1998
MAY

Vision and Strategic Plan

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DRAFT

INTRODUCTION

“For several years, DNREC has struggled to define a broad, Delaware-based view of our environmental, natural resource and recreational needs. On the one hand, we need a clear statement of the problems and stresses our resources face; on the other hand, we need understandable goals and process that will resolve our problems. Our success will be dependent on an agenda that speaks clearly to the public's concerns regarding quality of life, environmental health, and a lasting legacy for our children and their children.

This document presents proposed goals for DNREC. It also lays out relevant objectives that, if met, will assist in the attainment of those goals. And finally, it describes meaningful measures of performance which will provide a "yardstick" by which we - and the public we serve - can determine how we are doing. These measures will also emphasize, where possible, results in the environment - providing for the first time a clear accountability to the environment. These environmental indicators will be the core of DNREC's annual State of the Environment Report.

By more clearly defining Delaware's priorities in this fashion, we will be in a better position to forge partnerships necessary to achieve our goals. This document will also be the foundation for future budget requests, operational plans, and grant applications. It will also speak clearly - in English - to all those who have a keen interest in Delaware's environmental, natural resource and recreational quality, including those of us who have chosen to work at DNREC because of our commitment to these ends."

Christophe A. G. Tulou
Secretary

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OUR VISION:

The Department envisions a Delaware that offers a healthy environment where people include a commitment to the protection, enhancement and enjoyment of the environment in their daily lives; where Delawareans' stewardship of natural resources ensures the sustainability of these resources for the appreciation and enjoyment of future generations; and where people recognize that a healthy environment and a strong economy support one another.

OUR 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.

OUR CORE VALUES:

In pursuing its mission, the Department of Natural Resources and Environmental Control will treat its employees and the public with courtesy, respect and consideration, be fair and honest in its dealings, and be mindful of the special qualities that make Delaware a unique place to live and work.

The people who work at the Department are dedicated to improving and preserving the environment. Highly skilled and culturally diverse, they work with their partners to protect human health, ecosystems, and the beauty of the environment using the best available science. They value and promote innovative and effective solutions to environmental problems. They strive to protect and sustain the productivity of the natural resources on which all life and human activity depend.

As employees of DNREC we pledge to keep these tenets in a constant state of use, challenge and renewal for the good of the people we serve.

1. **SERVICE** - we are committed and empowered to provide the citizens of Delaware with the highest level of service possible.

2. **PROFESSIONALISM** - Employees at all levels will carry out their responsibilities in a professional manner, and with respect for their customers and coworkers.

3. **RESPONSIVENESS** - Services to Delaware citizens will be provided in a timely fashion.

4. **SENSITIVITY** - we will strive to understand and consider all points of view when making decisions which affect the public.

5. **COOPERATION** - we will strive to increase cooperation at all levels; with customers, within and among divisions, with local, county and federal governments, and other state agencies to achieve common objectives, with mutual accountability for achievement of those objectives.

6. **EFFICIENCY** - we will operate in a manner that provides reasonable and cost-efficient solutions to environmental challenges.

7. **BELIEF IN THE POTENTIAL OF PEOPLE** - DNREC will tap and expand the capabilities of all employees by leveraging their talents, developing their skills, and setting high expectations.

8. **CONTINUOUS PERFORMANCE IMPROVEMENT** - we will continuously improve on the measures of performance which are important to the people we serve by continually changing our processes, practices and systems, and by improving our skills.

9. **INFORMATION AS A STRATEGIC ASSET** - DNREC employees will recognize and harness the tremendous power of information to transform the organization, empower the public, and educate.

10. **PASSION FOR SUCCESS** - DNREC employees will be relentless in addressing the needs of the people and the environment of Delaware.

OUR MANAGEMENT PRINCIPLES:

DNREC will utilize the following principles in its organizational and environmental management practices.

1. Management of Delaware's environment will be conducted through a **holistic approach** that takes advantage of comprehensive, ecosystem-based management.

2. **Organizational performance** will be based on clear, legitimate measures to ensure accountability and continuous improvement.

3. **Innovation** will be encouraged and utilized in managing our organization and Delaware's environment.

4. Management approaches will nurture an **environmental ethic** among Delaware citizens.

5. DNREC will create and develop **partnerships** that integrate economic development, social policy and environmental protection and rely on clear, effective communication

6. The development, implementation and enforcement of all laws, regulations and policies will result in the **equitable treatment** of people of all races, incomes and cultures.

7. **Information** will be made available to Delaware's citizens to assist them in making effective decisions.

OUR GOALS:

- ***Promote Health and Safety***

  Explanatory paragraph By maintaining and improving the quality of our 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. Our vision includes a future time when ozone and particulates in the air are no longer threats to our health, and the quality of our outdoor recreational experiences no longer diminished by waters unsafe for swimming, by fish or shellfish too contaminated to eat, nor by the threat of encephalitis from mosquito bites. The Department recognizes that the health of Delaware's economy is very much dependent on the health of our 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***

  Explanatory paragraph: 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. Achieving this goal necessitates good quality air, water and soils. Sustaining this goal requires coordination of Department activities.

- ***Promote and Provide Recreational Opportunities***

  Explanatory paragraph: 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. Achieving this goal requires good quality air, water and soils, plus healthy living resources. Sustaining this goal requires coordination of Department activities. This effort involves provision of public access and other recreational facilities, balancing multiple uses, and performing educational outreach.

- ***Broaden the Commitment to Environmental Protection and Resource Conservation***

  Explanatory paragraph: 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. Integration means the coordination and/or unification of Department programs and authorities for the purpose of more effectively and efficiently preventing or reducing damage to the environment. 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. "Internal integration" refers to environmental policy actions taken across media to prevent release of pollutants and control residues. "External integration" refers to incorporating environmental policy into other types of policy ranging from agriculture, transportation, and energy to trade and economic development. The quality of the environment in the next century will largely be determined by the degree to which external integration succeeds. 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.

OUR STRATEGIC PLAN

Note to the Reader:

In preparing this document we have chosen to focus on the significant environmental problems facing Delaware and opportunities for improvement. There are many important ongoing activities within the Department that are not presented here. These daily tasks, either programmatic or administrative, in combination comprise the strategies by which a program unit contributes to the accomplishment of the Department's objectives. The annual submission (Operational Plan) for the Office of the Budget presents those activities that are essential for the maintenance of Delaware's environmental quality.

OUR CHALLENGES:

Stressors and sources impacting health and safety

Stressors	*Sources*
Ozone	Volatile Organic Chemicals (VOC) and NO_X emissions from stationary and mobile sources
Bacteria (Pathogenic Indicators)	On-site septic systems; wastes from animal operations and wildlife; combined sewer overflows; storm water runoff
Encephalitis	Mosquito breeding
Rabies	Wildlife vectors; susceptible domesticated animals not inoculated (dogs and cats)
Nutrient overenrichment	Excessive fertilization of lawns, gardens, golf courses, and farmlands; excessive applications of animal wastes; excessive loadings from on-site septic systems; airborne nitrogen deposition; storm water; and activities linked to soil erosion, agricultural chemicals; municipal and industrial wastewater discharges
Air toxics	Industrial facilities; mobile sources; area-wide point sources; commercial and consumer products; pesticides applications
Depletion of water supplies	Excessive pumping (mining) of aquifers, increased population, excessive surface withdrawals, insufficient infiltration / recharge saltwater intrusion
Solid Waste	Residences, businesses, industry
Acidification	Combustion processes which release sulfur and nitrogen oxides into the air
Methane & Sinkholes	Historical land-clearing practices, debris disposal areas
Accidents	Careless personal conduct, poor communications, insufficient training
Toxic substances in land and water	Hazardous material handling and disposal practices; accidents(spills); leaking storage systems; landfills; municipal and industrial wastewater treatment plants; storm water runoff; pesticides

Stressors and sources impacting the conservation of plant and animal resources

Stressors	*Sources*
Human activities that encroach upon or degrade ecosystems.	Land cover and use conversions; development; use of agricultural and industrial chemicals.
Depleted / nuisance stocks of fish and wildlife	Decreased habitat; land cover and use conversions; poor water quality; pathogens; and overharvesting.
Exotic and invasive species	Interstate and international transportation; development; habitat destruction.
Water quality limitations and lack of availability	Point and non-point pollution; diversion of water for other uses.
Degraded aquatic habitat	Urbanization; storm water; agricultural practices; excessive sedimentation; stream channelization and maintenance activities.
Toxics in the aquatic system	Hazardous material handling and disposal practices; accidents(spills); leaking storage systems; landfills; municipal and industrial wastewater treatment plants; storm water runoff; pesticides
Habitat fragmentation	Land use conversions; development.

Stressors and sources impacting recreational opportunities

Stressors	*Sources*
Public Outdoor Recreation Needs Unmet at the State and Local Levels	Limited scope of community planning: lack of facilities and opportunities; Public demand for recreation increasing
Water Quality Limitations for Recreational Uses	Point and non point source pollution
Loss of Open Space	Residential and Commercial Development; coastal storms and beach erosion
Multiple Uses of the Same Resource	Too few areas to meet diverse recreational needs
Aging Recreation Facilities	Inadequate funding for maintenance and rehabilitation; reduced navigable waterways due to accumulated sediments

Stressors and Sources impacting the commitment to environmental protection and resource conservation

Stressors	*Sources*
Loss of prehistoric, historic and cultural resources	Development / growth; Lack of interest and awareness, inadequate funding for maintenance and rehabilitation, effects of natural forces (erosion, weathering)
Media-specific focus (e.g. air, water, waste etc.)	Single media laws, regulations, organizational structures, and budgetary practices
Disparate databases / data fragmentation	Independent evolution and lack of integration in the development of programs
Sprawl	Poorly planned growth, insufficient data acquisition and exchange, low level of emphasis on urban conservation
"Disposal" mentality	Lack of focus on source reduction first, inadequate alternatives
Awareness / public interest level	Lack of information on consequences and benefits of personal actions or involvement

OBJECTIVES BY GOAL

I. Promote Health and Safety

Explanatory paragraph: By maintaining and improving the quality of our 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. Our vision includes a future time when ozone and particulates in the air are no longer threats to our health, and the quality of our outdoor recreational experiences no longer diminished by waters unsafe for swimming, by fish or shellfish too contaminated to eat, nor by the threat of encephalitis from mosquito bites. The Department recognizes that the health of Delaware's economy is very much dependent on the health of our 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.

Objectives:

Water Quality & Quantity

1. 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.

2. Develop compliance strategies for all wastewater systems from the current base and using the current water quality standards, by the year 2002.

3. Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.)/24-hour rainfall event for FY99.

4. Protect 6000 additional acres of land in FY1999 through the construction of drainage, flood control, and water management systems.

5. Reduce imperviousness of new development by 20% by the year 2005.

6. Reduce the percentage of active LUST sites impacting drinking water to less than 15% by 2005.

7. 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.

8. Provide for the equitable allocation of surface and ground water supplies through the analysis and issuance of allocation permits to water users.

9. Assure that all drinking water wells are constructed and sited such that public exposure to toxic contaminants is avoided.

Disease

1. 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).

2. Decrease human contact and health implications due to water borne pathogens and water based vectors by 25% by decreasing the combined sewer overflow occurrences in the Christina Basin.

Public Safety

1. Respond to all search and rescue incidents within 90 minutes.

2. Have no hunting-related nor recreational boating-related fatalities.

3. Reduce visitor and employee accidents in state parks by 5% annually

Air Quality

1. Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons / day by 1999 via Ozone Transport Commission NO_x Memorandum of Understanding.

2. Attain 1-hour ozone standard by 2005 in New Castle and Kent Counties.

3. Achieve 100% compliance with all air quality regulations.

4. Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998.

5. Maintain no exceedences of air quality standards for particulate matter, sulfur dioxide, carbon monoxide and nitrogen dioxide.

Waste Management

1. Increase response time to environmental, oil and hazardous substance incidents by 20%.

2. Remediate 12 debris pits per year once a debris pit remediation fund is established.

3. Ensure 100% compliance with permit requirements for contaminant discharges from solid waste transfer and disposal facilities.

4. Achieve an 80% compliance rate for operating USTs by 2005.

5. Mitigate or prevent releases by home heating fuel tanks by 2010.

6. Mitigate and Prevent Releases from Above Ground Storage Tanks by 2015.

7. Remediate fifty per cent (50%) of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (HSCA)(as of Sept. 1, 1995) by 2000.

8. Remediate 8 hazardous waste high priority sites (not Superfund or HSCA sites) by 1999.

9. Ensure 55% of inspected facilities are in compliance with hazardous waste laws and regulations at time of first inspection by 1999.

10. Ensure 100% of hazardous waste facilities assessed are returned to compliance within 180 days by 1999.

II. Conserve Plant and Animal Resources

Explanatory paragraph: 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. Achieving this goal necessitates good quality air, water and soils. Sustaining this goal requires coordination of Department activities.

Objectives:

Applied Habitat Research, Management and Restoration

1. Reduce wetland impacts by 25% during planning and construction of new tax / public ditch projects and by 10% for maintenance of existing tax / public ditch projects through the year 2003.

2. 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%.

3. 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%.

4. Improve by year 2003 the function and value of coastal and freshwater wetlands on a total 3000 wetland acres.

5. Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999.

6. Achieve 25% of the impoundment restoration goals identified in the Northern Delaware Wetlands Rehabilitation Plan by year 2003 (complete seven site projects).

7. Protect an additional 8,000 acres of conservation lands by acquisition / easement with emphasis on upland forests and riparian buffers through the year 2003.

8. 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.

9. 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.

10. Increase the percentage of shorelines stabilized annually using soil bioengineering techniques to 50% by the year 2003.

11. Develop one comprehensive Park Management Plan or Natural Preserve Management Plan annually through the year 2003 that improves the quality of the environment, by emphasizing habitat analysis, improvement / compatibility of recreational uses, environmental education and infrastructure development

Species Research, Monitoring and Management

1. Implement 100% of the existing state-level responsibilities for achieving the goals and objectives of the North American Waterfowl Management Plan by the year 2003.

2. Continue implementation of protection, recovery or management plans (federal or state) for endangered, threatened, or species of special concern on an annual basis.

3. Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC / PSE&G Settlement Agreement of 1995.

4. Minimize wildlife damage complaints (i.e. deer, beaver, snow geese, and resident Canada geese) to a level acceptable to the general public as measured by a 5% increase in providing assistance to landowners through the year 2003.

5. Reduce nuisance plant species on public and private lands and waters / wetlands in order to improve the natural functioning of these systems by a minimum of 2000 acres per year through the year 2003.

6. Complete a natural community classification document for Delaware, and assign rarity ranks for each community type by the year 2001.

7. Develop a checklist for the flora of Delaware, including bryophytes, and assign a state rarity rank for each taxon by 2003.

8. Complete natural heritage inventories of five wildlife management areas (one per year) by 2003.

9. Assess the capability of the Inland Bays to support submerged aquatic vegetation at six locations by the year 2003.

III. Promote and Provide Recreational Opportunities

Explanatory paragraph: Recreational opportunities that allow Delawareans and visitors 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 to maintaining a high quality of life for Delawareans and attracting visitors to the state. Achieving this goal requires good quality air, water and soils, plus healthy living resources. Sustaining this goal requires coordination of Department activities. This effort involves providing public access and other recreational facilities, balancing multiple uses, performing educational outreach, and providing recreational opportunities to people with varying physical abilities or economic resources.

Objectives:

Parks & Trails

1. Increase the number of interpretive trails on state land by 5 percent by 2002.

2. Improve 30 miles of trails and add 20 miles of trails or paved pathways throughout the state by 2004.

3. Assist in the addition of 50 acres of parkland and 12 outdoor recreation facilities at the municipal and county levels by 2004.

4. Improve operations, maintenance, visitor services, and safety in the Wilmington State Parks.

5. Increase outside funding sources by 10% to support park operations, maintenance and development by 2004.

6. Reduce major rehabilitation expenditure and curb facility deterioration by increasing preventative maintenance by 5%.

7. Reduce the backlog of infrastructure needs and building rehabilitation by 5% annually.

Open Space

1. Protect 10,000 additional acres of land through the Open Space Program, through purchase, donation and conservation easements, by 2002 for parks, wildlife areas, state forests, cultural sites and greenways.

2. Achieve no net loss of recreational and protective beach area along the Delaware Bayshore and Atlantic Ocean coast as measured on a 3 to 7 year re-nourishment cycle.

Natural Resource Use

1. 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 May 1999.

2. Stabilize declining hunting license numbers at 21,607 annually based upon the U.S. Fish and Wildlife Service 1997 License Index.

3. Increase the number of fishing license issued by 5% annually based upon the U.S.F.&W.S. 1996 License Index of 27,834.

4. Maintain no net loss of approved waters for shellfish harvest and consumption.

5. Increase waterways designated as fishable and swimmable by 5% by 2003.

IV. Broaden the commitment to environmental protection and resource conservation

Explanatory paragraph: 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. Integration means the coordination and/or unification of Department programs and authorities for the purpose of more effectively and efficiently preventing or reducing damage to the environment. 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. "Internal integration" refers to environmental policy actions taken across media to prevent release of pollutants and control residues. "External integration" refers to incorporating environmental policy into other types of policy ranging from agriculture, transportation, and energy to trade and economic development. The quality of the environment in the next century will largely be determined by the degree to which external integration succeeds. 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.

Objectives:

Pollution Prevention

1. Achieve a 30% reduction in Toxics Release Inventory releases (and possibly off-site transfers) from 1995 levels by 2000.

2. Reduce pollutant loadings to publicly owned treatment works from industrial dischargers by 10% by 2000.

3. By 2000 have 75% of high school economics teachers utilizing pollution prevention information in their courses.

4. By 2000, obtain commitments to incorporating specific pollution prevention and environmental strategies from industry and business, government, citizens, environmental organizations, and the communications media.

5. By 2001, 60% of state agencies have established pollution prevention objectives and strategies.

6. By 2001, 75% of all new industrial operations will be going through multimedia permitting reviews.

7. Reduce the quantity of hazardous waste generated by 20%(over 1995 levels) by the year 2000.

Community and Growth Guidance

1. Reduce the rate of private, undeveloped rural lands (Greenfields) conversions by 25% (of the 1995 rate) by the year 2000.

2. Demonstrate that planned work, live, and play communities (village concept) provide a balance and distribution of mixed residential and non-residential (employment and services) land uses which will result in at least a 10% reduction in the average length of

vehicle trips by the year 2005.

3. Clean up and make available for reuse 8 Brownfields sites annually

4. Assist communities by providing alternative funding sources, such as the 21st Century Fund for water and wastewater infrastructure.

Education

1. DNREC will increase the public's understanding of the agency and its activities by 25 percent (over results from 1997 survey) by 2000.

2. DNREC will 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.

3. DNREC will enhance its capacity to create a stronger environmental ethic among Delawareans through devotion of greater resources to public information and education programs through measurements gathered by periodic public surveys.

4. DNREC will establish baseline data to increase communications efforts by targeting disadvantaged socio-economic populations on environmental issues, which may affect those population groups. The communications effort will then increase 25% annually after this year 2000 target.

Systematic Approaches

1. Complete the first full rotation of the management cycle for all basins within the State by the year 2004

2. Biannually target one critical area for development of a Special Area Management Plan (SAMP)

3. 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.

Information and Data Systems

1. By 2005 DNREC will implement a means to effectively collect and manage 80 % of the information that its partners require in order to manage for environmental results.

2. By 2000 DNREC employees will have access to a minimum set of desktop computing resources and communications tools.

3. By 2005 DNREC will ensure public access to 50 % of its public information by electronic means.

4. Integrate new and existing databases and increase the capacity of a shared information management environment by 80% by 2008.

Historic & Cultural Resources

1. Annually, work to ensure that DNREC historic preservation responsibilities, under state and federal laws, are met effectively, efficiently, and economically.

2. Locate and identify prehistoric and historic cultural resources on 1% of DNREC landholdings annually.

3. Develop cultural resources management plans for 2 state parks, nature preserves, or wildlife areas by 2004.

4. Identify and document at least four significant folklore resources in Delaware by 2003.

OUR TERMINOLOGY

TERM	CHARACTERISTICS
Vision	- Expresses ultimate aspirations usually in qualitative terms
Mission	- Provides the purpose of a department, agency or unit and the rationale for its existence and services provided
Guiding Principles	A governing policy, pertaining to goals and methods, involves value judgment, and describes the critical points to be considered when making decisions about department priorities, activities, etc. for decision makers and serve as a common basis for decisions across the department .
Core Values	The most important beliefs and behaviors that define an organization's culture and practices. Values serve to establish the parameters of accepted and expected behavior in an organization.
Goal	- Long term environmental, natural resource, or recreational endpoint - Not constrained by resources - May be quantifiable or qualitative target
Objective	- Is measurable - States desired result over specific time - Includes mixture of outcomes and outputs - Constrained by resources - Is shorter term than goal - Is goal-driven
Activities (a.k.a. approach)	- Can be multi-year - Reflects approach to achieve objectives - Concise, clear, simply expressed and action oriented- - Reflective of a major strategic accomplishment that is critical to the achievement of a goal - Approach should include link to resources to be effective - Includes performance measures to show progress
Operational Plan (a.k.a. budget)	- Identifies the process of setting priorities and allocating manpower and fiscal resources toward those priorities - Provides a bridge to the vision, mission, goals , objectives, problems, strategies - Sets the action agenda for achieving results - Serves as the expression of all of the short term actions that must be taken if progress is to be made toward achieving goals and objectives. - covers a specified time period
Performance Indicator	- Is value or characteristic used to measure environmental, natural resource, recreational output or outcome - Denotes quality, quantity, efficiency, financial status, or activity - Answers "How will we know when we have been successful?" - Is comparative value (percentage, ration) showing change over time

TERM	CHARACTERISTICS
Outcome Measure	- Is quantifiable result - Is not necessarily annual - Is an assessment of results of a program activity compared to its intended result - Is preferred measure for moving toward results-oriented action - Is result-driven
Output Measure	- Records, tabulates, or calculates an activity or effort - Can be quantitative or qualitative - Is annual or more frequent - Includes process, timeliness, accuracy, customer satisfaction, efficiency or effectiveness. - Is activity-driven / "beans"
Input Measure	- What agency has available to carry out the program e.g. FTE, equipment & facilities, supplies, goods & services - Actual resources used.
Stressors	- any physical, chemical, or biological entity that can induce an adverse effect on ecosystems or human health

APPENDIX A

OBJECTIVES LINKED TO GOALS, STRESSORS AND CONCERNS

I. STRESSORS AND SOURCES IMPACTING HEALTH AND SAFETY

Stressors	*Our Concerns*	*Sources*	*Objectives*
Ozone	Asthma attacks, lung damage, crop damage	Volatile Organic Chemicals (VOC) and NO_X emissions from stationary and mobile sources	• Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons / day by 1999 via Ozone Transport Commission NO_x Memorandum of Understanding. • Attain 1-hour ozone standard by 2005 in New Castle and Kent Counties. • Achieve 100% compliance with all air quality regulations.
Bacteria (Pathogenic Indicators)	Stomach distress, bacterial infections, fish consumption advisories, contact recreation advisories	On-site septic systems; wastes from animal operations and wildlife; combined sewer overflows; storm water runoff	• Develop compliance strategies for all wastewater systems from the current base and using the current water quality standards, by the year 2002. • Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.) / 24-hour rainfall event for FY99. • Reduce imperviousness of new development by 20% 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). • Decrease human contact and health implications due to water borne pathogens and water based vectors by 25% by decreasing the combined sewer overflow occurrences in the Christina Basin. • Assure that all ground waters and surface waters used for drinking water meet Drinking Water Standards by 2008.
Encephalitis	Illness, potentially fatal, to humans and horses	Mosquito breeding	▪ 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%. ▪ 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).
Rabies	Illness potentially fatal to humans and other mammals	Wildlife vectors; susceptible domesticated animals not inoculated (dogs and cats)	• 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).
Nutrient overenrichment	Nuisance algae, odors, fish kills	Excessive fertilization of lawns, gardens, golf courses, and farmlands; excessive applications of animal wastes; excessive loadings from on-site	▪ 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. ▪ Manage storm water runoff, as required by the Sediment and Storm Water

		septic systems; airborne nitrogen deposition; storm water; and activities linked to soil erosion, agricultural chemicals; municipal and industrial wastewater discharges	Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.)/24-hour rainfall event for FY99. ▪ Reduce imperviousness of new development by 20% by the year 2005. ▪ Protect 6000 additional acres of land in FY1999 through the construction of drainage, flood control, and water management systems. ▪ Assure that all ground waters and surface waters used for drinking water meet Drinking Water Standards by 2008.
Air toxics	Exposure to carcinogenic compounds	Industrial facilities; mobile sources; area-wide point sources; commercial and consumer products; pesticides applications	• Achieve 100% compliance with all air quality regulations. • Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998. • Increase response time to environmental, oil and hazardous substance incidents by 20%.
Depletion of water supplies	Water use restrictions, cost of providing potable water	Excessive pumping (mining) of aquifers, increased population, excessive surface withdrawals, insufficient infiltration/recharge saltwater intrusion	▪ Reduce imperviousness of new development by 20% by the year 2005. ▪ Provide for the equitable allocation of surface and ground water supplies through the analysis and issuance of allocation permits to water users.
Solid Waste	Vermin, odors	Residences, businesses, industry	
Acidification	Fish kills, crop damage	Combustion processes which release sulfur and nitrogen oxides into the air	▪ Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons/day by 1999 via Ozone Transport Commission NO_x Memorandum of Understanding. ▪ Achieve 100% compliance with all air quality regulations. ▪ Maintain no exceedences of air quality standards for particulate matter, sulfur dioxide, carbon monoxide *and* nitrogen dioxide.
Methane & Sinkholes	Buildup of combustible compounds, threats to public safety posed by sinkholes	Historical land-clearing practices, debris disposal areas	• Remediate 25 debris pits per year once a debris pit remediation fund is established.

Accidents	Mental and physical health	Careless personal conduct, poor communications, insufficient training	▪ Respond to all search and rescue incidents within 90 minutes. ▪ Have no hunting-related nor recreational boating-related fatalities. ▪ Reduce visitor and employee accidents in state parks by 5% annually
Toxic substances in land and water	Exposure to carcinogenic compounds, fish consumption advisories, contact recreation advisories	Historical hazardous material handling and disposal practices; accidents(spills); leaking storage systems; landfills; municipal and industrial wastewater treatment plants; storm water runoff; pesticides	▪ 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. ▪ Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.)/24-hour rainfall event for FY99. ▪ Reduce imperviousness of new development by 20% by the year 2005. ▪ Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998. ▪ Increase response time to environmental, oil and hazardous substance incidents by 20%. ▪ Achieve an 80% compliance rate for operating USTs by 2005. ▪ Mitigate or eliminate releases by home heating fuel tanks by 2010. ▪ Develop an Above Ground Storage Tank Program by 2003. ▪ Remediate fifty per cent (50%) of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (HSCA)(as of Sept. 1, 1995) by 2000. ▪ Remediate 8 hazardous waste high priority sites (not Superfund or HSCA sites) by 1999. ▪ Ensure 55% of inspected facilities are in compliance with hazardous waste laws and regulations at time of first inspection by 1999. ▪ Ensure 100% of hazardous waste facilities assessed are returned to compliance within 180 days by 1999. ▪ Reduce the percentage of active LUST sites impacting drinking water to less than 15% by 2005. ▪ Assure that all ground waters and surface waters used for drinking water meet Drinking Water Standards by 2008.

II. STRESSORS AND SOURCES IMPACTING THE CONSERVATION OF PLANT AND ANIMAL RESOURCES

Stressors	*Our Concerns*	*Sources*	*Objectives*
Human activities that encroach upon or degrade ecosystems.	Declining wildlife habitat; fragmentation of habitat resulting in decreased biodiversity and habitat deterioration from non-point source pollution.	Land cover and use conversions; development; use of agricultural and industrial chemicals.	▪ Minimize wildlife damage complaints (i.e. deer, beaver, snow geese, resident Canada geese) to a level acceptable to general public as measured by a 5% increase in providing assistance to landowners through the year 2003. ▪ Reduce nuisance plant species on public and private lands and waters / wetlands in order to improve the natural functioning of these systems by a minimum of 2000 acres per year through the year 2003. ▪ Develop one comprehensive Wildlife Area Management Plan that provides a basis for habitat and species management, hunting, observation opportunities and that improves the quality of the environment through the year 2003. ▪ Reduce wetland impacts by 25% during the planning and construction of new / public ditch projects through the year 2003. ▪ Develop one comprehensive Park Management Plan or Natural Preserve Management Plan annually through the year 2003 that improves the quality of the environment by emphasizing habitat analysis, improvement / compatibility of recreational uses, environmental education and infrastructure development. ▪ Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999. ▪ Achieve 25% of the impoundment restoration goals identified in the Northern Delaware Wetland Rehabilitation Plan by year 2003 (complete seven site projects). ▪ Protect an additional 8,000 acres of conservation lands by acquisition / easement with emphasis on upland forests and riparian buffers through the year 2003. ▪ Increase the percentage of shorelines stabilized annually using bioengineering techniques to 50% by the year 2003. ▪ Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC / PSE&G Settlement Agreement of 1995. ▪ Stabilize declining hunting license numbers at 21,607 annually based upon the U.S. Fish and Wildlife Service 1997 License Index. ▪ Increase the number of fishing license issued by 5% annually based upon the U.S.F.&W.S. 1996 License Index of 27,834
Depleted / nuisance stocks of fish and wildlife	Nuisance species invading native habitats; stressed fish and shellfish populations;	Decreased habitat; land cover and use conversions; poor water quality; pathogens; and overharvesting.	▪ 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%. ▪ Implement 100% 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.

	Canada Goose, and Quail population decline; General trend in reduced populations of non-game species.		▪ Minimize wildlife damage complaints (i.e., beaver, snow geese, resident Canada geese) to a level acceptable to the general public as measured by a 5% increase in providing assistance to landowners through the year 2003. ▪ Reduce nuisance plant species on public and private lands and waters / wetlands in order to improve the natural functioning of these systems by a minimum of 2000 acres per year 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. ▪ Develop one comprehensive Wildlife Area Management Plan that provides a basis for habitat and species management, hunting, observation opportunities and that improves the quality of the environment through the year 2003. ▪ Complete a natural community classification document for Delaware, and assign rarity ranks for each community type by the year 2001. ▪ Develop a checklist for the flora of Delaware, including bryophytes, and assign a state rarity rank for each taxon by 2003. ▪ Complete natural heritage inventories of five wildlife management areas (one per year) by 2003.
Exotic and Invasive species	Nuisance species invading native habitats.	Interstate and international transportation.	
Water quality limitations and lack of availability	Declining and stressed populations of fish and shellfish.	Point and non point pollution; diversion of water for other uses.	▪ 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. ▪ Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.) / 24-hour rainfall event for FY99. ▪ Reduce imperviousness of new development by 20% by the year 2005. ▪ Protect 6000 additional acres of land in FY1999 through the construction of drainage, flood control, and water management systems.
Degraded aquatic habitat	Declining and stressed populations of fish and shellfish; decreased biodiversity of	Urbanization; storm water; agricultural practices; excessive sedimentation; stream channelization and maintenance activities.	• Reduce wetland impacts by 25% during the planning and construction of new / public ditch projects through the year 2003. • 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%. • Improve by year 2003 the function and value for fish and wildlife of coastal and freshwater wetlands on a total 3000 wetland acres.

	habitats.		• Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC / PSE&G Settlement Agreement of 1995. • Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999. • Achieve 25% of the impoundment restoration goals identified in the Northern Delaware Wetland Rehabilitation Plan by year 2003 (complete seven-site projects). • Increase the percentage of shorelines stabilized annually using bioengineering techniques to 50% by the year 2003.
Toxics in the aquatic system	Declining and stressed populations of fish and shellfish.	Hazardous material handling and disposal practices; accidents(spills); leaking storage systems; landfills; municipal and industrial wastewater treatment plants; storm water runoff; pesticides	▪ 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. ▪ Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.) / 24-hour rainfall event for FY99. ▪ Reduce imperviousness of new development by 20% by the year 2005. ▪ Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998. ▪ Increase response time to environmental, oil and hazardous substance incidents by 20%. ▪ Achieve an 80% compliance rate for operating USTs by 2005. ▪ Mitigate or eliminate releases by home heating fuel tanks by 2010. ▪ Develop an Above Ground Storage Tank Program by 2003. ▪ Remediate fifty per cent (50%) of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (HSCA)(as of Sept. 1, 1995) by 2000. ▪ Remediate 8 hazardous waste high priority sites (not Superfund or HSCA sites) by 1999. ▪ Ensure 55% of inspected facilities are in compliance with hazardous waste laws and regulations at time of first inspection by 1999. ▪ Ensure 100% of hazardous waste facilities assessed are returned to compliance within 180 days by 1999. ▪ Reduce the percentage of active LUST sites impacting drinking water to less than 15% by 2005.
Habitat fragmentation	Declining wildlife habitat; Decreased biodiversity; habitat deterioration	Land use conversions; development.	• Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999. • Increase the protection of sensitive lands including State Tidal Wetlands and Subaqueous Lands by 5% by the year 2008. • Increase by year 2003 the number of acres actively managed for wildlife or fisheries habitats

	from non-point source pollution		on public and/or private lands by a total of 50%. • Protect an additional 8,000 acres of conservation lands by acquisition/easement with emphasis on upland forests and riparian buffers through the year 2003.

III. STRESSORS AND SOURCES IMPACTING RECREATIONAL OPPORTUNITIES

Stressors	*Our Concerns*	*Sources*	***Objectives***
Public Outdoor Recreation Needs Unmet at the State and Local Levels	Declining open space with increased dependence on public lands resulting in over use of these areas.	Limited scope of community planning: lack of facilities and opportunities; Public demand for recreation increasing	▪ Assist in the addition of 50 acres of parkland and 12 outdoor recreation facilities at the municipal and county levels by 2004. ▪ Improve operations, maintenance, visitor services, and safety in the Wilmington State Parks. ▪ Increase outside funding sources by 10% to support park operations, maintenance and development by 2004.
Water Quality Limitations for Recreational Uses	Declining fish and shellfish populations with an increasing demand for water–based recreation.	Point and non point source pollution	▪ Maintain no net loss of approved waters for shellfish harvest and consumption ▪ Increase waterways designated as fishable and swimmable by 5% by 2003.
Loss of Open Space	Declining open space with increased dependence on public lands resulting in over use of these areas, habitat fragmentation, and diminished recreational opportunities.	Residential and Commercial Development; coastal storms and beach erosion	▪ Protect 10,000 additional acres of land through the Open Space Program, through purchase, donation and conservation easements, by 2002 for parks, wildlife areas, state forests, cultural sites and greenways. ▪ Achieve no net loss of recreational and protective beach area along the Delaware Bayshore and Atlantic Ocean coast as measured on a 3 to 7 year re-nourishment cycle.
Multiple Uses of the Same Resource	Conflicting uses place strain on our resources, cause safety concerns, and diminish the quality of	Too few areas to meet diverse recreational needs	▪ Increase the number of interpretive trails on state land by 5 percent by 2002. ▪ Improve 30 miles of trails and add 20 miles of trails or paved pathways throughout the state by 2004.

	recreational experiences.		
Aging Recreation Facilities	Facilities that are not well-maintained are aesthetically unpleasing, cause safety hazards, and diminish the recreation experience.	Inadequate funding for maintenance and rehabilitation; reduced navigable waterways due to accumulated sediments	▪ Reduce major rehabilitation expenditure and curb facility deterioration by increasing preventative maintenance by 5%. ▪ Reduce the backlog of infrastructure needs and building rehabilitation by 5% annually. ▪ 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 May 1999.

IV. STRESSORS AND SOURCES IMPACTING THE COMMITMENT TO ENVIRONMENTAL PROTECTION AND RESOURCE CONSERVATION

Stressors	*Our Concerns*	*Sources*	*Objectives*
Loss of prehistoric, historic and cultural resources	Disappearance and incomplete information of human's adaptation to the land and its cultural heritage	Development / growth; Lack of interest and awareness, inadequate funding for maintenance and rehabilitation, effects of natural forces (erosion, weathering)	▪ 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 1% of DNREC landholdings annually. ▪ Develop cultural resources management plans for 2 state parks, nature preserves, or wildlife areas by 2004. ▪ Identify and document at least four significant folklore resources in Delaware by 2003.
Media-specific focus (e.g. air, water, waste etc.)	Narrowly focused missions and objectives inhibit effective and efficient use of resources	Single media laws, regulations, organizational structures, and budgetary practices	▪ By 2001, 75% of all new industrial operations will be going through multimedia permitting reviews. ▪ Achieve a 30% reduction in Toxics Release Inventory releases (and possibly off-site transfers) from 1995 levels by 2000. ▪ Reduce the quantity of hazardous waste generated by 20%(over 1995 levels) by the year 2000. ▪ Complete the first full rotation of the management cycle for all basins within the State by the year 2004. ▪ Biannually target one critical area for development of a Special Area Management Plan (SAMP). ▪ 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.
Disparate databases / data fragmentation	Comprehensive analysis of stressed ecosystems and affected populations	Independent evolution and lack of integration in the development of programs	▪ By 2005 DNREC will implement a means to effectively collect and manage 80 % of the information that its partners require in order to manage for environmental results. ▪ By 2000 DNREC employees will have access to a minimum set of desktop computing resources and communications tools. ▪ By 2005 DNREC will ensure public access to 50 % of its public information by electronic means. ▪ Integrate new and existing databases and increase the capacity of a shared information management environment by 80% by 2008.
Sprawl	Land use patterns and trends impact future quality of life and land use.	Poorly planned growth, insufficient data acquisition and exchange, low level of emphasis on urban conservation	▪ Reduce the rate of private, undeveloped rural lands (Greenfields) conversions by 25% (of the 1995 rate) by the year 2000. ▪ Demonstrate that planned work, live, and play communities (village concept) provide a balance and distribution of mixed residential and non-residential (employment and services) land uses which will result in at least a 10% reduction in the average length of vehicle trips by the year 2005.

			▪ Clean up and make available for reuse 8 Brownfields sites annually ▪ Assist communities by providing alternative funding sources, such as the 21st Century Fund for water and wastewater infrastructure.
"Disposal" mentality	Avoid and minimize future problems	Lack of focus on source reduction first, inadequate alternatives	▪ Achieve a 30% reduction in Toxics Release Inventory releases (and possibly off-site transfers) from 1995 levels by 2000. ▪ Reduce pollutant loadings to publicly owned treatment works from industrial dischargers by 10% by 2000. ▪ By 2001, 60% of state agencies have established pollution prevention objectives and strategies.
Awareness / public interest level	Informed decisions from the public	Lack of information on consequences and benefits of personal actions or involvement	▪ By 2000 have 75% of high school economics teachers utilizing pollution prevention information in their courses. ▪ By 2000, obtain commitments to incorporating specific pollution prevention and environmental strategies from industry and business, government, citizens, environmental organizations, and the communications media. ▪ DNREC will increase the public's understanding of the agency and its activities by 25 percent (over results from 1997 survey) by 2000. ▪ DNREC will 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. ▪ DNREC will enhance its capacity to create a stronger environmental ethic among Delawareans through devotion of greater resources to public information and education programs through measurements gathered by periodic public surveys. ▪ DNREC will establish a baseline data to increase communications efforts by targeting disadvantaged socio-economic populations on environmental issues, which may affect those population groups. The communications effort will then increase 25% annually after this year 2000 target.

APPENDIX B

PERFORMANCE INDICATORS FOR OUR OBJECTIVES

I. PROMOTE HEALTH AND SAFETY

Objectives	Performance Indicator	Input	Output	Outcome
Water Quality & Quantity				
1. 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.	Emissions (DSW 29)			✓
2. Develop compliance strategies for all wastewater systems from the current base and using the current water quality standards, by the year 2002.	% of w/w and large septic systems in compliance		✓	
3. Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.)/24-hour rainfall event for FY99.	Compliance Rate (DSW 28)		✓	
4. Protect 6000 new acres of land in FY1999 through drainage, flood control, and water management	Water Management Acreage (DSW 23)		✓	
5. Reduce imperviousness of new development by 20% by the year 2005..	Acceptance rate for voluntary conservation design(DSW 28)		✓	
6. Reduce the percentage of active LUST sites impacting drinking water to less than 15% by 2005.	% of LUST sites impacting drinking water		✓	
7. 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.	# of drinking water or boil advisories			✓
8. Provide for the equitable allocation of surface and ground water supplies through the analysis and issuance of allocation permits to water users	# of allocation permits		✓	
9. Assure that all drinking water wells are constructed and sited such that public exposure to toxic contaminants is avoided	% and # of domestic wells with contamination			✓
Disease				
10. 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).	# of fish consumption advisories by watershed			✓
11. Decrease human contact and health implications due to water borne pathogens and water based vectors by 25% by decreasing the combined sewer overflow occurrences in the Christina Basin	# of swimming advisories by watershed			✓
Public Safety				
12. Respond to all emergency search and rescue operations within 90 minutes	% of responses within 90 minutes		✓	
13. Have no hunting-related nor recreational boating-related fatalities.	# of fatalities			✓
14. Reduce visitor and employee accidents in state parks by 5% annually	number of reported accidents compared with number of reported accidents in the previous year		✓	

Air Quality				
15. Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons / day by 1999 via Ozone Transport Commission NO_x MOU.	SIP Emissions Inventory			✓
16. Attain 1-hour ozone standard by 2005 in New Castle and Kent Counties.	Daily Air Quality Index			✓
17. Achieve 100% compliance with all air quality regulations.	Ambient concentrations - 5 criteria pollutants			✓
18. Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998.	Toxics Release Inventory		✓	
19. Maintain no exceedences of air quality standards for particulate matter, sulfur dioxide, carbon monoxide and nitrogen dioxide.	Ambient concentrations - 5 criteria pollutants			✓
Waste Management				
20. Increase response time to environmental, oil and hazardous substance incidents by 20%.	Adequacy of capacity to respond to emergencies		✓	
21. Remediate 12 debris pits per year once a debris pit remediation fund is established.	# of SW cleanups completed			✓
22. Ensure 100% compliance with permit requirements for contaminant discharges from solid waste transfer and disposal facilities.	# of SW facilities in compliance with technical standards		✓	
23. Achieve an 80% compliance rate for operating USTs by 2005.	% compliance rates for operating USTs		✓	
24. Mitigate or prevent releases by home heating fuel tanks by 2010.	# of unregulated LUST sites		✓	
25. Mitigate and prevent releases from above ground storage tanks by 2015.	# of tons of contaminated soil treated or disposed		✓	
26. Remediate fifty per cent (50%) of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (as of Sept. 1, 1995) by 2000.	# of cleanups completed in Superfund, HSCA, VCP			
27. Remediate 8 hazardous waste high priority sites (not Superfund or HSCA sites) by 1999.	Hazardous waste ground water releases controlled. Human exposure for hazardous waste CA sites controlled.		✓	
28. Ensure 55% of inspected generator / TSDFs are in compliance with hazardous waste laws and regulations at time of first inspection by 1999.	# of sites in compliance at first time of assessment		✓	
29. Ensure 100% of hazardous waste facilities assessed return to compliance within 180 days by 1999.	# of facilities returning to compliance within 180 days		✓	

II. CONSERVE PLANT AND ANIMAL RESOURCES

Objectives	Performance Indicator	Input	Output	Outcome
Applied Habitat Research, Management and Restoration				
1. Reduce wetland impacts by 25% during planning and construction of new tax / public ditch projects and by 10% for maintenance of existing tax / public ditch projects through the year 2003.	% of Wetland Acreage Impacted (DSW 26)		✓	
2. 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%.	Mosquito Control Source Reduction(*DFW-34)*	✓		
3. 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%.	Technical Assistance to Private Landowners(*DFW 24)* Wetlands Habitat and / or Restoration(*DFW-35)*	✓		
4. Improve by year 2003 the function and value of coastal and freshwater wetlands on a total 3000 wetland acres.	Wetlands Habitat Enhancement and / or Restoration(*DFW-35)*	✓		
5. Implement 100% of the existing state-level responsibilities for achieving the goals and objectives of the North American Waterfowl Management Plan by the year 2003.	Land Acquisition Increases(*DFW-30)*			✓
6. Continue implementation of protection, recovery or management plans (federal or state) for endangered, threatened, or species of special concern on an annual basis.	Natural Heritage Inventory(*DFW-2)* Endangered & Nongame, Migratory, Wintering Bird Populations(*DFW-4)* Endangered & Nongame Breeding Bird Populations(*DFW-5)* Endangered & Nongame Mammal Populations(*DFW-6)* Endangered & Nongame Reptiles &Amphibian Populations(*DFW-7*) Endangered Plant Species (*DFW-8.)*Fishery Management Plans Completed(*DFW - 39*)		✓	
7. Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999.	Wildlife / Fisheries Habitat Lost(*DFW - 3)*		✓	

8. Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC / PSE&G Settlement Agreement of 1995.	Wildlife / Fisheries Habitat Lost(*DFW – 3)*		✓	
9. Achieve 25% of the impoundment restoration goals identified in the Northern Delaware Wetlands Rehabilitation Plan by year 2003 (complete 7 site projects).	Wetlands Habitat Enhancement and / or Restoration(*DFW – 35)*	✓		
10. Minimize wildlife damage complaints (i.e. deer, beaver, snow geese, resident Canada geese) to a level acceptable to general public as measured by a 5% increase in providing assistance to landowners through the year 2003.	Upland / Big Game Trends(*DFW – 28)*	✓		
11. Protect an additional 8,000 acres of conservation lands by acquisition / easement with emphasis on upland forests and riparian buffers through the year 2003..				
12. 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.	Upland / Big Game Trends(*DFW – 28)* Waterfowl Surveys(*DFW – 29)*	✓		
13. Reduce nuisance plant species on public and private lands and waters / wetlands in order to improve the natural functioning of these systems by a minimum of 2000 acres per year through the year 2003.	Aquatic Weed Control(*DFW – 23)* Phragmites Control(*DFW – 37)*		✓	
14. 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.	Artificial Reefs(*DFW – 18)*	✓		
15. Develop one comprehensive Park Management Plan or Natural Preserve Management Plan annually through the year 2003 that improves the quality of the environment, by emphasizing habitat analysis, improvement / compatibility of recreational uses, environmental education and infrastructure development				
16. Complete a natural community classification document for Delaware, and assign rarity ranks for each community type by 2001.	Natural Heritage Inventory(*DFW-2)*			
17. Develop a checklist for the flora of Delaware, including bryophytes, and assign a state rarity rank for each taxon by 2003.	Natural Heritage Inventory(*DFW-2)*			
18. Complete natural heritage inventories of five wildlife management areas (one per year) by 2003. These inventories will include surveys for rare plant and animal species, natural community mapping, and point count surveys for nesting and migrating birds.				
19. Increase the percentage of shorelines stabilized annually using soil bioengineering techniques to 50% by the year 2003				
20. Assess the capability of the Inland Bays to support submerged aquatic vegetation at six locations by the year 2003.				

III. PROMOTE AND PROVIDE RECREATIONAL OPPORTUNITIES

Objectives	Performance Indicator	Input	Output	Outcome
1. Protect 10,000 additional acres of land through the Open Space Program, through purchase, donation and conservation easements, by 2002 for parks, wildlife areas, state forests, cultural sites and greenways.	Number of acres protected		✓	
2. Increase the number of interpretive trails by 5 percent by 2002.	Number of Interpretive Trails		✓	
3. Improve 30 miles of trails and add 20 miles of trails or paved pathways throughout the state by 2004.	Number of trail miles improved; number of new trail miles		✓	
4. Assist in the addition of 50 acres of parkland and 12 outdoor recreation facilities at the municipal and county levels by 2004.	Acres of municipal & county parkland; Number of county & municipal outdoor recreation facilities.		✓	
5. Improve operation, maintenance, visitor services and safety in the Wilmington State Parks.	Installation of informational & regulatory signs at all parking areas and public access points into the parks; Initiation of "Carry-In, Carry-Out" trash free parks program; Hiring of on-site enforcement staff; Closure of the park after sunset; Opening of park office for visitor services and information; Initiation of repairs to park roadways and the stadium track.*	✓		
6. Increase outside funding sources by 10% to support park operations, maintenance and development by 2004.	Number of dollars from non-state sources	✓		
7. 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 May 1999.	Number of Cubic Yards Removed (DSW 27)		✓	
8. Achieve not net loss of recreational and protective beach area along the Delaware Bayshore and Atlantic Ocean coast as measured on a 3 to 7 year re-nourishment cycle.	Dry Sand Beach Width fronting infrastructure; Surveys conducted by staff		✓	
9. Stabilize declining hunting license numbers at 21,607 annually based on the U.S. Fish and Wildlife Service 1997 License Index.	Number of Hunting Licenses – (*DFW – 25)*		✓	
10. Increase the number of fishing licenses issued by 5% annually based upon the U.S. Fish	Number of Fishing Licenses –		✓	

and Wildlife Service 1996 License Index of 27,834.	(*DFW – 10)*			
11. Maintain no net loss of approved waters for shellfish harvest and consumption.	*(SW 6)*			
12. Increase waterways designated as fishable and swimmable by 5% by 2003.	*(SW 7, SW 8, SW 9, SW 10)*			
13. Reduce major rehabilitation expenditure and curb facility deterioration by increasing preventive maintenance by 5%.	Delay of major rehabilitation planned		✓	
14. Reduce the backlog of infrastructure needs and building rehabilitation by 5% annually.	Number of buildings rehabilitated in a year		✓	

IV. BROADEN THE COMMITMENT TO ENVIRONMENTAL PROTECTION AND RESOURCE CONSERVATION

Objectives	Performance Indicator	Input	Output	Outcome
POLLUTION PREVENTION				
1. Achieve a 30% reduction in Toxics Release Inventory releases (and off-site transfers?) from 1995 levels by 2000.	TRI reports (OS - 1)			✓
2. Reduce pollutant loadings to publicly owned treatment works from industrial dischargers by 10% by 2000.	To be developed (OS - 2)			✓
3. By 2000 to have 75% of high school economics teachers utilizing pollution prevention information in their courses				
4. By 2000, obtain commitments to incorporating specific pollution prevention and environmental strategies from industry and businesses, government, citizens, environmental organizations, and the communications media.	# of developed and signed commitments (number or depth) (OS - 3)		✓	
5. By 2001, 60 % of state agencies have established pollution prevention objectives and strategies	# of agencies with written strategies and objectives (OS - 4)		✓	
6. By 2001, 75 % of all new industrial operations will be going through multimedia permitting reviews.	To be developed (OS- 5)		✓	
7. Reduce the quantity of hazardous waste generated by 20%(over 1995 levels) by the year 2000.	Annual Reports from Hazardous Waste Generators (DAWM HW-2, HW-4, HW-12, HW-13)		✓	
Community and Growth Guidance				
1. Reduce the rate of private, undeveloped rural lands (Greenfields) conversions by 25% (of the 1995 rate) by the year 2000.	Annual loss of greenfields measured over total greenfields (OS - 6)		✓	
2. Demonstrate that planned work, live, and play communities (village concept) provide a balance and distribution of mixed residential and non-residential (employment and services) land uses which will result in at least a 10% reduction in the average length of vehicle trips.	To be developed (OS - 7)			✓
3. Clean up and make available for reuse 8 Brownfields sites annually	Number of Remediations (DAWM SF-1)		✓	
4. Assist communities by providing funding sources, such as the 21st Century Fund for water and wastewater infrastructure.	Annual disbursement report (DWR - 2)		✓	

Education				
1. DNREC will increase the public's understanding of the agency and its activities by 25 percent (over results from 1997 survey) by 2008.	To be developed (OS - 8)			✓
2. DNREC will 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.	To be developed (OS - 9)			✓
3. DNREC will enhance its capacity to create a stronger environmental ethic among Delawareans through devotion of greater resources to public information and education programs through measurements gathered by periodic public surveys.	To be developed (OS - 10) Fish & Wildlife Education(*DFW – 41)*			✓
4. DNREC will establish a baseline data to measure communication efforts by targeting disadvantaged socio-economic populations on environmental issues. Our communication effort will then increase 25 % annually.	To be developed (OS - 11)		✓	
Systematic Approaches				
1. Complete the first full rotation of the management cycle for all basins within the State by the year 2004	Completed management cycle (OS - 12)		✓	
2. Biannually target one critical area for development of a Special Area Mgmt.Plan(SAMP)	Completed SAMP plan (SW-)		✓	
3. 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.	EPA Priority list (DWR - 1)		✓	
Information and Data Systems				
1. By 2005 DNREC will implement a means to effectively collect and manage the information that its partners require in order to manage for environmental results.	Data set measurements (OS - 13)		✓	
2. By 2000 DNREC Employees will have access to a minimum set of desktop computing resources and communications tools.	To be developed (OS - 14)		✓	
3. By 2005 DNREC will ensure public access to 50 % of its public information via electronic means.	Data set measurements (OS - 15)		✓	
4. Integrate new and existing databases and increase the capacity of a shared information management environment by 80% by 2008	Data set measurements (OS - 16)		✓	
Historic & Cultural Resources				
1. Annually, work to ensure that DNREC historic preservation responsibilities, under state and federal laws, are met effectively, efficiently, and economically.	Efficiency and financial reports (DPR -)		✓	
2. Locate and identify prehistoric and historic cultural resources on 1 % of DNREC landholdings annually.	To be developed (DPR -)		✓	
3. Develop cultural resources management plans for 2 state parks, nature preserves or wildlife areas by 2004.	To be developed (DPR -)		✓	
4. Identify and fully document at least 4 significant folklore resources by 2003.	To be developed (DPR -)		✓	

APPENDIX C

OPERATIONAL PLANS FOR THE DIVISIONS

Note: *The operational plans are prepared annually and reflect the allocation of personnel and other resources by Authorized Program Unit (APU), e.g. division, for the coming fiscal year. They should serve as an expression of the short-term actions that must be taken if progress is to be made toward achieving the stated goals and objectives.*

I. PROMOTE HEALTH AND SAFETY

Objectives	Operational Plans					
	OS	**DSWC**	**DFW**	**DPR**	**DWR**	**DAWM**
1. 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.						
2. Develop compliance strategies for all wastewater systems from the current base and using the current water quality standards, by the year 2002.						
3. Manage storm water runoff, as required by the Sediment and Storm Water Management regulations, from 100% of new development at the predevelopment rate for the 2-year, 10-year, and (100-year in NCCo.)/24-hour rainfall event for FY99.						
4. Protect 6000 new acres of land in FY1999 through drainage, flood control, and water management						
5. Reduce imperviousness of new development by 20% by the year 2005..						
6. Reduce the percentage of active LUST sites impacting drinking water to less than 15% by 2005.						
7. 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.						
8. Provide for the equitable allocation of surface and ground water supplies through the analysis and issuance of allocation permits to water users						
9. Assure that all drinking water wells are constructed and sited such that public exposure to toxic contaminants is avoided						
10. 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).						
11. Decrease human contact and health implications due to water borne pathogens and water based vectors by 25% by decreasing the combined sewer overflow occurrences in the Christina Basin						
12. Respond to all emergency search and rescue operations within 90 minutes						
13. Have no hunting-related nor recreational boating-related fatalities						
14. Reduce visitor and employee accidents in state parks by 5% annually						
15. Reduce oxides of nitrogen (NO_x) emissions by 24.0 tons/day by 1999 via Ozone Transport Commission NO_x MOU.						
16. Attain 1-hour ozone standard by 2005 in New Castle and Kent Counties						
17. Achieve 100% compliance with all air quality regulations						
18. Reduce emissions of benzene in WWT by 95%, chrome in cooling towers by nearly 100%, and dry cleaning and chrome electroplating significantly by 1998						
19. Maintain no exceedences of air quality standards for particulate matter, sulfur dioxide, carbon monoxide and nitrogen dioxide						
20. Increase response time to environmental, oil and hazardous substance incidents by 20%.						

21. Remediate 12 debris pits per year once a debris pit remediation fund is established						
22. Ensure 100% compliance with permit requirements for contaminant discharges from solid waste transfer and disposal facilities						
23. Achieve an 80% compliance rate for operating USTs by 2005						
24. Mitigate or prevent releases by home heating fuel tanks by 2010						
25. Mitigate and prevent releases from above ground storage tanks by 2015						
26. Remediate fifty per cent (50%) of high priority sites currently on the inventory under the Delaware Hazardous Substance Cleanup Act (as of Sept. 1, 1995) by 2000						
27. Remediate 8 hazardous waste high priority sites (not Superfund or HSCA sites) by 1999						
28. Ensure 55% of inspected generator/TSDFs are in compliance with hazardous waste laws and regulations at time of first inspection by 1999						
29. Ensure 100% of hazardous waste facilities assessed return to compliance within 180 days by 1999						

II. CONSERVE PLANT AND ANIMAL RESOURCES

Objectives	Operational Plans					
	OS	**DSWC**	**DFW**	**DPR**	**DWR**	**DAWM**
1. Reduce wetland impacts by 25% during planning and construction of new tax/public ditch projects and by 10% for maintenance of existing tax/public ditch projects through the year 2003.						
2. 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%.						
3. 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%.						
4. Improve by year 2003 the function and value of coastal and freshwater wetlands on a total 3000 wetland acres.						
5. Implement 100% of the existing state-level responsibilities for achieving the goals and objectives of the North American Waterfowl Management Plan by the year 2003.						
6. Continue implementation of protection, recovery or management plans (federal or state) for endangered, threatened, or species of special concern on an annual basis.						
7. Fully implement the Comprehensive Conservation and Management Plan for Delaware's Tidal Wetlands by year 1999.						
8. Achieve by year 2010 the environmental improvement objectives for wetlands and fisheries identified in the DNREC/PSE&G Settlement Agreement of 1995.						
9. Achieve 25% of the impoundment restoration goals identified in the Northern Delaware Wetlands Rehabilitation Plan by year 2003 (complete 7 site projects).						
10. Minimize wildlife damage complaints (i.e. deer, beaver, snow geese, resident Canada geese) to a level acceptable to general public as measured by a 5% increase in providing assistance to landowners through the year 2003.						
11. Protect an additional 8,000 acres of conservation lands by acquisition/easement with emphasis on upland forests and riparian buffers through the year 2003..						
12. 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.						
13. Reduce nuisance plant species on public and private lands and waters/wetlands in order to improve the natural functioning of these systems by a minimum of 2000 acres per year through the year 2003.						
14. 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.						

15. Develop one comprehensive Park Management Plan or Natural Preserve Management Plan annually through the year 2003 that improves the quality of the environment, by emphasizing habitat analysis, improvement/compatibility of recreational uses, environmental education and infrastructure development						
16. Complete a natural community classification document for Delaware, and assign rarity ranks for each community type by 2001.						
17. Develop a checklist for the flora of Delaware, including bryophytes, and assign a state rarity rank for each taxon by 2003.						
18. Complete natural heritage inventories of five wildlife management areas (one per year) by 2003. These inventories will include surveys for rare plant and animal species, natural community mapping, and point count surveys for nesting and migrating birds.						
19. Increase the percentage of shorelines stabilized annually using soil bioengineering techniques to 50% by the year 2003.						
20. Assess the capability of the Inland Bays to support submerged aquatic vegetation at six locations by the year 2003.						

III. PROMOTE AND PROVIDE RECREATIONAL OPPORTUNITIES

Objectives	Operational Plans					
	OS	**DSWC**	**DFW**	**DPR**	**DWR**	**DAWM**
1. Protect 10,000 additional acres of land through the Open Space Program, through purchase, donation and conservation easements, by 2002, for parks, wildlife areas, state forests, cultural sites, and greenways.						
2. Increase the number of interpretive trails by 5 percent by 2002.						
3. Improve 30 miles of trails and add 20 miles of trails or paved pathways throughout the state by 2004.						
4. Assist in the addition of 50 acres of parkland and 12 outdoor recreation facilities at the municipal and county levels by 2004.						
5. Improve operation, maintenance, visitor services and safety in the Wilmington State Parks.						
6. Increase outside funding sources by 10% to support park operations, maintenance and development by 2004.						
7. 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 May 1999.						
8. Achieve not net loss of recreational and protective beach area along the Delaware Bayshore and Atlantic Ocean coast as measured on a 3 to 7 year re-nourishment cycle.						
9. Stabilize declining hunting license numbers at 21,607 annually based on the U.S. Fish and Wildlife Service 1997 License Index.						
10. Increase the number of fishing licenses issued by 5% annually based upon the U.S. Fish and Wildlife Service 1996 License Index of 27,834.						
11. Maintain no net loss of approved waters for shellfish harvest and consumption.						
12. Increase waterways designated as fishable and swimmable by 5% by 2003.						
13. Reduce major rehabilitation expenditure and curb facility deterioration by increasing preventive maintenance by 5%.						
14. Reduce the backlog of infrastructure needs and building rehabilitation by 5% annually.						

IV. BROADEN THE COMMITMENT TO ENVIRONMENTAL PROTECTION AND RESOURCE CONSERVATION

Objectives	Operational Plans					
	OS	**DSWC**	**DFW**	**DPR**	**DWR**	**DAWM**
POLLUTION PREVENTION						
1. Achieve a 30% reduction in Toxics Release Inventory releases (and off-site transfers?) from 1995 levels by 2000.						
2. Reduce pollutant loadings to publicly owned treatment works from industrial dischargers by 10% by 2000.						
3. By 2000 to have 75% of high school economics teachers utilizing pollution prevention information in their courses						
4. By 2000, obtain commitments to incorporating specific pollution prevention and environmental strategies from industry and businesses, government, citizens, environmental organizations, and the communications media.						
5. By 2001, 60 % of state agencies have established pollution prevention objectives and strategies						
6. By 2001, 75 % of all new industrial operations will be going through multimedia permitting reviews.						
7. Reduce the quantity of hazardous waste generated by 20%(over 1995 levels) by the year 2000.						
Community and Growth Guidance						
1. Reduce the rate of private, undeveloped rural lands (Greenfields) conversions by 25% (of the 1995 rate) by the year 2000.						
2. Demonstrate that planned work, live, and play communities (village concept) provide a balance and distribution of mixed residential and non-residential (employment and services) land uses which will result in at least a 10% reduction in the average length of vehicle trips.						
3. Clean up and make available for reuse 8 Brownfields sites annually						
4. Assist communities by providing funding sources, such as the 21st Century Fund for water and wastewater infrastructure.						
Education						
1. DNREC will increase the public's understanding of the agency and its activities by 25 percent (over results from 1997 survey) by 2008.						
2. DNREC will 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.						
3. DNREC will enhance its capacity to create a stronger environmental ethic among Delawareans through devotion of greater resources to public information and education programs through measurements gathered by periodic public surveys.						

4. DNREC will establish baseline data to measure communication efforts by targeting disadvantaged socio-economic populations on environmental issues. Our communication effort will then increase 25 % annually.						
Systematic Approaches						
1. Complete the first full rotation of the management cycle for all basins within the State by the year 2004						
2. Biannually target one critical area for development of a Special Area Management Plan (SAMP).						
3. 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.						
Information and Data Systems						
1. By 2005 DNREC will implement a means to effectively collect and manage the information that its partners require in order to manage for environmental results.						
2. By 2000 DNREC employees will have access to a minimum set of desktop computing resources and communications tools.						
3. By 2005 DNREC will ensure public access to 50 % of its public information via electronic means.						
4. Integrate new and existing databases and increase the capacity of a shared information management environment by 80% by 2008						
Historic & Cultural Resources						
1. Annually, work to ensure that DNREC historic preservation responsibilities, under state and federal laws, are met effectively, efficiently, and economically.						
2. Locate and identify prehistoric and historic cultural resources on 1 % of DNREC landholdings annually.						
3. Develop cultural resources management plans for 2 state parks, nature preserves or wildlife areas by 2004.						
4. Identify and fully document at least 4 significant folklore resources by 2003.						

APPENDIX D

FOURTEEN FREQUENTLY ASKED QUESTIONS ABOUT OUR VISION

FOURTEEN FREQUENTLY ASKED QUESTIONS ABOUT OUR VISION

1) **What prompted the Department to prepare this document?**

The Department has been struggling to find a way to most effectively use our scarce resources to achieve the kinds of results in the environment that we – and the people of Delaware – want to achieve. Our Department Secretary, Christophe Tulou, thought that the Performance Partnership Agreement with EPA (described under question 4, below) was the answer. He was wrong. Many DNREC employees were uncomfortable with this "top-down" approach. It involved a federal agency that dealt with only a portion of DNREC; it was driven by "outside" forces; and there was not enough "buy in" to ensure its success within DNREC, much less in the environment. This document is OUR plan, represents our collective vision, shows how our programs fit together and relate to each other, and as a result, is much more than a collection of individual division plans.

2) **How was this document developed and by whom?**

This document was developed over a 15-month period by a group of DNREC staff (originally dubbed the "IT" Team, and then the "Vision Group") representing all divisions. Participants were selected because of their broad knowledge of programs, and networked with other DNREC staff to develop this document.

3) **What will this be used for?**

This document will be used for a variety of purposes. It may be used as a guide by DNREC employees to identify their individual "connectedness" to the overall goals and objectives of the Department. Employees and supervisors could, for example, incorporate appropriate objectives into performance plans. It will also be a tool that we can use to educate and influence a wide variety of constituencies, and to seek their comments on our goals and objectives as well as our progress in meeting them. It will be the foundation upon which future Department-wide plans and interagency initiatives – like the Performance Partnership Agreement – will be built. It will also serve as the basis for our annual budget strategic plan and our budget submission itself. The document will also, hopefully, inspire a creative environment within which goal- and results-based strategic thinking is fostered to allow us to respond quickly to new challenges as they arise.

4) **Is this the same thing as the Performance Partnership Agreement (PPA)?**

No. This is a DNREC document. However, it should serve as the basis for building future PPAs which in essence would be subsets of the issues contained in this document. At this point, it would probably be helpful to describe what the PPA is. Under the National Environmental Performance Partnership System (NEPPS), DNREC has entered into a partnership with the Federal Environmental Protection Agency (EPA) to meet environmental challenges in Delaware. This partnership is defined by Performance Partnership Agreements (PPA) that lay out the various commitments that EPA and DNREC have made to meet environmental goals in Delaware. We have also developed a Performance Partnership Grant (PPG) process which allows the consolidation of many EPA grants, and provides DNREC flexibility to direct those funds toward environmental priorities identified in our PPA.

5) **Is it going to be a plan that sits on the shelf, or will it actually be used?**

Frankly, that depends on our commitment – not to the document itself – but to the concepts of coordinating our efforts, leveraging our resources, and directing ourselves to achieving real, tangible results in the environment, our natural resources and recreational opportunity. This document may not be all that important to some DNREC employees. It is a way of putting a face on the results we desire and

the process that will best ensure we achieve them. For some people, a tangible document is important. For others, these principles are already alive and well – for example among those who are hard at work on our Whole Basin Management Teams. The document will allow those who are interested to see how their efforts relate to our priorities and to the efforts of others in the Department who are working toward those same goals and objectives. Sometimes those connections are not so obvious. The document should also be important to our constituencies outside our walls – such as other State agencies, the Governor's Office, the Budget Office, the General Assembly, federal partners, and our citizens. They can use this document to get a better idea of where we're headed, why and how. As the basis for forging important partnerships, and for building future budgets, the document will have to be dusted regularly. It should also be a living statement, subject to modification on an on-going basis to reflect changing needs and priorities. Of course, many of the goals and several of the objectives will have sufficient "legs" to carry us some time into the future.

6) **What is the timeframe for this strategic plan document?**

We are hoping to have this year's version of the plan done by July 20th, the due date for submission of the annual "strategic plan" to the Budget and Governor's Offices. While most of the basic elements of this document will remain part of our strategic plan for some time, it will change slightly based on our regular (probably annual) updates.

7) **Do "Our Core Values" and "Our Management Principles" really belong in this document?**

Not necessarily. They have been included as part of a package that speaks very broadly about what DNREC is all about. We want all our interested audiences to know what we believe in. Also, by including them, we reinforce these beliefs for our team. Any of these pieces, depending on your needs, may be removed and used separately.

8) **Now that the Department is about to have a final Vision Statement and a Department Strategic Plan, what might or does this mean (in terms of substantive impacts/effects) to:**

a. Meeting or fulfilling requirements / mandates from the General Assembly; from the State Budget Office?

This document allows us to engage the General Assembly and the Budget Office in a factual discussion about the environmental, natural resource and recreational needs of the State of Delaware. It provides for the tracking of progress toward meeting appropriate goals and objectives. It will allow us, the General Assembly, the Budget Office, and anyone else who is interested, to see where the gaps and needs are. In that way, it should make mandates and requests coming to this Department more informed. Our Constitutional role of executing the laws of the State with the resources provided by the General Assembly will be unchanged. This proposed process, through the performance measures, will provide a better means of accountability to those activities to which we have committed ourselves, or the General Assembly had directed us to perform.

b. **Development/implementation of the PPA and allocation of PPG funds (primarily EPA federal funds)?**

This document should serve as the foundation for building future agreements with Federal agencies and other partners, and should provide guidance for disbursement of grant funds. Given that the NEPPS process is a two-way street with EPA, this document gives us a better sense of the Delaware-specific needs that should be addressed – and rectified – through the PPA/PPG process (described in question 4).

c. **Budget development/allocation of state general funds?**

This document should serve as the foundation for building our annual budget request. Clearly, priorities can change – often quickly – and others may have different priorities than we do. However, this document reflects a careful assessment of long-term priorities that remain regardless of short-term needs. By focusing on those priorities (assuming they continue to be priorities for us and the citizens of Delaware) and measuring progress towards them, we will reinforce our credibility, thus making our requests and priorities more compelling. Please note that some of our basic programs will continue to be funded through the budget process even though they may not be explicitly mentioned in this document.

d. Budget development/allocation of non-EPA federal funds (e.g., DOI/USFWS grants – Pittman/Robertson, Wallop/Breaux funds; NOAA grants – DCMP, DNERR funds)?

Again, this document should serve as the foundation for building future funding relationships with all our federal partners. Clearly, federal funding agencies have their agendas. To the extent they want to invest in Delaware's well-being, we should also have a well-defined agenda – particularly if matching funds are required. This document will provide us with clearly stated goals and objectives; we should use it to seek all the partnerships and resources that will allow us to reach them. As new challenges or opportunities arise, we should be quick enough on our feet to take advantage of them, and to incorporate them into our Vision / Strategic Plan as appropriate. This document should not merely reflect the funding relationships we have with federal agencies; it should help define them.

e. Development/use of environmental indicators?

This document will be used to identify and track appropriate environmental indicators, along with an appropriate mix of other performance measures. Environmental indicators are those measures of environmental conditions that reflect what we are concerned about, are built on reliable data, measure outcomes in the environment (as opposed to activities within DNREC), and will continue to be useful over the long run. Environmental indicators will enable us to use environmental conditions as a better gauge of our success and as signals of need for change. They should also be easy for anyone to understand, and improve the quality and relevance of our discussions with our various partners and the citizens of Delaware.

f. **Development/implementation of Whole Basin Management?**

Whole Basin Management should be the earliest and simplest success of the Vision/Strategic Plan. Or, maybe, the Vision/Strategic Plan is one of the early successes of Whole Basin Management. In a real sense, the Department's "vision" has been expressed by the work of the WBM teams. We instinctively knew how to "do" it, now we are trying to "say" it. This document is based on the concepts that made WBM a reality in this Department; it will provide the basis for moving WBM forward.

g. **Effects on primarily Division-based programs?**

The key to this question is what results do the programs produce? Do they support the document's goals and objectives? Can they support the goals better? How could they be reconfigured to do that? How can programs work together, across institutional lines, to better achieve our goals? This document stresses that existing programs are not important so much by where they are performed, but what they accomplish. By emphasizing environmental results, this document places an emphasis on looking at all the resources that can get the job done – wherever they may be. Making our fish populations healthier, for example, depends on the good work of those who assess fish populations, improve fisheries habitat, rehabilitate wetlands, clean up contaminated waste sites, reduce deposition of pollutants from our air to our water, and all those who support these efforts. These activities take place in several divisions (and in some cases, other agencies), and they are all essential to healthy fish.

h. **Effects on employee performance plans?**

The document could become an important basis for performance plans. All employees and their supervisors should assess how the employee's work relates to the Vision/Strategic Plan. This may not always be easy, but with careful effort, should be possible for almost all employees. Once that link is established, it should be reflected in the performance plan. For example, for someone involved in contaminated site remediation, relations to fisheries, water quality and other goals supported by his or her work should be noted – not that this one individual becomes personally responsible for those results, but so that individual can recognize that those goals might not be met without his or her assistance. Of course, the person's performance plan should also reflect whatever responsibility may be associated with more specific performance measures related to site remediation. Through this tie with performance plans, employees can become more closely targeted toward, and accountable to, environmental results.

i. **Effects on the Department's organizational structure?**

Some day, probably well into the future, the Department may reorganize to better define itself relative to the environmental results it seeks. For the moment, employees are finding their own way to achieve those results without reorganization (e.g., Whole Basin Management). Since this document represents a somewhat different view of Department management, we should allow some time to pass to see how it works. Certain organizational adjustments may suggest themselves.

9. **Why isn't there an objective for _____?**

This question is available to all who review this document. There may be some objectives out there that have not been captured. If so, please let us know so we can incorporate them to the extent they relate to our priority activities.

10. **Many of the Department's non-administrative activities relate to one or more of the goals, but there are some activities that do not relate to any of the objectives. How will these activities be addressed by the annual budget submission, the PPA/PPG and Employee Performance Plans?**

With careful review, most non-administrative activities will have some connection to the goals and objectives laid out in this document, even if they are not specifically mentioned. The response to question 8(g) may be helpful to see how far afield these connections may go. Ironically, some activities may relate better to objectives traditionally associated with other programs, or even Divisions. No one will fall through the cracks. The goal is to ensure that all our efforts are directed, in some way, toward our goals and objectives. If that isn't being done in a particular instance, we will need to see whether some other important need is being met (e.g., a State or federal mandate). There may be a few instances where employee's talents and experience will be redirected more directly toward the goals and objectives we've identified. In any case, the goal is to make sure that all employees will be engaged in meaningful work, directed toward our goals and objectives, and supported by budgets, grants and performance plans.

11. It seems that the goals and objectives generally don't cover purely administrative (e.g., personnel, budget prep, accounting) and support activities (e.g., basic computer support) that enable us to do business. How will these activities be addressed by the annual budget submission, the PPA/PPG and Employee Performance Plans?

These activities have always been essential to fulfilling our business. That reality will not change with this document. What this document does, for the first time in DNREC's history, is relate these activities – and all of our others – to our highest calling: tangible, measurable improvements in the environment, our natural resources and recreational opportunities. The answer to question 10 may help here, too. Though administrative and support staff may find it difficult to relate to the goals, objectives and performance measures identified in this document, it should not be impossible. For some, it may be refreshing to know that they are important not only for the skills and support they provide, but also for the environmental results they are directly responsible for enabling. This document should provide them with a clearer picture of what their environmental achievements may be. As with all other DNREC employees, no one is single-handedly responsible for making changes in our environment, but as part of a 700+ team focused on environmental results, we can achieve a great deal. Furthermore, everyone in DNREC should be able to relate to the core values and management principles contained in the document.

12. Where can I learn how my program or job relates to this document?

The relevance of a program or job to this document should be carefully sought by each employee. Sometimes, it won't be easy. A careful review of the other questions and answers and the tables in the appendices may provide some hints about how employees might find themselves in this document. Still can't do it? Ask your supervisor. Every supervisor in the Department should know enough about the document to be able to answer this question for his or her staff.

13. How will we track and report our success in meeting these objectives?

The primary mechanism for tracking our success will be through the performance measures highlighted in the document, and through environmental indicators which are being developed. These will be reported annually through our State of the Environment report and our annual report on performance measures. These measures, however, will not capture the fullness of our experience. As always, we should continue to rely on qualitative indicators, especially where quantitative measures are unavailable or don't tell the whole story.

14. What are the consequences if we fail to achieve these objectives?

The consequences of success or failure should be the same as they are now, except that with this process, we will be better able to document reasons and be more confident that we know how to correct our course. By painting a clearer picture of the results we desire, we set a target to which employees can – and most likely will – respond appropriately. By tracking performance measures, we can become more personally and programmatically accountable, and make appropriate strategic adjustments without management direction, or a new plan!