

Natural Areas Stewardship on Private Forest Land

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The Virginia Department of Conservation and Recreation (DCR) operates one of the finest natural areas stewardship programs in the country - 42 dedicated natural area preserves boasting such natural features as caves, intertidal systems, cliff faces, sinkhole ponds, alpine balds, and wetlands. While these are among the finest of the state's natural areas, deserving of full time maintenance by a team of natural resource agency professionals, they are not the only ones. Many of Virginia's significant natural areas occur on private forest land and these also can inspire feelings of both pride and humility, while adding to the assets of the landowner's (and the Commonwealth's) balance sheet.

What does a natural area look like? A natural area on forest land may come in many shapes and sizes. It might be a sheltered cove with rich soils and lush vegetation. It might be a groundwater seep high in magnesium and iron, supporting vegetation that thrives in these unusual conditions. It might be an area with very thin, droughty soils that barely sustain trees - a barren or glade. It might be a riparian area, a cliff face, a cave, a sinkhole pond, or just an area of natural forest surrounded by plantation forest. Regardless of soil type, moisture conditions, the presence or absence of trees, natural areas show little evidence of past conversion to agricultural or residential uses, are often high in native plant and animal diversity, and have few or no weed species or naturalized species introduced from other countries. Finally, they may be maintained by naturally occurring but somewhat unusual conditions such as thin drought-prone soils, groundwater discharge, extreme high or low soil pH, or fire.



What is natural areas management? Though seemingly antithetical, management in natural areas is sometimes necessary. The abundance of introduced (often invasive) species such as kudzu, Japanese honeysuckle, tree-of-heaven, Japanese stiltgrass, and multiflora rose, have created many challenges for natural areas managers and private forest landowners alike. Mechanical methods (girdling, cutting, mowing, or pulling) are often the simplest solutions, though they may be labor intensive. Specially formulated pesticides are often combined with mechanical methods - cut stumps may be treated with herbicides to prevent resprouting, pre-emergent herbicides help prevent germination of annual weeds, and certain selective herbicides can kill invasive species that are mixed in with desirable species. The Nature Conservancy is one of many sources of information on how to control unwanted invasive species (<http://tncweeds.ucdavis.edu/>).

In other cases, natural processes may need to be simulated. Prescribed fire may replace wildfires that are now aggressively suppressed (though justifiably so). Prescribed fire can open the structure of the vegetation, stimulating the native seedbank with light and a shot of nutrients; it can also consume dead fuel left behind from invasive species control. Risers may be installed to replenish groundwater levels depleted by well-withdrawals or al-



tered by ditching, thus restoring the hydrology of the area. Carefully coordinated canopy removal (i.e. selective timber harvest) may also bring a beneficial increase in light to the forest floor, in areas where prescribed fire is not feasible. Natural areas may not always need active management, however. In some cases, fencing out cattle, and making sure that forest roads and/or skid trails are correctly sited may be enough to ensure the viability of a natural area. Your local state forester or Virginia Cooperative Extension Agent can help you find out more about surveying for native plants and animals, controlling invasive species, and making these forest management decisions.

How can I learn more about natural areas on my forestland? If one wishes to learn more about natural areas and native species on his or her forestland, field guides can provide general information on native plants and animals. Additionally, two state agencies track rare plant and animal species, and provide the public with rare species lists. These are available through DCR's website (<http://www.dcr.virginia.gov/dnh/nhrinfo.htm#>); additional information on animals is available through the Department of Game and Inland Fisheries (<http://www.dgif.virginia.gov/wildlife/publications.html>). The DCR Natural Heritage Program also operates an online database for those who want to know whether rare plants, animals, natural communities or other unique natural features are found on their forest land. If information on natural areas is incorporated into sound forest management planning, these natural areas will continue to provide benefits far into the future.

Footer: If you have an interest in natural areas stewardship, there are a number of cost-share programs available to forest landowners. Some are available through the Department of Forestry, others through the Department of Game and Inland Fisheries, still others are available from federal and local government sources. Your local forester or extension agent can help you find the right program available in your area.

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