

State WHIP Plan
Virginia
August, 2006

A. NATIONAL PRIORITIES

The National NRCS Strategic Plan for 2005-2010 identifies "Healthy Plant and Animal Communities" as one of three mission goals for the agency, categorizing them as national assets that must be sustained. The plan recognizes that working lands and waters provide habitat for diverse and healthy wildlife, aquatic species, and plant communities. The agency's major objective is to improve and manage an additional 9 million acres of essential habitat to benefit at-risk and declining species by 2010. The Wildlife Habitat Incentives Program (WHIP) has served (Appendix A) and continues to serve as a vehicle to achieve that mission.

In 2004, the Chief published the *National Fish, Wildlife, and Wetlands Action Plan*. This plan recognizes the importance of fish and wildlife activities on private lands and the increasing role that NRCS plays in implementing a host of conservation programs where fish and wildlife conservation is a primary objective. This plan identifies important actions to maximize the efficiency in meeting our fish, wildlife and wetland objectives. One of the top eleven immediate action items identified was to have states revise or develop a strategic plan for WHIP operation and ranking process and focus on highest priority wildlife needs. The Chief led the way for states in 2005, by clarifying the national priorities for WHIP:

- Promote the restoration of declining or important native wildlife habitats.
- Protect, restore, develop or enhance wildlife habitat of at-risk species (candidate species, and State and Federally listed threatened and endangered species).
- Reduce the impacts of invasive species on wildlife habitats.
- Protect, restore, develop or enhance declining or important aquatic wildlife species' habitats.

B. DEVELOPING THE PLAN THROUGH COOPERATIVE CONSERVATION

As part of our commitment to achieving conservation cooperatively, NRCS met with the members of the State Technical Committee actively involved in WHIP guidance to initiate an update to the State WHIP Plan. The committee is made up of individuals, state and federal agencies, and organizations across Virginia (Appendix B). The committee reviewed the national priorities as well as discussed the priorities of the state and Virginia's newly adopted Comprehensive Wildlife Conservation Strategy. A consensus was reached to focus on priority declining habitats as a better approach to securing meaningful results with modest funding. A daunting list of more than 1,000 species identified for the state as "species of greatest conservation need" can be better addressed by providing habitats that are used by a guild of these species as opposed to trying to address each separately by a single program.

C. PRIORITY DECLINING HABITATS

Human activities over many centuries have led to the degradation, fragmentation, and destruction of ecosystems. These forces have resulted in endangering and threatening the survival of many of our native plant and animal species and their associated habitats. Seventy-five percent of endangered and threatened species occur on private lands and more than half of those listed have at least 80 percent of

their habitat on private lands. Fortunately, the Farm Bill provides conservation incentives for both private and some public lands. Efforts are underway to conserve species through protection and restoration of their habitats. The results are encouraging, and the interest and dedication of landowners is exceptional. The remaining sections describe the priority declining habitats for Virginia's WHIP program and the essential practices to get them established. Appendix C provides the complete list of conservation practices that are available and can be used to supplement the critical practices.

1. *Atlantic Flyway – the Delmarva Peninsula*

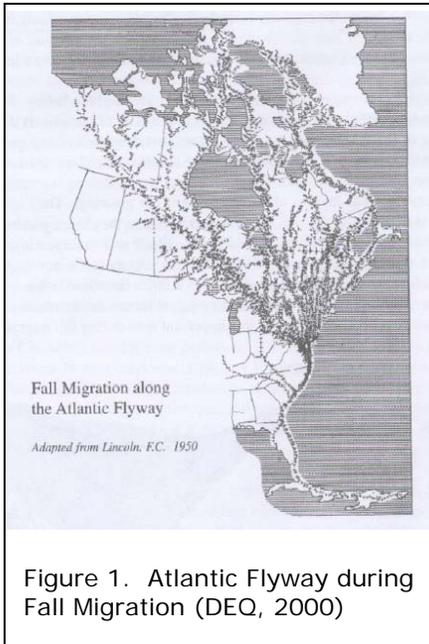


Figure 1. Atlantic Flyway during Fall Migration (DEQ, 2000)

The significance of the Atlantic flyway is evident by figures 1 and 2. Figure 1 illustrates fall migration routes of the entire Atlantic Flyway and figure 2 depicts the extent of the Mid-Atlantic/Southern New England Flyway. It is apparent that the Delmarva Peninsula is a major point of convergence of these flight paths. The reason being, the Chesapeake Bay is one of the largest physical barriers along the East Coast and the Peninsula serves as a resting and refueling opportunity for these birds to continue along their migration path.

Forested habitats of Northampton County, Virginia (southern most tip of the Peninsula) alone support between 6-7 million migrating songbirds during the course of a single fall season (Figure 3). Food and cover provided by native forests with dense understory vegetation

is the primary habitat needed by these migrants. Fruit-producing plants that provide cover and the necessary fruit and associated insects for food are the major source of energy needed to sustain and complete these annual migrations.

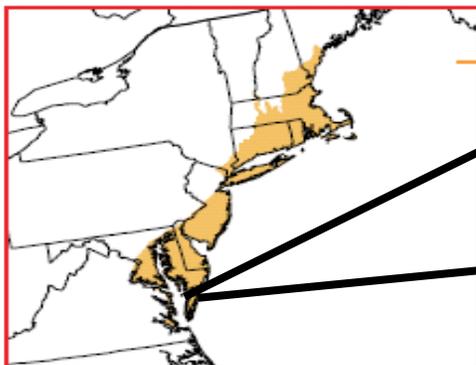


Figure 2. Mid-Atlantic/ Southern New England Flyway (DEQ, 2000)

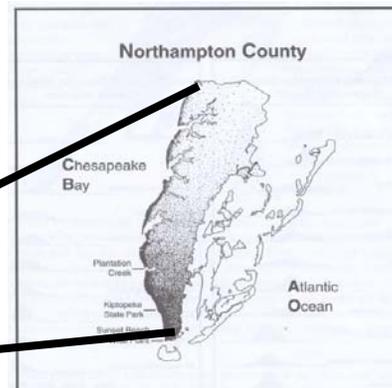


Figure 3. Northampton County, the southern most tip of the Delmarva Peninsula at the mouth of the Chesapeake Bay (DEQ, 2000)

Critical Conservation Practice Action: ~Restoration and Management of Rare and Declining Habitats – ES tree/shrub, 643

2. Fish Passage

The movement of fish and other aquatic organisms through stream corridors and river systems is vitally important to sustaining populations of aquatic species. Fragmentation of rivers and streams is a major problem throughout Virginia due to dams, low water bridges (Figure 4 and 5) and improperly designed steam crossings, especially culverts. The WHIP program in Virginia has provided funds for dam removal projects and low water bridge removals that have benefited threatened and endangered species and/or anadromous fish. 53 fish species are listed as threatened, endangered or of concern in the state. Fish passage will continue to be a priority for the WHIP program.



Figure 4. Upstream shot of low water bridge impediment to endangered Roanoke logperch migration



Figure 5. Downstream shot of low water bridge impediment to endangered Roanoke logperch migration

Critical Conservation Practice Action:

~Fish Passage, 396

3. Estuarine and Stream Restoration - Mollusks

Estuarine



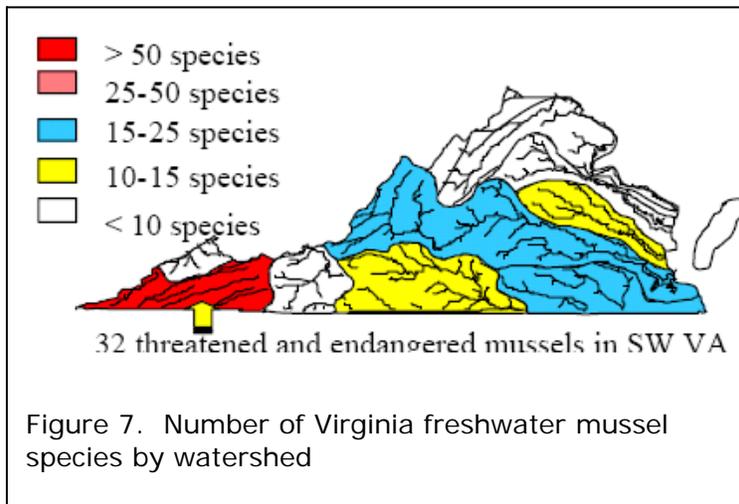
Figure 6. Oyster reef restoration, courtesy CBF

The Chesapeake Bay is the nation's largest estuary and half of Virginia's rivers and streams flow into the Bay. Two key declining habitat features of the bay are oyster reefs and SAV (Submerged Aquatic Vegetation) beds. More than 300 species depend on the microhabitats they provide. Together, these two systems help to improve water quality and protect shorelines by dissipating wave energy. Scientists believe that both are interdependent and

combined restoration efforts will be beneficial for both systems and the species that depend on them. Virginia's WHIP program funded its first combined SAV/oyster reef restoration effort in 2006. In future years, NRCS will partner with the Chesapeake Bay Foundation to improve oyster reef restoration efforts in the bay (Figure 6).

- Critical Conservation Practice Action:**
- ~Restoration and Management of Rare and Declining Habitats – oyster reefs, 643
 - ~Restoration and Management of Rare and Declining Habitats – SAV, 643
 - ~Streambank and Shoreline Protection – Bay shorelines, 580

Stream



Virginia has more than 80 species of freshwater mussels and 56 of those are listed as endangered, threatened, candidates for listing or of special concern. Southwest Virginia alone has 32 species of endangered and threatened freshwater mussels (Figure 7). Multiple conservation programs are improving stream conditions by excluding livestock from streams, protecting soil quality that reduces

sedimentation to the stream and restoring riparian buffers. As the stream health improves, the WHIP program is available to help restore critical habitats for these mussels. Furthermore, it is a priority to support the state and assist private landowners through WHIP to release cultured species from the Department of Game and Inland Fisheries Buller Fish Culture Station. The state has cultured a number of the listed freshwater mussel species at this facility and provided for their release at sites where they can augment existing populations.

- Critical Conservation Practice Action:**
- ~Stream Restoration and Management, 395
 - ~Restoration and Management of Rare and Declining Habitats – mussels, 643

4. Declining Habitats – Longleaf Pine, American Chestnut, Native Grasslands greater than 25 acres

Grassland

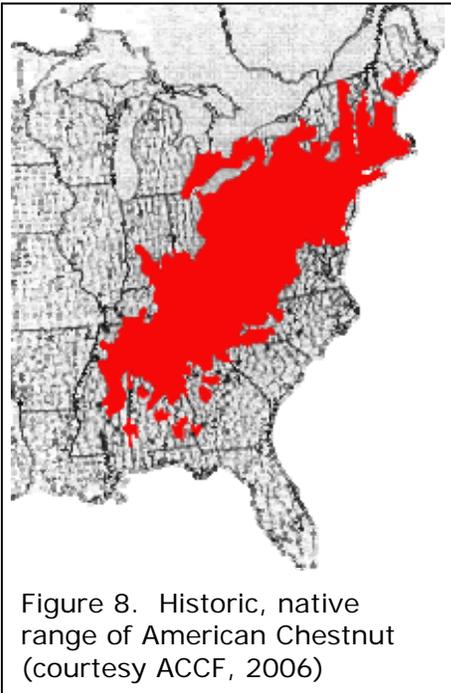
The North American Breeding Bird Survey reports that 15 of the 19 species of grassland birds have declined since 1966. Grassland birds are declining more rapidly than any other group of North American Birds. The declines are linked to habitat

loss and degradation of grassland habitats. Suppression of fire is also a causal factor allowing for woody encroachment into grassland. Woody vegetation negatively affects presence, abundance and nesting success of grassland dependent birds.

Restoring areas of grasslands of 100 or more acres is ideal for native grassland habitat but not always practical. At a minimum, 25 acres of native grassland is needed to support a majority of bird species that depend on this habitat. Only one declining grassland species can survive grassland habitat less than 5 acres in size. Priority will be given to restore areas that are adjacent to other hayfields or meadows which will create the effect of a larger continuous grassland system for wildlife. Shape will also be an important factor since predation of grassland birds usually decreases as the size or amount of edge habitat of grassland increases. Recommendations will include minimizing edge habitat where possible. Hence, blocks of habitat (circular or square fields) are preferable to linear configurations.

Critical Conservation Practice Action: ~ Early Successional Habitat Development/Management, 647

American Chestnut



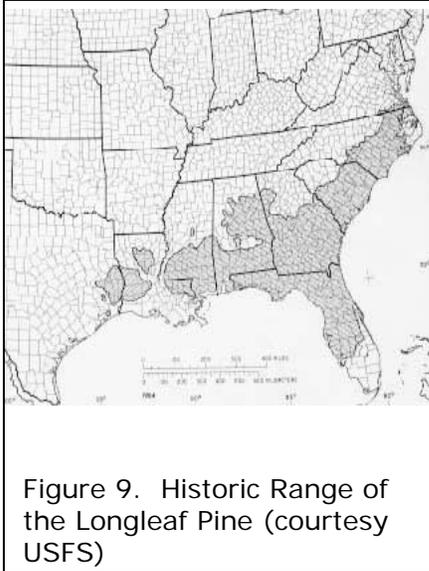
The American chestnut (*Castanea dentata*) tree was the dominant tree species in the southern Appalachian forests (Figure 8) up until it was decimated by the chestnut blight that hit during the 1920s and 30s. Chestnuts were a staple in the diets of wildlife from bears to squirrels. The “majestic” tree grew up to 100 feet high and averaged around 5 feet in diameter. In many forests it was the most numerous and often the largest tree in the forest. It was common on mountainous slopes at altitudes ranging from 2,000 to 4,000 feet.

Breeding efforts have crossed the blight resistant Chinese chestnut with the American chestnut to produce a blight resistant seedling that is 96% American Chestnut. These seedlings are available to help bring back this important Appalachian forested ecosystem.

Critical Conservation Practice Action: ~ Restoration and Management of Rare and Declining Habitats – American Chestnut, 643

Longleaf Pine

When European colonists came to Virginia in 1607, the uplands south of the James River were dominated by longleaf pine forests. This was the northern extent of the



longleaf pine's range (Figure 9) and it covered between 1 and 1.5 million acres in Virginia. However, today only 150 to 200 mature longleaf trees remain in Virginia.

Numerous threatened and endangered (T&E) species are associated with longleaf pine forests throughout the southeastern U.S. In Virginia, T&E species that could be conserved or potentially restored as a result of longleaf pine reestablishment and management include red-cockaded woodpeckers, Bachman's sparrows, Mabee's salamanders, and American chaffseed. Restored longleaf forests have a potential to play a role in the recovery of rare and declining species of plants and animals including carnivorous pitcherplants, Tiger salamanders, as well as various orchids and lilies.

Critical Conservation Practice Action: ~Restoration and Management of Rare and Declining Habitats – Longleaf Pine, 643

5. Invasive Species Control for Wildlife Habitat and other Wildlife Habitat

Invasive species is an enormous issue that has received attention through WHIP in the past and will continue to receive funding. This issue in general, presents a difficult challenge with no quick and easy solutions. Many unknowns exist regarding control methods and their efficacy. Because of this, the committee developed a procedure to help determine under what circumstances this type of work would receive consideration. The applications are required to address the following to be approved:

1. Project setting and importance – wildlife/ecosystem benefiting from project
2. Level of invasiveness – mild, high, etc.
3. Success level (accessibility, other agency experience)
4. Alternatives – chemical, biological, management (disc, burn, etc.)
5. Restoration and maintenance – including estimated costs
6. Long-term plan
7. Way to measure success

General Wildlife habitat projects may also be considered. These projects may include practices such as shallow water areas for wildlife, hedgerows, field borders and created wetlands. Invasive species control is available as a cost-share practice for wildlife practice management in both WHIP and EQIP where those program funds were used to establish wildlife habitat.

D. RANKING AND EVALUATION

A. NATIONAL

The 2002 Farm Bill (PL 107-171, Subtitle D, Section D, Sec 1240(c)) states, "in evaluating applications for cost-share payments and incentive payments, the Secretary shall accord a higher priority to assistance and payments that:

1. Encourage the use by producers of cost-effective conservation practices:
 - Cost effectiveness tools using Practice Average Cost data
 - Comparison of environmental benefits using Conservation Practice Physical Effects (CPPE)
 - Selection of resource concerns (180 National Planning Procedures Handbook 600.31(c))
 - Magnitude of benefits and cost effectiveness
2. Address national conservation priorities [WHIP]:
 - Promote the restoration of declining or important native wildlife habitats.
 - Protect, restore, develop or enhance wildlife habitat of at-risk species (candidate species, and State and Federally listed threatened and endangered species).
 - Reduce the impacts of invasive species on wildlife habitats.
 - Protect, restore, develop or enhance declining or important aquatic wildlife species' habitats.

B. STATE

1. Priority will be given to the WHIP committee's declining habitats.
2. Applications are required to meet the quality criteria of 50 points in the planned condition for landuse that is not completely devoted to wildlife (e.g. cropland, pastureland, etc.). If the existing habitat is above 50 points, an additional 10 point improvement in the planned condition is required.
3. For declining habitats and applications with landuse that is devoted to wildlife (e.g. woodland, shrubland), applications are required to meet the quality criteria of 75 percent (or 75 points) of the wildlife habitat potential in the planned condition.
4. Points will be given to declining habitats that are restored where known listed species are within a 2 mile radius of plan habitat work.
5. Applications require a minimum of 2 acres of work. An exception for this is for declining habitat work and listed species work.
6. Extra consideration will be given to partnership efforts.

E. OTHER CONSERVATION STRATEGIES

The WHIP Subcommittee agreed to keep abreast of other wildlife conservation strategies. For example, Virginia's Bird Conservation Initiative – Coastal Plain, Piedmont and Ridge and Valley, NFHI - National Fish Habitat Initiative, LIP – Landowner Incentive Program - imperiled species, PIF - Partners in Flight, and IBA - Audubon's Important Bird Areas to name a few. This will help to coordinate state

efforts, leverage partner resources and identify potential overlapping federal, state and local programs.

F. PERFORMANCE CRITERIA

The Virginia WHIP is designed to address listed species and species of concern as the overarching goal. Ranking criteria are intended to ensure that the projects with the highest benefits are selected for funding. This is achieved by incorporating technical expertise, recent research and technological advances. Practice requirements were developed to ensure wildlife quality criteria are being met or exceeded.

The following criteria will be used:

- **Ranking Tool** – The new ProTracts Ranking Tool will be used to ensure that applications in the ranking process will address national and state priorities. Applications will be reviewed by the WHIP program manager as a quality assurance process and to determine fund distribution to highest ranking applications. Feedback from field staff and partners will be collected and evaluated at the end of the funding cycle to assist in refinement of the ranking tool.
- **Implementation** – Contract reviews, quality reviews, ProTracts and Performance Results System (PRS) will be used to determine if practice implementation was successful and installed in a timely manner. When feasible, WHIP subcommittee members will incorporate site visits into meetings to evaluate program implementation and wildlife objectives.
- **Wildlife Response** – The Department of Game and Inland Fisheries have incorporated WHIP contract sites into their monitoring cycles when possible. Contract holders have also volunteered to participate in national monitoring efforts like the Christmas Bird Count Survey. This is valuable data since monitoring of wildlife response is not typically done by NRCS field staff. Other partners, for example Audubon, have volunteered to monitor certain contracts that pertain to their organization's goals. Furthermore, other avenues of monitoring wildlife response include the NRCS National Conservation Effects Assessment project, university researchers and Fish and Wildlife Conservation Grants. This data will help to continue to improve WHIP in Virginia.

G. BUDGET

Interest in WHIP over the last three funding cycles has remained above \$600,000 (Table 1). Applicant demand has exceeded financial assistance funding in each of those years. We estimate this trend to continue in Virginia. To help meet demand, wildlife practices for at-risk and declining species have been distributed in both EQIP (Environmental Quality Incentives Program) and WHIP for FY07. This will increase overall financial assistance funds for wildlife activities.

Partner contributions have been substantial over the years. The Department of Game and Inland Fisheries have helped write Wildlife Habitat Development Plans for applicants interested in WHIP. Furthermore, they have provided technical assistance and contract implementation for those same plans that were funded. The Virginia

Department of Forestry, Virginia Department of Game and Inland Fisheries, U.S. Fish and Wildlife Service and the Division of Natural Heritage (Virginia, Department of Conservation and Recreation) have also leveraged funding in cooperation with NRCS on special projects including, longleaf pine restoration, invasive species control for wildlife, fish passage, and migratory bird habitat establishment.

Table1. Prior year practice amounts, applicant numbers and funding

PRACTICE	Federal Fiscal Year (FY)		
	2004	2005	2006
Brush Management (314) ac	22.2	204.6	110.7
Conservation Cover (327) ac	0	4.7	18.9
Critical Area Planting (342) ac	0	11.2	1.6
Dike (356) ft	0	800	0
Early Successional Habitat Development/Management (647) ac	18.7	56.9	150.9
Fence (382) ft	5600	16,947	35,866
Field Border (386) ft	0	76,080.7	76,710.1
Firebreak (394) ft	26,486	10,7970.2	208,157
Fish Passage (396) no	0	0	2
Forest Stand Improvement (666) ac	0	20	0
Hedgerow Planting (422) ft	1744	44,759.2	99,959.4
Pasture and Hay Planting (512) ac	0	58.2	33.7
Pest Management (595) ac	61.4	479.2	319
Prescribed Burning (338) ac	212	453.2	1515.4
Riparian Forest Buffer (391) ac	0	3.2	2.5
Riparian Herbaceous Cover (390) ac	0	0	3.5
Shallow Water Development and Management (646) ac	0	0	30
Tree/Shrub Establishment (612) ac	15.5	58.4	243.3
Upland Wildlife Habitat Management (645) ac	123.8	640.4	808.4
Wetland Creation (658) ac	0	4.2	5.2
Wetland Wildlife Habitat Management (644) ac	0	3	0
APPLICATION & CONTRACT SUMMARY	2004	2005	2006
Application Funding Request	\$883,198	\$952,871	\$639,526
Number of Contracts	67	113	58
Acres	2228	5460	1352
Unfunded Applications	21	27	31
Funding Received	\$536,510	\$798,775	\$470,043

H. REFERENCES

Department of Environmental Quality, Virginia. 2000. Migratory Birds of the Lower Delmarva: A Habitat Management Guide for Landowners. Virginia Coastal Resources Management Program, DEQ, Richmond, Virginia. 24p.

Department of Game and Inland Fisheries, Virginia. 2006. Virginia's Comprehensive Wildlife Conservation Strategy. Richmond, VA.

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Department of Game and Inland Fisheries, Virginia. 2006. Conservation of Freshwater Mussel Resources in Virginia: Strategies for Managing a Critically Imperiled Fauna. Richmond, VA.

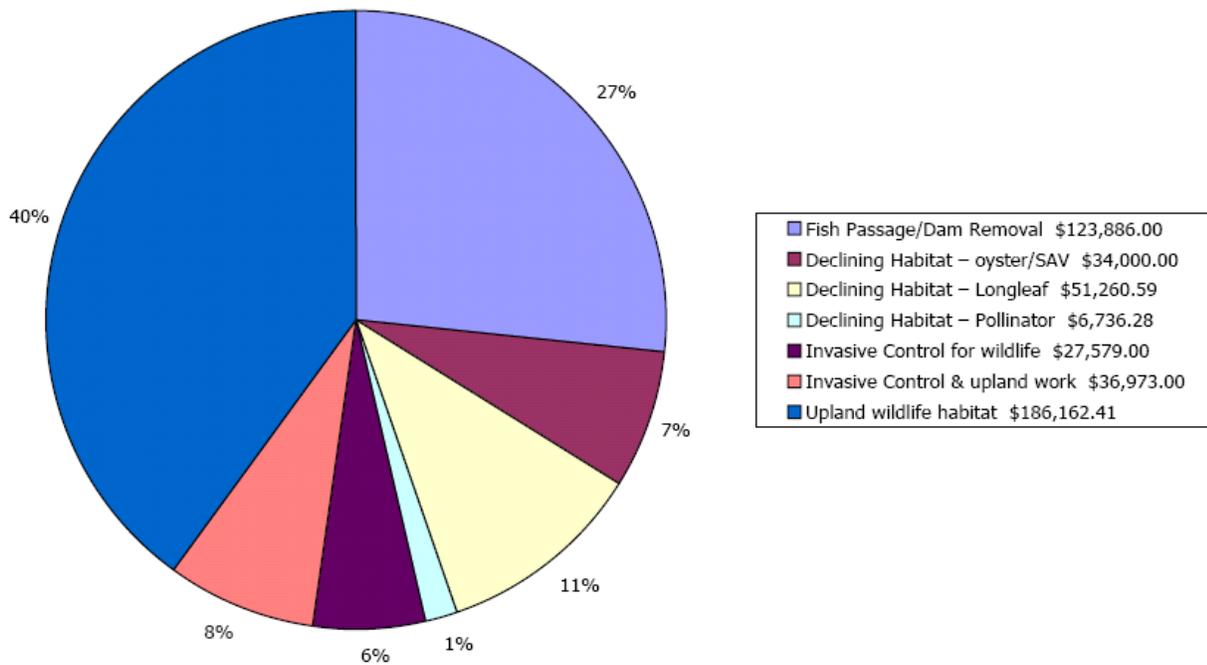
USDA, Natural Resources Conservation Service. 2006. Productive Lands, Healthy Environment. Office of the Chief, Washington, DC. 100p.

USDA, Natural Resources Conservation Service. 2005. National Fish, Wildlife, and Wetland Action Plan. Office of the Chief, Washington, DC. 18p.

APPENDIX A. FY 06 WHIP FUNDING

WHIP FY06 Funds by Priority

Total Funds Obligated - \$466,597.28



APPENDIX B. Members of the WHIP Subcommittee

Audubon

Chesapeake Bay Foundation

Chesapeake Wildlife Heritage

Defenders of Wildlife

The Nature Conservancy

Virginia, Department of Conservation and Recreation, Division of Natural Heritage

Virginia, Department of Conservation and Recreation, Soil and Water Conservation

Virginia, Department of Forestry

Virginia, Department of Game and Inland Fisheries, Game

Virginia, Department of Game and Inland Fisheries, Wildlife Diversity

U.S. Fish and Wildlife Service

APPENDIX C. WHIP CONSERVATION PRACTICE LIST

Practice_Code	Practice_Name	Component
314	Brush Management	314 Woody chemical, Herbaceous chemical, drum chopping or bush hogging
338	Prescribed Burning	338 Prescribed Burning
382	Fence	382-3 Strand Barbed Wire minimum
342	Critical Area Planting	342 Critical Area Planting
386	Field Border	386 Shrubs, WSG, WSG/Shrubs or Cool Wildlife Mix
390	Riparian Herbaceous Cover	390 Riparian Herbaceous Cover
391	Riparian Forest Buffer	391 Riparian Forest Buffer
394	Firebreak	394 Dozer or Disking
395	Stream Habitat Improvement & Mgmt.	395 Stream Habitat Improvement & Mgmt.
396	Fish Passage	396 dam removal, fish ladder, remove low water crossing, bridge replacement/enlargement, remove culvert, culvert replacement/enlargement
422	Hedgerow Planting	422 Hedgerow Planting
457	Mine Shaft and Adit Closing	457 Mine Shaft and Adit Closing - bats only
580	Streambank and Shoreline Protect	580 Streambank and Shoreline Protect
595	Pest Management	595 woody or herbaceous invasive control
612	Tree/Shrub Establishment	612 Tree/Shrub Establishment - trees & shrubs
643	Restoration & Mgmt. of Rare & Declining Habitats	643 Eastern Shore trees and shrubs, longleaf pine, 25 acre grassland, oyster reef, SAV, mussels, American Chestnut
644	Wetland Wildlife Habitat Mgmt.	644 Wetland Wildlife Habitat Mgmt.
645	Upland Wildlife Habitat Mgmt.	645 Upland Wildlife Habitat Management
646	Shallow Water Dev & Mgmt.	646 Shallow Water Dev. & Mgmt. (winter flooding only)
647	Early Successional Habitat Dev./Mgmt.	647 WSG, WSG/wildflowers, WSG/shrubs, shrubs
658	Wetland Creation	658 Wetland Creation
666	Forest Stand Improvement	666 Hardwood