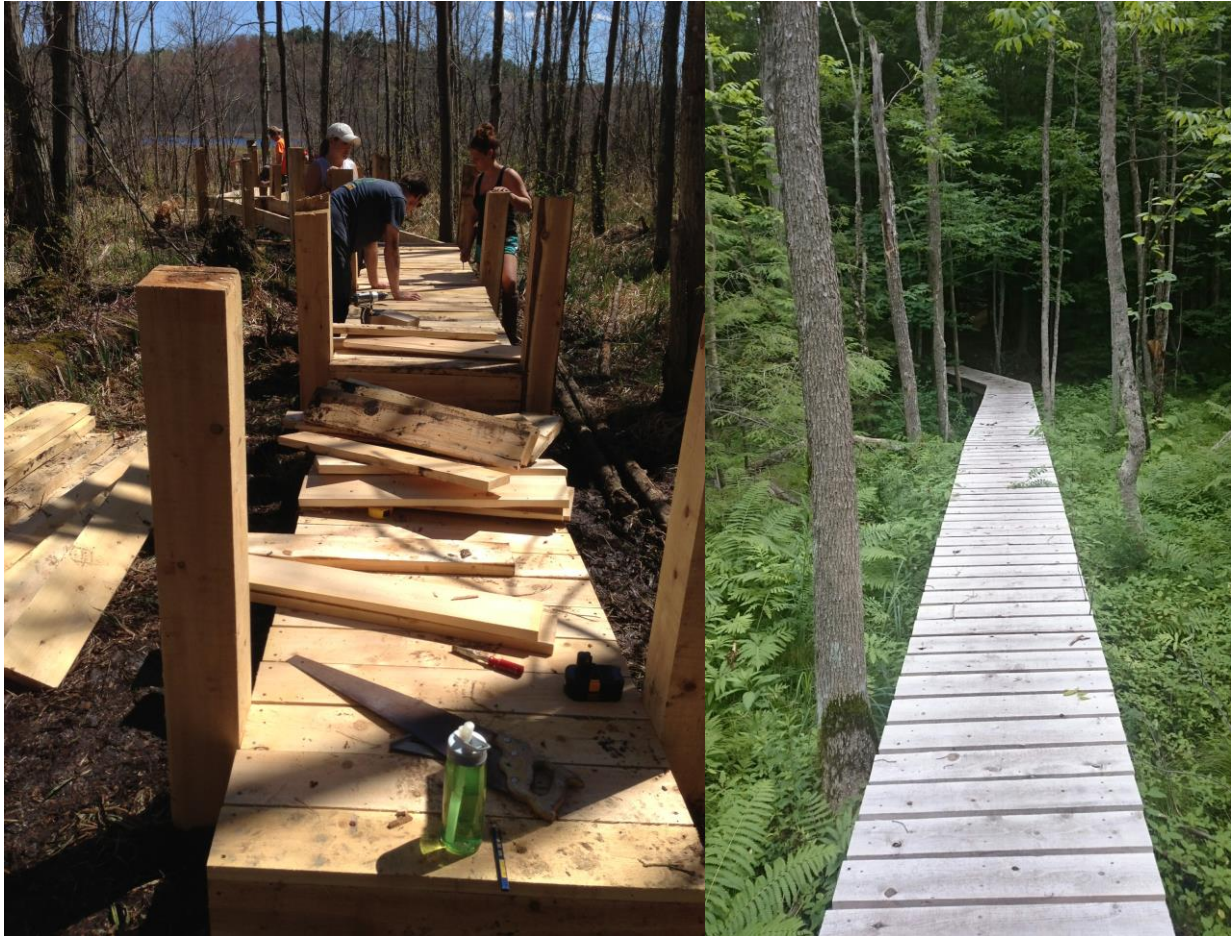


Figure 2: Mud Pond Circumferential Trail, completed 2018

The trail system within the MPCA is at this point fully developed, in other words, built to the maximum capacity that the land can support. No new trails should be developed, as doing so could negatively impact both the natural resource value of the land and the user experience. A primary management objective is to maintain the existing trails and structures to a reasonably high standard. In 2020 the town hired consulting firm SE Group to conduct a town wide trail conditions assessment and develop a maintenance plan for all town-maintained trails including MPCA. The assessment documented 520ft of puncheon, 1,300ft of boardwalk, and 52ft of bridges in the conservation area. All

boardwalk and puncheon on the west side of the pond is constructed with untreated cedar lumber, which has a lifespan of 40-50 years. The total replacement cost of all these structures is roughly \$500,000. The town should plan to implement structure replacements gradually over time to lessen the cost impacts and has established a trail maintenance capital improvement fund for such purposes.



*Figure 3 (left): Cedar boardwalk constructed by UVM students in 2013. Figure 4 (right): A section of the west side boardwalk completed by Vermont youth Conservation Corps in 2014.*



Figure 5: View of Mud Pond from west side viewing platform.

The entire trail system should be assessed annually in the spring and the conditions report updated to reflect work completed and new issues that need attention. Short and long-term maintenance needs should be identified and prioritized, and a plan developed to accomplish the highest priority projects. Proposed trail maintenance and improvement projects should involve trail building consultants when needed for more challenging situations.

For any trail reroutes, all trails should be designed in a manner that minimizes potential environmental degradation and minimizes user conflicts. The Vermont Department of Forests, Parks and Recreation provides a list of resources to provide technical guidance, available at [Partners and Resources | Department of Forests, Parks and Recreation \(vermont.gov\)](#). For work being proposed in or near wetlands the DEC Wetlands Program should be contacted. Winooski Valley Park District has provided technical assistance on trail issues in the past and should continue to be used as a resource. Consultation with the county forester should also be considered if there are concerns about the impact of the trail on forest health.

In addition to the technical assistance that will be needed, community involvement should be encouraged in developing, improving and maintaining trails. The town has developed an Adopt-A-Trail program that engages volunteers in the regular monitoring of Mud Pond Conservation Area and other trails. Adopters conduct four site visits a year and submit a report form to town staff describing any trail maintenance work done by the adopter and reporting any issues needing attention. The town should continue to maintain and support this program in order to enhance and improve trail conditions while reducing the burden placed on town staff.

Trails need to be clearly marked with allowed uses. This should be accomplished through signage at trailheads and clear markers at VAST trail junctions. Signage should be kept to the minimum necessary to guide users on the trail. Public feedback has indicated the need for improved wayfinding signage. Additional wayfinding signs should be posted at certain key intersections.

### Parking Lot

The six-car parking lot on Mud Pond Road serves both the Mud Pond Conservation Area and the Country Park. The popularity of mountain biking in the Country Park has caused the main parking lot to fill up during peak hours. Designated overflow parking is available along Mud Pond Road 500ft west of the parking lot, which allows for adequate parking for both parks. However, there have been complaints from abutting landowners regarding noise and disturbance. The town has installed signage encouraging respectful use and regularly reminds recreational users via social media and Front Porch Forum to respect neighboring properties. The town should continue this practice and should monitor the level of usage using surveys or trail counters.



Figure 6: Signage at Mud Pond Road to encourage respectful park usage.

Secondary access to the west of Mud Pond is provided via an informal pull-off along Oak Hill Road. Signage directs trail users to Mud Pond Conservation Area via the discontinued section of Mud Pond Road. This access has become increasingly popular, with reports of cars parked along the side of Oak Hill Rd. The town should investigate the feasibility for establishing a more formal access on the west side of Mud Pond similar to the small

parking lot that services the east side, utilizing the old Mud Pond Road and an easement on private land if necessary. Preliminary scoping should take into consideration all potential natural resource constraints such as topography, wetlands, wildlife habitat and travel corridors, presence of rare/threatened/endangered species; access and site distances; viewshed; proximity and ease of access to park entrance; proximity to neighboring residences; landowner cooperation where an easement(s) is involved; technical feasibility and cost.



*Figure 7: Informal secondary access to Mud Pond Conservation Area.*

### Temporary Structures

There is a 10x12ft overlook platform at the end of the trail facing the pond. The structure is largely constructed with untreated lumber, which will eventually need replacement. Staining the structure will lengthen its usable lifespan. No other structures should be installed.

### Recommendations for Physical Improvements

- No new trails should be developed.
- Assess trail condition annually and prioritize maintenance needs.
- Continue to support the Adopt-A-Trail program and coordinate volunteer workdays to accomplish trail and park improvement projects.
- Design trail reroutes, as needed, using technical guidance manuals or trail building consultants.
- Clearly mark trails for allowed uses.
- Install additional wayfinding signage at key intersections.
- Blaze the loop trail near the pond and add it to the trail map.
- Block off unofficial trails to discourage use.
- Continue to monitor and maintain the trailhead. A new trailhead kiosk should be constructed when the existing one wears out and should be built in the same style as the Five Tree Hill kiosk.
- Continue to monitor and maintain the overlook platform.

- Explore the feasibility of developing a parking lot on the west side of MPCA, utilizing the old Mud Pond Road and an easement on private land if necessary.

## **General Management of the Parcel**

### Best Use of Land

Intensive uses with negative resource impacts are prohibited. The best use of the land is for passive recreation such as hiking, snowshoeing, cross-country skiing and wildlife viewing. Snowmobiling is allowed on the VAST trail only. Trails should be clearly marked with the allowed uses.

### Vehicular Traffic

No motorized vehicles are allowed outside designated parking areas except snowmobiles during the time of year specified in the VAST agreement and only within the designated snowmobile corridor as delineated on the attached map. All-Terrain Vehicles (ATVs) and/or motorized groomers may be used only for trail maintenance purposes with permission of the town.

### Structures

No new physical improvements or structures are permitted except as outlined in this Management Plan.

### Upkeep, Damage, and Illegal Uses on the Property

Planning staff are responsible for maintaining and monitoring the property. The staff monitors official town trails and associated improvements approximately once a month. A trail work log should be used to document needed trail improvements and other work at MPCA. Trail users generally call when there are downed trees or other problems. Reported problems should be dealt with in a timely manner. The Williston Police can also be contacted if serious or recurrent problems occur.

### Boundary Marking and Posting

The original park boundaries were last marked by the University of Vermont LANDS Program in 2007. The Mud Pond Conservation Area boundaries are marked by a mixture of stone walls, fencing and surveyor pins. The boundary should be re-blazed as needed.

### Hunting

Hunting, trapping and/or shooting is not allowed in the Conservation Area. A portion of the property deeded to the town by Catherine Yandell has a perpetual deed restriction prohibiting hunting and trapping. Because this 8-acre lot is within the interior of the overall parcel, the town has decided it would be logistically too difficult to allow hunting on other portions of the Conservation Area while prohibiting it within the originally deeded 8-acre portion. Therefore, the no hunting policy will remain in place in perpetuity. Boundaries of the park are posted for “no hunting.” Vermont posting law requires signs be of a specific dimension with specific wording, spaced no further than 400 feet apart, be placed at each corner of the property, and dated each year. In addition, posting notices must be annually recorded at the town clerk’s office.

### Harvest of Trees or Plants

The historic practice in Williston's country parks and conservation areas has been to "prohibit cutting, removal, or harvesting of native plants and trees, except for minimal clearing necessary for the creation and maintenance of trails." Although the town is considering forest management on other town forests and has recently developed a forest management plan for Catamount, the Conservation Commission has decided to continue the practice of no active forest management within the Mud Pond Conservation Area, except for controlling invasive species. With permission of the Williston Conservation Commission, exceptions can be allowed for the cultural harvest and use of trees such as black ash.

### Invasive Species

In Spring 2019, the town engaged a group of students from University of Vermont's NR206 (Environmental Problem Solving) class to conduct an inventory of invasive plant species and develop an invasive plant management strategy. The resulting report entitled *Mud Pond Conservation Area Invasive Plant Management Plan* (Appendix D) describes the invasives present and extent of infestation. Five invasive plant species were identified on the property including honeysuckle (*Lonicera* spp.), common buckthorn (*Rhamnus cathartica*), Japanese barberry (*Berberis thunbergii*), oriental bittersweet (*Celastrus orbiculatus*), and glossy buckthorn (*Frangula alnus*). Common and glossy buckthorn are the most abundant invasives, with extensive infestations along the pond's edge near the overlook platform, along South Road and along the VAST trail. The Plan recommends addressing the infestations near the pond first, as those will be more likely to spread and especially where views are impacted. The town can target areas near trails for removal by volunteers and/or a professional contractor as time and resources permit. Invasives should be periodically monitored. The Vermont Agency of Natural Resources should be contacted for technical guidance as needed.

### Recommendations for General Management

- The Conservation Area should be used for passive recreation such as hiking, snowshoeing, cross-country skiing and wildlife viewing, with snowmobiling restricted to the VAST corridor.
- Monitor trail use and condition at least monthly during the summer months.
- Walk the boundary annually, ideally in early fall, and update the "No Hunting" signs as needed to comply with Vermont posting law.
- Continue the practice of no active forest management except for invasive species control.
- Harvesting certain trees such as black ash for cultural uses may be allowed with permission from the Conservation Commission.
- Periodically monitor invasive species, utilizing the assistance of Vermont Agency of Natural Resources and UVM students.
- Control invasive species with the assistance of volunteers and/or a professional contractor. Areas where views are impacted should be prioritized.

## **Trail Management**

### Mountain Biking

Mountain biking is prohibited in the Conservation Area to protect the natural resources and to enhance the user experience for passive recreation.

### Snowmobiles

The Route 7 VAST snowmobile trail passes through the Mud Pond Conservation Area. This is a main north south trail for snowmobile riders in the State. It travels east-west through the Conservation Area from South Road, and then follows the western boundary to the discontinued section of Mud Pond Road, following this to Oak Hill Road. The Town of Williston has established and maintained a positive working relationship with the Vermont Association of Snow Travelers (VAST) organization and would like to maintain a partnership with VAST and their local chapter the Williston Hill Hawks. For that reason, the town will continue to allow snowmobiling in MPCA on the designated VAST trail only, during the winter when the ground is frozen. Use of all motorized vehicles other than snowmobiles is prohibited. Snowmobile access is granted through a yearly written agreement between VAST and the town. Snowmobile trails should be inspected yearly by town staff before the agreement for the next year is signed. If there are concerns, a site visit with VAST should be conducted to address concerns.

### Horses

In order to ensure the safety of all user groups and protect the trails, horseback riding is prohibited throughout the Mud Pond Conservation Area.

### Trail Closures

Trails are dynamic and change with the seasons and weather conditions. While during most of the season, the mineral soils that make up a good, hardened trail are fairly stable, spring is the most sensitive time, making the trails vulnerable to erosion and long-term damage. While the Town has no official policy to close trails during the spring thaw (April 1 – June 1), signs should be posted at the trailhead discouraging trail usage if conditions warrant.

The town may at its discretion close trails to all or particular uses in cases of:

- Hazardous trail conditions due to flooding, downed trees, trail structure failures, or other;
- Degradation of natural resources due to trail abuse or muddy conditions;
- Location of a sensitive nest or den near the trail;
- Other situations of trail abuse that result in denigration of the resource.

The town will make reasonable attempts to provide advance notice for trail closures; however, such notice may not be possible under certain conditions. Trail closure notifications shall be placed at trailheads with the reason for the closure and a projected date the trail will be reopen if known. In the case of trail closures due to abuse, the town will attempt to determine the user or user group causing the problem and shall enter into negotiations with said users to remedy the abuse before the trail is reopened to that use.

If the abuse is more general in nature and cannot be assigned to a particular user or user group, then broader outreach and education will be conducted to instill good stewardship.

### Recommendations for Trail Management

- Annually inspect the snowmobile trail prior to renewing access agreement with VAST to ensure that any issues are addressed.
- Discourage trail usage during the spring thaw by posting signage at the trailhead.
- Implement trail closures when necessary to ensure user safety or protect natural resources.
- Clearly communicate trail closures to the public; in cases of abuse closures, where possible work with appropriate user group to remedy the problem.

## **Natural Resources and Habitat Conservation**

A natural resource inventory of the property was conducted in 1993 by the same group of University of Vermont graduate students that wrote the original management plan. This inventory documented species composition and gave suggested management options. The inventory indicated use of the land by various UVM classes. Contacting professors to obtain information or data they may have about Mud Pond is a good way for the Town to increase its knowledge about the natural features of this area. The town should utilize the UVM NR206 class to conduct natural resource inventories and/or wildlife tracking studies of the conservation area.

In 2017, an iNaturalist application was developed by the Williston Conservation Intern for people to log wildlife sightings in Williston; however, the site has not been widely used by the public. The Conservation Commission should consider ways to encourage the public to use the iNaturalist application, or to otherwise report wildlife sightings.

## **Management Plan Update**

The management plan should be reviewed and updated every ten years. Review shall be undertaken by the WCC with consultation from the Public Works and Recreation departments. The WCC shall approve the plan and forward it to the Williston Selectboard for final approval. Public comment on the plan shall be taken whenever the plan is updated. Notice should be given in the local newspaper and copies of the plan should be available at the town offices. Abutting landowners should also be notified by mail.

## **Conflict Resolution**

Conflicts should be brought the attention of the WCC. The WCC will review the problem and work with the stakeholders to come to a solution. In some cases, other town officials such as the Selectboard may be asked to mediate a situation if the WCC cannot come to an acceptable solution or if the WCC is a main stakeholder in the issue.

## Action Items

- Assess trail condition annually and prioritize maintenance needs.
- Continue to support the Adopt-A-Trail program and coordinate volunteer workdays to accomplish trail and park improvement projects.
- Clearly mark trails for allowed uses.
- Install additional wayfinding signage at key intersections.
- Block off unofficial trails to discourage use.
- Continue to monitor and maintain the trailhead. A new trailhead kiosk should be constructed when the existing one wears out and should be built in the same style as the Five Tree Hill kiosk.
- Continue to monitor and maintain the overlook platform.
- Walk the boundary annually, ideally in early fall, and update the “No Hunting” signs as needed to comply with Vermont posting law.
- Annually inspect the snowmobile trail prior to renewing access agreement with VAST to ensure that any issues are addressed.
- Discourage trail usage during the spring thaw by posting signage at the trailhead.
- Implement trail closures when necessary to ensure user safety or protect natural resources.
- Clearly communicate trail closures to the public and any user group representatives such as VAST; in cases of abuse closures, work with appropriate user group to remedy the problem.
- Update the natural community delineations and the wildlife inventory.
- Monitor and control invasive species; prioritize invasives removal in areas where views are impacted.
- Encourage teachers and schools to use MPCA as an outdoor classroom.
- Engage the public in trail maintenance and stewardship through annual workdays.
- Explore the feasibility of developing a parking lot on the west side of MPCA, utilizing the old Mud Pond Road and an easement on private land if necessary.
- Management should focus on actions which require minimal maintenance. Passive enforcement is preferred over posting and patrolling.
- This Management Plan should be reviewed and updated at 10-year intervals.

## Adoption

This Management Plan becomes effective upon approval of the Selectboard.

  
Selectboard Chair

11/16/2021  
Date

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## **Appendices**

A. Maps

B. Land and Water Conservation Fund Agreement

C. Property Deeds

D. Invasive Species Management Plan

## **APPENDIX A: Maps**

# **APPENDIX B: Land and Water Conservation** **Fund Agreement**

## **APPENDIX C: Property Deeds**

# **APPENDIX D: Invasive Species Management** **Plan**

# **APPENDIX E: Public Comments on Draft Management Plan**