

Habitat Conservation & Management

A Fundamental Part of Achieving the Mission of the Vermont Fish & Wildlife Department

Overview of habitat conservation and management

VFWD uses a multi-faceted approach for conserving, managing, enhancing and restoring habitat for fish, wildlife, plants and natural communities. This work is fundamental to the VFWD's mission of the conservation of all species of fish, wildlife, plants and **their habitats** for the people of Vermont. As stated in the VFWD strategic plan, *"Habitat conservation and management through planning, public education, regulation, acquisition of critical lands, and active management of state lands are all important objectives because the quality of Vermont's aquatic and terrestrial habitats ultimately determines the ability of the water and land to support healthy fish and wildlife populations."* VFWD owns and manages 145,000 acres of land specifically to benefit fish and wildlife and provide the public with opportunities to enjoy them. We also work with other conservation landowners including VFPR, USFWS, USFS, VLT, TNC, among others, to guide habitat conservation on those lands. Approximately 22% of the Vermont landscape is conserved in some fashion.

However, Stewardship of Private Land is Key to Success:

Given that the vast majority of land in Vermont is in private ownership (78%), VFWD's success in achieving its broad mission depends on decisions of private landowners regarding how they manage, subdivide or develop their land.

VFWD's approach to habitat conservation, management, and restoration on private land has a long history that dates back to the 1970s and involves:

- a. Protecting habitat through land use regulations (e.g., Act 250, Section 248, Wetland Rules, FERC relicensing)
- b. Influencing forest management through a timber harvest notification process with the Burlington Electric Department and Ryegate Associates
- c. Guiding and providing technical support to regional and municipal government and planning organizations to ensure conservation issues and interests are effectively considered and incorporated into town and regional plans
- d. Working with a wide range of partners to guide their actions to more effectively consider fish and wildlife habitat needs and interests including Vtrans, GMNF, USFWS, TNC, VNRC, ACCD, DEC, FPR, USDA/NRCS, AA, EPA, ACOE, Weyerhaeuser, VHCB, among others
- e. Provide technical and financial support to private landowners enrolled in NRCS Farm Bill conservation programs including EQIP
- f. Provide technical support to private landowners enrolled in UVA
- g. Provide information about effective and strategic land and habitat management to interested landowners
- h. Support and maintain biotics database as the foundation of natural resource, fish and wildlife information to guide all these efforts

Understanding the costs and benefits of these habitat conservation strategies is complicated when considering all the nuances associated with each of them. For instance, the influence VFWD biologists have on loggers, foresters and landowners as a result of our role with BED and Ryegate is not easily quantified, but after decades of working with this community, is significant. Another example is the effect our 30+ years of involvement in the Act 250 process has had on the efficiency of the process overall. Through the development of case law, developed as a result of the VFWD efforts, we have defined necessary wildlife habitat and rare and irreplaceable natural areas (RINAs), and created a process and culture within the regulated community where habitat is considered and protected, by-and-large without litigation. There are many benefits from our efforts that are often unseen.

Habitat Protection through land use regulation:

Current VFWD staff capacity dedicated to this work involves staff in all 5 district offices, and the central office. This involves staff from both the Wildlife and Fisheries Divisions. Historically, both divisions assigned these responsibilities to all fisheries and wildlife biologists in each of the 5 districts and each person was responsible for reviewing applications within the geography of their district.

In 1984, **VFWD established the first case law definition of necessary wildlife habitat** as well as a process for how to assess impacts and consider mitigation measures through the so-called Southview Estates decision. This case involved concerns about the loss of deer winter habitat in Stratton, Vermont. VFWD successfully argued that deer winter habitat fit the definition of necessary wildlife habitat and that the project, as proposed, would destroy part of that habitat. The case was argued before the District Commission, Environmental Board (now the Natural Resources Board), Vermont Supreme Court, and ultimately the Federal District Court of Appeals, 2nd circuit. VFWD position prevailed in all cases!

In 1992, VFWD established similar case law as a result of litigation with Killington Ski Resort over issues with a concentrated area of American beech trees, forested wetlands and a travel corridor used by black bears. This case was argued similarly up to the Federal District Court of Appeal and VFWD prevailed in all venues.

In 1994, **VFWD shifted to a model of centralized capacity for habitat protection** work where two wildlife biologists were responsible for the review of all permit applications and timber harvest notifications for both divisions and coordinated VFWD positions with input and support from other staff as needed. In all scenarios, Fish and Wildlife Specialist positions have been essential support to this work to the point where they now work independently on some impact assessments. This shift to a more centralized model was implemented to improve consistency in impact assessments and development of positions for the VFWD. **It was also used to enable other biological staff to focus more time and attention on other pressing needs for the department. The trickle-down benefits of this shift were significant and resulted in a wide range of benefits including a greater emphasis on big game management and state land management.**

Since 2009, VFWD redistributed these habitat protection responsibilities to a broader set of wildlife staff to meet demands from changing administrations. In addition, the complexity of fish and wildlife habitat issues grew to include bats whose populations were beginning to decline precipitously. Until 2012

VFWD had a less organized system for this work, but maintained a set of staff who still focused on it in 4 of the 5 district offices.

More recently, VFWD created 2 limited service positions to reactivate the more centralized approach to habitat protection. While this still requires support from others in both divisions, it's enabled us to maintain a high level of consistency in our approach to working with the regulated community and enabling other staff to spend time on species management or land management.

Results from this work include:

- *VFWD protects **30,000 acres of necessary wildlife habitat every 5 years** and has protected 60,000 acres of habitat through these efforts since 2009.*
- *This is roughly the **size of the island/town of South Hero, Vermont every 5 years.***
- *Annually, VFWD protects **6,000 acres of necessary wildlife habitat each year** from regulated development through these efforts.*
- *Review an average of 400 Act 250 and Section 248 permit applications for residential, commercial, energy and communications projects each year.*
- *Established entirety of existing case law that defines "necessary wildlife habitat" that now guides Act 250 and 248 and includes: deer winter habitat; concentrated mast areas for black bear; wetlands as feeding habitat and thermal refugia for black bear; travel corridors for black bear; wildlife functions of wetlands; heron rookeries; bicknell's thrush nesting habitat; grassland bird nesting habitat; rare and irreplaceable natural areas – state significant/rare natural communities; habitat for threatened and endangered species.*

Approximately half of the habitat protected over these timeframes is deer winter habitat resulting in **31,000 acres of deer winter habitat protected since 2009**. This is habitat that would otherwise have been destroyed by development.

VFWD created the mitigation process for deer winter habitat and black bear habitat based on population objectives that considered landscape carrying capacity and essential habitat requirements. This process was published in 1988 in the following articles:

- Darling, S.R. 1988. Thoughts on Use of Mitigation when Implementing Statewide Species Management Plans. Trans. Northeast Sect. Wildl. Soc. Vol. 48. Pp. 154 – 163.
- Regan, R.J. 1988. Protection of Deer Winter Range from Development in Vermont. Trans. Northeast Sect. Wildl. Soc. Vol. 48. Pp. 49 – 53.

Subsequently, **VFWD created guidelines to ensure consistent habitat protection** efforts by wildlife biologists in Vermont's land use regulatory processes. Today, VFWD maintains guidelines for deer winter habitat, black bear habitat, Bicknell's thrush habitat, heron rookeries, RINAs, riparian habitat, wetlands, northern long-eared bat habitat, Indiana bat habitat, and grassland bird nesting habitat.

Timber Harvest Notification Process:

According to Certificates of Public Good (CPG) issued by the Vermont Public Utilities Commission (formerly the Public Service Board) in 1987 and 1991 for the Burlington Electric Department and Ryegate Associates power plants respectively, **VFWD is responsible for the review and approval of all timber harvests that will sell wood to those permitted facilities.** The condition of the permits specifies that VFWD will review “notifications” prepared by the foresters employed by the facilities to ensure that **deer winter habitat, wetlands and habitat for endangered species** is not impacted by the proposed timber harvest. The CPGs set standards for what information must be in the notifications and allows VFWD 15 days to respond. Over the past 10 years, our **average response time is 7 days**, although many notifications are approved within 2 – 3 days from the date of receipt.

VFWD reviews an average of **230 notifications** for timber harvests each year. Geographically, this covers the majority of Vermont resulting in benefits to forest habitat management on hundreds of private landowner properties. The only other program that connects with so many private landowners to benefit forest habitat stewardship is the UVA program.

Below is information from 2018 that summarizes VFWD effort in this process (this information is similar each year for the past 10 years):

Number of notifications reviewed:	281
Number approved without issues:	167
Number approved with conditions:	114 (41%)
Number denied for cause:	2 (both were clearing for development in DWH and within 50 feet of a stream. One was revised and subsequently approved. This is similar for most years since 2009)

Over the course of the past 10 years, this process has resulted in **benefits to 21,382 acres of deer winter habitat, and 142,000 acres of forest habitat overall.** Wetlands, rare natural communities, endangered plants, and more recently northern long-eared bats have all benefitted from this process. Aside from the acres of habitat that have been enhanced through participation of VFWD professional wildlife biologists, **over 30 years of relationship and awareness building among foresters, loggers, landowners and our professional staff have created a working environment that better understands and supports thoughtful habitat management on private land.** This process was established with the understanding and foresight that by requiring professional foresters to be on the staff of the power facilities and requiring the wildlife habitat expertise of the VFWD a balance is achieved through both forestry and wildlife habitat technical knowledge and experience.

Support to Private Landowners:

To put this habitat protection effort into context with other private landowner work by VFWD, over the course of the last 5 years, VFWD personnel provided technical guidance that focused on habitat management to both private landowners and natural resource professionals. Technical guidance was provided through site visits, during public workshops and presentations, through discussions and meetings with cooperating partners, and in the preparation of forest and habitat management plans. A variety of habitat types were represented in these projects, including: deer winter habitat, forest interior bird habitat, rare and significant natural communities, wetlands, apple orchards and mast production areas, early successional habitats, late successional forests, riparian corridors, and large forest and connectivity blocks.

During this time period, VFWD supported 4.5 staff positions to provide technical assistance to private landowners in Vermont. These staff positions are partially funded through Department-led initiatives (the Vermont Habitat Stamp) and through cooperative agreements with conservation partners (USDA Natural Resource Conservation Service and the Wildlife Management Institute). During this same time, VFWD staff conducted over **900 site visits, covering over 300,000 acres** across Vermont. The primary focus of the site visits was to help landowners become more familiar with what management activities can be done on their property while helping to establish a ‘conservation-based’ way of thinking regarding the management and future of their property. During the visits, VFWD staff walked the property with the landowner, discussed what they appreciate most about their property, pointed out invasive species, identified important habitat elements, and helped establish a starting point to develop a management plan.

Over the past five years, staff created **292 new habitat management plans for NRCS programs, which will augment to the over 1,050 other individual habitat management projects** that are being currently laid out, monitored, and certified by VFWD staff on private lands throughout Vermont. The benefits of this work range from habitat enhancement including mast tree improvement, young forest habitat creation, apple tree release, and invasive plant control. Results include over **5,725 acres of habitat treatments** completed. Note that the habitat work accomplished with NRCS and Farm Bill programs is not funded by Pittman Robertson funds, but through a cooperative agreement with NRCS using EQIP technical assistance funds.

Legal Authority for VFWD Involvement in Act 250:

An initial note that this information only applies to Act 250 statutory authority and Vermont Natural Resources Board Rules of Procedure. 10 VSA 6085 ©(1)(D) provides that any state agency affected by a proposed project is afforded party status. 10 VSA 6027(a)(1) establishes the power to subpoena state agencies, witnesses, experts, and production of evidence. The NRB may request technical support from state agencies and departments and those agencies or departments may request reimbursement for their costs of providing that support. There is no legal obligation for any part of state government,

besides the NRB, to provide technical support to this process without a formal request. VFWD has been entirely voluntary over the course of the past 35+ years.

Funding for Habitat Protection Efforts through Act 250, 248, FERC Hydro-relicensing, Timber Harvest Notifications, Wetland Permits, Stream Alteration Permits, Among Others:

Costs associated with VFWD participating in these state and federal regulatory processes to protect interests in fish and wildlife habitat are largely staff salaries. Salaries for most staff engaged in this work rely on federal Pittman/Robertson funds (75%) and state funds (25%) for wildlife division staff, and federal Dingall/Johnson funds (75%) and state funds (25%) for Fisheries Division staff. In the case of addressing habitat protection for species that are not birds, mammals or fishes, other funding sources are used. On average, total VFWD staff costs for this work in both divisions is \$400,000.

While VFWD's mission benefits greatly from participation in these processes, the state and federal agencies who administer the actual permit processes do not support the costs of our technical involvement. Sources of non-federal, state funds as match for this work include:

- Hunting, fishing, trapping license revenues;
- General funds;
- Endowment funds from settlement agreements;
- Billback funds; and
- Percentage of funds conveyed to ANR from NRB.

To illustrate, in 2016 VFWD received \$100,000 as part of a settlement agreement with the Lowell Wind Energy Project to support staff capacity to monitor compliance with their permit. This position also coordinates the review of all PUC permit applications throughout Vermont for VFWD, in addition to reviewing timber harvest notifications, wetland permit applications, hydro relicensing permits, and Act 250 permits in certain parts of Vermont. The funds have been used as the non-federal match (25%) for this position.

General Assessment of Habitat Program Salary Costs:

FY19 Salary Costs for Habitat Protection through Act 250, 248, etc:	\$304,638
FY19 Salary Costs for Habitat Assistance to Private Landowners:	\$221,808
FY19 Salary Costs for Conservation Planning Support to Towns:	\$128,000
FY19 Salary Costs for WMA/State Land Management:	\$580,000
FY19 Salary Costs for Land Acquisition:	\$116,042
Total:	\$1,350,488

Note: These figures do not include all staff salary costs pertaining to the HABT and TA grants, but give a general sense for staff salary costs associated with these categories of our work.