

VERMONT FISH & WILDLIFE DEPARTMENT

Wildlife Management Area Report



2010 Annual Report

Wildlife Management Areas: Conserved Lands – Hidden Treasures

Vermont is synonymous with the outdoors. In part, because few states, especially in the East, can offer the near constant chance of discovery: a secret orchard, an unmapped trout stream, a nameless hill with a magnificent view, a remote bog with boreal birds. Best of all, there's no need for a deep wallet or long drive. Remarkably, many of these areas are lightly-used and otherwise intact. Yet only a few can compete with the quality opportunities waiting to be found in any one of the Vermont Fish & Wildlife Department's Wildlife Management Areas (WMA).

Recently an angler spoke of the particular WMA he favored as a "hidden treasure" and complimented the department for the foresight to purchase it. His spot, however, is just one of the eighty-six (86) hidden treasures, totaling 130,150 acres. These WMAs are well-distributed throughout the state, virtually ensuring that every Vermonter is within easy reach of hunting, fishing and other wildlife-related recreation. Access, though, has to be easily accessible. To ensure this, all the department's WMAs are featured on its website and in the Guide to the Wildlife Management Areas of Vermont. Both feature detailed colored maps of each site with UTM coordinates, key habitat features, common fish and wildlife -- including game species, and hunting opportunities.

WMA management emphasizes the conservation of fish and wildlife and their habitats with priority given to public access for hunting, fishing, trapping and other fish and wildlife-based activities. Some of this work is obvious. Most people will notice a new informational kiosk, an enhanced parking lot, a newly brush-hogged field, or on-going invasive species control. However, there is other important, necessary work being conducted by department staff that is just as hidden as the angler's favorite WMA. This includes reviewing requests for Special Use Permits, licenses or leases, re-blazing property lines and surveying property boundaries. Unfortunately, it can also include

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2010 Management Highlights

- Seventy-eight additional spruce grouse were released in Victory Basin WMA. Over the last three years, 129 birds have been released toward the goal of re-establishing a second Vermont population of this state-endangered boreal species.
- Dead Creek WMA hosted the 9th annual Dead Creek Wildlife Day. One of the Vermont Chamber of Commerce's "Top Ten Fall Events for 2010," this event hosted over 560 people who came to celebrate Vermont's wildlife heritage.
- Granite steps were installed at the steelhead viewing site at Willoughby Falls WMA, providing erosion control and public access that will last for centuries.
- A universal-access moose viewing platform was constructed at West Mountain WMA.
- Public Use Maps for 85 WMAs were updated with new boundary and access information and re-formatted with topographic lines and landmarks. The updated maps are available on the department's website: www.vtfishandwildlife.com/wma_maps.cfm.



This platform completed in 2010 provides a safe, universal access site to observe moose at West Mountain WMA. Photo: Paul Hamelin - VFWD



Most of the programs described in this report are funded through the Federal Aid in Wildlife Restoration Program. This program was initiated in 1937 as the Federal Aid in Wildlife Act and created a system whereby taxes are paid on firearms, ammunition and archery equipment by the public who hunts. Today this excise tax generates more than one hundred million dollars each year that are dedicated to state wildlife restoration and management projects across the United States. The state of Vermont uses these monies for acquiring land, and for restoring and managing wildlife. These excise tax dollars, coupled with state hunting license fees, have been the predominant source of funding for the successful restoration and management of Vermont's wildlife resources.



Conserving fish, wildlife, plants and their habitats for the people of Vermont.

WMAs at a Glance

The Vermont Fish & Wildlife Department has 86 Wildlife Management Areas (WMA) and numerous riparian parcels totaling over 130,150 acres. These lands play an important role in meeting the department's mission. Management of these areas emphasizes the conservation of fish and wildlife and their habitats, and the properties provide important public access for hunting, fishing, trapping and other fish and wildlife-based activities.

The department has purchased WMAs using several funding sources, including funds from hunting license sales, Vermont Waterfowl Funds from the sale of state duck stamps, U.S. Fish & Wildlife Service (USFWS) Federal Aid in Wildlife Restoration (Pittman-Robertson) Fund, Vermont Housing and Conservation Board, and the Land and Water Conservation Fund. Management and administration of all WMAs are primarily paid for through USFWS Federal Aid in Wildlife Restoration Funds. Each year, at least 16 department biologists and specialists work on WMA management and administration.

Technical assistance from the Vermont Department of Forests, Parks, and Recreation (FPR) staff is essential for completing long-range management planning, property administration, and habitat management projects. Wildlife habitat enhancement activities are conducted through commercial and non-commercial means to provide the rich diversity of habitat types and forest ages necessary to meet the needs of many wildlife species.

The management of WMAs is guided by Long Range Management Plans (LRMP). LRMPs are based on a thorough natural resources inventory and public input gathered through various methods. Management activities primarily focus on providing a diversity of fish and wildlife habitat as well as quality opportunities for fish and wildlife-based outdoor activities.

WMAs: Conserved Lands – Hidden Treasures *continued from page 1*

confronting illegal activities such as private trails, roads, buildings and encroachments. While this report highlights high profile work completed on WMAs this past year, please don't forget these day-to-day administrative duties while you are reading about what makes these public lands special, hidden places to visit in Vermont.



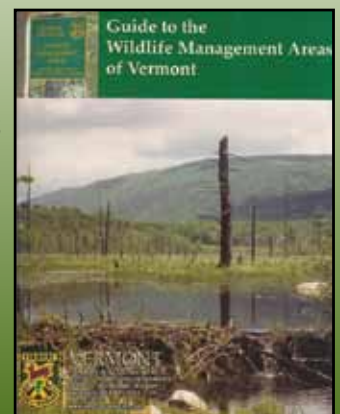
WMA management is primarily focused on providing a diversity of fish and wildlife habitat as well as quality opportunities for fish and wildlife-based outdoor activities.

Photo: Bog at Bill Sladyk WMA by Bob Zaino - VFWD

Getting there...

WMA maps with a written narrative describing each WMA are available on the department website (www.vtfishandwildlife.com) and also compiled in a statewide atlas, Guide to the Wildlife Management Areas of Vermont.

This atlas is available for \$17.25



Property Administration

An essential component of any land management program is the maintenance of property boundaries and infrastructure, such as roads, bridges, and signs. Without these efforts, the habitat management and public use goals of each area cannot be achieved. All 86 WMAs routinely require boundary line surveying and maintenance, building maintenance, signage, trash removal, and responses to encroachments and other trespasses.

During the 2010 calendar year the following maintenance activities were completed on WMAs:

- Installed or repaired **11** culverts or bridges
- Maintained **5** buildings
- Mowed/maintained **26** dams, dikes and levees
- Maintained **63** miles of forest roads
- Maintained **2,600** feet of fence, installed **300** feet of new fence
- Improved/maintained **20** parking areas
- Maintained **22** WMA signs/kiosks
- Maintained **61.5** miles of property boundary lines and surveyed **2.1** miles
- Installed **4** new gates
- Conducted **10** cultural resource reviews
- Assessed **9** parcels for potential acquisition to protect habitat and public access for fish and wildlife-based activities
- Addressed **81** property management issues (encroachments, issuing Special Use Permits, boundary line checks, trail reviews, temporary crossings, etc.)
- Conducted **27** presentations or media releases

Non-commercial Wildlife Habitat Management

Non-commercial fish and wildlife habitat management activities include projects where the habitat is enhanced through methods other than standard timber harvest contracts. In most cases, department wildlife or fisheries biologists, other Agency of Natural Resources (ANR) staff, volunteers, or private contractors perform these management activities.

During the 2010 calendar year, staff:

- Installed/maintained **8** beaver wetland water control devices
- Mowed or maintained **960** acres of grassland and cropland
- Cleared competing brush from **439** apple trees plus **23** acres of apple and young oak trees
- Planted **250** fruit or mast (nut bearing) trees
- Planted **130** pitch pine seedlings on **6** acres to restore a rare natural community
- Planted **120** trees to restore Lake Champlain Islands habitat
- Burned **19** acres and reclaimed or brush-mowed **68** acres to maintain **87** acres of old field habitat
- Restored **8,320** feet of stream bank plus **5.3** acres of floodplain by planting **1,806** trees
- Managed water levels on **982** acres of wetland habitat for waterfowl and other wetland bird species
- Maintained **649** waterfowl nest structures and installed **15** new additional ones
- Treated **9.5** acres to control invasive plants
- Thinned saplings to accelerate growth on **12** acres for future deer winter habitat
- Conducted **42** habitat, wildlife or public use inventories on **23** WMAs
- Evaluated an experimental mechanical treatment to control bracken fern on **0.75** acres of blueberry fields at Steam Mill Brook WMA

The 120 trees planted on Lake Champlain Islands in 2010 are part of a long term effort to restore the native trees, shrubs, and herbaceous plants destroyed by overabundant colonial birds.
Photo: John Gobeille - VFWD



Controlled burning was conducted at Sandbar WMA to improve habitat quality and control invasive honeysuckle.
Photo: John Gobeille - VFWD

Commercial Wildlife Habitat Management

Commercial wildlife habitat management activities can enhance wildlife habitat while removing merchantable timber or agricultural crops. Commercial logging operations also improve public access for fish and wildlife-based activities by helping the department develop or maintain WMA roads, culverts, bridges, and herbaceous openings.

All revenue generated by the commercial sale of timber and hay on WMAs is reinvested into the management or acquisition of these lands. Timber sale receipts from commercial forest management activities on WMAs have increased in recent years.

In 2003 the department entered into a partnership with the Ruffed Grouse Society (RGS) to address a backlog of planned timber harvests on WMAs, and to accelerate the level of non-commercial habitat management activities. The 2004 Legislature appropriated \$40,000 in capital funds to assist with this work. An additional \$50,000 was appropriated in 2005.

The RGS partnership and the capital appropriations have been productive, resulting in a dramatic increase in WMA timber

harvests and non-commercial habitat management activities during FY05 through FY10. A summary of WMA timber harvests for the five-year period FY06-FY10 is provided in Table 1.

Table 2 reports the commercial wildlife habitat management activities on WMAs in FY10. Variations in harvesting volumes across different regions of the state are a result of disparities in state-owned timber acreage and accessibility on WMAs, staffing levels, stand conditions, and work priorities. Table 3 indicates the acreage and minimum projected income for 10 timber harvests that were active, sold, or about to be sold on eight WMAs as of January 1, 2011.

Commercial agriculture was conducted via leases on 960 acres in four districts in 2010, generating \$7,664 in revenue to use as match for federal funding for WMA management. As with timber harvesting, this activity contributes to the local economy and maintains Vermont's working landscape while providing habitat elements for many Species of Greatest Conservation Need, as well as waterfowl, deer, bear, turkeys, and small game.

Table 1. Wildlife Habitat Timber Harvests on VFWD WMAs FY06-10^a

	FY06	FY07	FY08	FY09	FY10	5-Year Totals
Fee Acres Harvested (#)	527	444	659	624	565	2,817
Board Feet (MBF)	613	898	891	992	782	4,176
Cords (#)	2,430	2,473	3,008	3,477	1,939	13,327
Program Income (\$) ^c	\$188,236	\$180,487	\$294,582	\$268,200	\$205,193	\$1,136,698
Non-fee Acres Harvest (#) ^b	150	110	105	300	500	1,165
# of Active Timber Sales	10	12	12	11	11	N/A: Timber Harvests Span Several Years

Table 2. Wildlife Habitat Timber Harvests on VFWD WMAs - FY10^a

	District I Springfield	District II Rutland	District III Barre	District IV Essex Jct.	District V St. Johnsbury	State Totals
Fee Acres Harvested (#)	0	146	138	146	135	565
Board Feet (MBF)	0	218	330	63	171	782
Cords (#)	0	372	800	212	555	1,939
Program Income (\$) ^c	\$0	\$43,379	\$85,398	\$32,363	\$44,053	\$205,193
Non-fee Acres Harvested (#) ^b	500	0	0	0	0	500

^a Includes pre-harvest payments; ^b Timber rights privately owned; ^c All revenues generated on WMAs go back into the management of these properties.

Table 3. Wildlife Habitat Timber Harvests Active, Sold, or Ready to Sell on 8 VFWD WMAs as of Jan. 1, 2011

District	Number of Sales	Clear-Cut Acres	Selective Acres	Acres Total	Income Projection*
Springfield	2	17	65	82	\$16,984
Rutland	2	55	130	185	\$158,914
Barre	0	0	0	0	\$0
Essex	2	72	195	267	\$89,291
St. Johnsbury	4	131	34	165	\$57,044
Totals	10	275	424	699	\$322,233

*Based on actual price of purchased sales or minimum acceptable bid for sales ready to sell. Projection = payment amount remaining in active sales + uncut sold sales + prospectus minimum bids. Revenue subject to winter operating conditions; total income may not be realized until after June 30, 2013.

Granite steps constructed using "wall stone" donated by Rock of Ages prevent erosion and will provide access for viewing steelhead trout jumping at Willoughby Falls for many generations. Photo: Paul Hamelin - VFWD



Over 500 wildlife enthusiasts attended the 9th annual Dead Creek Day at Dead Creek WMA. Photo: Lilla Lumbra -VFWD



VFWD fisheries biologists conducted inventories to assess water quality and brook trout production at two Northeast Kingdom WMAs as part of a multi-year study of trout production in Essex County. Photo: Pete Emerson - VFWD

In the Spotlight: Pine Mountain WMA

Located ten miles west of the Connecticut River along the Wells River at the intersection of four Vermont towns (Groton, Ryegate, Newbury, and Topsham), Pine Mountain WMA is 2,274 acres of land dedicated to wildlife habitat management and fish and wildlife-based outdoor activities.



The WMA provides good hunting opportunities for grouse, turkey, white-tailed deer, black bear, and snowshoe hare, as well as good birding. Native brook trout are found in the small headwater streams on the WMA.

The original purchase from Douglas and Josephine French of

approximately 1,800 acres occurred in 1968, with more acreage added in 1972. Both purchases were made with the assistance of funds from the Federal Aid in Wildlife Restoration Act (P-R Funds), which are generated through excise taxes on the sale of firearms, ammunition, and hunting gear.

Pine Mountain's granite bedrock, rolling to steep topography, land use history, and several wetland types provide a rich mosaic of vegetative types. The WMA is home to a wide variety of bird, mammal, reptile, amphibian, and plant species. A map of Pine Mountain WMA may be printed from the department website: www.vtfishandwildlife.com/wma_maps.cfm

Several timber harvests were conducted during the past 25 years with specific habitat improvement objectives in mind. Prior to implementation of the projects, a Long Range Management Plan was developed, which includes a detailed forest and natural community inventory as well as assessments of aquatic and wildlife resources, geology,

and cultural resources. Examples of work conducted to implement the plan are described below.

Early Successional Habitat Management

Approximately 100 acres of northern hardwood with a high percentage of red maple and aspen were identified as having very good potential for providing nesting, feeding, and brood-rearing cover for ruffed grouse and a host of other young forest wildlife such as the chestnut-sided warbler and yellow warbler (Figure 1).

To provide a mosaic of vegetation patches less than 40 years old, the stand was divided into a grid of 2.5 acre blocks labeled as being the 1st, 2nd, 3rd, or 4th regeneration cuts. Following the initial cut in 1987, successive cuts have occurred at approximately ten year intervals (Figure 2). The final blocks are scheduled to be cut in 2017. When that portion is completed the 40-year cutting cycle will be complete and the blocks cut in 1987 will be scheduled for cutting again in 2027.

Coniferous Crown Enhancement

A second habitat project was conducted in the winter of 2009-10 to release over 100 acres of co-dominant coniferous species (white pine, balsam fir, hemlock, and red spruce) from competing deciduous trees. Snowshoe hare, ruffed grouse, and white-throated sparrows are among the species that will benefit from this management action. Conducted via a timber harvest, this action will enhance the cover value of the residual trees and encourage the growth of the next generation of conifer species already established in the



Figure 1. The brilliant yellow warbler is one of many species that will benefit from management of young forest habitat on Pine Mountain WMA.

Photo: ©2006 Charles H. Warren - www.nbii.gov



Figure 2. A mosaic of vegetation patches is created by harvesting 2.5 acre blocks to regenerate young forest habitat. Photo: VT FPR

understory. Individual trees were marked by Vermont Forests, Parks and Recreation (VTFPR) forestry staff and carefully removed by the logging contractor to ensure the residual stand was not damaged by the harvesting machinery.

The habitat treatment was operated during the winter months to ensure frozen conditions were in place to protect the soil and minimize damage to the young trees. In addition to the coniferous tree improvements, over 100 apple trees growing along or near the edge of the stand were released or pruned. The two log landings were seeded and mulched to prevent any soil erosion.



Figure 3. Conifer stand before (top) and after treatment (right) to remove deciduous tree competition. Photos: VT FPR



Pine Mountain Bridge Reconstruction

The main access road used to perform management activities at Pine Mountain crosses a significant stream that was spanned by a bridge needing replacement. Vermont Agency of Natural Resources' engineers, foresters, and the department's wildlife division personnel worked together to design and construct a new bridge that not only enables logging equipment to cross the stream safely, but also ensures the stream can access its natural channel and permits the passage of the variety of aquatic species using the stream.



Figure 4. The old wooden bridge (top) was replaced with a new steel beam bridge (below) at Pine Mountain WMA. Photos: VT FPR



The old timbers and decking were removed in the spring of 2008. During that summer, new concrete abutments and steel spanners were installed, along with more fill to raise and straighten the approach to the bridge. This change provides log trucks and other heavy machinery a safer and easier crossing of the stream. The decking was constructed and fastened to the infrastructure in the summer and early fall to complete the project.

Land Acquisition

WMA land acquisition is an important element in achieving the department's mission. Parcels are evaluated based upon existing habitat values and restoration potential, rare or exemplary natural communities, and public access values for fish and wildlife-based outdoor activities on land or water. Some parcels are acquired to improve access to existing WMAs, or to ensure that existing values are not compromised by adjacent developments.

Many land acquisition projects are made possible with the aid of conservation partners, notably the Vermont Land Trust, The Nature Conservancy, Ducks Unlimited, and the Trust for Public Land. The acquisition process is quite lengthy and comprehensive, involving assessment of attributes, real estate appraisal, property survey, town approval, funding approval, Agency of Natural Resources and Governor approval, and other administrative procedures. Only a small proportion of potential parcels considered meet all of the criteria and are actually acquired.

In 2010, the department did not acquire any property in fee title. Department staff reviewed and worked on conservation attributes of nine parcels to evaluate their merits for state ownership. A total of 14 parcels ranging in size from five to 650 acres are currently under consideration and in various stages of VFWD acquisition process.

Eagle Point WMA at Missisquoi National Wildlife Refuge (NWR), Derby, VT, 420 acres

A new WMA was recently established under a unique conservation partnership with the U.S. Fish and Wildlife Service (USFWS). Department staff assisted the USFWS with the acquisition of the Eagle Point Unit of the Missisquoi National Wildlife Refuge. This unit will be managed by the department as a new WMA.

This innovative cooperative agreement means the department is assuming long-term management responsibility of a 420-acre property on the shore of Lake Memphremagog, designated as the Eagle Point WMA at Missisquoi NWR. The USFWS acquired the property in accordance with the terms of the Michael Dunn Trust, which offered the land to the federal government as a donation. Michael Dunn was a native of Montreal who emigrated to the family property in the

1970s and later became an American citizen. He passed away in 2007, leaving property in the U.S. and Canada to the respective governments for conservation and public use.

The property consists of nearly a mile of lakeshore habitat, and includes numerous wetlands, large meadows, hemlock and mixed forest. It supports a great diversity of wildlife including aquatic mammals, waterfowl and other wetland species, grassland birds, and many other terrestrial species. The parcel offers excellent wildlife-based public use opportunities and angling access to Lake Memphremagog.

Working in partnership with the Vermont Land Trust, Community Financial Services Group (Trustee of the Michael Dunn Trust) and the department, the USFWS prepared a draft environmental assessment (EA), solicited public comment on the proposed donation, finalized the EA, and officially accepted the property on August 27, 2010.

The department's contributions to the acquisition included drafting resource assessments for the EA, presenting information at a public meeting and tour, and collaborating to draft a nationally unprecedented agreement to allow the department to manage the property as a WMA.

The final EA can be found online at USFWS website: www.fws.gov/northeast/planning/eaglepoint. A Long Range Management Plan for this property will be developed over the next 24 months.

