

THE MARYLAND FOREST CONSERVATION ACT:

the law that conserves forests during development

A TEN YEAR REVIEW

MD DNR Forest Service
September 2004



Summary

During the 10 years of implementing the Forest Conservation Act (1992 - 2002):



Statewide, the effect of the Forest Conservation Act on development has resulted in the retention of 79,174 acres of forest, the planting of 13,611 acres of trees and the clearing of 42,906 acres. In other words, 65 % of forest has been retained and 35 % cleared.



Statewide, 55,120 acres of retained and planted forest have been placed under long-term protection.



The State Forest Conservation Program has retained 2,528 acres of existing forest on development sites, cleared 1,158 acres of forest and planted 643 acres.



County Forest Conservation Programs have retained 54,741 acres of existing forest on development sites and cleared 29,320 acres, in other words, 65 % of forest has been retained and 35% cleared.



Municipal Forest Conservation Programs, in total, have retained 955 acres of existing forest, cleared 873 acres and planted 678 acres.



The State Forest Conservation Program, in addition to review activities, also:



Held 118 workshops that were attended by 3,350 attendees for a total of 17,040 seat hours. Attendees included local government officials and staff, consultants, and others seeking information on forest conservation related topics.



Approved 366 professionals to perform forest stand delineations and forest conservation plans as Qualified Professionals.



Awarded \$139,068 through the Urban & Community Forestry Grant Program to various groups for tree planting activities. Funding was made available through the State Forest Conservation Program Fee-In-Lieu Fund.

Why is there a Maryland Forest Conservation Act?

During the 1980's, a population increase in the State of Maryland led to the conversion of large tracts of agricultural and forest land to subdivision and commercial areas. In response to the intense development pressure on the environment, the State adopted three laws: the Chesapeake Bay Critical Area Law in 1984 to protect the Chesapeake Bay and its tributaries; the Nontidal Wetlands Law in 1990 to protect the state's wetlands; and the Forest Conservation Act adopted in 1991 to stem the loss of forest in the State.

The Maryland Forest Conservation Act (Natural Resources Article 5-1601–1612, Annotated Code of Maryland) objectives are to:

- minimize the loss of forest land from development
- ensure that priority areas for forest retention and forest planting are identified and protected prior to development.

The Forest Conservation Act, which established standards for local authorities to enforce during development, is a means to protect not only forest and trees in developing areas but also any sensitive area identified during the local planning or comprehensive land use plan adoption process. Standards established in the Act for identification, retention and replanting include those areas designated as sensitive areas under the Growth Management, Resource Protection and Planning Act of 1992. Sensitive areas include nontidal floodplains, streams and their buffers, steep slopes and critical habitats. Identifying and mapping of these areas is part of the Forest Stand Delineation. Protection occurs through the

establishment of long-term protection agreements as part of the local approval of Forest Conservation Plans.

Successful forest conservation planning requires collaboration between professional foresters, planners, landscape architects, engineers, surveyors and developers, as well as two-way communication between applicants and plan approval authorities.

When does it apply?

Any activity requiring an application for a subdivision, grading permit or sediment control permit on areas 40,000 square feet or greater is subject to the Forest Conservation Act and will require a Forest Conservation Plan.

What is required?

The **Forest Stand Delineation** identifies the existing forest cover and environmental features on the proposed development site. It is submitted at the initial stages of subdivision or project plan approval, before a grading permit application, or before a sediment control application is submitted. It is a snapshot, a 3-D narrative, that captures the project area from the ground plane up through the forest cover. When the Forest Stand Delineation is complete and approved, the information it provides can then be used to prepare the Forest Conservation Plan.

The **Forest Conservation Plan** indicates the limits of disturbance for the proposed project and how existing forested and sensitive areas will be protected during and after development. It is similar to a sediment and erosion control plan which indicates how sediment will be retained onsite. The submittal components include tree

protection specifications, mitigation planting plan, maintenance agreement and the long-term protection agreement to be placed on the retained forest and mitigation areas. This plan is part of the site plan and construction bid document package. A Forest Conservation Plan shall be submitted with the final subdivision or project plan, or application for a grading or sediment control permit.

There are exceptions to the Act. The applicability of the exceptions is determined by the local program or state program staff.

Who can do this work?

Forest Stand Delineations and Forest Conservation Plans must be prepared by a Maryland licensed forester, Maryland licensed landscape architect, or other qualified professionals.

10 Year Review - Forest Conservation Act's Impact on Forest Cover Statewide

Since July of 1993, the Maryland Department of Natural Resources Forest Service (MD DNR FS) has received annual reports from local governments that contain data on the implementation of their locally adopted forest conservation programs. The data submitted includes: number, location, and types of projects; amount of acres cleared, conserved, and planted in connection with development projects; the amount of reforestation and afforestation fees and penalties collected and expended; and the costs of implementing the local program. The MD DNR FS has compiled the information for the time period of January 1993 through June 2002 into a ten year

summary of forest conservation activities statewide. The data analyzed focused on the amount of:

- 1) existing forest onsite prior to development
- 2) existing forest retained onsite after development
- 3) proposed mitigation onsite after development
- 4) forest placed under long-term protection

The Report found that:

- Statewide, **79,174** acres of forest were retained, **42,906** acres were cleared and **13,611** acres were planted.
- All Forest Conservation Programs, on average, retained **65%** of existing forest on development sites and cleared **35%**.
- County programs accounted for **69%** of forest areas under review statewide.
- County Forest Conservation Programs, on average, retained **65%** (**54,741** acres) of existing forest on development sites and cleared **35%** (**29,320** acres).
- Total amount of retained and planted forest placed under long-term protection through County Forest Conservation Programs is **26,822** acres.
- Municipal Forest Conservation Programs, in total, have retained **412** acres of existing forest, cleared **289** acres and planted **180** acres.
- The State Forest Conservation program has retained **23,479** acres (**65%**) of existing forest on development sites, cleared **12,713** acres (**35%**), **4,613** acres planted onsite and **1,580** acres of retained and planted forest has been placed in long-term protection.

Analysis of the data shows, as would be expected, that the highest number of acres of forest cleared and retained occurred in those counties with the highest number of acres under review.

- At the 10-year mark, Prince George's and Charles Counties together accounted for nearly

40% of the total acres cleared.

- Prince George's, Montgomery, Baltimore and Calvert Counties make up nearly half (47%) of the total number of acres retained.
- Prince George's, Montgomery and Carroll Counties constitute half (47%) of the acres of new forest planted.

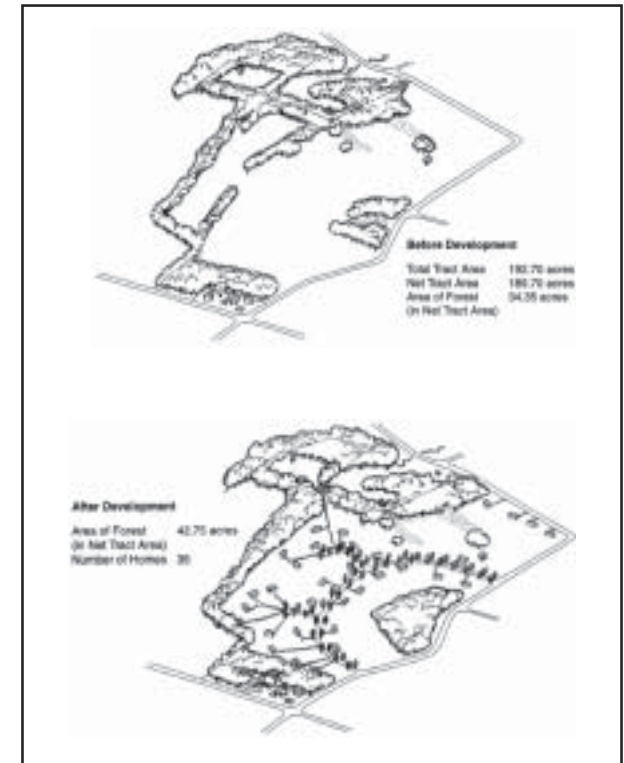
This marks a change from the first five years of the Act. At that point, Prince George's, Montgomery and Charles Counties were responsible for the majority of all the forest retained, cleared and planted in the state. What has caused the change?

During the most recent five years, a number of innovative new programs to retain and plant forests started to show results. For example, Calvert County requires cluster subdivisions with the remaining acreage placed in easement. Baltimore County has various stream buffer requirements and Carroll County has planted large amounts of trees through their mitigation banking program. These programs have dramatically increased the number of acres of forest retained and planted in these counties.

The graphic representations of the data indicate that counties along the I95/Rt. 301 corridor have the most forest conservation activity occurring; from this can be inferred that this area also has more development pressure than the rest of the State. So, forest conservation is not preventing development but working in tandem to conserve the State's forest resources during development. Over the past 10 years, the Forest Conservation Act has enabled the retention and planting of 92,785 acres of forest land; 65% of existing forest has been retained. The ratio of acres of forest retained and planted vs. cleared is

that nearly 2.2 acres are being protected for every acre cleared!

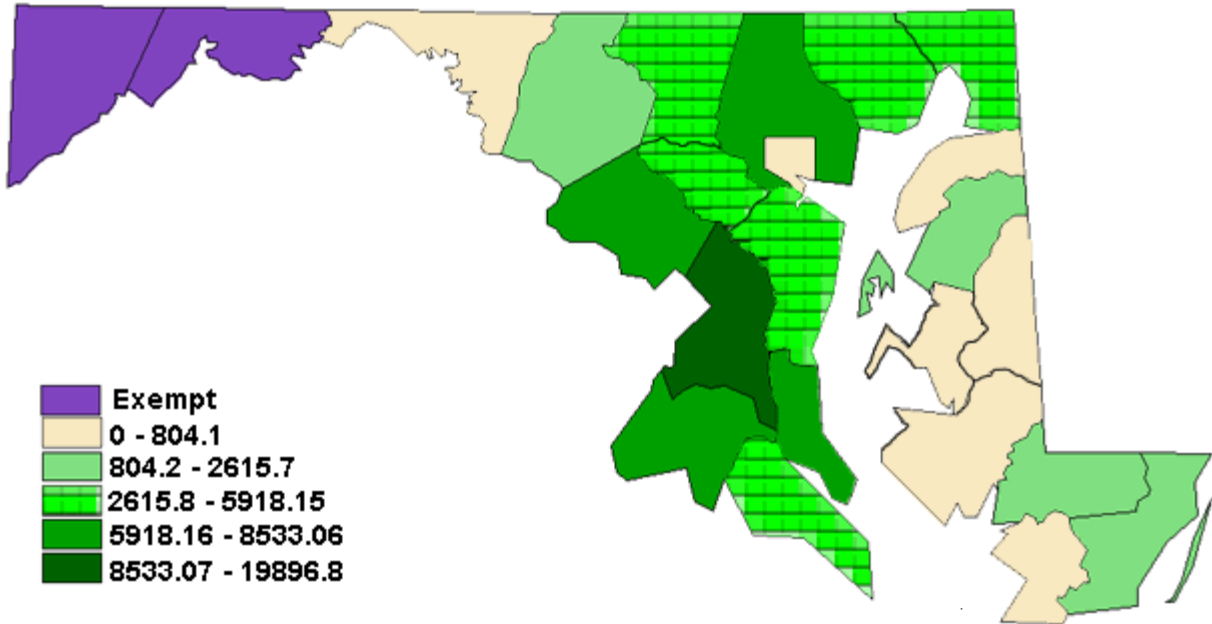
Maryland led the Nation with the adoption of a law to conserve forests during development and the result is exciting. A key factor needed to protect the Chesapeake Bay, forest cover, is being maintained without preventing land development.



Case Study: Before and After Development

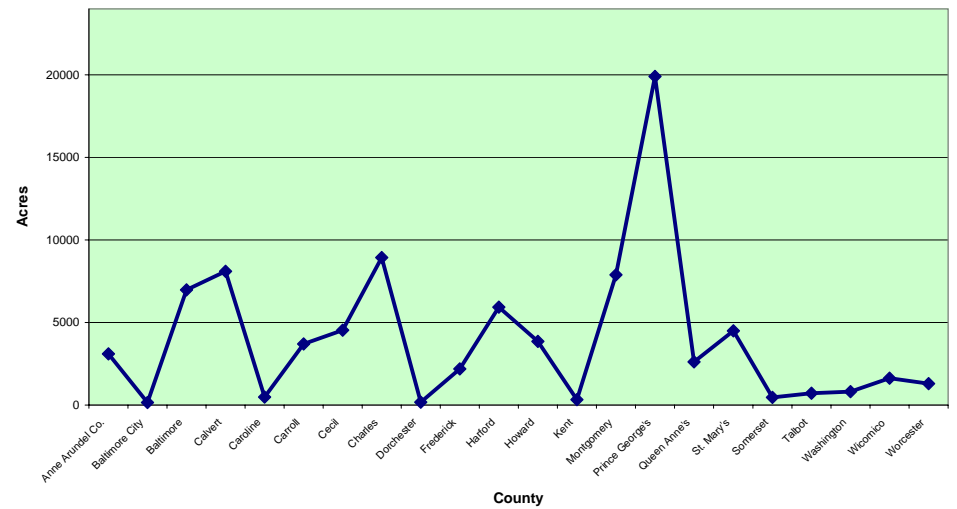
Majority of forest area under development review occurred within the **Route 301/I95 Corridor**

Acres of Existing Forest Under Review by County Forest Conservation Programs 1993-2002



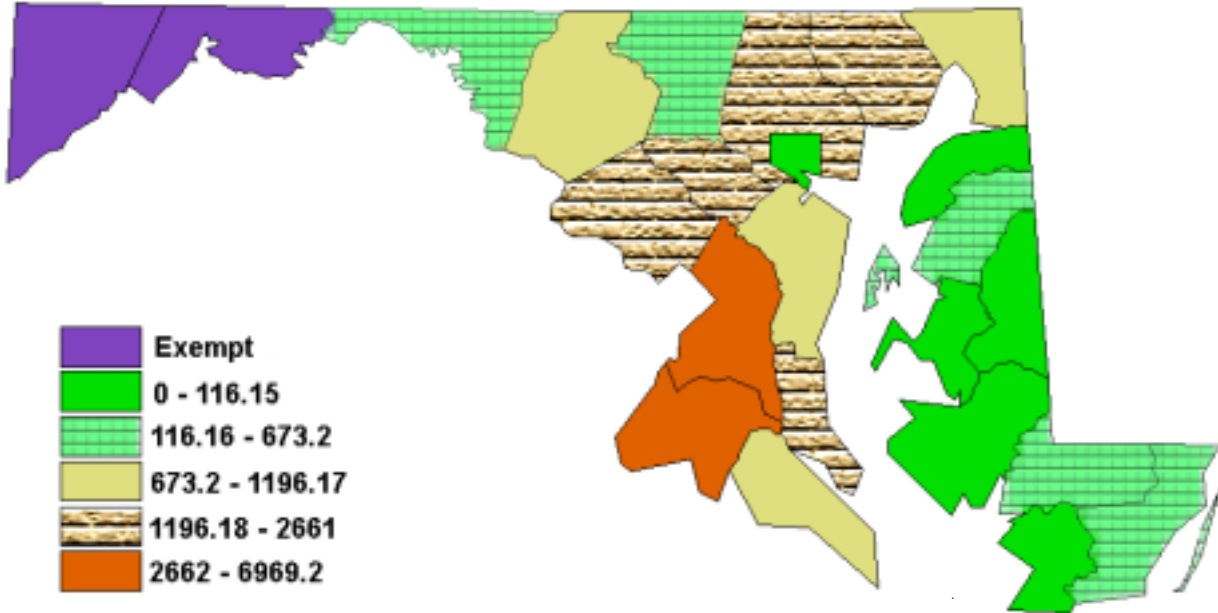
42% occurred in 3 counties:
Prince George's County
Charles County
Calvert County

19,896.8 acres
8,936 acres
8,090.7 acres



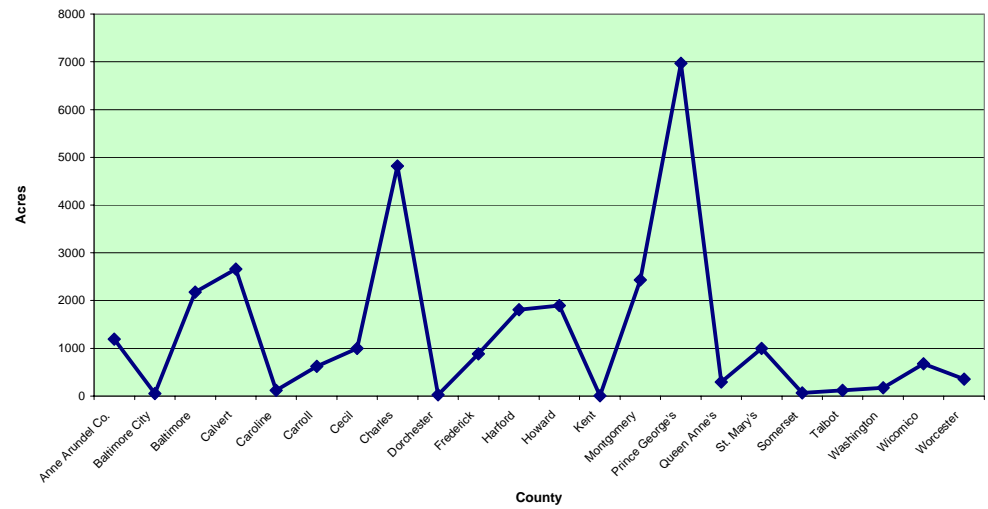
Majority of development-related clearing in Maryland occurred within the **Route 301 / I95 Corridor**

Acres of Forest Clearing Approved Under County Forest Conservation Programs 1993-2002



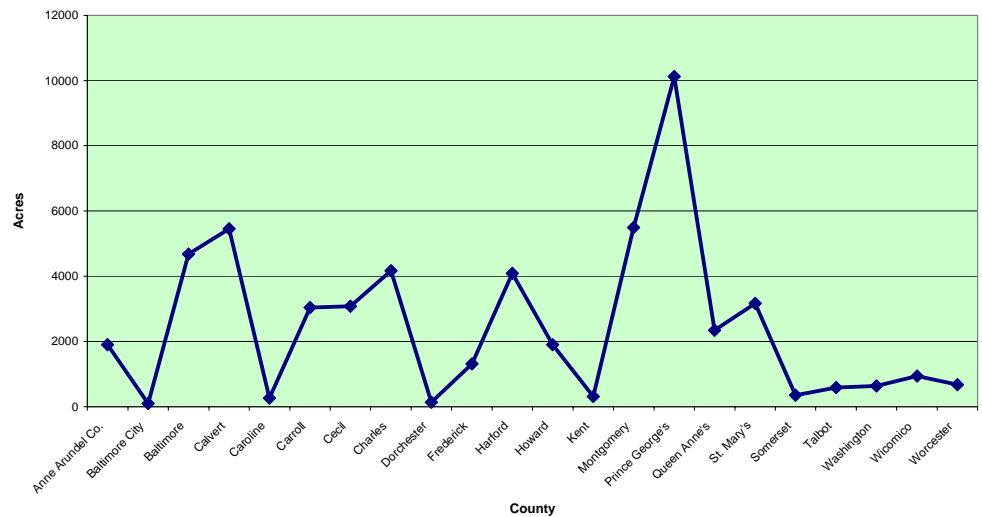
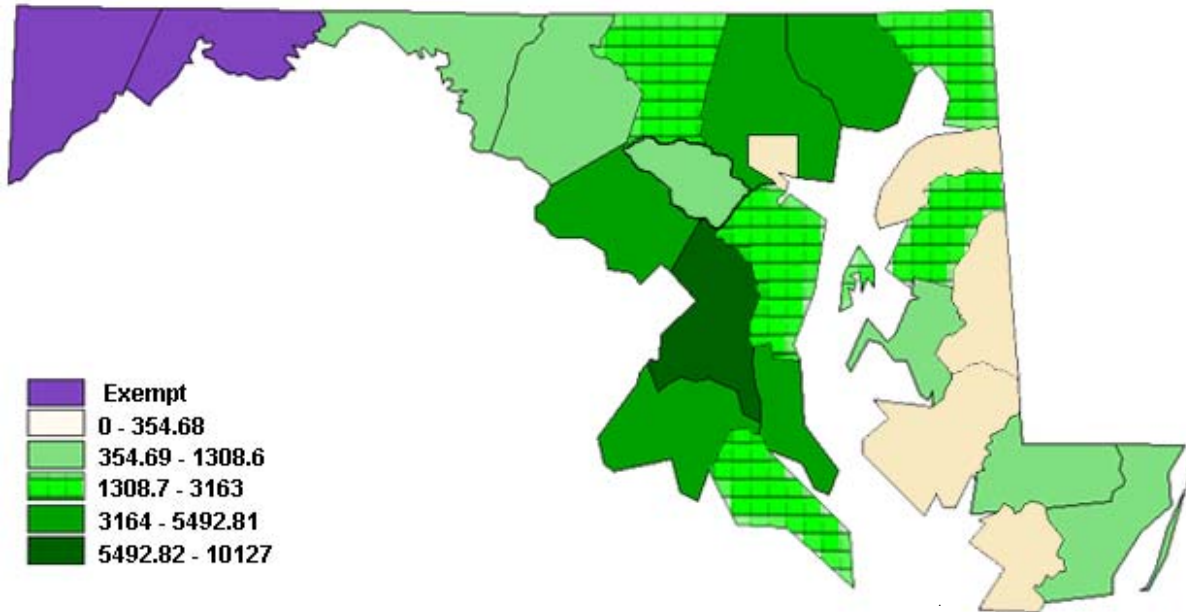
**40% occurred within 2 counties:
Prince George's County
Charles County**

**6,969.2 acres
4,815.8 acres**



Majority of forest retention also occurred within the same geographic area while a majority of planting occurred along the I95 corridor.

Acres of Forest Retained Under County Forest Conservation Programs 1993-2002

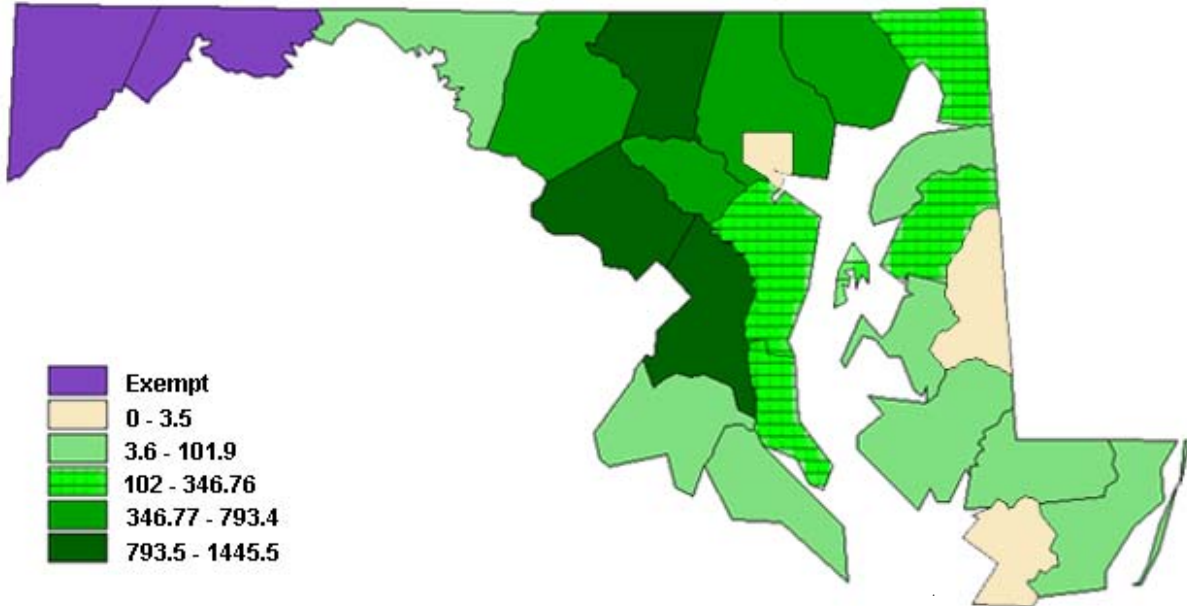


47% occurred within 4 counties:

Prince George's County
Montgomery County
Calvert County
Baltimore County

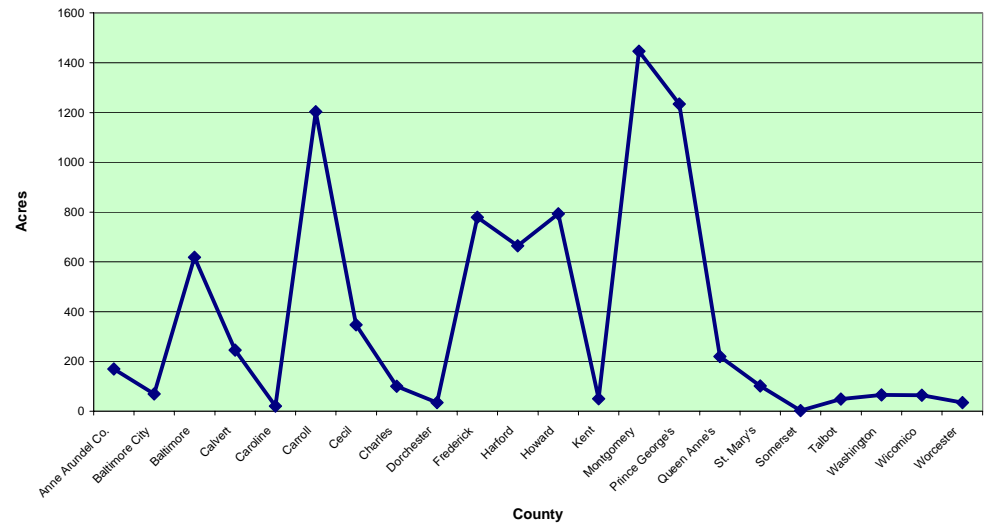
10,127 acres
5,492.8 acres
5,449.8 acres
4,677 acres

Acres of Forest Planted Under County Forest Conservation Programs 1993-2002



47% occurred within 3 counties:
Montgomery County
Prince George's County
Carroll County

1,445.5 acres
1,234 acres
1,203.2 acres



State Forest Conservation Program Highlights FY 1993 - 2002

- A total of 310 Forest Conservation Plans (FCP) were reviewed and approved with 18,140 acres of forest being reviewed, 1,158 acres of forest proposed for clearing, 2,528 acres of forest proposed for retention and 643 acres proposed for planting.
- The State Forest Conservation Program Fee-In-Lieu Fund, (fees paid in lieu of mitigation planting), collected \$215,648 of which \$139,068 has been rewarded through the Urban & Community Forestry Grant Program, to various groups for tree planting projects.
- The State Forest Conservation Program has collected a total of \$94,500 in enforcement fines.
- By 2002, 21 counties had adopted forest conservation ordinances; 12 municipalities were under the State Program; 9 jurisdictions were not exercising their authority and 2 counties and 18 municipalities were exempt.
- MD DNR FS staff held 188 workshops which were attended by 3,350 attendees for a total of 17,040 seat hours.
- Washington County's Forest Conservation Fund Program received the 1998 Distinguished Achievement Award from the Chesapeake Bay Local Government Advisory Committee's Innovative Awards Program for their use of fee-in-lieu funds on CREP sites.
- Since 1993, 366 individuals have become Qualified Professionals.
- **Assistance Provided to Local Programs included:**
 - o Assisted in the development of local programs' policies, procedures and guidelines such as Worcester County's Voluntary Environmental Guidelines for Golf Courses and Carroll and Frederick Counties' Forest Mitigation Banking Program policies.
 - o Assisted the local jurisdictions in the development and adoption of their Forest Conservation Ordinances.
 - o Reviewed proposed revisions to the forest conservation ordinances in sixteen counties and four municipalities, as these jurisdictions moved to further refine their existing forest conservation programs.
 - o Provided technical assistance during the review of development proposals and plan and field reviews in sixteen counties and 14 municipalities across the state.
 - o Assisted Frederick County in planting their fee-in-lieu funds on 170 acres of riparian buffer plantings along the Monocacy River.
 - o Conducted training in Chesapeake City and Cambridge on the development of urban forest management plan in order for jurisdictions to manage their trees and forests.
 - o Assisted the Towns of Vienna and North Beach in developing a forest conservation ordinance that combines forest conservation and critical area requirements.
- **Presentations:**
 - o "Forest Conservation through the Maryland Forest Conservation Act" poster presentation, Keep America Growing, Balancing Working Lands and Development Conference, June 6-9, 1999, Philadelphia, PA.
 - o Maryland's Forest Conservation Act: A Process for Urban Greenspace Protection During the Development Process for the Urban Greening and Landscape Research Symposium held in Copenhagen, Denmark, June 23-25, 1999.
 - o "Forest Conservation Act Update", MAC-ISA By the Bay (Mid Atlantic Chapter of the International Society of Arboriculture) Conference, September 26-29, 1999, Annapolis, Maryland.
 - o "Maryland's Forest Conservation Act: Five Years of Forest Conservation", Baltimore Ecosystem Study Annual Meeting, October 14-15, 1999, Baltimore, Maryland.
 - o "Case Studies in Forest Conservation", Reconnecting Landscapes – Rebuilding Forest Fragments in the Chesapeake Bay Watershed Conference, November 17-19, 1999, Annapolis, Maryland. Also contributed to the conference proceedings.
 - o "Forest Conservation", 2000 American Planning Association

National Planning Conference, April 15-19, 2000, New York, New York. Also contributed to the conference proceedings.

- o “Forest Conservation Through the Maryland Forest Conservation Act”, Fragmentation 2000: Sustaining Private Forests in the 21st Century Conference, September 17-20, 2000, Annapolis, Maryland. Also contributed to the conference proceedings.
- o “Forest Conservation Toolbox”, Maryland Community Forest Council’s 8th Annual Community Forest Workshop, October 24, 2000, Westminster, Maryland. Also contributed to conference proceedings.
- o “Cross Creek Golf Course Housing Development and FCA”, field portion of the Society of American Foresters 2000 Conference, November 20, 2000.
- o “Forest Conservation Through the Maryland Forest Conservation Act”, 2001 National Urban Forest Conference, September 5-8, 2001, Washington DC. Also contributed to the conference proceedings.
- o Maryland Municipal League’s April 2002 meeting, Annapolis, Maryland.
- o “Forest Conservation Act – Protecting Trees and Forests During Development”, 2002 NAUFCA meeting, May 8-10, 2002, Annapolis, Maryland.

- **Outreach Opportunities**

- o Cosponsored “The Forest Conservation Act: Opportunities for Profit and Progress” with The Home Builders Association of Maryland, Maryland Chapter of the ASLA, American Society of Civil Engineers and Carroll Community College, 1998.
- o Cosponsored the National Arbor Day Foundation’s “Building *With* Trees Workshop” at the Patuxent Wildlife Visitor Center, October 15, 1998.
- o Cosponsored with Worcester County Department of Comprehensive Planning, “Forest Mitigation Banking Workshop”, at Adkins Arboretum, July 28, 2000.
- o Contributed two articles, Maryland DNR–Concerns With Forest Stand Delineations, and MDNR Holds Woodland Symposium, the Maryland ASLA *landscape architecture* newsletter.
- o Cosponsored, Randall Arendt: Conservation Planning and Design within a Smart Growth Framework, at University of Maryland–College Park, April 18, 2001. Other cosponsors: MD Chapter of the American Society of Landscape Architects, UMD–Landscape Architecture Program, MD Chapter American Planning Association, Anne Arundel County – Office of Planning and the Chesapeake Trust.
- o The Forest Conservation Course, required by all professionals who wish to receive qualified professional status,

was conducted jointly by MD DNR and 10 community colleges across the state with 159 attendees in FY94 and FY95. Since FY96, the 25 courses have been conducted solely by the community colleges and John Hopkins University with 300 attendees.

- **Technology assistance**

- o Revised the Forest Conservation Technical Manual to streamline the manual and reflect statutory amendments.
- o Wrote Chapter 3: Site Development Options: Forests as part of the Conserving and Enhancing the Natural Environment: A Guide for Planning, Design, Construction and Maintenance on New & Existing School Sites, 1999 Manual by Maryland Department of Education.
- o Developed The Forest Conservation Toolbox, a multi-paged brochure that discusses the various programs within the MD DNR Forest Service and how the programs can be combined. Copies were distributed statewide to all local governments with planning and zoning authority.
- o Conducted the 1998 and 2003 Survey of Qualified Professionals to evaluate the forest conservation course’s effectiveness, continuing educational needs, input as to customer service on a local and state level and fees generated in the private sector.
- o Cosponsored the Forest Conservation and Land Development Symposium

with the University of Maryland College of Agriculture held biennially from 1995 through 2001 (2003's symposium was cancelled due to low registration). The symposium provided educational and technical information concerning compliance with the Forest Conservation Act and showcased forest conservation efforts.

- o Presented Excellence in Forest Conservation and Land Development Awards which showcase development projects that exhibit best compliance with forest conservation goals and objectives at the biennial symposiums.
- **Additional activities include:**
 - o In June 1993, the first issue of Forest Conservation Update newsletter was mailed and continued to be sent biennially through 2002.
 - o Reviewed proposed revisions of the MD Department of Environment's Sediment and Erosion Control Manual for FCA-related compliance issues.
 - o Assisted in the development of BWI Airport's Reforestation Master Plan, US Army's Fort Meade Long-Term Protection Master Plan and Andrews Air Force Base's Forest Stand Delineation Plan.
 - o Assisted other state and federal agencies, such as National Institute of Health, University of Maryland System, Towson University, Morgan State University, Martin State Airport, State Highway Administration with understanding and complying with the

Forest Conservation Act.

- o Staff assisted with numerous continuing education seminars, classroom presentations in elementary and secondary schools science and environmental education classes, and at professional and local government (MACo, Soil Conservation District) conventions, etc.
- o Maintained a listing of Forest Conservation Service providers, including a list of licensed landscape architects, licensed foresters and other qualified professionals. The list, which contains 400 names, is available by county and type of work the professionals are willing to perform.



Woodspring at New Market, Frederick County
Developer: Seawright Corporation (submitted photo)
Excellence in Forest Conservation and Land Development
Award Winner, 2001 White Oak Award

Qualified Professionals

The Forest Conservation Regulations, COMAR 08.19.06.01B, limit those individuals authorized to perform forest stand delineations and forest conservation plans to Maryland licensed foresters, Maryland licensed landscape architects and other qualified professionals approved by Maryland Department of Natural Resources Forest Service (MD DNR FS).

According to COMAR 08.19.06B (1)-(4) (amended July 1996),

An individual may be approved by the Department as a qualified professional if the individual:

- (1) *Possesses the following education or experience requirements:

 - a) *A 4-year degree in the natural resources sciences, natural resource management, landscape planning, or environmental planning,*
 - b) *4-years of professional experience in natural resources sciences, natural resource management, landscape planning, environmental planning, or the equivalent as determined by the Department, or*
 - c) *A graduate degree in natural resources sciences and 1-year professional experience;**
- (2) *Has shown the ability to meet the obligations required by the Department to prepare a forest stand delineation and a forest conservation plan; and*
- (3) *Has satisfactorily completed a forest conservation training program approved by the Department.*

Previous to 1996 the requirements stated that a 4-year degree and 2-years experience or a master's degree and 1-year experience in addition to the course were required.

Analysis of applications

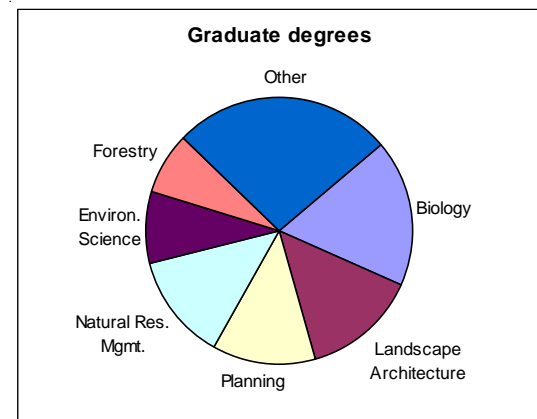
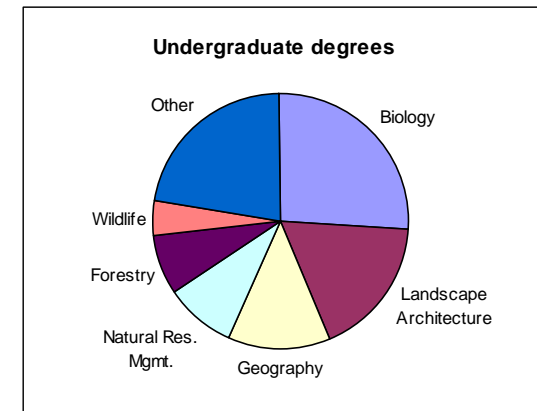
An analysis of the qualified professionals' applications indicate that a total of 416 applications for Qualified Professional status have been received with 366 (88%) being approved. Of the approved applicants, 306 (84%) applicants met the education requirements in contrast to 60 (16%) applicants that met the experience requirements. It should be noted that experience was not an option prior to 1996. Educational degrees were analyzed along with the field of study and 227 (74%) applicants received undergraduate degrees with the majority of applicants with degrees in Biology (59), Landscape Architecture (40) and Geography (29). The majority of graduate degrees were in Biology (14), Landscape Architecture (11) with a tie between Planning (10) and Natural Resource Management (10).

Approved Professionals			
	1993-1997	1998-2002	Total
Education	222	84	306
Experience	20	40	60
Total	242	124	366

This does not include Maryland licensed foresters or Maryland licensed landscape architects.

By Degree			
	1993-1997	1998-2002	Total
Undergraduate	167	60	227
Graduate	55	24	79
Total	222	84	306

Experience 1998-2002	
Civil Engineering	9
Surveyor	3
Arborist	3
Forestry	3
Environmental Science	2
Other	20
Total	40



Analysis of the 2003 Qualified Professional Survey

In the spring of 2003, a survey was mailed to the Maryland Qualified Professionals in order to learn more about the practicing professionals such as the number of plans completed per year, their experiences with the local jurisdictions and their place of business. Of the 340 surveys mailed, 66 were returned completed (a 22% response rate) and 50 were returned undeliverable.

Question 2: *Have you done any FSD or FCP in the past year? If so, how many FSD? How many FCP?* An average of 11 FSD and 11 FCP are completed in the past year per Qualified Professionals. The number of FSD ranged from 2 – 36 and the number of FCP ranged from 2 – 40. (Per 46 responses; this does not include those that responded as government reviewers).

Question 10: *How would you characterize your place of business or firm? a) Landscape Architecture, b) Environmental Consultant, c) Engineering, d) Forest Industry, e) Local Government*

The sixty four responses state the following types of firms: Environmental Consultant (18), Engineering (17), Local Government (12), a combined Landscape Architecture/Environmental Consultant/Engineering (6), a combined Landscape Architecture/Environmental Consultant (4), Landscape Architecture (2), Forest Industry (2), a combined Engineering/Local Government (1).

Question 1 & 6: *On a scale from 1-5 (1 is the most negative rating and 5 the most positive): how would you rate your overall experience with local reviewers?*

County	Rating (# responses)
Anne Arundel	3.0 (11)
Baltimore	3.5 (10)
Calvert	— (0)
Caroline	5.0 (2)
Carroll	3.8 (8)
Cecil	3.5 (6)
Charles	3.6 (8)
Dorchester	4.0 (1)
Frederick	3.5 (4)
Harford	3.7 (6)
Howard	3.6 (14)
Kent	— (0)
Montgomery	4.0 (17)
Prince George’s	3.7 (21)
Queen Anne’s	— (0)
St. Mary’s	3.3 (3)
Somerset	— (0)
Talbot	4.5 (4)
Washington	3.0 (2)
Wicomico	4.3 (4)
Worcester	4.0 (2)

Of the 66 returned surveys, 46 included this information. Some surveys indicated multiple responses.

All the counties received a rating of 3 or higher indicating that the qualified professionals have general satisfaction or better with the local government reviewers. Prince George’s, Howard and Montgomery Counties had the highest number of responses with a majority of those ratings being in the 4 –5 range.

Questions 12 & 13: *What is your company’s standard fee for a Forest Stand Delineation (FSD)? What is the standard fee for a Forest Conservation Plan (FCP)?*

	1-10 acres	11-50 acres	50+ acres
FSD range	\$1,410 \$300 - \$2500	\$2,477 \$400 - \$5500	\$3,071 \$700 - \$10,000
FCP range	\$1,311 \$300 - \$3,000	\$2,000 \$400 - \$5,500	\$2,653 \$700 - \$6,000

Of the 66 returned surveys, 31 included information about standard fees.

The highest fees were found in Prince George’s and Charles Counties while the lowest appear to be found in Caroline and Talbot Counties. (Only 1 survey was returned indicating the fees in Caroline and Talbot Counties.)

A conclusion could be drawn by the responses to Question 2 and Questions 12 & 13 that the number of qualified professionals (31) each completing 11 FSD per year has a potential to generate between \$480,810 and \$1,047,211 of income per year. The same number of qualified professionals each completing 11 FCP yearly has a potential to generate between \$447,051 to \$904,673 of income per year.

Summary of Legislative Changes to the Forest Conservation Act & Regulations

From FY93 - FY02, there has been legislative activity in the form of 22 Senate Bills and 28 House Bills proposed to amend the MD Forest Conservation Act. Out of 50 attempts, only 7 were adopted. The following is a description of the adopted changes to the statute and regulations.

Amendments to the Forest Conservation Act

Senate Bill 915 Forest Conservation Requirements - Local Programs Effective June 1, 1993

NRA 5-1603 Local Forest Conservation Program

- * Allows local forest conservation programs to use clustering and other innovative land use techniques to protect and retain forests and sensitive areas.
- * Allows for the recovery of all costs incurred in the administration of the local forest conservation program.

NRA 5-1607 Preferred Sequence for Afforestation and Reforestation

- * Allows for the use of street trees and offsite protective easements on existing forested areas as mitigation techniques.

Added Section 2 which establishes an Advisory Group on Forest Conservation that will serve through May 31, 1994.

House Bill 360 Forest Conservation Requirements - Paved Surfaces - Waiver

Effective October 1, 1994

NRA 5-1603 Local Forest Conservation Program

- * Waives forest conservation requirements for areas previously developed and covered by paved surfaces at the time of subdivision, grading, or sediment control permit application.

House Bill 63 Forest Conservation - Navigable Airspace - Exemption

Effective May 1995

NRA 5-1602 Applicability of Subtitle

- * Adds to the list of exceptions: the cutting or clearing of trees that affect navigable airspace as per FAA requirements.

Senate Bill 33 Forest Conservation

Effective October 1, 1997

NRA 5-1601 Definitions

- * Adds to definitions: forest mitigation banking and linear project.
- * Revises definitions: net tract area and reforestation.

NRA 5-1602 Applicability of subtitle

- * Adds the extension of Critical Area forest protection methods outside of critical area.
- * Revises the single lot exception to include linear projects.

NRA 5-1603 Local Forest Conservation Program

- * Allows the State when administrating the forest conservation program in place of the local jurisdiction to recover administration costs.

NRA 5-1604 Forest Stand Delineation

- * Establishes alternative methods of forest stand delineations such as simplified forest stand delineations and other substitute plans.

NRA 5-1606 Afforestation; Forest Conservation Thresholds

- * Revises the afforestation requirements to not include linear projects.

NRA 1607 Preferred Sequence for Afforestation and Reforestation

- * Revises the preferred sequence for afforestation and reforestation to include the use of forest mitigation banks.
- * Adds coastal bays and their buffers to priority areas for retention and protection and priority areas for afforestation and reforestation.
- * Adds forest areas in 100 year floodplains to priority areas for afforestation or reforestation.

NRA 5-1610 Forest Conservation Fund; Local Forest Conservation Fund

- * Revises the amount of time fee-in-lieu money can remain in fund.
- * Revises the manner in which it is returned to the applicant
- * Adds forest mitigation banks as a method of spending fee-in-lieu money.

NRA 5-1610.1

- * Adds section that discusses forest mitigation banks in greater detail.

NRA 5-1613 Annual Report

- * Adds forest mitigation banks to the reporting requirements.

Also amended NRA 5-103.

House Bill 1183 Coastal Bays Protection Program - Worcester County

Effective June 1, 2002

- * Creates a Coastal Bay Protection Program similar to the Chesapeake Bay Critical Area Law in Worcester County. This Bill may exempt the land that falls under this criteria from FCA compliance.

*Senate Bill 895
- Pilot Program*

Forest Retention Banks

Effective July 1, 2002

NRA 5-1610.2

* Establishes a 2-year pilot program, effective only in Carroll and Frederick County, in which a landowner can use forested stream buffers established under the federal Conservation Reserve Enhancement Program to create forest retention banks.

House Bill 470 Forest Conservation

Effective October 1, 2002

NRA 5-1605(d)

* Clarifies the forest conservation plan's review time frame as determining the plan to be complete only.

NRA 5-1607(e)

* Adds the State as also requiring protective agreements as part of the forest conservation program.

NRA 5-1610(c)

* Clarifies that all enforcement funds collected are deposited in the Forest Conservation Fund.

Revisions to the Forest Conservation Regulations

*MD Register Volume 23 Issue 6 March 15,
1996 pg. 490-501*

Effective July 1, 1996

Includes the recommendations of the Advisory Group on Forest Conservation. Modifications include requirements for linear projects, provisions for mitigation banks as an off-site planting alternative and extends fee-in-lieu expenditure time period. These regulation changes basically became SB33.

*MD Register Volume 25, Issue 8 April 10,
1998 pg. 624-634*

Effective June 5, 1998

COMAR 08.19.01 General

* Removes the edition number that is referenced with the Forest Conservation Manual.

* Adds definitions for forest mitigation bank, forest mitigation bank agreement, and forest mitigation bank plan.

* Deletes definition for linear project, net tract for linear project, and reforestation.

* Revises the application section to include the extension of Critical Area forest protection methods outside of critical area as part of the critical area exemption.

* Revises the mining Natural Resources Article references to Environmental Article.

COMAR 08.19.02 State Review and Approval of a Local Program

* Removes the date referenced that a local jurisdiction's forest conservation program must be submitted for Department review and approval.

* Adds simplified forest stand delineation or substitute plan as an alternative form of forest stand delineation wherever forest stand delineation is mentioned.

* Revises the amount of time fee-in-lieu money can remain in the fund and the manner in which it is returned to the applicant.

* Adds forest mitigation bank requirements (ie long-term protection, priority areas, submittal requirements)

* Revises the biennial review section to include the reporting of forest mitigation bank applications.

COMAR 08.19.03 Model Forest Conservation Ordinance

* Adds definitions for forest mitigation bank, forest mitigation bank agreement, forest mitigation bank plan, and linear project.

* Revises definitions for net tract area and reforestation.

* Revises the application section to include the extension of Critical Area forest protection methods outside of the project's critical area as part of the critical area

exemption, and linear projects to the single lot exemption.

* Revises the mining and nontidal wetland Natural Resources Article references to Environmental Article.

* Adds forest management plan and amended sediment and erosion control plan to the forms of declarations of intent.

* Revises the simplified forest stand delineation language to include other appropriate documents that may substitute for a forest stand delineation if certain criteria are met.

* Adds the purchasing of forest mitigation bank credits as an alternative to payment into local forest conservation fund wherever the fund is mentioned. (i.e. forest conservation plans, reforestation)

* Removes references to the Forest Conservation Technical Manual.

* Adds coastal bays and their buffers to the priority for retention areas.

* Removes the sequence for afforestation and reforestation and replaces it.

* Adds to the priority for afforestation and reforestation.

* Revises the time frame that fee money can remain in the fund and adds forest mitigation bank as an alternative to payment.

* Revises the annual report to include forest mitigation bank requirements.

COMAR 08.19.04. State Forest Conservation Program

* Revises the mining and nontidal wetland Natural Resources Article references to Environmental Article.

* Removes references to the Forest Conservation Technical Manual.

* Adds coastal bays and their buffers to the priority for retention areas.

* Adds the purchasing of forest mitigation bank credits as an alternative to payment into local forest conservation fund wherever the fund is mentioned. (i.e. forest conservation plans, reforestation)

* Adds to the priority for afforestation and reforestation

* Revises the amount of time fee-in-lieu money can remain in the fund and the manner in which it is returned to the applicant.

* Adds forest mitigation bank requirements (ie long-term protection, priority areas, submittal requirements)

* Adds enforcement provisions regarding violations, noncompliance and enforcement of forest mitigation banks' long-term protection agreements and sets penalty.

COMAR 08.19.06 Additional Requirements for State and Local Programs

* Adds enforcement provisions regarding violations, noncompliance and enforcement of forest mitigation banks long-term protection agreements and sets a penalty.

MD Register Volume 28, Issue 12 June 15, 2001 pg.1124 - 1128

Effective August 20, 2001

COMAR 08.19.01 General

* Revises the definition for lot

* Revises the single lot exemption to read residential construction activity on a lot.

COMAR 08.19.02 State Review and Approval of a Local Program

* Revises the local authority's forest mitigation bank program to remove the extra planting required in order to debit prior to 2 years.

COMAR 08.19.03 Model Forest Conservation Ordinance

* Revises the definition for lot

* Revises the single lot exemption to read residential construction activity on a lot.

* Revises the time frame money is to remain in the fund from one year or two growing seasons to two years and three growing seasons.

* Removes from the forest mitigation banking language the requirement of extra planting in order to debit prior

to 2 years.

COMAR 08.19.04 State Forest Conservation Program

* Revises the preliminary forest conservation plan submittal procedure to allow this information to be submitted with the final forest conservation plan.

* Revises the public notice requirement to occur after the forest conservation plan is determined to be complete.

* Revises the public information hearing language to reflect the public notice language.

COMAR 08.19.05 Forest Conservation Maintenance and Management Agreements

* Adds the requirement for the recordation of a legally binding protective agreement.

COMAR 08.19.06 Additional Requirements for State and Local Programs

* Adds the process of "unqualifying" professionals.

* Updated the geographical regions listed in this section to reflect current DNR Forest Service regions.

* Removes the required time frame for statewide forest resource inventories.



WMATA Branch Avenue (F) Route,
Prince George's County

Developer: Washington Metropolitan Area Transit Authority (WMATA) (submitted photo)

Consultants: Gannett Fleming, Inc., Whitman, Requardt and Assoc., Rummel, Klepper & Kahl Inc., Mahan, Rykiel Assoc., Daniel, Mann Johnson & Mendenhall and Johnson, Mirmiran & Thompson.

Excellence in Forest Conservation and Land Development Award Winner, 1999 Flower Dogwood



Before:

April 1994

Scotchtown Hills Elementary School, Laurel,
Prince George's County

Photo, Marian Honeczy, MD DNR Forest Service



After:

November 1995

Scotchtown Hills Elementary School,
Laurel, Prince George's County

Photo, Marian Honeczy, MD DNR Forest Service

Enforcement Action

PROJECT TYPE	LOCATION	STATUS	VIOLATION	ACTION TAKEN	NOTES
Enforcement Actions 1998					
State	Pr. George's Co.	case closed 12/17/98	no fcp approval prior to construction	mtg with owner	fcp submitted and paid fee-in-lieu
Private	Worcester Co.	case closed 3/12/99	single lot exemption	no action taken	due to multi-environmental laws violations court-ordered mitigation fulfilled our requirements
Private	Worcester Co.	case closed 3/12/99	intra-family transfer exempt.	no action taken	investigation inconclusive
Subdivision	Worcester Co.	case closed 5/14/99	clearing within easement	letter to homeowners to replant	replanting passed planting inspection
Enforcement Actions 1999					
Shopping Center	Hagerstown	case closed 5/9/00	no fcp approval prior to construction	complaint letter with fine imposed issued 4/6/99 stop work letter issued 4/8/99	\$25,500 penalty paid (\$1,000 a day)
Restaurant	Ocean City	case closed 12/11/00	no fcp approval prior to construction	complaint letter with fine imposed issued 4/22/99; OAH Hearing	\$15,000 penalty paid (\$1,000 a day) per Circuit Court decision
Enforcement Actions 2000					
Golf Course	Caroline Co.	case closed 12/6/00	no fsd or fcp submittal	complaint letter issued with fine imposed 7/15/99	\$12,500 penalty paid and \$12,500 in planting required as result of settlement
Private	Caroline Co.	case closed 9/00	no fsd or fcp submittals	complaint letter issued with fine imposed 7/27/99	no penalty determined
Student Housing	Wicomico Co.	case closed 5/23/00	no fcp approval prior to construction	complaint letter with fine imposed issued 7/27/99.	\$6,000 penalty paid
Student Housing	Pr. George's Co.	case closed 3/3/00	no fcp approval prior to construction	complaint letter with fine imposed issued 8/18/99	\$15,000 penalty paid

PROJECT NAME	LOCATION	STATUS	VIOLATION	ACTION TAKEN	NOTES
Enforcement Actions 2001					
Industrial Park	Dorchester Co.	case closed 10/24/00	no fcp approval prior to construction	complaint letter issued 7/16/00	\$7,000 penalty paid
Private	Caroline Co.	case closed 5/15/01	no fcp approval prior to construction	complaint letter with fine imposed issued 7/18/00	\$26,000 penalty paid
School	Dorchester Co.	case closed 3/30/01	no fcp approval prior to construction	complaint letter issued 3/19/01	no penalty determined
Enforcement Actions 2002					
State	Harford Co.	case closed 9/4/02	no fcp approval prior to construction	complaint letter with fine imposed issued 7/24/01	\$40,000 penalty paid
State	Anne Arundel Co.	case closed 6/10/02	no pre-construction mtg. prior to construction	complaint letter with fine imposed issued 9/4/01	\$5,000 penalty paid
Federal	Montgomery Co.	case closed 3/20/02	no fcp approval prior to construction	complaint letter with fine imposed issued 12/12/01	\$5,000 penalty paid
Enforcement Actions 2003					
State	Anne Arundel Co.	case closed 5/6/03	no fcp amendment approval prior to clearing	complaint letter with fine imposed issued 9/23/02 OAH conference	\$7,500 penalty paid and \$2,500 held in abeyance as result of settlement
State	Anne Arundel Co.	case closed 10/3/02	cleared beyond tree protection	complaint letter with fine imposed issued 9/23/02	\$1,860 penalty paid

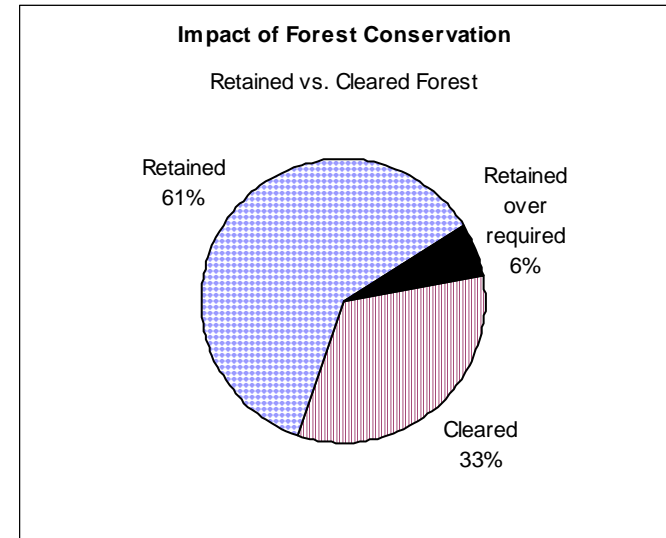
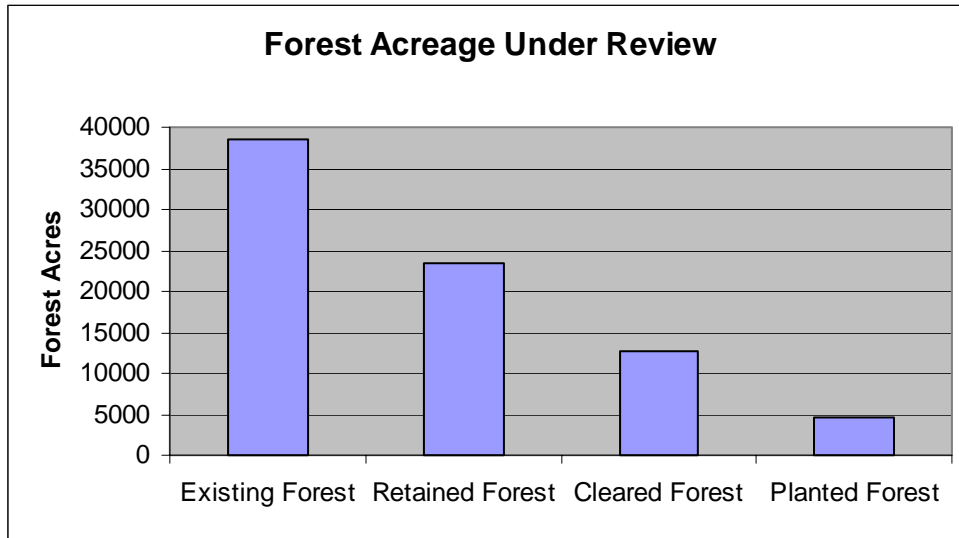
fcp - forest conservation plan
fsd - forest stand delineation
mtg. - meeting
Co. - county

Appendix A:

Analysis of State Forest Conservation Program

State Forest Conservation Program

FY 1993 - 2002



Forest	State Program	Statewide Total
Existing	38,614.66	128,629.74
Retained ⁺	23,478.83	79,174.13
Cleared	12,713.27	42,905.65
Planted	4,612.86	13,610.62

2002 Data* 2,081,182**
 %Land Area 37.8%

State Forest Conservation Program reviews projects that are State funded, by a federal or State agency, on State land and projects in jurisdictions without a local forest conservation program.

Forest Conservation Review in State Forest Conservation Program during fiscal years 1993- 2002 resulted in:

- average of 61% of existing forest onsite is retained onsite
- average 33% of existing forest onsite is cleared
- average 6% more existing forest is retained than required
- average 2.2 times as much forest is planted and retained as cleared
- during the first 5 years 36,397 acres of existing forest were reviewed compared to 2,217.66 acres during the next 5 years, (This reflects the State Programs' review of local programs projects from 1993 -2000)
- per the 5 Year Report an average of 58% forest was retained and 33% cleared, and 9% more existing forest retained than required

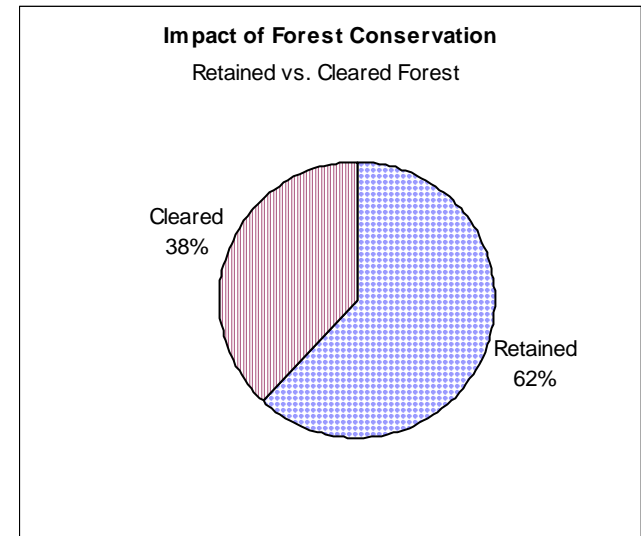
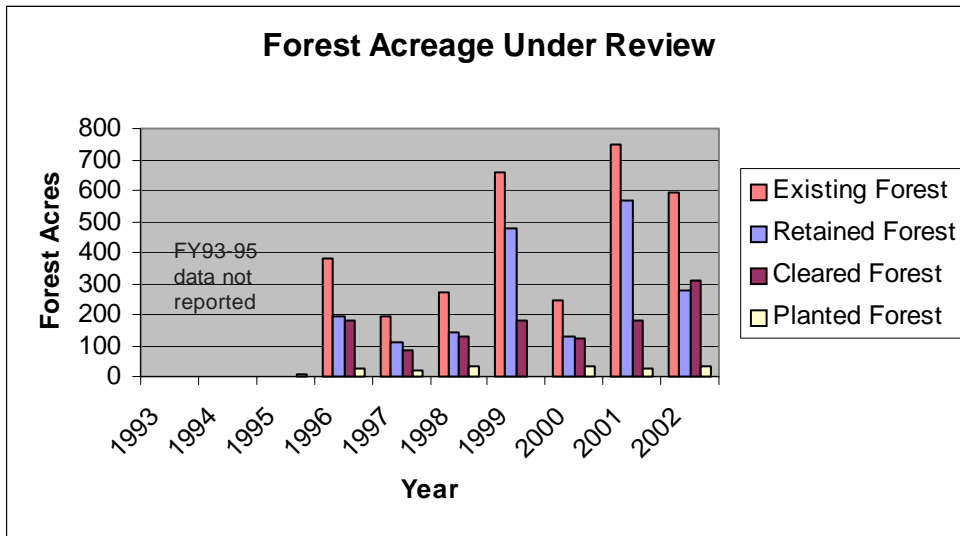
⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties

Appendix B:

Analysis of Individual County Forest Conservation Programs



Forest	Anne Arundel	All Counties
Existing	3,091.82	88,186.7
Retained ⁺	1,902.36	54,740.7
Cleared	1,189.46	29,319.9
Planted	170.6	8,319.7
2002 Data*	109,110.6	2,081,182**
% Land Area	41%	37.8%

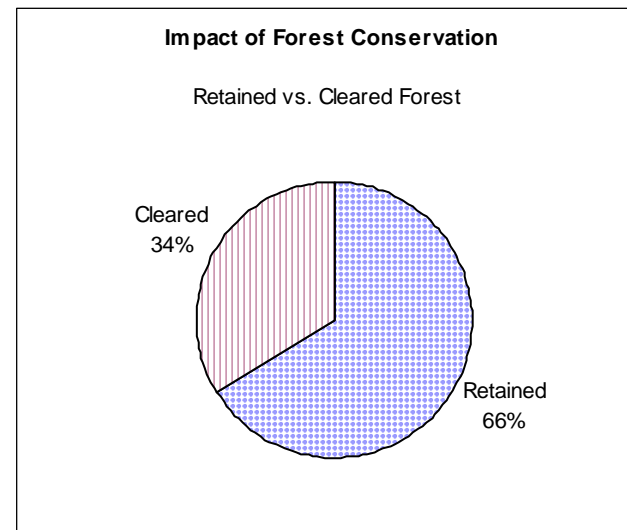
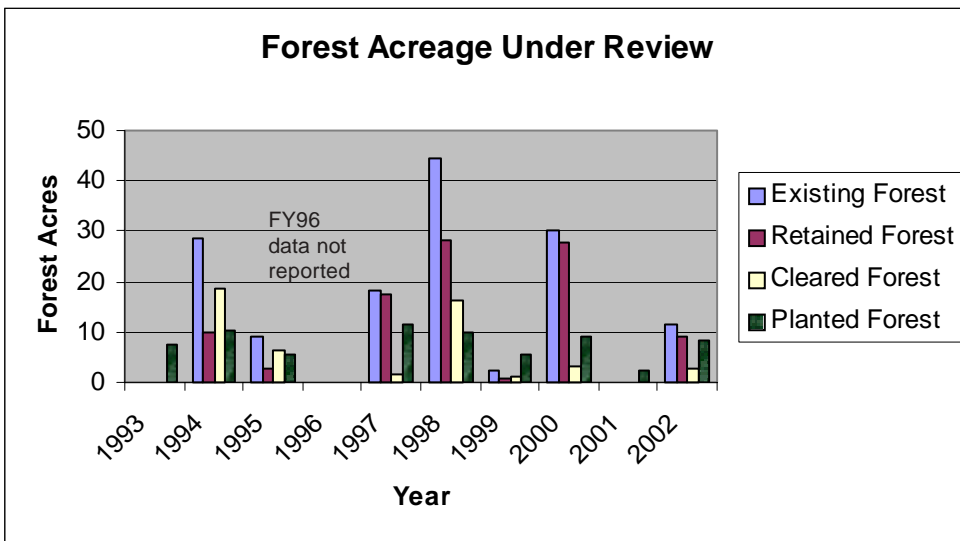
Forest Conservation Review in Anne Arundel Co. during fiscal years 1993 through 2002 resulted in:

- average 62% of existing forest onsite is retained onsite
- average 38% of existing forest onsite is cleared
- average 1.74 times as much forest is planted and retained as cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Baltimore City	All Counties
Existing	144.6	88,186.7
Retained ⁺	96.05	54,740.7
Cleared	50.15	29,319.9
Planted	70.17	8,319.7
2002 Data*	3,755.3	2,081,182**
%Land Area	7%	37.8%

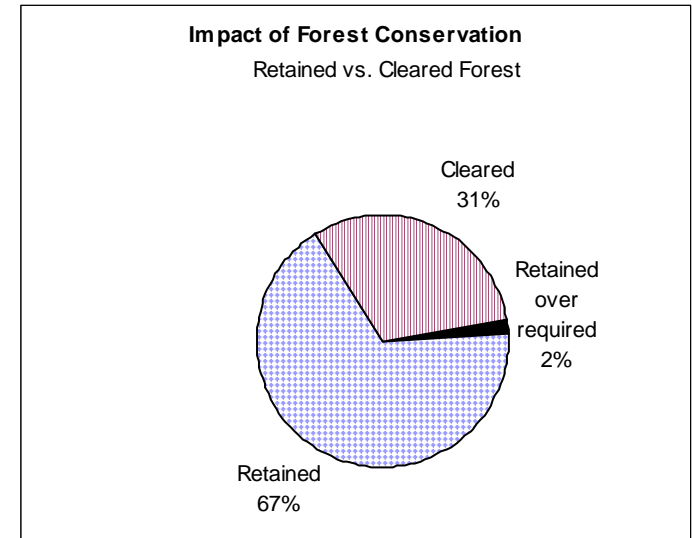
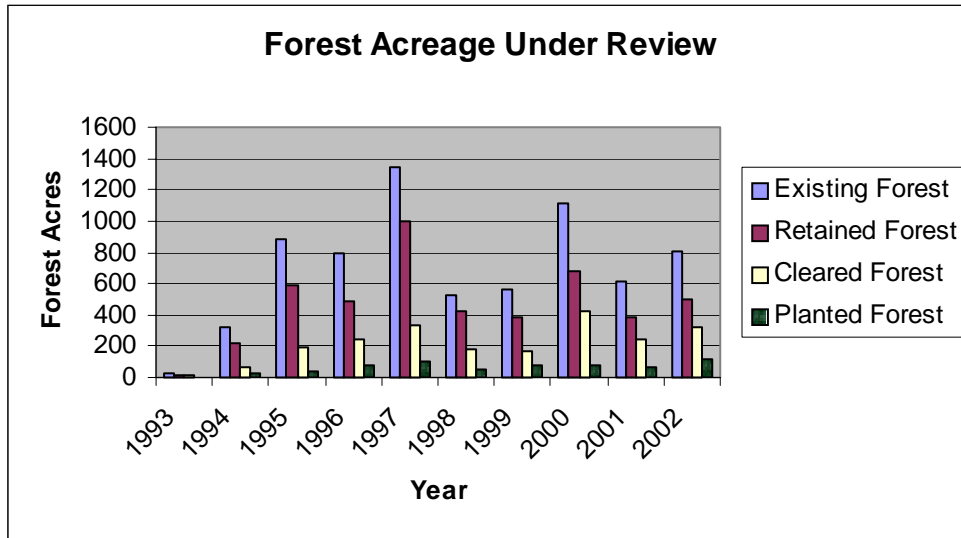
Forest Conservation Review in Baltimore City during fiscal years 1993 through 2002 resulted in:

- average 66% of existing forest onsite is retained onsite
- average 35% of existing forest onsite is cleared
- average 3.3 times as much forest is planted and retained as cleared
- during the first 5 years 75 acres of existing forest were reviewed compared to 69.6 acres during the next 5 years
- per the 5 Year Report an average of 40% forest was retained and 60% cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Baltimore	All Counties
Existing	6,983.1	88,186.7
Retained ⁺	4,677.0	54,740.7
Cleared	2,174.1	29,319.9
Planted	618.4	8,319.7

2002 Data*	129,440.4	2,081,182**
%Land Area	34%	37.8%

Forest Conservation Review in Baltimore Co. during fiscal years 1993-2002 resulted in:

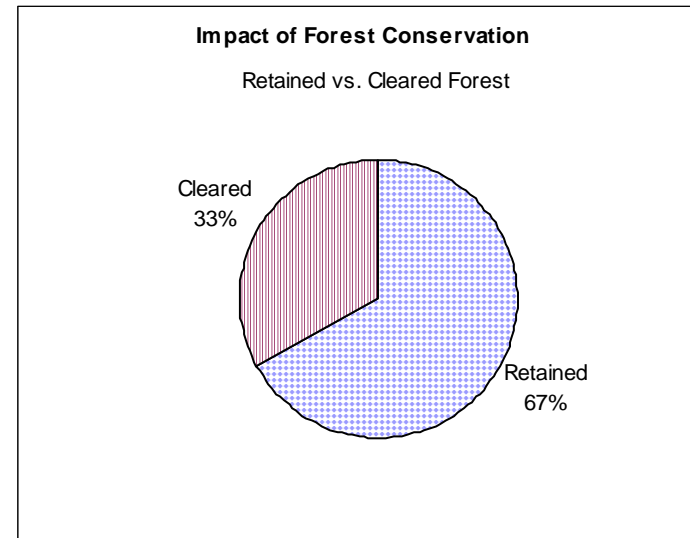
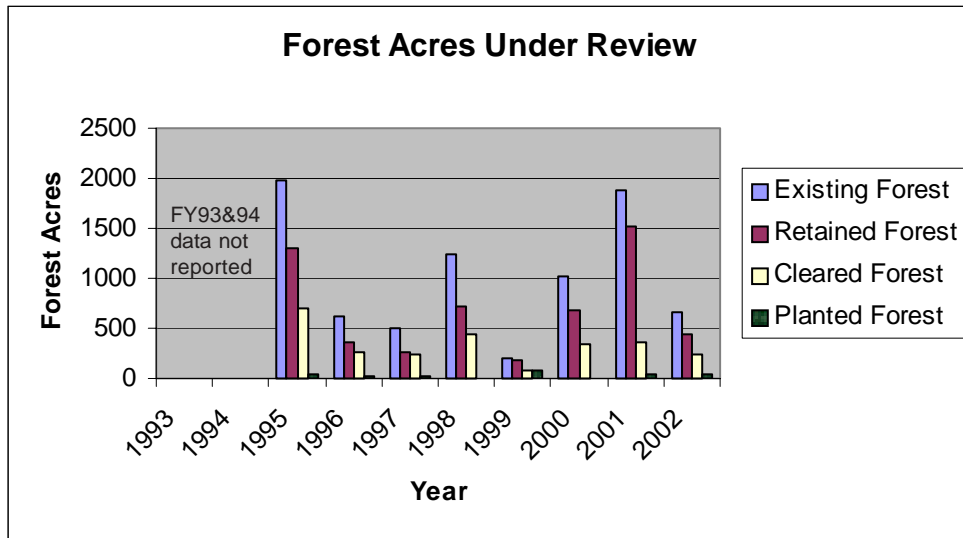
- average of 67% of existing forest onsite is retained onsite
- average 31% of existing forest onsite is cleared
- average 2% more existing forest is retained than required
- average 2.4 times as much forest is planted and retained as cleared

- during the first 5 years 3,361 acres of existing forest were reviewed compared to 3,622 acres during the next 5 years
- per the 5 Year Report an average of 68.5% forest was retained and 25% cleared, and 6.3% more existing forest retained than required

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Calvert	All Counties
Existing	8,090.67	88,186.7
Retained+	5,449.8	54,740.7
Cleared	2,661.0	29,319.9
Planted	246.2	8,319.7

2002 Data*	69,499.7	2,081,182**
%Land Area	51%	37.8%

Forest Conservation Review in Calvert Co. during fiscal years 1993 through 2002 resulted in:

- average 67% of existing forest onsite is retained onsite
- average 33% of existing forest onsite is cleared
- average 2.1 times as much forest is planted and retained as cleared

- during the first 5 years 3,108 acres of existing forest were reviewed compared to 4,983 acres during the next 5 years
- per the 5 Year Report an average of 62% forest was retained and 38% cleared

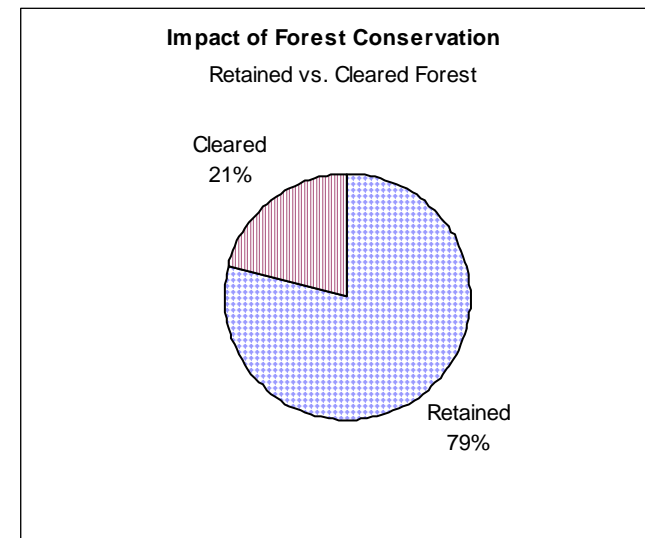
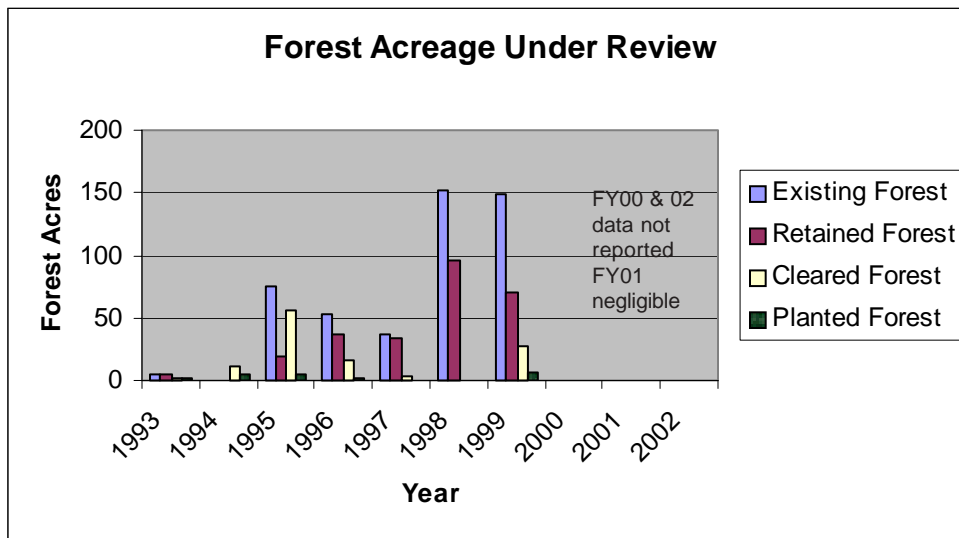
+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties

Caroline County

FY 1993 - 2002



Forest	Caroline	All Counties
Existing	470.5	88,186.7
Retained ⁺	261.6	54,740.7
Cleared	115.75	29,319.9
Planted	21.46	8,319.7

2002 Data*	63,610.0	2,081,182**
%Land Area	31%	37.8%

Forest Conservation Review in Caroline Co. during fiscal years 1993 through 2002 resulted in:

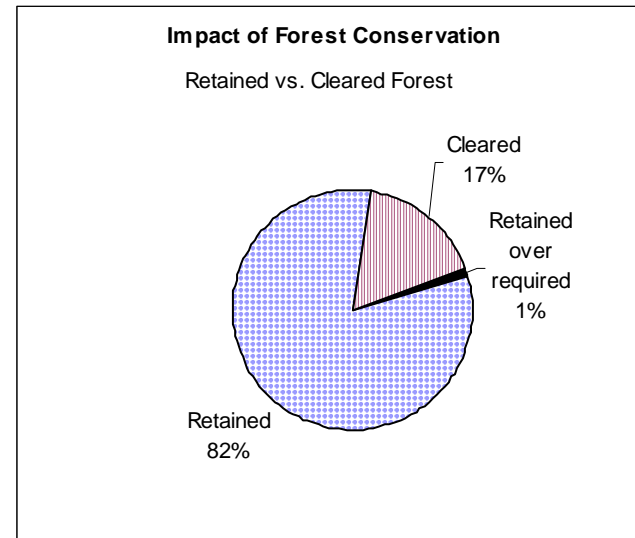
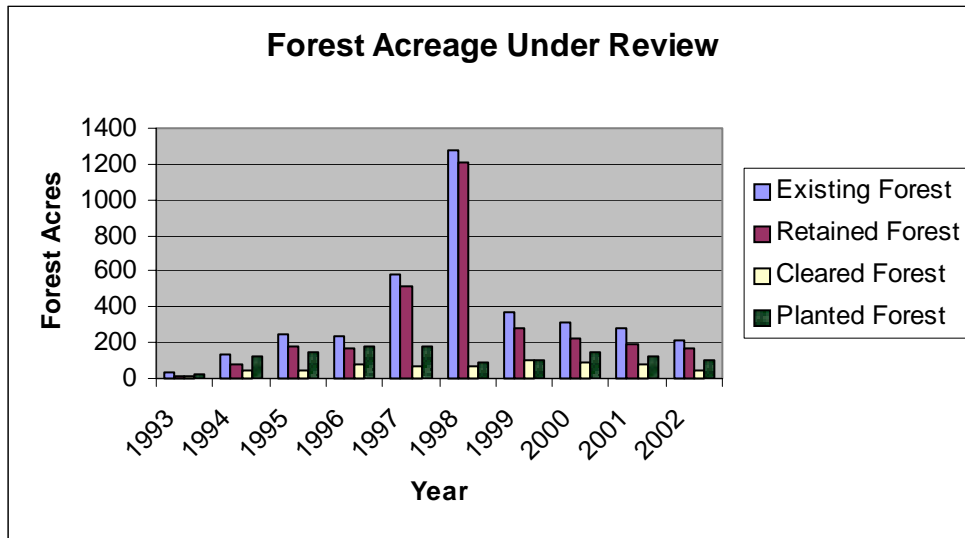
- average 69% of existing forest onsite is retained onsite
- average 31% of existing forest onsite is cleared

- during the first 5 years 192 acres of existing forest were reviewed compared to 279 acres during the next 5 years
- per the 5 Year Report an average of 79% forest was retained and 21% cleared

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Carroll	All Counties
Existing	3,707.4	88,186.7
Retained ⁺	3,042.9	54,740.7
Cleared	619.5	29,319.9
Planted	1,203.2	8,319.7

2002 Data* 67,975.1 2,081,182**
 %Land Area 24% 37.8%

Forest Conservation Review in Carroll Co. during fiscal years 1993 through 2002 resulted in:

- average 82% of existing forest onsite is retained onsite
- average 17% of existing forest onsite is cleared
- average 1% more existing forest is retained than required
- average 6.9 times as much forest is planted and retained as cleared

- during the first 5 years 1,243 acres of existing forest were reviewed compared to 2,464 acres during the next 5 years
- per the 5 Year Report an average of 77% forest was retained and 19% cleared, and 4% more existing forest retained than required

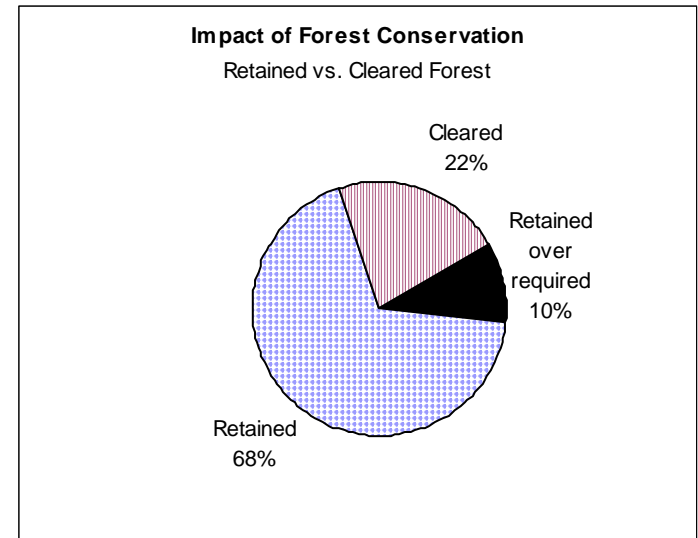
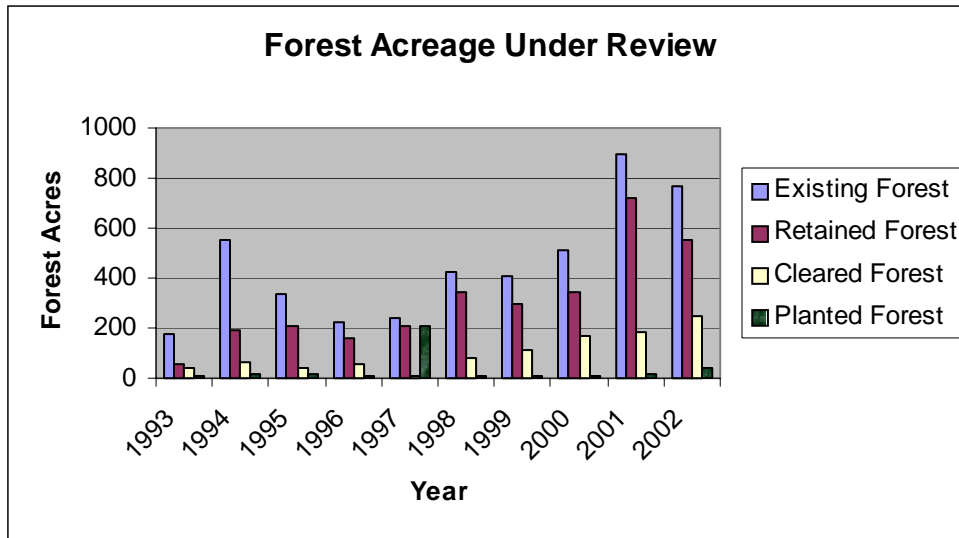
⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties

Cecil County

FY 1993 - 2002



Forest	Cecil	All Counties
Existing	4,529.91	88,186.7
Retained ⁺	3,081.67	54,740.7
Cleared	1,000.01	29,319.9
Planted	346.76	8,319.7

2002 Data*	84,851.9	2,081,182**
%Land Area	38%	37.8%

Forest Conservation Review in Cecil Co. during fiscal years 1993 through 2002 resulted in:

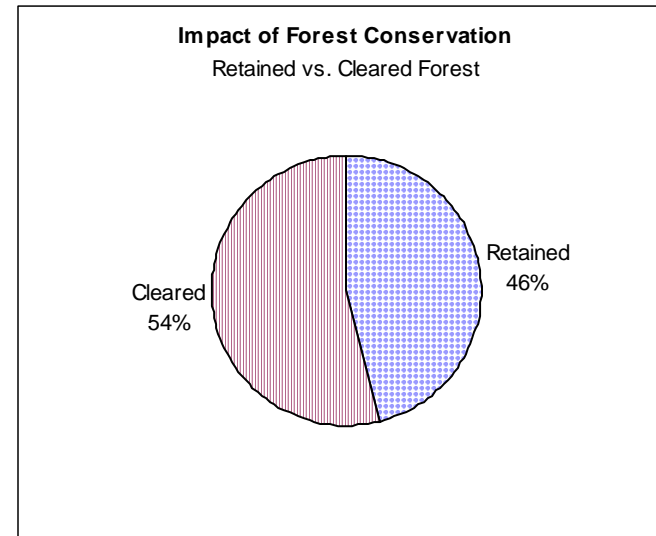
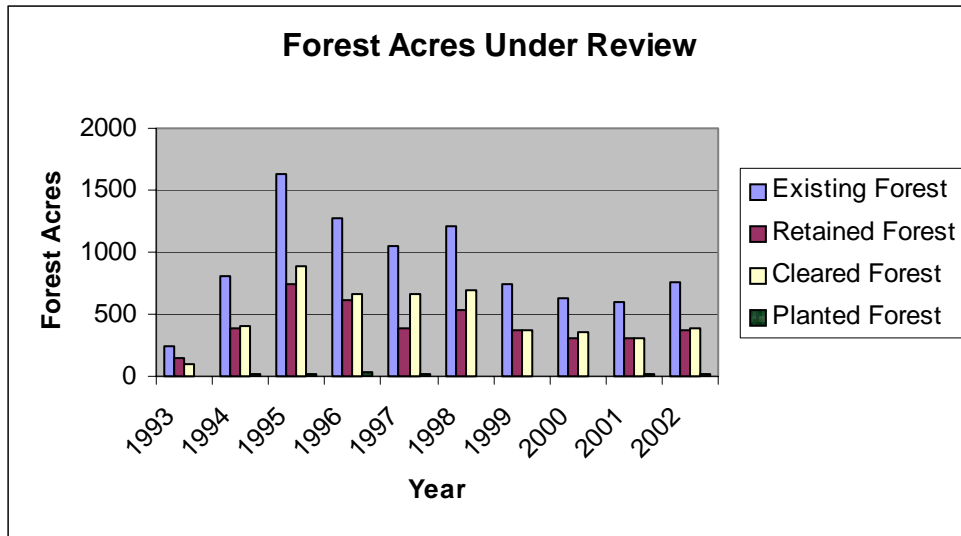
- average 68% of existing forest onsite is retained onsite
- average 22% of existing forest onsite is cleared
- average 10% more existing forest is retained than required
- average 3.4 times as much forest is planted and retained as cleared

- during the first 5 years 1,521 acres of existing forest were reviewed compared to 3,009 acres during the next 5 years
- per the 5 Year Report an average of 55% forest was retained and 14% cleared, and 31% more existing forest retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Charles	All Counties
Existing	8,968.66	88,186.7
Retained ⁺	4,167.47	54,740.7
Cleared	4,815.79	29,319.9
Planted	100.27	8,319.7

2002 Data*	178,472.1	2,081,182**
%Land Area	61%	37.8%

Forest Conservation Review in Charles Co. during fiscal years 1993 through 2002 resulted in:

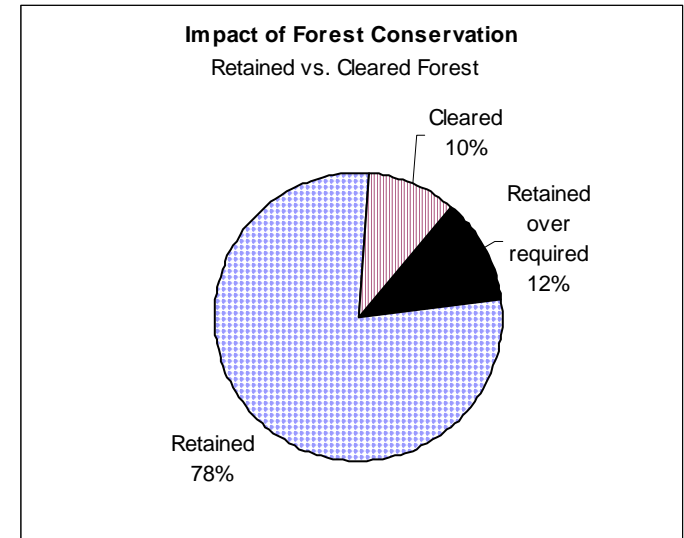
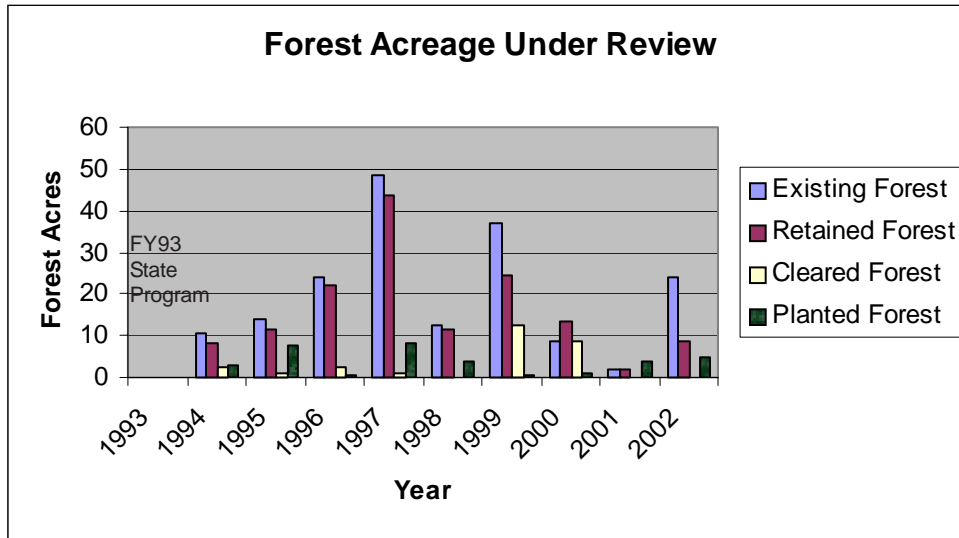
- average 46% of existing forest onsite is retained onsite
- average 54% of existing forest onsite is cleared

- during the first 5 years 4,672 acres of existing forest were reviewed compared to 4,264.66 acres during the next 5 years
- per the 5 Year Report an average of 46% forest was retained and 54% cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Dorchester	All Counties
Existing	180.34	88,186.7
Retained ⁺	140.09	54,740.7
Cleared	19.21	29,319.9
Planted	37.80	8,319.7

2002 Data*	126,759.5	2,081,182**
%Land Area	36%	37.8%

Forest Conservation Review in Dorchester Co. during fiscal years 1993 through 2002 resulted in:

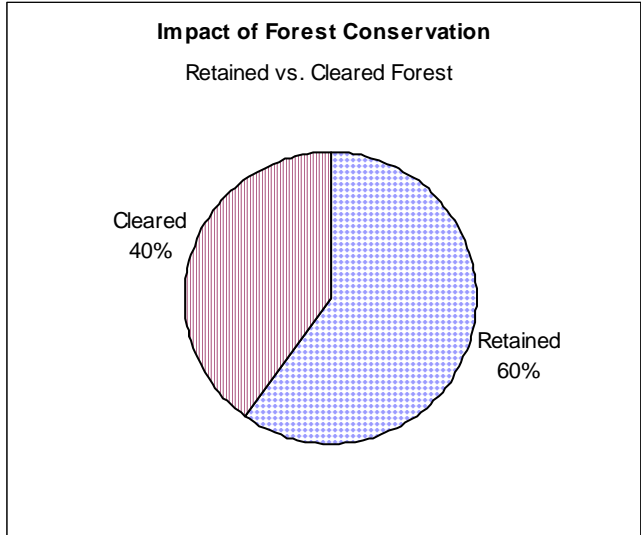
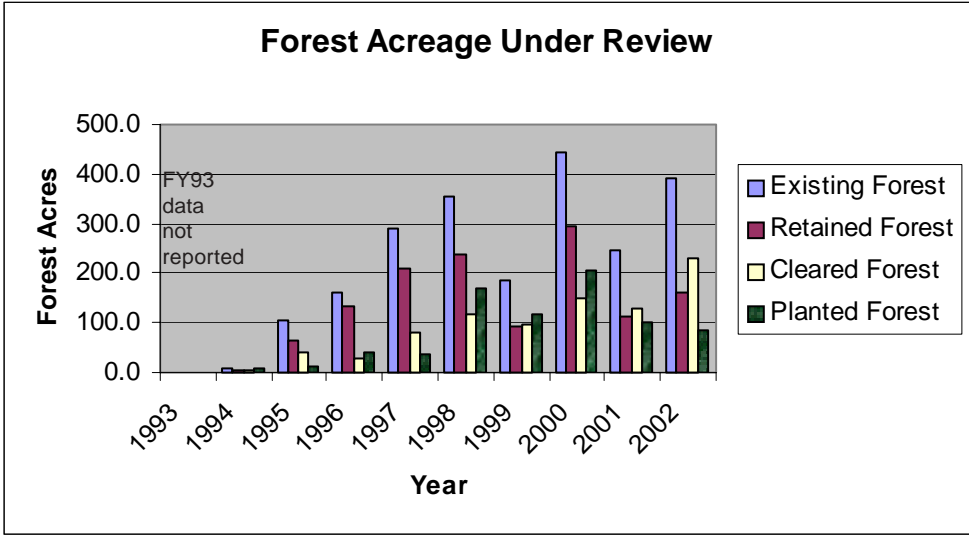
- average 78% of existing forest onsite is retained onsite
- average 10% of existing forest onsite is cleared
- average 12% more existing forest is retained than required
- average 6.9 times as much forest is planted and retained as cleared

- during the first 5 years 86 acres of existing forest were reviewed compared to 94.34 acres during the next 5 years
- per the 5 Year Report an average of 90% forest was retained and 5% cleared, and 5% more existing forest retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



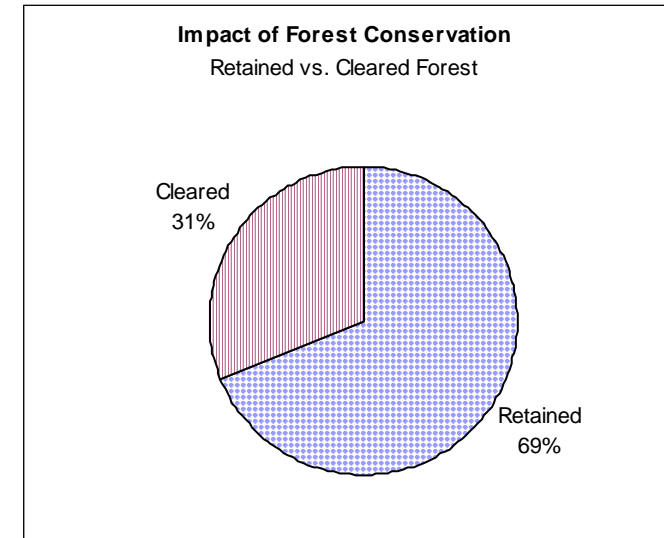
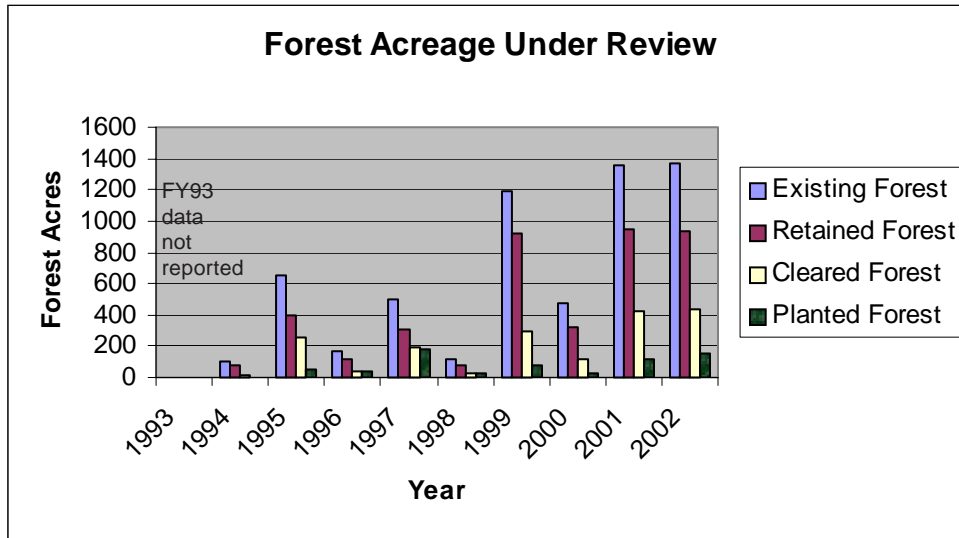
Forest	Frederick	All Counties
Existing	2,190.0	88,186.7
Retained ⁺	1,308.6	54,740.7
Cleared	881.4	29,319.9
Planted	778.6	8,319.7

2002 Data*	145,432.3	2,081,182**
%Land Area	34%	37.8%

Forest Conservation Review in Frederick Co. during fiscal years 1993 through 2002 resulted in:

- average 60% of existing forest onsite is retained onsite
- average 40% of existing forest onsite is cleared
- average 2.4 times as much forest is planted and retained as cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP
^{*}Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.
^{**}Statewide estimate minus Allegany and Garrett Counties



Forest	Harford	All Counties
Existing	5,918.15	88,186.7
Retained ⁺	4,090.15	54,740.7
Cleared	1,805.76	29,319.9
Planted	664.99	8,319.7

2002 Data*	95,892.1	2,081,182**
%Land Area	34%	37.8%

Forest Conservation Review in Harford Co. during fiscal years 1993 through 2002 resulted in:

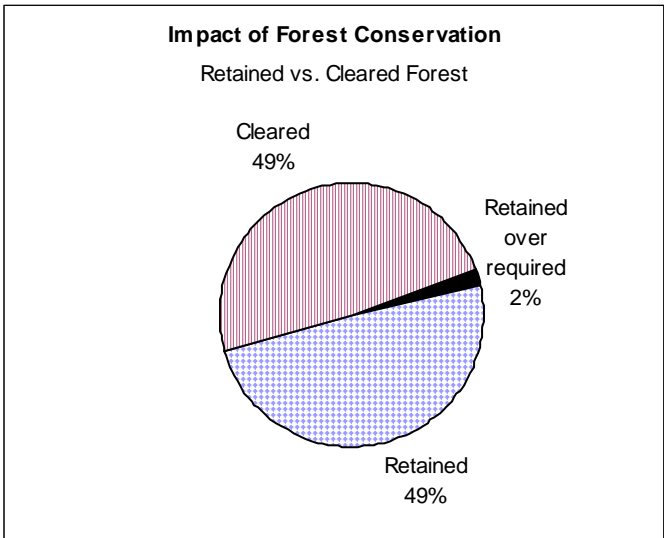
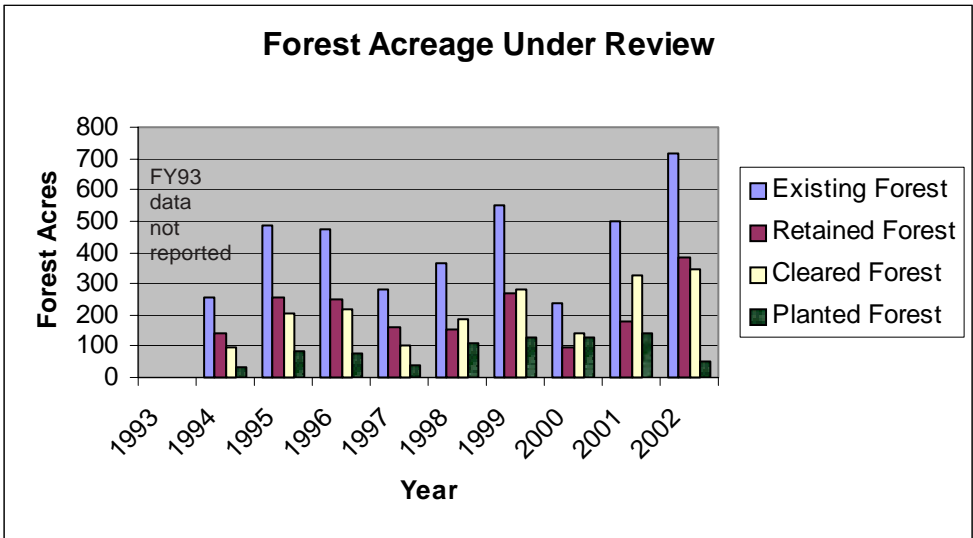
- average 69% of existing forest onsite is retained onsite
- average 31% of existing forest onsite is cleared
- average 2.6 times as much forest is planted and retained as cleared

- during the first 5 years 1,418 acres of existing forest were reviewed compared to 4,500 acres during the next 5 years
- per the 5 Year Report an average of 77% forest was retained and 19% cleared, and 4% more existing forest retained than required

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Howard	All Counties
Existing	3,860.0	88,186.7
Retained ⁺	1,897.0	54,740.7
Cleared	1,897.0	29,319.9
Planted	793.4	8,319.7

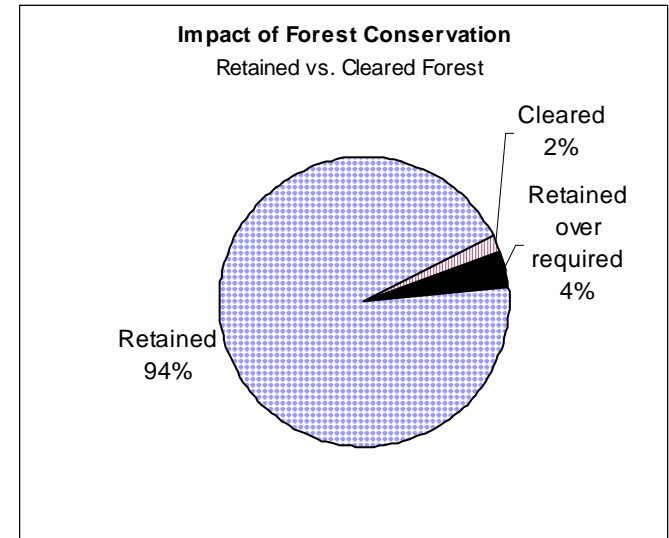
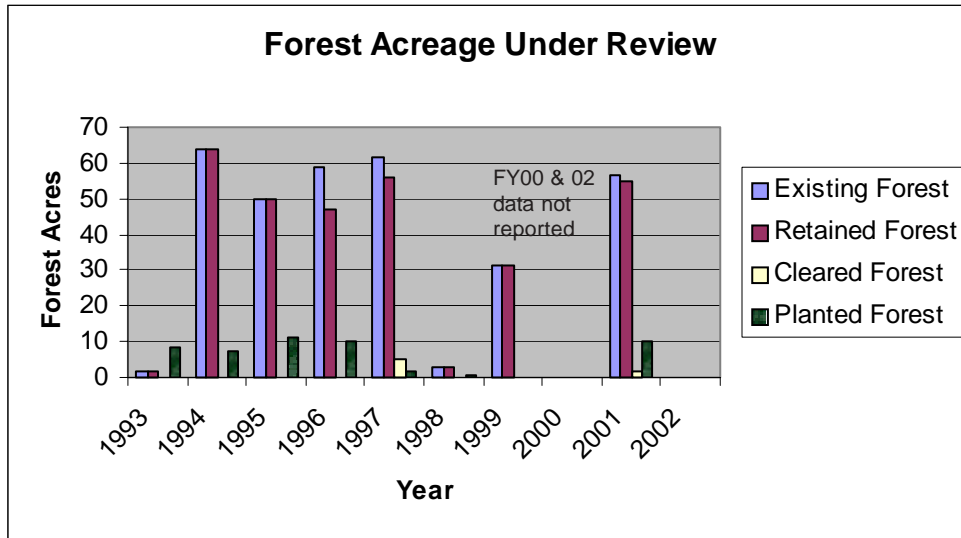
2002 Data* 49,517.9 2,081,182**
 %Land Area 44% 37.8%

Forest Conservation Review in Howard Co. during fiscal years 1993 through 2002 resulted in:

- average 49% of existing forest onsite is retained onsite
- average 49% of existing forest onsite is cleared
- average 2% more existing forest is retained than required
- average 1.4 times as much forest is planted and retained as cleared
- during the first 5 years 1,492 acres of existing forest were reviewed compared to 2,368 acres during the next 5 years
- per the 5 Year Report an average of 55% forest was retained and 42% cleared, and 3% more existing forest retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP
^{*}Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.
^{**}Statewide estimate minus Allegany and Garrett Counties

Kent County FY 1993 - 2002



Forest	Kent	All Counties
Existing	327.0	88,186.7
Retained ⁺	307.8	54,740.7
Cleared	7.2	29,319.9
Planted	49.9	8,319.7

2002 Data*	44,734.8	2,081,182**
%Land Area	25%	37.8%

Forest Conservation Review in Kent Co. during fiscal years 1993 through 2002 resulted in:

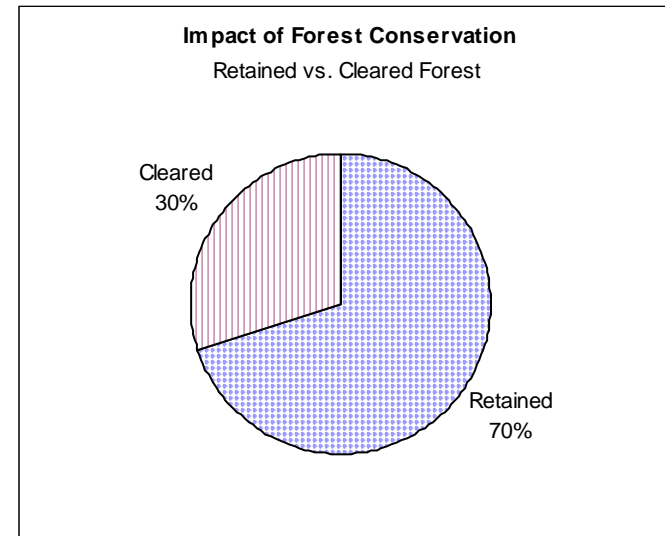
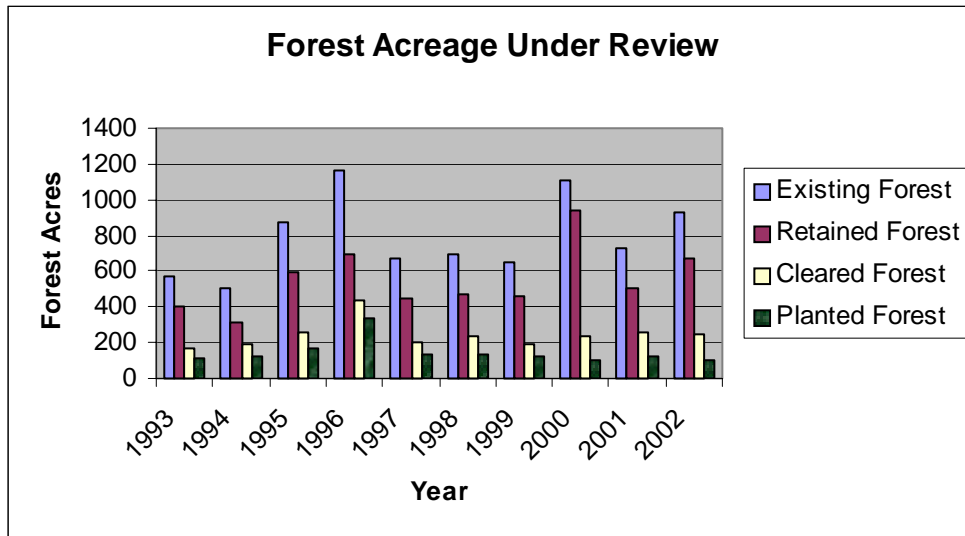
- average 94% of existing forest onsite is retained onsite
- average 2% of existing forest onsite is cleared
- average 4% more existing forest is retained than required
- average 49 times as much forest is planted and retained as cleared

- per the 5 Year Report an average of 93% forest was retained and 2.4% cleared, and 5% more existing forest retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Montgomery	All Counties
Existing	7,884.45	88,186.7
Retained ⁺	5,492.81	54,740.7
Cleared	2,434.55	29,319.9
Planted	1,445.5	8,319.7

2002 Data*	91,929.5	2,081,182**
%Land Area	29%	37.8%

Forest Conservation Review in Montgomery Co. during fiscal years 1993 through 2002 resulted in:

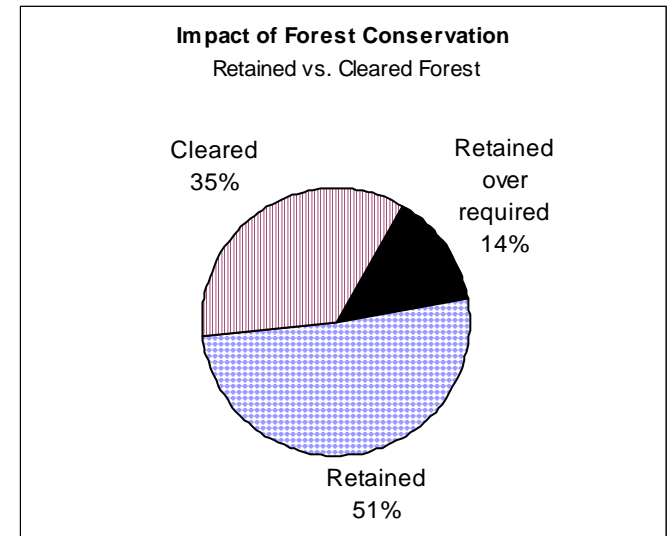
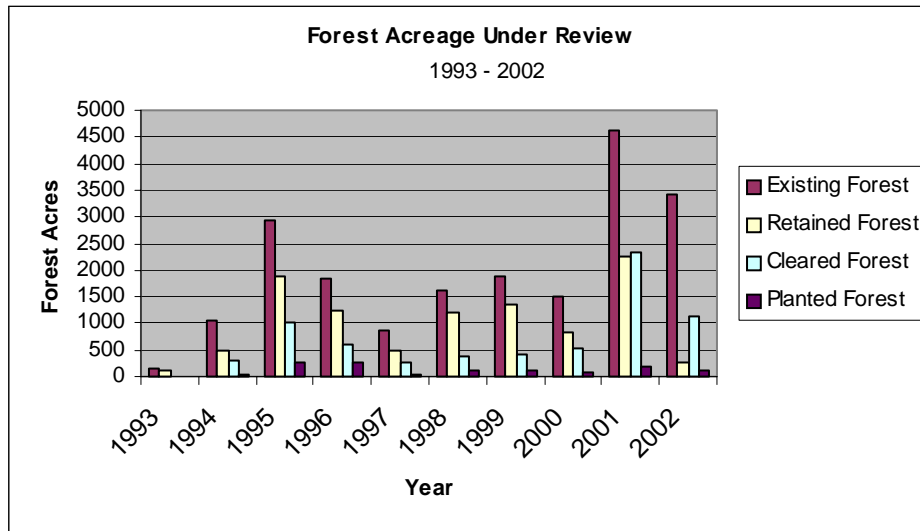
- average 70% of existing forest onsite is retained onsite
- average 30% of existing forest onsite is cleared
- average 2.8 times as much forest is planted and retained as cleared

- during the first 5 years 3,776 acres of existing forest were reviewed compared to 4,109 acres during the next 5 years
- per the 5 Year Report an average of 66% forest was retained and 33% cleared, and 1% more existing forest retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Prince George's	All Counties
Existing	19,896.8	88,186.7
Retained*	10,127.0	54,740.7
Cleared	6,969.2	29,319.9
Planted	1,234.0	8,319.7
2002 Data*	131,391.1	2,081,182**
% Land Area	42%	37.8%

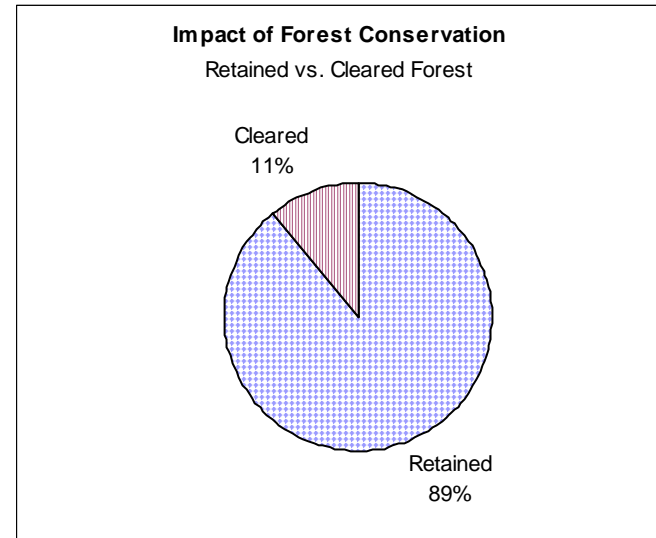
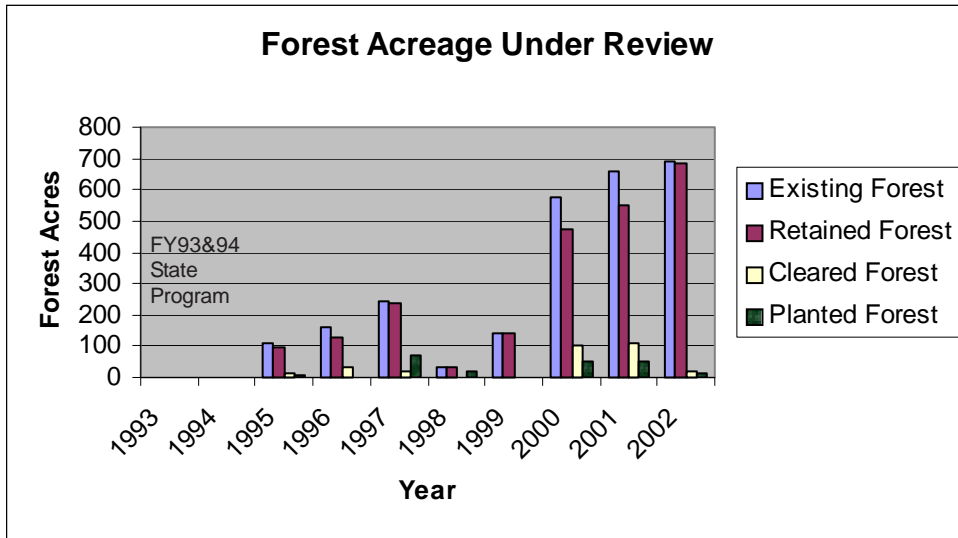
Forest Conservation Review in Prince George's Co. during fiscal years 1993 through 2002 resulted in:

- average 51% of existing forest onsite is retained onsite
- average 35% of existing forest onsite is cleared
- average 14% more existing forest is retained than required
- average 1.6 times as much forest is planted and retained as cleared
- during the first 5 years 6,856 acres of existing forest were reviewed compared to 13,040.8 acres during the next 5 years
- per the 5 Year Report an average of 61% forest was retained and 32% cleared, and 7% more existing forest retained than required

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Queen Anne's	All Counties
Existing	2,615.7	88,186.7
Retained ⁺	2,345.6	54,740.7
Cleared	290.9	29,319.9
Planted	220.7	8,319.7

2002 Data*	63,068.1	2,081,182**
%Land Area	27%	37.8%

Forest Conservation Review in Queen Anne's Co. during fiscal years 1993 through 2002 resulted in:

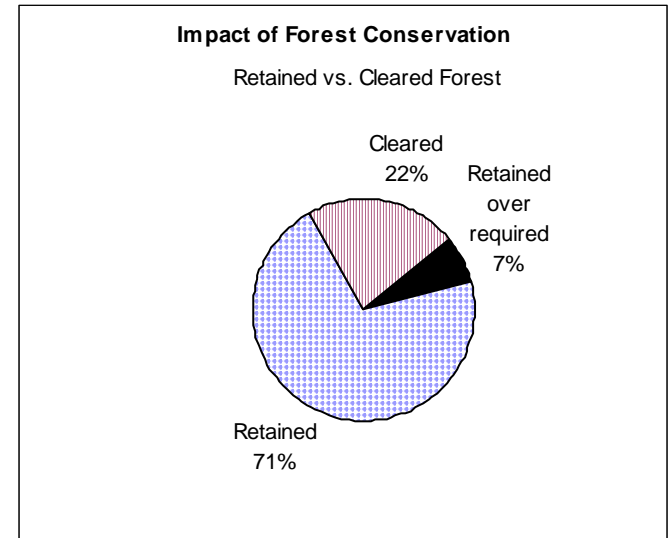
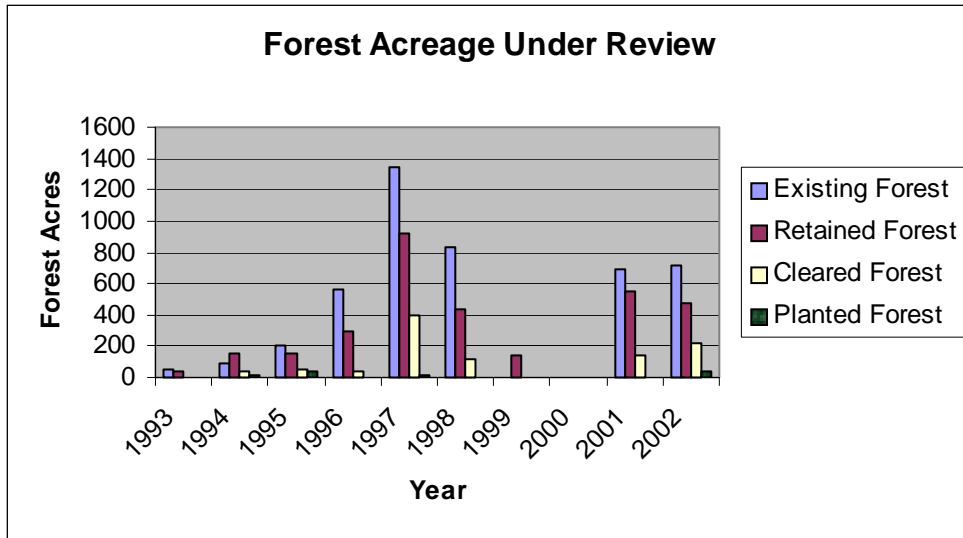
- average 89% of existing forest onsite is retained onsite
- average 11% of existing forest onsite is cleared
- average 8.8 times as much forest is planted and retained as cleared
- during the first 5 years 513 acres of existing forest were reviewed compared to 2,102.7 acres during the next 5 years
- per the 5 Year Report an average of 88% forest was retained and 12% cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties

St. Mary's County FY 1993 - 2002



Forest	St. Mary's	All Counties
Existing	4,486.4	88,186.7
Retained ⁺	3,163.0	54,740.7
Cleared	994.4	29,319.9
Planted	101.9	8,319.7

2002 Data*	118,501.8	2,081,182**
%Land Area	51%	37.8%

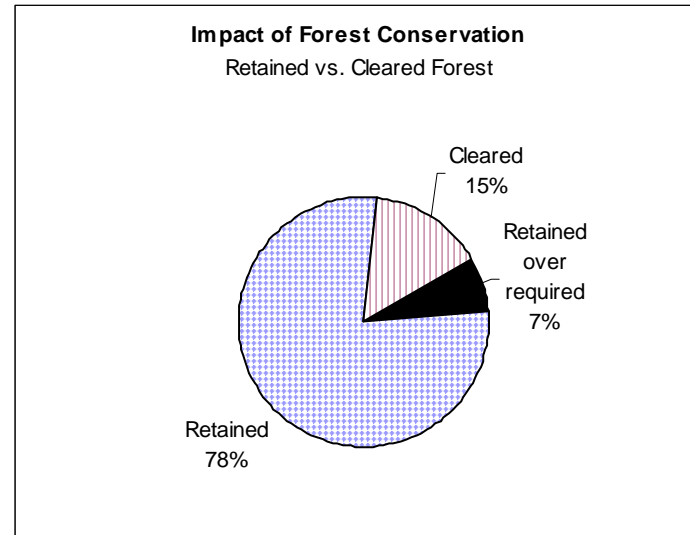
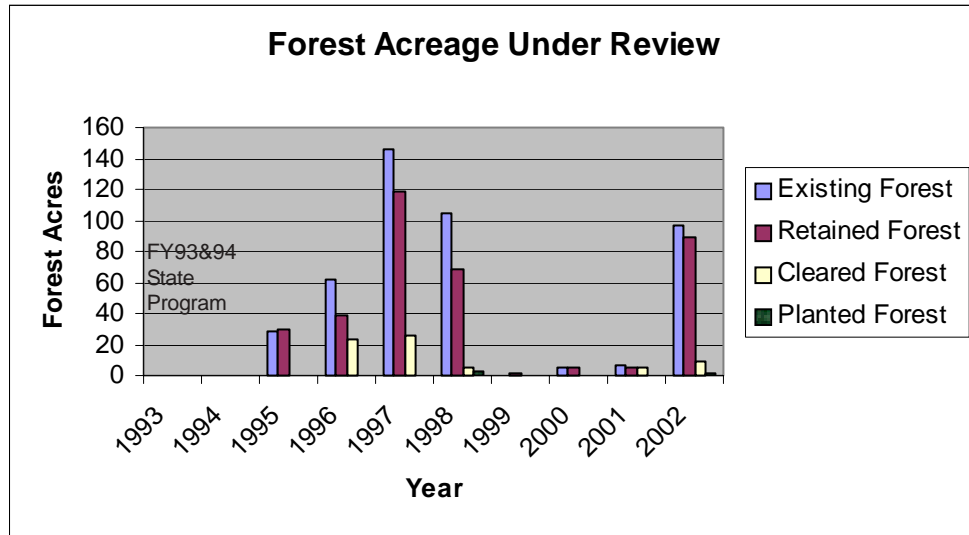
Forest Conservation Review in St. Mary's Co. during fiscal years 1993 through 2002 resulted in:

- average 71% of existing forest onsite is retained onsite
- average 22% of existing forest onsite is cleared
- average 7% more existing forest is retained than required
- average 3.3 times as much forest is planted and retained as cleared
- during the first 5 years 2,249 acres of existing forest were reviewed compared to 2,237 acres during the next 5 years
- per the 5 Year Report an average of 70% forest was retained 23% cleared, and 7% more existing forest retained than required

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Somerset	All Counties
Existing	454.4	88,186.7
Retained ⁺	354.6	54,740.7
Cleared	67.95	29,319.9
Planted	3.5	8,319.7

2002 Data*	82,518.3	2,081,182**
%Land Area	40%	37.8%

Forest Conservation Review in Somerset Co. during fiscal years 1993 through 2002 resulted in:

- average 78% of existing forest onsite is retained onsite
- average 15% of existing forest onsite is cleared
- average 7% more existing forest is retained than required
- average 5.3 times as much forest is planted and retained as cleared

- during the first 5 years 236 acres of existing forest were reviewed compared to 218 acres during the next 5 years
- per the 5 Year Report an average of 79% of forest was retained and 21% cleared

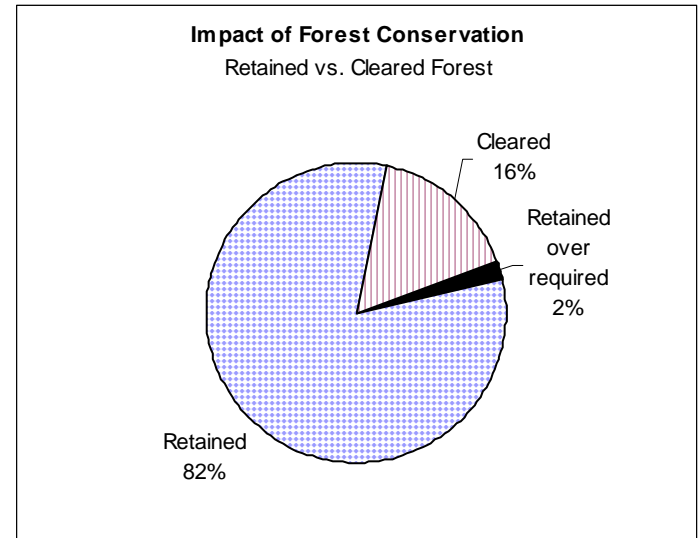
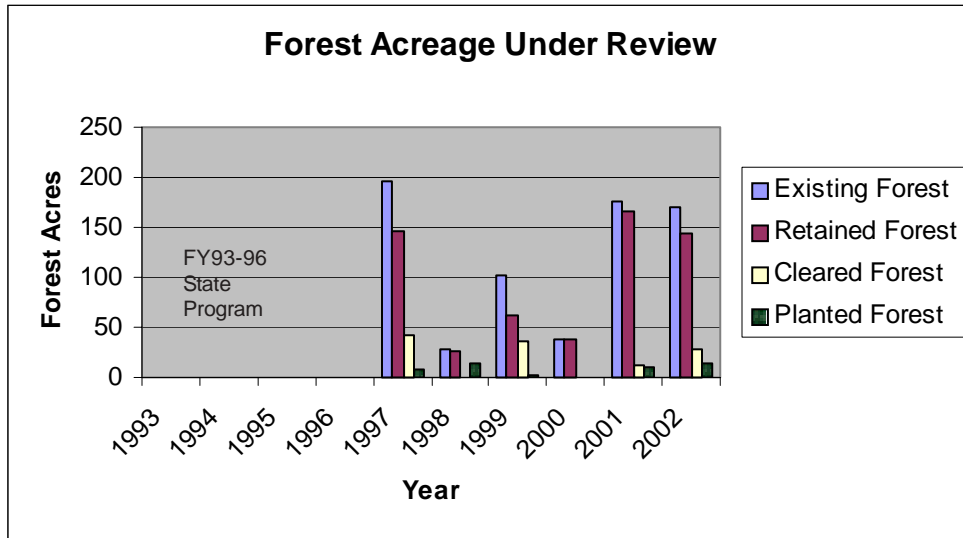
⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties

Talbot County

FY 1993 - 2002



Forest	Talbot	All Counties
Existing	710.98	88,186.7
Retained ⁺	582.83	54,740.7
Cleared	116.15	29,319.9
Planted	49.09	8,319.7

2002 Data*	41,443.9	2,081,182**
%Land Area	24%	37.8%

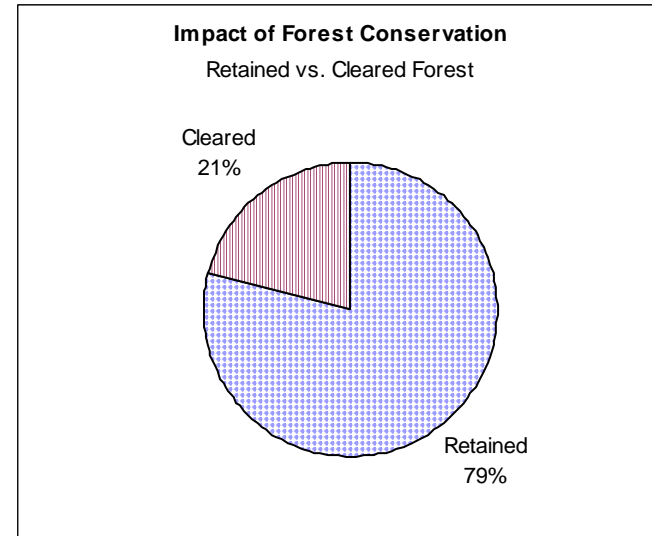
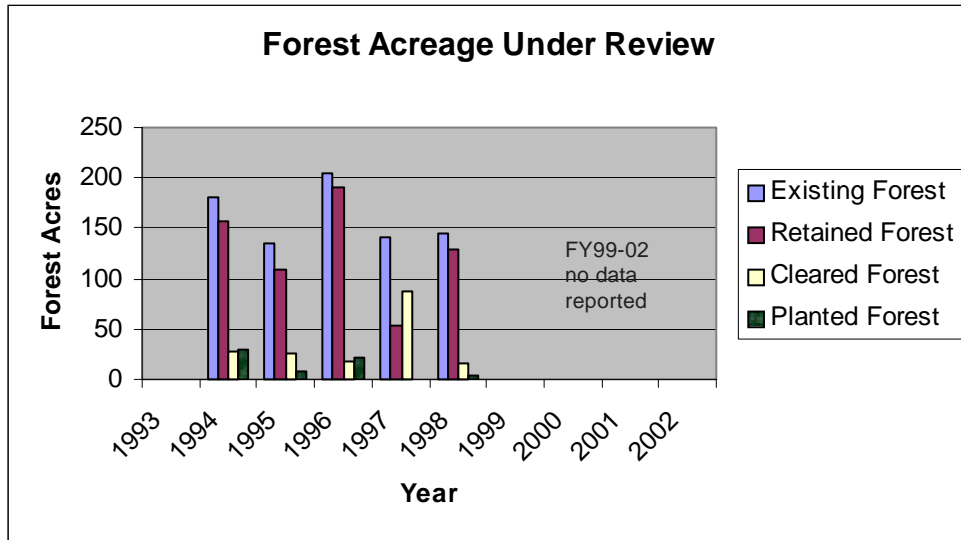
Forest Conservation Review in Talbot Co. during fiscal years 1993 through 2002 resulted in:

- average 82% of existing forest onsite is retained onsite
- average 16% of existing forest onsite is cleared
- average 2% more existing forest is retained than required
- average 5.4 times as much forest is planted and retained as cleared

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Washington	All Counties
Existing	804.1	88,186.7
Retained ⁺	636.3	54,740.7
Cleared	174.73	29,319.9
Planted	65.8	8,319.7

2002 Data*	116,953.7	2,081,182**
%Land Area	40%	37.8%

Forest Conservation Review in Washington Co. during fiscal years 1993 through 2002 resulted in:

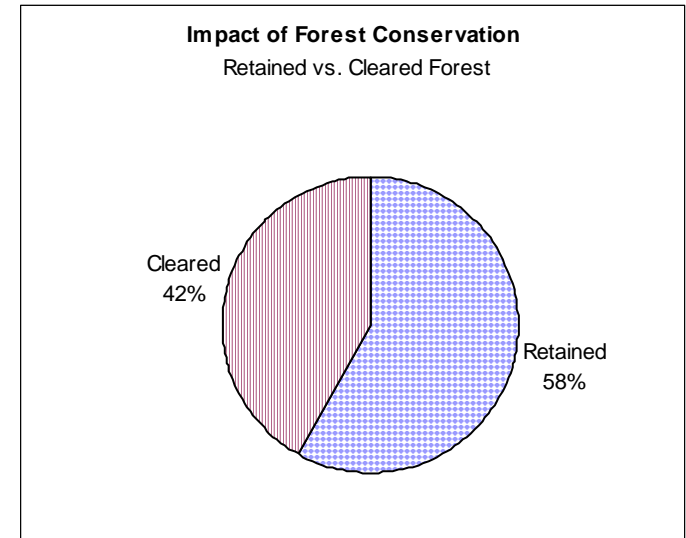
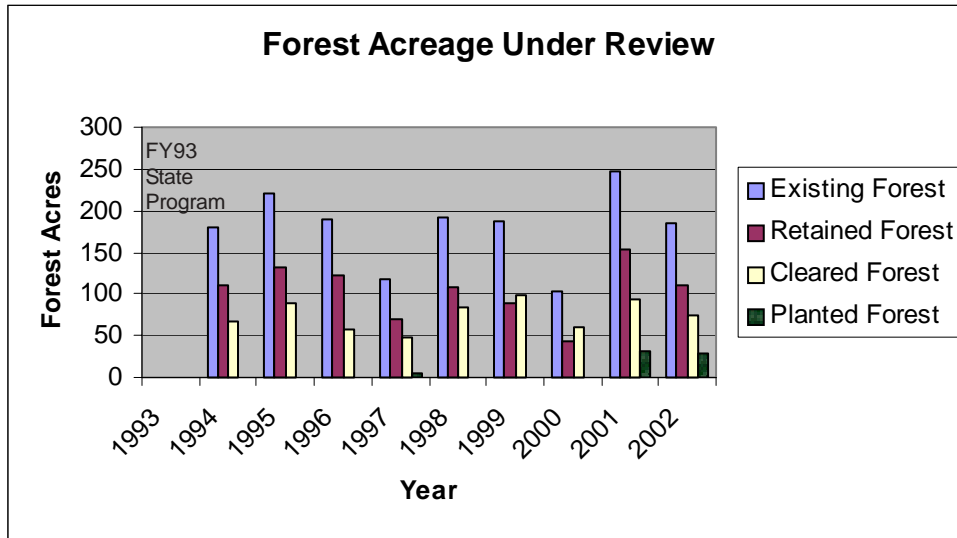
- average 79% of existing forest onsite is retained onsite
- average 21% of existing forest onsite is cleared
- average 4 times as much forest is planted and retained as cleared

-per the 5 Year Report an average of 77% forest was retained and 11% cleared, and 12% more existing forest was retained than required

⁺Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Wicomico	All Counties
Existing	1,623.3	88,186.7
Retained ⁺	941.0	54,740.7
Cleared	673.1	29,319.9
Planted	64.9	8,319.7

2002 Data*	106,236.3	2,081,182**
%Land Area	44%	37.8%

Forest Conservation Review in Wicomico Co. during fiscal years 1993 through 2002 resulted in:

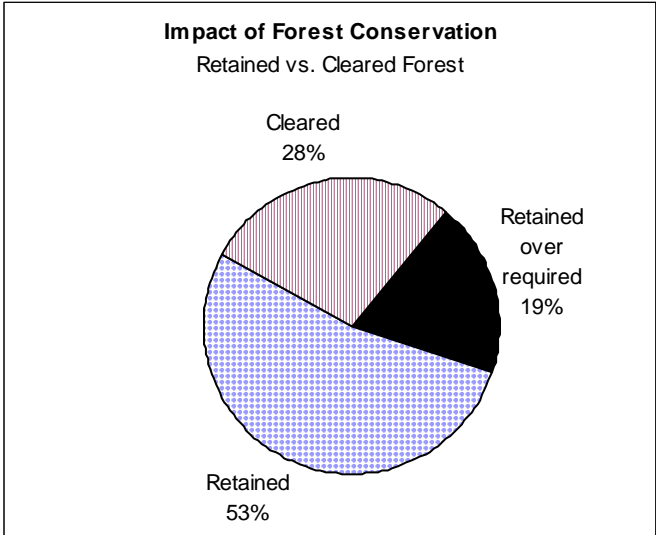
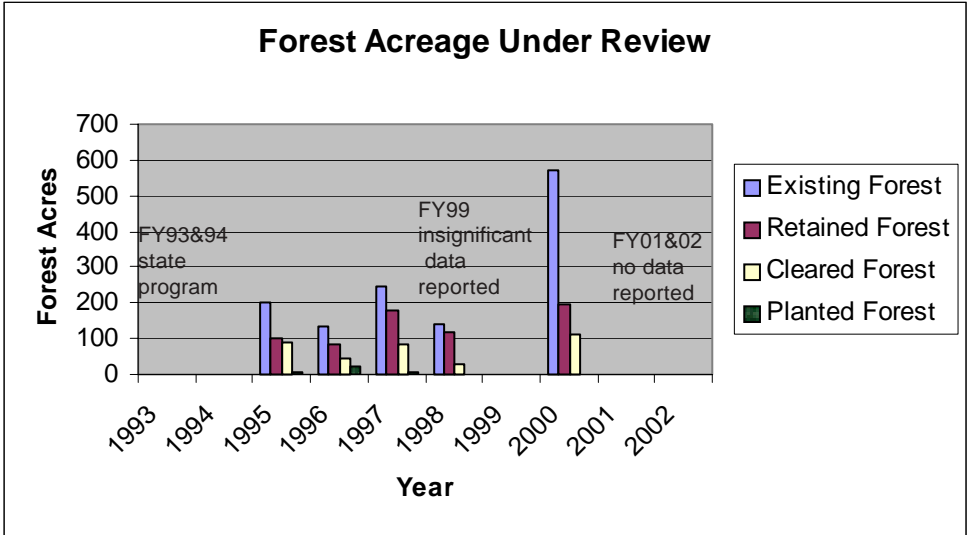
- average 58% of existing forest onsite is retained onsite
- average 42% of existing forest onsite is cleared
- average 1.5 times as much forest is planted and retained as cleared

- during the first 5 years 698 acres of existing forest were reviewed compared to 925 acres during the next 5 years
- per the 5 Year Report an average of 52% forest was retained and 38% cleared, and 10% more existing forest was retained than required

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP

*Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.

**Statewide estimate minus Allegany and Garrett Counties



Forest	Worcester	All Counties
Existing	1,291.6	88,186.7
Retained ⁺	678.5	54,740.7
Cleared	356.4	29,319.9
Planted	35.4	8,319.7

2002 Data* 159,987.7 2,081,182**
 %Land Area 53% 37.8%

Forest Conservation Review in Worcester Co. during fiscal years 1993 through 2002 resulted in:

- average 53% of existing forest onsite is retained onsite
- average 28% of existing forest onsite is cleared
- average 19% more existing forest is retained than required
- average 2 times as much forest is planted and retained as cleared

- during the first 5 years 577 acres of existing forest were reviewed compared to 714.6 acres during the next 5 years
- per the 5 Year Report an average of 63% forest was retained and 37% cleared

+Retention implies long-term protection (LTP); additional onsite retention may have occurred without LTP
 *Maryland Generalized Land Use/Land Cover Statistics, Maryland Department of Planning, water classification not included.
 **Statewide estimate minus Allegany and Garrett Counties

Appendix C:

Analysis of Individual Municipal Forest Conservation Programs

Municipalities Summary

Ten year summary of forest acreage under review:

Anne Arundel -

Annapolis - not reporting '93, '00, '01

Forest	Annapolis	All Municipalities
Existing	71.14	1,828.38
Retained	24.26	954.60
Cleared	46.98	872.48
Planted	7.98	678.06

Land Area (ac): 4,886 acres

Cecil -

Elkton -

Forest	Elkton	All Municipalities
Existing	191.7	1,828.38
Retained	113.2	954.60
Cleared	83.8	872.48
Planted	17.9	678.06

Land Area (ac): 5,183.9 acres

North East - only reported in 2001, delegated authority to County in 2002

Forest	North East	All Municipalities
Existing	30.2	1,828.38
Retained	10.3	954.60
Cleared	19.9	872.48
Planted	0.0	678.06

Land Area (ac): *****

Perryville - delegated authority to county in 2002

Forest	Perryville	All Municipalities
Existing	29.2	1,828.38
Retained	18.2	954.60
Cleared	11.0	872.48
Planted	12.7	678.06

Land Area (ac): 1,401 acres

Dorchester -

Cambridge - not reporting FY93 - FY96

Forest	Cambridge	All Municipalities
Existing	45.16	1,828.38
Retained	0.5	954.60
Cleared	10.04	872.48
Planted	10.59	678.06

Land Area (ac): 4,356 acres

Frederick -

Frederick -

Forest	Frederick	All Municipalities
Existing	210.92	1,828.38
Retained	94.37	954.60
Cleared	90.32	872.48
Planted	356.25	678.06

Land Area (ac): 13,311.9 acres

Harford -

Aberdeen - only reported in FY97

Forest	Aberdeen	All Municipalities
Existing	38.1	1,828.38
Retained	29.4	954.60
Cleared	8.7	872.48
Planted	2.9	678.06

Land Area (ac): 3,839 acres

Bel Air -

Forest	Bel Air	All Municipalities
Existing	113.3	1,828.38
Retained	67.2	954.60
Cleared	27.7	872.48
Planted	5.9	678.06

Land Area (ac): 1,855.9 acres

Havre de Grace -

Forest	Havre de Grace	All Municipalities
Existing	72.4	1,828.38
Retained	35.8	954.60
Cleared	35.8	872.48
Planted	20.5	678.06

Land Area (ac): 3,475 acres

Montgomery -

Gaithersburg - not reporting FY96 & 97

Forest	Gaithersburg	All Municipalities
Existing	292.4	1,828.38
Retained	187.5	954.60
Cleared	203.3	872.48
Planted	98.1	678.06

Land Area (ac): 6,409 acres

Rockville -

Forest	Rockville	All Municipalities
Existing	234.8	1,828.38
Retained	127.7	954.60
Cleared	102.1	872.48
Planted	26.2	678.06

Land Area (ac): 7,679.9 acres

Prince George's -

Laurel - not reporting FY99-01

Forest	Laurel	All Municipalities
Existing	88.8	1,828.38
Retained	27.3	954.60
Cleared	65.6	872.48
Planted	23.0	678.06

Land Area (ac): 1,919.9 acres

Queen Anne's -

Centreville - only reported FY97 - 99

Forest	Centreville	All Municipalities
Existing	51.4	1,828.38
Retained	28.3	954.60
Cleared	0.0	872.48
Planted	0.0	678.06

Land Area (ac): 1,542.8 acres

Talbot -

Easton- not reporting FY97, 00 & 02

Forest	Easton	All Municipalities
Existing	112.48	1,828.38
Retained	172.28	954.60
Cleared	87.7	872.48
Planted	43.8	678.06

Land Area (ac): 3,199.9 acres

Washington -

Hagerstown - only reported FY01 & 02

Forest	Hagerstown	All Municipalities
Existing	146.08	1,828.38
Retained	18.25	954.60
Cleared	79.54	872.48
Planted	52.24	678.06

Land Area (ac): 7,129.6 acres

The following municipalities have either submitted a report of no Forest Conservation reviews or did not submit a report:

Allegany - Exempt**Anne Arundel -**

Highland Beach - Exempt

Calvert -

Chesapeake Beach - Adopted

North Beach - Exempt

Caroline -

Denton - Adopted

Federalsburg - CA/FCA Program

Goldsboro - State program review

Greensboro - Adopted

Henderson - Not exercising planning & zoning

Hillsboro - Not exercising planning & zoning

Marydel - Not exercising planning & zoning

Preston - State Program review

Ridgely - State Program review

Carroll -

Hampstead - Assigned

Manchester - Assigned

Mount Airy - Assigned

New Windsor - Assigned

Sykesville - Assigned

Taneytown - Assigned

Union Bridge - Assigned

Westminster - Assigned

Cecil -

Cecilton - Assigned

Charlestown - Adopted

Chesapeake City - Adopted

Port Deposit - State Program review

Rising Sun - Adopted

Charles -

Indian Head - Adopted

La Plata - Adopted

Port Tobacco - Exempt

Dorchester -

Brookview - Not exercising planning & zoning

Church Creek - Not exercising planning & zoning

East New Market - Assigned

Eldorado - Not exercising planning & zoning

Galestown - Not exercising planning & zoning

Hurlock - State Program review

Secretary - State Program review

Vienna - Assigned

Frederick -

Brunswick - Assigned

Burkittsville - Assigned

Emmitsburg - Adopted

New Market - Adopted

Middletown - Assigned

Mount Airy - Assigned

Myersville - Assigned

Rosemont - Assigned

Thurmont - Assigned

Walkersville - Assigned

Woodsboro - Assigned

Garrett - Exempt**Howard - No Municipalities****Kent -**

Bertterton - Assigned

Chestertown - Adopted

Galena - Assigned

Millington - Assigned

Rock Hall - Assigned

Montgomery -

Barnesville - Adopted

Brookeville - State Program review

Laytonsville - Adopted

Poolesville - Adopted

Washington Grove - Adopted

Queen Anne's -

Barclay - Not exercising planning & zoning

Church Hill - State Program review

Queen Anne - State Program review

Queenstown - Adopted

Sudlersville - State Program review

Templeville - Not exercising planning & zoning

St. Mary's -

Leonardtown - Adopted

Somerset -

Crisfield - Assigned

Princess Anne - Assigned

Talbot -

St. Michael's - State Program review

Trappe - State Program review

Oxford - Adopted

Washington -

Boonesboro - Assigned

Clear Spring - Assigned
Funkstown - Assigned
Hancock - Assigned
Keedysville - Assigned
Sharpsburg - Assigned
Smithsburg - Assigned
Williamsport - Assigned

Wicomico -

Delmar - Assigned
Fruitland - Assigned
Hebron - Assigned
Mardela Springs - Assigned
Pittsville - Assigned
Salisbury - Assigned
Sharptown - Assigned
Willards - Assigned

Worcester -

Berlin - Assigned
Ocean City - Adopted
Pocomoke City - Assigned
Snow Hill - Assigned

The Mission of the Maryland Department of Natural Resources

The Department of Natural Resources preserves, protects, enhances and restores Maryland's natural resources for the wise use and enjoyment of all citizens.

Forest Service Mission

To restore, manage, and protect Maryland's trees, forests, and forested ecosystems to sustain our natural resources and connect people to the land.

Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor
C. Ronald Franks, Secretary

Steven W. Koehn, Director, Forest Service

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