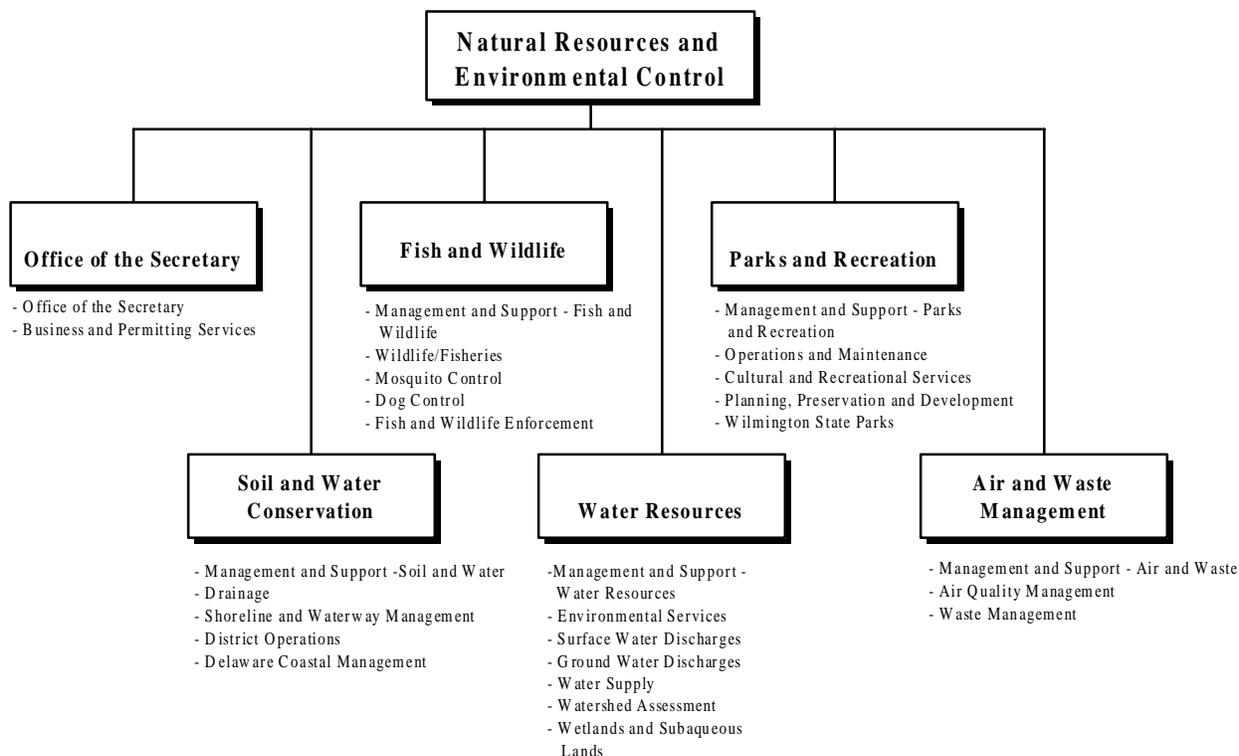


NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00



MISSION

The mission of the Department of Natural Resources and Environmental Control is to ensure the wise management, conservation, and enhancement of the state's natural resources, protect public health and the environment, provide quality outdoor recreation, improve the quality of life, and educate the public on historic, cultural, and natural resource use, requirements, and issues.

KEY OBJECTIVES

- **Promote Health and Safety**

By maintaining and improving the quality of air, land, and water resources, by managing populations of mosquitoes and other pests, and by cleaning up spills involving hazardous chemicals, the department significantly enhances the health and well being of Delaware's people, wildlife, and plants. The department recognizes that the health of Delaware's economy is very much dependent on the health of its natural resources. Without a clean and adequate supply of air,

land, and water resources, many of Delaware's existing businesses cannot thrive nor can certain new businesses be accommodated. The department promotes public health and safety and helps to ensure a healthy environment through education, outreach, planning, and regulatory programs.

- **Conserve Plant and Animal Resources**

This goal is to conserve and enhance plant and animal communities, through protection and management of species populations and their habitats. This effort involves maintenance of biodiversity, harvest allocation of species populations, protection of ecological functions and processes, and performing educational outreach.

- **Promote and Provide Recreational Opportunities**

Recreational opportunities that allow Delawareans to enjoy natural resources and open spaces, contribute to and enhance our mental and physical health and our quality of life. The department strives to provide recreational opportunities while balancing resource protection with resource use. A diverse system of state parks, wildlife areas and greenways that protects natural resources and provides recreational and environmental educational opportunities is crucial.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Broaden the Commitment to Environmental Protection and Resource Conservation

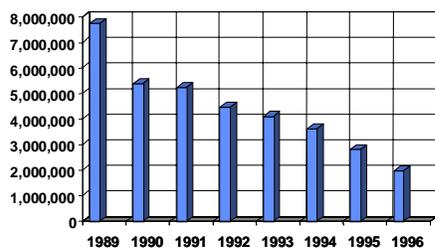
Economic, environmental, and social problems cannot be addressed in isolation. The department works in partnership with others to develop strategies that integrate economic development, environmental quality, and social policy making with broad public involvement. This involves a systematic approach that reflects shared goals and takes into account the linkages of the environment, both internally (cross media) and externally with society. The department strives to create a widely held ethic of stewardship that strongly encourages individuals, institutions, corporations and local governments to take full responsibility for the economic, environmental, and social consequences of their actions. Creating this ethic will depend in part on DNREC's ability to enhance public awareness of environmental issues and people's personal responsibility in affecting environmental change through public information and educational efforts targeting adults and student populations.

PRIORITIES

Moving the department to community-based environmental protection. Efforts such as Whole Basin Management, TMDLs and even wildlife management issues have made it clear that we need to focus more attention and resources toward engaging citizens on environmental issues within the context of their communities. To that end the department will be working on a strategy for the external integration of the goals and objectives of the strategic plan and developing and implementing community-based communication strategies.

Toxic Chemical Releases

Air, Water, Land, Off-Site --in millions of pounds

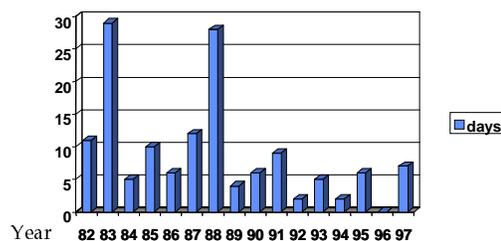


Does not include data on delisted chemicals or chemicals added or modified from 1992 to 1996
Source: 1996 Delaware Toxic Release Inventory Report

Improving the basis for decision making. The department continues to collect a wealth of information

about the environment. The challenge remains to seek methods to better integrate this information to make it more useful to a broad range of technical professions as well as the public. Part of this effort involves using this data to assess the risk to citizens from environmental problems.

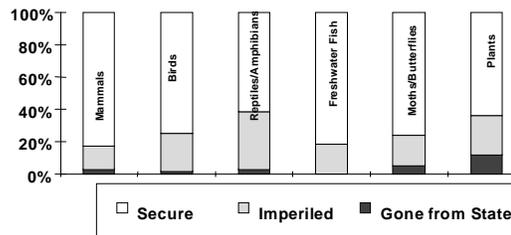
NUMBER OF DAYS DELAWARE EXCEEDED THE OZONE STANDARD



Source: 1997 Annual Air Quality Report

Improving our stewardship of land resources. Most of the environmental challenges stem from the various – and often harmful – uses of the land. One of the tasks is to improve the ability to conduct assessments of the impacts associated with sprawl and share that information with land use decision-makers and citizens. The successes of managing state lands must be also shared with other land managers around the State.

NATIVE PLANTS AND WILDLIFE

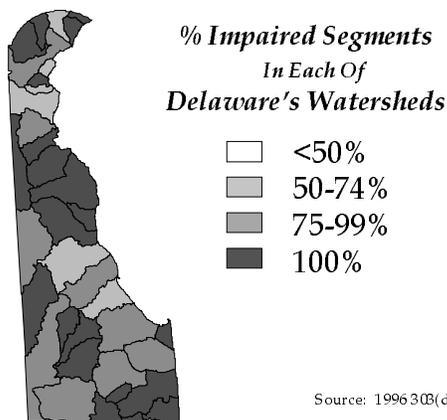


Repairing the State's ecological infrastructure. This theme cuts to the most fundamental mission. Many of the programs are aimed at making improvements to the air and water quality and the land-based resources that provide habitat for fish and wildlife populations. The department will continue to invest in repairing impaired waterways through the TMDL and Whole Basin Management programs, preserving and restoring

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

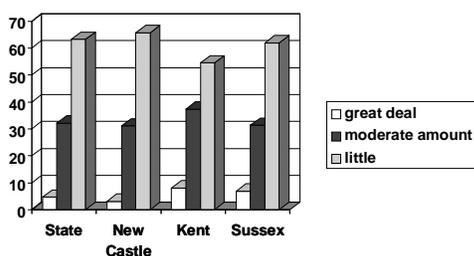
habitat, and reducing sources of pollution such as runoff from the lands.



Source: 1996 303(d) List

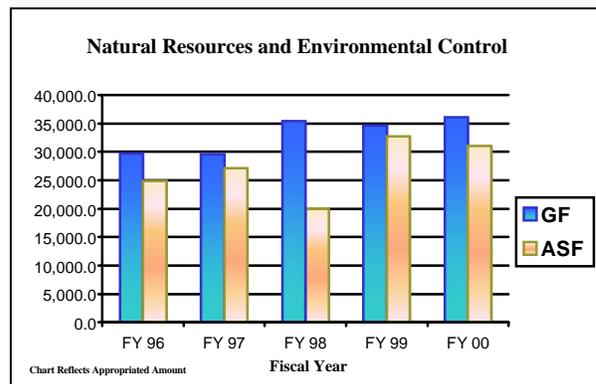
Improving department-wide operations. In order to continue building on past successes in managing the environment, the department must reexamine the internal structure and support for the department's employees. Looking throughout the agency for other opportunities to apply similar models that will enhance the ability to leverage financial and human resources within the agency, from the private sector and federal agencies.

Would you say you know a great deal, moderate amount or little about the activity of DNREC and its programs?



Source: Public Perceptions and Priorities Toward Delaware's Environment -- University of Delaware Center for Applied Demography and Survey Research

Protecting Public Health and Safety. The protection of public health is perhaps Department of Natural Resources and Environmental Control (DNREC) most fundamental priority. The department is targeting efforts toward avoiding the generation of the pollutants and substances that have the potential to negatively impact the public health. Where avoidance is not possible, the department seeks to reduce exposure and mitigate impacts on human health and the environment.



BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	35,422.8	34,699.0	36,058.8
ASF	19,932.3	32,763.8	31,010.1
TOTAL	55,355.1	67,462.8	67,068.9

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	339.2	368.2	370.2
ASF	265.0	267.4	270.4
NSF	138.8	137.4	139.4
TOTAL	743.0	773.0	780.0

FY 2000 BUDGET HIGHLIGHTS

OPERATING BUDGET:

- ◆ Recommend enhancements of \$245.3 for supplies and materials and contractual services, and \$59.5 in personnel costs to convert 2.0 vacant NSF FTEs Environmental Scientists to General Funds. These positions and funds are appropriated for the Whole Basin Management and Total Maximum Daily Load programs.
- ◆ Recommend enhancement of \$250.0 for the competency based pay program affecting Fish and Wildlife Agents, Environmental Protection Officers, and Park Rangers.
- ◆ Recommend one-time funding in the Budget Office's Development Fund for the Coastal Zone Indicators and Data Integration projects.
- ◆ Recommend one-time funding of \$50.0 in the Budget Office's Contingency for the Wildlife Damage Control program in the Division of Fish and Wildlife.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- ◆ Recommend enhancement of \$33.2 ASF for personnel costs and 1.0 ASF FTE Facility Manager in the Division of Parks and Recreation.
- ◆ Recommend one-time funding of \$25.0 in the Budget Office's Contingency for a new tractor and mowing equipment in the Division of Parks and Recreation.
- ◆ Recommend enhancement of \$71.0 for the Sand Bypass System in the Division of Soil and Water Conservation.
- ◆ Recommend enhancement of \$30.0 ASF for personnel costs and 1.0 ASF FTE Administrative Assistant in the Division of Soil and Water Conservation.
- ◆ Recommend enhancement of \$130.0 for contractual services in the Division of Soil and Water Conservation to hire additional nutrient/crop advisors.

CAPITAL BUDGET:

- ◆ Recommend \$2,345.0 for the conservation cost sharing program which provides incentives to landowners or users to support the design and installation of Best Management Practices that will protect the state's natural resources and water supplies by preventing urban and agricultural non-point source pollutants from reaching surface and subsurface waters, as well as protect important farmland soils from excessive erosion and provide wildlife habitat.
- ◆ Recommend \$1,250.0 to address a backlog of deferred park rehabilitation projects.
- ◆ Recommend \$600.0 to continue the tax/public ditch program.
- ◆ Recommend \$1,000.0 to continue the beach preservation program.
- ◆ Recommend \$1,000.0 to address critical restorations and repairs at Fort Delaware State Park and for those parks located within the city of Wilmington that are managed by the Division of Parks and Recreation.

OFFICE OF THE SECRETARY

40-01-00

MISSION

To oversee the development and implementation of state environmental, natural resource and recreational policies and programs; promote employee productivity through technology and training; manage the department's financial and human resources; promote quality and continuous improvement of the programs; assist other agencies in the promotion of environmentally sound, economic development; and coordinate policy among the department's divisions.

KEY OBJECTIVES

- Complete the first full rotation of the management cycle for all basins within the State by the year 2004.
- Integrate new and existing databases and increase the capacity of a shared information management environment by 80 percent by 2008.
- Ensure public access to 50 percent of its public information via electronic means by 2005.
- Implement a means to effectively collect and manage the information that its partners require in order to manage for environmental results by 2005.
- Establish baseline data to gauge people's individual behaviors in affecting the environment by 2000. This will be accomplished through conducting public surveys and/or researching similar national or regional surveys.
- Increase the public's understanding of the agency and its activities by 25 percent (over results from 1997 survey) by 2008.
- Expand the State Revolving Fund Expanded Use Program annually, to include new non-point source opportunities, to include brown fields, stream bank protection, and poultry manure composting.
- Reduce the rate of private, undeveloped rural lands (Greenfields) conversions by 25 percent (of the 1995 rate) by the year 2000.
- By 2002, obtain commitments to incorporating specific pollution prevention and environmental strategies from industry and businesses,

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

government, citizens, environmental organizations, and the communications media.

- Ensure that 75 percent of facilities inspected annually are generally compliant with air quality regulations at time of inspection.

BACKGROUND AND ACCOMPLISHMENTS

The department's Whole Basin Management approach, established in 1995, continues to serve as one of the most successful efforts initiated under the current Administration. This multi-disciplinary, ecosystem-based approach has reinvigorated staff at all levels because it permits employees to operate as a focused unit on issues of mutual interest and concern. Whole Basin Management has created an excellent cross-training environment that provides for increased pride and productivity by staff throughout the department. Whole Basin is also responsible for numerous technological strides with the development of a contaminated site-listing database and a host of GIS data layers. This approach maximizes the effectiveness of staff to achieve environmental results through comprehensive ecosystem management. Positive outcomes have included: a comprehensive preliminary assessment of the Piedmont Basin; a comprehensive project funding review process enabling the department to strategically fund projects tied to ecosystem management; a framework to settle the TMDL lawsuit; and an efficient and coordinated context for moving the TMDL process forward, and for developing stakeholder participation in the efforts to achieve water quality standards.

The Business and Permitting Services Office (BPS) provides non-regulatory assistance functions for businesses and permittees within Delaware. The office is designed around three basic program areas: pollution prevention, permitting assistance and the Clean Air Act Ombudsman. Through the Clean Air Act Ombudsman, a closer working relationship has been developed between the regulated community and DNREC by increasing the quality and quantity of outreach and compliance assistance programs. A Penalty Mitigation Policy was developed as a tool to help businesses achieve compliance through voluntary reporting without fear of enforcement actions being taken against them. BPS staff has also continued oversight of implementation of the permitting reform effort in DNREC that has completed over 90 percent of the original recommendations. A total of \$650,000 has been made available for Delaware industries through the

U.S. Department of Energy National Industrial Competitiveness through Energy, Environment, Economics (NICE³) grant program. BPS staff has completed the first year implementation of a five-year department-wide Pollution Prevention Strategy to further integrate pollution prevention into all DNREC programs, industry, commercial businesses, government, and general public.

The Human Resources Office has prepared a department-wide Human Resources Workforce Plan. Within this plan is a department-wide Recruitment Plan which will facilitate effective and efficient recruitment to meet the workforce demands of the department over a three-year period. As a complement to the Workforce Plan, the Human Resources Office is conducting a needs assessment to update the departmental Training Plan. This assessment will also serve as an individual employee development plan which can be used to provide direction and define and enhance work skills for all employees.

The Office of Information and Education is responsible for coordinating many of DNREC's outreach and educational efforts. Among the major initiatives undertaken last year was the development of "the Observer," a semi-annual newspaper circulated to 30,000 hunters, fishermen and boaters in the state, maintenance and enhancements to the department's Web page which has seen increased participation to nearly 3000 visits monthly. The office also produced a series of television commercials about natural resource issues in Delaware. The office is also coordinating DNREC staff involvement with the Department of Education on the development of a seventh grade science unit on Delaware's watersheds. Examples of DNREC's continued success with volunteers include the Christina River Cleanup in April when more than 1,000 people participated, and the Coastal Cleanup in September which drew 1600 people who cleaned up nearly 30,000 pounds of debris.

DNREC negotiated a Memorandum of Understanding (MOU) for guidance in developing regulations for the Coastal Zone Act, which has not had lasting regulations in 27 years. The MOU balances the interests of both industry and environmental advocacy groups. In December of 1998, the regulations were approved by the Coastal Zone Industrial Control board and put in place by the Secretary of the department.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	3,591.2	3,932.8	4,605.5
ASF	971.3	1,047.4	1,060.3
TOTAL	4,562.5	4,980.2	5,665.8

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	30.7	31.7	31.7
ASF	19.3	19.3	19.3
NSF	2.0	2.0	2.0
TOTAL	52.0	53.0	53.0

OFFICE OF THE SECRETARY

40-01-01

ACTIVITIES

- Assist the divisions to meet their human resource, financial, legislative, policy and other needs promptly and accurately.
- Provide for rational, accurate, and responsive budgeting and financial management processes.
- Administer the Coastal Zone statute and provide timely, efficient services to industries seeking status decisions.
- Coordinate database and Geographical Information Systems (GIS) operations for the department.
- Guide IRM planning and decision making through the policy level Executive Steering Committee for IRM and Strategic Plan for Information Resource Management.
- Assess the department's workforce diversity and target/develop programs to address needs.
- Ensure employees are educated regarding benefits and their rights.
- Coordinate the preparation of site-specific environmental assessments and recommendations to communities, jurisdictions, and agencies in a form that is usable for land use decision makers for comprehensive plans, ordinance revisions, zoning changes, site reviews, and policy development.
- Evaluate citizen values and priorities on environmental issues through surveys and focus groups.
- Develop department-wide communications strategies using information gathered in surveys and focus groups. This effort includes evaluation of current department-wide outreach efforts and

identification of opportunities to integrate key department issues/themes and messages into those efforts.

- Develop and distribute communications products that heighten people's awareness of environmental issues in their communities and suggest opportunities for them to reduce environmental impacts. These products include a state of the environment report, citizen guide to watersheds and TMDLs, natural heritage guides on species and habitats, and various fact sheets and brochures.
- Sponsoring and participating in special events designed to raise people's awareness such as the State Fair, Coast Day, Earth Day, the Coastal Cleanup and Christina River Cleanup.
- Sponsor training for educators on environmental issues and supplemental environmental education materials and curriculum including the new Watershed Education unit.
- Ensure effective public participation in agency decision-making processes.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
# reports to county land use advisory committees	180	220	240
# training hours provided to staff	2,500	7,500	8,500
Increase citizen volunteer hours	10,000	12,308	14,000
Increase public access to environmental information (Internet users per month)	1,000	2,600	4,000
Increase in administrative and program management processes conducted electronically	6	TBD	TBD
Circulation of <i>Outdoor Delaware</i> magazine	6,367	7,000	7,000

BUSINESS AND PERMITTING SERVICES

40-01-02

ACTIVITIES

- Provide pollution prevention assistance to industry, local governments, and citizens.
- Work with the regulatory programs on incorporating pollution prevention into permitting processes and compliance activities.
- Facilitate quarterly Pollution Prevention Industry Roundtable meetings.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Ensure effective public participation in agency permitting processes.
- Be a first point of contact for small businesses on Clean Air Act issues and assist them with permitting and compliance issues.
- Reach out to small businesses when upcoming regulations have a small business impact and educate them on the regulations and how to cost-effectively comply.
- Provide general assistance and information on DNREC permitting programs and provide a central point of contact and coordination service for customer issues and problems.
- Operate and market the Development Advisory Service (DAS).

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Provide waste reduction technical assistance to business community	12	12	12
Publicly owned treatment works (POTWs) with pollution prevention efforts	3	3	3
Increase number of Ombudsman contacts by 50%	30	60	90
On site clean air act assistance	15	15	15
Assist potential permittees through DAS and increase general assistance efforts by 100%	60	90	90

FISH AND WILDLIFE

40-05-00

MISSION

To conserve and manage the fish and wildlife resources of the State; to provide safe and enjoyable fishing, hunting, and boating opportunities to the citizens of Delaware and its visitors; to manage and make available for public use and enjoyment the lands with which it has been entrusted; and to improve the public's understanding and interest in the state's fish and wildlife resources through information and outreach programs.

KEY OBJECTIVES

- Hold illness rate to 1997 levels for those illnesses associated with environmental conditions (e.g. mosquito-borne diseases, rabies, fish tissue contaminants; Pfiesteria-related problems; contaminated clams and oysters).
- Have no hunting-related or recreational boating-related fatalities.
- Hold number of "nuisance free" mosquito nights to 1997 levels or lower, thereby maintaining or enhancing quality of life (and disease control).
- Reduce through the implementation of source reduction techniques for mosquito control (e.g. Open Marsh Water Management, impoundment water management), by year 2003 the total aerial application of insecticides by 10 percent.
- Increase by year 2003 the number of acres actively managed for wildlife or fisheries habitats on public and/or private lands by a total of 50 percent.
- Implement 100 percent of the existing state-level responsibilities for achieving the goals and objectives of the North American Waterfowl Management Plan by the year 2003.
- Continue implementation of protection, recovery or management plans (federal or state) for endangered, threatened, or species of special concern on an annual basis.
- Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC/PSE&G Settlement Agreement of 1995.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Achieve 25 percent of the impoundment restoration goals identified in the Northern Delaware Wetlands Rehabilitation Plan by year 2003 (complete seven site projects).
- Minimize wildlife damage complaints (i.e. deer, beaver, snow geese, resident Canada geese) to a level acceptable to general public as measured by a five percent increase in providing assistance to landowners through the year 2003.
- Develop one comprehensive Wildlife Area Management Plan each year that provides a basis for habitat and species management, hunting, observation opportunities and that improves the quality of the environment through the year 2003.
- Place 6000 tons of materials annually on the existing 11 artificial reef sites in the Delaware Bay and Atlantic Ocean in order to provide for increase fish stocks and recreational fishing opportunities through the year 2003.
- Annually protect 2,000 acres of land through the Open Space Program, through purchase, donation and conservation easements, for parks, wildlife areas, state forests, cultural sites, and greenways.
- Stabilize declining hunting license numbers at 21,607 annually based on the U.S. Fish and Wildlife Service 1997 License Index.
- Increase the number of fishing licenses issued by five percent annually based upon the U.S. Fish and Wildlife Service 1996 License Index of 27,834.

BACKGROUND AND ACCOMPLISHMENTS

Division programs are developed and administered to serve the interests of all of the people of the state. The division works with all segments constituencies to identify their needs and interests in fish and wildlife resources. The division advocates the human use of fish and wildlife including observation, study, hunting, fishing and trapping, in a humane manner without threatening the continued existence of species.

- The division provided technical assistance to over 50 private pond owners to control nuisance vegetation and improve fishing, and also provided technical assistance to more than 200 contacts with state and federal agencies in habitat considerations.
- In partnership with Safari Club International and Buckmasters, during the last four years more than 30,000+ pounds of venison has been collected by

volunteers of Delaware Sportsmen Against Hunger to feed people through the Salvation Army and other charitable agencies.

- The Augustine Creek Partnership between the division, the U.S. Fish and Wildlife Service, PSE&G, and Delaware Wildlands restored 964 acres of tidally impounded wetlands.
- The Open Marsh Water Management Program at the Mahon Road Marsh and Lewis Ditch Marshes was completed, with a total reduction of insecticide treatment needed on 750 acres of salt marsh.
- The management of Delaware's abundant deer herd is a priority for the division. Deer are an important game species with 10,000 animals harvested by 18,000 hunters in 1997. The harvest may have stabilized the overall population for the first time.
- The division completed the development of a management plan for northern bobwhite quail. During the past year, 70 acres were enrolled in the private landowner cost share program. Emphasis will focus on returning active farmland for small game habitat under the 1996 Federal Farm Bill Program.
- The division, in cooperation with several partners, developed a Delaware Bay Shorebird Guide. The guide graphically depicts important shorebird species that migrate through Delaware, with basic background information regarding their biology and dependence upon horseshoe crabs.
- Delaware is in compliance with 19 fisheries management plans required under the Atlantic Coast Fisheries Cooperative Management Act.
- The harvest of horseshoe crabs was reduced 39 percent in 1998. By closing state and federal lands to harvesting in May and June, migratory shorebirds were able to feed on horseshoe crab eggs with relatively few interruptions and regain their fat content to complete their migration to their Arctic nesting grounds.
- The division, in partnership with the New Castle Conservation District, is working to improve fisheries and wildlife habitat values in degraded wetlands. This has resulted in water management on 250 acres of Augustine Creek.
- The division completed a new small boat access facility on Concord Pond near Seaford.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- The division's Aquatic Resource Education Program, located at the Aquatic Resource Education (ARE) Center near Smyrna, continues to expand programs for young people in an effort to increase awareness about the importance of Delaware's aquatic habitats. The number of student and teacher contacts exceeded the projected ten percent increase in Fiscal Year 1997.
- The Enforcement Section increased the number of Hunter Safety Education Certifications by 30 percent and Boating Safety Certifications by 11 percent.

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	4,982.8	5,075.8	5,281.5
ASF	2,888.3	4,744.8	5,140.4
TOTAL	7,871.1	9,820.6	10,421.9

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	64.0	64.0	64.0
ASF	32.8	32.8	32.8
NSF	26.2	28.2	28.2
TOTAL	123.0	125.0	125.0

MANAGEMENT AND SUPPORT - FISH AND WILDLIFE

40-05-01

ACTIVITIES

- Direct, plan, and coordinate the administration of total division program strategies and objectives.
- Direct, plan and coordinate the development of mosquito control, fisheries, and wildlife resource initiatives.
- Coordinate, plan and develop state and federal budget funding strategies for division programs and initiatives.
- Evaluate and pursue revenue options other than license increases to match Federal Aid in Wildlife and Sport Fish Restoration matching programs.
- Represent the division on regional organizations such as the Atlantic States Marine Fisheries Commission, Atlantic Flyway Council, International Association of Fish and Wildlife Agencies, etc.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Implement findings of Responsive Management Survey - Issue 2 editions of a division Newsletter to Hunters, Anglers and Boaters.	2	2	2

WILDLIFE/FISHERIES

40-05-02

ACTIVITIES

Manage, protect and conserve fish, wildlife and their habitats by:

- conducting research surveys and inventories of fish, shellfish, and wildlife populations;
- developing fish and wildlife management plans for 13 state-owned wildlife management areas, 44 freshwater pond and marine fishing access sites, and 14 species of marine fish;
- monitoring, maintaining and regulating harvestable fish and wildlife populations;
- conducting integrated fish and wildlife management programs to promote the health of biological communities;
- providing technical assistance to landowners and government agencies;
- monitoring the users of fish and wildlife resources;
- administering a non-game and endangered species program;
- operating firearm/archery training facilities to promote safety; and,
- monitoring fisheries for diseases or lesions to indicate the presence of Pfiesteria.

Provide safe, high-quality opportunities for public enjoyment of fish and wildlife by:

- acquiring lands and waters for recreation and conservation;
- developing and maintaining public facilities;
- controlling aquatic and terrestrial weeds;
- improving fish and wildlife habitat;
- developing and implementing wetland enhancement initiatives; and,
- coordinating and conducting fish, wildlife, acquisition, and hunter safety and aquatic resource education activities.

Provide coordination, fiscal and accounting services for the division.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase number of acres of actively managed wildlife habitat on public lands by 5% annually.	5,855	4,504	6,150
Comply with Fisheries Management Plans (Number)	19	20	21
Increase number of Hunter Education Certifications by a minimum of 5% per year to minimize hunter related accidents.	1,337	1,403	1,474

MOSQUITO CONTROL

40-05-04

ACTIVITIES

- Monitor mosquito populations and levels of nuisance or disease.
- Investigate and assess controls via Open Marsh Water Management (OMWM) / Integrated Marsh Management (IMM), impoundment management, mosquito fish stocking, woodland control and insecticides.
- Provide temporary controls in response to disease outbreaks or rising nuisance levels through the use of chemical controls.
- Conduct research surveys and inventories of mosquitoes, fish and wildlife populations.
- Continue with the implementation and installation of OMWM systems within Delaware's wetlands.
- Continue the implementation of wetland rehabilitation within the Christina/Delaware River Corridor.
- Administer education programs as they relate to wetland restoration mosquito control problems and Integrated Marsh Management needs.
- Develop a biological control program for woodland mosquito species.
- Coordinate with the Riverfront Development Authority to restore Dravo Marsh (Wilmington Wildlife Refuge).

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Eradicate 15% of saltmarsh mosquito breeding acreage habitat per year using Open Marsh Water Management techniques.	650	600	300
Achieve a 5% increase in nuisance free nights	82	73	75
Restore 15 % of the degraded wetlands under the Northern Delaware Wetlands Rehabilitation Program.	964	632	628

DOG CONTROL

40-05-05

ACTIVITIES

- Administer a statewide dog control program through contracts with the Delaware and Kent County SPCA.
- Service complaints about dog law violations.
- Monitor dog law compliance and control unwanted dogs.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase # animals to shelters statewide by 5%/yr to reduce # of free roaming animals	9,936	10,433	10,955

FISH AND WILDLIFE ENFORCEMENT

40-05-06

ACTIVITIES

- Enforce state and federal wildlife, finfish, shellfish, boating laws, both recreational and commercial.
 - Encourage the reporting and continue the investigation of reportable hunting and boating accidents.
 - Conduct statewide Boating Education Safety Programs in an effort to decrease natural resource type accidents.
 - Conduct marine search and rescue operations, and conduct statewide marine rescue training for coastal fire companies.
 - Manage and supervise a state vessel registration program.
-

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase Boating Safety Certifications by a minimum of 5% per year in order to reduce boating related accidents.	1,401	1,457	1,529

PARKS AND RECREATION

40-06-00

MISSION

To provide state parks, facilities and programs for outdoor recreational use; to protect natural resources in parks, nature preserves and greenways; to provide technical, financial and planning assistance to the public for park, recreation and conservation areas; and to make available natural and cultural interpretive and educational services.

KEY OBJECTIVES

- Reduce visitor and employee accidents in state parks by five percent annually.
- Annually protect 2,000 acres of land through the Open Space Program, through purchase, donation and conservation easements, for parks, wildlife areas, state forests, cultural sites, and greenways.
- Increase the number of interpretive trails by five by 2002.
- Improve 30 miles of trails and add 20 miles of trails or paved pathways throughout the state by 2004.
- Assist in the addition of 50 acres of parkland and 12 outdoor recreation facilities at the municipal and county levels by 2004.
- Enhance level of service in the Wilmington State Parks to equal the level of service in the rest of the state park system by 2002.
- By 2002, increase state park donations and sponsorships to \$40,000 annually.
- Reduce major rehabilitation expenditure and curb facility deterioration by increasing preventive maintenance by five percent.
- Reduce the backlog of infrastructure needs and building rehabilitation by five percent annually.
- Annually, work to ensure that DNREC historic preservation responsibilities, under state and federal laws, are met effectively, efficiently, and economically.
- Locate and identify prehistoric and historic cultural resources on one percent of DNREC landholdings annually.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Develop cultural resources management plans for two state parks, nature preserves or wildlife areas by 2004.
- Identify and fully document at least four significant folklore resources by 2003.
- Protect an additional 2,000 acres of conservation lands annually by acquisition/easement with emphasis on upland forests and riparian buffers.

BACKGROUND AND ACCOMPLISHMENTS

The division contains five administrative sections to carry out this mission:

- Management and Support
- Operation and Maintenance
- Cultural and Recreational Services
- Planning, Preservation and Development
- Wilmington State Parks

11 field offices statewide are responsible for overseeing the operation of 18,400 acres in 14 state parks, Brandywine Zoo, Baynard Stadium, ten nature preserves and four other sites. In addition, the division oversees 1,148 acres through six private nature preserves and 38 conservation easements protecting 925 acres.

The division operates units containing a variety of landscape and natural resource features from rolling terrain in the uppermost regions of New Castle County to lands and inland ponds throughout the State to coastal beaches in Sussex County. Cultural and historic resources are protected and interpreted while a wide variety of recreational facilities are provided for Delawareans and out-of-state visitors.

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	7,497.6	8,747.9	8,745.3
ASF	5,973.8	7,341.3	7,441.1
TOTAL	13,471.4	16,089.2	16,186.4

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	76.5	101.5	101.5
ASF	59.5	60.5	61.5
NSF	1.0	1.0	1.0
TOTAL	137.0	163.0	164.0

MANAGEMENT AND SUPPORT - PARKS AND RECREATION

40-06-01

ACTIVITIES

- Policy implementation, coordination, and fiscal control.
- Overall guidance in the development of CIP program.
- Personnel recruitment, hiring and training.
- Volunteer recruitment and placement.
- Inter/intra agency coordinator for the division.
- Coordination of services for five citizen advisory councils.
- Coordination of state park friends organizations.
- Mini/micro computer support for the division.
- Management of Twenty-First Century Park Endowment and all state park trust funds.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase # of volunteer hours by 2%	25,643	26,000	26,520

OPERATIONS AND MAINTENANCE

40-06-02

ACTIVITIES

- Manage daily operations of 14 state parks including special revenue generating facilities (Biden Center, Killen's Water Park, Cauffiel).
- Conduct building and grounds maintenance.
- Enforce state park rules and regulations.
- Provide for site and visitor safety and security.
- Provide visitor services and assistance.
- Collect revenue and administer concession.
- Conduct marketing and promotion.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Maintain 92% customer service rating of state park visitors	92	92	92
Increase park revenue by 3%	\$5,697,300	\$5,478,000	\$5,868,219
Implement campground reservation at 5 state parks facilities	--	5	5

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

CULTURAL AND RECREATIONAL SERVICES

40-06-03

ACTIVITIES

- Plan and administer recreation activities, programs and events.
- Provide environmental education.
- Provide natural and cultural resource interpretative programs and exhibits.
- Conduct historic and prehistoric archeological surveys and preservation management plans.
- Provide folk life conservation and interpretation.
- Administer the Delaware Conservation Corps Program.
- Plan and develop state park trail system.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase # people participating in park programs by 2.6%	178,286	168,000	182,921

PLANNING, PRESERVATION AND DEVELOPMENT

40-06-04

ACTIVITIES

- Plan, design, engineer and construct facilities and infrastructure within the state park system.
- Coordinate land protection activities, including acquisition, easements and donations, under the auspices of the Land Protection Act.
- Administer the natural areas program through the Land Preservation Office as defined by law.
- Administer state and federal grants and provide technical assistance to county and local governments for land acquisition, outdoor recreation facility and greenway development.
- Assess statewide outdoor recreation facility needs and issues.
- Coordinate and oversee the Council on Greenways and Trails, Natural Areas Council, and the Open Space Council.
- Coordinate a Geographic Information System (GIS) that supports the mission to protect resources and provide recreation opportunities.
- Provide staff and administrative support for the Open Space Council.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Reduce backlog of park building and infrastructure and rehabilitation by 5% (Expressed in dollars)	1,250,000	1,250,000	5,680,000
Protect 2,000 acres that meet the criteria of the Land Protection Act	2,508	--	2,000

WILMINGTON STATE PARKS

40-06-05

ACTIVITIES

- Implement a comprehensive maintenance and capital improvement plan to upgrade standards.
- Enforcement of park rules and regulations.
- Provide visitor safety.
- Manage the Brandywine Zoo and Baynard Stadium.
- Provide public interpretive programming.
- Coordinate special events and facilities.
- Provide pedestrian links between the various park units and acquire remaining land in holdings at Alapocas Parks.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
# of visitors to Brandywine Zoo	--	70,000	70,000
# of park visitors	--	445,000	765,000
# of stadium uses per year	--	50	50
# of park programs/attendance	--	100/445,000	100/445,000

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

SOIL AND WATER CONSERVATION

40-07-00

MISSION

To preserve and protect the state's soil, water and coastal resources by managing the state's shoreline, coastal zone and navigable waterways; regulate coastal and urban land use and construction activities; promote wise agricultural and urban land management practices; promote wise water management practices to preserve local agricultural interests, protect urban communities and provide for public safety; and ensure that federal activities, permits and licenses, Outer Continental Shelf plans and grants-in-aid are consistent with economic and environmental policies.

KEY OBJECTIVES

- Prevent increases and strive to reduce nutrients, sediments, and toxic substances in the Piedmont Basin, Chesapeake Basin, Inland Bays Basin, and Delaware River Basin by 2005.
- Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100 percent of new development at the predevelopment rate for the two-year, ten-year, and (100-year in NCCo.)/24-hour rainfall event.
- Protect 10,000 new acres of land through drainage, flood control, and water management by 2003.
- Reduce imperviousness of new development by 20 percent by the year 2005.
- Hold illness rate to 1997 levels for those illnesses associated with environmental conditions (e.g. mosquito-borne diseases, rabies, fish tissue contaminants; Pfiesteria-related problems; contaminated clams and oysters).
- Reduce wetland impacts by 25 percent during planning and construction of new tax/public ditch projects and by ten percent for maintenance of existing tax/public ditch projects through the year 2003.
- Continue implementation of protection, recovery or management plans (federal or state) for endangered, threatened, or species of special concern on an annual basis.

- Restore four publicly accessible small boat navigation channels and associated facilities statewide to their authorized dimensions by removing undesirable accumulated sediment in response to legislative, inter/intra agency and constituent requests by June 2000.
- Achieve no net loss of recreational and protective beach area along the Delaware Bayshore and Atlantic Ocean coast as measured on a three to seven year re-nourishment cycle.

BACKGROUND AND ACCOMPLISHMENTS

Drainage. Establishing and maintaining public drainage facilities (tax/public ditches) provides public benefits including: stabilizing agricultural production; more efficient nutrient utilization; reducing excess nutrient transport; decreasing road maintenance; trapping erosion and sediment; storm water management for urban and rural flooding; establishing a future maintenance program funded by tax ditch landowners; and establishing a firm base for the installation of agricultural Best Management Practices (BMPs).

In the past four years, the division has implemented 497 Rural Conservation and Development projects which were funded with \$22 million from the Twenty-first Century Fund for a variety of flood abatement and drainage projects. Approximately 40 percent of the jobs in the first three fiscal years have been completed. The department has received over 2800 requests for drainage assistance during the past 5 1/2 years, of which approximately 71 percent have been resolved. The remainder have all been investigated and are pending due to rights-of-way, permits, and/or funding.

Shoreline and Waterway Management. Rising sea levels, storms, and permanent construction interferes with the natural landward migration of beaches and dunes, and threatens Delaware's shoreline resources. These problems underscore the need to improve the State's management strategies regarding coastal storm hazards and beach erosion. Since 1994, over 2,500,000 cubic yards of sand were placed on Delaware beaches and over 302,900 cubic yards of sediment were dredged out of Delaware's lakes, rivers and bays. The extensive damage to the dunes and beach from the severe northeasters in January and February of 1998 were repaired. The division conducted, in cooperation with local governments, an economic analysis of the value of

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

beaches to the State that was called for by the Beach Replenishment Task Force. The analysis estimated severe economic losses over the next five years if the ocean beaches were no longer replenished.

District Operations. District Operations assists the Conservation Districts in tailoring the programs to meet the needs of diverse constituents, oversees the statewide implementation of the state's sediment control and storm water management program, and coordinates statewide non point source pollution control programs. District Operations programs combine research and education, technical assistance, financial incentives, and regulation with interagency and private partnerships. All programs target Delaware's top two non point pollutants, excess sediment and nutrients, and address the state's strategic priorities described in the Fiscal Year 1999 Environmental Partnership Agreement and Delaware's NPS Management Plan.

The Storm Water Management program has successfully designed and coordinated training and implementation projects throughout the state. To date 3,700 people have participated in the training. In efforts to better manage nutrients from animal operations, the division has revised and distributed 1500 copies of the third edition of Delaware Guidelines for Environmental Management to animal producers and applied for \$8.2 million in federal Conservation Reserve Enhancement Program to create more than 6000 acres of filter strips and wetlands. The division also coordinated with Maryland and a private contractor on a poultry litter composting and marketing demonstration project.

Coastal Management The Pea Patch Island Heronry Region Special Area Management Plan (SAMP) includes 30 focused strategies to implement a more detailed and balanced management of the natural resource and economic development needs for the Pea Patch Island region. NOAA has approved funding for the first two years of implementation.

The Delaware National Estuarine Research Reserve building on St. Jones neck will serve as a research and education center for coastal management issues statewide. Funding to complete the 5400 square foot building was secured and construction has begun.

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 Gov. Rec.
GF	6,983.5	4,687.5	4,913.5
ASF	444.0	5,679.6	2,925.0
TOTAL	7,427.5	10,367.1	7,838.5

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 Gov. Rec.
GF	46.7	46.7	46.7
ASF	--	--	1.0
NSF	15.3	15.3	15.3
TOTAL	62.0	62.0	63.0

MANAGEMENT AND SUPPORT - SOIL AND WATER 40-07-01

ACTIVITIES

- Provide administrative direction and supportive professional and technical services to all divisional programs and projects.
- Provide program planning, coordination, engineering, fiscal support and clerical services.
- Provide liaison among local, county, state and federal governmental legislators, officials and agencies.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Meet % deadlines for official requests from the department's Office of the Secretary	100	100	100

DRAINAGE 40-07-02

ACTIVITIES

- Conduct environmentally sensitive tax ditch planning and public ditch planning.
- Assist counties with legally mandated updates to tax ditch property owner files for all tax ditch properties.
- Provide tax ditch technical assistance (surveying, engineering, environmental evaluations, permit applications) for tax ditch formation and

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

construction. Provide tax ditch technical assistance to all existing tax ditches for operations and maintenance. Provide tax ditch construction funding.

- Maintain, implement and expand Best Management Practices (BMP) for tax ditch planning and construction that incorporate water management for water dependent resources within the watershed.
- Provide technical assistance to Conservation Districts.
- Install and protect highway culverts to expedite tax ditch construction.
- Cooperate and assist the Department of Transportation with emergency bridge replacement as needed.
- Investigate and resolve drainage complaints from landowners, public officials and agencies.
- Provide education outreach to agricultural and environmental communities to demonstrate the working relationship of drainage, agriculture and wetlands.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase acres of agricultural and residential land receiving drainage, flood protection and water management	417,000	423,000	427,000
Reduce potential adverse wetland impacts by 25% during planning and construction of new tax/public ditch organizations	30%	25%	25%

SHORELINE AND WATERWAY MANAGEMENT **40-07-03**

ACTIVITIES

- Develop and carry out beach preservation projects to protect and preserve Delaware's coastline.
- Administer coastal construction regulatory program.
- Improve storm hazard preparedness and mitigation.
- Reduce natural hazard losses through cooperation with FEMA and DEMA in state natural hazard mitigation programs.
- Provide technical assistance to local governments and homeowners to improve beach and dune management.

- Identify sufficient sand sources for beach nourishment work for a ten-year maintenance period.
- Provide assistance to property owners, elected officials at all levels, and the media in understanding the complex physical dynamics of beach erosion and storm impacts to aid in pre and post coastal storm impact reduction and recovery.
- Operate and maintain sand bypass facility at Indian River Inlet.
- Conduct repair and maintenance program of publicly owned coastal dunes.
- Improve and maintain navigational channels statewide.
- Restore the environmental integrity of state-owned lakes and ponds.
- Monitor erosion rates of beaches and dunes through a comprehensive surveying program.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
# of publicly accessible small boat navigation channels restored to authorized dimensions	--	--	4

DISTRICT OPERATIONS **40-07-04**

ACTIVITIES

- Provide comprehensive Erosion & Sedimentation (E&S) and Storm Water Management Training to 30 percent of the land development community, in partnership with other agencies and members of the regulated community.
- Provide financial, technical and compliance assistance to delegated agencies for plan review and field inspection services on 6,000 acres of development and construction projects.
- Provide sediment and storm water management field inspection on federal and state funded, non-DELDOT construction activities.
- Direct and administer Clean Water Act Section 319 grant funds for priority water quality assessment and implementation of best management projects.
- Provide training programs for contractors, developers, animal producers, and agency personnel.
- Provide technical assistance to other agencies, engineers and consultants, farmers and animal

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

producers, contractors and developers, and educators, college professors, and university officials.

- Provide staff support for DNREC's Whole Basin Total Maximum Daily Load effort by performing related assessment and implementation activities in the Piedmont, Chesapeake, Inland Bays and Delaware Bay Basins.
- Implement and assess environmental effectiveness of nonstructural sediment and storm water management practices as a pilot project in Kent County.
- Coordinate with state/federal agencies and the University of Delaware in implementing programs for animal feeding operations.
- Develop and support a statewide construction project database system and a District Operations-Conservation District based, geographic information system that allows for nutrient loading estimates at the sub-watershed level.
- Administer the Conservation Cost Share Program and agricultural component of the State Revolving Loan Fund Program in coordination with federal Farm Bill programs.
- Direct the state's efforts and funding for the USDA's Conservation Reserve Enhancement Program.

- Administer the federal consistency provisions of the Coastal Zone Management Act for Delaware.
- Provide conflict resolution between multi-users of coastal resources.
- Promote sustainable development in Delaware's Coastal Zone.
- Implement actions to protect and enhance the Pea Patch Island Region in accordance with the Special Area Management Plan.
- Implement enhancement plan approved by NOAA for cumulative and secondary impact avoidance and coastal wetland protection.
- Implement educational programs for the public, schools, resource users and decision-makers addressing coastal resource issues.
- Develop Environmental Indicators in accordance with Memorandum of Agreement for Coastal Zone Regulations.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% soil saved on active construction sites through compliance with the Delaware Sediment & Stormwater Program	--	--	65
Maintain 3% reduction nitrogen loadings in the Nanticoke and Inland Bays watersheds	3.2	3.0	3.0

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% tracked of nationwide permits issued by U.S. Army Corps of Engineers	75	50	100
# strategies implemented at Pea Patch Island	--	--	12

DELAWARE COASTAL MANAGEMENT

40-07-05

ACTIVITIES

- Administer NOAA's grant awards to DNREC for coastal management and DNERR.
- Provide grant funding to improve responsiveness to coastal management issues including coastal storm related damage reduction, near-coastal water pollution abatement, habitat improvement, oil pollution prevention and response, coastal access, and pollution prevention.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

WATER RESOURCES

40-08-00

MISSION

To protect and enhance the quality and adequacy of Delaware's surface water, ground water, underwater, and wetland resources by professionally and enthusiastically serving every customer at all times with integrity. The division will value, train, and nurture its employees as its greatest asset to assure that integrity and excellent performance are maintained. To be successful, every employee will play a vital role in achieving the division's vision.

KEY OBJECTIVES

- Prevent increases and strive to reduce nutrients, sediments, and toxic substances in the Piedmont Basin, Chesapeake Basin, Inland Bays Basin, and Delaware River Basin by 2005.
- Develop compliance strategies for all wastewater systems from the current base and using the current water quality standards by the year 2002.
- Assure that all ground waters and surface waters used for drinking water are protected by 2008 for the long-term goal of meeting Drinking Water Standards.
- Assure that all drinking water wells are constructed and sited such that public exposure to toxic contaminants is avoided.
- By the year 2003, fully implement a no net loss policy for the unavoidable losses of wetlands and for the unavoidable physical alteration of streams by requiring mitigation in wetlands and subaqueous lands permits.
- Maintain no net loss of approved waters for shellfish harvest and consumption.
- Maintain the percentage of waterways meeting fishable and swimmable goals at October 1994 through September 1996 levels.
- By the year 2008 the number of public water supply systems implementing pollution methodologies such as voluntary contaminant management approaches in source water protection areas will increase by 5 percent.

- Assist communities by providing funding sources, such as the Twenty-first Century Fund for water and wastewater infrastructure.
- Expand the State Revolving Fund Expanded Use Program annually, to include new non-point source opportunities, to include brown fields, stream bank protection, and poultry manure composting.

BACKGROUND AND ACCOMPLISHMENTS

The Division of Water Resources recognizes that water conservation is best achieved through the cooperative efforts between the division and its constituents. Such cooperation directly fulfills the division policy and responsibility of education and communication regarding environmental compliance, conservation and management.

Among the responsibilities satisfied by the division are the implementation of various regulatory programs; providing technical skills to programs; laboratory services; educational services; performing applied research; and helping finance water pollution control measures.

The division continues to protect the interests of Delaware's residents by following its operating motto of "clean water today and tomorrow."

Accomplishments

- Achieved "excellent" customer satisfaction rating from 90 percent of respondents.
- Continued to support the Wastewater Facilities Advisory Council and assured Twenty-first Century Fund money is allocated for wastewater.
- Expanded and administered water pollution control loans to communities, farmers (including dairy), underground tank owners through the State Revolving Loan Fund (SRF).
- Improved the efficiency of the septic loan program.
- Continued streamlining the well/septic permitting system.
- Implemented water well construction regulations' revisions.
- Continued to develop innovative technologies for wastewater disposal and shoreline stabilization.
- Continued to implement whole basin management practices in the Inland Bays, Nanticoke and Christina River Basins.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Assisted communities seeking central wastewater infrastructure facilities.
- Coordinated and implemented the Comprehensive Conservation and Management Plan for the Delaware Estuary.
- Implemented the Comprehensive Conservation and Management Plan for the Inland Bays.
- Continue to make progress in the TMDL development process.

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	8,772.5	8,636.1	8,742.5
ASF	2,445.1	2,804.6	3,256.8
TOTAL	11,217.6	11,440.7	11,999.3

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	68.3	71.3	73.3
ASF	64.0	63.0	64.0
NSF	31.7	30.7	32.7
TOTAL	164.0	165.0	170.0

MANAGEMENT AND SUPPORT - WATER RESOURCES

40-08-01

ACTIVITIES

- Improve the levels of technical support, education, and regulatory services to the citizens of the State to better protect the state's water resources.
- Actively implement the Delaware Estuary CCMP action items.
- With the Executive Director of the Center for the Inland Bays, implement the Inland Bays Comprehensive Conservation and Management Plan.
- Provide wastewater engineering/financial planning assistance to communities through the State Revolving Loan (SRL) funding.
- Provide low-interest water pollution control loans/grants to communities, homeowners, and agricultural producers.
- Provide support to the Wastewater Facilities Advisory Council.
- Provide technical support and strategic input to local governments which maintain projects that affect wetlands.

- Provide geographic mapping and analysis of land use/load cover information for priority basins.
- Implement a comprehensive water resource educational and constituent outreach plan.
- Produce maps from the geographic information system in support of the various in-house programs.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Develop / implement constituent outreach program.	10%	15%	20%
Develop / implement enhanced accounting system to assess the expenditure effectiveness	0	50%	50%
Implement additional 5% of the Inland Bays CCMP action items.	5%	5%	5%
Provide wastewater engineering/financing planning services to communities/facilities	10%	10%	10%
Maintain expanded use SRF loan application approval rates.	75%	75%	75%

ENVIRONMENTAL SERVICES

40-08-02

ACTIVITIES

- Monitor the state of natural resources through biological assessments and chemical analyses to enhance the quality of life for Delaware's citizens.
- Develop and implement a system to measure customer satisfaction.
- Expand quality improvement initiatives by implementing International Organization for Standardization (ISO) 9000 standards and statistical process controls.
- Continue to develop the Laboratory Information Management System to enhance quality and productivity and to facilitate information sharing throughout the section, division, and department.
- Enhance staff capabilities, skills and knowledge through professional development and cross training.
- Provide educational initiatives for teachers and youth in schools, colleges, and universities and utilize skills of senior citizens through SEEDelaware, Science Alliance, job shadowing, internships, mentoring, tours, and volunteer programs.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Implement a multifaceted pfiesteria monitoring and assessment program to investigate pfiesteria distribution and abundance, relationships between pfiesteria and water quality, and to guide the State's pfiesteria response.
- Assess harmful blooms of macro-algae and phytoplankton and their impact on aquatic resources.
- Identify new market opportunities, anticipate and satisfy clients' changing needs by expanding laboratory analytical capabilities to incorporate the best available technology.
- Implement pollution prevention strategies in selection of methods, equipment, and supplies to minimize waste generation.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase productivity in terms of effectiveness (market capture) by 2% per year for the next three fiscal years	2	4	6
Improve cycle times to increase by 4% per year for the next three fiscal years	4	8	12
% time in training to increase annually by 3% for the next three fiscal years	3	6	9

SURFACE WATER DISCHARGES 40-08-04

ACTIVITIES

- Equalize annual permit production and align permit issuance on a watershed basis to eliminate permit backlog by Fiscal Year 2000.
- Issue NPDES permits that contain the necessary requirements and conditions i.e., toxic controls, pretreatment requirements, storm water, CSO, sludge requirements, etc.
- Issue licenses for wastewater treatment operators.
- Review plans and issue permits for construction of wastewater collection and treatment facilities.
- Issue permits for beneficial reuse of biosolids.
- Initiate timely and appropriate enforcement action.
- Conduct compliance inspections for NPDES facilities.
- Periodically review and update program regulations for point sources.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase % biosolids beneficially used.	95	96	97
Increase # stream miles meeting designated uses that contain point source discharges.	65	68	70

GROUND WATER DISCHARGES 40-08-05

ACTIVITIES

- Encourage designers/applicants to incorporate land treatment systems into their wastewater management plans.
- Perform construction and compliance inspections on 100 percent of all large on-site wastewater systems and 75 percent of all small systems.
- Issue large septic permits and spray permits in compliance with all applicable regulations.
- Issue replacement/repair permits for all malfunctioning subsurface systems.
- Issue Underground Injection Control (UIC) permits/authorizations in compliance with all applicable regulations.
- Locate and inventory all unauthorized UIC wells.
- Perform inspections on UIC wells.
- Prevent non-complying UIC systems from polluting ground water.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% inspected systems constructed properly	100	100	100
% alternative on-site treatment systems in operational compliance	40	40	40
Increase % facilities inspected	35	40	40

WATER SUPPLY 40-08-06

ACTIVITIES

- Review and approve allocation permits for ecological and public health protection.
- Review and approve water well permits for proper placement and construction.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Maintain Water Well and Allocation Data Management (DWUDS) database in TEPP.
- Establish long-term protection strategies for public drinking water supply areas.
- Provide assistance to New Castle County for requirements of New Castle County WRPA Ordinance.
- Provide public education specific to water conservation, wellhead protection, and source water protection
- Conduct research and monitoring of ground water resources.
- Perform groundwater reviews for non-hazardous waste sites.
- Provide for source water protection program development under the Federal 1996 Safe Drinking Water Act Amendments (joint cooperation with DHSS and PSC).
- Participate in Comprehensive State Ground-Water Protection Program Development, under Whole Basin Management and Performance Partnership Agreement.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% 1-day turnaround time for domestic well applications	95	95	95
% well violations referred for formal enforcement	10	10	5
% well permit data entered within 5 days of receipt of information	90	80	90
% hydrogeologic reviews provided within 20 days for sites requiring ground-water monitoring	80	95	95
% 2-day turnaround provided for drinking water wells located near contaminated sites	95	10	95
Provide for the delineation of wellhead protection areas	10	15	25

WATERSHED ASSESSMENT 40-08-07

ACTIVITIES

- Monitor and accurately assess water quality and shellfish distribution and processing facilities relative to NSSP specifications.
- Issue advisories as appropriate to ensure safety of water for swimmers.

- Complete bi-annual water quality inventory. Develop Total Maximum Daily Loads (TMDLs) and Pollution Control Strategies (PCSs) for priority watersheds.
- Review and revise, as necessary, Delaware's Surface Water Quality Standards.
- Develop an aerial mapping method to determine future wetlands trends by basin.
- Determine recent wetlands trends (losses/gains) by basin, wetland type, and causative factors.
- Implement management actions that will protect the public from pfiesteria related toxic events.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% waters attaining designated uses	22	22	22
Enhance swimmer protection and public natural bathing beaches	90	100	100
Maintain incidence of shellfish-borne disease at no greater than current levels, # illnesses	5	5	5
Maintain incidence of water-borne disease at no greater than current levels, # illnesses	10	<10	<10
Protect water contact users by maintaining the incidence of pfiesteria-borne illness at zero.	0	0	0

WETLANDS AND SUBAQUEOUS LANDS 40-08-08

ACTIVITIES

- Maintain an inventory of tidal wetlands.
- Determine wetland change (gain/loss) on a five-year basis.
- Issue wetlands permits.
- Issue subaqueous lands permits and leases.
- Improve marina operations in state waters.
- Review and issue marina construction permits.
- Issue 401 Water Quality Certifications.
- Promote "bio-engineering" as preferred method of shoreline stabilization.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
% annual increase linear ft. of shoreline stabilized with rip-rap or vegetation vs. bulkhead	20	20	20
% increase in # approved marina operation and maintenance plans	10	10	10

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

AIR AND WASTE MANAGEMENT

40-09-00

MISSION

To optimize the air resources and waste management practices within Delaware by working cooperatively with the citizens and businesses of Delaware to protect public health, welfare and the environment.

KEY OBJECTIVES

- Prevent increases and strive to reduce nutrients, sediments, and toxic substances in the Piedmont Basin, Chesapeake Basin, Inland Bays Basin, and Delaware River Basin by 2005.
- Reduce the percentage of active LUST sites impacting drinking water to less than 15 percent by 2005.
- Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons/day from 1994 levels by 1999 via Ozone Transport Commission NO_x MOU.
- Attain one-hour ozone standard by 2005 in New Castle and Kent counties and maintain the ozone air quality standard in Sussex County.
- Ensure that 75 percent of facilities inspected annually are generally compliant with air quality regulations at time of inspection.
- Maintain no exceedences of air quality standards for particulate matter, sulfur dioxide, carbon monoxide and nitrogen dioxide.
- Remediate five debris pits per year once a debris pit remediation fund is established.
- Ensure 100 percent compliance with permit requirements for contaminant discharges from solid waste transfer and disposal facilities.
- Achieve an 80 percent compliance rate for operating USTs by 2005.
- Remediate 50 percent of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (as of Sept. 1, 1995) by 2000.
- Remediate eight hazardous waste high priority sites (not Superfund or HSCA sites) by 1999.

- Ensure 100 percent of hazardous waste facilities assessed return to compliance within 180 days by 1999.
- Minimize impacts of salvage yards on water quality and public health by 2006.
- Achieve a 30 percent reduction in Toxics Release Inventory releases from 1995 levels by 2000.
- Reduce the quantity of hazardous waste generated by 20 percent (over 1995 levels) by the year 2000.
- Clean up and make available for reuse eight Brownfields sites annually.

BACKGROUND AND ACCOMPLISHMENTS

Air Management

Emergency Response. Environmental Response Branch (ERB) staff respond to time-critical emergency and non-emergency environmental incidents around-the-clock for the protection of human life, health, safety and the environment. In Fiscal Year 1998, the Emergency Response staff responded to 421 incidents; 60 percent of the total number of incidents occurred in New Castle County, 60 percent of the total number of incidents involved no other State Emergency Response Agencies but DNREC, and 60 percent of the total number of incidents were petroleum-related.

Enforcement. Environmental Protection Officers are first responders to environmental emergencies and enforce the regulations of the Division of Air and Waste Management, the Division of Water Resources, and the Division of Soil and Water Conservation. To better serve them, the branch established a new Community Policing Unit. Officers within the unit work cooperatively with citizens of New Castle and Kent County to resolve local environmental problems, and provide training to other governmental agencies.

Air Quality Management. Since the passage of the 1990 Clean Air Act Amendments, the department made unprecedented progress in its efforts toward providing clean air to all its citizens. Delaware, as a result of past efforts, has attained and maintained the Air Quality Standards for all pollutants except Ozone. By fully adopting and initiating implementation of a 15 percent VOC reduction plan and a plan for additional control measures through 1999, the State has taken a major step in its efforts to attain the Ozone standard. The State has

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

also identified control measures that, when fully adopted and implemented, will allow the State to attain the one-hour Ozone standard by 2005. During 1998 the department enhanced its permitting process by processing all of the Title V permit applications and began the task of evaluating each application and issuing the consolidated Title V Operating Permits. The Title V Program is designed to assure that major facilities come into compliance and stay in compliance by consolidating into a single document all of a facility's air permits, compliance schedule and monitoring and reporting requirements. The Small Business Technical Assistance Program, including the Ombudsman, was expanded by the addition of the Compliance Advisory Panel (CAP). This program provides technical advice and assistance to small businesses to aid them in complying with regulations.

Waste Management

Site Investigation & Restoration (formerly known as the Superfund Branch). The Branch has identified approximately 400 hazardous substance release sites in Delaware, of which 17 are National Priority List (NPL) sites managed by the EPA. Three NPL sites have been cleaned up and removed from the list. With the passage of the Delaware Hazardous Substance Cleanup Act (HSCA) in 1990, the Branch has assumed a major role in investigating and cleaning up over 120 of the non-NPL sites which pose a threat to public health, welfare and the environment. In 1993, the Branch initiated the Voluntary Cleanup Program (VCP) under which a party can come forward and remediate a contaminated site and make it available for reuse. This program was formalized through amendments to HSCA in July 1995.

The Branch has investigation and cleanup ongoing at more than 90 sites: 15 using HSCA funds, 32 under HSCA enforcement, 50 under VCP and 15 (8 NPL sites and 7 Brownfield Assessments) under the federal program. Work has been completed to date at 9 NPL sites, 42 HSCA sites and 36 VCP sites.

Underground Storage Tank. Delaware's Underground Storage Tank (UST) Program regulates petroleum and hazardous substance tanks through their life cycle. A program milestone was achieved in September 1996 when Delaware's UST program received program delegation from EPA Region III. Delaware's UST program is now authorized to operate in lieu of the Federal UST program. In 1997 the UST program in coordination with the Delaware Economic Development

Office and the State Revolving Fund announced a new loan program for UST sites. The program named PLUS will assist owners with upgrading, removing and remediating UST sites. Another milestone was reached in December 1998 when the final upgrade deadline for active underground storage tank systems passed. As of this date, all tanks must meet the corrosion protection standards as well as leak detection, spill and overflow protection requirements.

Solid Waste Management. The Solid Waste Management Branch regulates the transportation and disposal of solid waste in Delaware. In Fiscal Year 1998, the Branch oversaw the construction of new landfill leachate and gas collection systems for waste cells at two of the Delaware Solid Waste Authority's three municipal solid waste landfills. The Branch drafted legislation proposing a surcharge on construction and demolition waste to fund remediation of debris pits in residential areas—which resulted in a one-year appropriation for debris removals and requires a report to the Legislature in Fiscal Year 1999.

Hazardous Waste Management. The Hazardous Waste Management Program is responsible for protecting public health and the environment from the mismanagement of approximately 22,000 tons of hazardous waste generated in Delaware every year. The Hazardous Waste Management Program continued its pursuit of sound hazardous waste management through an effective compliance assistance, permitting and enforcement. The Program met or exceeded all performance measures in the Fiscal Year 1998 budget year.

BUDGET

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	3,593.5	3,618.9	3,770.5
ASF	7,209.1	11,146.1	11,186.5
TOTAL	10,802.6	14,765.0	14,957.0

POSITIONS

	FY 1998 ACTUAL	FY 1999 BUDGET	FY 2000 GOV. REC.
GF	53.0	53.0	53.0
ASF	89.4	91.8	91.8
NSF	62.6	60.2	60.2
TOTAL	205.0	205.0	205.0

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

MANAGEMENT AND SUPPORT - AIR AND WASTE 40-09-01

ACTIVITIES

- Develop and implement policies and procedures.
- Oversee administrative functions: grants, budget, personnel, legislation and fiscal control.
- Coordinate division efforts in teacher education and general educational activities to strive to promote citizen awareness and responsible citizen action.
- Coordinate division IRM needs and facilitate data integration within the division and between the division and the department to support comprehensive environmental protection and public access to environmental information.
- Coordinate grant work plan development, implementation and performance measurement for federal and state budgeting purposes.
- Provide enforcement support for the divisions of Air and Waste Management, Water Resources, and Soil and Water Conservation.
- Participate with federal, state and local emergency responders and planning agencies.
- Administer the state Criminal Investigation/ Background Unit Law.
- Participate in and evaluate multi-media inspections and permitting.
- Oversee the response to Freedom of Information Act (FOIA) requests received by the division.
- Provide and coordinate legal assistance for the division.
- Upgrade response capabilities through planning, training and conducting exercises.
- Coordinate and plan response activities through the State Emergency Response Commission (SERC).
- Expand or modify use of current response resources and technologies, including increasing the utilization and capabilities of computer-related response support.
- Maintain and develop policies, practices and procedures to prevent responder injury rates and improve effectiveness.
- Maintain a Community Policing Unit within the department.
- Administer and evaluate the Competency Based Career Advancement Pilot program for Environmental Protection Officers.
- Provide environmental enforcement awareness training to other police agencies within the state.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Maintain zero responder injury record	0	0	0
# emergency responses to incidents	421	504	504
# notifications to department of spills	641	5135	200
# FOIA requests received and responded	660	812	1020

AIR QUALITY MANAGEMENT 40-09-02

ACTIVITIES

- Participate actively in Ozone Transport Commission (OTC), State and Territorial Air Pollution Control Administrators (STAPPA), and Mid-Atlantic Regional Air Management Association (MARAMA) activities.
- Direct the State Implementation Plan (SIP) revisions as required by the Clean Air Act Amendments (CAAA) of 1990.
- Promulgate new air regulations mandated by the CAAA.
- Develop and submit emission inventories consistent with the CAAA.
- Track air quality status, especially ozone attainment status, and implement monitoring program for fine particulate matter.
- Oversee existing motor vehicle exhaust emission pressure and anti-tampering tests.
- Increase inspections and continue permitting air contaminant sources pursuant to the new and more complex Title V permitting program.
- Expand the stack-testing program in support of the enhanced permitting program.
- Continue to implement the CAAA Section 112(r) Accidental Release Program.
- Continue implementation of the Emergency Planning and Community Right-to-Know (EPCRA) Program components.
- Continue to implement and enhance the Small Business Technical Assistance Program.
- Administer and update the asbestos abatement program.
- Work with other public and private entities to develop or implement transportation and voluntary control programs such as Ozone Action Day.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

40-00-00

- Continue enforcement activities to identify and bring significant violators and non-notifiers into compliance.
- Continue entering data into the national Aerometric Information Retrieval System (AIRS) on most Delaware facilities, all enforcement activities, modifications of facilities, new major construction permits, continuous monitoring system inspections and compliance schedules.

PERFORMANCE MEASURES

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
By 12/99, reduce oxides of nitrogen (NO _x) emissions by 24.0 tons/day via the Ozone Transport Commission (OTC) MOU	0%	50%	100%
By 1/99, issue all Title V operating permits	30%	50%	100%
By 12/02, fine particulate monitoring network in place. (6 sites total)	0	3	6
By 12/99, adopt all measures necessary to attain the 1-hr ozone standard	0%	30%	80%

WASTE MANAGEMENT

40-09-03

ACTIVITIES

Site Investigation and Restoration

- Identify sites and prioritize them using the Delaware Hazard Ranking Model.
- Oversee Remedial Investigation, Feasibility Study, Remedial Design and Remedial Action at HSCA sites.
- Review applications of volunteers for acceptance into the Voluntary Cleanup Program (VCP).
- Provide oversight for the investigation, study, design and cleanup of VCP sites consistent with HSCA.
- Assist the volunteers in obtaining grants, loans and tax credits at brownfield sites so that such sites can be put to productive use.
- Develop and promote field screening procedures to reduce the number of analytical samples sent to the laboratory for full analysis.
- Provide a voluntary cleanup option under the enforcement program to cut down the duration of negotiation of agreements.

Underground Storage Tank

- Identify unregistered Underground Storage Tanks (USTs).
- Identify the number of sites in compliance with financial responsibility and leak detection regulations.
- Conduct UST facility, UST removal or abandonment, and new UST installation compliance inspections.
- Conduct new UST installation plan reviews.
- Identify unreported releases from USTs.
- Reduce the amount of time from identification to closure of Leaking Underground Storage Tanks (LUST) sites.
- Continue implementation of risk based corrective action closure procedures at LUST sites.

Solid Waste Management

- Regulate the disposal of non-hazardous solid waste to prevent any significant adverse impacts to Delawareans or Delaware's environment.
- Monitor permitted solid waste sites to identify any contaminant releases to the environment. Require, oversee and approve corrective actions to remedy any significant adverse impacts resulting from contaminant releases.
- Pursue closure and remediation of unauthorized, illegal or environmentally unacceptable solid waste disposal sites.
- Encourage and facilitate the recycling and reuse of solid waste materials for beneficial purposes, reduced environmental impact potential, and conservation of waste disposal space.
- Track the transport and disposal of solid waste to ensure compliance with environmental regulations.

Hazardous Waste Management

- Communicate and encourage targeted hazardous waste generators on the reduction of hazardous waste.
- Complete hazardous waste compliance assessments and permitting while implementing a multi-media approach where possible.
- Implement the hazardous waste corrective action process.
- Provide educational opportunities to the hazardous waste facility universe and public.

NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
40-00-00

PERFORMANCE MEASURES
Underground Storage Tanks

	FY 1998 Actual	FY 1999 Budget	FY 2000 Gov. Rec.
Increase % of leaking underground storage tank sites that do not impact ground water/drinking water	Goal exceeded at 92	80	81
Increase % of facilities in compliance with technical standards	60	65	70
Hazardous waste Generation(tons)	19,906	20,932	19,881
% of facilities assessed returning to compliance within 180 days	100	100	100
% of facilities in compliance at time of first assessment	89	60	60
# of participants in educational opportunities	250	175	175
# of high priority sites remediated	6	8	8
Remediate 40% of high priority sites (120 sites) by FY 2001	7	6	6
# of sites available for productive use	49	48	48