

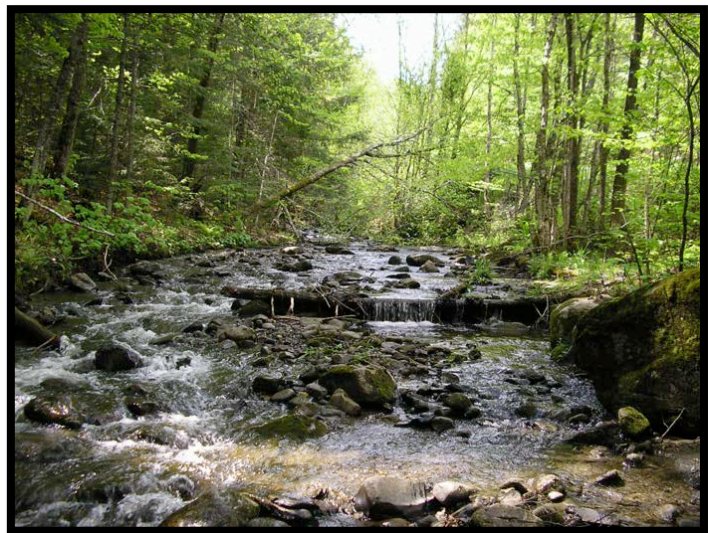
# Riparian Area Management on ANR Lands

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To many of us, the term “riparian area” brings to mind images of lush land bordering tumbling rivers. As correct as our visualizations may be, riparian areas are much more -- they surround wetlands, lakes, ponds, vernal pools and streams of all sizes. In fact, water defines iconic features of the more than 350,000 acres of Vermont’s state parks, state forests, and wildlife management areas. While anglers, paddlers, and swimmers come to state-owned lands to enjoy the waters themselves, a team of biologists, ecologists and lands managers from the Agency of Natural Resources have been putting their heads together to focus on the neighboring matter of riparian area management. After nearly three years of work, the Agency has now approved riparian area policy and guidelines for ANR lands that will provide adaptive management recommendations that elevate the ecological importance of this natural resource. These guidelines provide state land managers with current information on riparian area functions and values, tools to identify and manage riparian areas, and methods to promote consistency in management of riparian areas across all ANR lands.

## Getting in the zone

The boundaries of riparian areas are not defined by one static measurement taken from the edge of a river. Instead, they are described as zones of dynamic interaction and influence between all aquatic and terrestrial ecosystems. Riparian areas influence water quality, provide aquatic and terrestrial habitats, affect stream channel and floodplain stability, and are vital parts of many natural communities.



District Stewardship Teams at the ANR have always considered the special management needs of riparian areas in their plans for state-owned property. Given the diversity of ANR lands and the many different management objectives associated with them, a “one size fits all” approach to riparian area management has never seemed reasonable. However, in the wake of Tropical Storm Irene, the state increased its focus on the urgent need to develop flood-resilient communities, pushing land managers to recognize and formalize examples of responsible riparian area stewardship already in place on state lands. A consistent and targeted management approach was needed to clarify the overarching goals of riparian area management on state-owned lands. Yet the state did not have one.

## The ANR Lands Stewardship Team

Enter the ANR Lands Stewardship Team, a cross-agency group developed over 15 years ago to create policy that applies to all ANR lands, whether managed by Vermont Fish & Wildlife, the Department of Forests, Parks and Recreation, or the Department of Environmental Conservation. Tasked with developing policy that provides flexibility for unique landscapes, a workgroup turned to district stewardship staff to flesh out the details of long-standing but varied riparian management practices.



Meeting monthly for over two years, the work group devoted considerable time up front to clearly define the many functions and values of riparian areas and their associated desired conditions. Because the policy and guidelines will inform all aspects of riparian management – including activities as diverse as timber harvesting, hiking trails, boating access, and invasive species removal – the workgroup needed guidelines that were more complex than a simple “no-cut” buffer that might be applied to a development project.

## Letting science inform management

The work group left little room for guesswork when it came to the reasoning behind its guidelines, basing its recommendations on the best available science gathered during a comprehensive literature review on riparian zone management techniques. After incorporating relevant data, the work group focused on management strategies that were practical to implement and reflected the diversity of ANR lands, including the full range of management objectives they require.

Ultimately, the guidelines delineate specific riparian management zones (RMZs) for the following water features: ephemeral streams, intermittent streams, perennial streams, larger rivers with broad floodplains, lakes and ponds, wetlands, and vernal pools. Although these are diverse features, they share many common riparian functions including provision of important terrestrial wildlife habitat, shoreland stabilization, and retention of sediment and nutrient that would otherwise be carried downstream. Depending on the feature, the recommended RMZs vary in width from potentially less than 50' for small ephemeral streams to 100' or more for larger streams and rivers; 100' for lakes and ponds; 50' – 100' for wetlands (depending on class and type); and 650' for vernal pools, including both primary area around the pool and an extended secondary zone for upland amphibian habitat. However, the RMZs are not set in stone and may be reduced or enlarged due to site-specific factors such as slope, soil type, forest cover, or the extent of existing transportation infrastructure.

Additionally, the policy makes an important distinction between riparian areas associated with the Agency's vast undeveloped acreage and those associated with developed sites on ANR lands. Specifically, the policy directs that management of riparian areas will:

(1) maximize riparian function and values by maintaining or enhancing desired riparian conditions; **and**

(2) provide for public access infrastructure and other water and land-based recreation facilities (e.g. fish hatcheries, access areas, swimming areas, campgrounds, trails, etc.) that are designed and operated to maximize retention of riparian functions and values while minimizing negative impacts.

### Leading by example

The final riparian area management policy for ANR lands acknowledges that both the public benefits and ecological functions of riparian areas can be protected, enhanced and restored through intelligent land management decisions. While the policy and guidelines only apply to ANR lands, the ANR Land Stewardship Team hopes that they will become an in-depth and practical resource for any land manager interested in maximizing the many functions and values of riparian areas. The policy and guidelines (along with other ANR lands policies) are posted on the Department of Forests, Parks and Recreation's website at [http://fpr.vermont.gov/about\\_us/rules\\_regulations](http://fpr.vermont.gov/about_us/rules_regulations).

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