Chesapeake Watershed Forestry

STRATEGIC ACTION PLAN 2009-2014

Draft Draft Draft Draft

INTRODUCTION

Forests are the most beneficial land use for protecting water quality due to their ability to capture, filter, and retain water, as well as absorb pollution from the air. The Bay watershed is currently 58% forested and contains some of the most extensive hardwood forests in the world's temperate latitudes. However, forests in the Chesapeake Bay watershed are being lost at a rate of 100 acres/day and the Bay's water quality remains severely degraded

To meet this and other forest challenges, the Chesapeake Watershed Forestry program (CWF) began in 1990. Partners in this effort include a range of governmental and non-governmental organizations with forest interests and form the Forestry Work Group, part of the Chesapeake Bay Program (http://www.chesapeakebay.net/committee_forestryworkgroup_info.aspx?menuitem=16736). Core members are the Bay state forest agencies and the US Forest Service through the Northeastern Area office of State and Private Forestry.

Principles guiding the CWF strategy:

1) Apply the best science available;
2) Build programs that are sustainable and adaptable;
3) Cultivate partnerships to leverage resources;
4) Utilize outreach efforts that are deliberate and direct; and
5) Develop short term goals based on a two year work plan.
6) Monitor and assess projects regularly.

The following points further explain the critical nature of our work:

- Healthy forests are the most beneficial land cover for water quality, and forestry is part of the solution to reducing non-point source pollution in agricultural and urban areas.
- With 900,000 private forest landowners in the Bay watershed holding 80 percent of the forests, strong partnerships and collaboration are essential to demonstrating how forest protection, restoration, and stewardship contribute to Chesapeake Bay restoration.
- Forests provide multiple resource benefits to the 17 million residents of the Bay watershed such as: clean drinking water, clean air, wildlife habitat, recreation, improved neighborhoods and shopping districts, potential for energy independence, and climate change mitigation.
- Riparian forests are critical to water quality, aquatic health, and habitat diversity; these areas require substantial restoration and protection.

This 2009-2014 Strategic Action Plan continues with three previously identified strategic priorities designed to address the watershed forestry issues:

I. CONSERVE HIGH VALUE FORESTS
II. RESTORE RIPARIAN FORESTS TO MAXIMIZE WATER QUALITY

III. ENHANCE VEGETATIVE COVER IN DEVELOPED AREAS

These are the most important areas in which to act in order to achieve our ultimate goal of maintaining and enhancing Chesapeake watershed forest functions.

I. CONSERVE HIGH VALUE FORESTS

NA Strategic Plan Objective 1D: Protect and enhance the health of watershed forests.

The State of Chesapeake Forests report, published in 2006, describes the following forces of change that impact the ability of forests to provide a full suite of ecosystem services in the watershed: urban sprawl from development, lack of sustainable management of private forests, overabundant deer, spread of invasive plants and pests, and climate change. Of these forces of change, development pressure is has the largest impact upon our ability to maintain watershed forest functions.

CWF helped develop the 2007 Forest Conservation Directive "Protecting the Forests of the Chesapeake Watershed" (http://www.chesapeakebay.net/content/publications/cbp_27761.pdf) that was adopted by the Chesapeake Bay Executive Council. This landmark Directive committed Bay state partners to conserve forests critical to water quality "where conservation is most needed." Other goals to reduce loss of forests watershed wide were adopted. As signatories, each state and the federal government developed Implementation Plans to address the goals in the Directive.

Priority Forest Areas For Conservation And Restoration Include [add COAST criteria here?]:

- Stream, shoreline and floodplain forests, depressions, and forested wetlands;
- Forests in headwaters and on steep slopes;
- Forests protecting drinking water supplies;
- Large contiguous blocks of forest; and
- Sustainably managed working forests.

The objective of this Strategic Priority is to maintain and increase forest cover in areas most important to healthy watershed functioning. The act of conservation here ranges from protection to making a particular forest tract more profitable or worthwhile. In addition to working with Land Trusts and governmental land protection programs, this strategy entails improving land use planning down to the local government and landowner level. Innovative tools will be promoted to facilitate the implementation of conservation, protection and restoration efforts in the watershed. Incentives that align with ecosystem service markets will be advanced.

Conserve High-Value Forests

A) Improve Land-Use Planning especially concerning Targeted Forest Conservation
   1. Support greater forest conservation and planning by state and local governments.
      (a) Assist implementation of watershed actions in State Forest Resource Assessment Strategy and others.
      (b) strategies developed for the Chesapeake Forest Conservation Directive (also in ID2).
      (c) Support use of forests in climate mitigation and adaptation strategies, including migration corridors for vulnerable species.
      (d) Incorporate the use of forests and buffers in TMDL and MS_4 strategies.
      (e) Link Forest Legacy funding strategies to watershed values when possible
   2. Deliver targeting tools for forest conservation to state and local organizations.
      (a) Work with Fostering Stewardship and Water Quality Goal Teams, to interpret and disseminate tools
      (b) Coordinate and interpret regional targeting and conservation efforts.
      (c) Target conservation of riparian forests by coordinating with forest buffer restoration efforts and priority locations.
   3. Communicate benefits of forest conservation and management for local land use planning, such as through CNEMO

B) Coordinate and support the development of ecosystem markets
   1. Support the development of models, partnerships, and tools that encourage the market-based transactions of working forests ecosystem services in priority areas (e.g., Land Server, Bay Bank, Rappahannock Exchange).
   2. Improve models and science for tracking or quantifying forest functions and marketable benefits (use STAC and CBP modeling program)

C) Advance Forest Management as key to conserving forests
   1. Affect the use of existing forest certification programs, particularly by private/non-industrial land owners, by linking certification programs with other ecosystem service incentives for the landowner.
   2. Promote market demand for certified forest products and identify opportunities to expand markets that can support good forest management, such as 'buy local' programs.
   3. Increase resources through governmental, private programs and innovative business partnerships (e.g., Forest Security Areas) to demonstrate how forest conservation goes together with management in targeted areas.
   4. Continue to advance *Forestry for the Bay* to deliver forest management information and expertise to landowners.
   5. Promote the use of diverse Farm Bill programs to support forest management

CREP in Pennsylvania

PA CREP can restore buffers at a $2000-5000/ac net profit to landowners. The acre authorization for enrollment, essentially the budget, is presently robust, and, if reached, will likely be expanded. Maximizing CREP's use in PA elementary.

6. Identify and provide incentives and support for forest diversity, management for multiple values, and resiliency.

D) Coordinate progress on the 2007 Forest Conservation Directive
1. Track total and high value forest acres.
2. Monitor and adjust management to better meet overall goals.
3. Report out to CPB and partners.

II. RESTORE RIPARIAN FORESTS TO MAXIMIZE WATER QUALITY

NA Strategic Plan Objective 1D: Protect and enhance the health of watershed forests.

Riparian forests are those that border streams, shorelines, and other waterways are referred to as riparian forests. These forests are of exceptional importance to the health of Chesapeake watersheds for some of the reasons listed in Figure 3. Bay Program partners have recognized the need to re-establish forests along riparian areas since 1994. While an earlier goal was met eight years in advance, the most recent goal of 10,000 miles of forest buffer to be restored by 2010, will not be met. However, Bay states continue to set goals that are higher still for riparian forest restoration through their 2-year milestones.

What Riparian Forest Buffers do better than Grass Buffers…

- Stabilize and protect stream channels
- Provide critical habitat
- Capture and filter surface runoff
- Reduce nutrient and sediment loads from adjacent land
- Contribute organic carbon to stream ecosystems to allow further denitrification to occur
- Present opportunities for for recreation (walking, jogging, riding, fishing & hunting)

Development pressures and a desire to situate buildings near water, has elevated the importance of protecting established buffers. Between 1994-2002, certain Chesapeake localities experienced riparian forest losses in a range of 1.1 – 5.2 percent (Wilder and Jorgenson 2006). So while miles of new buffer are planted, existing buffers are lost. Our current goal is to have at least 70% of riparian areas with a forest buffer. Newer buffers will also benefit from better targeting and placement. Restoration and conservation go hand-in-hand: while work is being done on targeted conservation, restoration should also be prioritized, and vice versa.

A) Increase the quality and quantity of riparian forest buffer restoration
1. Target buffer placement on the landscape for water quality
2. Promote Bay-wide efforts for stream-lined CREP including opportunities for improved technical assistance. Build links that incentivize buffers in connection with other funding sources
3. Increase capacity for silviculture and forest management within buffer
4. Link riparian forest buffer restoration and maintenance to other watershed activities (e.g., dam removal, stream clean-ups, etc)
5. Set goal, targets, and strategic approach for RBF maintenance activities, and rehabilitation and repair
6. Improve current accounting forest buffer restoration to include buffer loss.

7. Calculate riparian buffer credits and incorporate into ecological markets - nutrient, carbon, etc. - as an additional incentive for landowners to conserve/restore.

B) Promote benefits and flexibility of riparian forest buffer practices

1. ID newer set of model ordinances and easements for buffer conservation, including consideration for shoreline migration and protecting active river areas, like floodplains and source areas.
2. Identify options for effective and efficient riparian forest buffer restoration including early successional species, natural succession and other techniques.
   (a) Evaluate lessons learned and adaptation needed
3. Communicate latest riparian forest buffer implementation techniques and technology to partners, including technical service providers
4. Update economic analysis of RFB restoration

III. ENHANCE TREE COVER IN DEVELOPED AREAS

NA Strategic Plan 2D: Maintain and enhance the benefits that communities within metropolitan areas derive from their forests and trees

The Bay watershed is home to 17 million people, and more than 80% of them live in urban areas. Urban tree cover improves the quality of life for people living and working in Chesapeake Bay communities. Tree cover improves air quality by lowering air temperatures, removing pollutants, reducing the heat island effect, and, if properly placed, reducing energy needs for cooling and heating buildings. Urban trees also absorb and treat stormwater. Sufficient tree cover comes with prosperity in terms of neighborhood satisfaction, increased home values, community health, and commercial activity.

Benefits of Urban Trees

- Remove Air Pollutants
- Provide Shade for People and Buildings
- Reduce Energy Needs for Heating & Cooling
- Reduce Storm Water Management Costs
- Protect Aquatic Ecosystems
- Provide Recreational Opportunities

Chesapeake Bay Program partners realize the connection urban tree cover has with watershed health. A 2003 goal was established for 5 communities in each jurisdiction to increase tree cover. Since 2003, CWF partners have assisted xx communities with tree canopy cover assessments and goal setting. In 2007, as part of the Forest Conservation Directive, the goal was increased to at least 120 communities by 2020. In **Strategic Priority III,** support for increasing canopy cover will be expanded to include valuation of urban forest community services, promotion of trees in storm water management plans and renewed emphasis on the management and maintenance of urban trees.

A. Trees and Stormwater

1. Summarize and publish tree canopy benefits specific to water quality: UFORE HYDRO, urban riparian areas, stormwater. Tabulate benefits to facilitate incorporation into the Clean Water Act regulatory framework.
2. Continue to assess, implement, monitor, and report communities establishing tree canopy goals.
3. Develop urban tree canopy standards/guidelines for code and ordinance reviews.

B. Trees and People

4. Promote the benefits of tree cover with local government officials through CNEMO and encourage use of the Mapper, an easy-to-use tracking tools for periodic tree canopy inventories.
5. Promote and recognize forest conservation efforts and afforestation of public facilities (schools, urban parks, government office lands) and corporate lands (corporate campuses).
6. Identify future options for maintaining trees and engaging communities (adaptive management principles).