

Wetlands' Roles Among ACF Natural Communities



Camera trap photos of an owl and a deer in an ACF wetland, late spring, 2016

What is a “natural community”?

- A natural community is an interacting assemblage of organisms, their physical environment, and the natural processes that affect them.--*Wetland, Woodland, Wildland*, p.2
- A natural community is made up of the species that live together in a natural setting, along with their physical environment and the processes that affect them. --Vermont Fish and Wildlife Department website
(<https://www.vtfishandwildlife.com/conserve/conservation-planning/natural-community-inventory>)

Upland species need wetlands, and vice-versa

- “Vermont’s wetlands support a myriad of waterfowl, wading birds, wetland-dependent furbearers, black bears, moose, amphibians, pitcher plants – the list goes on and on. These species all rely, in whole or in part, on wetland ecosystems for their survival”
-- *Conserving Vermont’s Natural Heritage* (VT Fish and Wildlife Department and Agency of Natural Resources)

Upland species need wetlands, and vice-versa

- Functional wetlands ... are critical wildlife habitat across taxonomic groups, including wetland specialists who cannot survive without nearby wetlands.

-- *Wildlife and Recreation: Understanding and Managing the Effects of Trail Use on Wildlife*, by Meredith Naughton, published by Vermont's Fish and Wildlife Department and Forest, Parks and Recreation Department, 2018.

Upland species need wetlands, and vice-versa

- [W]etlands support an extraordinary diversity of plants and animalsMany common upland-dwelling animals rely on wetlands for food, water and shelter.
- Wetlands provide essential habitat for numerous wildlife species, from large mammals to tiny insects

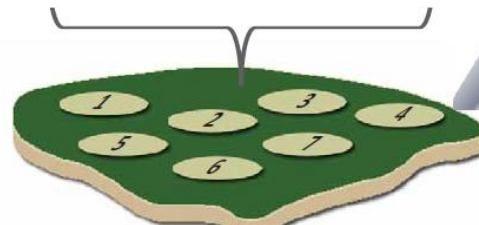
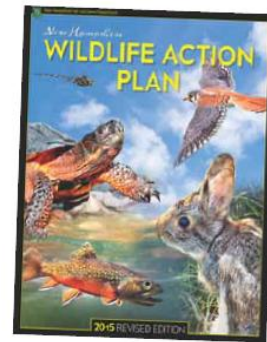
-- *Wetland, Wildland, Woodland*, 2nd Edition, by Elizabeth H. Thompson, Eric R. Sorenson and Robert J. Zaino. Published by The Nature Conservancy and Vermont Land Trust, 2019.

Wetlands: “key habitats” to protect



AVOID SPECIAL HABITAT TYPES

Some habitats are rare, or support wildlife that are particularly sensitive to disturbance. The most recent version of New Hampshire's Wildlife Action Plan and the Natural Heritage Bureau's list of exemplary natural communities were used to identify seven key habitat types to avoid locating trails within if possible. A list of exemplary natural communities present in each town is available at [www.nhdf.org/DRED/media/Documents/TownList-\(1\).pdf](http://www.nhdf.org/DRED/media/Documents/TownList-(1).pdf).



SEVEN KEY HABITATS

- EXEMPLARY NATURAL COMMUNITIES
- PINE BARRENS
- SHRUBLANDS
- WETLANDS
- ROCKY RIDGES OR TALUS SLOPES
- POORLY DRAINED SOILS
- GRAVEL PITS

--Impacts of recreational trails on wildlife. N.H. Fish and Game Department, 2019.
(<https://www.wildlife.nh.gov/sites/g/files/ehbemt746/files/inline-documents/sonh/trails-for-people-wildlife.pdf>)

A “primary food source” for upland species, including bears

- Early spring is the most difficult time of the year for bears. At this time, food is scarce and bears must scavenge intensively to stay alive. Because wetlands green up first, wetland grasses and green, leafy plants have been found to be the primary food of the black bear in the spring....From the time they emerge from their dens to the end of July, their activities center around forested wetlands, beaver dams, and along streams and riverbanks.

-- Wetlands and Black Bears, [Vermont Fish and Wildlife website](#)

Safety and security

- If you were a mother bear with infant offspring, you'd seek wetland edge habitat in early summer. Food is an obvious draw, because wetlands offer a bounty of delectable and digestible forbs, tender grasses and sedges. Thermal cover with nearby cooling water bodies is also essential – it's hot beneath your still-shedding black winter coat. But most of all, you and your family need cover for security – abundant young trees and shrubs for on-the-ground concealment, and large trees to climb and hide within when danger approaches. Humans, dogs, coyotes, other bears and, historically, wolves and cougars are threats to vulnerable cubs.

-- *Wildlife and Habitats*, by Susan Morse, 2021

Bobcats favor wetlands, too

- Bobcats used forest, scrub/shrub habitat, and wetlands or stream buffers more than other habitats.
- Recommendations
 - Maintain large buffers along rivers and streams for travel corridors.
 - Maintain undeveloped blocks of habitat composed of forest, scrub/shrub, wetlands and streams and maintain connectivity between them.
 - Protect rock and ledge areas.
 - Minimize fragmentation from roads.

-- Vermont Fish and Wildlife website
(<http://www.vtfishandwildlife.com/learn-more/vermont-critters/mammals/eastern-bobcat>)

UVM ACF report assigns equal status to ACF wetland and upland communities

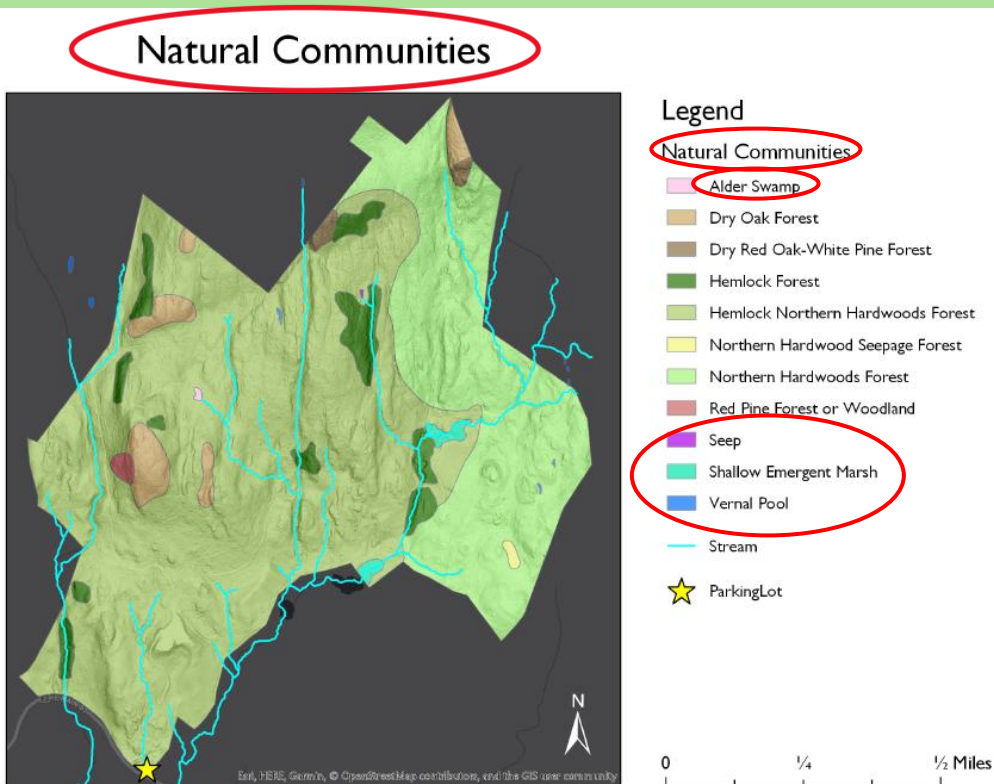


Figure 7. Natural communities of the Andrews Community Forest, Richmond, VT. Mapped October 2018.

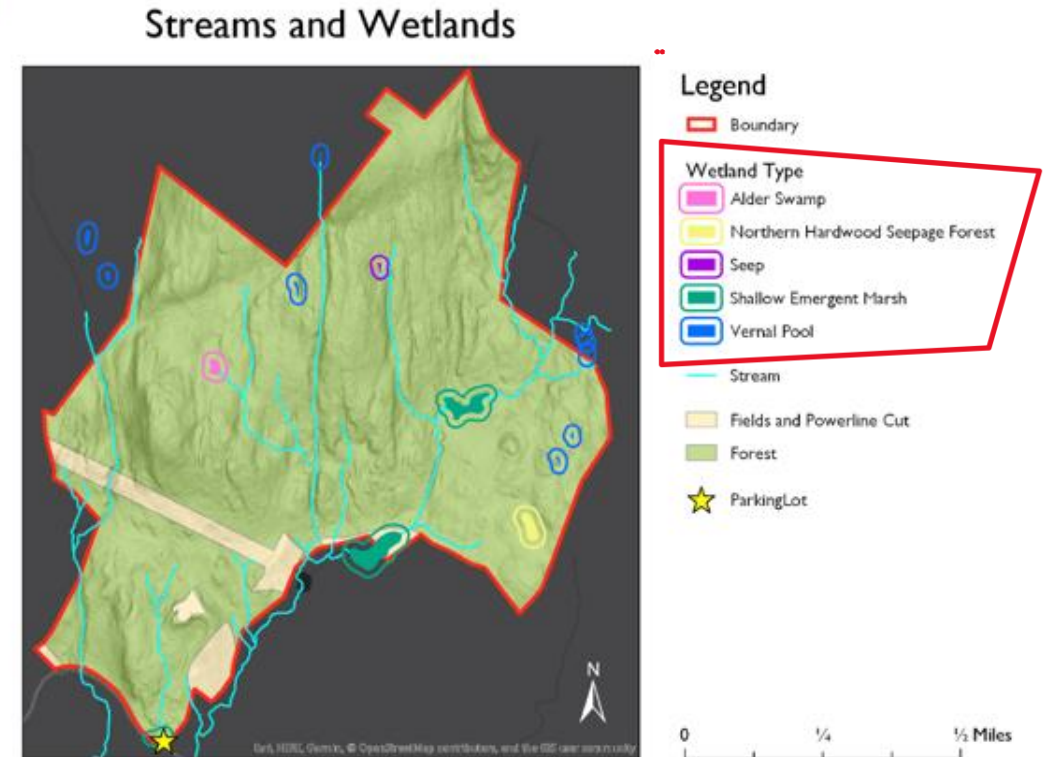


Figure 9. Streams and wetlands of the Andrews Community Forest, Richmond, VT as mapped during October 2018. Solid color indicates actual location and size of wetland feature. Colored rings have been added to highlight location and have no other descriptive purpose.

Our Town's commitment

- [Richmond] is home to black bear, bobcat, otter, fisher, mink, and moose – animals high on the food chain that require large and varied areas to survive and which therefore are indicators of the overall health of the local ecosystem.
 - Black bear production and seasonal habitat consists of extensive, remote forestland with special areas, such as mast production areas (stands of nut-producing trees), wetlands and travel corridors.
- Richmond Town Plan (current)

Our Town's commitment

- “Protect natural communities such as wetlands, streams, native species, soil health, and ecological processes on town-owned land.”

-- From Richmond Town Plan, 2026 draft

Among the Easement's specific obligations

- A.1.a.: To conserve productive forestland, wildlife habitat, biological diversity, **natural communities**, riparian buffers, **wetlands**, soil productivity, water quality and native flora and fauna...and the ecological processes that sustain these natural resource values....”

-- *ACF Grant of Development Rights, Conservation Restrictions and Public Access Easement*, Statement of Purposes, A.1.a.

Using corridors (aka “zones”) of influence to protect both upland wetland communities



- “To determine the average corridor of influence for our region, New Hampshire Fish and Game staff did an extensive review of the scientific literature. Sixty-seven articles were

used to calculate an average flight distance for amphibians and reptiles of 60 feet, to determine that birds become alert 150 feet on either side of a trail on average, and that **mammals become alert to human presence at an average of 400 feet.**”

-- *Trails for People and Wildlife*, N.H. Fish and Game Dept., 2019

So what's a reasonable buffer for ACF?

- Trail recreation can greatly degrade the ecological function of a wetland.... The suggested buffer distance varied based on focal species of the study, ranging from 15m for yellow-headed blackbirds to 300m for moose. Here, a compromise buffer distance of 100m is suggested.
- *Wildlife and Recreation: Understanding and Managing the Effects of Trail Use on Wildlife*, by Meredith Naughton, published by Vermont's Fish and Wildlife Department and Forest, Parks and Recreation Department, 2018.

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