MISSION

The mission of the Department of Natural Resources and Environmental Control (DNREC) is to engage all stakeholders 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. The department is also charged with leading energy and climate change policy.

KEY OBJECTIVES

- Promote health and safety by monitoring, maintaining and improving the quality of air, land and water resources, manage populations of mosquitoes and other pests and prevent and clean up spills involving hazardous chemicals to enhance the health and well being of Delaware’s residents, wildlife and plants.

- Conserve plant and animal resources through protection and management of species populations and their habitats. This effort involves maintenance of biodiversity, harvest allocation of species populations, protection and restoration of ecological functions and educational outreach.

PRIORITIES

Transform DNREC into a model 21st century department - This model better aligns our functions by ensuring efficient service delivery and coordination (air, water, soil and waste), integrating emerging priorities (climate and energy) and modernizing public hearing and permitting processes, so they are transparent, consistent and efficient. It adapts to fiscal realities through realignment and cross-training and improves performance by implementing performance measurement systems that collect and track data on key performance and environmental indicators.
Provide world-class parks and open-space, recreational opportunities and habitat and biodiversity protection - DNREC will implement this priority through expanded land conservation efforts by completing key acquisition and preservation projects, enhancing recreational opportunities and coordinating habitat preservation and ecological restoration efforts. These investments will improve the quality of life for residents, enhance the attractiveness of the State to potential residents and growing companies, improve resident health and provide educational opportunities for youth to become environmental stewards of the future.

Improve public health and environmental outcomes - DNREC will focus on high impact activities to enhance air quality, water quality and supply, soil quality and waste management and habitat and biodiversity protection. These programs will create additional economic opportunity by encouraging investment and accelerate responsible economic development. This effort will initially focus on larger facilities to ensure every major facility and project is in regulatory compliance.

Transition Delaware towards a sustainable green economy - DNREC will strive to integrate a climate prosperity strategy into all aspects of departmental and cabinet-wide operations. This also includes:

- Transforming energy and climate policy by implementing the vision of the Sustainable Energy Utility (SEU);
- Further integrating environmental and health externalities into the Integrated Resource Planning process;
- Participating in Regional Greenhouse Gas Initiative and other climate mitigation efforts;
- Developing adaption plans to address rising sea level and other impacts of climate change;
- Supporting offshore wind deployment/production and other opportunities to grow a green economy;
- Taking a leadership role among state agencies and leading by example on issues related to energy consumption; and
- Promoting sustainable practices through a land use agenda with a focus on more sustainable development practices.

<table>
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<tr>
<th>FUNDING</th>
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<th>FY 2012 BUDGET</th>
<th>FY 2013 GOV. REC.</th>
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**FY 2013 BUDGET HIGHLIGHTS**

**OPERATING BUDGET:**
- Recommend ($269.8) ASF in Personnel Costs to reflect projected expenditures.

**CAPITAL BUDGET:**
- Recommend $1,300.0 for Clean Water State Grant which leverages $6.5 million in federal funds to provide low interest loans to communities for wastewater facility improvements and expansions.
- Recommend $1,500.0 for Conservation Cost Share program, which provides landowners funding assistance for the design and installation of systems that best protect water supplies and natural resources while minimizing erosion of farmland and the pollution of wildlife habitat.
- Recommend $250.0 for Delaware Bayshore Initiative to support the implementation of the Bayshore Action Plan to realize the vision of the Delaware Bayshore becoming a premier global destination for birding, wildlife watching, hunting and outdoor recreation.
♦ Recommend $3,000.0 for statewide trails and pathways to leverage additional funding for the establishment of a world class interconnected network of shared-use pathways and trails to support non-motorized travel and recreational opportunities.

♦ Recommend $740.0 for critical equipment for operations, which will be used for the acquisition/replacement of critical specialized equipment essential to performing environmental and natural resource operations, conservation, protection and research activities.

♦ Recommend $1,148.7 for the maintenance of tax and public ditches and building structures that improve the quality of runoff water and for repairing deteriorated drainage channels in environmentally sensitive areas.

♦ Recommend $2,050.0 for the redevelopment of Strategic Sites, including the continued remediation and redevelopment of the former NVF Facility in Yorklyn and the redevelopment of the Fort DuPont complex in Delaware City.

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OFFICE OF THE SECRETARY
40-01-00

MISSION

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

KEY OBJECTIVES

- Lead the transformation of DNREC into a 21st century department.
- Integrate clean energy programs, including energy efficiency and renewable energy, and climate change mitigation and adaption efforts into Delaware policy and operations.
- Coordinate land use activities with other state agencies and county and municipal governments to preserve open space and minimize impacts to habitat, air and water quality.
- Implement Delaware’s Coastal Zone Act and protect and enhance the natural attributes of Delaware’s Coastal Zone to maintain and enhance fish and wildlife populations.
- Engage state, federal and local governments, universities, environmental and citizen groups, private landowners and agricultural and business communities to implement actions for biodiversity conservation and ecosystem protection.
- Increase trust and understanding within DNREC and with its customers.
- Continue the development and implementation of e-government initiatives and the Environmental Navigator to comply with 7 Del. C. § 6014(a).
- Continue to provide timely and appropriate response on a 24-hour basis to resident inquiries and environmental emergencies and enforce compliance for public health and safety objectives.
BACKGROUND AND ACCOMPLISHMENTS

The Information Technology program unit is responsible for the management of the information resources to ensure investments are optimized to benefit the department and its constituents. The program unit developed an integrated information system containing facility, permitting, enforcement, ambient monitoring and natural resource data.

The Public Affairs unit issues press releases, manages the content of the website and sponsors and participates in Coastal Cleanup, the State Fair, Coast Day and other volunteer activities. It also organizes press events and coordinates responses to media inquiries to promote and explain departmental news, initiatives, events and special projects. Publications include Outdoor Delaware, press releases and marketing materials.

The Human Resources unit is increasing efforts in the areas of workforce development, quality and diversity. The unit is spearheading the development of a DNREC specific leadership academy and succession planning program. The unit participates in resolving workplace issues by revising policies and procedures to meet DNREC’s changing needs.

Energy and Climate is responsible for strategic energy and climate planning and policy to protect the health, safety and welfare of the residents and economy of the State. The division manages policy activities and programs necessary to achieve the key objective for integration of clean energy programs and climate mitigation and adaptation.

The Coastal Programs program unit serves as the key research and policy entity on matters relating to coastal and ocean resources and habitat, sea level rise and programs and issues arising from the federal Coastal Zone Management Act.

The Financial Services program unit reflects a consolidation of the department’s financial assistance and financial management groups into a single program unit to improve efficiencies, reduce overhead costs and promote cross training to support a broad array of financial elements.

The Community Services program unit has been transitioned into the Office of the Secretary to reflect the department-wide activities and duties associated with this unit. The focus of this unit is to improve coordination and collaboration among the various program ombudsmen, community organizations, enforcement and other partners in environmental public health protection.

### FUNDING

<table>
<thead>
<tr>
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<th>FY 2011 ACTUAL</th>
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### POSITIONS

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### OFFICE OF THE SECRETARY

#### ACTIVITIES

- Assist the divisions in meeting their human resources, financial, legislative, policy and other needs promptly and accurately.
- Work with the Department of Health and Social Services (DHSS), Division of Public Health and key department staff to examine the capabilities for environmental health tracking and prepare an action plan for initiation of a tracking program.
- Develop a new employee orientation and DNREC specific leadership academy.
- Assess the department’s workforce diversity and develop programs.
- Develop and distribute communication products that heighten awareness of environmental issues in communities and suggest opportunities to reduce environmental impacts.
- Sponsor and participate in special events designed to raise the public’s environmental awareness, such as the State Fair, Coast Day, Earth Day, Coastal Cleanup and Christina River Cleanup.
- Work with community organizations, homeowner associations and other groups to help them participate in DNREC’s programs and address their environmental concerns.

### COASTAL PROGRAMS

#### ACTIVITIES

- Administer National Oceanic and Atmospheric Administration grant awards to DNREC for coastal
management and Delaware National Estuarine Research Reserve (DNERR).
- Provide grant funding to improve responsiveness to coastal management issues.
- Administer the federal consistency provisions of the Coastal Zone Management Act for Delaware.
- Conduct initial benthic bottom mapping of Delaware’s Atlantic Ocean resources.
- Serve as the key research and policy entity on sea level rise and implement the first phase of the development of a State Sea Level Rise Adaptation plan.
- Implement the master plan for the ecological restoration and facility use of the Blackbird Creek Reserve properties.
- Implement education and training programs for communities, schools, resource users and decision makers addressing coastal resource issues.
- Implement the national System Wide Monitoring Program for water quality, nutrients and biological parameters.
- Serve as Delaware’s lead on the Mid-Atlantic Regional Council on the Ocean.

**Community Services**

**Activities**

- Perform outreach to areas affected by environmental management issues to improve the division’s ability to communicate with Delawareans.
- Promote communication and collaboration within DNREC and among environmental protection partners.
- Work with community organizations, homeowner associations and other groups to help them participate in DNREC’s programs and address their environmental concerns.
- Coordinate all departmental activities with federal and non-governmental organizations to achieve environmental objectives within the agricultural community.

**Energy and Climate**

**Activities**

- Promote energy conservation and energy efficiency as an energy generation resource.
- Promote renewable energy sources, alternative fuels and innovative energy technologies to address energy demands and the economic development of the clean energy economy.
- Implement Delaware’s Energy Efficiency Resource Standard and evaluate, measure and verify all reported electricity consumption, electricity demand reduction and natural gas consumption from Delaware’s utility programs.
- Implement the recommendations of the Governor’s Energy Advisory Council.
- Administer the Green Energy fund and associated energy efficiency and renewable energy programs.
- Manage, oversee, monitor and evaluate SEU programs and contracts as required by 29 Del C. § 8059.
- Coordinate the development of statewide climate mitigation and climate adaptation plans.
Conduct the federally required components of the State Energy Plan grant program awarded by the U.S. Department of Energy.

Coordinate with state and federal agencies in the management of energy data, renewable energy generation, energy efficiency and conservation efforts.

Collaborate with the Office of Management and Budget in energy efficiency and deployment of renewable energy in state facilities.

Manage, oversee and implement the State’s Weatherization program.

Administer the Coastal Zone statute and provide timely, efficient services to industries seeking permits or status decisions.

### PERFORMANCE MEASURES

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### INFORMATION TECHNOLOGY

**ACTIVITIES**

- Maintain the network and provide help desk services for all department employees.
- Continue the integration of information into the Environmental Navigator and make information available to department staff and the public.
- Continue development of e-government initiatives to allow the public to do business online with the department.
- Continue to implement the Electronic Document Management System.

### PERFORMANCE MEASURES

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### FINANCIAL SERVICES

**ACTIVITIES**

- Provide financial planning and fiscal policy development.
- Provide accurate and responsive budget analysis and support to divisions.
- Provide staff support to the Clean Water Advisory Council and provide wastewater engineering and financial planning assistance to communities.
- Provide low-interest water pollution control loans to communities, homeowners and agricultural producers.
- Provide grants to water pollution control loan recipients to make projects affordable as defined by the Clean Water Advisory Council.

### PERFORMANCE MEASURES

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<tr>
<th></th>
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<tr>
<td>wastewater projects</td>
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<td>(millions)</td>
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<tr>
<td>activities (thousands)</td>
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MISSION

To conserve and manage the natural resources of the State, provide safe and enjoyable recreational opportunities to Delawareans and visitors, manage and make available for public use and enjoyment the lands with which it has been entrusted, provide technical, financial and planning assistance to the public for conservation areas and improve the public’s understanding and interest in the State’s natural resources through information and outreach programs.

KEY OBJECTIVES

- Protect and restore an interconnected system of undeveloped lands.
- Maintain tidal fisheries management.
- Protect, restore and enhance fisheries and wildlife habitats.
- Foster partnerships with private landowners.
- Conserve biodiversity and the integrity of biological function.
- Provide wildlife-related recreational opportunities.
- Restore natural functions of streams degraded by development.
- Provide water management technical assistance through the construction of drainage, flood control and water management systems.
- Achieve no-net-loss of recreational and protective beaches and dunes along the publicly accessible, developed portions of the Delaware Bay shore and Atlantic Ocean coast as measured on a three- to seven-year renourishment cycle.
- Assist the Nutrient Management Commission in managing and regulating the generation and application of nutrients to meet load reduction targets established by approved Total Maximum Daily Load (TMDL) and meet or exceed surface water quality standards for nutrients.
- Increase the percentage of waterways meeting water quality standards for swimming and healthy aquatic life.
- Improve the function and value of coastal and freshwater streams and wetlands for habitat, flood control and water quality enhancements.
- Identify and assess the causes and factors contributing to the sudden dieback of tidal wetland habitats.
- Implement the Delaware Wetlands Conservation Strategy.
- Maintain a system for determining the existence and location of state resource areas, their degree of endangerment, an evaluation of their importance and information related to their natural, historic or open space values.
- Improve the effectiveness of the State’s stewardship of plants, animals and their habitats on public lands.
- In conjunction with other public and private land management organizations, undertake special programs to acquire or otherwise permanently protect lands within established state resource areas and other lands identified as having significance according to the procedures of the Delaware Land Protection Act.
- Assist in the addition of park land and outdoor recreation facilities at municipal and county levels through grant assistance.
- Increase preventive maintenance to reduce major rehabilitation expenditures and curb facility deterioration.
- Locate and identify important natural resources on DNREC landholdings and develop resource management plans for parks, nature preserves and wildlife areas.
- Continue creative partnerships with for-profit and nonprofit organizations to provide services and raise funds.
- Integrate recommendations developed by the Children in Nature Task Force to increase children’s access to nature through family outdoor programs, development of new nature centers, guided field experiences and community events.

BACKGROUND AND ACCOMPLISHMENTS

The Office of Natural Resources contains three divisions: Parks and Recreation, Fish and Wildlife and Watershed Stewardship. The former Watershed Management unit has been renamed Watershed Stewardship to reflect an ecosystem-based focus on high impact activities that will
enhance air quality, water quality and supply, soil quality and habitat and biodiversity protection.

Parks and Recreation has 11 field offices statewide that oversee the operation of 20,364 acres in 16 state parks, the Brandywine Zoo and Baynard Stadium. Parks and Recreation also manages 10 nature preserves (3,169 acres), 12 other sites (2,345 acres) outside of the parks and monitors 78 conservation easements, which protect an additional 3,644 acres.

Parks and Recreation operates units containing a variety of landscape and natural resource features from rolling terrain in the uppermost regions of New Castle County to coastal beaches in Sussex County. Cultural and historic resources are protected while a wide variety of recreational facilities are provided for Delaware residents and out-of-state visitors.

Fish and Wildlife manages a variety of programs including: fish and wildlife management and research; land and habitat management; fishing, hunting and boating access lands and facilities; mosquito control; fish, wildlife and boating enforcement; education and volunteer involvement; and licensing and boat registration. Wildlife and fisheries research and management programs ensure sustainable fish and wildlife populations for now and the future, while land management and habitat restoration efforts enhance fish and wildlife populations on public and private lands. Fish and Wildlife owns and manages approximately 61,000 acres of public lands and 47 boat ramp access areas that provide quality outdoor hunting, fishing, nature observation and boating recreation opportunities.

Watershed Stewardship assists the conservation districts in tailoring programs to meet the needs of diverse constituents and coordinates statewide non-point source pollution control programs. Watershed Stewardship programs combine research and education, technical assistance, financial incentives and regulation with interagency and private partnerships. Initiatives, such as beach nourishment projects, public dune maintenance and emergency storm repair and cleanup, are carried out to improve protection to waterfront homes, businesses, roads and utilities and enhance the basis of the State’s coastal recreation and tourism industry. Watershed Stewardship focuses on restoring the functions and values of streams, drainage ditches, wetlands and riparian corridors. These programs focus expertise and resources on restoration projects to re-establish biological diversity. Watershed Stewardship strives to implement a variety of restoration techniques that accelerate the ecological processes resulting in projects, which replicate natural functioning ecosystems.

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<td>349.0</td>
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**PARKS AND RECREATION 40-03-02**

**ACTIVITIES**

Administration and Support

- Responsible for all budget and fiscal management, personnel, legislation and volunteer administration, including the AmeriCorps program in support of the division.
- Manage 21st Century Park Endowment and state park trusts.
- Manage the marketing program for Delaware State Parks.
- Manage publication and information services, including research, editing and digital design for all commercially-printed state park publications and wayside exhibits.
- Manage the retail sales program, including gift shops, campground stores, vending and food concession operations.
- Administer the central reservation system for camping and other visitor services.

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<thead>
<tr>
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<td>% increase in park and facility revenue</td>
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<td>3.000</td>
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<tr>
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<td>100,000</td>
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</table>

Planning, Preservation and Development

- Maximize the use of funds and protection methods, other than fee simple acquisition, to permanently protect statewide priority projects through the use of open space criteria and the ranking system adopted by the department.
• Coordinate conservation easement protection efforts on private lands.
• Coordinate all real estate issues, including utility easements, use agreements and agriculture easements.
• Administer the Natural Areas program through the Land Preservation Office as defined by law.
• Plan, design, engineer and construct facilities and infrastructure within the park system.
• Administer state and federal grants and provide technical assistance to county and local governments for land acquisition, outdoor recreation facility and trail development.
• Plan and develop the park trail system.
• Coordinate and oversee the Council on Greenways and Trails, Natural Areas Advisory Council and Open Space Council.

**NATURAL RESOURCES AND ENVIRONMENTAL CONTROL**

**40-00-00**

**PERFORMANCE MEASURES**

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<tr>
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<tr>
<td># of conservation easements that meet the criteria of the Land Protection Act</td>
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**Operations, Maintenance and Programming**

• Manage daily operations of 16 state parks, including special revenue generating facilities.
• Enforce state park rules and regulations and provide for site and visitor safety and security, including a water safety program.
• Develop and implement comprehensive natural resource management plans.

**PERFORMANCE MEASURES**

<table>
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<th></th>
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<tbody>
<tr>
<td>% increase of people participating in park programs</td>
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<td>2.0</td>
</tr>
<tr>
<td># of teacher trainings to support Children in Nature initiative</td>
<td>13</td>
<td>14</td>
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</table>

**Wilmington State Parks**

• Manage the Brandywine Zoo, Rockford Park, H. Fletcher Brown Park, Brandywine Park, Baynard Stadium, Alapocas Run State Park and the Blue Ball Barn, including upgrade of facilities.
• Provide public interpretive programming, concert series and coordinate special events.

• Continue to develop relationships and partnerships with surrounding neighborhood associations and City of Wilmington officials.

**Indian River Marina**

• Manage and operate the Indian River Marina, including 274 wet slips, 24 transient slips, 156 unit dry stack storage building, full service marine fuel dock, ships store and winter storage services.
• Manage a 12-unit cottage complex. Each duplex offers 900-square feet of living space with full amenities overlooking the Indian River Inlet.
• Manage concession operations, including a full service bait and tackle, fish cleaning, head boat operations and retail convenience store/café.

**PERFORMANCE MEASURES**

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<thead>
<tr>
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<tbody>
<tr>
<td>% occupancy of wet slips</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>% occupancy of dry storage</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

**FISH AND WILDLIFE**

**40-03-03**

**ACTIVITIES**

**Wildlife/Fisheries**

• Conduct research surveys and inventories of fish, shellfish and wildlife populations.
• Develop fish and wildlife management plans for 15 wildlife management areas, manage 54 freshwater pond and marine fishing access sites and comply with management plans for 25 species or species groups of marine fish and shellfish.
• Monitor, maintain and regulate harvestable fish and wildlife populations.
• Provide technical assistance to landowners and government agencies.
• Administer wildlife management and research, including non-game and endangered species, hunter education training, wildlife recreation and wildlife outreach programs.
NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
40-00-00

- Provide fishing and hunting license services and monitor the users of fish and wildlife resources.
- Provide education and volunteer programs to educate and engage the public on natural resource issues to increase understanding and involvement in fish and wildlife conservation.
- Monitor fish for diseases and investigate fish kills as to extent and probable cause.
- Obtain fish for contaminant testing and inform the public of fish consumption advisories.
- Acquire, develop and maintain lands and waters for recreation and conservation.
- Control aquatic and non-indigenous plants and improve fish and wildlife habitats.
- Develop wetland enhancement programs and coordinate fish, wildlife, acquisition and hunter education and aquatic resource education activities.
- Conduct a trout stocking program in all three counties.

**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of acres of actively managed wildlife habitats on public lands</td>
<td>8,700</td>
<td>8,700</td>
<td>9,000</td>
</tr>
<tr>
<td># of fisheries management plans complied with</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td># of hunter education certifications</td>
<td>1,363</td>
<td>1,100</td>
<td>1,500</td>
</tr>
</tbody>
</table>

**Mosquito Control**

- Monitor mosquito populations and extent of quality of life and nuisance problems or mosquito-borne diseases (focus on West Nile Virus and Eastern Equine Encephalitis) and undertake control actions in response to infestations, disease outbreaks or adverse economic impacts.
- Respond to resident complaints about excessive numbers of biting mosquitoes or concerns about mosquito breeding areas.
- Investigate and assess mosquito control efficacy and non-target impacts associated with Open Marsh Water Management, impoundment management, mosquito fish stocking and insecticide use (larvicides and adulticides).
- Conduct research surveys and inventories of mosquitoes, fish and wildlife populations.
- Continue implementation of wetland restoration and enhancement projects within the Christina/Delaware River Corridor (Northern Delaware Wetlands Rehabilitation program).

- Interact with the U.S. Fish and Wildlife Service to ensure effective and practicable mosquito control on Delaware’s two national wildlife refuges.
- Conduct public education and outreach programs on mosquito control problems and wetlands restoration and management.
- Coordinate with the Riverfront Development Corporation to restore and manage wetlands at the Russell W. Peterson Urban Wildlife Refuge.
- Work with the American Mosquito Control Association to help resolve national mosquito control issues having local impacts.

**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of Open Marsh Water Management Acres Treated</td>
<td>120</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% of nuisance-free nights (June-August)</td>
<td>86</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td># of acres of degraded wetlands under the Northern Delaware Wetlands Rehabilitation program restored</td>
<td>3</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

**Enforcement**

- Prevent, investigate and prosecute illegal natural resource activity within the State.
- Provide environmental education opportunities through Boating Safety and Hunter Safety education programs.
- Conduct marine search and rescue operations and statewide marine rescue training for coastal fire departments.
- Manage and administer the state Vessel Registration program.
- Assist the Department of Safety and Homeland Security with activities in the prevention of terrorism.
- Manage the Recreational Boating Safety program by conducting safety equipment inspection boardings, investigating accidents and coordinating boating education volunteers.
- Enhance response capabilities during critical incidents, such as homeland security threats, maritime operations, woodland search and rescue and other incidents.

**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of boating safety presentations delivered to the public</td>
<td>79</td>
<td>211</td>
<td>79</td>
</tr>
<tr>
<td># of recreational boating accidents</td>
<td>9</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>
WATERSHED STEWARDSHIP
40-03-04

ACTIVITIES

Drainage and Stormwater
- Conduct environmentally sensitive tax and public ditch planning and provide technical assistance to landowners on surface water management issues.
- Ensure implementation of the State’s no-net-loss of wetlands policy in water management projects and develop wetland and stream restoration techniques.
- Provide technical assistance to local soil and water conservation districts.
- Provide education and outreach to agricultural and environmental communities to demonstrate the working relationship of drainage, agriculture and wetlands.
- Encourage the establishment of riparian corridors along tax ditch rights-of-way to support the Conservation Reserve Enhancement program (CREP), the implementation of TMDLs, Pollution Control Strategies (PCS) and Watershed Implementation Plans (WIPs).
- Implement dam safety regulations and dam inspection standards, provide emergency action plans and provide assistance to private dam owners.
- Investigate and implement solutions to the Resource Conservation and Development projects funded through the Capital Improvement Act and Twenty-First Century Fund.
- Provide comprehensive Erosion and Sedimentation (E & S) and Stormwater Management training to the land development community.
- Provide financial, technical and compliance assistance to delegated agencies for plan review and field inspection of land development projects.
- Provide sediment and stormwater management field inspection on federal- and state-funded, non-Department of Transportation, construction activities.
- Implement National Pollutant Discharge Elimination System (NPDES) Phase II requirements for stormwater management.
- Provide technical and administrative support to the Delaware Clean Water Council.

PERFORMANCE MEASURES

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<tbody>
<tr>
<td># of acres of agricultural and residential land receiving drainage, flood protection and water management</td>
<td>565,432</td>
<td>569,432</td>
<td>573,432</td>
</tr>
<tr>
<td># of acres of wetland restoration developed and constructed in marginal agricultural fields and/or adjacent to streams and tax ditches</td>
<td>10.8</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td># of feet of stream restoration projects developed and constructed</td>
<td>8,900</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td># of tons of sediment removed from storm water prior to discharge to waterways</td>
<td>563,095</td>
<td>566,682</td>
<td>572,350</td>
</tr>
<tr>
<td>% of total recommendations of the Surface Water Management Task Force implemented</td>
<td>85</td>
<td>85</td>
<td>85</td>
</tr>
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</table>

Shoreline and Waterway Management
- Develop and carry out beach preservation projects to enhance and preserve the recreational and storm protection values of Delaware’s beaches.
- Sustain the primary dune and beach system through a regulatory control program that keeps construction off the dunes and beach.
- Improve coastal storm hazard preparedness and mitigation.
- Reduce natural hazard losses through cooperation with the Federal Emergency Management Agency and the Delaware Emergency Management Agency in natural hazard mitigation programs.
- Provide technical assistance to local governments and homeowners to improve beach and dune management.
- Identify sufficient sand sources for beach nourishment work for a 10-year maintenance period.
- Provide understanding of the complex physical dynamics of beach erosion and storm impacts to aid in pre- and post-coastal storm impact reduction and recovery.
- Operate and maintain a sand bypass facility at Indian River Inlet.
- Conduct repair and maintenance program of publicly-owned coastal dunes.
- Improve and maintain navigational channels statewide.
- Implement a regional sediment management strategy for Rehoboth and Indian River Bays.
NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
40-00-00

- Establish and maintain aids to navigation in the State’s Inland Bays to ensure channels are properly marked for safe navigation by the boating public.
- Restore the environmental integrity of state-owned lakes and ponds.
- Mechanically harvest nuisance marine macro algae in the Inland Bays to maintain water quality, aesthetics and boating access.
- Remove abandoned vessels and derelict structures from the Inland Bays.
- Restore ecologically important areas in the Inland Bays and re-establish eel grass populations where appropriate.

**Performance Measures**

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<tbody>
<tr>
<td># of aids to navigation established and maintained in Inland Bays for boating public</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td># of feet in width that design beach is maintained on Atlantic facing public beaches present for summer recreational use seaward of the designed dunes</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% achievement of eliminating shoals in all authorized channels and maintaining channels for safe navigation</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>% of completed investigations concerning nuisance accumulations of macro-algae in the Inland Bays</td>
<td>100</td>
<td>100</td>
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</table>

Watershed Assessment and Management

- Implement the water quality monitoring and assessment program.
- Implement the Federal Beaches Environmental Assessment and Coastal Health Act by monitoring guarded beaches and notifying the public of swimming advisories due to unacceptable water quality conditions.
- Develop PCSs and WIPs to meet pollutant load reduction goals established by state and federal TMDLs.
- Work with partner programs and agencies to implement new and existing regulations and voluntary actions, including retrofits and restoration projects, to achieve load reduction goals set by TMDLs.
- Track progress toward achieving load reduction goals using a two-year milestone approach, beginning in the Chesapeake Bay watershed.
- Participate in the implementation of the Delaware Wetlands Conservation Strategy.

- Implement Marine Biotoxin Contingency Plan when hazardous algae bloom-related events threaten commercial and recreational shellfish resources.
- Cooperate with Delaware River Basin Commission, Pennsylvania and New Jersey in developing TMDLs for toxic pollutants for the Delaware Estuary.
- Regulate state shellfish growing areas and certified shellfish dealers through cooperative agreements with the U.S. Food and Drug Administration and the National Shellfish Sanitation Program.
- Serve as lead for fish contamination assessments and coordinate at state and inter-state levels.

**Performance Measures**

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<tbody>
<tr>
<td># of acres of watersheds with PCSs in place</td>
<td>652,957</td>
<td>866,778</td>
</tr>
<tr>
<td># of incidences of water-borne disease (swimmer illness)</td>
<td>1.0</td>
<td>1.0</td>
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</table>

Conservation Programs

- Direct and administer Clean Water Act Section 319 grant funds for priority water quality assessment and implementation of best management projects.
- Provide technical assistance to other agencies, engineers and consultants, farmers and animal producers, contractors and developers, educators, college professors and university officials.
- Assist the Nutrient Management Commission with the implementation of Nutrient Management regulations and plans.
- Perform assessment and implementation of TMDL activities in the Piedmont, Chesapeake and Inland Bays and Delaware Bay basins.
- Administer the Conservation Cost Share program and agricultural component of the State Revolving Loan Fund program in coordination with federal farm bill programs.
- Direct the State’s efforts and funding for the U.S. Department of Agriculture CREP.
- Administer the Buried Wood Debris Remediation program.

**Performance Measures**

<table>
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<tr>
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<tbody>
<tr>
<td>% reduction of nitrogen loadings in the Chesapeake, Delaware and Inland Bays watersheds</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td># of debris pits remediated</td>
<td>5</td>
<td>14</td>
</tr>
</tbody>
</table>
MISSION

To protect and enhance the quality of Delaware’s air and water resources and assure appropriate waste management practices within Delaware by verifying strict compliance with laws and regulations to protect Delaware’s precious resources and by working cooperatively with residents and businesses to protect public health, welfare and the environment.

KEY OBJECTIVES

- Increase percentage of facilities in compliance at time of inspection.
- Enhance the fairness, consistency, predictability, deterrence value and efficiency of the DNREC enforcement process.
- Monitor and control the occurrence of environmentally-related exposures and diseases.
- Provide the equitable and adequate allocation of safe surface and ground water supplies.
- Reduce nutrients, bacteria and toxic substances entering the State’s waterways through the implementation of TMDLs and PCSs.
- Increase the percentage of waterways meeting water quality standards for swimming and healthy aquatic life.
- Reduce exposure to hazardous substances, including carcinogenic substances in the ambient environment.
- Prevent exceedances of air and water quality standards.
- Develop strategies to attain the new 8-hour ozone standard statewide by 2019 and re-designate New Castle County to attainment with respect to Fine Particle (PM2.5) Standards by Calendar Year 2013.
- Maintain monitoring networks to provide representative and accurate data for ambient concentrations of pollutants of concern.
- Promote effective and sustainable cleanup and reuse of Brownfields in conjunction with community land use plans.

- Increase municipal solid waste recycling to 60 percent pursuant to 7 Del. C. § 6056.
- Protect public health and safety by conducting hazardous materials emergency planning and accidental release prevention and by maintaining an effective emergency response capability.
- Provide outreach and educational opportunities on the Office of Environmental Protection’s mission, programs and decisions.

BACKGROUND AND ACCOMPLISHMENTS

This unit merged two former units known as Air and Waste Management and Water Resources. The division is comprised of three internal program units: Air Quality, Water and Waste and Hazardous Substances.

Air Quality monitors and regulates all emissions to the air, issues permits to construct and permits to operate to air contaminant sources, maintains emission inventories from business and industry, develops the state implementation plan as required by the Clean Air Act, adopts new regulations, supports enforcement of existing regulations and permits and inspect asbestos removal sites. The unit continues to move forward with the Title V Operating Permit program that includes issuance of required permits, operating a Compliance Assurance program and issuing Title V permit renewals.

Water implements its various regulatory programs, provides technical skills to programs, laboratory services, inspections and educational services and performs applied research.

Waste and Hazardous Substances is responsible for ensuring Delaware’s wastes are managed in a way that protects human health and the environment. The program ensures proper management through a permitting and compliance monitoring program and also through encouragement of waste reduction, reuse and recycling activities. Waste and Hazardous Substances has a major role in investigating and cleaning up hazardous substance release sites that pose a threat to public health, welfare and the environment. Waste and Hazardous Substances programs regulate the installation, operation, removal and remediation of tanks storing petroleum and hazardous substances. The primary objectives of the tank programs are the prevention of tank releases and early detection and expedited cleanup of releases that occur.

Waste and Hazardous Substances also ensures all boilers and pressure vessels in the state are inspected to prevent catastrophic failures. Waste and Hazardous Substances provides comprehensive planning and prevention and 24-hour response to time critical emergency and non-
emergency environmental and hazardous materials incidents for the protection of human life, health, safety and the environment.

**FUNDING**

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<tr>
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<tbody>
<tr>
<td>GF</td>
<td>7,395.5</td>
<td>7,252.0</td>
<td>7,416.0</td>
</tr>
<tr>
<td>ASF</td>
<td>18,309.3</td>
<td>42,905.3</td>
<td>42,854.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>25,704.8</strong></td>
<td><strong>50,157.3</strong></td>
<td><strong>50,270.9</strong></td>
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**POSITIONS**

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<tbody>
<tr>
<td>GF</td>
<td>77.2</td>
<td>69.7</td>
<td>70.7</td>
</tr>
<tr>
<td>ASF</td>
<td>148.6</td>
<td>137.6</td>
<td>135.1</td>
</tr>
<tr>
<td>NSF</td>
<td>71.2</td>
<td>70.7</td>
<td>71.2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>297.0</strong></td>
<td><strong>278.0</strong></td>
<td><strong>277.0</strong></td>
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**AIR QUALITY 40-04-02**

**ACTIVITIES**

- Participate in Ozone Transport Commission (OTC), National Association of Clean Air Agencies and Mid-Atlantic Regional Air Management Association activities to take advantage of combined expertise and foster regional and national strategies.
- Evaluate and recommend to the Environmental Protection Agency (EPA) a monitoring strategy in Sussex County to support the attainment status of Delaware’s air quality relative to the new sulfur dioxide standards.

**Air Surveillance**

- Monitor or track ambient air quality for all pollutants, especially ozone and fine particulate matter to assess attainment status with National Ambient Air Quality Standards.
- Provide air toxics monitoring at a minimum of two sites in Delaware.

**Permitting and Compliance**

- Develop state implementation plan revisions as required by the Clean Air Act Amendments of 1990 (CAA).
- Continue to implement value stream mapping recommendations for minor source permitting program to maintain permit issuance time at 90 or fewer days.
- Implement new procedures and protocol to expedite major enforcement cases.
- Issue Title V permit revisions and renewals in a timely basis.
- Track facility submission and inspector review of Annual Compliance Certification reports and Semi-Annual Monitoring reports for all Title V facilities.
- Report all stack test results within 120 days of testing.
- Develop and implement a biannual toxics facilities inspection plan.
- Enter and track all enforcement data into the department’s database and upload to the EPA compliance database.
- Conduct a full compliance evaluation of large facilities every two years, medium facilities every five years and full compliance evaluations of small facilities as needed.
- Evaluate facility compliance with regulatory and permit requirements and propose enforcement actions for non-compliance facilities.

**Planning**

- Continue planning and implementation efforts to address long-term ozone, fine particulates and regional haze problems.
- Work with public and private entities to develop or implement transportation and voluntary control programs, such as Ozone Action Day.
- Promulgate new air regulations required by the CAAA and OTC.
- Conduct an annual point source emission inventory and a comprehensive emission inventory every three years, consistent with the CAAA.
- Develop and implement a new, web-based emission inventory reporting system for annual submission of facility reports.

**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of exceedances of Ozone, PM, CO, NO2 and SO2 standards</td>
<td>19</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of ambient air samples collected</td>
<td>1,030</td>
<td>1,097</td>
<td>1,097</td>
</tr>
<tr>
<td># of air samples for air toxics*</td>
<td>5,880</td>
<td>4,600</td>
<td>4,600</td>
</tr>
</tbody>
</table>

*DNREC received a grant from the EPA to perform enhanced toxics monitoring for a portion of Fiscal Year 2011.
ACTIVITIES

Surface Water Discharges

- Use NPDES permits to implement PCSs for TMDLs.
- Issue NPDES permits that contain the necessary requirements and conditions (toxic controls, pretreatment requirements, stormwater, Combined Sewer Overflow (CSO) and sludge requirements).
- Develop and implement a NPDES program for pesticides pursuant to the Clean Water Act.
- Issue licenses for wastewater treatment operators and review plans and issue permits for the construction of wastewater collection and treatment facilities.
- Conduct compliance inspections for NPDES facilities and CSO systems.
- In partnership with the Department of Agriculture, implement a regulatory program for large and medium Concentrated Animal Feeding Operations.
- Review and approve the construction of central wastewater systems for new development.
- Periodically review and update program regulations for point source dischargers.

**Performance Measures**

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<tbody>
<tr>
<td>% major individual NPDES permitted facilities inspected annually</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% minor individual NPDES permitted facilities inspected annually</td>
<td>45</td>
<td>50</td>
<td>50</td>
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</table>

Groundwater Discharges

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

**Performance Measures**

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<tbody>
<tr>
<td>% of alternative on-site treatment systems inspected for operational compliance</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% of construction inspections for on-site wastewater systems that discharge:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 2,500 gallons/day</td>
<td>57</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>&gt; 2,500 gallons/day</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% of compliance inspections for on-site wastewater systems that discharge more than 2,500 gallons per day</td>
<td>382*</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% of statewide compliance inspections on holding tanks</td>
<td>150**</td>
<td>100</td>
<td>100</td>
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</table>

*554 compliance inspections on 145 sites.
**503 compliance inspections on 336 holding tanks.

Water Supply

- Provide technical and policy support to the Water Supply Coordinating Council.
- Review and approve allocation and water well permits for public and environmental protection.
- Conduct research and monitor ground water resources. Included as a priority activity is implementation of the expanded ground water monitoring network in southern New Castle County being conducted by the Delaware Geological Survey.
- Provide assistance to New Castle County for requirements of the New Castle County Water Resource Protection Area Ordinance.
- Implement the Source Water Assessment and Protection program under the federal 1996 Safe Drinking Water Act amendments (joint cooperation with DHSS), including long-term protection strategies for public drinking water supply sources.
- Promote water conservation, wellhead protection and source water protection with public education and cooperative agreements with stakeholders.
- Perform ground water reviews for non-hazardous waste sites.
**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of water allocation permits issued to reduce backlog of unpermitted projects</td>
<td>49</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>% of well permit data entered within five days of receipt of information</td>
<td>95</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>% of public water systems with source water protection strategies in place</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% of public water systems with source water protection strategies substantially implemented</td>
<td>100</td>
<td>100</td>
<td>100</td>
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**Wetlands and Subaqueous Lands**
- Maintain an inventory of tidal wetlands, issue wetland and subaqueous lands permits and leases for docks, piers, shoreline stabilization and other projects in tidal and non-tidal waters.
- Review and issue marina construction permits.
- Issue Water Quality Certifications for federal permits.
- Provide customer service to landowners, realtors and developers regarding the location of regulated wetlands and waters.
- Promote wetland, stream channel and riparian restoration.
- Administer a cost-share program to assist waterfront landowners with shoreline stabilization projects using vegetation and other environmentally friendly techniques.
- Support efforts to re-establish fees for commercial and industrial docks and piers on public subaqueous lands.

**PERFORMANCE MEASURE**

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<tbody>
<tr>
<td>Average turnaround time to complete for each test (days)</td>
<td>4.5</td>
<td>4.4</td>
<td>4.3</td>
</tr>
</tbody>
</table>

**WASTE AND HAZARDOUS SUBSTANCES**

**ACTIVITIES**

**Site Investigation and Restoration**
- Oversee remedial investigation, feasibility study, remedial design and action at Hazardous Substance Cleanup Act, Voluntary Cleanup program and Brownfield sites.
- Assist in facilitating grants and loans at Brownfield sites to ensure sites are cleaned up and reused in a safe and productive manner.
- Promote field screening procedures to reduce the number of analytical samples sent to the laboratory for full analysis.
- Work with communities to enhance understanding of the Site Investigation and Remediation Section (SIRS) programs and the risks posed by SIRS sites.
- Perform Brownfield assessments or inspections at sites targeted for redevelopment.
- Conduct Natural Resource Damage Assessments at sites where releases of hazardous substances have harmed the environment.

**Environmental Laboratory**
- Perform biological assessments and chemical analyses to ensure the wise management, conservation and enhancement of the State’s natural resources and protect public health and the environment.
- Perform microbial source tracking techniques for DNA fingerprint identification of bacteria, protozoa and other organisms in support of the development and implementation of TMDLs, PCSs, permit allocations and regulatory and enforcement actions.
- Operate the Laboratory Information Management System to enhance quality and productivity and facilitate information sharing throughout the department.
- Implement a balanced scorecard performance measure pilot for the department.
- Provide educational initiatives for teachers and youth in schools, colleges and universities and use skills of senior citizens through job shadowing, internships, mentoring, tours and volunteer programs.
- Identify new market opportunities and improve laboratory efficiencies and analytical capabilities to identify and implement cost-effective technologies.
• Enhance and implement the Brownfield inventory and a ranking system to address redevelopment potential and the degree of contamination.
• Screen shallow public drinking water supplies for contaminants, as recommended by Delaware’s Advisory Council on Cancer Incidence and Mortality.

**PERFORMANCE MEASURES**

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<tbody>
<tr>
<td># of acres of Brownfields remediated</td>
<td>114</td>
<td>90</td>
<td>95</td>
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<tr>
<td>% of SIRS sites remediated</td>
<td>45</td>
<td>46</td>
<td>45</td>
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<tr>
<td>Average # of months to complete a Brownfield project</td>
<td>14</td>
<td>13</td>
<td>13</td>
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<tr>
<td># of proposed and final remediation plans issued</td>
<td>49</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td># of enforcement sites initiated</td>
<td>4</td>
<td>5</td>
<td>4</td>
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**Tank Management**

• Conduct Underground Storage Tank (UST) and Aboveground Storage Tank (AST) facility compliance assessments, oversee removals and closures, approve design plans and supervise the installation of new systems.
• Administer contracts for sites using state funding to remove orphan USTs and complete site remediation.
• Implement cost savings for sites through pay-for-performance contracting.
• Review vapor recovery (VR) permit applications and oversee testing of VR systems to ensure compliance with the gasoline VR regulations.
• Reduce the amount of time from identification to closure of Leaking Underground Storage Tank (LUST) sites.
• Continue implementation of risk-based corrective action closure procedures at LUST sites.
• Increase tank inspection frequency, creating a training program for tank owners and operators and establish a delivery prohibition program.
• Increase outreach and inspection activities to educate the UST regulated community, including tank owners, operators, contractors and consultants.
• Commission private insurance boiler inspectors operating within Delaware and monitor their inspections.
• Conduct inspections of boiler and pressure vessels at facilities that do not have insurance.
• Investigate boiler and pressure vessel accidents.

**Solid and Hazardous Waste Management**

• Regulate the disposal of waste generated in Delaware to prevent adverse impacts to the environment.
• Monitor permitted solid and hazardous waste sites to identify any contaminant releases to the environment.
• Require, oversee and approve corrective actions to remedy any significant adverse impacts resulting from contaminant releases.
• Pursue closure and remediation of unauthorized, illegal or environmentally unacceptable solid and hazardous waste disposal sites.
• Track the transport and disposal of solid and hazardous waste to ensure compliance with environmental regulations.
• Communicate and encourage hazardous waste generators on the reduction of hazardous waste.
• Complete solid and hazardous waste compliance assessments and implement a multi-media approach where possible.
• Implement the hazardous waste corrective action process.
• Oversee the scrap tire cleanup program.
• Implement the Universal Recycling law.
## Performance Measures

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<tbody>
<tr>
<td># of scrap tires cleaned up (tons)</td>
<td>1,478</td>
<td>3,500</td>
<td>3,500</td>
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<tr>
<td>% of municipal solid waste recycled</td>
<td>32.6</td>
<td>40.0</td>
<td>45.0</td>
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<tr>
<td>% of facilities assessed returning to compliance within 180 days</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td># of tons of waste properly managed under permits</td>
<td>1,268,097</td>
<td>1,350,000</td>
<td>1,450,000</td>
</tr>
<tr>
<td># of participants in 3R's (reduce, reuse and recycle) educational opportunities</td>
<td>404,000</td>
<td>50,000</td>
<td>20,000</td>
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### Emergency Prevention and Response

- Respond to and investigate environmental incidents and emergencies on a 24/7 basis.
- Respond to hazardous materials incidents as part of the State Emergency Response Team and the Delaware Emergency Operations Plan.
- Participate in emergency planning and exercises with federal, state and local emergency management and response agencies.
- Provide emergency response and hazardous materials training to state and local response agencies.
- Ensure compliance with hazardous chemical inventory and Toxic Release Inventory (TRI) data reporting pursuant to the Emergency Planning and Community Right-to-Know Act (EPCRA).
- Support State Emergency Response Commission (SERC) operations and local emergency planning committees through collection of EPCRA Tier II hazardous chemical reporting fees and data.
- Analyze TRI data and report data trends.
- Upgrade and maintain response capabilities and activities through SERC.
- Ensure effective risk management programs at extremely hazardous substance facilities by continuing to conduct compliance inspections, review risk management plans and investigate releases pursuant to the Accidental Release Prevention Regulation.

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<tbody>
<tr>
<td># of emergency responses to incidents</td>
<td>299</td>
<td>320</td>
<td>320</td>
</tr>
<tr>
<td># of Accidental Release program inspections</td>
<td>28</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>% of EPCRA electronic reporting</td>
<td>99</td>
<td>90</td>
<td>98</td>
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