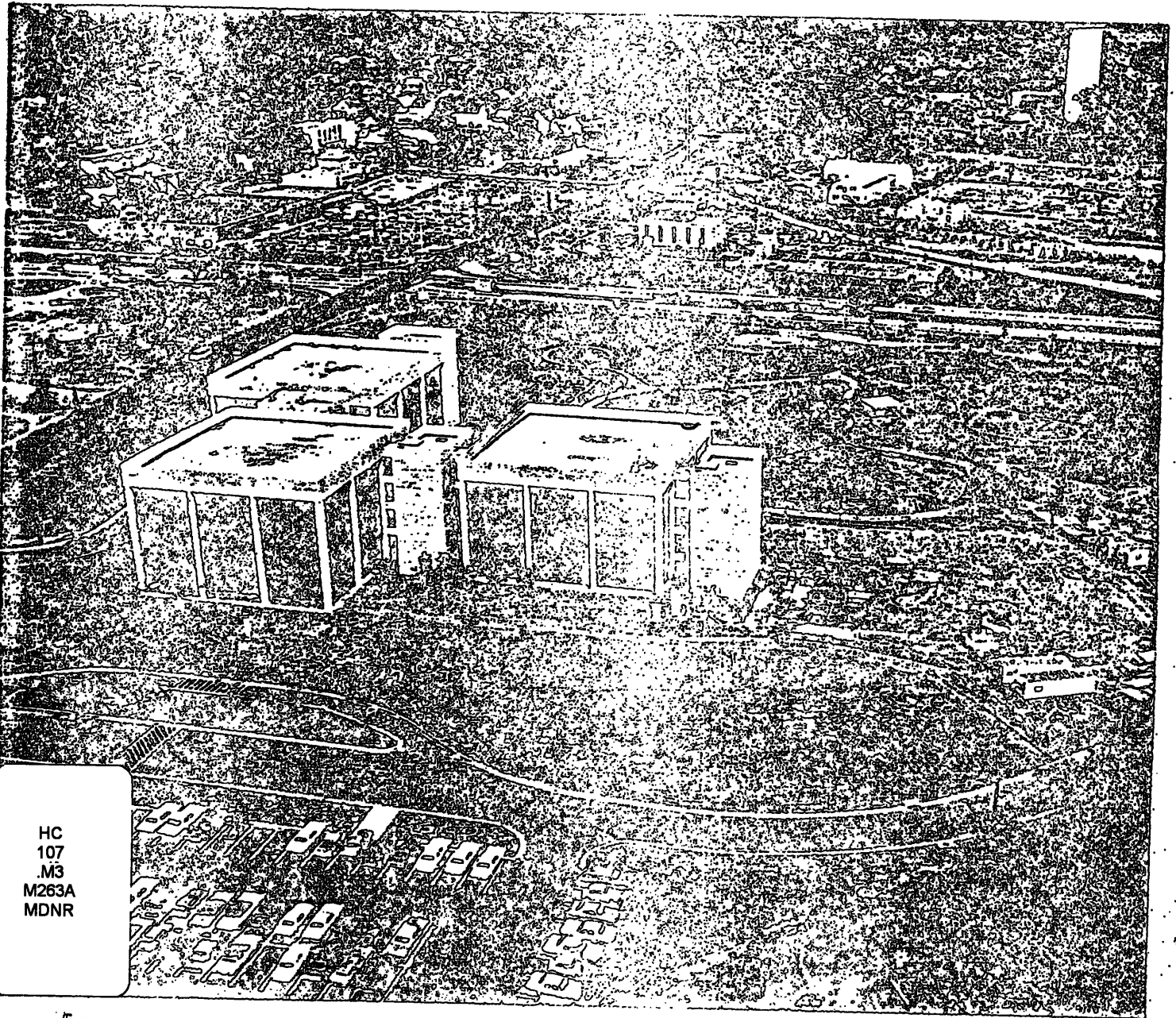


WYE MILLS

State of Maryland DEPARTMENT OF NATURAL RESOURCES Annual Activities Report

DEPARTMENT OF NATURAL RESOURCES
INFORMATION RESOURCE CENTER
NON-CIRCULATING

1973



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PROBABILITY

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JAMES B. COULTER
SECRETARY

JOSEPH H. MANNING
DEPUTY SECRETARY

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
TAWES STATE OFFICE BUILDING
ANNAPOLIS 21401

January, 1974

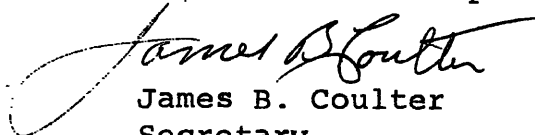
This report of activities in the Maryland Department of Natural Resources reflects two major developments which occurred during Fiscal Year 1973. The Department moved into new headquarters in the Tawes State Office Building, Annapolis. Relocation of working spaces coupled with implementation of the plan for internal administrative re-organization has resolved the Department into ten major operating units:

Capital Programs Administration	Maryland Geological Survey
Natural Resources Police Force	Fisheries Administration
Maryland Environmental Service	Wildlife Administration
Water Resources Administration	Park Service
Power Plant Siting Program	Forest Service

Administrative and other support services have been centralized in the Office of the Secretary with the result that operating unit programs are now able to provide natural resources related services directly and efficiently.

The Department continues to review programs in the light of performance, and changing resource conditions and will recommend changes necessary to assure protection and enhancement of the environment and public recreational opportunities.

This report would not be complete without two acknowledgments: First, the Department extends sincere appreciation to the countless volunteer organizations, community groups and individuals whose voices were heard during the year, speaking out on behalf of the objectives of the Department of Natural Resources. Second, I offer my personal thanks to the 1,115 men and women of the DNR staff whose efforts made 1973's achievements possible.


James B. Coulter
Secretary

OFFICE OF THE SECRETARY

The following activities were conducted by the Office of the Secretary under terms of agreements with other States.

Susquehanna River Basin Compact - Formulates a comprehensive plan for the conservation, utilization, development, management and control of the water resources of the Susquehanna River Basin.

Interstate Commission on the Potomac River Basin - Coordinates, tabulates and summarizes existing data on the character, pollution and condition of tributary streams; conducts investigations; promotes adoption of uniform legislation for the control of stream pollution; and cooperates with other organizations in studies of treatment methods for sewage and industrial wastes.

Potomac River Basin Advisory Committee - Coordinates and advises the heads of government on the best possible permanent interstate organization to plan, develop and manage the water and related resources of the Potomac River Basin.

Potomac River Fisheries Commission - Conserves and maintains the fishery resource of the River.

Atlantic States Marine Fisheries Commission - An outgrowth of the "Eastern Conservation Conference". Seven states, including Maryland, ratified the compact in 1941. The Commission advises only, aiding in the development of joint programs dealing with particular species of fish or bodies of water common to two or more states.

Coastal States Organization - Established to contribute to the development of common policy regarding national coastal zone management.

Interstate Oil Compact Commission - Formulates plans to conserve oil and gas.

Ohio River Basin Commission - Coordinates comprehensive planning for the development of water and related land resources.

Interstate Conference on Water Problems - Established to act in an advisory capacity to the Water Resources Council and to the Environmental Protection Agency and to represent the Council of State Governments on issues before Congress.

Among the support services centered in the Office of the Secretary are: Legal; Administration; Program, Planning and Evaluation; Extension Services; Public Information Services; Boating Administration; and Maryland Environmental Trust.

BOATING ADMINISTRATION

Boating Administration is responsible for the administration of the provisions of the State Boat Act pertaining to the registration and titling of boats, and for collecting, depositing, and recording all fees and taxes associated with the registration, titling, or re-registration of boats.

Approximately 10,000 copies of the Guide for Cruising Maryland Waters were sold in 1973.

75,404 boats were registered.

Maryland Environmental Trust

The Maryland Environmental Trust promotes conservation, improvement, stimulation, and perpetuation of the aesthetic, natural, health and welfare, scenic, and cultural qualities of the environment, including but not limited to land, water, air, wildlife, scenic qualities, open spaces, and buildings.

The powers and duties of the Maryland Environmental Trust are vested in and exercised by a Board of Trustees appointed by the Governor.

PROGRAM PLANNING AND EVALUATION

This program is responsible for assisting the Secretary in the coordination and direction of comprehensive planning in the area of natural resources management. Specific program activities include:

Administration of the Clearinghouse functions for the Department, coordinating comments and conducting investigations when warranted (approximately 250 projects in 1973).

Development of environmental impact assessments on Department projects and evaluation of Environmental Impact Statements submitted to the Department for review by other agencies, federal, State and local, which presently total approximately 100 items.

Coordination with federal, multi-state, state, multi-county, county, and local agencies and organizations such as: Corps of Engineers, Soil Conservation Service, Bureau of Outdoor Recreation, Forest Service, National Park Service, Housing and Urban Development; Appalachian Regional Commission, Chesapeake Bay Consortium, North Atlantic Regional Water Resources Study, Northeastern United States Water Supply Study, Ohio River Basin Commission, Potomac Basin Advisory Committee, Interstate Commission, Potomac Basin Advisory Committee, Interstate Commission on the Potomac River, Delmarva; Department of Transportation, Department of State Planning, Department of Economic and Community Development, Department of Health and Mental Hygiene; Regional Planning Council, Maryland-National Capital Park and Planning Commission, Washington Suburban Sanitary Commission, Tri-County Councils (Western Maryland and Southern Maryland); and various city, county, watershed and district agencies.

Coordination and evaluation of the management programs of Department units, development of programs requiring Department-wide coordination.

Planning support for resource management programs of Department units.

Planning for the integration of resource management programs on a geographic basis such as, Scenic Rivers Program, Coastal Zone planning, Wildlands Preservation System, and Land Use Planning for Department lands.

Activities 1973

SUBJECT:

		PROGRAM	PROJECT	STUDY	GUIDELINES	REGULATIONS	LAWS	POLICIES	BILLS	REPORTS	COMMITTEES	CONFERENCES	HEARINGS	INFORMATION
PARTICIPATE		2	0	5							2	5	5	
		1	11	3							13	0	0	
EVALUATE		2	269	258	2	4	0	1	5	9	--	--	--	
		1	11	34	1	2	0	0	5	10	--	--	--	
ADMINISTER		0	4	3	0		0	0			--	1	1	
		5	5	8	0		0	0			--	--	--	
DEVELOP		4	2	4	5	1		1	4	5	--	--	1	
		5	4	5	5	3		0	1	4	--	--	--	

DNR INVOLVEMENT:

CURRENT STATUS KEY:



top line-project complete

bottom line-project ongoing

EXTENSION SERVICE

The Extension Service is primarily a field operation. It provides assistance, and technical information at the local level. An Extension Specialist is stationed at each regional service center to promote and explain better resource use practices. The Extension Specialists keep abreast of all natural resources developments, and problems.

10,000 additional copies of "The Happy Crabber" brochure were produced and distributed in 1973.

Over 5,000 "Eel Pot" brochures were printed and distributed.

Other publications which were printed for free public distribution are as follows:

"A Visit to the Albert Powell Hatchery"--10,000 copies.

"A Marylander's Guide to Venomous Snakes and Snake-bite Treatment"--6,000 copies.

Reprint of revised "Directory to the Department of Natural Resources".

Extension Service "List of Publications".

Concluded the production of the motion picture the "Maryland Gobbler".

Prepared a Forest Service 20 minute color motion picture "The Forest and the Trees".

The film library loaned over 500 copies of films to the general public.

Conducted spring and fall turkey hunting clinics.

Continued to work with landowners and sportsmen to encourage more orderly hunter access to private lands.

Tax guides and tax fact sheets were prepared for the commercial fishermen. Public meetings were held throughout the tidewater area to inform and assist the watermen in new catch record reporting system.

Arranged and conducted tours of the fishing industry for foreign fishery representatives, schools and other interested groups.

PUBLIC INFORMATION SERVICES

The Public Information program is responsible for the rapid, accurate and complete dissemination of information to the public concerning the policies and activities of the Department of Natural Resources through news releases, television and radio broadcasts, brochures, newsletters and sponsorship of public events.

The official publication of the Department is the Maryland Conservationist. 50,000 copies are printed, sold and circulated annually.

200,000 booklets, papers and guides on sports fishing were issued; 2,300 citations to individuals participating in tidal and fresh water fishing tournaments were issued.

120,000 copies of Fish and Wildlife News are distributed annually.

There were 25,000 Maryland Wildlife resources maps distributed; 200,000 copies of Guide to Maryland Hunting; 20,000 copies of Homes and Shelters for Wildlife; and 150,000 publications describing State parks.

The Commercial Fisheries News, with a bi-monthly circulation of 13,000 copies, is supported on a 50-50 matching basis by federal funds.

Ten television spot announcements were produced and used by all UHF and VHF television stations in Maryland and Washington, D.C.

CAPITAL PROGRAMS ADMINISTRATION

This program is responsible for the land planning, acquisition, design, and construction activities of the Department of Natural Resources.

Design and Construction - Activity is responsible for planning, design, and construction projects for park, forest, wildlife and fishery areas. Preparation of master development plans for Department land areas is major function of this activity.

Shore Erosion Control - Activity is responsible for administering the Shore Erosion Control Construction Loan Fund, for providing engineering services to private property owners and local governments, and for maintaining shore erosion protection devices for State-owned properties.

Land and Property - Activity is responsible for coordinating the land acquisition program funded by the Outdoor Recreation Land Loan of 1969 (Program Open Space) with the Land Acquisition Division of the Department of General Services; preparing and up-dating take line maps of proposed acquisition areas for approval by the Secretary of Natural Resources; and maintaining a complete record as to the status of all tracts acquired and to be acquired.

Program Open Space - Responsible for the administration of approximately 19 million dollars annually of State and federal grants to Maryland's 24 major subdivisions and the Department of Natural Resources.

Waterway Improvement - Hydrographic Surveying is conducted to aid in the conservation and management of the water resources of the State. This includes:

Precise positioning, charting and determination of geographic positions of all natural oyster bars, private oyster leaseholds, oyster seed and shell plantings;

Determination and positioning of soft shell clamming bottoms;

Classification surveys for bottom characteristics;

Establishing and determining geodetic positions of shore control signals;

Establishing, positioning and maintaining regulatory buoys demarcating oyster, clamming and crabbing areas;

Surveying and measuring the lengths of all pound nets in the Chesapeake Bay and its tributaries and maintaining charts of all nets;

Locating and determining the position of duck blinds;

And ice breaking operations during the winter oyster harvest.

Dredging for waterway projects involving the dredging of channels and harbors is conducted.

The Waterway Grants activity is responsible for recreational development of the Chesapeake Bay with particular emphasis on projects and activities directly related to the general boating public.

Marine Operations conducts general waterway maintenance in channels, harbors, and areas that are not maintained by the U.S. Corps of Engineers.

NATURAL RESOURCES POLICE FORCE

The Natural Resources Police headquarters and communication center move to the Tawes State Office Building in Annapolis has provided for the consolidation of the Inland Enforcement, Marine Enforcement, Hunter Safety, Investigation Sections, Division Chiefs and the Superintendent of Natural Resources Police into three divisions: General Direction, Marine Division, and Inland Division.

General Direction - The new communications center has the capability of state-wide radio communication for the Inland Division and the entire Chesapeake Bay area for the Marine Division, 24 hours a day. In addition to regular police communication, a VHF/FM radio system was installed to allow the center to monitor radio distress calls from the boating public.

A grant was received from the U.S.C.G. under PL 92-75 for Boating Safety. This allowed for the purchase of additional and replacement equipment to be used for boating safety patrols in areas of high density recreational boating. Another benefit for the recreational boater was the initiation of a home study course on Basic Boating Safety.

The Aviation Section carried out many surveys for Water Resources, Wetlands, Land Acquisition, Fire Control, Fisheries and Wildlife Administrations. These surveys also included fish mortality counts and oil spills.

Law enforcement flights to check on illegal baiting of blinds were continuous during waterfowl season as were flights to apprehend deer jacklighters.

Ten search and rescue flights were made in actual and suspected drownings.

The Natural Resources Police Academy at Matapeake is now a fully accredited school of training, meeting and exceeding the training requirements set forth by the

Maryland Police Training Commission.

One class of five recruits received 644 hours of In-Class Training, plus five days of field training.

Seventy-four Natural Resources Police officers of the Marine Division received sixteen hours of In-Service Instructions pertaining to Game laws.

Ninety-one Marine Division officers received eighteen hours instruction on Environmental Protection laws.

Firearms training and pistol qualifications were met by 112 Marine Division officers.

Fifty-eight Natural Resources Police officers of the Inland Division received instruction in Natural Resources law.

Five men received five days of orientation to become the first group of Natural Resources Police Cadets.

The Academy facilities were used by several other State agencies.

Plans have been approved and a contract let for construction of a two story metal building with 15,700 square feet of floor space at the Matapeake Multi-use field Station.

This contract includes the rebuilding of the existing piers, a boat repair area, access road, electrical service and new sewer plant. The sewer plant will service both this facility and the adjacent Chesapeake Bay Hydraulic Model Complex now under construction by the Army Corp of Engineers.

Construction was completed on a 300 foot self support radio tower at this site.

Natural Resources Police Force--Marine Division consists of a 125-man force which includes personnel in Headquarters, Communications, Maintenance, Supply, Training Academy and Field Force Sections.

Units include 45 patrol boats (28' - 45'); 47 runabouts, 12 vehicles and 6 boat trailers. All patrol boats, vehicles, and runabouts are equipped with two-way radios. All patrol boats are equipped with depth finders, and seventeen have radar. Most have portable emergency pumps for fire-fighting and refloating sunken boats.

Radiological monitoring by trained personnel is conducted in conjunction with Civil Defense exercises throughout the State.

The Scuba Diving Section, consisting of eight officers, made 29 dives for underwater repairs to disabled boats. They aided in refloating sunken boats and recovery of lost items. Nine dives were made to assist other police agencies in search and recovery of murder victims, stolen vehicles, etc.

Maintenance and Supply Section processed 1,299 store requisitions; made 568 repairs to Marine Division officers' equipment, hauled and repaired patrol boats on 64 occasions.

141,754 inspections of boats were conducted for conservation and boating safety purposes.

There were 37,662 inspections made of Seafood Processing Houses and trucks carrying seafood cargo.

2,183 arrests, 1,554 warnings and 921 confiscations were made for violations of boating and seafood conservation laws.

186 boat accident investigations were processed involving 239 boats.

Recoveries were made of 68 stolen boats and 30 stolen motors.

1,240 man-hours were utilized in search and recovery of 33 drowning victims.

Assists were rendered to the boating public on 1,385 occasions, including delivery of emergency messages, first aid assistance, regatta patrols, tow in port of disabled vessels, removal of persons from water, search for overdue boats, fire-fighting, engine repairs, refloating sunken boats and pulling boats from aground.

There were 743 trips by patrol boats made for the State Department of Health and Mental Hygiene to obtain water and shellfish samples.

447 trips involving 4,483 man-hours were spent assisting other Departments and agencies of the County, State and Federal governments.

Steel hull patrol boats kept the harbors free of ice during the cold weather, making it possible for commercial watermen to operate.

To insure pleasure boating safety, weather and sea conditions were reported daily from all parts of the Chesapeake Bay during the boating season.

Daily patrols were maintained in all "Pollution Closed Seafood Areas".

Oyster taxes were collected and permits to export oysters were issued.

Personnel of the Marine Division were kept up to date on new laws, regulations and benefits through regularly scheduled supervisors' meetings at Headquarters, followed up by Regional meetings, including all personnel.

Natural Resources Police Force--Inland Division is comprised of sixty-three officers, one radio technician, and two secretaries.

For purposes of administration, the State has been divided into four regions: Western, Central, Southern and Eastern.

The Inland Division is responsible for the enforcement of all laws and regulations relating to both game and non-game species of wildlife including migratory birds and wild waterfowl; the laws and regulations relating to fish and fishing in the non-tidal waters of Maryland; enforcement of the boating regulations on the non-tidal waters, and enforcement of the litter laws. Division personnel also perform such enforcement assignments for other segments of the Department of Natural Resources as the Secretary directs.

In the first few months of operation the Investigation Section made three cases; two involving selling deer meat, and one involving a hunting guide. At present there are several cases under investigation. The defendants in the deer selling cases were found guilty with fines imposed that totaled over \$1,000.00. In the case of guiding without a license, the defendant elected to forfeit \$100.

During this fiscal year the Inland Division expanded the use of aircraft for wildlife law enforcement. We now have initiated night aircraft patrols. Aircraft, working in conjunction with ground mobile units have proven most effective.

The first venture into this type of operation resulted in a total of eight flights with approximately 50 hours of flying time resulting in apprehension of fifteen persons charged with using lights in night hunting (jacklighting), and the filing of twelve related charges against these suspects.

During the fiscal year, 2,835 complaints were logged, assigned to specific officers, and the complaints were resolved and concluded.

Officers... at their homes during the year.

Arrest records indicate that officers of the Inland Division made a total of 1,634 cases and an additional 16 juvenile cases were handled informally.

Warnings were issued to an additional 355 persons during the year.

Total fines imposed amounted to \$61,365.00.

From July 1, 1972, to May 15, 1973, when the responsibility for issuance of permits was taken over by the Wildlife and the Fisheries Administrations, the Inland Enforcement Division issued a total of 1,341 permits covering Fishing Lakes, Fish Breeders, Resident and Non-Resident Fur Dealers, Game Breeders, Possession permits, Regulated Shooting Areas, Dog Training areas, Taxidermists and Tanners, Scientific Collecting permits, Falconry permits and Commercial Hunting Guides permits.

During the year officers of the Inland Division were called upon to:

Assist State and local police officials in apprehension of suspects;

Assist Wildlife Law Enforcement Agencies in contiguous states in the apprehension and prosecution of Maryland residents who are sought for violations of game and fish laws in those jurisdictions;

Assist in the search for persons reported lost or missing;

Assist in the search and recovery of drowning victims;

Relay of emergency information to hunters, fishermen, boaters, campers, etc.;

Recover watercraft that had gone adrift;

Render assistance to boaters;

Render assistance to stranded motorists and at the scenes of automobile accidents;

Patrol and provide traffic control for boat regattas and boat races.

The incidence of assaults on officers of the Inland Division has caused concern; 10 per cent of the field force was subjected to assaults during fiscal 1973. In two of the incidents officers were fired upon. In one case, the officer's patrol car was fired on and hit. In the second, the missile struck the ground near the officer's feet while he was standing next to his patrol car.

In fiscal 1973 there were 520 man-days applied to training. The following courses were contained in the curriculum:

- Natural Resources Law - 375 man-days
- Narcotics and Dangerous Drugs - 40 man-days
- Hunter Safety - 18 man-days
- First-Aid - 12 man-days
- Criminal Investigation - 24 man-days
- Maryland Police Training Commission
 - Instructor's course - 23 man-days
- Pistol Qualification - 30 man-days

In fiscal 1973 the Captains and Sergeants of the Inland Division spent about 20 man-days instructing other State and County Enforcement Divisions in Natural Resources Laws.

Project Transition, a cooperative program with the United States Department of Defense, gives military personnel about to return to civilian life an opportunity

to receive on-the-job training in law enforcement and fish and wildlife management. Under Project Transition, seven trainees have completed the six week training course.

The following is a breakdown by projects of the man-days expended by the Officers of the Inland Division:

Protection and Enforcement	9,621.0 man-days	65.9%
Programming & Coordination	2,401.0 man-days	16.4%
Maintenance	1,356.5 man-days	9.3%
Information & Extension	998.0 man-days	6.8%
<u>Investigation</u>	<u>234.5 man-days</u>	<u>1.6%</u>
Totals	14,611.0 man-days	100.0%

Firearms and Hunter Safety Training Program - A total of 14,517 Marylanders took part in the program. A record 9,949 persons were certified as Maryland Safe Hunters and 4,568 persons attended firearms safety lecture-demonstrations during the past year.

MARYLAND ENVIRONMENTAL SERVICE

The Maryland Environmental Service is a public utility enterprise created to plan, develop and finance water supply, waste water treatment and solid waste disposal programs for the cities, towns, counties, regions and industries of Maryland.

Solid Wastes - MES is the steward of State funds involved in the construction of Baltimore City's Pyrolysis Plant and maintains continuous liaison of the project. In cooperation with Baltimore County, the Service is planning a solid waste reclamation system to be located at the Texas Landfill Site. The design, being developed in conjunction with Teledyne National, calls for a facility capable of separating and recycling.

A solid waste recycling project with a different approach is being conducted in cooperation with Montgomery County. A citizen-based effort for collecting, segregating and recycling metals, glass and papers will service the county. Although this concept has been marginally successful as a volunteer effort, this particular project will be the first attempt in the country to conduct an operation on a full-scale basis supervised by professional personnel.

By contract with the Potomac Electric Power Company, MES is designing a flyash landfill for the Chalk Point Power Station in Prince George's County. MES will operate the facility.

Sewage Sludge - On March 30, 1973, the first load of sludge from the Blue Plains Sewage Treatment Plant was delivered to Beltsville, where today, in cooperation with the Agriculture Research Service, MES is operating the largest sewage sludge composting program in the nation. This program operates under controlled environmental standards and does not require large amounts of energy. The composted product is being used as a soil conditioner.

MES is providing assistance to the counties in preparing their solid waste management plans. There has been

continuous coordination with local governments and MES sponsorship of regional symposia.

River Basin Planning - With the passage of the 1972 Amendments to the Federal Water Pollution Control Act (P.L. 92-500), the federal government greatly increased the scope and complexity of river basin wastewater facilities planning. Under the leadership of MES and in cooperation with other State agencies, the Continuing Planning Process document was prepared. Now accepted by the EPA, this procedure provides Maryland with an effective tool to guide the facilities planning process.

Draft plans have been prepared for the Patapsco-Back River basin (including Baltimore Harbor), the Metropolitan Potomac, and the Patuxent River Basins.

In the Little Gunpowder River valley, sewerage changes recommended by MES and adopted by Harford County will save \$4.2 million dollars of public capital over the next more expensive alternative, and will save \$1.0 million considering all capital and operating costs.

The Patuxent River Basin Plan contains regional systems for the Upper and Central Patuxent Wastewater management areas at long-term savings of \$9.1 million and \$4.5 million.

MES Technical Services has provided assistance to local governments in advance of river-basin planning. This has been done in Cecil County, Hagerstown, Swan Point-Cobb Island, and in other areas.

MES Regional Engineers provide technical advice and assistance throughout the State. The Industrial By-Product Brokerage Service is obtaining listings from industry and matching clients so that one industry's waste can become another's raw material. Regional Engineers are helping the seafood industry solve wastewater problems, assisting in highway and school construction projects requiring waste disposal services, and maintaining good working relationships with local government and private concerns, and feeding back advice on local problems to the planning process.

The Freedom District, Carroll County sewage treatment plant will be constructed and operated by MES and will serve the citizens of Carroll County and two State Institutions - Springfield and Henryton State Hospitals.

Technical assistance is being given to the City of Bowie in designing and constructing improvements in their wastewater treatment plant.

As the energy crises continues to grow, the Waste Oil Recovery and Reuse Program initiated by MES nearly three years ago is providing timely information on amounts, characteristics and location of the approximately 18 million gallons of waste oil produced annually in Maryland.

During this year MES operated 19 wastewater treatment facilities and 6 water treatment facilities throughout the State. A continual training program was conducted for the operators and a series of new classifications has provided the mechanism for excellent career opportunities as wastewater operators.

WATER RESOURCES ADMINISTRATION

The Water Resources Administration is concerned with the protection, enhancement, and management of the water resources of the State.

Enforcement - This program is responsible for the inspection, investigation and enforcement activities of the Administration, and encompasses Watershed Control and Water Quality Control.

The Watershed Control activity applies prevention-oriented enforcement procedures to those activities directly related to the geologic and hydrologic processes occurring in watershed areas. This includes inspections of proposed and actual changes in the watersheds. A drill rig is used for evaluating land disposal sites for liquid and solid wastes.

Inspections for water (floodplain) permits	600
Inspections for wetlands licenses	600
Inspections for sediment control plans	1,300
Inspections for small ponds permits	25
Complaints received and administered	250
Enforcement actions taken	250
Sites evaluated with drill rig	50

The Water Quality Control activity is responsible for enforcement of the water quality control provisions of Article 96A of the Code relating to industries and other point source discharges. Activity personnel inspect and monitor waste discharges, and institute enforcement actions against industrial polluters, mining operations, agricultural polluters and vessels found causing pollution. Approximately 1,200 point sources of discharge (industrial, mining, agricultural) are under surveillance by Water Quality Control engineers and technicians. Activities also include the investigation of spills of oil and other hazardous materials.

During fiscal year 1973, 329 administrative enforcement proceedings were instituted for violation of water quality laws and/or regulations.

This activity is also responsible for the administration of the Industrial Wastewater Works Operator Training and Certification Program.

Permits and Certification - This program is responsible for water resources development activities and encompasses two primary work projects: General Permits and Water Quality Permits.

General Permits issues wetlands permits for the regulation of dredging and filling in tidal wetlands, including the investigation and public hearing of works proposed in both State and private wetlands;

Certifies impact of proposed projects involving dredging, filling, the placement of works in waterways, and the disposal of spoils;

Issues permits involving surface water use, including appropriations, dam and reservoir construction and maintenance, construction in waterways and floodplains, and design and construction of small ponds;

Issues permits involving groundwater use, including appropriations and construction of water wells.

Wetlands Management:

Board of Public Works licenses	250
Department of Natural Resources permits	75
DNR notifications/approvals	75
Advisory service projects	75

Water Quality Certification:

Wetlands projects	250
Other Corps of Engineers permit projects	550

Groundwater Management:

Well permits	9,500
Groundwater appropriation permits	300
Appropriation permit review/revision	1,500

Surface Water Management:

Small ponds	200
Dams and reservoirs	10
Surface water appropriation permits	25
Construction in waterway	80
Review and advisory service projects	75

The Water Quality Permits activity is responsible for: (1) issuing waste discharge permits for 1,500 industrial discharges and several thousand discharges from active mines and agricultural sources. This involves evaluation of discharge on receiving water, evaluation of technology available for treating the particular type of waste or reducing it in the production stage, consideration of special factors (e.g., age and size of plant), preparation of permit, advertising and holding public hearing, and revision of permit as required, and (2) licensing of all persons engaged in transferring, storing, treating, or disposing of oil.

During fiscal year 1973, the first year of the activity, 250 permits were issued.

Technical Services - Provides technical support services to the enforcement and permits and certification programs, and encompasses four primary work projects: Laboratory Services, Water Quality Services, Surface Water Services, and Groundwater Services.

Laboratory Services is responsible for chemical, biological, and physical analysis. Present laboratory facilities include the main laboratory in Annapolis and a regional laboratory in Cumberland. A laboratory aboard the vessel "Monitor" is used for immediate analysis of certain parameters. Two mobile laboratory trailers are also maintained for immediate analysis in the field. There were 43,459 analyses performed in fiscal year 1973.

Water Quality Services is responsible for technical support including surveys and investigations to determine water quality conditions and describe hydrologic features;

The Conowingo Dam Study is in response to an agreement between the State and the Philadelphia Electric Power Company.

Land Acquisition - The program obtains several suitable sites for the construction of power plants in the event a utility-owned site is found unsuitable during environmental evaluations.

MARYLAND GEOLOGICAL SURVEY

The Maryland Geological Survey is responsible for conducting topographic, geologic, hydrological and geophysical surveys and applying the data obtained from this research to land use problems. In addition, the Survey regulates oil and gas well drilling, supervises the activities of the Bureau of Mines, Land Reclamation Committee and the Division of Archeology.

Legislation

Maryland became a signatory of the Interstate Mining Compact.

A draft of a proposed Maryland Surface Mining Act was prepared and submitted to the Legislative Council.

Land Reclamation Committee - Bureau of Mines

Strip mining on State land (Savage River State Forest) was stopped on July 1, 1973. Subsequently, Buffalo Coal Company was allowed to complete augering and stripping on land already disturbed as of June 30, 1973.

The Site Evaluation Committee spent 23 days in on-site investigations of permit applications.

A "Guidelines Manual for Surface Coal Mine Operators" was prepared.

Publications

Sales: 1973 - \$24,840

Reports published:

Bulletin 31. Geohydrology of channel-fill deposits near Salisbury, Maryland.

Reports of Investigations 19. Hydrogeology of the carbonate rocks, Frederick and Hagerstown Valleys, Maryland.

Information Circular 13. Seismic Evidence for high angle reverse faulting in the Coastal Plain of Maryland, Prince George's and Charles County, Maryland.

Basic Data Report 6. Worcester County, groundwater information.

User's Guide for the Artesian Aquifers of the Maryland Coastal Plain.

Miocene Text was reprinted.

List of Publications was revised.

County topographic maps revised and reprinted:

Montgomery

Gazetteer Map of Maryland

Anne Arundel, Harford, Queen Annes, Frederick

Hydrogeology and Hydrology

In FY '73 studies were being conducted on the hydrogeology of Triassic rocks in the Piedmont, groundwater resources in the Ocean City and Worcester County area, and aquifer modelling and research on the Aquia and Magothy aquifers in the Coastal Plain of Southern Maryland.

The stream data network was partially damaged by Tropical Storm Agnes. As a consequence, it was necessary to replace two stream gaging stations, rebuild several flow control structures, and repair or replace over 15 stream level recorders. The network is now fully operational.

Environmental Geology

This program is responsible for geologic research and mapping, topographic map revision, environmental geology, and mineral resource investigations. These studies provide the basic framework for determination of the mineral and water resources of the State and generate the geologic data necessary for wise land use decisions.

Geologic mapping was completed in the Cockeysville and Hampstead Quadrangles and was well underway in Middle River, Baltimore East, Baltimore West, Ellicott City and Reisterstown Quadrangles. Land-form mapping of one half of Baltimore County was completed, with the remainder to be finished in FY '74. A mineral resource map of Baltimore County was compiled and will be published in FY '74.

Geologic and environmental geologic mapping was begun in northern Anne Arundel County.

Compilation of the geologic map of Union Bridge Quadrangle was completed and geologic investigation extended into adjacent parts of Frederick County.

A geologic map and report on the geology of the Blue Ridge Summit and Catoclin Furnace Quadrangles was completed.

Estimates on the remaining coal reserves on State lands were calculated and areas of potential slide areas in strip mined and deep mined areas were delineated.

Coastal and Estuarine Geology

The program deals with basic and applied research into the geologic factors that influence erosion of the shoreline and deposition in the nearshore environment. During the year, Maryland Geological Survey:

Measured seasonal rates of shoreline change at 210 sites;

Established 17 additional reference sites;

Documented seasonal rates of shoreline changes by photography;

Began a special report on the islands of the Chesapeake Bay;

Analyzed beach profile data collected by the U.S. Coastal Engineering Research Center by computerization methods;

And participated in the ERTS-1 program (NASA).

Division of Archeology

The Division of Archeology continued its program of salvage and test excavation at significant prehistoric archeological sites threatened with destruction. There

an increased demand for the preparation and review of environmental impact statements.

A report was completed on excavations at a prehistoric Indian site at Friendsville in Garrett County.

The Division cooperated in archeological survey and excavation work sponsored by other agencies including Artisans' House in Annapolis (Maryland Historical Trust, Department of Economic and Community Development), Point Lookout State Park (Maryland Park Service), and the reputed site of the eighteenth century Hungerford Tavern in Rockville (Montgomery County Historical Society and the Archeological Society of Maryland).

Four permits for archeological investigations on State-owned lands were processed. Maintenance of site records, photograph files, and collections was continued, and special indexes of artifact types and shell middens in Maryland were developed.

FISHERIES ADMINISTRATION

Through its Fisheries Administration, the Department of Natural Resources is responsible for maintaining abundant populations of shell and finfish through biologically sound management practices; and for providing commercial and recreational opportunities through the controlled harvest of commercial and game species.

Soft shell clam landings dropped to 14,106 bushels in 1973 due to the effects of Tropical Storm Agnes. Bottom studies were conducted to determine effects of the storm and spat counts and other studies conducted.

Oyster propagation projects included the planting of fresh shell stock, seed and the monitoring of spat.

Maryland waters were stocked with 322,030 warm water finfish and 403,000 trout.

Four trout stream surveys were conducted.

Forty-seven ponds in all geographic areas of the state were checked for habitat.

Forty-four fish mortalities were investigated and analyzed.

A creel census was conducted on Deep Creek Lake.

Ten reservoir reproduction checks were completed.

Seven hundred and sixty-five striped bass, weighing over 15 pounds were tagged to determine harvest information for trophy fish.

The Administration completed a crab survey and published a report entitled "The 1972 Maryland Blue Crab Production and Distribution to Markets."

Also conducted were creel censuses to obtain information about activities and catch of sport crabbers.

Field Surveys were conducted on 134 streams in 8 river drainages to assess their importance to anadromous fish species. Spawning and nursery areas were delineated for protection.

WILDLIFE ADMINISTRATION

Management activities of the Wildlife Administration are concerned with providing public recreational opportunities by evaluating public demands, wildlife population and harvest parameters, environmental factors, controlled harvest of game species and by applying management techniques to insure sustained production for use.

Forest Wildlife Management, Upland Wildlife Management, Waterfowl Management, Furbearer Management, Land Management and Technical Services are the five primary work projects of the Wildlife Administration. Program personnel are responsible for:

Planning, conducting and evaluating all wildlife surveys;

Developing and applying management techniques;

Preparing annual status reports;

Developing recommendations for regulating public use;

Introducing and restoring wildlife species;

Developing, operating, and maintaining all State-owned and private cooperative Wildlife Management Areas (262,000 acres);

Providing technical advisory services to private landowners and other interested parties for the enhancement of property and relief from nuisance species;

And assisting in the preparation of environmental impact statements.

Coordination of project activities and supervision of land management activities in the field is the responsibility of regional wildlife managers.

A survey of licensed hunters is conducted annually to provide necessary information relative to the number of hunters, effort expended, and total harvest by species on a county basis.

The most recent data (1970-71 season) is summarized as follows:

	<u>Number of Hunters</u>	<u>Hunter Effort Man Days</u>	<u>Total Harvest</u>
Upland Wildlife (7 species)	320,248	2,051,279	1,905,427
Forest Wildlife (4 species)	241,768	1,221,173	885,257
Waterfowl (24 species)	68,466	456,706	400,631
Furbearers (3 species)	10,100	150,590	304,194
Non-Game (1 species)	16,825	143,530	276,214

PARK SERVICE

Thirty-five State park areas, totaling 44,500 acres, are operational and provide a wide variety of interests from such day-use activities as picnicking, hiking, fishing, swimming, nature study and sightseeing to the overnight activities of camping and cabin occupancy. Year-round activities are enjoyed in some State parks where snowmobiling, cross-country skiing and winter camping are offered for more extended use and enjoyment of these unique areas.

During the fiscal year nearly 7,000,000 people visited the thirty State parks maintaining attendance records. This figure is considerable lower than the approximate 9,000,000 visitors in FY '72. The main reason for the drop in visitation was the loss of facilities and areas at Patapsco and other parks as the result of Tropical Storm Agnes in June of 1972. Plans are currently being formulated to restore facilities in these areas so they will again be available to provide recreational opportunities and services to the public.

Interpretive programs which consist of nature and historic walks, exhibits, audio-visual programs, labeled nature trails, brochures, publications and other facilities, help our visitors enjoy and understand the natural and cultural resources of the State parks.

These programs, offered in twenty-two parks, were conducted by sixteen naturalists and historians. They were attended by 175,000 visitors; an increase of 25,000 over 1972.

The most popular activities were self guided nature and historic trails, campfire programs, canoe trips, tours of historic mills and buildings. Special Revolutionary War performances were also extremely popular.

Multi-use State Parks

Cunningham Falls - Frederick County

Greenbrier - Washington County

Gunpowder - Harford and Baltimore Counties

Patapsco - Baltimore, Anne Arundel, Howard and Carroll Counties

Multi-use State Parks cont

Seneca Creek - Montgomery County
Shad Landing - Worcester County
Susquehanna - Harford County

General Recreation Parks

Big Run - Garrett County
Calvert Cliffs - Calvert County
Cedarville - Charles and Prince George's Counties
Dans Mountain - Allegany County
Gambrill - Frederick County
Herrington Manor - Garrett County
Martinak - Caroline County
Milburn Landing - Worcester County
New Germany - Garrett County
Rocks - Harford County
Swallow Falls - Garrett County

Waterfront Parks

Assateague - Worcester County
Deep Creek Lake - Garrett County
Elk Neck - Cecil County
Janes Island - Somerset County
Matapeake - Queen Anne's County
Point Lookout - St. Mary's County
Sandy Point - Anne Arundel County

Natural Environment Areas

Severn Run - Anne Arundel County
Soldiers Delight - Baltimore County

Historic or Scenic Parks

Casselman Bridge - Garrett County
Fort Frederick - Washington County
Fort Tonoloway - Washington County
Gathland - Washington County
General Smallwood - Charles County
Washington Monument - Washington County
Wye Oak - Queen Anne's County

Roadside Picnic Area - Jonas Green - Anne Arundel County

FOREST SERVICE

The Forest Service strengthened its State Forest and urban-community forestry programs during Fiscal Year 73.

Multiple use plans for the State Forests are being prepared. State forest wildlands and trails for assorted recreation uses received much attention during the year.

More attention is being given to trees and woodlots in the urban-community setting by providing planning and tree management services to communities and lot owners.

Plans are being made to participate in the American Bicentennial celebration in 1976.

The Forest Service joined the American Forestry Association in a commitment to plant 96 million trees in the next 10 years.

Fire Control is responsible for the protection of 2,855,000 acres of woodland in Maryland. Due primarily to the generous rainfall during the normally critical fall and spring fire seasons, Fire Control experienced a mild year. A total of 294 forest fires burned 647 acres of woodland. There were also over 500 grass and brush fires which required suppression.

Two new large pieces of equipment, a Unimog and a Bombardier will greatly assist with the hazard reduction program.

The fire prevention program continues to expand and has proven effective. In addition to many local contacts, Smokey Bear has appeared on Romper Room and other TV shows. Since it was established in the spring of 1973, over 2,000 young Marylanders have joined the Junior Forest Ranger program.

Community Services - 2,135 permits were issued to persons and utility companies to do tree care work. Forty-eight candidates were examined for qualifications to do tree work. 1,810 property owners were advised on the care and planting of shade trees.

The 1973 edition of "Big Tree Champions of Maryland" was completed and placed on sale.

Over 3,600 certified Wye Oak seedlings were sold.

Approximately 4,000,000 trees were distributed for reforestation purposes from the Buckingham Forest Nursery. The major species produced are loblolly pine, white pine, red pine, Scotch pine and the spruces.

Approximately 2,400 roadside trees were distributed to municipalities and public agencies to be planted on public right-of-ways or land owned by the State of Maryland. Continuous production of approximately 3,000 to 4,000 trees is anticipated.

There are a number of seed orchards in different parts of the State: (1) A loblolly pine seed orchard on the Pocomoke Forest, (2) white and red pine areas on one of the western forests, (3) white pine clonal orchard, loblolly pine, larch, and a white pine seed production area on the nursery property. These plantings will provide seed for trees having superior characteristics.

More citizens are planting trees for sound and sight barriers, aesthetics and wildlife food and cover.

Forest Products Utilization - A research demonstration log storage yard has been set up in the Pocomoke State Forest. Logs will be stored for up to two years in an effort to gain sufficient knowledge of log storage systems. Storage could make it possible for industry to log at opportune times of the year and insure a continuous supply of raw materials. Valuable cooperation and assistance was given by U.S. Forest Service, Insect and Disease Laboratory, Gulfport, Mississippi, and local loggers and primary processors.

Southern Pine Beetle - The epidemic has subsided because of increased harvesting and a change in weather conditions.

Gypsy moth - Four counties, Cecil, Kent, Harford and a portion of Washington, are under quarantine. The Department of Agriculture, in cooperation with the Maryland Forest Service, is maintaining a continued surveillance. If it progresses here as it has in other states, the oak-hickory forests of Maryland could be placed under extreme pressure.

PL 566 Watersheds - Approximately 62 woodland owners were assisted resulting in 472 acres put under adequate treatment and 15 forest management plans being prepared.

Potomac Flood Control Project - In excess of 764 man days of assistance were provided, servicing approximately 288 requests. 142 forest management plans were prepared for 2,644 acres and in excess of 1,600 acres received cultural treatment.

Statewide, Foresters of the Service prepared detailed management plans for 244 landowners on 13,667 acres and marked 7½ million board feet of timber for harvesting on 82 ownerships.

Planning for multiple uses - During FY '73, the Maryland Forest Service continued to formulate comprehensive planning for Maryland's one hundred and twenty thousand acres of State Forest for the benefit and enjoyment of all Marylanders. Increased emphasis was given to many forms of forest recreation and to wildlife habitat improvement; development of recreational trails for hiking, skiing and snowmobiling was expanded. Forest wildlife habitat conditions were improved by the treatment of almost 1,800 forest acres.

Sales - Forest product sales mostly in the form of standing sawtimber or pulpwood, was second only in volume and value to record year 1971. This year's production was an all-time high for the State-owned hardwood forests of Western Maryland. Much of this land was acquired by the State as devastated, cut-over land; after thirty-five years of State ownership, protection and management, it is now largely rehabilitated, yielding once again values in wood, recreation, water and wildlife.

Acquisition - State Forest land acquisition continues at a slow pace, with the purchase of some 670 acres this year. It is hoped this program can be expedited in the near future before rising prices preclude needed acquisition.

By action of the General Assembly, strip mining for coal on State lands is now prohibited.

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