Chesapeake Bay Riparian Forest Initiative

The restoration of water quality and living resources are the principal goals of the 1987 Chesapeake Bay Agreement. To achieve these goals, it was agreed to reduce nutrients entering the Chesapeake Bay 40 percent by the year 2000 and sustain this level thereafter. In 1992, efforts were expanded to restore water quality and living resources in the tributaries as well as the Bay through development of river-specific pollution reduction plans. In 1993, commitments to living resources were strengthened by goals for removing fish blockages and restoring hundreds of miles of migratory fish habitat through an ecosystem-based habitat strategy.

Through the efforts of the USDA Forest Service, Northeastern Area, and its partners in the Forestry Work Group, a riparian forest initiative has brought more focus on the need to better manage riparian areas and to recognize forests along waterways, or "riparian forests" as a resource important to the Chesapeake Bay. Specific actions have been taken to demonstrate the role of riparian forests for habitat in the ecosystem, as buffers for water quality enhancement in agricultural and developing areas, and in the landscape, as components of overall watershed health and resilience.

BACKGROUND

With the Chesapeake at its heart, 100,000 miles of interconnected streams, rivers, shorelines and their riparian areas serve as a "circulatory system" linking the landscape to the Bay. Forests are the natural riparian vegetation. Although they comprise only 5-10% of land in the watershed, riparian forests have a valuable role in maintaining water quality due to their position in the landscape. Today, 50% or more of these streamside and shoreline forests are degraded and more continue to be lost.

THE STRATEGY

Clearly, issues and opportunities related to riparian areas cut across land uses, jurisdictions, multiple uses and benefits, and government policies and programs. The Chesapeake Bay Program has no defined policies or programs specifically addressing this resource and state efforts are not well integrated or targeted.

GOALS

To improve watershed health by expanding forest cover along streams, rivers and shorelines of the Chesapeake Bay watershed.

To make optimal use of riparian forest buffers as a tool for enhancing water quality and aquatic habitat in agricultural and urbanizing areas.

A myriad of conflicts and considerations, such as development, agriculture, silvicultural BMP's, incentive program needs, wetlands regulation, habitat restoration, fisheries, nutrient buffering, and others convey a sense of just how diverse riparian linkages may be. Riparian landscapes are often at the "edge" of many land uses and streamside areas on private lands are not actively managed for their water quality or ecological benefits. Through the Chesapeake Bay Riparian Initiative, we are promoting a comprehensive approach to build awareness and common objectives, coordinate agencies and efforts, and increase grass roots activism, education, technology transfer, and on-the ground results.

Water Quality and Habitat Objectives

Facilitate Collaboration and Consensus-Building

The Northeastern Area, Forest Service is providing leadership to create an enhanced riparian stewardship ethic in the watershed. By working with the Forestry Work Group(FWG), an action plan was outlined to integrate riparian forests into regional pollution reduction strategies. The FWG and USFS Liaison serve as a catalyst to forge new partnerships with various federal, state and local agencies as well as local groups. Forest Service people provide technical expertise and education valuable in building local and regional consensus.

In 1993, NA worked with the Chesapeake Bay Commission(CBC) to help develop a resolution on Riparian Forests petitioning the Bay Program to increase its commitments to riparian forests. In October of 1994, the Governors and EPA joined them by signing a Directive. Together, these actions began an effort to develop future goals and recommendations for a watershed-wide policy on riparian forest management. With the help of citizens, landowners, and other stakeholders, an expert panel of managers and scientists, is deliberating these issues. The USFS-NA was asked to lead development of the panel. The NA Director is a panel member and USFS Liaison leads the Technical Support Team.

Accomplishments

1992 Forestry Work Group Leadership on Riparian Forests
1993 "White Paper": Functions and Values of Riparian Forests
1994 Chesapeake Bay Commission Resolution
1994 Executive Council Directive on Riparian Forest Policy
1995 MD, VA and PA Stream Corridor Task Forces

Build a Scientific Foundation

Public and political leadership needs a solid, scientific base on which to make decisions now. However, the state of our knowledge related to the functions, values, processes and impacts to riparian ecosystems in the eastern half of the nation is not well-defined. Little research currently focusses on riparian forest functions or nutrient dynamics, leaving substantial research and information needs in the Bay watershed. The Northeastern Area, Forest Service has helped respond.

Scientific Consensus on Water Quality Functions of Riparian Forest Buffers - the Northeastern Area, Forest Service facilitated and coauthored a collaborative effort of 13 scientists and managers to synthesize existing research and build the first published consensus on the values of riparian forests in buffering water quality and controlling stream environment.

Stroud Water Research Center - Helped design and secure funding for a long-term study on the water quality enhancement potential of newly planted riparian forests.

Riparian Forest Buffer Field Handbook - Using scientific studies and practical information from field experience, a handbook is being prepared to help professionals and landowners be successful in restoring riparian forests in agricultural and urban areas.

Demonstrate Results

The Northeastern Area, Forest Service uses small grants and technical help to implement pilot projects to test approaches or build partnerships. These projects may have scientific, practical, or educational value and encourage innovation. Projects are conducted by State Forestry agencies, non-profit groups, or local governments on farms and in communities around the watershed.

Conodoguinet Creek Project, PA - Working with the Alliance for the Bay and PA Bureau of Forestry, volunteers were organized and trained to inventory the riparian forests of the Conodoguinet and develop restoration and monitoring plans. Stream projects are now being done with NA's help.

Lancaster County Stream Team, PA - Providing technical expertise, training, and financial assistance, a partnership of over 8 different local groups and agencies have developed watershed strategies for educating landowners and have succeeded in reforesting riparian areas throughout Donegal Springs Creek and additional sites on the Conestoga River.

Little Gunpowder Falls River Restoration, MD- Using the Forest Stewardship Program as a tool and working with NRCS, CFSA, Trout Unlimited and others the Maryland Forest Service will reforest all riparian areas on the Little Gunpowder by 1997.

Difficult Run Watershed Plan, VA - As a result of the work of NA , the VA Department of Forestry, and the CBP Forestry Work Group, Fairfax Releaf has become a primary force in organizing local citizens to replant cleared and disturbed riparian areas in the urban/suburban areas of Fairfax County. With NA's assistance, an EPA grant will now help local groups develop a watershed restoration plan.

Herring Run Association, MD - This community-based association is beginning with help from NA to develop an education program, including elementary school curriculum, to enhance the stream greenway along Herring Run. Their goal is to return a Herring spawning run to the creek by the year 2000.

Increase Awareness and Technical Knowledge

Northeastern Area and its partners have completed numerous fact sheets, slide programs, brochures, workshops for local governments and grass roots groups, a conference, and developing training programs for field professionals in Maryland, Pennsylvania, and Virginia. These efforts increase knowledge of riparian values and management techniques and strategies.

Regional and Watershed Approaches

The Northeastern Area coordinates regional or watershed approaches to forest resources in the Bay Watershed; providing the incentives for states to work together to assess an issue.

Riparian Forest Inventory and GIS - The Forest Service is currently developing a comprehensive inventory of the status of riparian forests in the Chesapeake Bay Watershed. Using a GIS database approach, this inventory will provide a first look at the distribution and condition of riparian forests and their potential use as buffers for nutrient pollution control. This inventory will also yield valuable information for targeting habitat restoration efforts and technical support of Bay Program water quality modelling efforts.

Nutrient Reduction Tributary Strategies - In 1992 under direction of the Bay Program, states developed river basin strategies to reduce nutrient loads to the Chesapeake. The Northeastern Area, Forest Service worked with state committees in ensuring that riparian and stream corridor protection was included in these plans and provided analysis to help model nutrient removal effectiveness.

Maryland Targeting Strategy - Technical and financial assistance from the Northeastern Area have guided a pilot approach in Maryland to deliver state cooperative and landowner assistance programs by priority watershed (water quality and habitat) needs allowing them to focus on regional Bay goals.

Loudoun County Stream Valley Overlay District - As an example, Loudoun County is experiencing rapid growth and conversion of farms to subdivision. Working with other local agencies, the Forest Service assisted the County Open Space Committee develop a zoning approach to protect stream corridors from development in a priority watershed approach.

Our Partners

Building and sustaining this Riparian Initiative has attracted a variety of partners who share common objectives for improving water quality and enhancing the health of our streams and rivers. New agencies and organizations continue to be added to the list. Implementing projects has also involved many volunteers who came to field sites gave thousands of hours to surveys, tree planting, stream cleanups and monitoring. Without a continued focus on weaving and culturing these long-lasting partnerships, the Riparian Initiative could not succeed.

Maryland DNR Forest Service + Pennsylvania Bureau of Forestry + Virginia Department of Forestry
Alliance for the Chesapeake Bay + Trout Unlimited + Natural Resources Conservation Service
US Fish and Wildlife Service + Chesapeake Bay Commission + City of Baltimore
Chesapeake Bay Foundation + VA Local Assistance Department + NOAA + Extension Service
Conodoguinet and Herring Run Watershed Associations + Fairfax Releaf + Baltimore County
Loudoun County + VA Department of Conservation and Recreation + Stroud Water Research Center
Soil and Water Conservation Districts + Metropolitan Washington Council of Governments
RC&D's + Environmental Protection Agency + many others.