Delaware Outdoors:
Building an Outdoor Legacy

2013-2018

Statewide Comprehensive Outdoor Recreation Plan

Park Resource Office

Susan Moerschel, Program Manager

Kendall Sommers, Outdoor Recreation Planner

Division of Parks and Recreation

Charles A. Salkin, Director

Matthew P. Chesser, Administrator, Planning, Preservation and Development Section

Department of Natural Resources & Environmental Control

Collin P. O'Mara, Secretary

Delaware Outdoors: Building an Outdoor Legacy is made possible by a Federal Land and Water Conservation Fund grant through the National Park Service. The Plan is supported by assistance of 21st Century Funds – investments in Delaware's future. The Division of Parks & Recreation, in the Department of Natural Resources & Environmental Control is a state agency dedicated building parks, creating outdoor experiences and nurturing healthy lifestyles.

Table of Contents

Acknowledgements

Letter from Governor Markell

Foreward: Collin O'Mara, Cabinet Secretary, Delaware Department of Natural Resources and Environmental Control

Chapter 1 Introduction
- SCORP Development Overview and Implementation
- Investment in Outdoor Recreation
  - LWCF
  - DTF
- America's Great Outdoors
- SCORP Planning Regions
- Oversampled Municipalities
- Delaware Demographics
- Population growth and trends (2000-2010)
- Executive Order #26- Strategies for State Policies and Spending

Chapter 2 Outdoor Recreation Supply
- Outdoor Recreation Inventory
- Level of Service Analysis of Outdoor Recreation Facilities
  - Walk-shed Analysis
  - Drive-shed Analysis
  - Strengthening Recreation Data

Chapter 3 Outdoor Recreation Trends and Demand
- Importance of Outdoor Recreation
- Participation in Outdoor Recreation
- Reasons for Participating in Outdoor Recreation
- Access & the Built Environment
- Priorities for State and Local Funding

Chapter 4 Outdoor Recreation and Conservation Issues and Recommendations

A. Improving Public Health
B. Getting Children Outdoors
C. Accessible Recreation
D. Statewide Trails and Pathways
E. Partnerships for Conservation, Recreation& Tourism
F. Protecting Lands for Conservation & Recreation

Appendices

Acknowledgements

The research, writing and management of the 2013 State Comprehensive Outdoor Recreation Plan has been overseen by the Park Resource Office, Division of Parks and Recreation, Department of Natural Resources and Environmental Control. Kendall Sommers, Division Planner, conducted the research and is the primary author of this plan. Michael Krumrine, Geographic Information Specialist, provided the mapping and conducted the spatial analysis functions of this document. Susan Moerschel, Chief, Park Resource Office and Bob Ehemann, Grants Coordinator, provided direction and editorial functions for this project. Rich Phifer, Land Acquisition Specialist, maintained the outdoor recreation inventory referenced in this document. Ron Vickers, Chief, Land Preservation Office provided an overview of Delaware's open space investments.

We respectfully thank Nemours Health and Prevention Services for their continued partnership. We are grateful for the input from Marina Kaplan and Patti Miller, Nemours Health and Prevention Services, with enhancing the 2011 Outdoor Recreation Participation and Trends Survey.

We are very grateful to the members of the Technical Advisory Committee (TAC) who provided direction in the development of this plan. These experts are committed to quality outdoor experiences, healthy lifestyles, tourism and child advocates.

Romain Alexander	City of Wilmington
Anthony Aglio	Delaware Department of Transportation
Helen Arthur	Delaware Division of Public Health
David Bartoo	Delaware State Parks
Jason Berry	Kent County Planning
Sally Boswell	Center for the Inland Bays
Marco Boyce	Delaware Department of Transportation
Ron Breeding	Nemours Health and Prevention Services
Matt Chesser	DNREC, Division of Parks and Recreation
Kimberly Cole	Delaware National Estuarine Research Reserve
Kevin Coyle	DNREC, Office of the Secretary, Planning Office
Heather Dunigan	Wilmapco
Bob Ehemann	Delaware State Parks
Charlie Emerson	City of Newark
Gary Emory	Milford Department of Parks and Recreation
Marcia Fox	Delaware Forest Service
Tamika Graham	Wilmapco
Kyle Hodges	State Council for Persons with Disabilities

Constance Holland	Office of State Planning Coordination
Jon Husband	New Castle County, Special Services
Marina Kaplan	Nemours Health and Prevention Services
Sarah Keifer	Kent County, Department of Planning Services
Mike Krumrine	DNREC, Division of Parks and Recreation
Kate Layton	Dover/Kent County MPO
Mike Mensinger	Delaware National Estuarine Research Reserve
Susan Moerschel	DNREC, Division of Parks and Recreation
Linda Parkowski	Delaware Economic Development Office
Rich Phifer	DNREC, Delaware Division of Fish and Wildlife
Charles Salkin	DNREC, Division of Parks and Recreation
Jeremy Sheppard	Kent County Parks and Recreation
Eileen Sparling	University of Delaware- Center for Disability Studies
Andrea Trabelsi	Delaware Greenways
Ron Vickers	DNREC, Division of Parks and Recreation
Wayne Voshell	City of Dover
Tina Watson	Bombay Hook National Wildlife Refuge
Jacque Williamson	Delaware Center for Horticulture

We thank the 2,064 citizens from around the state who responded thoughtfully to research question from the 2011 Outdoor Recreation Participation and Trends Telephone Survey. We also thank members of conservation and recreation organizations throughout the state who participated in open discussions regarding the development of this document. Public participation was a core component of this plan.

Delaware Association for Environmental Educators
Delaware Children in Nature Task Force
Delaware Council on Greenways and Trails
Delaware Coalition for Healthy Eating and Active Living (DE HEAL)
Delaware Greenways, Inc.
Delaware Nature Society
Delaware Recreation and Parks Society
Recreational Trails Advisory Committee
Delaware Wildlands, Inc.
DNREC Planners Technical Advisory Committee

Responsive Management, Inc. was contracted by the Division of Parks and Recreation to conduct the 2011 telephone survey and report. Mark Damian Duda, Executive Director, and his staff provided thoughtful direction in designing the survey and insightful guidance to Division staff in developing the SCORP.

Dear Outdoor Enthusiast,

The 160,000 acres of public parks, wildlife areas, natural areas, and historic resources that comprise Delaware's Great Outdoors have never been more important to our state's future. Inspiring more Delawareans to enjoy these priceless treasures has the potential to improve public health outcomes, reduce health care costs, increase student performance, provide opportunities for at-risk youth, conserve our natural resources, and support our multi-billion tourism industry.

Every year, millions of visitors and hundreds of thousands of Delawareans enjoy our vibrant parks, spectacular conservation areas, and our growing network interconnected trails and pathways—yet there are still many families who have yet to experience all Delaware's Outdoors have to offer.

Our goal is simple: We want all Delaware children to have the opportunity to play outdoors close to home and immerse themselves in nature.

A team of talented public servants, recreation and conservation experts, and citizens developed *Delaware Outdoors: Building an Outdoor Legacy* with the goal of providing a vision for outdoor recreation facilities, parks, trails, ecological destinations and conservation areas across our state. By continuing our investments in parks, trails, wildlife areas, open spaces, and outdoor recreation amenities we will enhance Delaware's quality of life and improve our economic competitiveness at the same time.

Together, we will leave a legacy of conserving Delaware's world-class natural resources and expanding outdoor recreational opportunities that foster active, healthy, and happy lives for current and future generations.

See you in Delaware's Great Outdoors!

Sincerely,

Jack Markell

Jack A. Markell
Governor

Foreword

By Collin O'Mara, Secretary
Department of Natural Resources & Environmental Control

More than ever before, we need to connect children and families with nature. It's good of our economy, our public health, our environment, and our overall quality of life. Fortunately, Delaware offers a cornucopia of rich outdoor experiences - sites for active recreational quests, places to reconnect with nature, and vast expanses to deepen our love of the outdoors. Delaware offers nearly 160,000 acres of publicly accessible parks, wildlife areas, open spaces, and natural and historic resources worth exploring—and more on the way. As a result of several generations' commitment to land conservation through the State Open Space and Farmland Preservation Programs, efforts of Federal and municipal partners and forward-thinking environmental organization actions, and landmark conservation state laws, close to 10% of Delaware's nature treasures are protected and publicly accessible for outdoor recreation.

More and more people are realizing that a healthy environment and access to diverse outdoor experiences play an integral role in our state's economic success, proving recreation and conservation are drivers of job growth. Delaware beaches, state parks, wildlife areas, and waterways, provide the foundation for a multi-billion dollar tourism industry that supports tens of thousands of jobs. Delaware's world-class wildlife habitat is repeatedly recognized globally significant ecologically and the State is increasingly noted as a destination for our 4Bs: beaches, bike trails, birding/hunting, and boating/fishing opportunities. By continuing to make strategic investments, we can enhance recreation and conservation opportunities for our citizens and spur local economic development and ecotourism opportunities that will strengthen communities in all three counties.

This outdoor recreation plan calls on each of us to do our part to expand outdoor opportunities for all Delawareans, improve our recreational resources, to make personal efforts to be more active, to cultivate healthy communities, and to conserve our natural resources. Together we will inspire adult and youth to get outdoors, provide more close-to-home recreational opportunities, reduce childhood obesity, connect communities with trails and pathways, expand ecotourism opportunities, foster environmental resource stewardship, and enhance conservation and recreational opportunities which appeal to all Delawareans and the thirty million people living within a three-hour drive.

By implementing the recommendations in this plan and continuing exciting efforts underway like the Children in Nature Initiative, the First State Trails and Pathways Plan, and the Delaware Bayshore Initiative, we will build upon our rich outdoor recreation tradition and in doing so cultivate healthy communities and dynamic public spaces that both meet today's needs and leave an enduring environmental legacy.

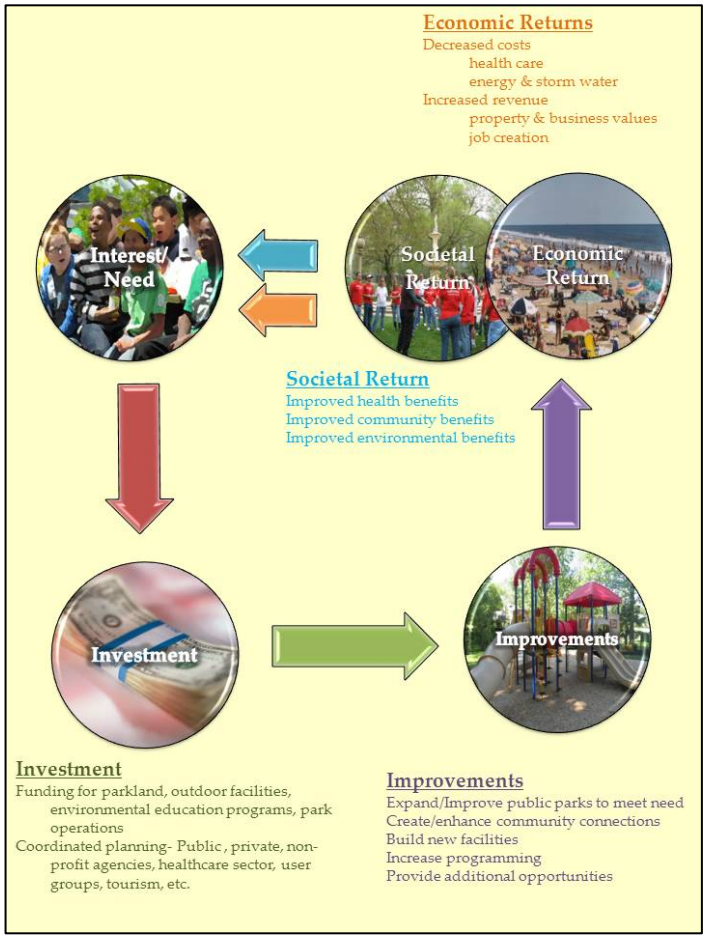
Please join us in this effort as we work to ensure that Delawareans of all ages enjoy the state's abundant recreational resources for generations to come.

Collin P. O'Mara
Secretary

Introduction

Investment in Outdoor Recreation

Investments in parks, trails, conservation areas, and outdoor recreation facilities offer countless and long-lasting benefits to our communities including numerous societal and economic returns. Once an investment in outdoor recreation is made, it sparks a renewed interest and expanded use of outdoor recreation facilities and results in both intrinsic and measurable benefits. Investments that expand and improve public recreation facilities, increase recreation and environmental programming, improve our quality of life and contribute to communities' vibrancy. Investments in parks and outdoor recreation facilities yield returns such as environmental improvements, benefits to health and fitness, decreased healthcare costs, and increased property values.



New and improved facilities attract new recreation participants to the outdoors. When people spend time outdoors, they begin to foster an appreciation of the natural environment. Out of this appreciation comes a sense of ownership and a connection to these areas. People who have a connection to the environment around them are more likely to become stewards to those resources. Not only do they have an increased willingness to preserve these areas, but they will be more likely to participate in activities that will enhance or protect an area they feel connected.

Delaware faces many challenges as it conserves land and water resources, strives to meet growing outdoor recreation needs of a changing population, as well as

updating a backlog of deferred maintenance or rehabilitation of existing outdoor recreation facilities. State population projections show Delaware continuing to grow throughout the next decade. The largest demographic increase is predicted to be the 55 and older age group. With our growing and changing population composition there will be new challenges and constraints to meeting the diversity of needs. Population shifts, development patterns, public health matters, climate change, and economic conditions, make it vital to plan carefully if Delaware is to meet outdoor recreation needs.

Several funding sources have provided assistance in building parks and protecting natural resource conservation areas that today are the foundation of Delaware's outdoor recreation and conservation estate.

Federal Land and Water Conservation Fund Program (LWCF)

The Federal Land and Water Conservation Fund (LWCF) (Public Law 88-578, 16 U.S.C. 460/-4) was established by Congress in 1964 to provide assistance to state, local and federal agencies in creating parks and open spaces, protecting wilderness, wetlands, wildlife habitat and refuges, and enhancing recreational opportunities. The program founders sought to create a nationwide legacy of quality parks, outdoor recreation and conservation areas and to stimulate non-federal investments at the state and local level across the United States.[1] Congress clearly indicated that the LWCF Program should have lasting effect on the supply of recreation sites and facilities by requiring that the sites assisted be added permanently to the national outdoor recreation estate. As a result, Section 6(f)(3) of the LWCF Act states unequivocally that grant-assisted areas are to remain forever available for "public and outdoor recreation use".

[1] www.nps.gov/lwcf

The LWCF, a U.S. Department of Interior program that is administered for Delaware by the State Division of Parks and Recreation, is comprised of a trust fund that accumulates revenues from federal outdoor recreation user fees, the federal motorboat fuel tax, and surplus property sales. A majority of funding for the program comes from accumulated revenues from off-shore oil and gas leases- thus recycling an important natural resource back to public use through park and conservation lands and recreational facilities. Current funding levels for the LWCF Program are at an all-time low. During the past decade, revenues from the outer continental shelf land leases have accounted for almost 100% of the funding source.

Delaware Land and Water Conservation Trust Fund (DTF)

In 1986, the state enacted the Delaware Land and Water Conservation Trust Fund Act (DTF), a state law that mirrors the federal LWCF Program (Del. Code Title 30 ch. 54). The DTF is a matching grant program administered by the State Division of Parks and Recreation within the Department of Natural Resources and Environmental Control that assists county and municipal governments and park districts with park land acquisition and outdoor recreation facility development. Annually, $1 million of Real Estate Transfer Tax is deposited into the Trust with the principal intact. Trust-generated income is divided equally between park and trail projects.

DTF assistance is available for parkland, open space or greenway acquisition, planning and outdoor recreation facility development projects. Up to 50% funding is available for eligible projects while a sponsor and match may be derived from the agency's budget, other grants, in-kind sources or donations. Sponsoring agencies must agree to dedicate the project site to public outdoor recreation use in perpetuity and

assume responsibility for continuing operation and maintenance of the area. To date the DTF Program has assisted 44 eligible agencies with over 300 completed projects. The $21M of DTF assistance has leveraged $56 million in local community investment. More than three quarters of the DTF projects (237) resulted in park development, 48 in park land acquisition, and 27 were directed to park planning.

America's Great Outdoors

In 2010, the Obama Administration launched the America's Great Outdoors (AGO) initiative to develop a 21st Century conservation and recreation agenda. AGO recognizes that many of the best ideas come from local grassroots conservation initiatives, and calls for reworking inefficient policies and making the Federal Government a better partner with states, tribes, and local communities. As a result, the America's Great Outdoors Report, published in February 2011, proposed a number of recommendations and actions directed towards reigniting a commitment to conserving our natural heritage. A number of the AGO recommendations overlap with the recommendations outlined within the Delaware Statewide Comprehensive Outdoor Recreation Plan signifying a greater support for achieving shared goals. Overlapping recommendations are outlined in the Outdoor Recreation and Conservation Issues and Recommendations section of this SCORP document. *www.americasgreatoutdoors.gov*

Statewide Comprehensive Outdoor Recreation Plan

Delaware Outdoors is a planning and policy document that identifies needs in outdoor recreation throughout the state of Delaware. Identification of these needs guide the investment of funding for outdoor recreation, specifically in the distribution of LWCF and DTF monies, as well as other public and private funds. In order to remain eligible to receive LWCF grants, states are required by the Land and Water Conservation Fund Act, through administration by the Department of Interior, National Park Service, to develop a SCORP every five years.

During the development of this Statewide Comprehensive Outdoor Recreation Plan (SCORP), citizens, local interest groups, municipal, county and state government agencies were asked to identify Delaware's outdoor recreation needs and concerns and provide recommendations to meet overall needs. A Technical Advisory Committee, made up of more than twenty-five local, regional, state, federal and non-governmental organizations, met quarterly to inform and guide plan development.

In developing and researching the findings reported in the 2013 SCORP, the planning process discovered changes in recreation and growth trends, community

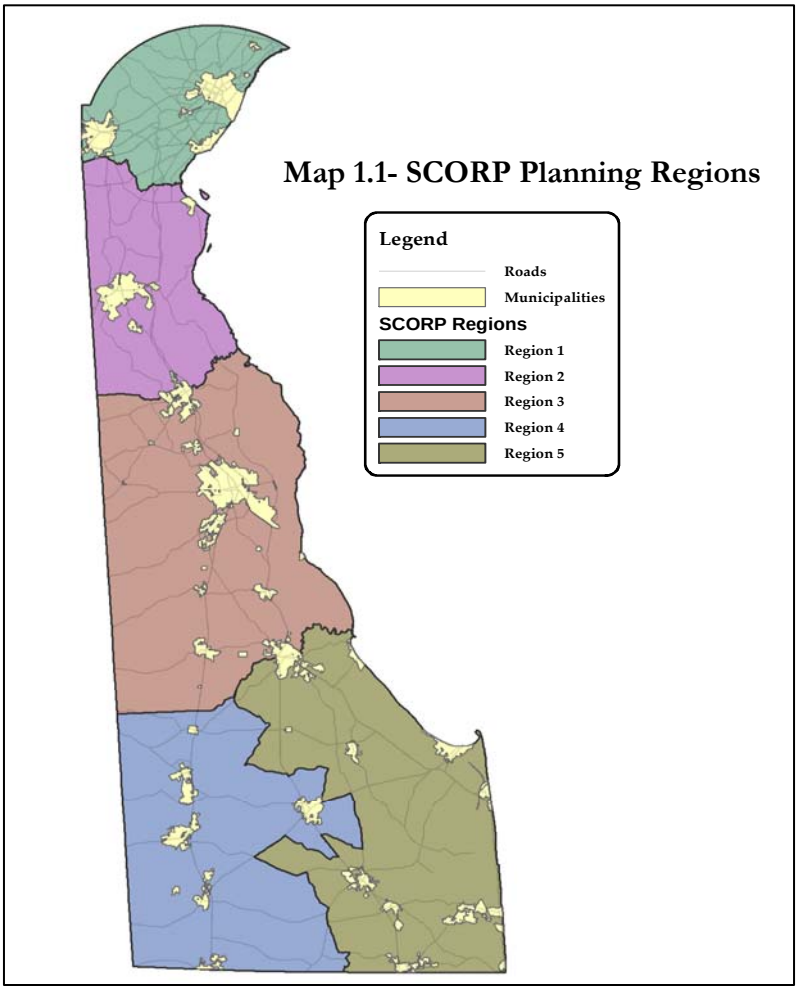
needs, and landscape preferences. Many discoveries were made in the process, such as:

- A majority of Delaware residents (93%) indicate outdoor recreation is important to their quality of life.
- 58% of residents participate in outdoor recreation for their physical fitness and to lead a healthier lifestyle.

Focus of the SCORP is regional in nature, and not intended to indicate specific locations for community parks. However, further planning to secure park land and locate specific facilities at the local level is very important.

Identifying the public demand for and supply of outdoor recreation resources in the state are core components in developing this Plan. While resulting information is aggregated regionally, SCORP data and analysis will be further developed and applied at the local level to assist municipalities and counties with identifying park land locations and outdoor recreation facility enhancements that best meet public needs. Prioritizing Delaware's outdoor recreation facility needs and spatially identifying areas with the largest recreation gaps provide valuable information that direct future funding for outdoor recreation facilities.

Outdoor Recreation Planning on the Local Level

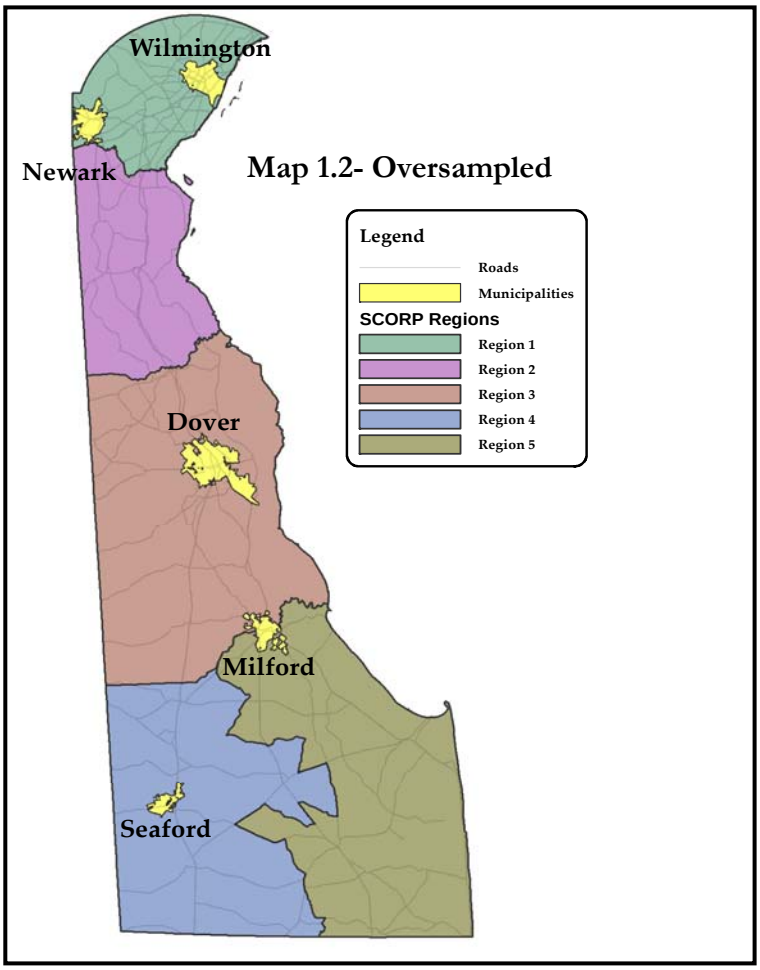


Delaware is comprised of three counties and fifty-seven incorporated municipalities. State law (22 Delaware Code §702) requires every county and municipality with populations greater than 2000 residents to review their adopted Comprehensive Land Use Plan every five years, and then revise, update or amend the plans as necessary, and re-adopt them at least every ten years. Comprehensive plans are required to address open space and recreation by analyzing existing park and recreation facilities available to the community and addressing recreation needs, policies, goals, and facility expansion. SCORP-based data and findings are integral in meeting comprehensive land use plan requirements. More importantly, SCORP data and findings provides information for locally-directed decision making that would result in outdoor recreation facilities that keep pace with growing and changing jurisdictions.

Planning Regions

For the purpose of refining data and research findings, Delaware has been divided into five planning regions. Development patterns, population and census tracts were initially used to formulate the regional boundaries. These regions used today to

present outdoor recreation demand and need data were first adopted in 2002. In an effort to track trends, the same boundaries are applied in this SCORP exhibited in Map 1.1. Regions 1 and 2 are in densely populated New Castle County; Region 3 includes all of Kent County; and Regions 4 and 5 in Sussex County, the state's largest and fastest growing county.

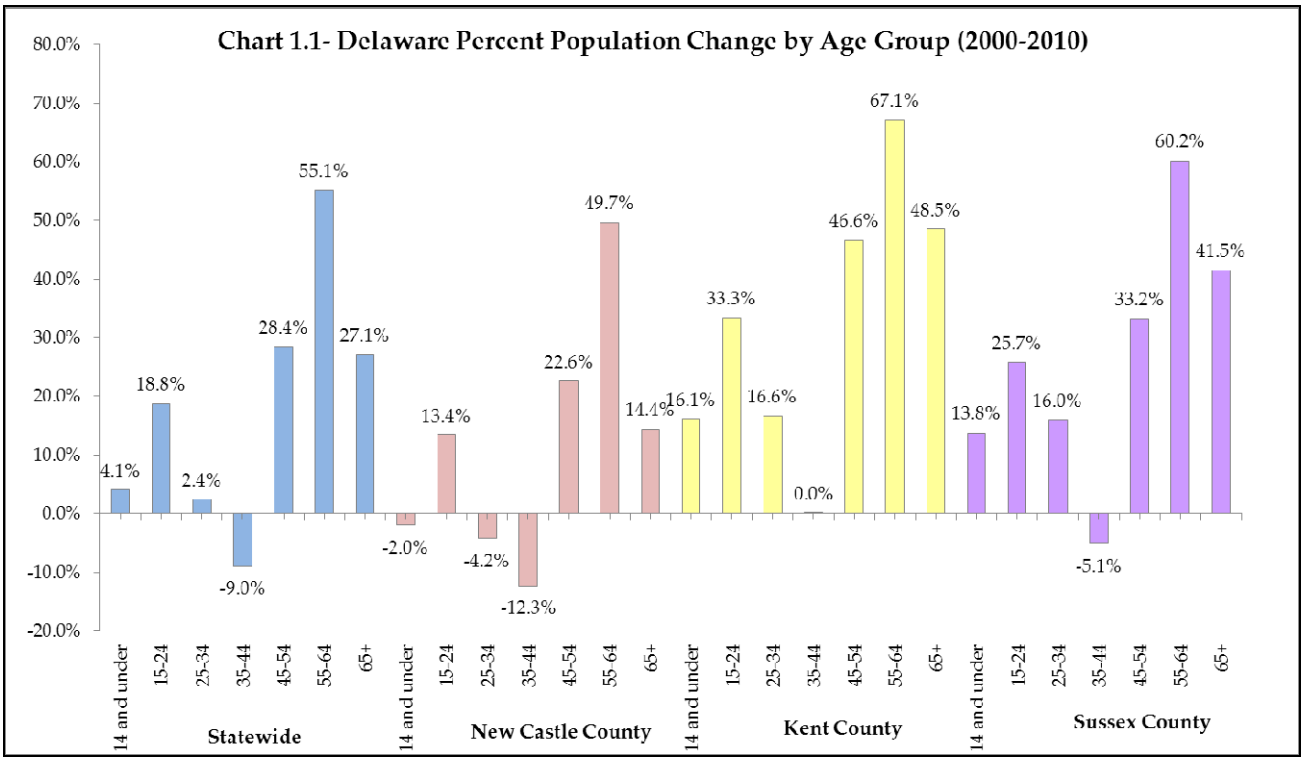


Municipalities

Additional research was collected to conduct a separate analysis of five Delaware municipalities: Wilmington, Newark, Dover, Milford, and Seaford. This municipal oversampling was done to gain a better understanding of outdoor recreation patterns and demands in a smaller geographical area. These municipalities, depicted in Map 1.2, were selected because they have long-standing staffed park and recreation departments.

Population Growth and Trends

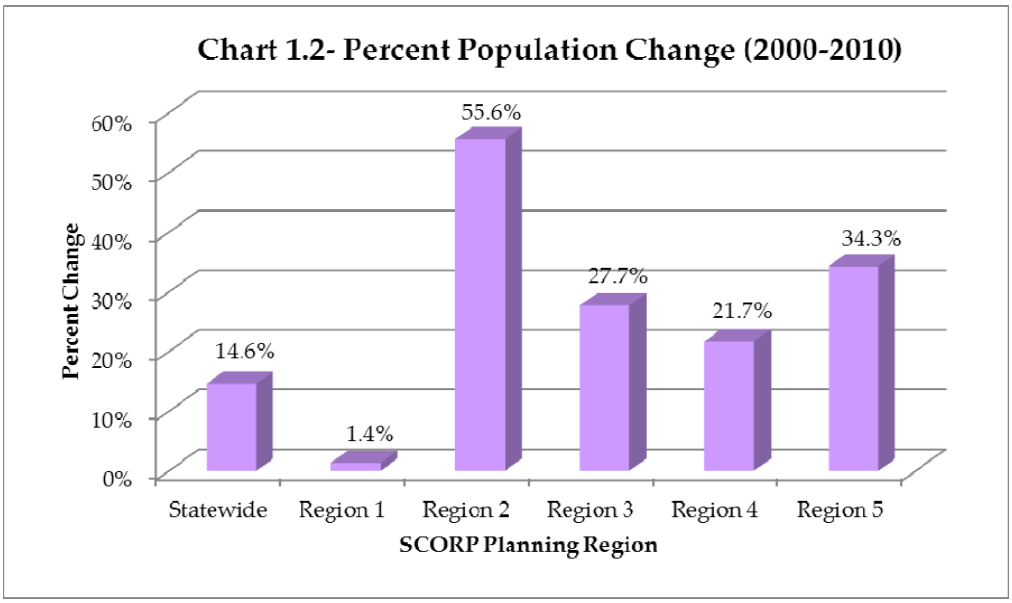
Though a small state, Delaware is centrally located on the eastern seaboard of the United States and is bordered by the Atlantic Ocean and Delaware Bay, as well as by the states of New Jersey, Pennsylvania and Maryland. Delaware's mid-Atlantic location offers convenient access to major metropolitan areas, making it an ideal place to live and still be a short car ride away from a major city. The proximity to Washington D.C., Philadelphia, and Baltimore along with low property taxes and other factors, has greatly contributed to the suburbanization of the State. Delaware's population increased nearly 15% from 2000 to 2010. With 897,934 residents, Delaware ranked the



8th most dense state in America in 2010. Population growth was seen in all three counties and most municipalities. Chart 1.1 displays Delaware's population change by age group between 2000 and 2010. Population growth, for all but one SCORP Planning Region, outpaced the overall state growth, putting added pressure on local recreation facilities and amenities. Large population growth was particularly seen in southern New Castle County and Kent County, Regions 2 and 3 respectively. Chart 1.2 shows percent population growth for each of the SCORP Planning Regions between 2000 and 2010.

State population projections show growth continuing into the next decade although growth rates are anticipated to be slower than between 2000-2010. Projection data shows the state population increasing 9.7% to 981,922 residents by 2020. Sussex County is projected to have the greatest amount of growth (19.5%) during this time period. Table 1.1 Shows projected population trends statewide and by county.[2]

[2] Delaware Population Consortium



Nationally, the rate of land development is outpacing population growth. Delaware, too, has had its share of suburban sprawl in the past two decades. In the 15 year period between 1992 and 2007, Delaware's developed residential areas alone grew 50.9%. Land use decisions affect everyone and require quality comprehensive plans, community design standards and land use ordinances to direct growth, and its associated infrastruture, while minimizing impacts to vital natural and environmental resources. New development planned and executed around existing development: 1) puts people where community services already exist; 2) reduces costs of installing new infrastructure, keeping schools, parks, libraries, shopping and emergency services close-to-home; and 3) decreases the fragmentation of agriculture and forest, maintaining farm productivity and ecological diversity. This type of development also promotes active living by making it possible for residents to incorporate incidental physical activity opportunities into their daily routines by walking or biking to and from home to nearby ommunity services.

Table 1.1- Projected Population by County

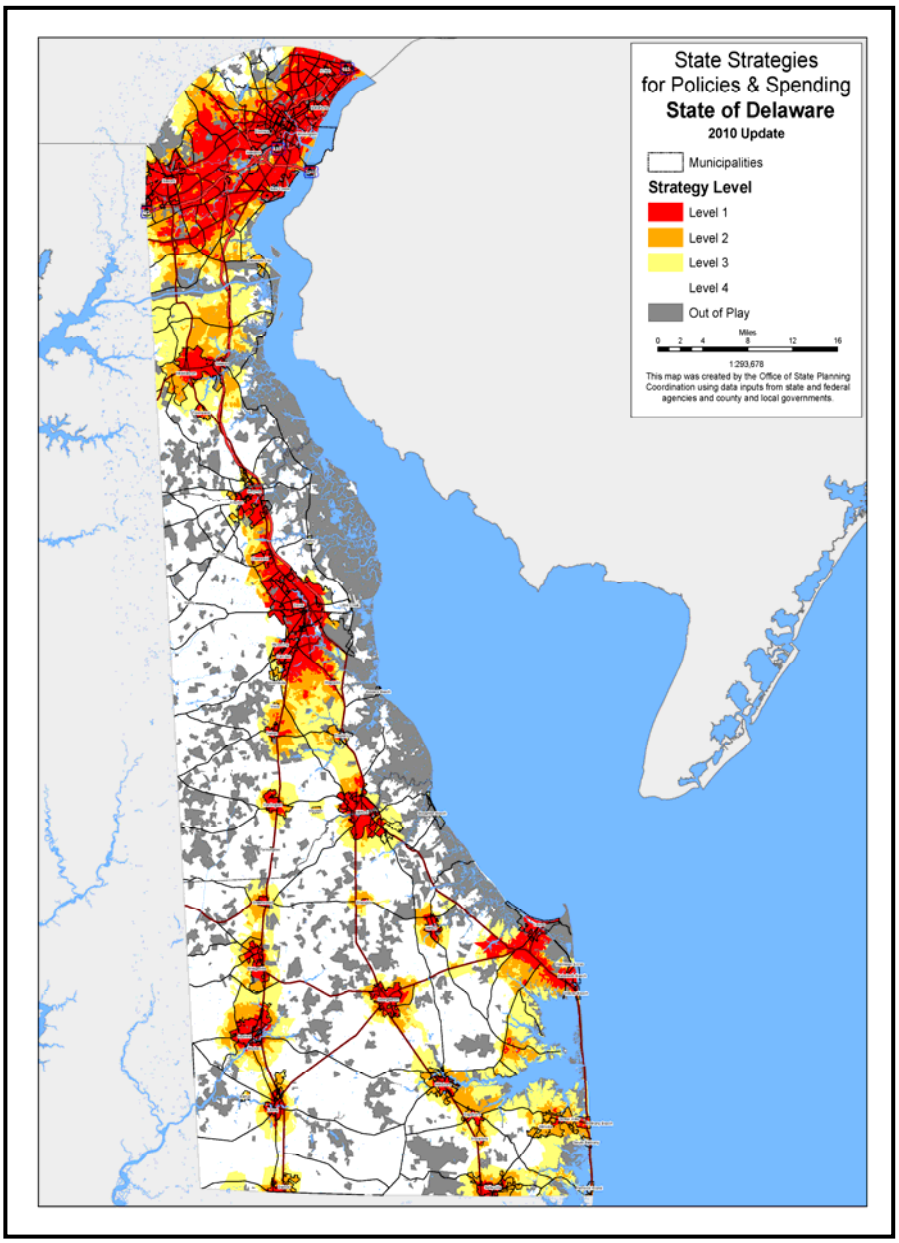
	2010	2015	% change 2010-2015	2020	% change 2010-2010
Statewide	895,173	940,449	5.1%	981,922	9.7%
New Castle County	538,170	554,405	3.0%	567,764	5.5%
Kent County	160,058	169,884	6.1%	178,817	11.7%
Sussex County	196,945	216,160	9.8%	235,341	19.5%

Strategies for State Policies and Spending

In 2011, Governor Markell signed Executive Order #26, approving an update of the *Strategies for State Policies and Spending* to better coordinate land-use decision-making with the provision of infrastructure and services in a manner that makes the best use of our natural and fiscal resources. The update for the *Stratgies for State Policies and Spending* builds on the groundwork laid in 1999 and 2004. The document is a result of extensive coordination with local governments and state agencies to guide state investment decisions to promote efficient development patterns, protect agriculture and open space, discourage sprawl, and communicate with local governments on land-use matters. The State Strategies identifies Levels 1 and 2 which areas are most prepared for growth and where the state can make the most cost-effective investments in roads, schools, parks and other public facilities and services. Level 3 areas reflect areas where growth is anticipated by local, county, and state plans in the longer term, or as areas that may have environmental or other constraints to development. In the Level 4 areas, the state will make investments that will help preserve a rural character, such as

investments to protect open space and agriculture. Out-of-play areas are those that cannot be developed because they are protected lands or regulations prohibit development. Map 1.3 exhibits the geographic areas in the *Strategies for State Policies and Spending.* *Strategies for State Policies and Spending* supports many of the concepts that are encouraged by the park and recreation community, including preservation of open space, close to home recreation opportunities, and bicycle and pedestrian mobility.

Map 1.3- 2010 State Strategies for Policies and Spending



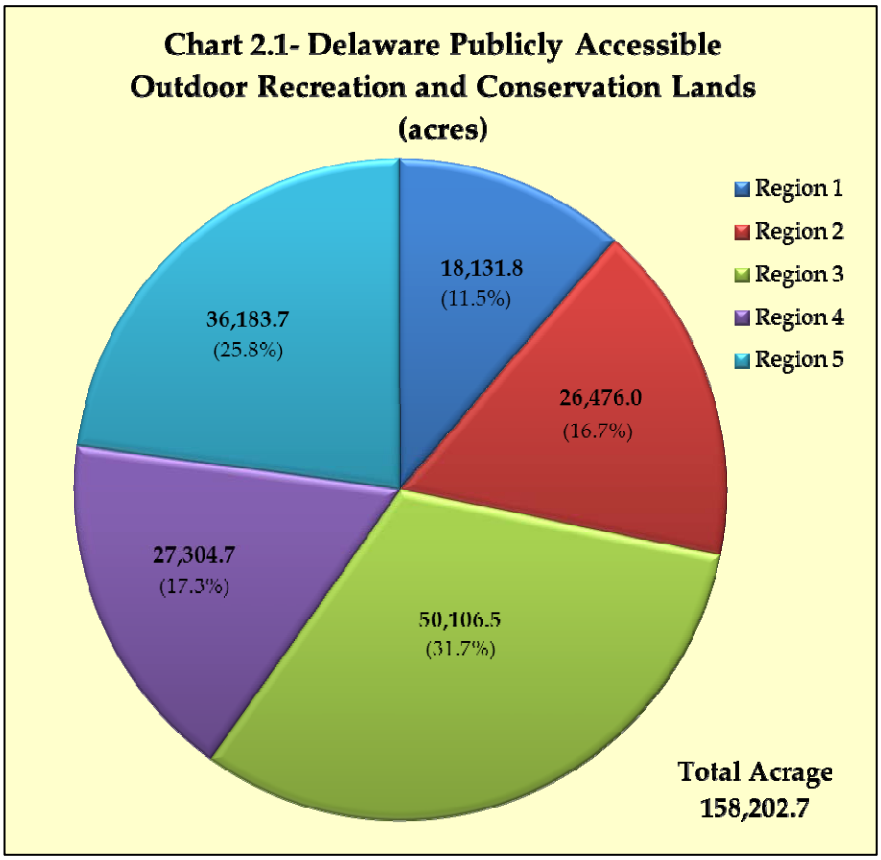
Implementation of the SCORP recommendations that encourage investments for active recreation in areas identified as 'most prepared for growth' while preserving open space in rural and environmentally sensitive areas will ultimately maintain and enhance our quality of life.

Outdoor Recreation Inventory

Goal: Incorporate the Outdoor Recreation Inventory in state and local planning decisions and educational outreach

Before analyzing outdoor recreation needs, it is essential to have an understanding of recreational facilities that are already in place. The Delaware Division of Parks and Recreation maintains an Outdoor Recreation Inventory (ORI) for the state. The ORI is an asset registry of open space, protected land, parks and recreational facilities managed by federal, state, county, and municipal governments, private conservation groups and school districts. At the Federal and State levels, public recreation and conservation lands in Delaware are managed by the US Fish and Wildlife Service; Department of Natural Resources and Environmental Control, Division of Parks and Recreation, the Division of Fish and Wildlife, and the Delaware Coastal Programs; the Department of Agriculture, State Forest Service; and the

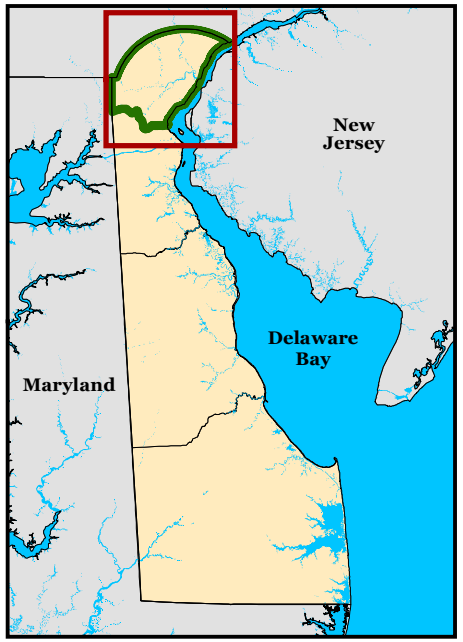
Department of the State, Division of Historical and Cultural Affairs. While one park district and fifty-seven municipal and three county governments manage park lands and outdoor recreational facilities at the local level.



The ORI database contains information on a wide range of outdoor recreation amenities. The first computer-based statewide inventory of publicly-owned recreation areas was created in 1993. Subsequent comprehensive ORI updates were completed in 1999, 2002, 2006, and again during the summer of 2011. This most recent review, conducted for this SCORP, involved site visits to most outdoor recreation areas throughout the state to verify park amenities as well as the first data assemblage of privately held recreation facility information. Chart 2.1 displays the recreation-related acreage for local, county, state, and federal public lands by SCORP Planning Region and Table 2.1 summarizes individual outdoor recreation facilities for each Region. Additionally, Maps 2.1 through 2.5 graphically depicts the locations of publicly accessible recreation lands. A complete list of Delaware's Outdoor Recreation Inventory can be found in Appendix A.

The ORI is an invaluable tool for conducting generalized level of service analyses, calculating the amount of outdoor recreation space available and identifying specific types of outdoor recreation facilities and their location within each SCORP Planning Region. Delaware boasts nearly 160,000 acres of land that is publicly accessible for active and eco-based outdoor recreation. Delaware's outdoor recreation

Map 2.1
Publicly Accessible Outdoor Recreation Areas
SCORP Region 1



NORTH

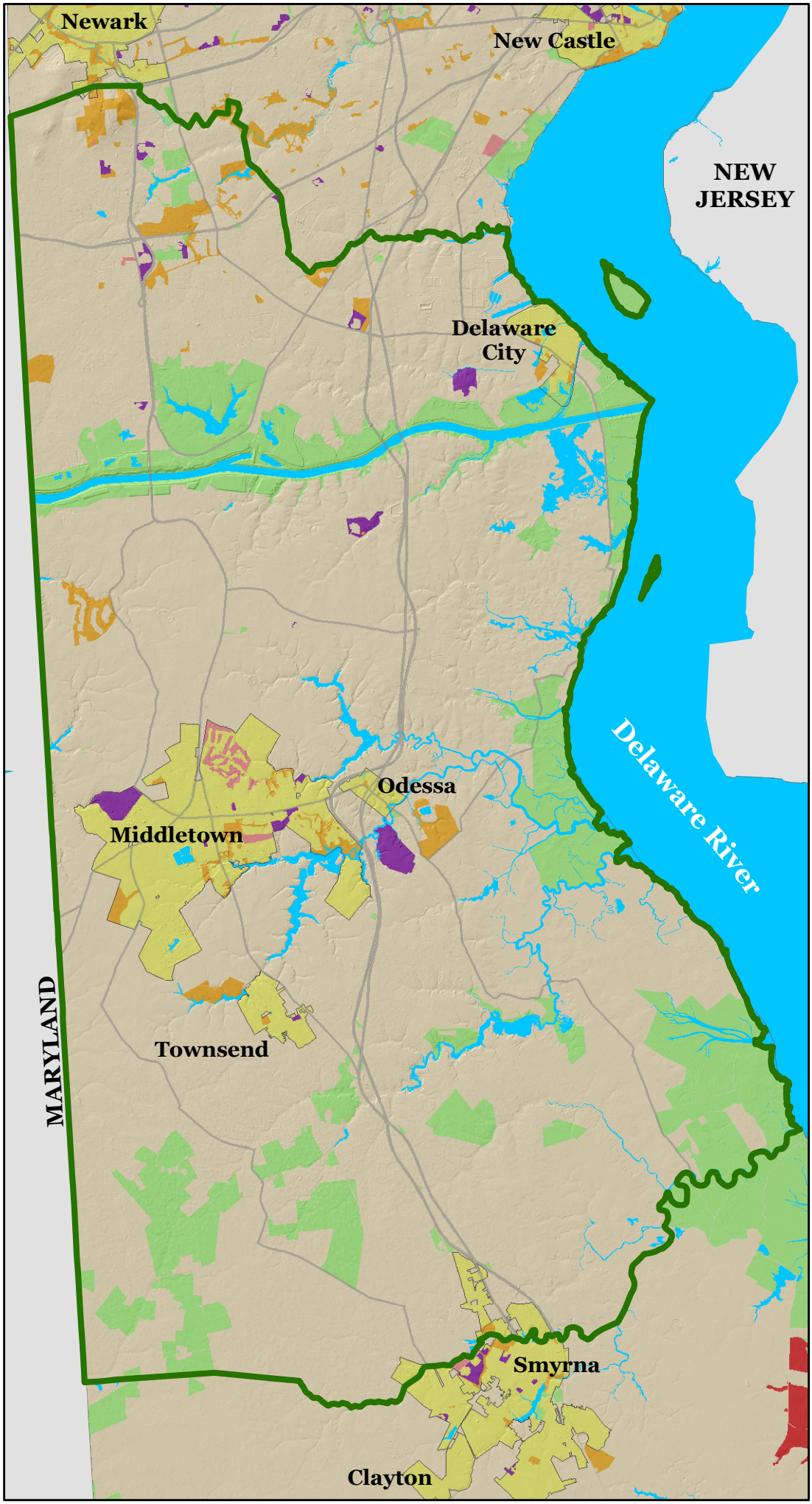
Legend

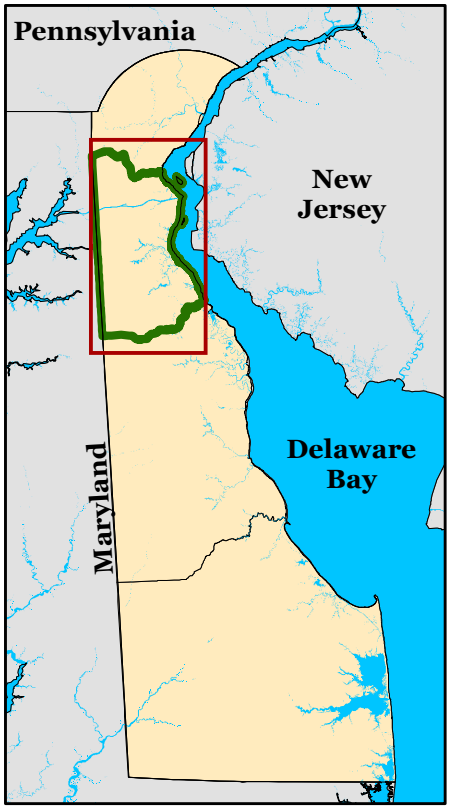
- SCORP Region 1
- Water
- Municipalities

Outdoor Recreation Areas

- State
- Local
- Public School District
- Privately Managed

Map 2.2
Publicly Accessible Outdoor Recreation Areas
SCORP Region 2





NORTH

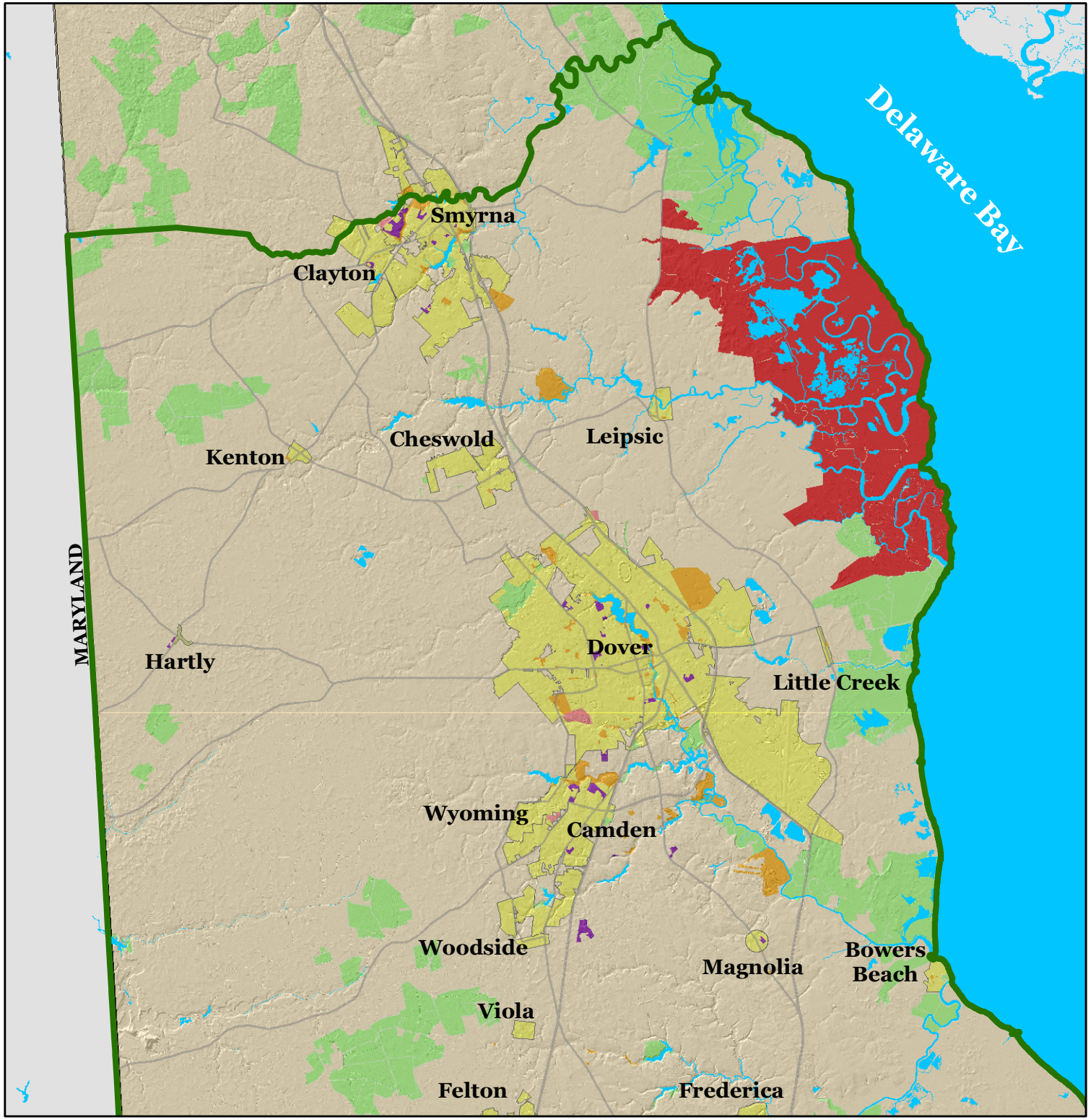
Legend

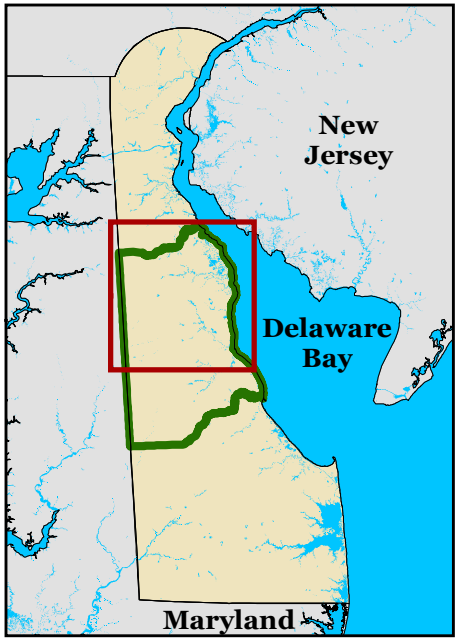
- SCORP Region 2
- Water
- Municipalities

Outdoor Recreation Areas

- Federal
- State
- Local
- Public School District
- Privately Managed

Map 2.3a
Publicly Accessible Outdoor Recreation Areas
SCORP Region 3





NORTH

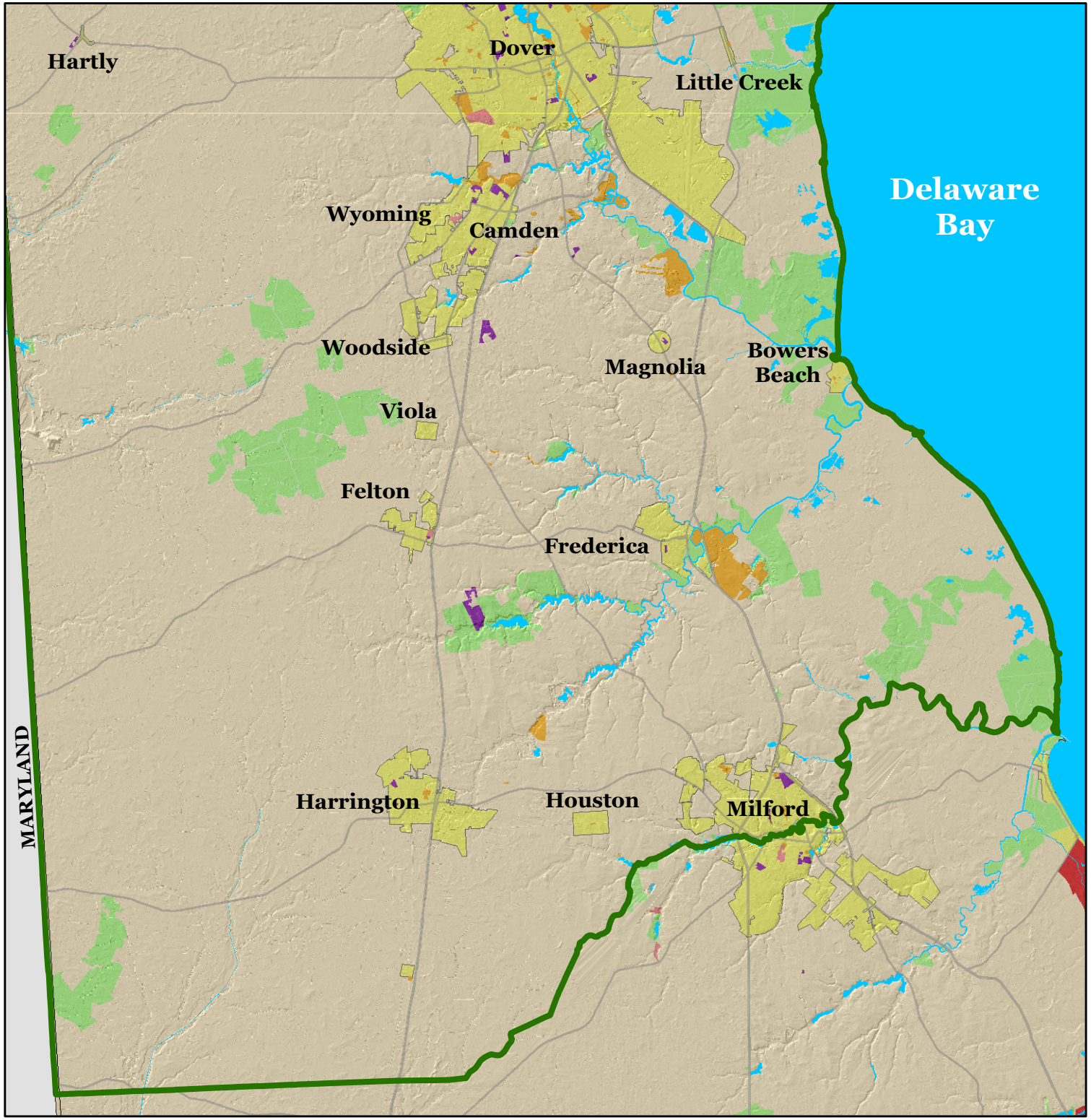
Legend

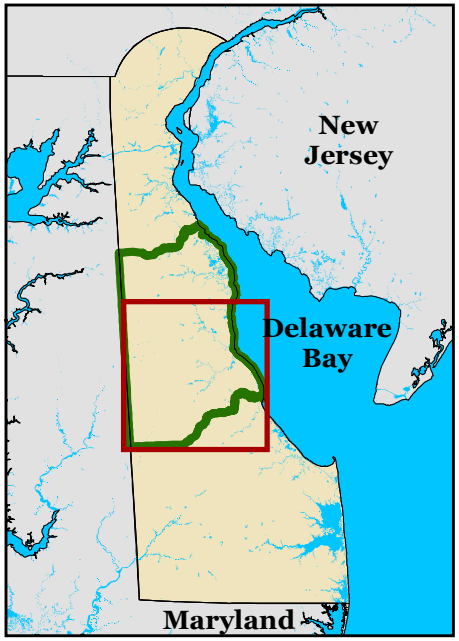
- SCORP Region 3
- Water
- Municipalities

Outdoor Recreation Areas

- Federal
- State
- Local
- Public School District
- Privately Managed

Map 2.3b
Publicly Accessible Outdoor Recreation Areas
SCORP Region 3





NORTH

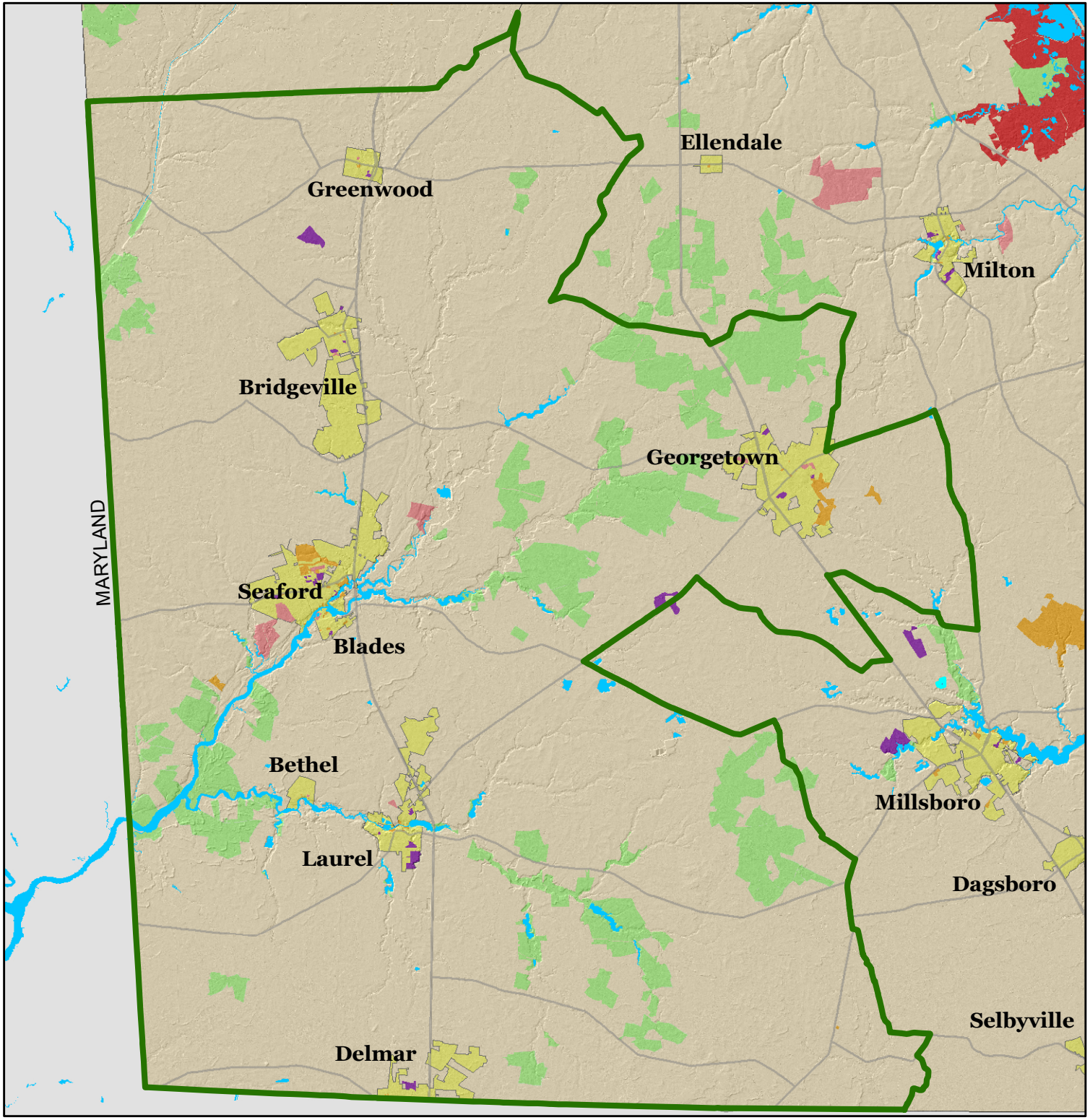
Legend

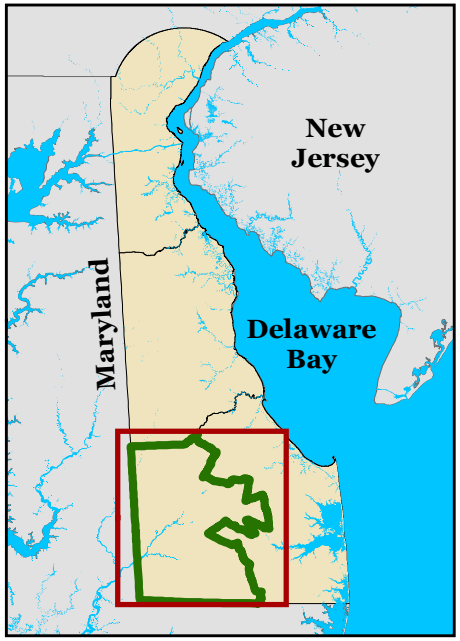
- SCORP Region 3
- Water
- Municipalities

Outdoor Recreation Areas

- Federal
- State
- Local
- Public School District
- Privately Managed

Map 2.4
Publicly Accessible Outdoor Recreation Areas SCORP Region 4





NORTH

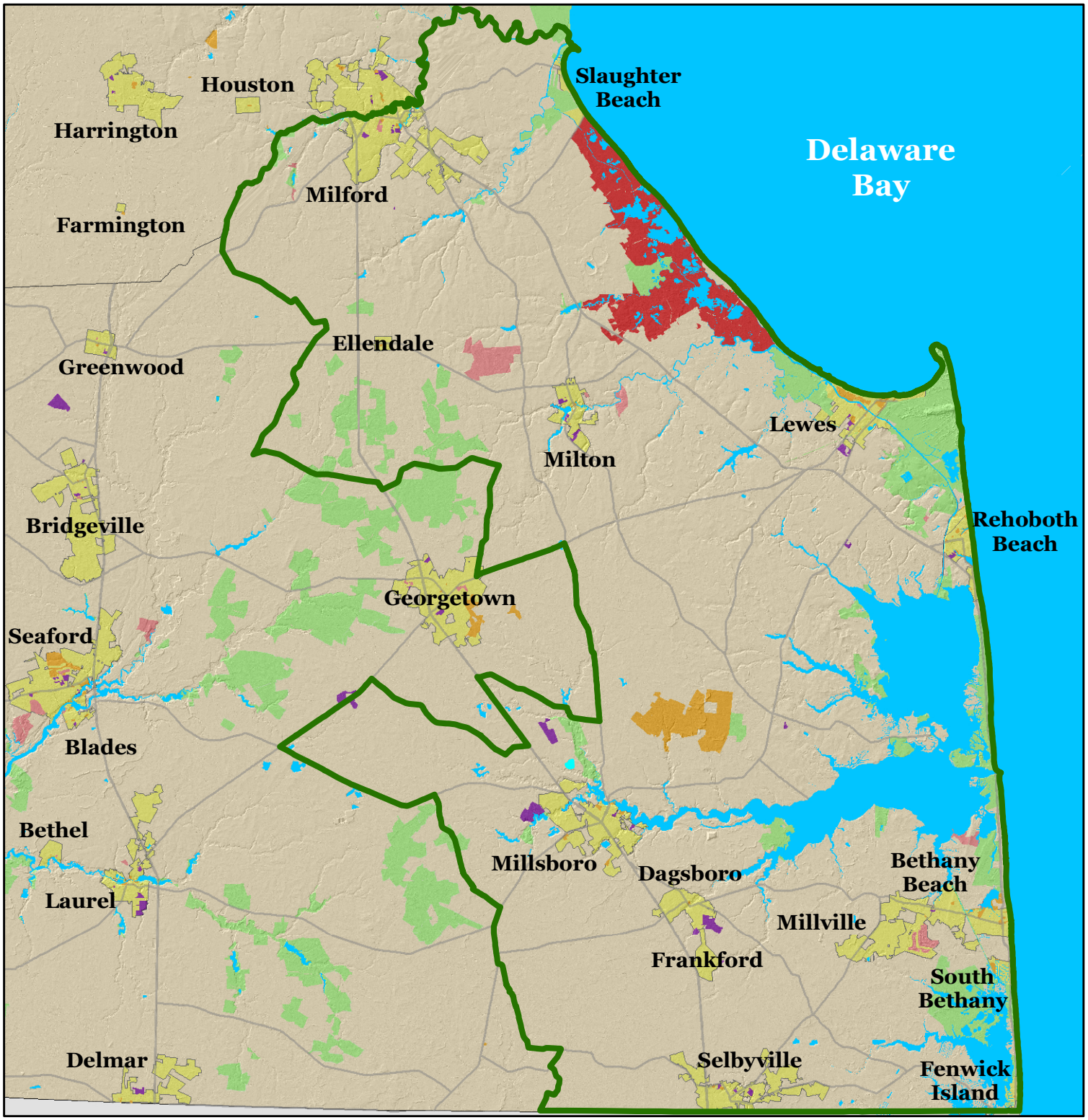
Legend

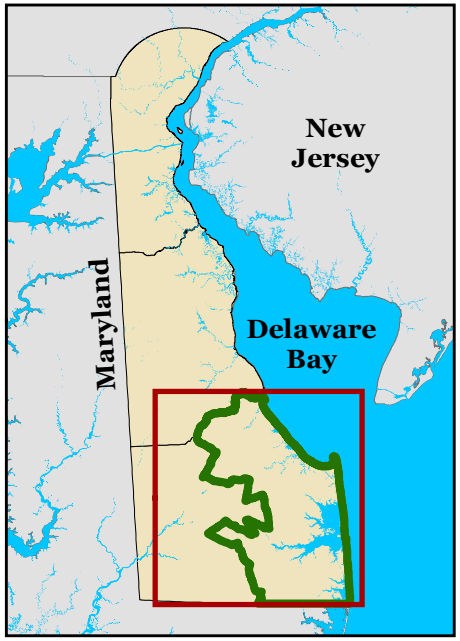
- SCORP Region 4
- Water
- Municipalities

Outdoor Recreation Areas

- Federal
- State
- Local
- Public School District
- Privately Managed

Map 2.5
Publicly Accessible Outdoor Recreation Areas SCORP Region 5





NORTH

Legend

- SCORP Region 5
- Water
- Municipalities

Outdoor Recreation Areas

- Federal
- State
- Local
- Public School District
- Privately Managed

estate is distributed among the five SCORP planning regions with Region 3 having the largest percentage (31.7%) of land dedicated as public recreation space. Regions 5 (25.8%), Region 4 (17.3%), and Region 2 (16.7%), follow with slightly less land dedicated for public outdoor recreation, while Region 1 (11.5%) has the least acreage in the public domain.

This acreage breakdown is understandable when looking at the size of each region. Region 3 and Region 5 are the largest of the five regions and thus, proportionally, should have the most land dedicated for outdoor recreation. However, careful consideration must be used when utilizing the ORI for service analyses. The designation of 'use' within the ORI must be taken into account when looking at close-to-home recreation opportunities. Region 3 has the largest acreage, but most of that land consists of large tracts of conservation lands, wetlands and refuges that are suited for passive recreation activities. In reality, only 6.2% of the ORI acreage in Region 3 is close-to-home active recreation facilities. As shown in Chart 2.2, relatively low percentage of active outdoor recreation opportunities is seen in all of the planning regions except Region 1.

Chart 2.2- Outdoor Recreation Inventory by SCORP Planning Region

	Region 1	Region 2	Region 3	Region 4	Region 5
Outdoor Recreation Acreage within each Planning Region *	18,131.75	26,475.98	50,106.54	27,304.67	36,183.74
% of Outdoor Recreation Acreage	11.5%	16.7%	31.7%	17.3%	25.8%
% of the Region's Recreation Acreage that is Close-to-Home Active Recreation**	54.1%	15.9%	6.2%	13.0%	24.4%

* Publicly Accessible Conservation and Outdoor Recreation Lands

** Calculation does not include public school facilities

Table 2.1- Publicly Owned Outdoor Recreation Facilities

		Region 1	Region 2	Region 3	Region 4	Region 5	Statewide
Water based Facilities	Swimming in Ocean	0	0	1	0	10	11
	Swimming Pool	7	2	2	0	0	11
	Spray Park	5	0	1	0	0	6
	Fishing area (saltwater)	2	7	7	0	23	39
	Fishing area (freshwater)	42	8	26	24	22	122
	Piers	10	17	9	11	30	77
	Marinas	0	2	0	0	1	3
	Boat Ramps	4	11	23	12	21	71
Field Sport Facilities	Baseball/Softball Fields	139	14	26	12	6	197
	Football Fields	6	2	3	2	1	14
	Soccer Fields	22	3	10	3	0	38
	Tracks	2	1	0	0	0	3
	Multipurpose Fields	34	14	20	0	4	72
Court Sport Facilities	Tennis Courts	125	20	9	0	7	161
	Basketball Courts	164	14	17	5	8	208
	Volleyball Courts	21	3	15	2	9	50
Picnic & Playground Facilities	Playgrounds	190	29	30	10	17	276
	Tot Lots	161	27	21	10	15	234
	Swings	552	65	68	46	35	766
	Tot Swings	401	64	41	17	27	550
	Pavillion	65	40	27	19	35	186
	Picnic Area	122	27	32	19	28	228
Camping Facilities	RV & Tent Camping	0	2	1	1	2	6
	Youth Camping	2	1	1	1	2	7
	Primitive Camping	0	2	1	2	3	8
	Cabins	0	0	11	8	5	24
	Yurts	0	2	0	2	0	4
	Cottages	0	0	0	0	12	12
Other Facilities	Gardening	1	0	0	0	0	1
	Skate Parks	5	4	2	0	0	11
	Disc Golf	5	2	2	0	1	10
	Golf	2	1	2	1	0	6
	Dog Areas	4	3	2	0	0	9
	Nature Centers	4	3	4	2	3	16

This chart does not represent recreational facilities on school grounds.

As Delaware's outdoor recreational opportunities continues to grow, either with new lands or additional facilities, it is crucial to work with local governments to update the ORI database to track the supply of facilities available for public use. With a majority of local governments lacking GIS software or staff to manage this data, the Division of Parks and Recreation has created a spatial ORI dataset that can be shared and viewed using either GIS software or Google Earth. The spatial dataset includes land boundaries represented by polygons and recreational facilities represented by points. The tabular data associated with the ORI includes the facility name and type, acreage, managing agency/owner, whether it is publically accessible, and any on-site amenities. All public and privately protected lands whether or not they are open for public recreation are included in the dataset. The ORI is a critical tool for locating and mapping publicly-held parks, forests, wildlife areas and outdoor recreation facilities.

Though the ORI is a comprehensive database for publicly-owned and protected lands, it currently cannot give an overall picture of outdoor recreation supply in Delaware. Private recreation facilities, such as swimming pools, tennis courts and private playgrounds throughout the state play an important role for supplementing outdoor recreation needs. A complete understanding of private facilities and services and their distribution throughout the state combined with the existing ORI would provide a second-to-none analysis of outdoor recreation supply.

With the wealth of outdoor recreation data contained in the ORI, there are discussions of creating a searchable online website for statewide recreation resources. Using an interactive online interface, the ORI could be viewed freely and used in a variety of ways. For residents, it is a useful tool for finding a specific recreational facility or discovering close-to-home and work opportunities. For data managers, the information assists in monitoring all publicly-owned park, recreation and conservation sites for maintenance and stewardship responsibility including LWCF and DTF sites that require protection in perpetuity.

Recommendation:

Develop an online clearinghouse of all public outdoor recreation facilities.

Level of Service Analysis of Outdoor Recreation Facilities

Delaware is developing robust analytical models that analyze outdoor recreation facility distribution and level of service. This is a departure from past approaches that looked solely at acreage of publicly accessible land. Though important, large tracts of land, which have been protected primarily for conservation provide limited recreation opportunities and skew the overall assessment of active outdoor recreation spaces. Population centers, projected population growth, outdoor recreation facility distribution and facility availability are all key factors in conducting level of service analyses. As such, a spatial representation of Delaware's ORI is a valuable component in both land use and park planning.

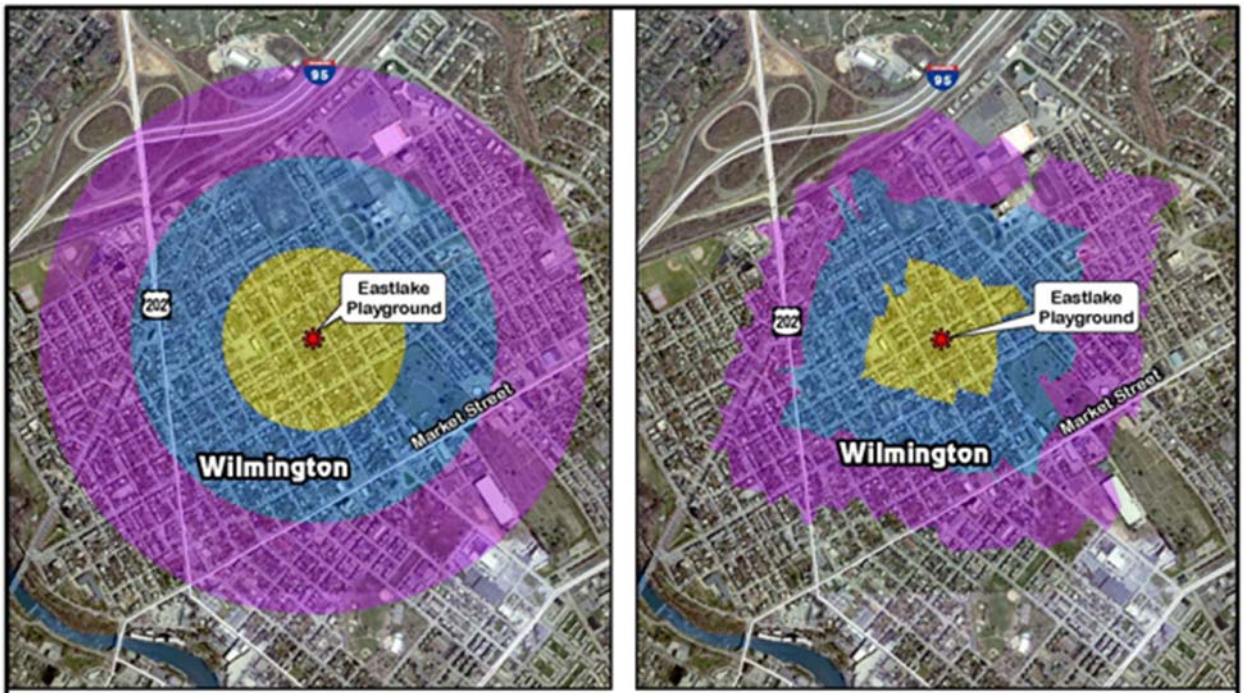
In the Spring of 2012, the Division of Parks and Recreation contracted Azavea, a geospatial firm specializing in location-based application development, to create GIS models that assist in park and recreation planning. The three models developed use GIS infrastructure data to identify walk-sheds, drive-sheds, and transit-sheds for parks and recreation spaces throughout the state. The models are built using the Network Analyst extension of ArcGIS combined with 2010 Census statistics to estimate the service areas for recreational facilities recorded in Delaware's ORI. Differing from a basic buffer analysis, these models use actual road and pedestrian travel networks providing more accurate estimates of populations served. For the first time, the utility of employing a network analysis can easily and accurately assist park planners at a very local level. The following sections present examples of spatial network analyses and their utility in planning and decision-making. The Division of Parks & Recreation will conduct and build on spatial analyses for outdoor recreation facilities. This information will be used to provide technical assistance to county and local parks departments and also to prioritize funding decisions that meet outdoor recreation needs. The following sections are examples of how the spatial analysis tools can be utilized.

Walk-shed Analysis

A walk-shed is a pedestrian travel zone defined by the walkable area around a particular point of interest, in this case parks and recreational facilities. A walk-shed network uses pedestrian travel networks like neighborhood streets, sidewalks, trails and pedestrian pathways to calculate a true route of travel. Traditional buffer analyses do not account for certain impedances like rivers, railroads, buildings, and major

roadway crossings that could prevent access to facilities or make a walking trip longer. As a result, buffer analyses can drastically overestimate a park or recreation facility's level of service. Figure 2.1 demonstrates level of service estimates using both a simple buffer analysis and a walkable route analysis conducted using existing pedestrian travel networks around the Eastlake Playground in Wilmington.

Figure 2.1- Level of Service Comparison (Buffer Analysis vs. Walkable Route Analysis)



Buffer Analysis

Distance covered at 2.5mph

Buffer	People Served
5 Minute Radius	2,533
10 Minute Radius	8,289
15 Minute Radius	15,148

Walkable Route Analysis

2.5 mph walking pace

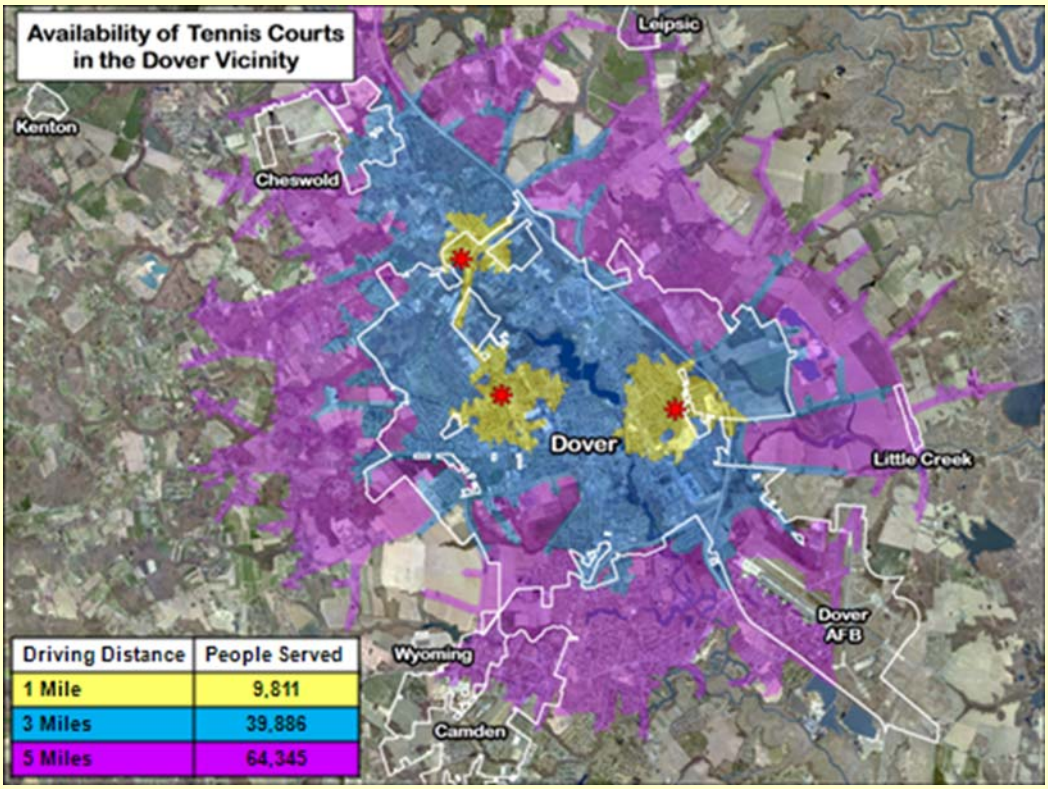
Walk Time	People Served
5 Minute	1,355
10 Minute	5,542
15 Minute	10,023

As shown, the circular buffer analysis increases the level of service in a 5 minute walking radius to Eastlake Park by more than one thousand people, by nearly three thousand people within a 10 minute walk, and close to five thousand individuals within a 15 minute walk. The Figure 2.1 buffer analysis does not account for difficulties crossing major roads nor the inability to cross Interstate 95. A walkable route analysis accounts for such barriers and more accurately reflect pedestrian access to the Eastlake

Playground. At a reasonable walking pace of 2.5 miles per hour, 1,355, 5,542 and 10,023 people live within five, ten, and fifteen minutes respectively of the playground.

Drive-shed Analysis

Using the state road network, the same type of spatial network analyses can be conducted to identify drive-sheds for parks and recreation facilities. Similar to a walk-shed, a drive-shed is a vehicular travel zone defined by a road network around a particular point of interest. A drive-shed network analysis uses information from the state road network to calculate the number of people served within a defined driving distance of a park facility. Figure 2.2 contrasts the walk-shed and drive-shed level of service functionalities for tennis courts located in Dover.



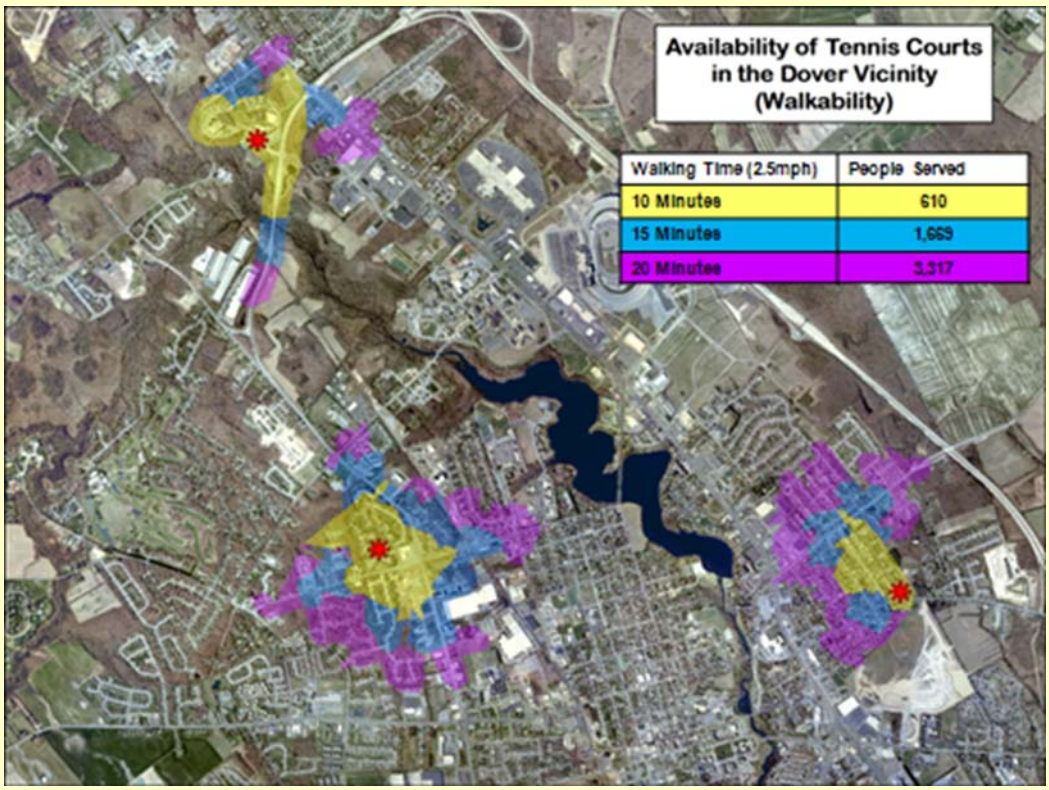
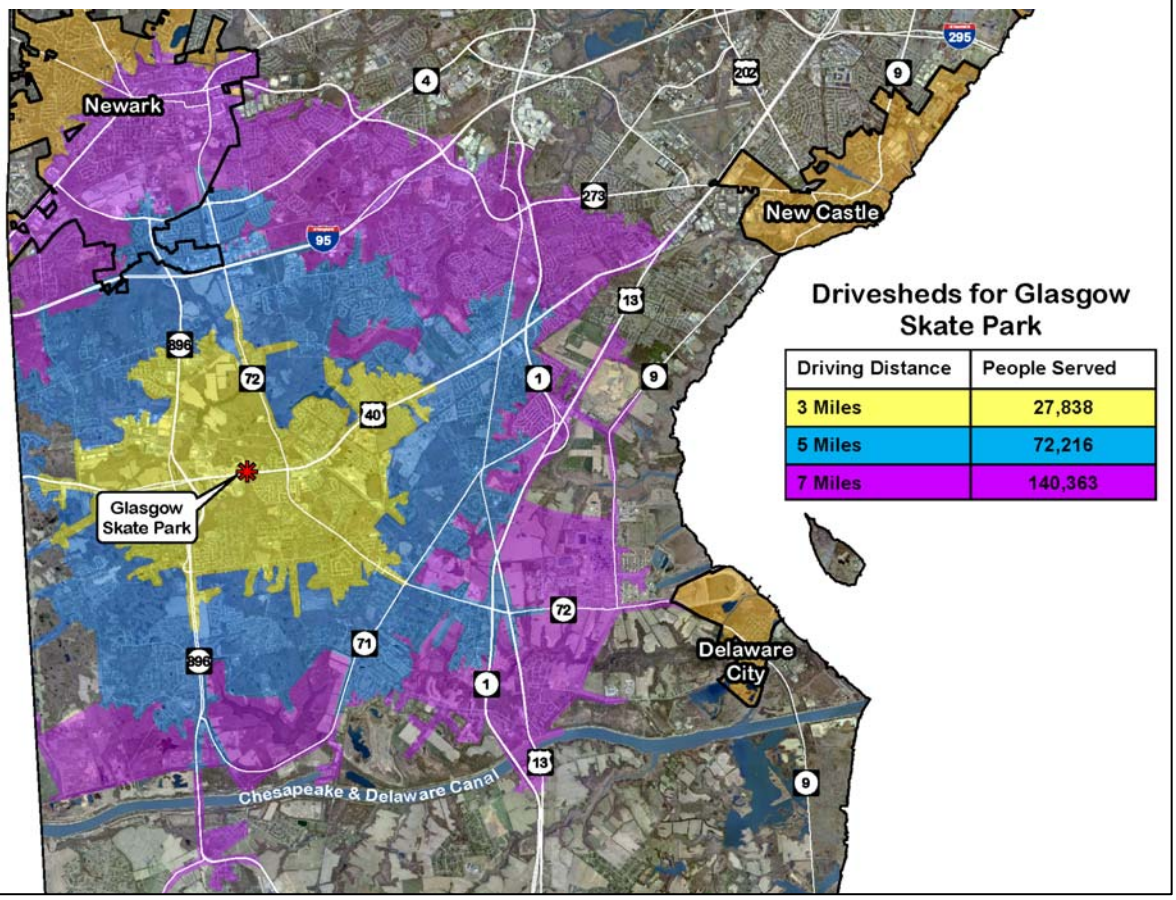


Figure 2.2- Drive-shed and Walk-shed Analysis for Public Tennis Facilities in Dover, DE

Drive-shed analyses are useful for regional and district parks, those that have unique features and amenities that are designed to serve a larger population because people are willing to drive further. Glasgow Park, managed by New Castle County, is home to a 24,000 square foot skate park, the largest publicly-owned skate facility in the state. As shown in Figure 2.3, by locating the skate park in central New Castle County, the skate facility is within a short seven mile drive to more than 140,000 residents.

Figure 2.3- Level of Service Analysis for Glasgow Regional Park, New Castle County, DE



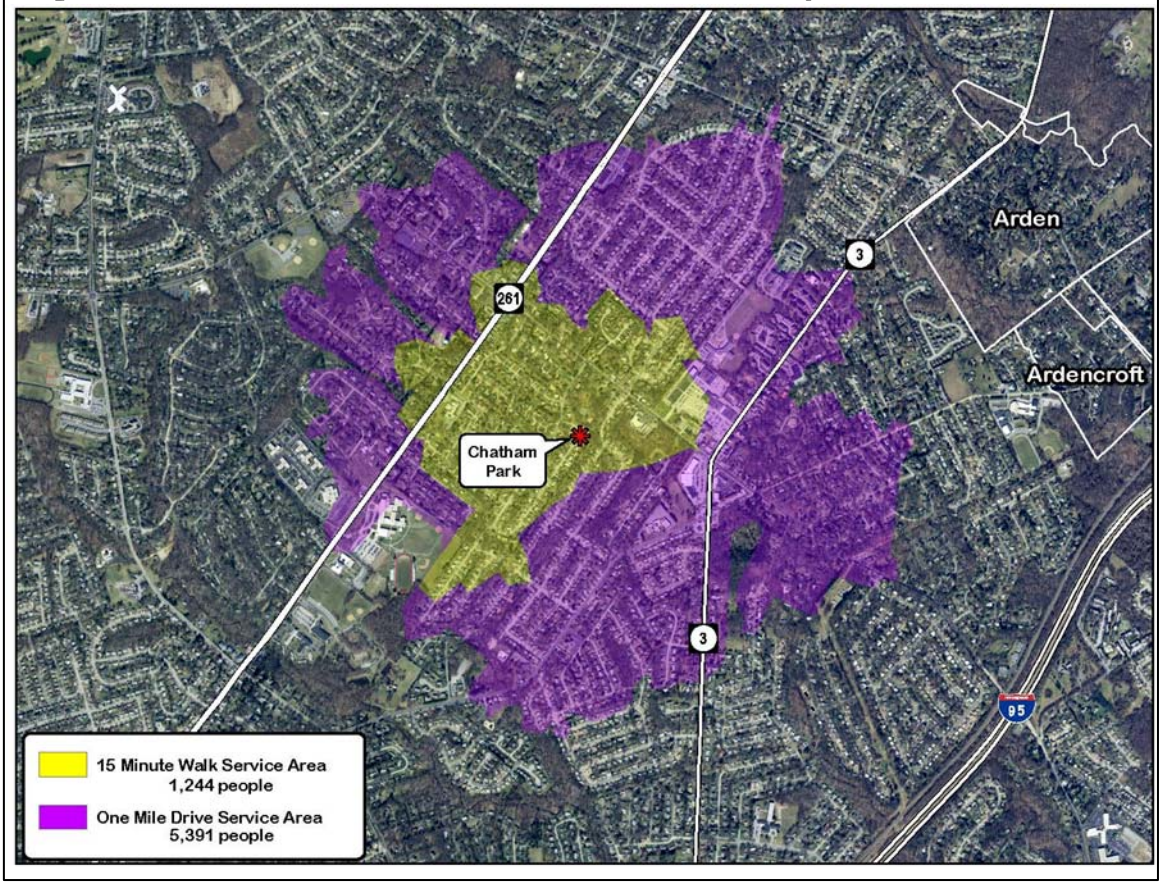
Replacement of Aging Facilities

Network analyses can have great value in planning for the replacement of aging facilities and properly allocating park investments. Specific information for each amenity in a park including the year in which an amenity was built and the average

lifespan of the amenity combined with the number of people that are served can be vital information for investment decisions.

As demonstrated in Figure 2.4 Chatham Park is a neighborhood park in New Castle County. More than one thousand people live within a 15 minute walk and five thousand people live within 1 mile drive from this park. As Chatham Park is the only park in the immediate area, the amenities and services of the park are vital for close to home recreation opportunities. If amenities are removed, in disrepair, or obsolete in meeting local needs, residents around this park become underserved. Tracking the date in which facilities are built (in a relational database) and understanding the average life span of individual amenities can aid in facility management and planning for maintenance and replacement. Bolstering the spatial data of the Outdoor Recreation Inventory to include detailed information, such as constructed date, about individual amenities will strengthen the utility of the ORI for all park professionals.

Figure 2.4- Chatham Park Walk-shed and Drive-shed Analysis



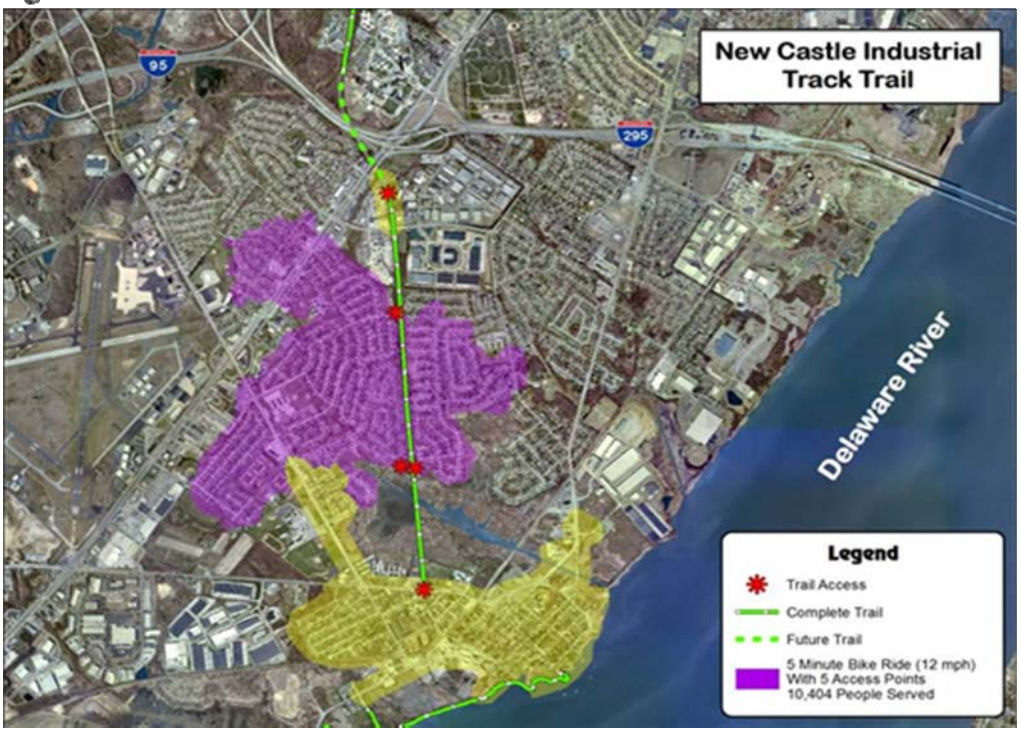
Identifying the Best Location for Amenities

Single amenity level of service analyses enables park professionals to look at a specific facility and identify the facility's service network access via driving, biking and walking as well as the number of people living within that defined service area. This type of network analyses can assist in identifying the best location for new community connections to parks and recreation facilities and guide investments that will have the greatest return for the community. Figure 2.5 illustrates the southernmost extent of the New Castle Industrial Track Trail that, when complete, will provide an off-road connection from the City of New Castle to the City of Wilmington. Currently there are two access locations, one on each end of the trail. With the current trail access locations, the trail serves just over 3,500 people who live within a five minute bike ride.

Aerial photo and field reviews determined locations for three potential trail access points. Using a network analysis, the number of community residents served can be determined. In this example, adding three strategically placed trail access points, at a relatively low cost, can nearly triple the number of people who live within a five minute bike ride of the New Castle Industrial Track Trail (Figure 2.6). With trail demand high, as found in the Outdoor Recreation Participation and Trends Survey, creating community trail connections will begin to satisfy public trail needs.

Figure 2.5- Existing Conditions for the New Castle Industrial Track Trail

Figure 2.6- Additional Access to the New Castle Industrial Track Trail



Strengthening Recreation Data

Private recreation providers play an integral role in providing outdoor recreation opportunities throughout the state. To get a complete understanding for outdoor recreation services in Delaware, private facilities should be included in these types of network analyses. Certain private facilities provide services to portions of the population that may be categorized as underserved when looking only at publicly accessible facilities. As an example, golf facilities are located around the state, but most are privately-owned and managed. Looking at only the golf facilities that are publicly-owned and operated would mistakenly inflate the need for golf facilities. Unfortunately, there is no single information source for the supply of private recreation facilities and/or provider information. Strengthening public and private partnerships would help fill this gap of information and allow for an overarching, all inclusive outdoor recreation level of service analysis. The amount of information that could be garnered from including private facilities would only enrich planning efforts for public recreation providers by not duplicating private sector services and directing funding where most needed.

Recommendation:

Identify private recreation facilities to be incorporated in a statewide level of service analysis.

Though spatial network analyses are powerful tools for recreation facility planning and understanding level of service, they do not give complete pictures. The analyses output can only be as accurate as the data upon which it is based. Delaware's Outdoor Recreation Inventory is the most robust dataset available for publicly accessible parks and recreation areas, but can be strengthened to include more detailed information on individual facilities, such as age and condition. Additionally, more accurate spatial data representing road, sidewalk and pedestrian pathways would enhance the analyses. For more detailed planning, U.S. Census information can be queried by age, ethnicity, and socio-economic status to get a better understanding of level of service for each demographic.

Recommendation:

Broaden the Outdoor Recreation Inventory to include facility age and condition analyses. This data will help managers plan for maintenance and replacement of outdoor recreation facilities.

Identify missing information needed to conduct more accurate spatial analyses.

Assist county and local parks and recreation officials with level of service and spatial analyses of their local parks and recreation facilities. This information will help planners and local decision makers in setting investment priorities that meet the outdoor recreation needs of local residents.

Conduct outdoor recreation spatial analyses to inform health impact assessments for local and regional community designs.

Outdoor Recreation Inventory

Goal: Incorporate the Outdoor Recreation Inventory in state and local planning decisions and educational outreach

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Assist county and local parks and recreation officials with level of service and spatial analyses of their local park and recreation facilities to determine geographical representation of recreational facility needs.	*DPR, State and Local recreation officials*	
2. Broaden the Outdoor Recreation Inventory to include facility age and condition analyses.	*DPR, State and Local recreation providers*	
3. Identify missing information needed to conduct more accurate spatial analyses.	*DNREC, DELDOT, State and Local planning agencies and parks departments, SCORP TAC*	
4. Identify private recreation facilities to be incorporated in a statewide level of service analysis.	*Outdoor Recreation Industry, State and Local recreation providers, DPR*	
5. Conduct outdoor recreation spatial analyses to inform health impact assessments for local and regional community designs.	*DE HEAL, DPH, OSPC, DNREC, DE Greenways, WILMAPCO, Kent/Sussex MPO*	
6. Develop an online clearinghouse of resources that disseminates detailed information for all recreation facilities in Delaware.	*DNREC, USFWS, State and Local recreation providers.*	

**See Outdoor Recreation and Conservation Issues and Recommendations Section (page 4.1) for explanation of table.*

Outdoor Recreation Research and Findings

To better understand participation and trends in outdoor recreation of Delaware residents, a telephone survey was conducted. The Division of Parks and Recreation contracted Responsive Management Inc., a survey and research firm specializing in outdoor recreation and natural resource issues, to assess Delawareans' participation in outdoor recreation activities. The survey was conducted in August of 2011. Survey respondents were queried about their personal recreational activities and those of their household. Responsive Management obtained a total of 2,064 completed telephone surveys that were evaluated for the statewide results. An analysis of the survey response data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. The results were weighted so that all regions and municipal areas would be in their proper proportion in statewide totals. Additionally, the results were weighted by demographic and geographic characteristics so that the sample was representative of Delaware residents as a whole. Specifically, the survey concentrated on assessing the respondents' view of six content areas:

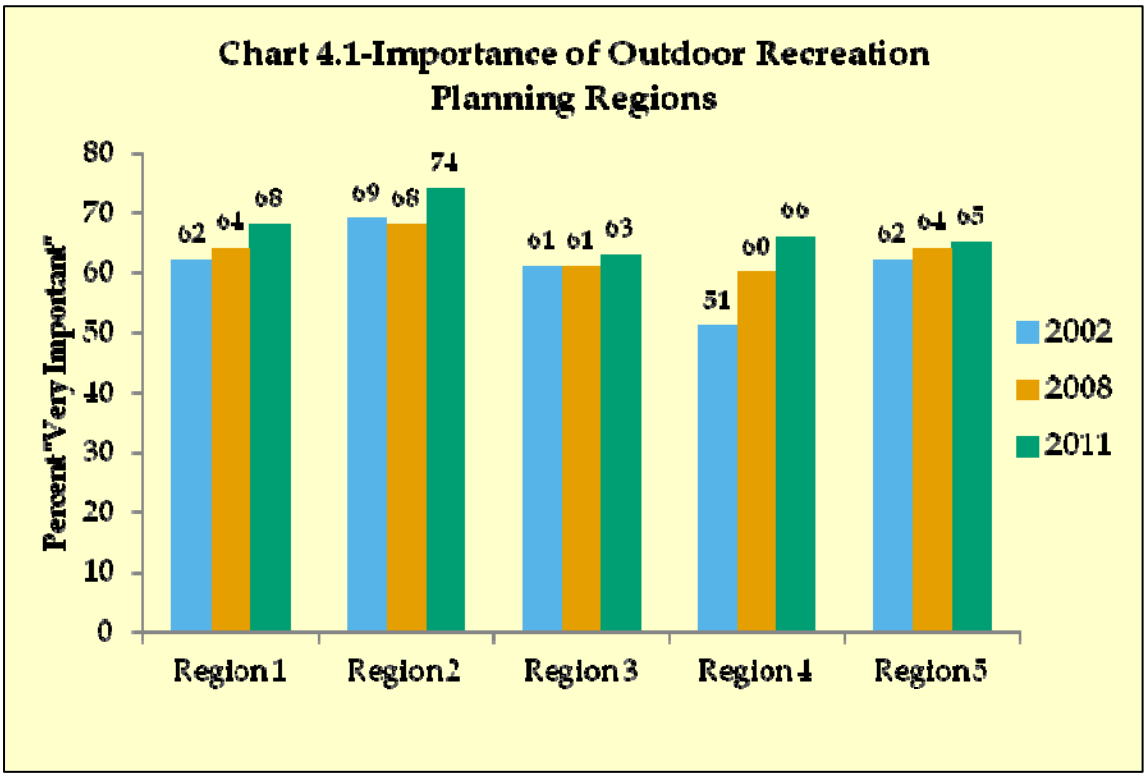
- Importance of and participation in outdoor recreation
- Outdoor recreation and activity level of children
- Reasons for participating in outdoor recreation
- Ratings of facilities and opinions on specific aspects of facilities
- Accessing facilities
- Priorities for funding and policy making decisions

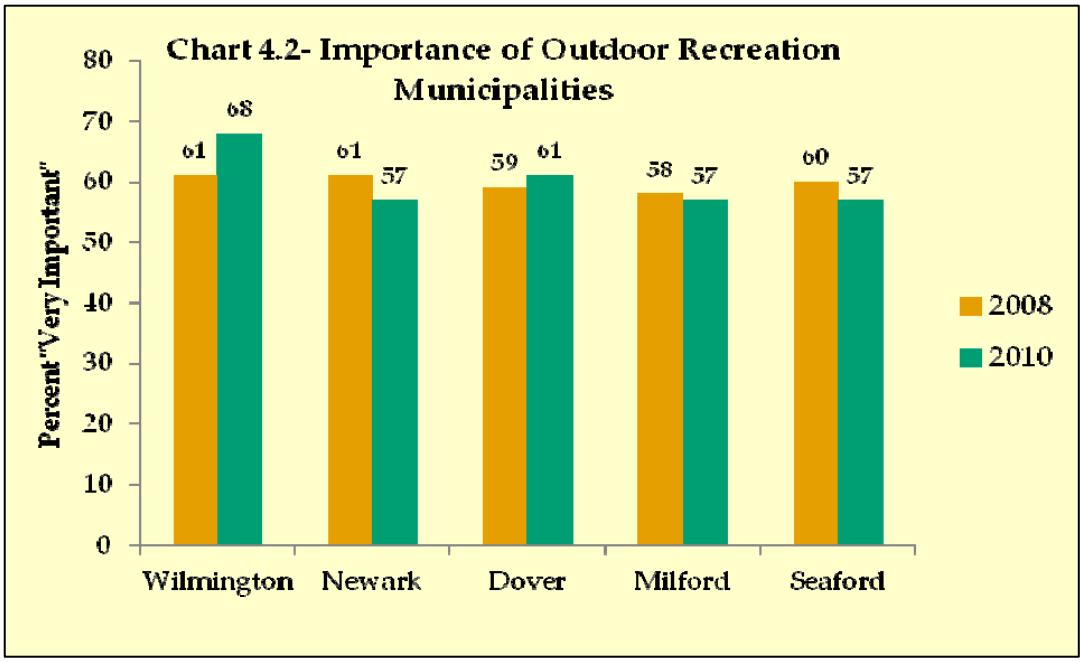
Similar surveys of Delaware residents were conducted in 2002 and 2008 and are useful for comparisons and revealing outdoor recreation trends. The 2011 Outdoor Recreation Participation and Trends (ORPT) phone survey methodology, instrument, and demographics can be found in Appendices B and C.

Importance of Outdoor Recreation

When looking at the findings from the 2011 ORPT telephone survey, it is apparent that Delawareans place a high importance on outdoor recreation. Statewide, 93% of Delaware residents indicated that outdoor recreation had some importance in their lives, while 67% said it was 'very important' to them personally. These findings are very close to the results of the same question asked in the 2002 and 2008 public opinion telephone surveys. Responses over the past nine years indicate continued demand for outdoor recreation opportunities throughout the state. As exhibited in Chart 4.1, residents indicating that outdoor recreation is 'very important' to their quality of life has increased in every SCORP Region, with Region 4 showing the greatest increase. Chart 4.2 demonstrates the slight changes within the municipalities for those who indicate that outdoor recreation is 'very important'.

93% of Delaware residents indicate outdoor recreation is important





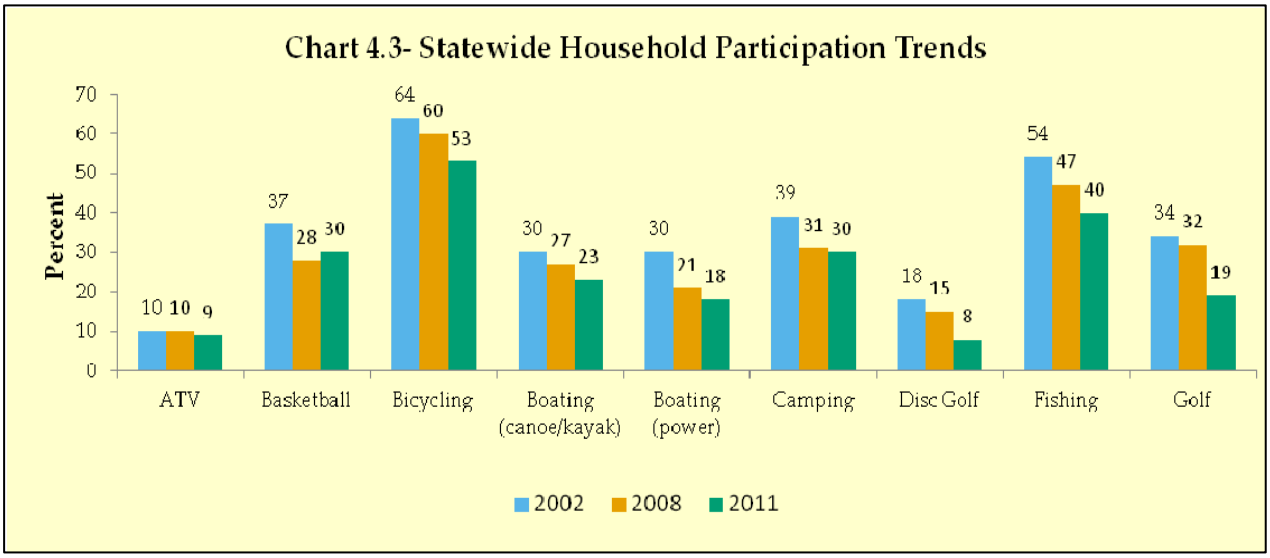
Participation in Outdoor Recreation

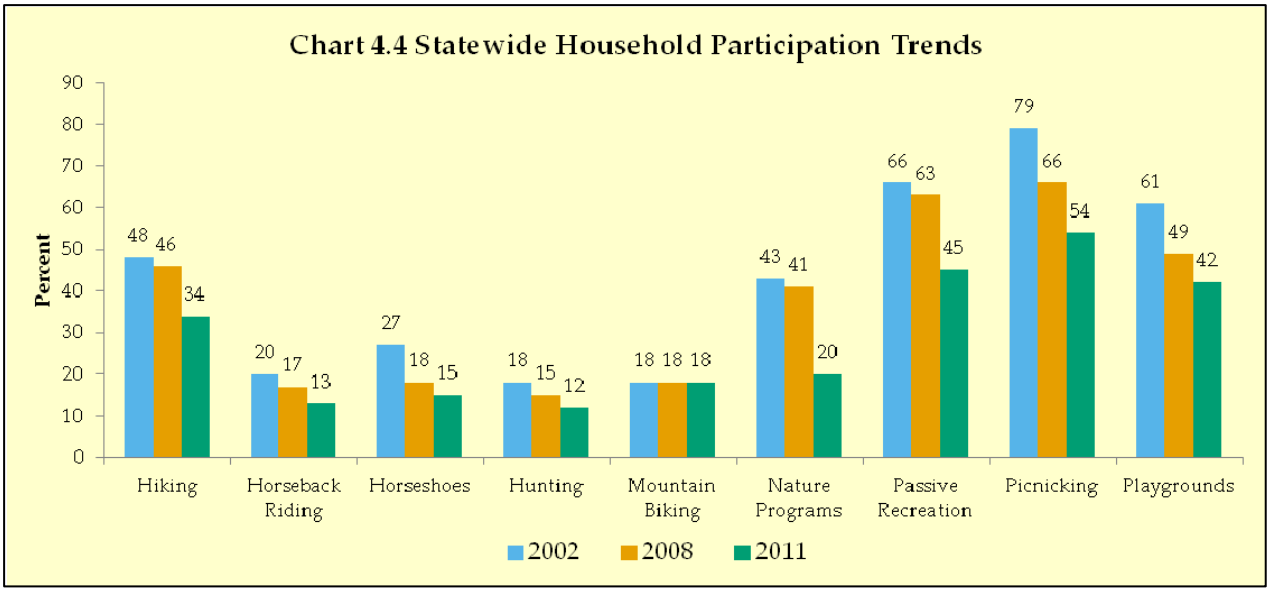
Delawareans participate in a variety of outdoor recreation activities. During the 2011 Survey, Delaware residents were asked which three activities have they personally participated in over the last 12 months. Statewide, more than one third of the respondents (36%) have personally walked or jogged, making this the most popular individual outdoor activity. Other popular individual activities include: bicycling (14%); swimming at the beach (13%); dog walking (12%); gardening (11%); swimming in a pool (10%); and fishing (10%). Alarmingly, nearly one in ten residents has not participated in any kind of outdoor recreation activity in the past year.

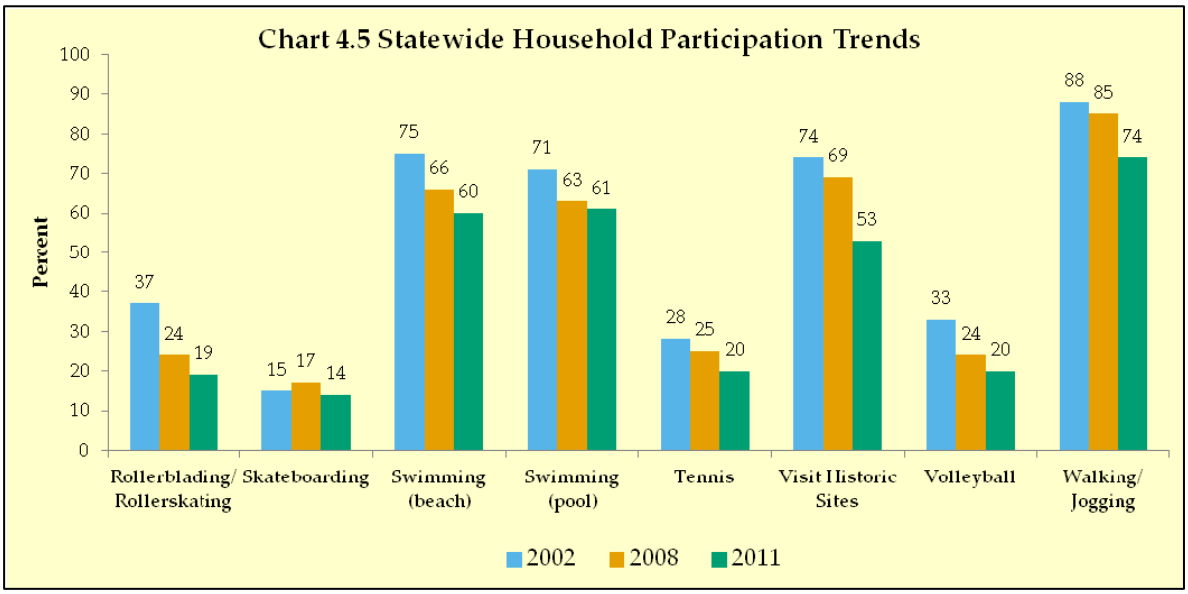
In addition, respondents were asked to indicate if they or any member of their household planned or expected to participate in a variety of outdoor activities in the next twelve months. The most popular outdoor recreation activity among Delaware households, by far, is walking or jogging (74% planned household participation). A second tier of responses in which activities have 50% participation or greater include: swimming in a pool (61%); swimming at the beach (60%); gardening (55%); picnicking (54%); visiting historic sites (53%); and bicycling (53%). Although there are some regional variations, there is little variation in the top activities among the Planning Regions and oversampled municipalities. Charts 4.10 through 4.20, show survey responses to activities in which any member of the household will participate in the next twelve months.

Each outdoor recreational activity in the survey has seen a decline in participation over the last nine years. The only two activities that have held steady in participation have been

mountain biking and skateboarding. The decline in participation is most likely attributed to the slow-down in the economy. Leisure time activities are often sacrificed when households cutback their spending. Charts 4.3 through 4.5 illustrate the nine year statewide outdoor recreation participation trend for Delaware households. The decline in participation is consistent with findings from national surveys conducted during the same time period.







Although there is very little variation in the top activities, there are regional differences for the second tier activities. Activities with the largest regional variations in participation include hiking, mountain biking, and hunting. These variations are most likely due to trail access and topography, rocky Piedmont setting to the north and flat coastal plain rural areas to the south. When compared to the average statewide participation, residents of Region 1 and 2 are more likely to hike than residents of other regions, particularly Region 4, southwest Sussex County. A similar variation can be seen in the municipal results where residents in Newark are far more likely than average to participate in hiking than residents in Seaford.

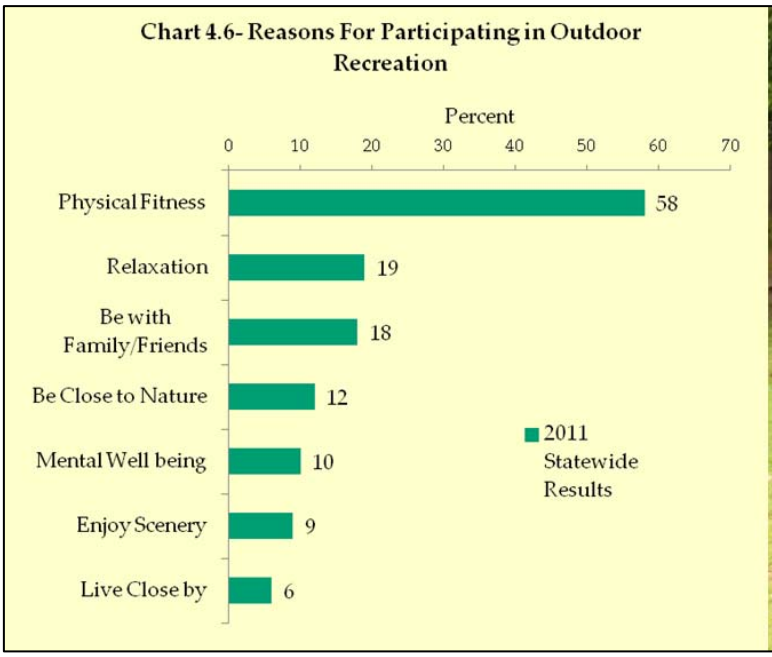
More traditional outdoor recreation activities like hunting and fishing also show regional disparities in participation. Residents in Region 4 are far more likely to participate in hunting than those in any of the other SCORP Planning Region. Fishing on the other hand has very high participation in Regions 3, 4, and 5 when compared to the statewide average. When looking at the natural resource areas needed to support these activities, these disparities are not surprising. Planning Regions 1 and 2 are the most built-out regions with few large tracts of undeveloped land suitable for hunting, fewer recreational water bodies and associated facilities to accommodate fishing. With the understanding that you cannot create the natural land and water resources that provide these outdoor recreation activities, there should be greater priority placed on protecting the remaining areas that do provide these opportunities.

Reasons for Participation and for Choosing Specific Areas

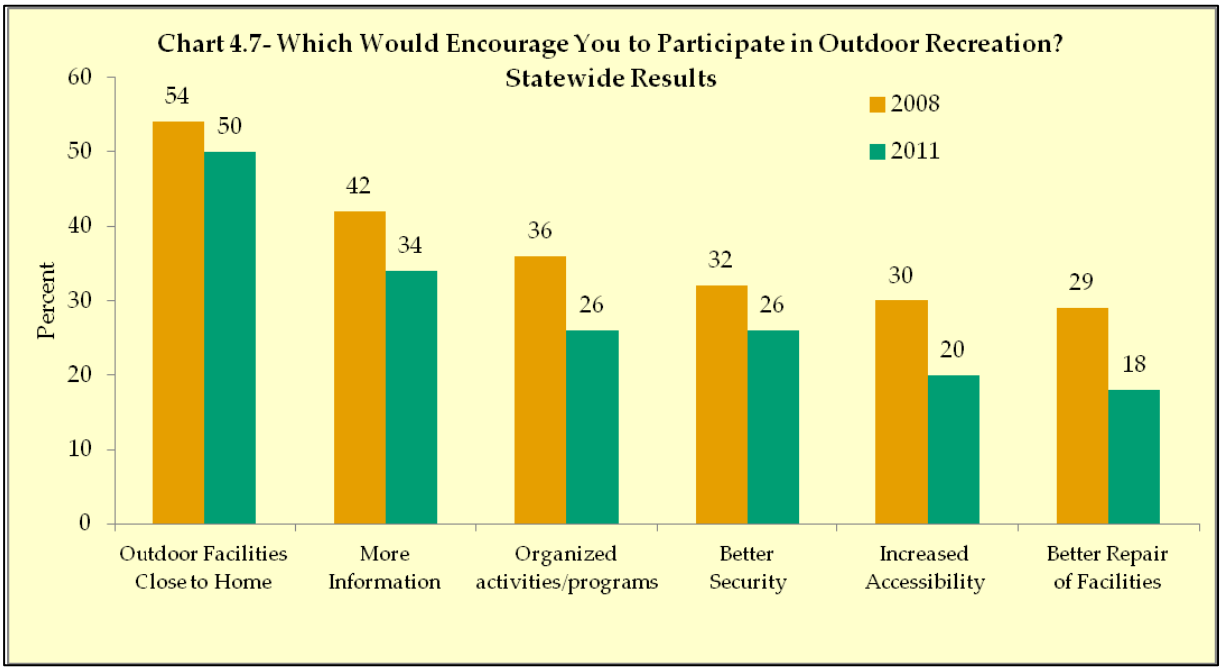
The top reasons that residents gave for participating in outdoor recreation is for physical fitness: 58% say this is their most important reason, distantly followed by relaxation (19%), to be with family and friends (18%), to be close to nature (12%), and for mental well-being (10%). Physical fitness continues to be the biggest motive for participating in outdoor recreation. This response has increased statewide from 2002 to 2011 by nearly ten percent. Similar responses are seen in each SCORP Planning Region and Oversampled Municipality. One marked difference is that Milford residents are much less likely than residents of other municipalities to participate in outdoor recreation for their physical fitness, while they are more likely to recreate to be with family and friends.

The survey asked respondents whether each of six items outlined below would increase their participation in outdoor recreation in Delaware (Chart 4.7). Respondents choose proximity to recreational facilities (50%) as the most important factor for increasing their participation in outdoor recreation. This is followed by having more information about facilities and recreation opportunities (34%); more opportunities to participate in organized activities/programs (26%); and better security within facilities (26%). The regional survey results show some differences; "more outdoor facilities and opportunities close to where you live" was more commonly chosen by Western Sussex County residents (Region 4) compared to other regions, while North New Castle County (Region 1) residents were the least likely to choose that answer. Chart 4.7 outlines a three year trend in what would encourage Delaware residents to participate in outdoor recreation.

Just under a third of Delaware residents (31%) said that there is a facility that they



would like to see added to a park in their community. Most commonly, they wanted outdoor swimming pools, indoor recreation facilities, improved amenities, playgrounds for children, and biking paths.

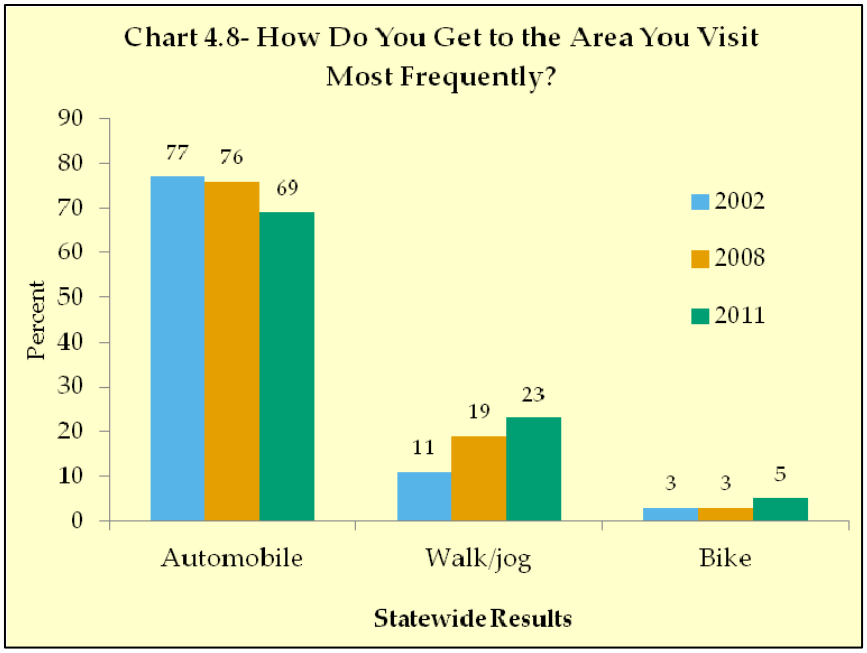


Accessing Facilities/ Built Environment

The majority of Delaware residents who have participated in at least one outdoor activity in the past twelve months (60%) live within 5 miles of the outdoor recreation area they most frequently visit; nonetheless, there are some who travel farther, with 15% of these respondents traveling beyond 10 miles. New Castle County residents have the shortest travel distance. They have the lowest mean distance (7.2 miles), and they have the highest percentage that live within the 1 to 5 mile range. Residents of West Sussex County (Region 4) have the longest travel distance, a mean of 12.6 miles.

The automobile (69%) is the most common mode of transportation that people use to get to their most visited outdoor recreation area, distantly followed by walking/jogging (23%), bicycling (5%), and to a lesser extent, public transportation (1%). Although the automobile continues to be the major mode of transportation, nine year trends show a marked increase in the number of people walking and biking to outdoor recreation areas.

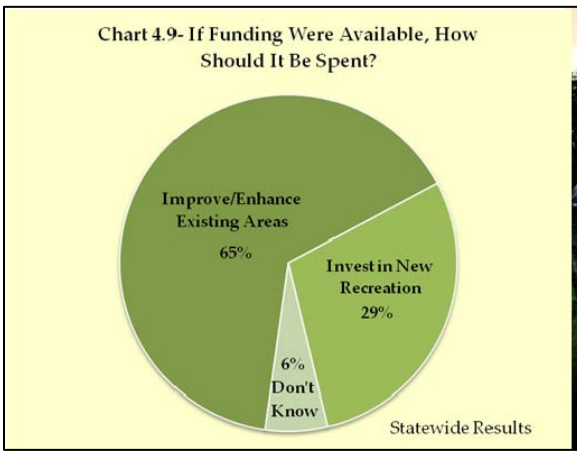
Due to the number of alternative transportation facilities, the regional breakdown shows that residents of Region 1 (North New Castle County) are most likely to walk or jog and residents of Region 5 (East Sussex County) are most likely to bike to a park area. In the oversampled municipalities, Wilmington residents are most likely to walk or jog and Newark residents to bicycle to an outdoor recreation area.



Statewide, respondents listed distance/too far (59%) as the top reason for not walking or biking to a park. Other responses included traffic/dangerous roads (16%), physical inability to walk or bike because of health and/or age (7%), and driving convenience (7%).

Priorities for Funding and for State and Local Officials

Often, parks and recreation facilities are viewed as "nice to have" amenities. As more people depend on public parks for recreation, the importance of these facilities is becoming recognized as vital community infrastructure. When asked if public recreation programs are a luxury rather than a necessity, a majority of Delaware residents (63%) disagreed. To further solidify the importance of providing publicly accessible recreation spaces, a large majority of Delaware residents (68%) agree that parks, open spaces, and conservation areas should receive



budget priority even during economically challenging times.

Delaware residents are cautious about any new construction for parks and recreation areas. A majority of residents would like future parks and recreation investments to go toward improvements or enhancements of existing areas (65%) rather than to be used for construction of new parks and recreation areas (29%). Region 1 residents are the most likely to say that they want to improve/enhance existing parks and recreation areas, and Region 5 residents prefer investments in new parks and recreation areas. In the municipal analysis, Wilmington residents are most likely to want improvements and enhancements to existing parks and recreation areas, while Newark residents are the most likely to want investments in new parks and recreation areas.

With limited funding and staff, determining which programs and facilities to offer continues to be a challenge for public recreation providers. When read a list of eight program areas, Delaware residents ranked the following programs as very important: outdoor recreation programs for teens ages 13-17; outdoor recreation programs for children ages 4-12; and outdoor recreation programs for persons with disabilities.

Chart 4.10- Statewide Household Outdoor Recreation Participation

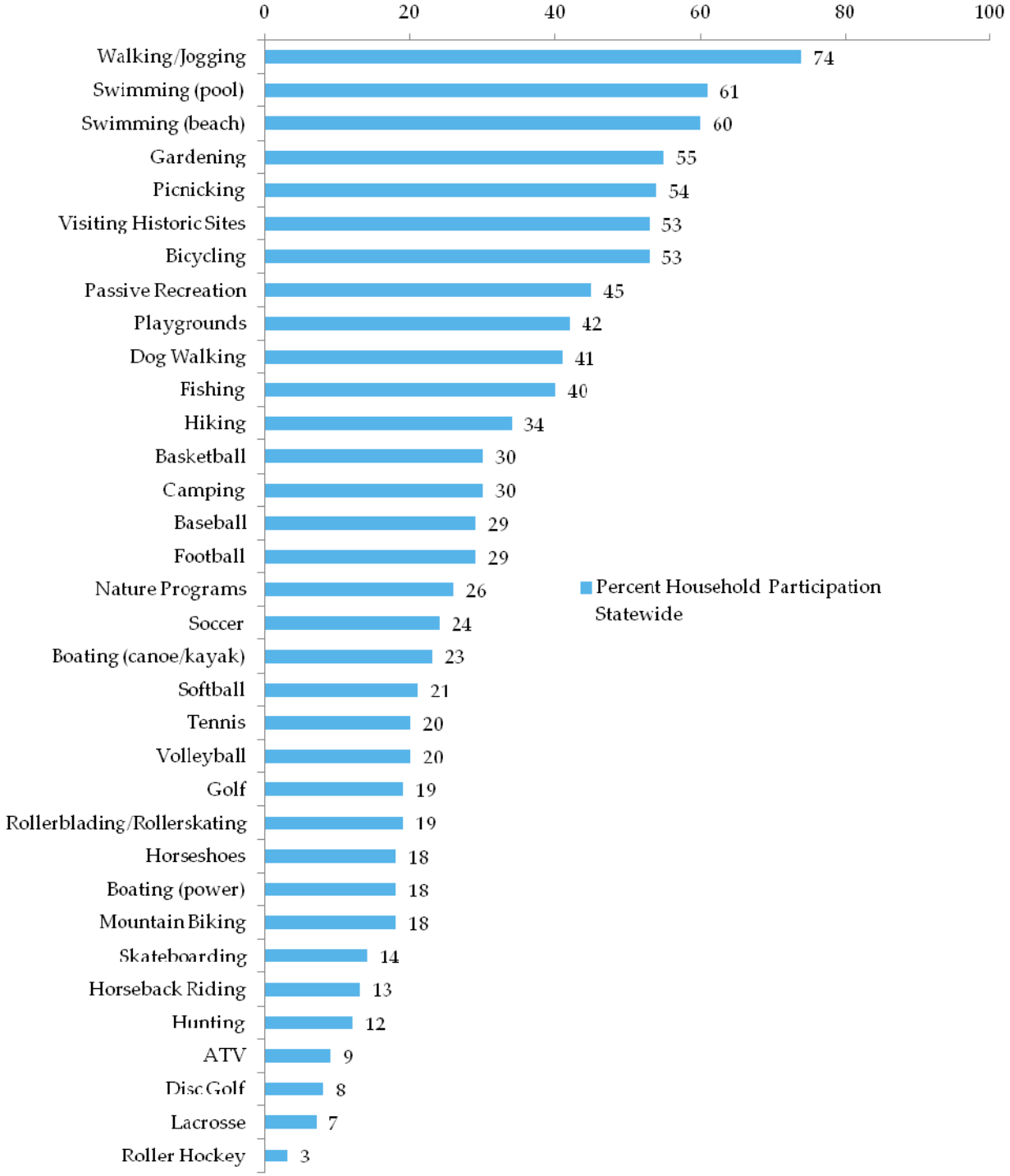


Chart 4.11- Household Outdoor Recreation Participation Region 1

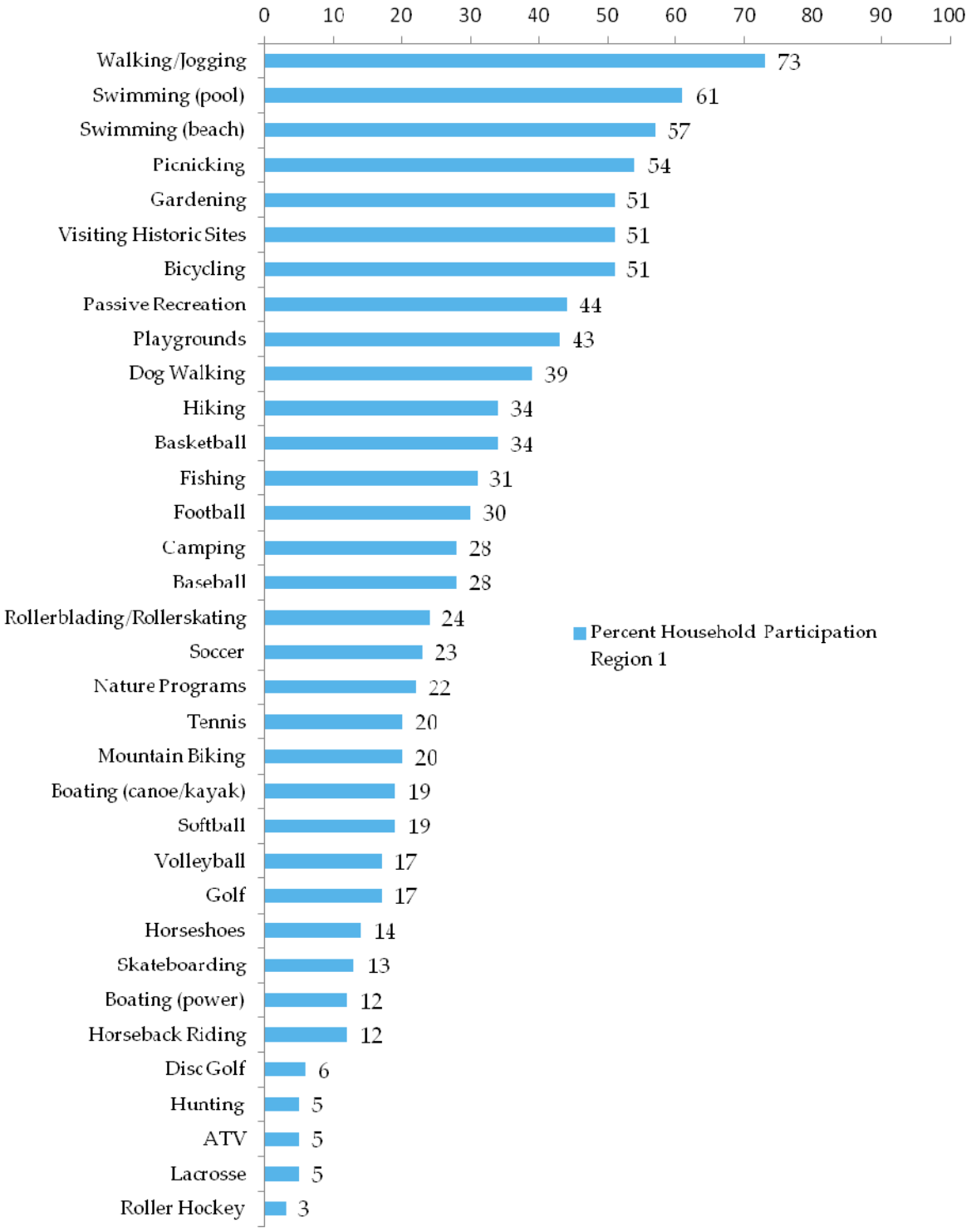


Chart 4.12- Household Outdoor Recreation Participation Region 2

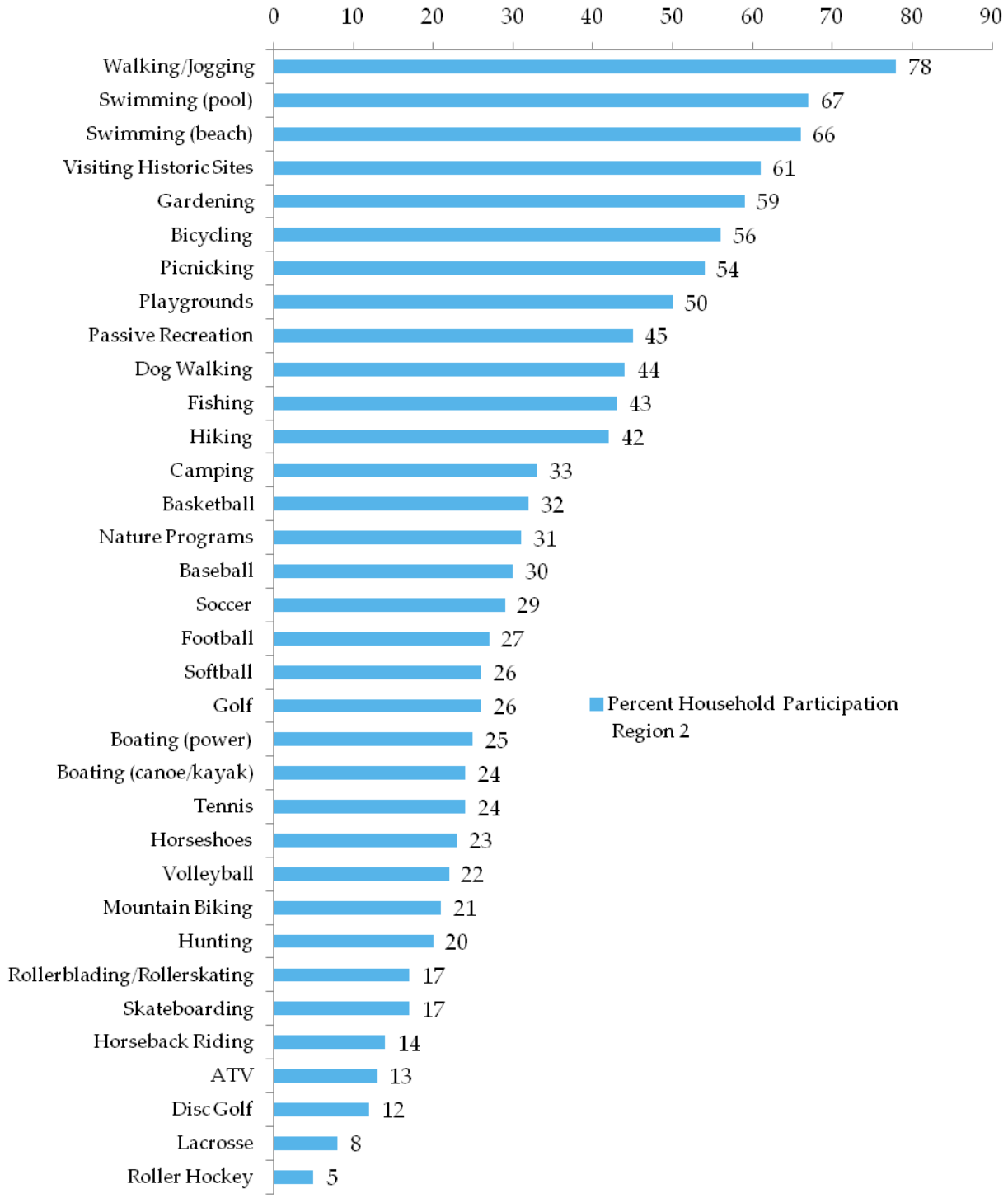


Chart 4.13- Household Outdoor Recreation Participation Region 3

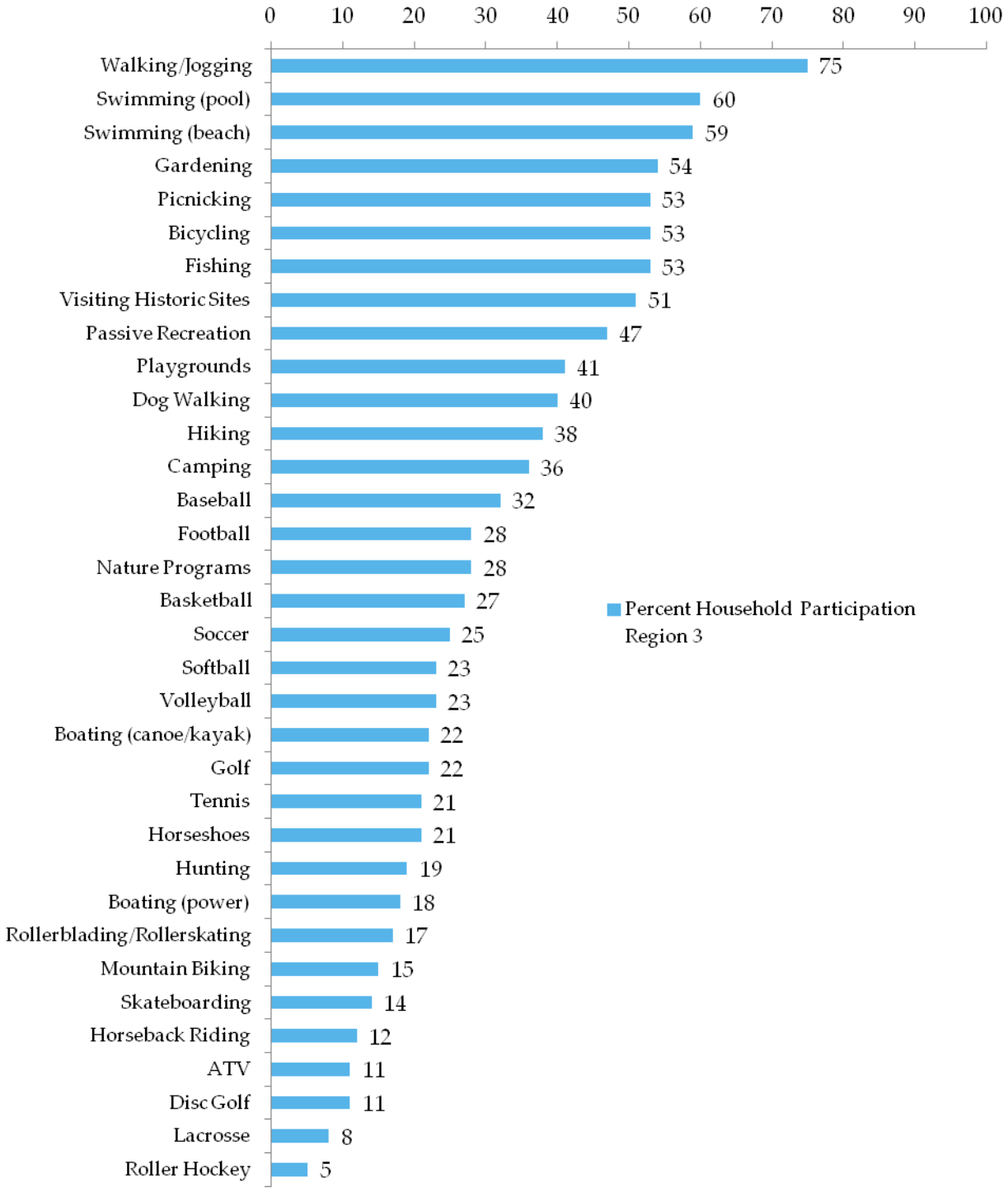


Chart 4.14- Household Outdoor Recreation Participation Region 4

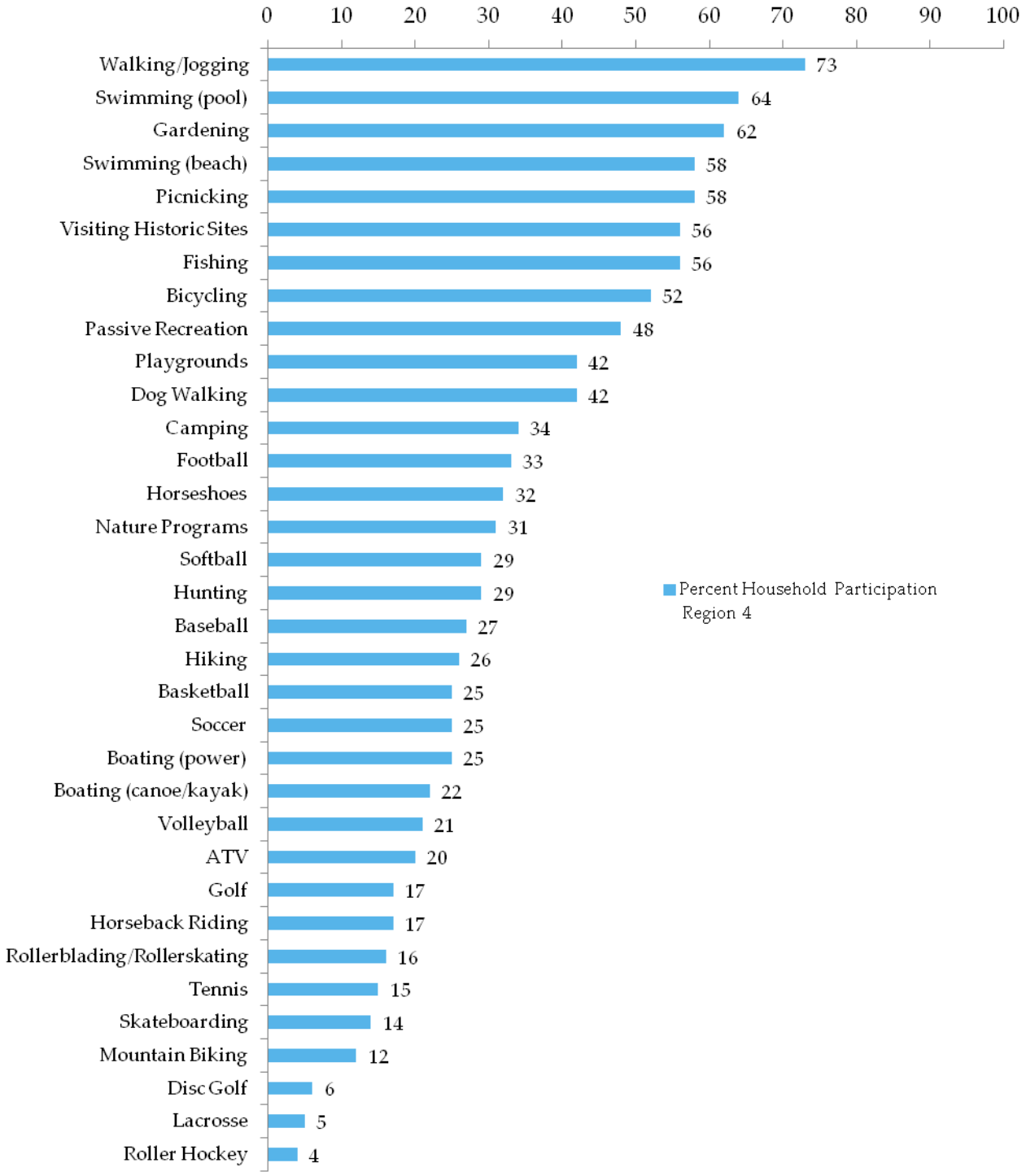


Chart 4.15- Household Outdoor Recreation Participation Region 5

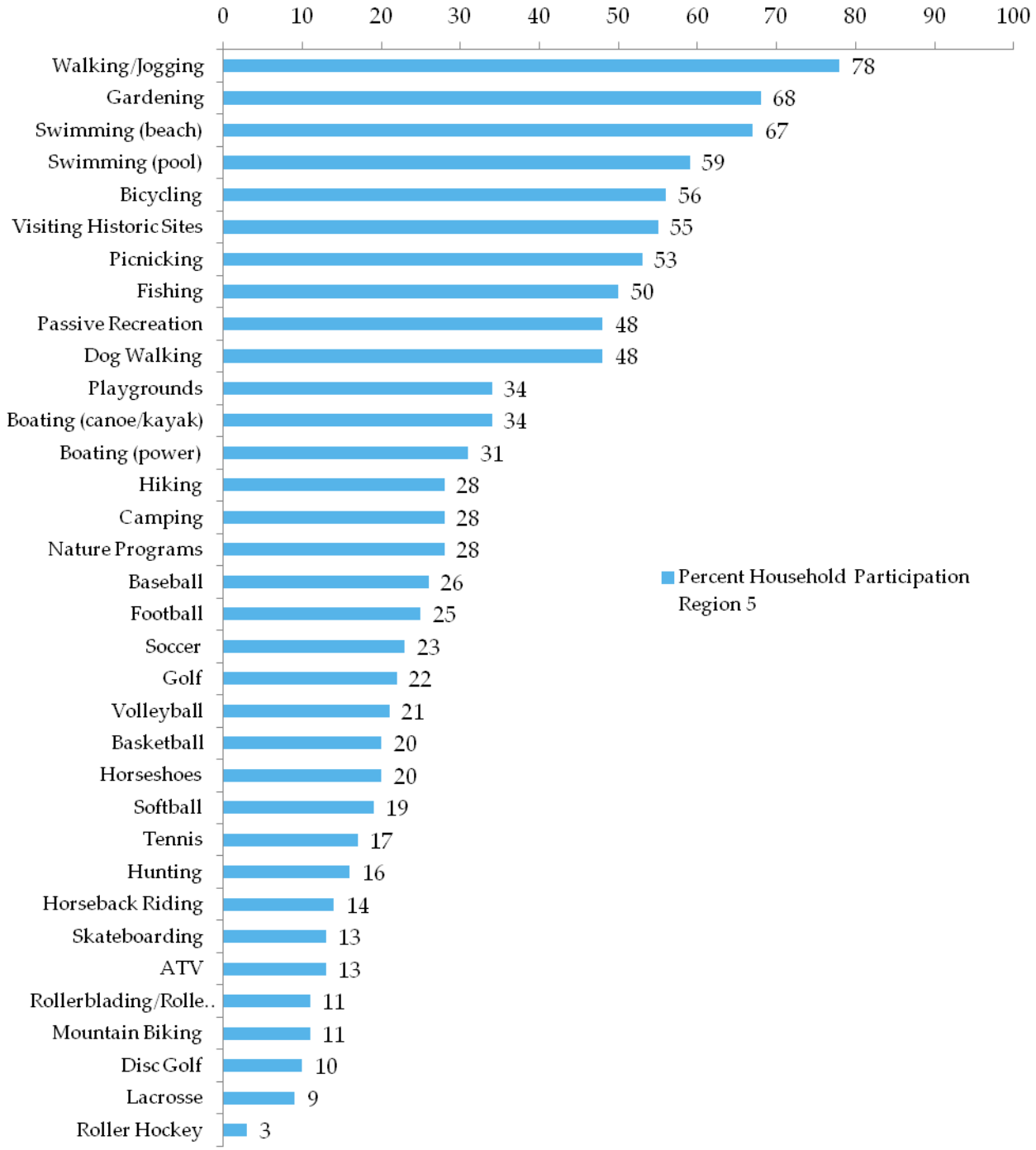


Chart 4.16- Household Outdoor Recreation Participation Wilmington

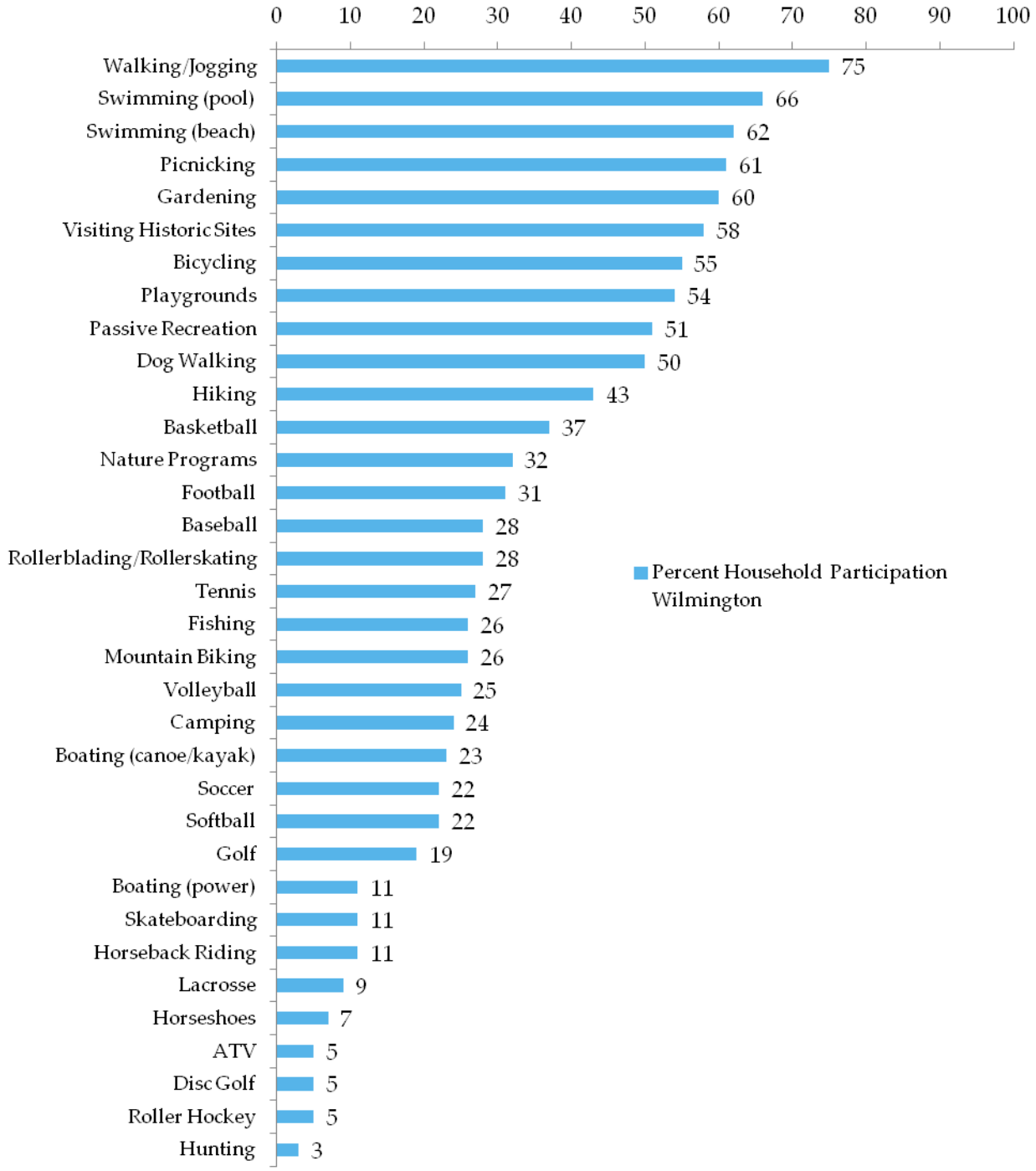


Chart 4.17- Household Outdoor Recreation Participation Newark

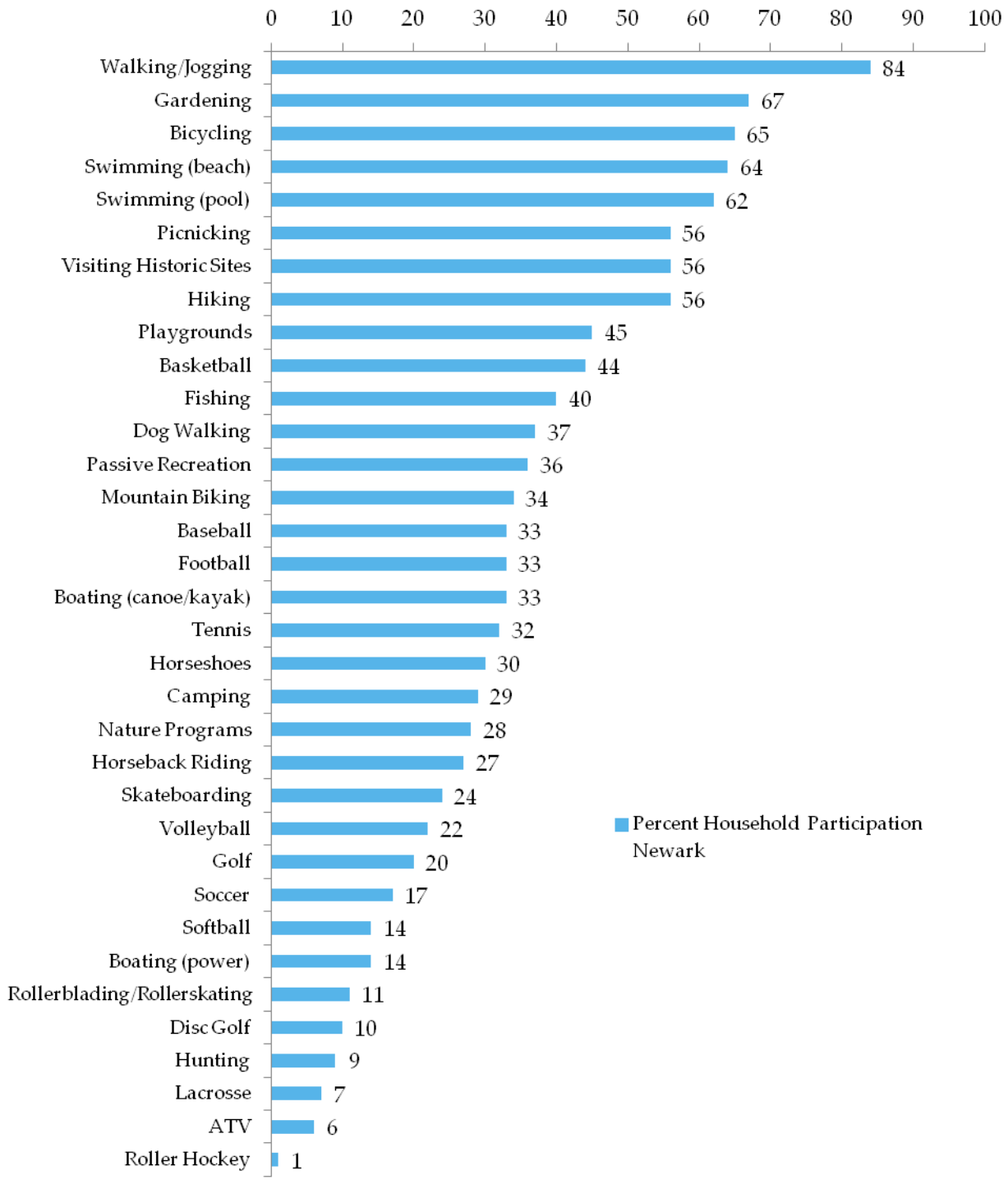


Chart 4.18- Household Outdoor Recreation Participation Dover

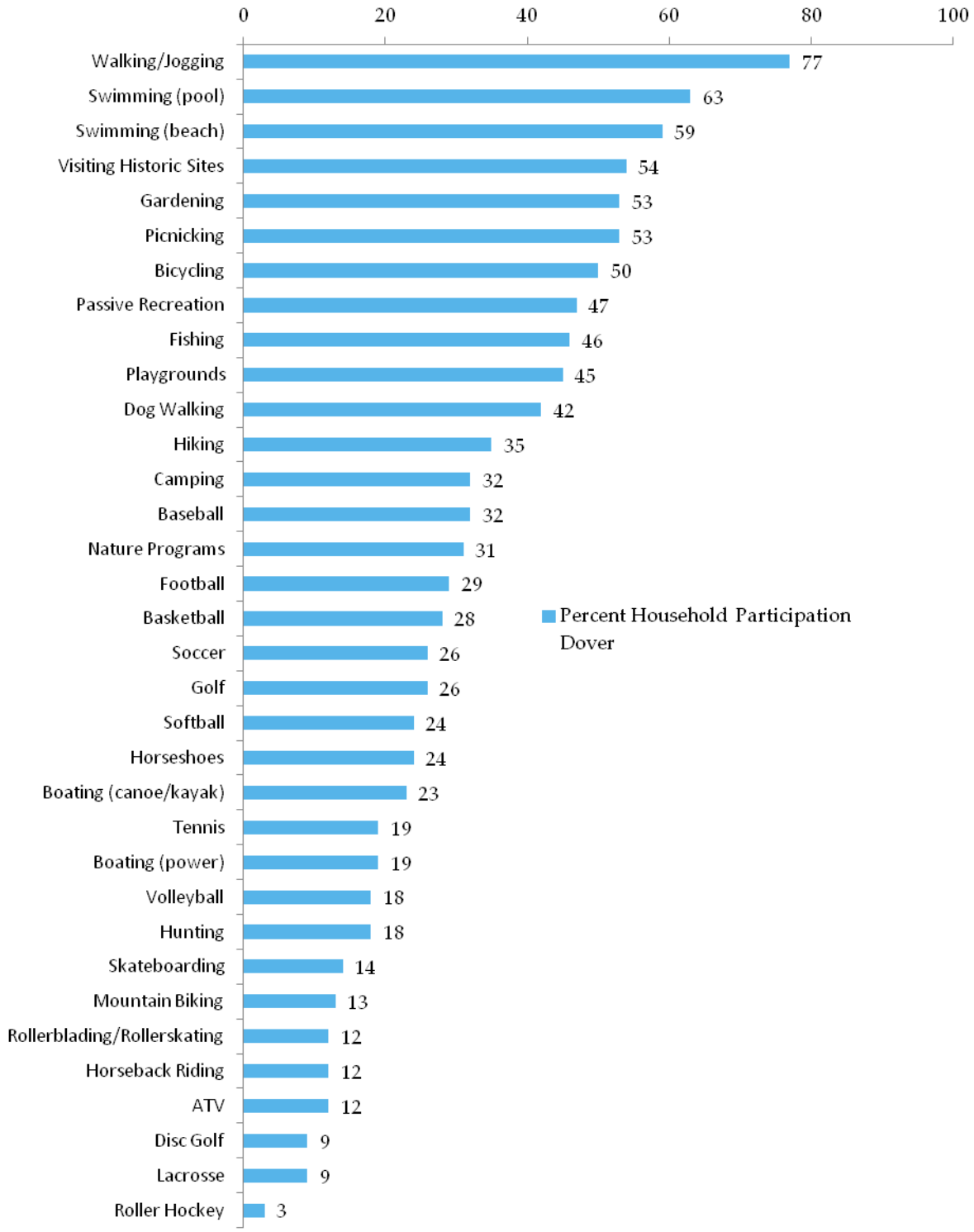


Chart 4.19- Household Outdoor Recreation Participation Milford

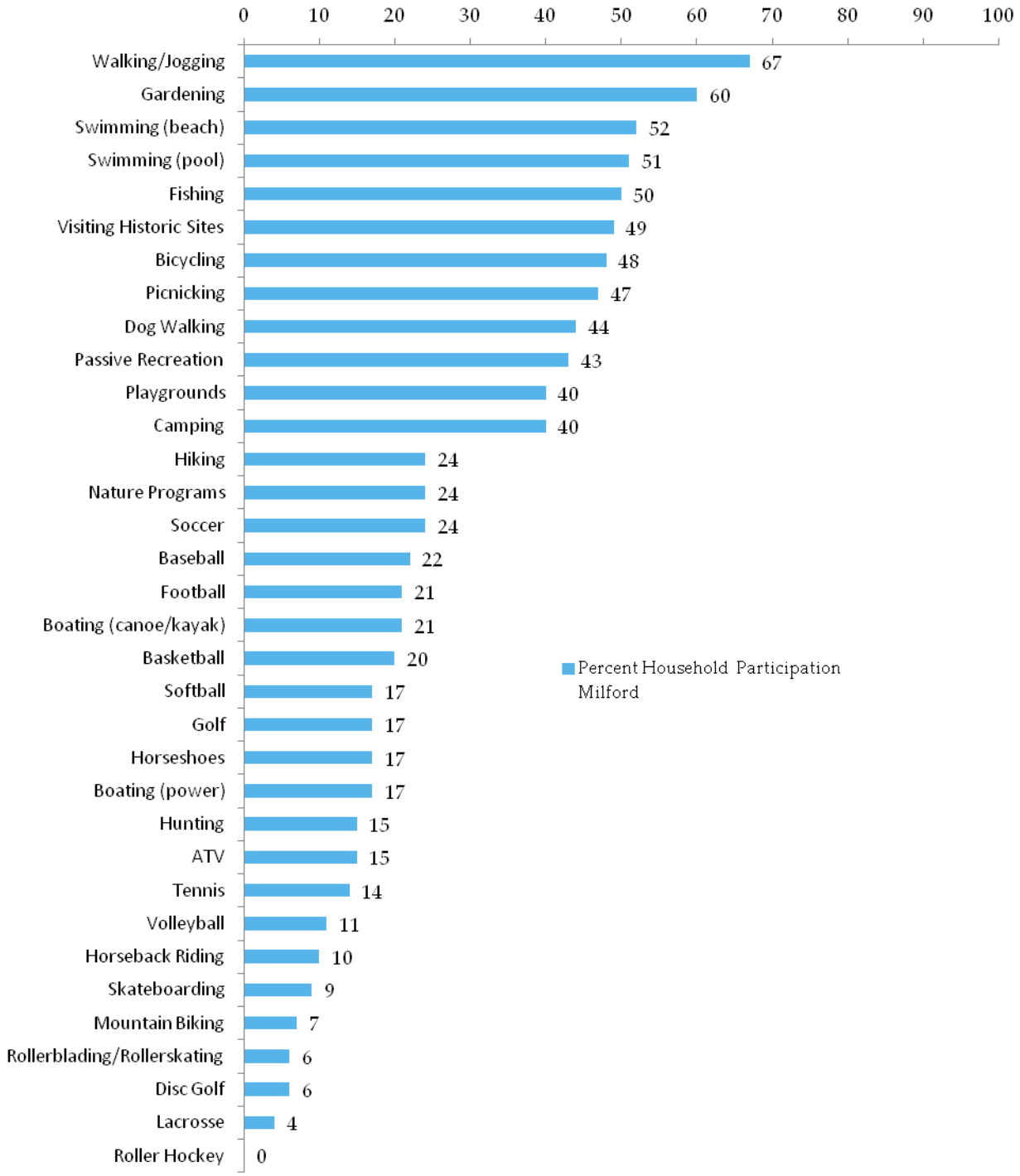
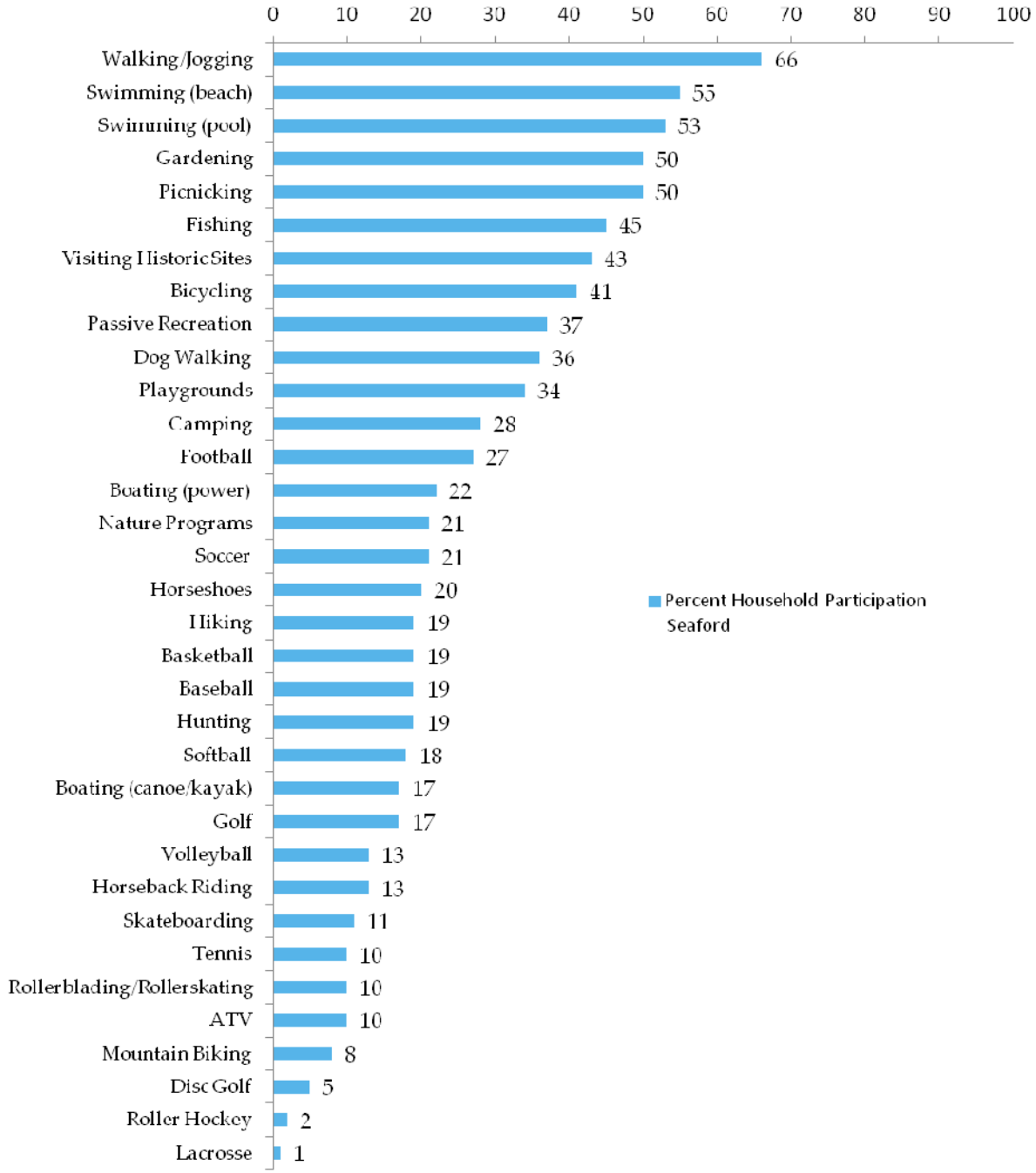


Chart 4.20- Household Outdoor Recreation Participation Seaford



Outdoor Recreation and Conservation Issues and Recommendations

As important as our understanding of public outdoor recreation preferences, so too is our understanding of issues relating to outdoor recreation. Throughout the preparation of the 2013 SCORP, meaningful comments were gathered from numerous public and professional venues including the phone survey, online surveys and workshop discussions. Furthermore, issues were identified from the Technical Advisory Committee members and the Park and Recreation Department Directors.

Combined, these sources of input are vital in understanding the public's issues and concerns about outdoor recreation in Delaware. The most relevant issues and recommendations are summarized in this chapter and are tools to direct investments in outdoor recreation and to assist local governments with their comprehensive plans. The information can also be used to gain public support for recreation, quality of life and conservation related initiatives.

Shared Priorities with America's Great Outdoors

In 2010, the Obama Administration launched the America's Great Outdoors (AGO) initiative to develop a 21st Century conservation and recreation agenda. AGO recognizes that many of the best ideas come from local grassroots conservation initiatives, and calls for reworking inefficient policies and making the Federal Government a better partner with states, tribes, and local communities. As a result, the America's Great Outdoors Report, published in February 2011, proposed a number of recommendations and actions directed towards reigniting a commitment to conserving our natural heritage. A number of the AGO recommendations overlap with the recommendations outlined within the Delaware Statewide Comprehensive Outdoor Recreation Plan signifying a greater support for achieving shared goals.

A matrix summarizing goals and recommendations can be found at the end of each section. Those shared recommendations that support the AGO initiative are identified within the matrix. Additionally, a complete list of all recommendations in this document can be found in Appendix D.

Partners in Implementation

Along with developing recommendations to enhance the outdoor recreation opportunities in Delaware, the Technical Advisory Committee identified key partners who are instrumental in helping achieve the goals of this SCORP. Implementation of SCORP recommendations will be accomplished through new and existing partnerships, growing collaborations and ad-hoc implementation teams. Key partners for each recommendation are identified in the matrix at the end of each issues section. It is important to note that implementation should not be limited to those individuals or organizations that are listed.

Acronyms for Implementers

CIN	Children In Nature Task Force
DAEE	Delaware Association of Environmental Educators
DART	Delaware Transit Corporation
DE HEAL	Delaware Coalition for Healthy Eating and Active Living
DEDO	Delaware Economic Development Office
DelDOT	Delaware Department of Transportation
DF&W	Delaware Division of Fish and Wildlife
DLLG	Delaware League of Local Governments
DNREC	Delaware Department of Natural Resources and Environmental Control
DNS	Delaware Nature Society
DOE	Delaware Department of Education
DPH	Delaware Division of Public Health
DPR	Delaware Division of Parks and Recreation
DRPS	Delaware Recreation and Parks Society

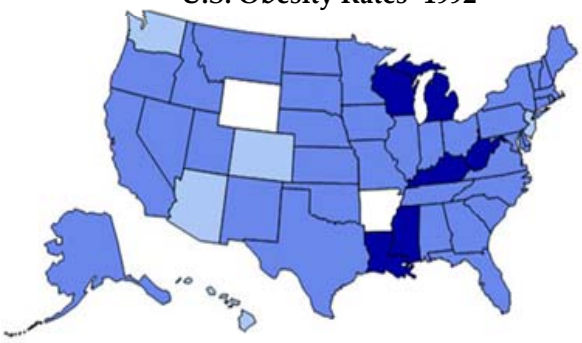
DSP	Delaware State Police
DSU	Delaware State University
GCHPDP	Governor's Council on Health Promotion and Disease Prevention
NHPS	Nemours Health and Prevention Services
NPOs	Non Profit Organizations
OSPC	Office of State Planning and Coordination
SCORP TAC	SCORP Technical Advisory Committee
UD	University of Delaware
UD-CDS	University of Delaware- Center for Disability Studies
USDA-NRCS	U.S. Department of Agriculture- Natural Resource Conservation Service
USFWS	U.S. Fish and Wildlife Service

Improving Public Health

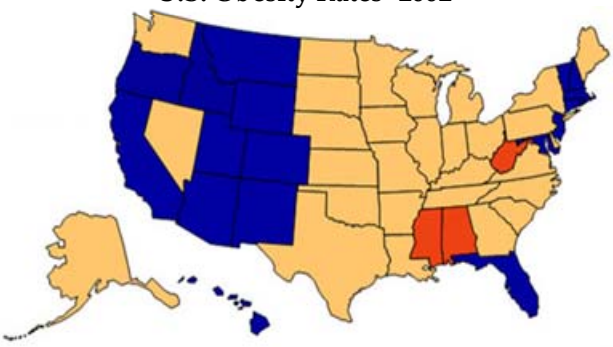
Goal: Increase availability to convenient and safe places to be active and lead healthy lifestyles

Good health is a fundamental component of an individual's life and can impact one's access to school, employment, recreational activities and community life. Physical inactivity, poor diet, and obesity are major causes of chronic disease and premature death in Delaware and throughout the nation. Adult obesity rates have skyrocketed across the nation over the past twenty years. Center for Disease Control data shows that only six states had an obesity rate above 15% in 1992, that same obesity rate included twenty states by 2002. By 2010, no state had an obesity rate below 20%. In fact, 12 states have obesity rates that exceed 30% of their population and the rates continue to climb.

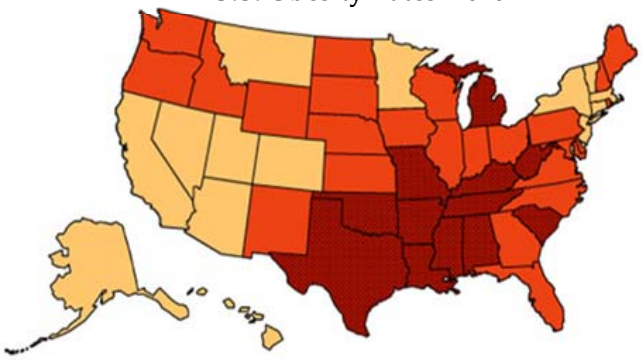
U.S. Obesity Rates- 1992



U.S. Obesity Rates- 2002



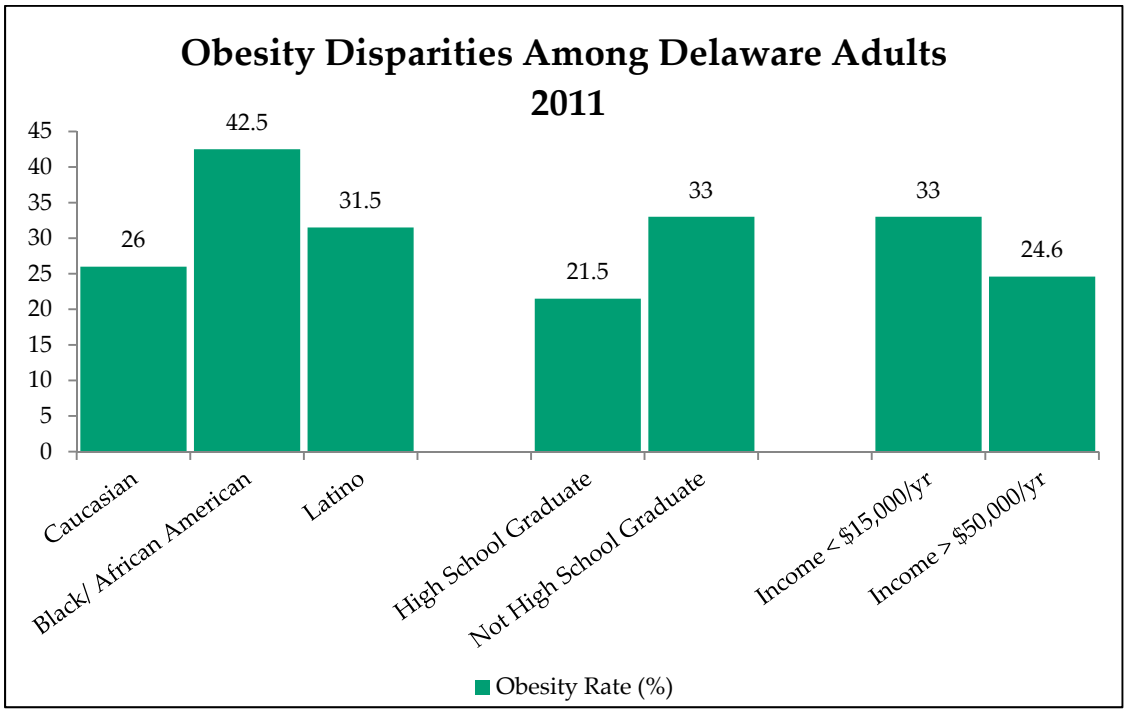
U.S. Obesity Rates- 2010



Source: Centers for Disease Control- www.cdc.gov/obesity/data

No Data | <10% | 10%-14% | 15%-19% | 20%-24% | 25%-29% | ≥30

Delaware's obesity rates have mirrored those of the nation. In 2011, Delaware was ranked the 21st most obese state in the nation with an adult obesity rate of 28.8%. In addition, the combined rates for overweight and obesity have increased. In 2002, Delaware had a combined obesity and overweight rate of 58.6%. Most recent statistics (2011) indicate that combined rate has reached 63.8%, with Kent County having a slightly higher incidence of obesity than either New Castle or Sussex Counties. Alarmingly, it has been predicted that Delaware will be the 3rd most obese state by 2030 if concerted prevention efforts are not taken.[i]



Delaware's overweight and obesity trends also include troubling social and racial disparities. Adult obesity rates in Delaware were 42.5% for Blacks and 31.5% for Latinos while a much lower 26% for Caucasians. There are also noticeable disparities between those who have and those that have not graduated high school as well as between those earning less than $15,000 and those earning more than $50,000 per year.[ii]

There is a correlation between lack of physical activity and overweight and obesity.[iii] [iv] [v] The Center for Disease Control recommends that adults need at least 150 minutes of moderate physical activity per week or 75 minutes of vigorous physical activity per week. The Behavioral Risk Factor Surveillance System (BRFSS), indicators to assess physical activity are based on a set of questions that address type, duration,

and frequency of physical activity- both at work and in leisure time. Although there has been an incremental increase in the number of adults meeting recommended physical activity levels, about half of Delaware adults still do not meet the recommendations for moderate and/or vigorous physical activity.[vi]

Increasing Activity through Increased Access

Our surroundings either enable or hinder our ability and decisions to participate in outdoor recreation and physical activity. Though many steps have been taken to address the obesity epidemic, millions of Americans still lack access to safe places to be physically active. A key strategy in chronic disease and obesity prevention is incorporating places to be active in our built environment. The built environment encompasses all buildings, spaces, and things that are created, or modified by people. It includes roads, sidewalks, trails, greenways, homes, neighborhoods, schools, workplaces, parks and recreation areas, businesses and transportation systems.[vii] Regular physical activity can be achieved by running in the park, hiking as a family on nearby trails, or playing on ball fields and playgrounds. Delaware is home to approximately 160,000 acres of publicly accessible state, local, and neighborhood parks, trails and green spaces. These outdoor recreation places and their associated facilities can provide safe, fun, accessible and convenient settings for physical activity, which is critical amidst the growing obesity epidemic in Delaware.[viii]

Delawareans Physical Activity

- 13.5% met recommendations for vigorous physical activity
- 14% met both recommendations of moderate and vigorous physical activity
- 40.9% got insufficient activity to meet any recommendations
- 11.2% reported getting no physical activity at all

Access to parks, trails and recreation spaces is associated with increased physical activity levels.[ix] It has been shown that nearly a 50% increase in physical activity can be achieved by creating or enhancing access to opportunities for physical activity.[x] Because of this, the Centers for Disease Control and Prevention's comprehensive recommendations for reducing the prevalence of obesity identified improving access to outdoor recreational facilities as a key strategy for creating safe communities that support physical activity.[xi]

Increasing access to parks and recreation spaces can be as simple as increasing the awareness of where these facilities are located. Delaware's Outdoor Recreation Inventory is exceptional resource with detailed information about Delaware's outdoor recreation estate. As our outdoor recreation resources continue to grow, it is crucial to have a clearinghouse available to easily disseminate information about parks and facilities. For residents, a searchable on-line clearinghouse would be a useful tool for finding a specific recreational activity or selecting places to live near parks. For planners, the application assists in monitoring park and recreation sites for maintenance and stewardship responsibility associated with LWCF and DTF sites. An online clearinghouse could foster partnerships by easily allowing recreation providers to better understand what and where facilities are available throughout Delaware. Additionally, a clearinghouse for recreation resources could readily provide detailed information and technical support needed by several ongoing initiatives in Delaware.

Recommendations:

Develop an online clearinghouse of all public outdoor recreation resources. This type of web-based resource will help citizens make choices for leisure time activities.

Provide technical assistance to ongoing statewide health initiatives (Delaware HEAL & Governor's Council on Health Promotion and Disease Prevention) to impact public health and recreation related recommendations.

Get Active!
Your Rx for Health

A partnership with Nemours Health & Prevention Services, Seaford area pediatricians, Nanticoke Hospital and Delaware State Parks, physicians prescribe outdoor activity for overweight and obese children. Kids in the trial program receive an Rx booklet that includes tips for healthy eating, calories burned participating in various activities, and a list of Seaford area parks with outdoor recreation facilities. The families of children each receive three free passes to a local State Park.

Community Connections Are the Key

Statewide data indicates connecting communities to recreational facilities with trails and pathways raises awareness and

increases use. Supporting infrastructure that ensures safe bicycle and pedestrian networks is a motivator for people to visit parks and participate in physical activity. New connections to existing communities provide access to facilities that would have otherwise gone unnoticed. Trail-related activities are increasing across the state. In 2009, for example, the construction of a short trail completed a connection from a county park to an adjacent neighborhood near Newark, DE. This small trail made it possible to walk or bike to the neighboring park without traversing the shoulder of a dangerous road. Trail counter data has shown a large number of people continue to use this valuable community trail connector. Prior to this connection, residents likely drove to the park or simply did not visit. After the connection, a steady flow of walkers, joggers and bikers safely and routinely enjoy the park. This example exemplifies how small infrastructure additions and modifications in our communities can have huge impacts on our physical activity levels and emphasize the importance of community connections.

Recommendation:

Within municipalities, identify sidewalk/pathway gaps that need to be filled in order to connect people to parks. This will inform decision-making investments that ensure greater community walkability and encourage active lifestyles.

Outdoor spaces are a quiet contributor to a healthy lifestyle. While participating in outdoor recreation can help us be active and stay physically fit, it is also fun. The 'fun factor' of being in a park setting encourages visitors to be active where they might otherwise lack the initiative. Outdoor activities like hiking and biking can be easily incorporated into formal wellness programs and personal health goals to provide a fun way to increase physical activity and encourage weight loss.

Recommendations:

Support the Children in Nature Task Force Report (released Oct. 2012) to expand the model of Prescription for Health beyond Sussex County.

Improving Public Health

Goal: Increase availability to convenient and safe places to be active and lead healthy lifestyles

RECOMMENDATIONS	IMPLEMENTERS	AGO Initiative
1. Develop an online clearinghouse of all public outdoor recreation resources.	*DPR, County & Municipal Parks departments, DE HEAL, Sussex Outdoors, NHPS*	
2. Provide technical assistance to ongoing statewide health initiatives (Delaware HEAL & Governor's Council on Health Promotion and Disease Prevention).	*DE HEAL, GCHPDP, OSPC*	
3. Identify sidewalk/pathway gaps that are needed to connect people to parks.	*Municipalities, DPR, DelDot*	
4. Support the Children in Nature Task Force Report (released Oct. 2012) to expand the model of Prescription for Health beyond Sussex County.	*CIN Task Force, NHPS, DSP, Municipal & County Parks, local pediatricians*	

[i] F as in Fat- How Obesity Threatens America's Future 2012. Trust For America's Health. http://healthyamericans.org/report/100/
[ii] F as in Fat- How Obesity Threatens America's Future 2011. Trust For America's Health. http://www.healthyamericans.org/report/88/
[iii] Butte NF, Puyau MR, Adolph AL, Vohra FA, Zakeri I. Physical activity in nonoverweight and overweight Hispanic children and adolescents. Med. Sci. Sports Exerc. 2007;39:1257–1266. [PubMed] Accessed 1/20/13.
[iv] Hughes AR, Henderson A, Ortiz-Rodriguez V, Artinou ML, Reilly JJ. Habitual physical activity and sedentary behaviour in a clinical sample of obese children. Int J Obes (Lond) 2006;30:1494–1500. [PubMed] Accessed 1/20/13.
[v] Treuth MS, Hou N, Young DR, Maynard LM. Accelerometry-measured activity or sedentary time and overweight in rural boys and girls. Obes. Res. 2005;13:1606–1614. [PubMed] Accessed 1/20/13.
[vi] Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS)
[vii] Srinivasan, S., O'Fallon, L.R., Dearry, A. Creating healthy Communities, Healthy homes, healthy people: Initiating a research agenda on the built environment and public Health. American Journal of Public Health. 2003 September; 93(9): 1446–1450.
[viii] Nemours Health and Prevention Services (2010), Investment in Parks and Recreation is Necessary for Children's Health
[ix] Bedimo-Rung, A.L., Mowen, A.J., & Cohen, D.A. (2005). The Significance of Parks to Physical Activity and Public Health: A Conceptual Model. *American Journal of Preventive Medicine*, 28(2S2), 159-168
[x] Emily B. Kahn et al. and the Task Force on Community Preventive Services, "The Effectiveness of Interventions to Increase Physical Activity," American Journal of Preventive Medicine, 22, no. 4S (2002): 87–88. cited in Geis, E. The Health Benefits of Parks (2006) The Trust for Public Land. http://www.scribd.com/doc/30400548/The-Health-Benefits-of-Parks-by-Erica-Gies. Accessed 1/20/13
[xi] Centers for Disease Control and Prevention (2009), Recommended community strategies and measurements to prevent obesity in the United States. MMWR, 2009; 58(RR07): 1-26. www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm

Getting Children Outdoors

Goal: Improve and create new opportunities for children to be active in the outdoors.

Public open spaces play a major role in getting people outdoors, creating a sense of community and well-being. More importantly, these places provide a means for both children and adults to be physically active and to live healthy lifestyles. This is critical when childhood obesity is an epidemic nationally and in Delaware. Park and recreation facilities including trails and community pathways provide an outlet for everyone to engage in positive lifelong activities. Most adults who participate in outdoor recreation were introduced to outdoor activities as a child. With the growing number of electronic distractions (TV, computers, smartphones, video games, etc.), engaging youth participation is critical to sustain future generations of outdoor enthusiasts and land stewards.

The Outdoor Foundation's study, entitled *Exploring the Active Lifestyle,* looked at what sparks consumers' involvement in the outdoors and barriers to participation. According to the study, 90 percent of adults who participate in outdoor recreation were

introduced to outdoor activities between the ages of 5 and 18 - making today's youth participants critical to building future generations of healthy, outdoor participants. Close to 60% of children and young adults ages 6 through 24 participate in some type of outdoor recreation, but this statistic has consecutively decreased over the past few years. Minority populations are severely under represented with only 21% participating in outdoor recreation.

Studies indicate a discrepancy in how children and adults participate in outdoor recreation activities. National surveys indicate that youth in America tend to participate in more 'extreme' outdoor activities such as skateboarding, BMX bicycling, snowboarding, climbing, and triathlons. It is interesting to note that though certain popular youth activities like skateboarding, BMX bicycling, and mountain biking all have less than 10% youth participation however, the frequency of participation is much higher in these activities. There may not be as many participants, but those who are participating are doing so twice or three times as much as other activities.

Recommendations:

Continue to conduct outdoor recreation participation studies aimed at specific user groups and demographics to better understand outdoor recreation in Delaware.

The Delaware Children in Nature Task Force was formed to address the challenge of reconnecting children with nature. The Task Force is Delaware's commitment to the nationwide No Child Left Inside movement. Two Task Force committees have focused on different approaches to get kids outside: school-based and community-based education. Both committees strive to ensure that every Delaware

child has the opportunities and benefits of exploring, growing, and learning from our diverse natural environment.

Recommendations:

Provide technical assistance to the Children In Nature Task Force.

Schools are an often overlooked resource for helping children reconnect with the outdoors. Growing research indicates than children who have meaningful outdoor experiences have higher rates of achievement than those who do not. In December 2011, Nemours Health and Prevention Services (NHPS) along with representatives from the Delaware Department of Education announced the results of a recent study that demonstrated a clear and consistent relationship between fitness and academic achievement regardless of a student's gender, race, family income or school district. The data showed students who are more physically fit perform significantly better in both reading and math.

These findings are consistent with a number of research studies suggesting a link between physical activity, student behavior, and academic achievement. Studies have shown that physical activity is linked to better concentration, reduced disruptive behaviors and higher test scores in reading, math and writing. This Nemours Health and Prevention Services study is the first to demonstrate these relationships among Delaware students. Studies like this only reinforce the necessity of parks and recreation

facilities for the social and mental development of our young citizens.

Recommendations:

Provide training to develop schoolyard habitats, outdoor classrooms and/or school gardens to assist in reconnecting youth to their environment.

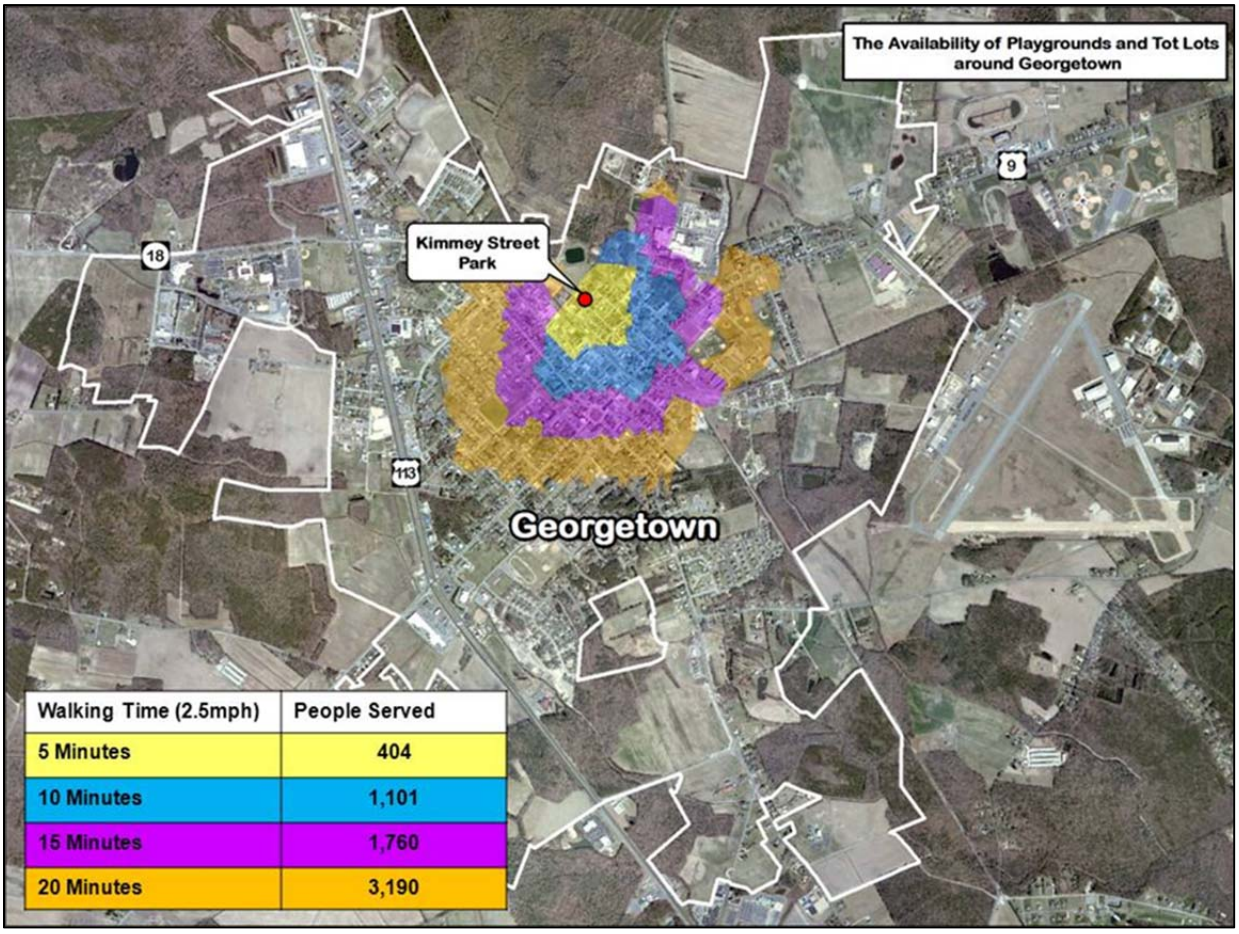
Establish and maintain an environmental education resource clearinghouse.

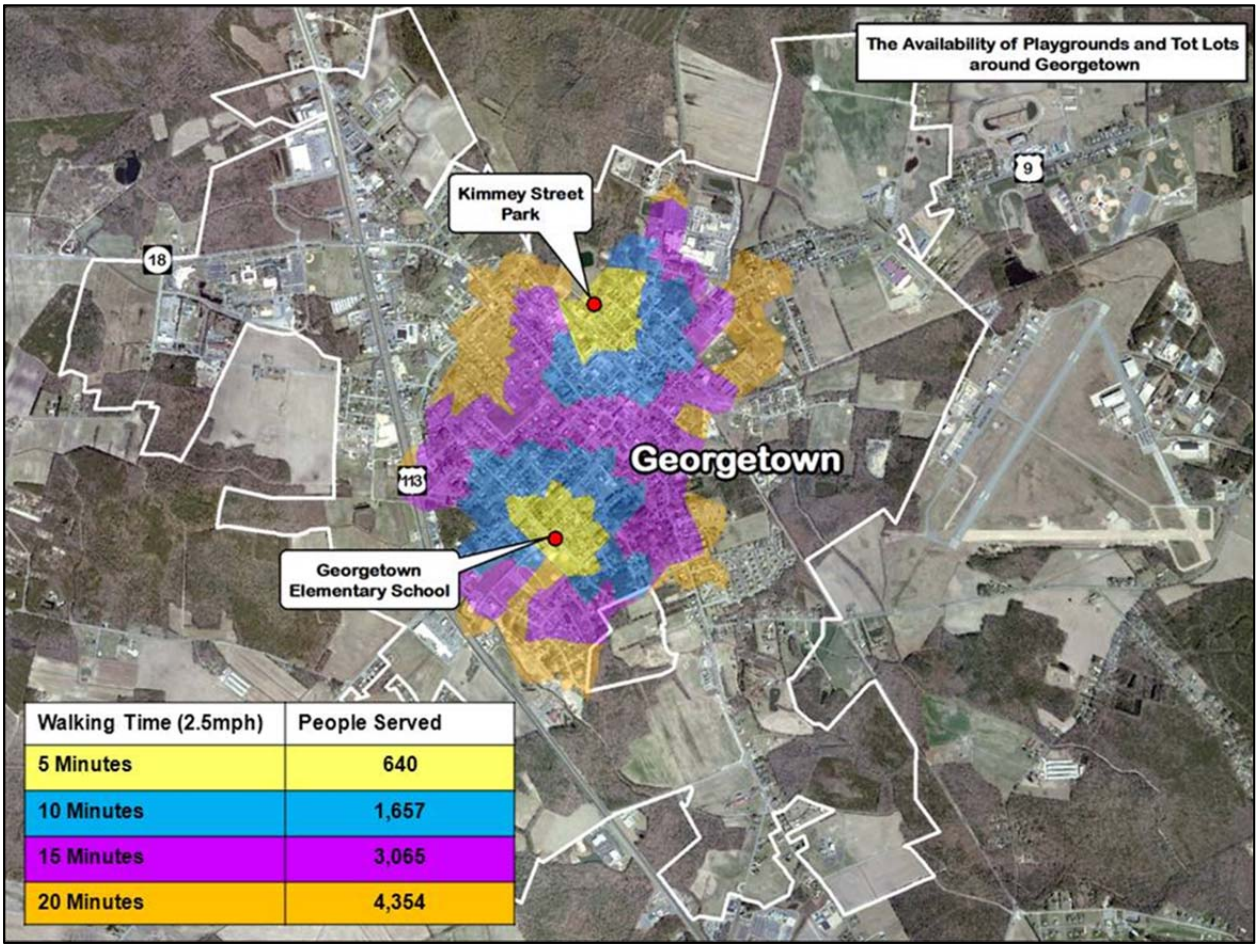
Importance of School Facilities

Today, more than ever, there is a lack of integration between indoor classroom instruction and experiential outdoor learning and free play exploration. What is widely perceived by the public as the 'culture of testing' in our schools has taken precedence and funding away from experiential outdoor learning. Twentieth century land use patterns, school design (no windows) and community design have moved schools away from community centers creating an atmosphere of isolation, and thus, misses the opportunity to engage children in walking and bicycling to school. The closure of a school facility during non-school hours combined with vehicle only access to schools drastically decrease available outdoor recreation spaces and facilities. Opening a

school's outdoor facilities for community use at times schools are closed drastically increase the availability of outdoor spaces for youth and families, promote healthy lifestyles, and foster stewardship of our schoolyards.

Schools play a role in providing recreational opportunities for kids and young adults. But not all school facilities are available after school hours. Spatial analyses tools can determine the disparity in the number of people served when school facilities remain closed to the public. As an example, conducting a network analyses for playgrounds and tot lots, it becomes clear that there is a large gap in services around Georgetown, DE. This example shows the value of school facilities remaining available for public use after school hours. Kimmey Park is the only public recreation area that provides play equipment in Georgetown. In no other public park or open space in Georgetown is there a playground or tot lot. A walk-shed analysis for Kimmey Park shows that approximately 404 people live within a five minute walk to that tot lot. In this example, there is nearly an entire municipality with little to no close to home access to public active play facilities. This is alarming when the population of Georgetown has





grown 38.3% to 6,422 people between 2000 and 2010 and 29% of those residents are under the age of 18.

If the analysis includes school playground and tot lots, the number of residents served increases to 640. For an accurate analyses, more information would be needed to determine individual school policies and the actual availability of their recreation facilities. This type of analysis strengthens the need for joint use agreements with schools.

Recommendations:

Coordinate discussion between the Department of Education, the Department of Natural Resources and Environmental Control, and other outdoor recreation providers to share outdoor recreation facilities and resources.

Increase community access to school recreational facilities by reducing barriers associated with use.

Identify public school facilities that are not publicly available during non-school time. An analysis will identify gaps in services essential for demonstrating the importance of schools in meeting outdoor recreation needs.

Ensure the long-term maintenance and safety of all recreation facilities by encouraging schools to participate in playground safety certification courses.

Getting Children Outdoors

Goal: Improve and create new opportunities for children to be active in the outdoors.

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Continue to conduct outdoor recreation participation studies aimed at specific user groups and demographics.	*DPR, Nemours, DF&W, DE Greenways, DEDO, local governments*	
2. Provide technical assistance to the Children In Nature Task Force.	*DNREC, DOE, DNS, DAEE, DE Center for Inland Bays, USFWS, NHPS, Delaware Greenways, DPH, local governments, DelDot, DE Wildlands, OSPC, USDA-NRCS, Girl Scouts/Boy Scouts of America, DE Dept. of Agriculture, UD, DSU*	
3. Provide training to develop schoolyard habitats, outdoor classrooms and/or school gardens to assist in reconnecting youth to their environment.	*Center for Inland Bays, Delaware Nature Society, Delaware Dept. of Agriculture*	
4. Establish and maintain an environmental education resource clearinghouse.	*DNREC, Delaware Dept. of Agriculture, DNS, Delaware Greenways, UD, DSU, DAEE*	
5. Coordinate discussion between Department of Education, the Department of Natural Resources and Environmental Control and other outdoor recreation providers to share outdoor recreation facilities and resources.	*DNREC, DOE, American Heart Association, DE HEAL*	
6. Increase community access to school recreation facilities by reducing barriers associated with use.	*OSPC, DNREC, DelDot, DOE,*	

7. Identify public school facilities that are not publicly available during non-school time.	*DOE, DE HEAL, NHPS, DNREC*	
8. Ensure long-term maintenance and safety of all recreation facilities.	*DNREC, Local Recreation Organizations, DOE*	

Accessible Recreation

Goal: Implement and maintain services that are high quality, inclusive and accessible to all.

Distance from and physical access to recreational facilities is one of the greatest barriers to getting people outdoors and being active. Not only should facilities be universally accessible and equally distributed throughout our communities, they should be located in areas that will provide the highest use for the greatest number of people. Understanding community character and local demographics plays a key role in helping locate specific amenities and ensure citizens of all ages, interests, economic stature and abilities are served by a park or recreation facilities.

Top 5 Reasons for Choosing a Specific Recreation Area

1. Live Close By
2. Has specific amenities
3. Aesthetics
4. Clean
5. Safe

Source: 2011 Delaware Outdoor Recreation Participation and Trends Survey

Access for All

The condition of park facilities and the actual pathways to reach a park can also encourage or inhibit park use. Park users are more likely to visit a park that is easy and safe to get to, where the facilities are consistently well maintained and are safe to use. Having attractive natural environmental features in and around parks is a motivator for visitation and use. Supporting infrastructure that ensures safe bicycle and pedestrian passage is particularly motivating for people to use a park and engage in physical activity. More often than not, there are significant gaps in pathway and sidewalk structures that prevent people from safely accessing parks and recreation facilities. Though a critical part of the active transportation infrastructure, many municipal areas lack strong plans and/or codes that address and enhance walkability, bikability and interconnectivity within communities.

Though close to home parks are important for our communities, not all parks will have the same facilities and amenities. Facility diversity is an important factor when planning new parks or conducting level of service analyses within communities. Regional parks are typically larger in size and offer a wider number of recreation opportunities. These parks serve diverse users. Typically located on the outskirts of towns in unincorporated areas of the counties, regional parks, and State and Federal recreational lands can be difficult to access for those users

who are unable to drive themselves. Increasing public transportation opportunities to these facilities would increase access for all individuals.

Recommendation:

Create locally specific policy briefs highlighting the importance of outdoor recreation, walkability, and inter-connectivity.

Brief local governments on findings from in-depth spatial analyses and demonstrate the need to update local development codes to improve walkability, interconnectivity, and active recreation.

Provide on-going training to assist agency planners to remain current on best practices for park management and playground safety.

Provide technical assistance to state and local officials during comprehensive planning processes to incorporate trails, parks and recreation spaces in local planning efforts.

Identify and assess outdoor recreation facility conditions to be used in spatial analyses, DTF and LWCF grant distribution and facility maintenance planning.

Obtain a clear understanding of the level of public transportation services to parks and recreation facilities.

Explore a State Park pass loan initiative to encourage park use and promote healthy lifestyles in economically challenged areas.

Moreover, perceived and real safety issues are also factors that influence park use. Perceived safety includes how safe one feels in and around parks while real safety would be the actual rate of crime that occurs in and around parks. Residents who feel unsafe after dusk or who witness signs of disarray in their community such as graffiti, garbage and vandalism are less likely to let their children bike, walk or play outside. In contrast, adults who felt safe in their communities were 60% more likely to let their children play in public spaces.[i ii iii iv] Perceived safety and fear of crime are two factors that drive the 'Not In My Back Yard' (NIMBY) mentality creating roadblocks for planning and developing park and recreation facilities.

Recommendation:
Conduct spatial analyses of park locations juxtaposed to crime incidences.

Factors Affecting Park Use

Park Access- Easy access to parks is associated with increased park use.

Park Distribution- Disparities in park distribution are evident in areas with low income and racial/ethnic populations.

Park Facilities- There are certain types of facilities that encourage higher levels of physical activity such as trails and playgrounds.

Park Conditions- Facilities that are consistently well maintained, aesthetically appealing and safe are associated with increased public use.

Source: National Recreation and Park Association

Access for Underserved Populations

One of several issues regarding the built environment is whether there are adequate places to engage in physical activity within our communities. Nationally, a number of studies have shown that in addition to availability of parks and recreational facilities, other factors impact park use and activity levels. Those factors include: access, distribution, types of facilities and conditions.

Parks and play spaces are important assets in promoting active living and overall health across all segments of the population, yet not all communities and demographics have adequate access to these resources. Research has shown that having a large number of parks nearby increases the likelihood of being physically active; and parks that include specific active recreation facilities such as trails, playgrounds and sports fields stimulate higher levels of activity.[v vi] Unfortunately, communities with higher poverty rates and communities with higher percentage of minority residents are significantly less likely to have parks and green spaces nearby.[vii viii] This is disheartening when research also suggests that parks and recreation

may be more important in promoting physical activity among lower-income youth than among youth who come from more affluent neighborhoods.[ix]

Although parks and recreation spaces are available in urban, suburban and rural areas of Delaware, the distribution of these amenities are not uniform. Disparities in distribution and park access specifically characterized by low-income populations and racial/ethnic minority populations need to be evaluated in our communities and throughout the state. This is one of several aspects of the built environment that can be addressed to ensure fair and equitable distribution of park facilities and recreation spaces.

Recommendation:

Gather vital information necessary to complete in-depth spatial analyses of outdoor recreation facilities for underserved and urban populations.

Access for Persons with Disabilities

While leading a healthy lifestyle can be challenging for everyone, individuals with disabilities face additional difficulties: facilities and recreational settings may not be accessible, outdoor programs and activities may not accommodate specific needs, and outdoor recreation information may not be available in alternate formats. Barriers do not need to be disability specific to disproportionately burden individuals with disabilities. Having a disability should not prevent an individual from being healthy, engaging in exercise and physical activity, or enjoying parks and outdoor recreation areas. With appropriate and accessible service systems in place, individuals with disabilities can achieve and maintain active and healthy lifestyles.[x]

Existing data about the number, diversity, geographic distribution, and needs of Delawareans with disabilities are sparse and fragmented. The definitions and types of data collected are not always consistent across agencies, which impedes effective

collaboration and construction of a system-wide accounting of disability related needs. Delaware needs, but lacks, a comprehensive, state-wide database system for tracking needs and services provided for persons with disabilities.[xi]

The Behavioral Risk Factor Surveillance System (BRFSS), one of few population-based health surveys in Delaware, includes two questions about disability. Unfortunately, the BRFSS does not collect disability type or needs-specific data and does not include individuals from all disabilities or age groups. While it provides a way to compare adults who do and do not have a disability, it does not allow for examining differences by type of disability or the impact of disability severity or duration.

One question in the BRFSS asks if a person is "limited in any way in any activities because of physical, mental, or emotional problems," and a second question asks whether he/she uses special equipment. In 2009, BRFSS researchers reported that 18.4% of the Delaware population reported limitations in activity and 7.2% reported they require the use of special equipment.

While the Americans with Disabilities Act (ADA) of 1990 has led to greater access to employment, transportation, public services and accommodations for people with disabilities, some of the ADA regulations have been challenging to apply to public park and recreation settings. A clearer understanding of the actual demographics of persons with disabilities and their specific needs would help outdoor recreation providers in delivering universally inclusive facilities and programs.

Recommendations:

Create an accessibility guide to all public outdoor recreation spaces.

Develop guidance tools that address best practices for universal accessibility to outdoor recreation facilities.

Ensure representation from the disability community throughout the conservation and recreation planning processes.

Accessible Recreation

Goal: Implement and maintain services that are high quality, inclusive and accessible to all.

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Create locally specific policy briefs highlighting the importance of outdoor recreation, walkability, and inter-connectivity.	*Counties, Municipalities, DPR, DRPS, DelDot, Trail community, GCHP, DE HEAL, OSPC, DLLG, NHPS*	
2. Brief local governments on findings from in-depth spatial analyses and demonstrate the need to update local development codes to improve walkability, interconnectivity, and active recreation.	*Counties, Municipalities, DRPS, DPR, OSPC, DE HEAL, NHPS*	
3. Provide on-going training to assist agency planners to remain current on best practices for park management and playground safety.	*DRPS, DPR, Local Parks and Recreation Agencies*	
4. Provide technical assistance to state and local officials during comprehensive planning processes to incorporate trails, parks and recreation spaces in local planning efforts.	*DPR, DPH, OSPC, DE HEAL*	
5. Obtain a clear understanding of the level of public transportation services to parks and recreation facilities.	*DART, DELDOT, DNREC, Local Parks and Recreation Agencies*	
6. Identify and assess outdoor recreation facility conditions to be used in spatial analyses, DTF and LWCF grant distribution and facility maintenance planning.	*DPR, Local Parks and Recreation Agencies.*	
7. Explore a State Park pass loan initiative to encourage park use and promote healthy lifestyles in economically challenged areas.	*County Library Systems, DPR, Local Parks and Recreation Agencies*	
8. Conduct spatial analyses of park locations juxtaposed to crime incidences.	*DPR, DNREC, DSP*	

9. Gather information necessary to complete in-depth spatial analyses of outdoor recreation facilities for underserved and urban populations.	*DPR, OSPC, County and Municipal governments*	
10. Create an accessibility guide to all public outdoor recreation spaces.	*DNREC, USFWS, NPOs, UD-CDS*	
11. Develop guidance tools that address best practices for universal accessibility to outdoor recreation facilities.	*DNREC, USFWS, NPOs, UD-CDS*	
12. Ensure representation from the disability community throughout the conservation and recreation planning processes.	*UD-CDS, DPH*	

[i] Miles, R. (2008). Neighborhood Disorder, Perceived Safety, and Readiness to Encourage Use of Local Playgrounds. *American Journal of Preventive Medicine*, 34(4), 275-281.
[ii] Olvera, N., Smith, D.W., Lee, C., Liu, J., Lee, J. (2012). Hispanic maternal and children's perceptions of neighborhood safety related to walking and cycling. *Health & Place*, 18(1), 71-75.
[iii] L. Weir, D. Etelson, D. Brand Parents' perceptions of neighborhood safety and children's physical activity Preventive Medicine, 43 (3) (2006), pp. 212–217.
[iv] Kelling GL, Coles CM. Fixing broken windows: restoring order and reducing crime in our communities. New York: Free Press, 1996.
[v] Active Living Research. Parks, Playgrounds, and Active LivingResearch Synthesis, February 2010. www.activelivingresearch.org/files/Synthesis_Mowen_Feb2010.pdf. Accessed 1/20/13.
[vi] Kaczynski, A.T., & Henderson, K.A. (2007). Environmental correlates of physical activity: A review of evidence about parks and recreation. Leisure Sciences, 29(4), 315-354.
[vii] University of California, Berkeley. Disparities in Park Space by Race and Income Policy Brief. July 2011. University of California Regents http://activelivingresearch.org/files/PolicyBrief_ParkDisparities_0.pdf. Accessed 1/20/13.
[viii] Moore, L.V., Diez Roux, A.V., Evenson, K.R., McGinn, A.P., & Brines, S.J. (2008). Availability of Recreational Resources in Minority and Low Socioeconomic Status Areas. American Journal of Preventive Medicine, 34(1), 16-22.
[ix] Active Living Research- www.activelivingresearch.org/node/12518
[x] Healthy Delawareans with Disabilities, Bridging the Gap. A Plan for Action: A Strategic Plan for Delaware to Promote Health and Prevent Secondary Health Conditions in Individuals with Disabilities.
[xi] Healthy Delawareans with Disabilities, Bridging the Gap. A Plan for Action: A Strategic Plan for Delaware to Promote Health and Prevent Secondary Health Conditions in Individuals with Disabilities.

Statewide Trails & Pathways Initiative

Goal #1: Make Delaware walkable and bikeable by creating a premier interconnected network of multi-use bicycle and pedestrian trails and pathways.

Goal #2: Design, construct and maintain a sustainable network of trails and pathways.

The benefits of trails and pathways extend well beyond their physical boundaries by revitalizing communities, helping to keep local economies strong, increasing access to healthy outdoor recreation and providing places for active transportation. Investing in trails and pathways makes our communities more desirable places to live. Communities around the country know that trails are good for business. They have reaped the rewards as trail users buy from small businesses and rely on local restaurants and lodging providers. Study after study demonstrates the many societal and economic benefits are directly attributed to trail development. Medical research has shown that our health improves when we are physically active. Economic research has shown that a trail can bring at least $1 million annually to a community, depending on how well the town embraces their trail system.[i] In addition, results from a study in Oregon found that proximity to an open-space can have a statistically significant positive effect on a home's sale price.[ii]

> *"… one of the best ways we can improve our quality of life, and promote healthy lifestyles at the same time, is to make our state more walkable and bikeable. Building on the strong foundation of existing trails and greenways already in place, we can make Delaware one of the most walkable and bikeable states in America."*
>
> Governor Jack Markell
> State of State
> January 19, 2012

Trail-related pursuits are the number one outdoor recreation activities in Delaware with 74% of Delaware households walking or jogging; 53% bicycling; 34% hiking; 23% canoe/kayaking; 18% mountain biking; and 13% horseback riding.

Based on a comparison of findings (from previous SCORP surveys published in 2002 and 2008), the trend for trail related activities continues to be popular among the recreating public.[iii] The overwhelming demand for linear facilities resonates throughout every SCORP Planning Region as well as all five oversampled municipalities.

In his 2009 Executive Order #6, Governor Jack Markell required all future investments in transportation infrastructure to evaluate and include, if reasonably cost effective and logistically achievable, accommodations for bicycle and pedestrian facilities. In 2011, Governor Markell extended his support for bike and pedestrian pathways by launching the Statewide Trails & Pathways Initiative *(www.trails.delaware.gov)* to create a premier system of recreational and alternative transportation facilities for our residents and our visitors. The Delaware General Assembly has answered the call in Fiscal Year 2012 and Fiscal Year 2013 funding $7M and $13M respectively in trail and pathway projects. While the earliest projects are being completed, there is much more work to be done to achieve an interconnected trail system that both meets the public's desire for recreational trails, and, provides active non-motorized transportation.

Recommendation:

Increase the system of interconnected trails and pathways by extending existing trail hubs within municipalities and State Parks. Construct new or upgrade fifty miles of shared-use trails in state parks.

Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails into county regions.

Allocate a steady and reliable funding stream for trails and pathways that builds on and extends the existing network.

Coordinate planning efforts to connect neighborhoods with places of work, schools, businesses, parks and other community facilities.

The New Imperative: Building the Case for Trails and Pathways

A hundred and fifty years ago individuals were responsible for managing their own sewerage, garbage and water. Public investments dedicated to these functions, were born of serious public health issues and concerns. Public health in turn improved with publicly-funded, centralized delivery and disposal systems. Today, we are facing new imperatives that include epidemics of obesity, cancer, respiratory and cardiovascular diseases and too much screen time on computers, televisions and mobile devices.

Living active lifestyles to combat these modern epidemics can reach the greatest number of people and have the largest impacts through community design and building community connections to trails and pathways. Personal health and wellness, as well as community livability are enhanced and improved by expanding the availability of trails and pathways. When trails and pathway are viewed as basic services that must be incorporated into our community fabric, the healthy choices of walking and biking become second nature. Parks, trails and recreation services nurture a sense of belonging, ownership, and community pride among people who live and work together. Trails and pathways play a significant role in fostering community connection both in spirit and in activity.

Quality of life & healthy lifestyles

While park settings tend to have a wide range of facilities to encourage physical activity, research has revealed that there are specific types of facilities that promote higher levels of physical activity than others. Park users engage in higher levels of

Parks that have trails and wooded areas are seven times more likely to be used for physical activity than parks

physical activity in parks that have playgrounds, sports facilities, and trails. Furthermore, parks that have either paved or unpaved trails and wooded areas are seven times more likely to be used for physical activity than parks that did not have these features.[iv]

A community connected by trails, pathways, and sidewalks promote, and results in, active living and healthy lifestyles. Both research and public demand underscore that trails and pathways are a necessity in our communities. Safe, convenient trails and pathways near homes are known to motivate people to walk and bike more, in turn, improve the health of children and adults. A complete pedestrian network provides a means for communities to be more active and healthy.

This is critical when you consider the obesity epidemic nationally and in Delaware. In Delaware, nearly 60% of adults and 30% of children are overweight or obese. Regular physical activity, which can be achieved by trail walking, biking and running, helps maintain a healthy weight and prevent heart disease, type 2 diabetes, and other chronic diseases.[v] Parks and trails provide children outlets for engaging in positive energetic activities. Studies show evidence demonstrating that healthier citizens means

reduced overall healthcare costs.[vi]

Amidst competing priorities in tough economic times, park and recreation facilities may sometimes be regarded as 'nice to have', rather than a necessity. Park and recreation services are an essential component of the fabric of our communities, significantly contributing to our quality of life. Creating active, inviting and comfortable parks will entice residents and visitors to stop, explore, and become stewards these public spaces. The unique feel and appearance of a community parks are essential to create a strong sense of place, pride and stewardship.

Environmental return

The environmental return of increasing bicycle and pedestrian pathways are obvious: no carbon emissions from walking and bicycling, reduction of vehicles usage and vehicle miles travelled on Delaware roads-thereby reducing emissions of greenhouse gases and improving air quality. There are even quantifiable impacts in reducing vehicle miles traveled and supporting alternate transportation modes, such as:

- Traffic congestion wastes nearly 3.9 billion gallons of gas per year in the U.S.
- For every 1 mile pedaled rather than driven, nearly 1 pound of carbon dioxide is saved.

While Delaware's sources for poor air quality are primarily derived from out-of-state facilities, investment in recreation trails and shared pathways provide opportunities to

reduce mobile greenhouse gas sources and provide credits to the State's Improvement Plan under the Clean Air Act.[vii]

Lastly, trails and pathways provide opportunities for visitors and Delawareans to experience the State's natural amenities, such as wildlife, wetlands, forests, streams and rivers without detrimental impacts to the environment. They are also a conduit to immerse children in nature.

Economic rewards

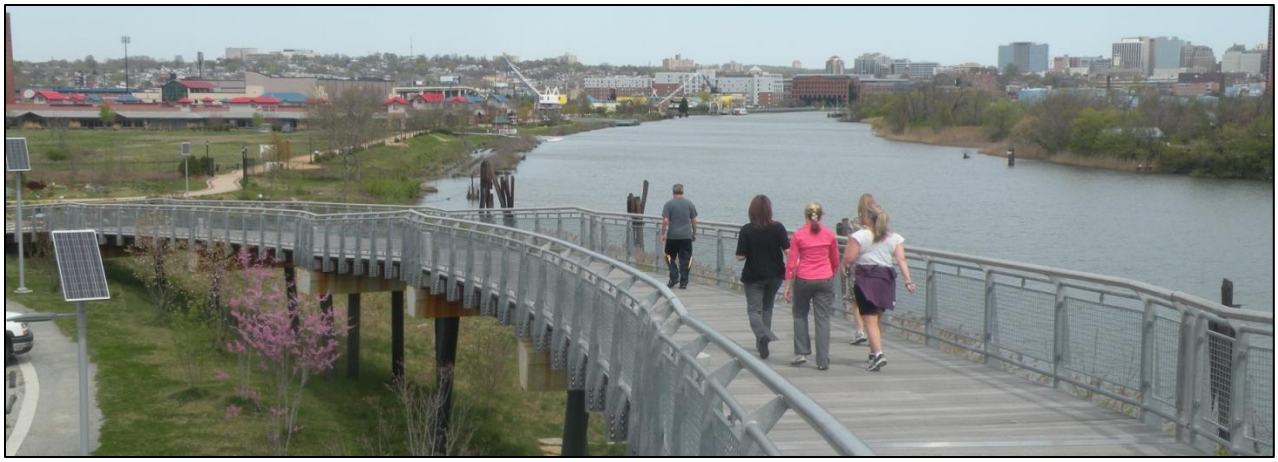
Nationally, trail-related expenditures are reported to range from $1 to $75 per day, depending on the trail mileage covered. A network of trails and pathways will boost local businesses and tourism. Trail economic impacts studies around the country, including one of the Junction & Breakwater Trail between Lewes and Rehoboth, demonstrates that trail users pump additional revenue into local marketplaces with their food, lodging and gear purchases. Analyses show that bicycle projects create an average of 11.4 jobs per million dollars spent, compared to just 7.8 jobs for road only projects.[viii] In a Junction & Breakwater Trail user survey, 49% of the users reported that their purchases of a bike, bike supplies, footwear or clothing were influenced by their

trail use. And, 53% said they purchased soft goods in conjunction with a J&B Trail trip. Returns are high for the relatively low cost investment for trail development. This is good news for local businesses.[ix]

Delaware is in the geographic center of the heavily populated Mid-Atlantic region, a short day trip from major U.S. cities. Approximately 11.8 million people live within an hour drive of our borders in Maryland, Pennsylvania, New Jersey and Virginia. This central location delivers tremendous potential to boost trail tourism for both day visitors, overnight tourists and residents alike.

A number of reports show the impact of outdoor recreation on the economy. Nationally, the recreation industry contributes $730 billion annually to the U.S. economy and supports nearly 6.5 million jobs. When trail facilities are in place, overnight visitors spend an average of $98/day in trail communities, while local trail users spend an average of $13 for each trail use. Bicycling alone generates $289 billion annually in retail sales and services, and $88 billion in annual state and national tax revenue. The outdoor recreation industry accounts for over 1.1 million jobs. Outdoor recreation sales (gear & trips) generate $325 billion in annual returns. This is more than the economic returns from pharmaceutical/medicine manufacturing ($162 B) and legal services sector($253 B).[x]

The Delaware real estate sector promotes the value of trails in its sales advertisements highlighting properties that adjoin trails or are near state and local parks. Studies have shown that homes closer to bike paths are more valuable than comparable properties elsewhere.[xi] Aside from property value increases, households



reap economic benefits by using these close to home pathways. The average American household spends $7,179 per year on owning and driving their cars. Using trails and pathways, on a round trip commute of 10 miles, bicyclists save around $10 daily.[xii]

Growing Demand for Walkable and Bikeable Communities

A 2011 survey by National Association of Realtors found Americans favor walkable mixed-use neighborhoods. A growing majority prefer these types of neighborhoods over ones that require more driving between home, work and other destinations. To support this information, an independent survey found that nearly half of drivers ages 18-34 are driving less and 66% said they would drive less if transportation alternatives were more readily available. [xiii]

Walking and biking rank in Delaware's top 5 most participated in outdoor activities

The number of people who bicycle to work nationwide has increased 64% in 10 years, though in Delaware, the number remains very low (0.37%). The bicycle commuter demographic is distributed evenly among all income groups. Yet, the percent of bicycle trips for recreational purposes remains relatively high in Delaware (53%) and rises with increasing income.[xiv]

Local Demand: What do Delawareans want?

Walking and biking rank within the top five most participated in outdoor activities in Delaware. Trails and pathway facilities are in high demand as half of all Delaware residents want close to home trail-related opportunities.

According to the 2011 Outdoor Recreation Participation and Trends Survey (ORPTS 2011), 74% of survey respondents expected a member of their household to participate in walking or jogging; 53% participate in bicycling; 34% in hiking; and 18% in mountain biking. Based on a comparison of findings (from the 2002 and 2008 published surveys), the trend for trail-related activities continues to be widespread among the recreating public. This trend is mirrored at the national level, running, jogging and trail running are the most popular outdoor activities with almost 51 million participants while biking (road, mountain and BMX) and hiking are also in the top five most popular outdoor activities.[xv]

Despite the state's diverse population, varying landscapes types and regional variations in outdoor recreation needs, the need for linear facilities – trails and paved pathways for walkers, joggers, hikers, and bicyclists – ranked highly in every corner of Delaware. And, these activities ranked high among different ethnic groups and across age categories. This informs citizens, advocates, planners and policymakers that more

linear facilities are essential to keep pace with the population growth and the public's participation in trail-related outdoor activities.

Delawareans are clear in their overwhelming demand for trails and pathways. Sixty-six percent of survey participants reported that bike and pedestrian facilities (trails and pathways) are very important funding priorities for state and local policymakers. To strengthen this finding, 68% of respondents say funding for trails/parks and conservation areas should be a priority even during economic hard times.

Recommendation:

Identify gaps in trail and pathway systems to prioritize critical community connections.

Identify needed land and support the development of future trail extensions and connections that encourage healthy lifestyles and increase recreational opportunities.

Conduct a detailed spatial analysis to determine geographical representation of trail, pathway and sidewalk related needs.

Existing Conditions

Currently, there are 506 miles of trails and multi-use pathways in our state - 149 miles of trails in the State Park System. Though there are over 100 miles in our communities, this is not enough to satisfy the public's expressed need for biking, hiking, walking, running, and nature exploration, or routes for non-motorized transportation.

Outdoor Recreation Participation and Trends Survey participants clearly reported that they are not walking, biking, or jogging to a great degree because they perceive that roads are too dangerous and because community facilities/services are often too far away. These

sentiments are reinforced by the increase in statewide bicycle crashes reported each year. In other words, there are insufficient, safe bicycle and pedestrian facilities like trails and pathways that advance biking or walking to schools, businesses and community centers.

Recommendation:
Advocate and identify funding sources to conduct local walkability and bikability analyses to assist local communities in trails and pathways planning and development.

Provide the most up to date trails and pathways data during the comprehensive planning processes to demonstrate the necessity of close to home community connections.

Conduct trail volume and use surveys to understand and enhance trail use.

Promote and support a bicycle and shared-use trail safety campaign aimed at educating bicyclists/drivers and bicyclists/walkers about rules and responsibilities of sharing facilities.

Develop a cohesive trail and pathway wayfinding signage system that is comprehensive, coordinated and functional. Sign functions may be categorized as: informational signs showing orientation; directional and trailhead signs guiding users to locations/features/landmarks; interpretative signs explaining natural and cultural information; and regulatory signs proscribing trail and pathway use, behavior and local laws.

Principles of Sustainable Trail Design & Development

Designing and constructing sustainable trails is of paramount importance to maintaining the designed experience, health, and life span of the trail system. Many trail management problems, from erosion to user conflict, stem from poor trail planning and design. A poorly designed trail, no matter how well it is built, will degrade at a faster rate and cause problems for managers and trail users. All trail users affect the trail surface and surrounding environment, especially when trails are poorly planned and constructed. Those impacts range from vegetation loss, soil displacement, erosion, water quality problems, and disruption of wildlife.

The basic principles of sustainable trails include the following: maximize natural and cultural resource protection; ability to support current and future use; minimize adverse effects on plant or animal life in the area; require little future rerouting and long-term or reoccurring maintenance; and reduce staff time and funds spent on trail maintenance. In essence, greater level of sustainability relates directly to water and use management. Adopting these principles ensures a more accessible and sustainable trail system for the future.

Designing a sustainable trail and trail systems requires the analysis and evaluation of the following elements and factors: cultural resources; endangered or sensitive plant and animal species; occurrence and health of native plants and animals; mature growth forests; natural drainage; topography, soils, slope and grade changes; ease of access from control points such as trailheads; user type and volume; user safety; and providing interesting experiences within the landscape. A sustainable trail system will offer trail users landscape and experiential variety.

Current research suggests that the most effective way to minimize the environmental effects of trail uses is to build environmentally sustainable trails. A

sustainable trail balances many elements including location, expected trail use, construction methods, grade changes (grade reversals) and employing quality construction techniques and material.

Recommendations:

Develop a unified statewide trail classification and marking system that provides direction on trail care, trail widths, and surface type.

Conduct trail and pathway grade analyses to identify existing unsustainable and inaccessible trail sections.

Adopt universal sustainability and trail maintenance standards for trail and pathway design and construction.

Share trail standards and design knowledge and skills to counties, municipalities and volunteer organizations to cultivate a widespread trail building community.

Statewide Trails & Pathways Initiative

Goal #1: Make Delaware walkable and bikeable by creating a premier interconnected network of multi-use bicycle and pedestrian trails and pathways.

Goal #2: Design, construct and maintain a sustainable network of trails and pathways

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Increase the system of interconnected trails and pathways by extending existing tail hubs within municipalities and state parks.	*DNREC, DelDot, local parks and recreation departments, County and Municipal planners*	
2. Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails into county regions.	*DelDOT, DNREC, county partners, trail users, bike commuters*	
3. Allocate a steady and reliable funding stream for trails and pathways that builds on and extends the existing network.	*DNREC, DelDot, local parks and recreation departments, County and local officials, NHPS, Bike Delaware, trail advocates*	
4. Coordinate planning efforts to connect neighborhoods with places of work, schools, businesses, park and other community facilities.	*DNREC, DelDot, Office of State Planning & Coordination, County and*	

	Municipal planners	
5. Identify gaps in trail and pathway systems to prioritize critical community connections.	*DNREC, DelDot, local parks and recreation departments, County and Local government officials, trail advocates, trail users, volunteers*	
6. Identify needed land and support the development of future trail extensions and connections that encourage healthy lifestyles and increase recreational opportunities.	*DNREC, DelDot, local parks and recreation departments, County and Municipal planners*	
7. Conduct a detailed spatial analysis to determine geographical representation of trail, pathway and sidewalk related needs.	*DNREC, DelDot*	
8. Conduct trail volume and use surveys to better understand and enhance trail use.	*DNREC, DelDot, local trail managers*	
9. Advocate and identify funding sources to conduct local walkability and bikability analyses.	*DNREC, DelDot, DRPS, County and Local officials ,NHPS, Sussex Outdoors, DE Heal, Trail users, trail advocates*	
10. Promote and support bicycle and shared-use trail safety campaign.	*DNREC, DelDot, DRPS, NHPS, DE Trails and Pathways Initiative partners*	
11. Develop a unified statewide trail classification and signage marking system.	*DNREC, DelDot, County and Municipal officials, local parks and*	

	recreation departments, County and Municipal planners, Bike Delaware, trail advocates	
12. Conduct trail and pathway grade analyses to identify unsustainable and inaccessible trail sections.	*DNREC, DelDot, Trail managers, volunteers, UD-Center for Disability Studies, DPH*	
13. Adopt universal sustainability and trail maintenance standards for trail and pathway design and construction.	*DNREC, DelDot, DRPS, trail managers, trail builders, trail advocates, trail users, volunteers*	
14. Share trail standards and design knowledge and skills with counties, municipalities and volunteer organizations.	*DNREC, DelDot, DRPS, local parks and recreation departments, trail builders, trail advocates, volunteers*	

[i] Delaware Trails & Pathways Initiative; Economic Benefits of Trails and Pathways- www.trails.delaware.gov/EconomicBenefits.aspx
[ii] Active Living Research. Economic Benefits of Communities that Support Physical Activity Fact Sheet. Princeton, NJ: Active Living Research, a National Program of the Robert Wood Johnson Foundation; July 2012. Available from: www.activelivingresearch.org. http://www.activelivingresearch.org/node/12695. Accessed 1/20/13.
[iii] 2011 Delaware Outdoor Recreation Participation and Trends Survey, Delaware State Parks
[iv] Parks & Recreation in Underserved Areas; A Public Health Perspective, NRPA http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf
[v] Gordon-Larsen, P., et al. Active commuting and cardiovascular disease risk. Archives of Internal Medicine, 169, 1216-1223. July 13, 2009. http://archinte.ama-assn.org/cgi/content/short/169/13/1216
[vi] Wang, G., et al. Cost-Benefit Analysis of Physical Activity Using Bike/Pedestrian Trails. Health Promotion Practice, v.6, no.2, 174-179. April 2005. www.americantrails.org/resources/health/trailinvest.html
[vii] Delaware Trails & Pathways Initiative; Environmental Benefits of Trails and Pathways- www.trails.delaware.gov/Benefits.aspx

[viii] NCHRP 08-36, Task 103, Mining Recovery Act Data for Opportunities to Improve the State of Practice for Overall Economic Impact Analysis of Transportation Investments, January 2012
http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36%28103%29_FR.pdf.
[ix] Delaware Greenways, Junction & Breakwater Rail-Trail 2011 Trail Use Study and Economic Analysis, January 2012
[x] Outdoor Industry, The Outdoor Recreation Economy.
www.outdoorindustry.org/pdf/OIA_OutdoorRecEconomyReport2012.pdf

[xi] Racca, D. and Dhanju, A., Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas. Center for applied Demography and Research. November 2006.
http://www.ce.udel.edu/dct/publications_files/Rpt.%20188%20Bike%20Paths.pdf
[xii] Commute solutions online calculator. October 4, 2011. October 31, 2011.
http://commutesolutions.org/external/calc.html
[xiii] Davis, B and Dutzik, T., Transportation and the New Generation; Why Young People Are Driving Less and What It Means for Transportation Policy, April 2012.
http://www.uspirg.org/sites/pirg/files/reports/Transportation%20%26%20the%20New%20Generation%20vUS_0.pd
[xiv] 2011 Delaware Outdoor Recreation Participation and Trends Survey, Responsive Management, Inc.
[xv] Outdoor Recreation Participation Report 2012-
http://www.outdoorindustry.org/images/researchfiles/OIA_OutdoorRecreationParticipationReport2012.pdf?170

Partnerships for Conservation, Recreation and Tourism

Goal: Provide responsible access to natural and historical spaces while conserving the environment and improving local economies.

Nearly three out of four Americans participate in active outdoor recreation each year. Getting outdoors means big business. Americans generate jobs, spend money, and support local communities when they get outside. Low impact activities like hiking, biking, and wildlife viewing generate an enormous economic impact. Outdoor recreation activities contribute more than $700 billion to the U.S. economy, support more than 6 million jobs, and produces $289 billion in retail sales and services, not to mention the billions of dollars generated in annual tax revenue.[i] Delaware is the tiny gem of the mid-Atlantic that hosts more than 7 million visitors per year. With each visitor spending more than $545 per trip, Delaware's tourism industry is a key part of the economy.

The tourism industry is the third largest private employer in the state supporting nearly 40,000 jobs in businesses like hotels, restaurants, retail outlets, bait and tackle shops, recreational equipment stores, boat sales and tour operators. Without tourism in Delaware, each Delaware household would pay more than $100 in additional taxes. Delaware has more than 160,000 acres of publicly-owned parks, wildlife areas, open spaces, and natural and historic resources worth exploring by the more than 30 million Americans living within a three-hour drive.

Delaware Outdoor Recreation Economy

$4.0 Billion *in consumer spending*

39,000 *Direct Delaware jobs*

$1.1 billion *in wages and salaries*

$304 million *in state and local tax revenue*

Delaware offers spectacular outdoor recreation and trail opportunities. Visitors flock to our Bayshore, Nanticoke River, Inland Bays, ocean beaches, state parks, wildlife areas, and farmland to experience that which they cannot enjoy at home: world-class birding, fishing, biking, hiking, canoeing, and kayaking. Six of the ten most popular visitor activities in Delaware relate to outdoor recreation.[ii]

Several recent outdoor resource-related economic studies demonstrate how investments are paying off. These studies demonstrate the economic impact of natural resource based opportunities and provide guidance for public and private decision makers considering future investments, and business market opportunities associated with the recreational, natural and cultural resources. A few salient findings are highlighted below.

Atlantic Coastal Economy

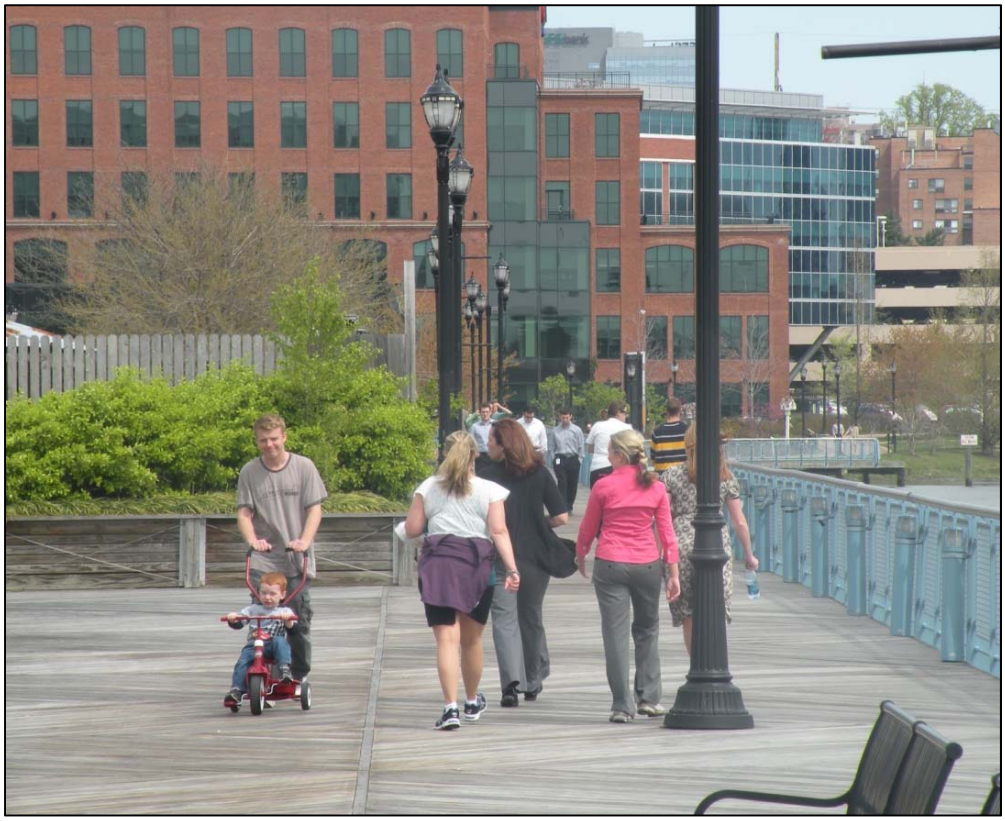
Cape Henlopen, Delaware Seashore and Fenwick Island State Parks, Inland Bays, and the lower Delaware Bay, and, the beach towns of Lewes, Rehoboth, Dewey, and Fenwick Island combined, are significant economic generators. Delaware's stunning coastal resources attract full-time and seasonal residents and visitors. Coastal economic impacts originate from direct beach or water activities by coastal residents and visitors. Direct coastal economic activity generates 39,900 jobs – over $1.5 billion in labor income.

http://www.deseagrant.org/sites/deseagrant.org/files/product-docs/economicReport-2012lr.pdf

Wilmington Parks

Although the city and state parks located in Wilmington were not created as economic generators, there is a growing realization that these parks provide the city with millions of dollars of value. Through an economic analysis of Wilmington city parks, the Trust for Public Land found the park system – comprised of both City and state managed sites - provided the city government with direct revenue of more than $1.36 million and added to the general wealth of the citizenry by nearly $11 million. Parks also provided residents with saving of over $47 million through the direct park use value ($41m), health value ($4.3m), and community cohesion value ($1m).

http://www.dnrec.delaware.gov/parks/Information/Documents/Wilmington%20Parks%20Economic%20Study.pdf



Riverfront Wilmington

The Delaware Children's Museum, DuPont Environmental Education Center, its parks and Riverwalk generated $308 million in public revenue exceeding the $29 million in public investments that created the facilities.
http://128.175.63.72/projects/DOCUMENTS/Final%20Report.pdf

Junction & Breakwater Trail

Located between Lewes and Rehoboth, users of the Junction & Breakwater Trail were asked about their trail-related spending during the 2011 summer. Trail users reported that trail use influenced their purchases of both hard and soft goods. Trail users generated hard good purchases of $209,000 - - 38% reported to have purchased a bike because of their trail use; 30% bought bike supplies; 14% purchased shoes; and 18% purchased clothing. And, soft goods purchased by trail users totaled $409,000 - - 35%, 32% and 32% respectively for beverages, restaurant meals and snacks.
http://trails.delaware.gov/JBEconomicStudy.pdf

Delaware Tourism Study

An Economic Impact Study of Tourism was conducted in 2010 for Delaware.
http://www.visitdelaware.com/about-us/tourism-statistics/

Key findings are:

- Tourism's total contribution to Delaware's 2010 Gross Domestic Product (GDP), the total market value of goods and services produced by the State's economy, is $2.1 billion.
- A total of 1.5 million people traveled to Delaware on business and 5.6 million traveled for leisure.
- On average, the typical 2010 visitor to Delaware was 47 years of age with a household income of $94,322 which was higher than the national average.
- Tourism generated $400 million in state and local government taxes/fees in 2010.

Though national data reveals the economic benefits of parks and outdoor recreation, in these budget-challenged times, it has become increasingly important to calculate the

economic values parks add at state and local levels. Simple economic estimates can be calculated using park visitor statistics, while sophisticated economic models can produce robust information about the economic benefits of parks and the outdoor recreation economy to further demonstrate value to our state and communities.

Recommendations:

Foster public/private partnerships and tourism packaging that promote the ecological beauty and recreational opportunities in Delaware.

Conduct park and recreation economic studies to assess the benefits of parks, wildlife conservation areas and the outdoor recreation economy.

Preserve and enhance large scale land conservation to make Delaware a destination for outdoor enthusiasts.

Working together for the Great Outdoors

Protecting areas at a larger landscape scale will not only provide enhanced and continued stewardship for our natural, cultural and recreational resources but have enormous potential to attract visitors and boost local economies through tourism. Delaware's unique size yields close relationships with our regional neighbors, businesses, local governments, conservation organizations, tourism and recreational advocates. Together, these associations are working to enhance and improve the availability of cultural, natural and recreational resources for our residents and make Delaware a destination for outdoor enthusiasts. Several current Delaware

initiatives have many overlapping goals with those identified within this Plan as well as those outlined in the Americas Great Outdoors Report. The following Initiatives and Programs are collaborative endeavors on-going in Delaware that have wide-ranging positive outcomes for outdoor recreation, conservation and tourism. It is important to support these efforts as they continue.

Delaware Bayshore

Extending from Pea Patch Island in New Castle County to the City of Lewes in Sussex, County, the Delaware Bay shoreline is widely recognized as an area of global ecological significance. Its expansive coastal marshes, shoreline, agricultural lands and forests provide diverse habitat to many species, including migratory shorebirds. Birders and conservationists from around the world come to the Delaware bayshore to witness the annual spring spectacle of more than a half million shorebirds taking a rest stop to dine on eggs laid by spawning horseshoe crabs.

Launched in 2012, the Delaware Bayshore Initiative will collaboratively build on the region's reputation as a unique and beautiful natural resource, and help improve the shoreline-based economy by encouraging more Delawareans and visitors to enjoy it through recreational activities like hunting, fishing, boating and other ecotourism activities. Due in large part to early private-public land conservation acquisitions and to the legacy of the Coastal Zone Act, nearly 60% of the 200,000 acre Delaware Bayshore Region remains undeveloped, and is today protected as publicly-owned state or federal wildlife lands. The balance is largely rural agricultural land.

The Delaware Bayshore Initiative stands to improve quality of life through enhanced outdoor recreational opportunities; to provide students with outdoor living classroom educational options; boost small town economies; and to help prepare Delaware for future climate changes and impacts.

http://www.dnrec.delaware.gov/Pages/Delaware-Bayshore.aspx

Recommendations:

Build on public-private partnerships and leveraging state, federal and private resources for:

1. Conservation and ecological restoration - connect wildlife areas by acquisition or easement of unprotected lands; restore native habitat; and protect resources.
2. Recreation and connectivity - focus strategic investments to connect wildlife areas to urban centers; maximize enjoyment of the outdoors by providing safe, healthy recreational experiences; and enhance access to public lands along the Bayshore.
3. Engagement and marketing - engage, educate and inspire the next generation of environmental stewards; partner with local communities and organizations to promote the area regionally, nationally and internationally; and promote local volunteerism.

Route 9 Coastal Heritage Scenic Byway

Route 9 Coastal Heritage Scenic Byway – the Bayshore Byway - winds along the north and central coastline following Delaware Bay coastal waters. The 52-mile Byway threads its way through coastal towns and villages from the historic city of New Castle, past working landscapes, and astride rich natural resources, south to the historic John Dickinson Plantation. The Byway lies entirely within the Atlantic Flyway where each spring hundreds of thousands of migrating shorebirds pass through the area. Among the best known is the Red Knot, which feeds on tiny horseshoe crab eggs along the Delaware Bayshore, which has one of the largest concentrations of spawning crabs in the world and is one of the most critical stops on the east coast for migrating shorebirds. This important area is a treasure to natural resource and recreation enthusiasts. Designated under Delaware's Byway Program, the Route 9 Byway Working Group is developing a comprehensive management plan designed to meet federal standards qualifying the roadway as National Scenic Byway.
http://byways.org/explore/byways/2334

Recommendations:

Develop the Route 9 Corridor Management Plan to meet Federal standards. The Corridor Management Plan would emphasize the place-based history, heritage and unique culture of the Byway's towns and villages.

Examine potential Byway-suitable corridors that would extend the existing Bayshore Byway south of the St. Jones River to Lewes connecting key natural and cultural resources within the Bayshore region.

Seek Federal designation for the Route 9 Coastal Heritage Scenic Byway.

Delaware's First National Park

Delaware is the only state in the union without a unit of the National Park System. National Parks offer the highest level of protection for large scale landscapes and promote a wide variety of outdoor recreation experiences. National Park units are important engines for local jobs, income, and economic growth, as well as sources for educational and recreational pursuits. For every dollar spent on a National Park, four dollars are returned to the local economy. [iii]

Delaware National Coastal Special Resource Study and Environmental Assessment (2008), was conducted by NPS to determine whether specific natural and cultural resources or areas in Delaware are nationally significant, suitable, and feasible to qualify for potential congressional designation as a unit of the National Park Service. As a result of the Special Resource Study, the First State National Historical Park Act of 2011, Senate Bill 323, would create a park celebrating early American Dutch, Swedish and English Settlements located throughout Delaware, as well

as Delaware's role in the events leading up to the signing of our Constitution. Once both the full Senate and House of Representatives approve the Senate Bill, it will be sent to the President for his signature. When established, the Delaware First State National Historic Park would stretch across the state link Old Sheriff's House; Fort Christina National Historic Landmark; Old Swedes Church National Historic Landmark; Old New Castle Courthouse; John Dickinson Plantation National Historic Landmark; Dover Green; and Ryves Holt House - sites that celebrate Delaware's colonial history in the founding of the nation.

In addition to the sites identified in the proposed Delaware First State National Historical Park Act, a new proposal recommends incorporating the 1,100 acre Woodlawn property into Delaware's first national park unit. This site adjoins Brandywine Creek State Park to the south and lies east of Brandywine Creek, in both New Castle County, Delaware and Delaware County, Pennsylvania. The site holds national, regional and local significance associated with industrialist William Poole Bancroft.

Recommendations:

Continue to support establishment of the Delaware National Historic Park.

Promote the management of these National Park-worthy areas to protect unique natural, historical and cultural resources while providing a wide variety of outdoor recreation opportunities.

Captain John Smith Chesapeake National Historic Trail

Four hundred years ago Englishman John Smith and a small crew of adventurers set out in an open boat to explore the Chesapeake Bay. Between 1607 and 1609 Smith mapped and documented over 3,000 miles of Bay and its rivers. Along the way they visited many thriving Native American communities and gathered information about this "fruitful and delightsome land". In December 2006 the U.S. Congress designated the routes of Smith's explorations of the Chesapeake as a national historic trail—the first national water trail. In 2012, Interior Secretary Salazar designated four connecting rivers – the Upper Nanticoke, Upper James, Susquehanna, and Chester Rivers – recognizing their close association

with John Smith's exploration of the Chesapeake Bay. These rivers and river segments, now part of the John Smith National Historic Trail (*http://www.nps.gov/cajo/index.htm*), include American Indian towns and cultures of the 17th-century Chesapeake that Smith encountered and are valuable for their unique history, heritage, cultural, recreational and natural resources. Today, 20.4 miles of the John Smith National Historic Trail traverse the Delaware portion of the Nanticoke River, Broad Creek and Deep Creek. This segment of the John Smith Trail comes to life through the locally designated Nanticoke River Water Trail.

Recommendations:

Add place-based interpretive information at key sites celebrating the Nanticoke's history, heritage and culture and that of Captain John Smith's voyage along the water trail.

Within the Nanticoke watershed, conserve lands evocative of landscapes encountered by Captain John Smith and his crew.

Chesapeake Bay Gateways & Water Trails Network

The Chesapeake Bay Gateways & Water Trails Network is comprised of parks, refuges, museums, historic sites and water trails spanning the entire Chesapeake Bay watershed. Visitors to Gateway sites and water trail users will experience the region's rich natural, cultural, and historic resources and access recreational opportunities of the Bay and its tributaries. The western portion of Delaware's three counties - 34%- falls within the Chesapeake Bay watershed and contribute to the health and integrity of the Bay. Three Delaware sites are today partners in the Chesapeake Bay Gateways Network. Explore these and other Gateway sites to experience the Bay's stories, spirit and mystery. *www.baygateways.net*

> Trap Pond State Park, located on the upper reaches of the James Branch, protects upper Chesapeake headwaters and is home to the northernmost natural stand of bald cypress trees in the U.S. Interpretative exhibits on the area's rich natural resources are on display in the Bald Cypress Nature Center. Trap Pond became one of Delaware's first state parks in 1951.
> *www.destateparks.com/park/trap-pond/index.asp*

Seaford Museum is dedicated to preserving and commemorating the history of the town of Seaford, located on the banks of the Nanticoke River. Exhibits portray the town's rich history and culture, Nanticoke Indian life, early agriculture, shipbuilding, the canning industry and Captain John Smith's Chesapeake voyage and much more.
www.seafordhistoricalsociety.com/index.cfm?ref=30029

The Nanticoke River Water Trail brings to life the Captain John Smith Chesapeake National Historic Trail tracing the historic routes taken by Captain John Smith and his crew from 1607 to 1608. The Nanticoke Water Trail traverses more than 60 miles of National Trail's 3,000 miles of waterways within Virginia, Maryland, Delaware and Washington, D.C. The trail commemorates Smith's extraordinary voyages and provides opportunities to learn about Native American societies and cultures and the unique natural history of the Chesapeake Bay and its tributaries. Visit this online resource.
www.paddlethenanticoke.com

Recommendations:

Increase access to the Nanticoke River Water Trail for kayaking and canoeing. Identify and create water access along the uppermost tidal reaches of the Nanticoke River; Deep Creek; and Broad Creek.

Protect sites identified in the National Park Service Access Plan that affords direct access to the water trail.

A National Wild and Scenic River

Covering 107 square miles, the White Clay Creek watershed falls in parts of Chester County, Pennsylvania and New Castle County, Delaware. Nearly 100,000 people call the White Clay Creek watershed home. After several years of citizen collaboration, U.S. Congress federally designated the White Clay Creek and its tributaries into the National Wild and Scenic River System. That marked the first time an entire watershed - rather than just a section of river - had been designated into the national system. This approach takes into consideration the variety of influences outside the river corridor that affect river habitat and water quality. The federal designation helps preserve watershed features that enhance water quality and natural resources, guide appropriate

development of land that can coexist with the waterway, and improve the overall quality of life. *www.whiteclay.org* and *www.nps.gov/ncrc/programs/pwsr/whiteclaycreek_pwsr_sub.html*

Recommendations:

Collaborate with the National Park Service, White Clay Creek Watershed Management Committee and other stakeholders to implement shared goals:

1. Improve water quality and conserve water quantity
2. Conserve open space, woodlands, wetlands & geologic features
3. Protect native plant and animal species
4. Preserve cultural, historical and archaeological sites
5. Enhance outdoor recreation opportunities
6. Encourage environmental education and watershed awareness

Recreational Trail Designations

The National Trail System Act of 1968 (Public Law 90-534) authorized creation of a national trail system comprised of National Recreation Trails, National Scenic Trails and National Historic Trails. National Recreation Trails are designated by the Secretary of Interior or the Secretary of Agriculture to recognize exemplary trails of local and regional significance that connect people to local resources and improve their quality of life. Designations are based on diverse partnerships between federal, state, local, and private organizations. Through designation, these trails are recognized as part of America's national system of trails. [iv] Delaware currently has three designated National Recreation Trails: Hagley Museum Trail System, James F. Hall Trail (New Castle County) and the Pinelands Nature Trail (Sussex County).

Recommendations:

Increase the number of National Recreation Trail designations in Delaware.

Partnerships for Conservation, Recreation and Tourism

Goal: Provide responsible access to natural and historical spaces while conserving the environment and improving local economies.

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Foster public/private partnerships and tourism packaging that promote the ecological beauty and recreational opportunities in Delaware.	*DNREC, DEDO, Delaware Dept. of Agriculture, USFWS, private conservation and recreation organizations*	
2. Conduct park and recreation economic studies to assess the benefits of parks, wildlife, conservation areas, and Delaware's outdoor recreation economy.	*DNREC, local parks and recreation departments, DEDO, USFWS, private conservation and recreation organizations*	
3. Preserve and enhance large scale land conservation partnerships to make Delaware a destination for outdoor enthusiasts.	*DNREC, Delaware Dept. of Agriculture, USFWS, private recreation and conservation organizations, local governments*	
4. Build on public/private partnerships by leveraging state, federal, and private resources.	*DNREC, DelDot, DE Dept. of Agriculture, USFWS, private recreation organizations, private conservation organizations, private industry*	
5. Develop the Route 9 Corridor Management Plan.	*Rt. 9 Byway Working Group, DNREC, DelDOT*	
6. Seek Federal designation for the Route 9 Coastal Heritage Scenic Byway.	*Rt. 9 Byway Working Group, DNREC, DelDOT, DE Greenways*	

7. Examine potential corridors that would extend the existing Bayshore Byway south.	*DNREC, DelDOT, DE Greenways, Byway Advisory Group*	
8. Continue to support the establishment of the Delaware National Historic Park units.	*DNREC, The Conservation Fund, Woodlawn Trustees, Mt. Cuba Center, State Historical and Cultural Affairs*	
9. Promote the management of recreation areas to protect unique natural, historical and cultural resources while providing a wide variety of outdoor recreation opportunities.	*DNREC, State Historical and Cultural Affairs, private recreation and conservation organizations, outdoor enthusiasts, sportsmen/women*	
10. Provide additional interpretive information along the Captain John Smith Water Trail.	*Nanticoke River Water Trail Working Group, DNREC*	
11. Conserve lands within the Nanticoke watershed that are evocative of the landscapes encountered by Captain John Smith and his crew.	*Nanticoke River Water Trail Working Group, DNREC, private conservation organizations*	
12. Increase access to the Nanticoke River Water Trail.	*Nanticoke River Water Trail Working Group, DNREC*	
13. Protect water access sites identified in the National Park Service's Access Plan.	*Nanticoke River Water Trail Working Group, DNREC*	
14. Collaborate to improve the shared goals of the White Clay Creek Watershed Management Plan.	*White Clay Creek Watershed Management Committee, DNREC, NPS*	
15. Increase the number of National Recreation Trail designations in Delaware.	*DNREC, Trail managers, Trail enthusiasts*	

[i] The Active Outdoor Recreation Economy Report. Outdoor Foundation. Fall 2006

[ii] 2010 Delaware Tourism Study: *http://www.visitdelaware.com/about-us/tourism-statistics/*

Protecting Lands for Conservation and Recreation

Goal: To maintain and enhance the interconnected network of natural areas, open spaces, parks, and conservation lands

Land use changes due to human activity have a great effect on ecological resources. Scattered patterns of 50-plus years of modern development in Delaware, especially the construction of low-density residential housing subdivisions, consumes excessive amounts of land and fragments natural landscapes. Wildlife habitat and migration corridors are lost, and normal ecosystem functions are disturbed or destroyed. When natural spaces are converted for human use, the population of species dependent on the lost habitat may decrease below the threshold needed for long-term persistence. Habitat loss and fragmentation are perhaps the greatest threat to forest wildlife, and the primary cause for species extinction by restricting the movement of plants and animals. Ecosystems with lower diversity are generally less desirable and can affect the availability of outdoor recreation opportunities.

Many species of greatest conservation need are "area-sensitive" requiring relatively large areas of mostly unbroken habitat to ensure their viability. Protecting areas of conservation need will provide an interconnected network of forests, uplands and wetlands for wildlife habitat and associated recreation activities. State, Federal and non-governmental conservation lands, which generally make up the largest parcels in preservation networks, are particularly critical for meeting the needs of sensitive species and associated low impact recreational demand. Landscape scale planning among all agencies and organizations will be necessary to comprehensively identify those areas with greatest conservation need.

The basic building blocks of a conservation network include not only those larger core areas but also natural wildlife corridors. Wildlife corridors are those linear features that provide adequate cover sufficient for the movement of wildlife. These corridors preserve the connectivity of undeveloped lands within developing areas, preserving connections between different habitats and/or large habitat blocks. Corridors are also an excellent means of providing people with connections between large open spaces. In many instances, corridors can support low impact human

activities such as hiking, biking, kayak/canoeing, wildlife viewing and nature observation.

Recommendations:

Identify and prioritize lands for acquisition that protect and maintain large scale landscapes and avoid fragmentation of resources.

Manage core natural areas to minimize direct disturbances and the introduction and spread of non-native and invasive species.

Protect land through conservation easement or fee simple purchase to create conservation corridors.

Strategically planned and managed networks of natural lands, working landscapes, and other open spaces that conserve ecosystem functions and provide associated quality of life benefits provide a systematic approach to land conservation.

A network of interconnected green spaces can provide vital habitat for wildlife, protect water supplies, improve air and water quality, and provide low impact outdoor experiences for recreation enthusiasts. The end result is a healthier environment and a better quality of life for residents. These environmental benefits can be achieved through proper planning and robust funding for land conservation. More often than not, the benefits of open land are not given adequate attention in the land use planning, engineering, and development processes. Conservation lands and residential development are not mutually exclusive. Incorporating natural spaces, wildlife habitat, and conservation corridors early in the planning process can greatly enhance the quality of a residential development or a community as a whole. Strong collaborations between private entities, local governments, non-profit organizations and conservation groups can serve as a springboard to protect and connect natural spaces throughout the state.

Recommendations:

Identify conservation opportunity areas for inclusion and protection in the natural resource element of local comprehensive land use plans.

Protect rare landscape elements, cultural resources, and sensitive areas and associated species.

Leverage partnerships with state and federal agencies, conservation organizations and private landowners.

Develop a guide for local governments and conservation organizations that outlines available funding sources and incentives available to help protect high priority conservation and recreation areas.

Local Parks

In 1986, the state enacted the Delaware Land and Water Conservation Trust Fund Act (DTF), a state law that mirrors the federal LWCF Program (30 Del. Code, Chapter 54). The DTF is a matching grant program administered by the State Division of Parks and Recreation within the Department of Natural Resources and Environmental Control that assists county and municipal governments and park

districts with park land acquisition and outdoor recreation facility development. Annually, $1 million of Real Estate Transfer Tax is deposited into the Trust with the principal intact. Trust-generated income is divided equally between park and trail projects.

DTF assistance is available for parkland, open space or greenway acquisition, planning and outdoor recreation facility development projects. Up to 50% funding is available for eligible projects while a sponsor and match may be derived from the agency's budget, other grants, in-kind sources or donations. Sponsoring agencies must agree to dedicate the project site to public outdoor recreation use in perpetuity and assume responsibility for continuing operation and maintenance of the area. To date the DTF Program has assisted 44 eligible agencies with over 300 completed projects. The $21M of DTF assistance has leveraged $56 million. More than three quarters of the projects (237) have been for park development, 48 for acquisition projects and 27 for planning projects have been funded.

Delaware's Open Space Program

One effective way the State is creating this network of conservation and recreation lands is through the Open Space Program. The Open Space Program coordinates the acquisition of various state lands: parks, fish and wildlife management areas, forests, nature preserves, and cultural sites. Protection efforts build on existing state, federal, local and private conservation organization lands and inholdings. Lands acquired under this Program are protected through fee simple acquisitions, bargain sales, donations, and conservation easements.

While state land conservation started in the 1920s, a cohesive effort with dedicated funding formally began with the passage of the Delaware Land Protection Act (7 Del. Code, Chapter 75) in July 1990. The law established the Open Space Program to acquire interest in real property to carry out conservation programs of the State. Under the purpose of the law, the State is "to protect and conserve all forms of natural and cultural resources; to protect and conserve the biological diversity of plants and animals and their habitat; to protect existing or planned parks, forests, wildlife areas, nature preserves or other recreation, conservation or cultural sites by controlling the use of contiguous nearby lands; to preserve sites of special natural, cultural or geological interest; to connect existing open spaces into a cohesive system of [conservation] greenways and resource areas; to provide for public outdoor recreation; and to allow for water resource conservation".

This legislation also established a nine member Open Space Council which advises the Secretary of the Department of Natural Resources and Environmental Control as to the administration, implementation and financing of the program. Seven members of the Council are public members appointed by the Governor, one member is appointed by the Speaker of the House of Representatives and one member is appointed by the President Pro Tempore of the Senate. Ex-Officio members of the Council are the Secretary of Agriculture, the Secretary of State, the Director of the Delaware Economic Development Office, and the State Liaison Officer for the Federal Land and Water Conservation Fund.

Quarterly meetings are held to review properties brought before the Council for consideration for acquisition. These properties are first selected as priority projects by the land managing agencies that qualify for funding under the program: Division of Fish and Wildlife, Division of Parks and Recreation, Division of Historical and Cultural Affairs, and the Delaware Forest Service. Then the land project is recommended to an Interagency Working Group, comprised of state and county agency staffs. This group reviews the specific natural, cultural and recreational information for each site and decides which projects are taken to the Open Space Council for its consideration.

Assessing the priority of a given property for preservation is a process that involves ranking and descriptive evaluation. The ranking process is intended to provide a strategic way of preserving open space by evaluating a property on its own features and against other similarly ranked properties in order to maximize resource benefits and leverage all relevant funding sources. Additionally the property is reviewed against existing resource plans.

This ranking process is supported by science, management priorities and public needs. The ranking criteria assign points across five broad areas: ecological value, land

use, water quality, recreation, and cultural resources. Once ranked, the property is evaluated qualitatively by describing other potential benefits, challenges or factors affecting preservation of the land. The recreation potential of a project is reviewed for high priority recreation needs as defined in the SCORP. Specific conservation issues are based on species and habitat inventories and ecological modeling. The Open Space Program Property Ranking Process is found in Appendix E.

The funding for the acquisition of open space properties has come from a variety of sources, including State Conservation Revenue Bonds, a portion of the State's realty transfer tax and legislative appropriations. The original funding mechanism, also passed in 1990, was a new subchapter to the Realty Transfer Tax Act (30 Del. Code, Chapter 54, Subchapter II). Most of the funding today comes from a portion of the realty transfer tax which is imposed on the sale of real estate. The current level of funding is typically $9.0 million annually. These State funds are often used to match or leverage federal funding from a variety of programs in the U.S. Fish and Wildlife Service, the National Park Service and the U.S. Forest Service. In addition private foundation funds are matched with state dollars.

From July 1990 through December 2012 the Open Space Program completed 353 fee simple acquisition, donation and conservation easement projects, resulting in the permanent protection of 53,714 acres. Over $246,469,536 of Open Space funds and $74,023,662 of other funds were expended on these projects. A breakdown by county is included here.

Open Space Program
Summary By County
1990-2012

County	Projects	Acres	Open Space Funds	Other Funds	Total Cost
New Castle	132	11,844	$130,960,601	$34,627,795	$165,588,396
Kent	65	9,234	$16,635,634	$4,496,812	$21,132,446
Sussex	156	32,636	$98,873,301	$34,899,055	$133,772,356
Total	353	53,714	$246,469,536	$74,023,662	$320,493,198

The slowed economy over the last five years (2008 through 2012) resulted in tight state and federal budgets. Over this same timeframe the funding for the Open Space Program from realty transfer taxes was reduced by 36% from the typical funding amount of $9.0 million annually. Despite this, fifty eight land protection projects were completed conserving over 3,900 acres. These projects, included key in-holdings, critical wildlife habitats, diverse wetland and forestland areas, all added to the variety of preserved conservation and recreation lands throughout the State. A complete listing of projects for the last five years is in Appendix F. A brief five year summary is found below.

The Open Space Program will strive to build on its successes. With consistent support from the general public as reflected in many SCORP-related surveys over the years, the protection of open lands for recreation and conservation is a priority through all regions of the state. Challenges will include maintaining a consistent funding source in slow-growth economic times and developing the capacity to effectively manage the currently protected lands. The emphasis will be on making vital connections/corridors between and among conserved lands and analyzing these actions from a larger landscape perspective. The Open Space Program will continue to add to the State's outdoor recreation and conservation estate and assist in maintaining the quality of life for Delaware's citizens and visitors.

Open Space Program
Summary By County
2008-2012 Five Year Report

County	Projects	Acres	Open Space Funds	Other Funds	Total Cost
New Castle	21	721	$6,260,969	$1,544,403	$7,805,372
Kent	3	323	$0	$120,000	120,00
Sussex	34	2,899	$20,293,903	$7,788,000	$28,081,903
Total	58	3942.77	$26,554,872	$9,452,403	$35,887,274

Protecting Lands for Conservation and Recreation

Goal: To maintain and enhance the interconnected network of natural areas, open spaces, parks, and conservation lands

RECOMMENDATIONS	IMPLEMENTERS	AGO
1. Identify and prioritize lands for acquisition to protect and maintain large landscapes and avoid fragmentation of resources.	*Open Space Council, Greenways & Trails Council, DNREC, DE Dept. of Agriculture, private conservation organizations*	
2. Identify conservation opportunity areas for inclusion in the natural resource element of local comprehensive land use plans.	*DNREC, OSPC, County and Local officials, environmental advocates*	
3. Protect rare landscape elements, cultural resources, sensitive areas, and associated species.	*DNREC, DE Dept. of Agriculture, Delaware Historical and Cultural Affairs, USFWS*	
4. Balance resource protection with resource use.	*DNREC, DE Dept. of Agriculture, USFWS, DPH, local parks and recreation departments, private recreation and conservation organizations*	
5. Protect land to create conservation corridors.	*DNREC, DE Dept. of Agriculture, private conservation organizations*	
6. Leverage partnerships with state and federal agencies, conservation organizations and private landowners.	*State and Federal Environmental agencies, conservation organizations and private landowners*	
7. Develop a guide to funding sources and incentives to protect high priority	*DNREC, De Dept. of Agriculture, private industry*	

conservation and recreation areas.		
8. Manage core natural areas to minimize direct disturbances and the introduction and spread of non-native and invasive species.	*Federal, State, and local land managers, private landowners, volunteer groups*	

Appendices

A. Delaware Outdoor Recreation Inventory

B. 2011 Telephone Survey Methodology and Survey Instrument

C. Demographics of Delaware Residents

D. Complete List of 2013-2018 SCORP Recommendations

E. Open Space Program Acquisition Ranking Criteria

F. Open Space Program Acquisition Inventory

G. Wetlands Priority Component

Appendix A. Delaware Outdoor Recreation Inventory

Publicly Accessible Outdoor Recreation Facilities- Kent County

Name	Management Agency	Use
Andrews Lake	Division of Fish & Wildlife	Wildlife Area
Benjamin Banneker Elementary School	Milford School District	School
Bicentennial Park	City of Milford	Park
Big Oak Park	Kent County	Park
Blackiston Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Blairs Pond	Division of Fish & Wildlife	Wildlife Area
Bombay Hook National Wildlife Refuge	US Fish and Wildlife Service	Wildlife Area
Bowers Beach	Division of Fish & Wildlife	Boat Ramp
Brecknock Park	Kent County	Park
Browns Branch County Park	Kent County	Park
Caesar Rodney High School	Caesar Rodney School District	School
Camden-Wyoming Little League Park	Camden-Wyoming Little League	Active Recreation
Capital Park	Kent County	Active Recreation
Cheswold Town Park	Town of Cheswold	Park
Clayton Community Park	Town of Clayton	Park
Constitution Park	City of Dover	Historical Site
Continental Park	City of Dover	Open Space
Coursey Pond	Division of Fish & Wildlife	Wildlife Area
Crossgates Park	City of Dover	Open Space
Derby Pond	Division of Fish & Wildlife	Wildlife Area
Dover Park & Recreation Area	City of Dover	Park
Dover Street Park	City of Dover	Park
Eagles Nest	Kent County	Open Space
Farmington School Playground	Town of Farmington	Park
Felton Little League Ball Park	Felton Little League	Active Recreation
First State BMX Facility	City of Milford	Active Recreation
Fork Branch Nature Preserve	Delaware State Parks	Nature Preserve
Garrisons Lake	Division of Fish & Wildlife	Wildlife Area
Garrisons Lake Golf Club	Delaware State Parks	Active Recreation

Greater Milford Boys & Girls Club	City of Milford	Park
Green Branch Trail	Town of Smyrna	Active Recreation
Green Meadows Park	Town of Smyrna	Park
Griffith Lake	Division of Fish & Wildlife	Wildlife Area
Hamlet	City of Dover	Open Space
Harrington Community Park	Town of Harrington	Active Recreation
Haven Lake	Division of Fish & Wildlife	Wildlife Area
Heritage Park	Town of Harrington	Open Space
Isaacs Branch	DNREC	Active Recreation
Isaacs Branch Greenway	Kent County	Active Recreation
John Dickinson Plantation	Division of Historical & Cultural Affairs	Historical Site
Johnson Square	Town of Wyoming	Open Space
Jonathans Landing	Kent County	Active Recreation
Kenton Municipal Park	Town of Kenton	Park
Killens Pond State Park	Delaware State Parks	Park
Kirkwood Street Park	City of Dover	Park
Lake Como Recreation Area	Town of Smyrna	Park
Lake Forest Central Elementary School	Lake Forest School District	School
Lake Forest High School	Lake Forest School District	School
Lebanon Landing	Division of Fish & Wildlife	Boat Ramp
Legislative Green Park	City of Dover	Historical Site
Leipsic Municipal Playground	Town of Leipsic	Park
Little Creek Park	Town of Little Creek	Park
Little Creek Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Main Street Park	Town of Bowers Beach	Park
Mallard Pond	City of Dover	Open Space
Mary Street Park	City of Dover	Park
Masseys Pond	Division of Fish & Wildlife	Wildlife Area
Mayfair Park	City of Dover	Park
McGinnis Pond	Division of Fish & Wildlife	Wildlife Area
Memorial Park	City of Dover	Park
Milford Neck Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Mill Creek	Town of Smyrna	Open Space
Millcreek Playground	City of Dover	Park

Mispillion Riverwalk	City of Milford	Park
Moores Lake	Division of Fish & Wildlife	Wildlife Area
Mud Mill Pond	Division of Fish & Wildlife	Wildlife Area
N.E. Front St. Public Access Facility	Division of Fish & Wildlife	Boat Ramp
Norman G. Wilder Wildlife Area	Division of Fish & Wildlife	Wildlife Area
North Bowers Beach Community Park	Town of Bowers Beach	Park
North Elementary School	Lake Forest School District	School
Old Mill Acres	Kent County	Park
Orville Myers	City of Dover	Open Space
Port Mahon Access & Fishing Area	Division of Fish & Wildlife	Wildlife Area
Richardson Park	City of Dover	Open Space
Royal Grant	Kent County	Open Space
Saulsbury Park	City of Dover	Open Space
Schutte Park	City of Dover	Park
Scottons Landing	Division of Fish & Wildlife	Boat Ramp
Silver Lake	City of Dover	Park
Silver Lake Recreation Area	City of Dover	Park
Smyrna Municipal Park	Town of Smyrna	Park
St. Jones Reserve	Division of Soil & Water	Natural Area
St. Jones River Access	Division of Fish & Wildlife	Natural Area
Sunnyside Elementary School	Smyrna Special School District	School
Sunnyside Park	Town of Smyrna	Park
Taber State Forest	Delaware Forest Service	State Forest Lands
Ted Harvey Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Terry Campus Recreation Area	Delaware Technical & Community College	Active Recreation
The Green	City of Dover	Historical Site
Tidbury Creek County Park	Kent County	Park
Town Square	Town of Wyoming	Historical Site
Tub Mill Pond	Division of Fish & Wildlife	Boat Ramp
Turner Drive Park	City of Dover	Open Space
William Holden Memorial	City of Dover	Open Space
Williams Park	City of Dover	Park
Woodland Beach Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Wyoming Park	Town of Wyoming	Park

Publicly Accessible Outdoor Recreation Facilities- New Castle County

Name	Management Agency	Use
11th & Washington Triangle	City of Wilmington	Open Space
3 Forts Ferry	Delaware State Parks	Park
Absalom Jones Community Center	New Castle County	Active Recreation
Academy Hill	New Castle County	Open Space
Adams Street Courts	City of Wilmington	Park
Afton Park	New Castle County	Park
Alapocas Ball Fields	New Castle County	Park
Alapocas Run State Park	Delaware State Parks	Park
Alapocas Run State Park	Delaware State Parks	Park
Alapocas Run State Park	Delaware State Parks	Park
Alban Park	New Castle County	Park
Albertson Park	New Castle County	Open Space
Allen Tract	New Castle County	Open Space
Arden Green	Town of Arden	Park
Arden Woodlands	Town of Arden	Open Space
Ardentown Open Space	Town of Arden	Open Space
Ardentown Playground	Town of Arden	Park
Arundel Park	New Castle County	Park
Ashland Nature Center	Delaware Nature Society	Natural Area
Auburn Heights	Delaware State Parks	Natural Area
Auburn Heights Preserve	Delaware State Parks	Park
Augustine Beach	Division of Fish & Wildlife	Wildlife Area
Augustine Wildlife Area	Division of Fish & Wildlife	Nature Preserve
Augustine Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Augustine Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Back Creek Golf Course	New Castle County	Active Recreation
Bancroft Parkway	City of Wilmington	Open Space
Bancroft Parkway Connector	City of Wilmington	Open Space
Banning Park	New Castle County	Park
Barbara Hicks Playground	City of Wilmington	Park
Barry & Union Triangle	City of Wilmington	Open Space

Battery Park	City of Delaware City	Park
Beaver Brook Crest Park	New Castle County	Park
Bechtel Park	New Castle County	Park
Becks Pond	Division of Fish & Wildlife	Open Space
Bellefonte Park	Town of Bellefonte	Park
Bellevue State Park	Delaware State Parks	Nature Preserve
Birch Knoll	New Castle County	Open Space
Blackbird Reserve Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Blackbird State Forest	Delaware Forest Service	State Forest Lands
Blue Rock / Fairfax North Park	New Castle County	Park
Bonsall Park	New Castle County	Park
Boulevard Triangle	City of Wilmington	Open Space
Brandywine Creek State Park	Delaware State Parks	Park
Brandywine High School	Brandywine School District	School
Brandywine Mills Park	City of Wilmington	Park
Brandywine Mills Plaza	City of Wilmington	Open Space
Brandywine Park	Delaware State Parks	Park
Brandywine Playground	City of Wilmington	Park
Brandywine Springs Park	New Castle County	Park
Brandywine Zoo	Delaware State Parks	Park
Brandywood Elementary School	Brandywine School District	School
Breezewood II	New Castle County	Park
Brevoort Park	New Castle County	Open Space
Brian Martin Park	Town of Elsmere	Park
Bringhurst Woods	New Castle County	Park
Broad Dike	City of New Castle	Open Space
Brookbend Park	New Castle County	Open Space
Brookfield Park	New Castle County	Park
Brookhaven Park	New Castle County	Open Space
Brookmeade	New Castle County	Open Space
Brown Park	City of Wilmington	Park
Brown/Burton/Winchester Park	City of Wilmington	Park
Buckley Park	New Castle County	Park
Buena Vista	Division of Historical & Cultural Affairs	Historical Site

Bull Hill Park	City of New Castle	Park
Buttonwood Park	City of New Castle	Park
C&D Canal Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Calf Run Park	New Castle County	Park
Cambridge Gardens Park	New Castle County	Park
Camp Wright	New Castle County	Open Space
Canby Park	City of Wilmington	Park
Canby Park West	City of Wilmington	Park
Cardiff Park	New Castle County	Park
Carousel Park	New Castle County	Park
Carrcroft Crest Park	New Castle County	Park
Carrcroft Elementary School	Brandywine School District	School
Carter & 22nd Lot	City of Wilmington	Open Space
Castle Hills Park	New Castle County	Park
Cedar Swamp Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Cedars Park	New Castle County	Park
Centennial Village Park	New Castle County	Park
Centreville Park	City of Wilmington	Open Space
Chaddwyck Park	New Castle County	Park
Chalfonte Park	New Castle County	Open Space
Channin	New Castle County	Open Space
Chapel Hill Park	New Castle County	Park
Charles E. Price Memorial Park at Levels Road	Town of Middletown	Park
Charles W. Pettit Green	Town of Arden	Open Space
Chatham Park	New Castle County	Park
Chelsea Manor Park	New Castle County	Park
Chestnut Run	New Castle County	Open Space
Christiana Village Park	New Castle County	Park
Christina Landing	City of Wilmington	Open Space
Christina Park	City of Wilmington	Park
Christina Parkway Open Space	DelDOT	Open Space
Christina River Access Area	Division of Fish & Wildlife	Boat Ramp
Christina River Access Area	Division of Fish & Wildlife	Boat Ramp
Christopher Columbus Triangle	City of Wilmington	Historical Site

Claymont Elementary School	Brandywine School District	School
Clifford Brown Memorial Plaza	City of Wilmington	Open Space
Coleman Park	City of Newark	Open Space
Collins Park	New Castle County	Park
Conaty Park	City of Wilmington	Park
Concord High School	Brandywine School District	School
Connell Street Tot Lot	City of Wilmington	Park
Cool Run Park	New Castle County	Park
Cool Spring Park	City of Wilmington	Park
Country Creek Park	New Castle County	Park
Courtney Street Open Space	City of Newark	Open Space
Creek Bend	City of Newark	Open Space
Cross Gate Park	New Castle County	Open Space
Darley Woods	New Castle County	Open Space
Dartmouth Woods Park	New Castle County	Park
Deacons Walk Park	New Castle County	Park
Deerfield Golf and Tennis Club	Delaware State Parks	Active Recreation
Deerhurst	New Castle County	Open Space
Delamore Tot Lot	City of Wilmington	Park
Delaware City Canal Promenade	City of Delaware City	Active Recreation
Delaware City Library & Community Center	City of Delaware City	Park
Delaware Memorial Bridge Rest Area	Delaware River & Bay Authority	Park
Delaware Tech Plaza	City of Wilmington	Open Space
Delaware Veterans Memorial Cemetary	Delaware Commission of Veterans Affairs	Historical Site
Delcastle Golf Center	Delcastle Golf Center	Active Recreation
Delcastle Recreation Area	New Castle County	Active Recreation
Delpark Manor Park	New Castle County	Park
Denn Place	New Castle County	Open Space
Devon Park	City of Newark	Park
Devonshire Park	New Castle County	Park
DNERR Blackbird Creek Reserve	Office of the Secretary	Wildlife Area
Dobbinsville Park	City of New Castle	Open Space
Douglas Dwight Alley Park	City of Newark	Park

Dr. Foster M. Brown Pool	City of Wilmington	Active Recreation
Dragon Run Park	City of Delaware City	Park
Drummond North	New Castle County	Park
Dugan Park	City of Wilmington	Park
Duke Field	M.O.T. Little League	Active Recreation
Dunlinden Park	New Castle County	Park
East 7th Street Park	City of Wilmington	Park
Eastburn Acres Park	New Castle County	Park
Eastlake Playground	City of Wilmington	Park
Eastlawn Playground	City of Wilmington	Park
Ed Oliver Golf Club	City of Wilmington	Active Recreation
Eden Park	City of Wilmington	Park
Edna Dickey Park	City of Newark	Park
Elan Park	City of Newark	Park
Elbert Playground	City of Wilmington	Park
Ella Johnson Memorial Park	Town of Newport	Park
Elsmere	Town of Elsmere	Open Space
Elsmere Memorial Park	Town of Elsmere	Park
Etta J. Wilson Elementary School	Christina School District	School
Evert R. Brown Memorial Park	City of Delaware City	Park
Fairfax South Park	New Castle County	Park
Fairfield Crest Park	City of Newark	Park
Fairfield Open Space	City of Newark	Open Space
Fairfield Park	City of Newark	Park
Fairgrounds Park	Town of Elsmere	Park
Father Tucker Park	City of Wilmington	Park
Faulkland Heights Park	New Castle County	Park
Flint Woods Nature Preserve	Delaware State Parks	Nature Preserve
Folk Memorial Park	City of Newark	Park
Forbes Field	Woodlawn Trustees, Inc.	Wildlife Area
Forest Knoll at Wellington Woods Park	New Castle County	Open Space
Fort Casimir Memorial Park	City of New Castle	Park
Fort Christina Monument	City of Wilmington	Historical Site
Fort Delaware State Park	Delaware State Parks	Park
Fort DuPont State Park	Delaware State Parks	Park

Forwood Elementary School	Brandywine School District	School
Fountain Plaza	City of Wilmington	Open Space
Fox Point State Park	Delaware State Parks	Park
Fox Run	New Castle County	Open Space
Frank Hann Community Park	New Castle County	Open Space
Freedom Tot Lot	City of Wilmington	Park
Frog Hollow Golf Course	Frog Hollow Golf Club	Active Recreation
Fulton Street Tot Lot	City of Wilmington	Park
Garfield Park	New Castle County	Park
Garfield Triangle	City of Wilmington	Open Space
Garwood Park	New Castle County	Open Space
Gateway Farms / Hickory Hill Park	New Castle County	Park
George Read Park	City of Newark	Park
George Wilson Center & Park	City of Newark	Park
Glasgow Park	New Castle County	Park
Glasgow Pines Park	New Castle County	Park
Glen Berne Estates	New Castle County	Open Space
Glendale Park	New Castle County	Park
Goodley Park	New Castle County	Park
Gordy Estates Park	New Castle County	Park
Gray Acres Park	New Castle County	Park
Green Acres	New Castle County	Open Space
Green Valley Park	New Castle County	Park
Greenbank Mill	Greenbank Mill Associates	Historical Site
Greenbank Park	New Castle County	Open Space
Greenlawn	Greenlawn LLC	Park
Greentree Park	New Castle County	Park
Grendon Farms Park	New Castle County	Park
Gwinhurst Park	New Castle County	Open Space
H. Fletcher Brown Boys Club	City of Wilmington	Active Recreation
H. Fletcher Brown Park	Delaware State Parks	Park
H.B. DuPont Park	City of Wilmington	Park
H.M. Holloway Sr. Park	City of Wilmington	Park
Hale-Byrnes House	Division of Historical & Cultural Affairs	Historical Site

Harmony Hills Park	New Castle County	Open Space
Harrington Triangle	City of Wilmington	Open Space
Harrison Street Triangle	City of Wilmington	Open Space
Harvey Mill Park	New Castle County	Park
Haynes Park	City of Wilmington	Open Space
Heald & B Tot Lot	City of Wilmington	Park
Helen Chambers Playground	City of Wilmington	Park
Henry George Memorial Green	Town of Arden	Open Space
Heritage Farm Park	New Castle County	Park
Heritage Park	New Castle County	Park
Hidden Valley Park	City of Newark	Open Space
Highland West Park	New Castle County	Park
Hill Stream	New Castle County	Open Space
Hobbs Property	Delaware State Parks	Natural Area
Holiday Hills Park	New Castle County	Open Space
Holloway Terrace Park	New Castle County	Park
Holly Oak Creek Park	Town of Arden	Park
Hurricane Run/Rocky Run	Woodlawn Trustees, Inc.	Open Space
Hyde Park	New Castle County	Park
Industrial Track Greenway Trail	City of New Castle	Active Recreation
Industrial Track Greenway Trail	New Castle County	Active Recreation
Iron Glen	City of Newark	Open Space
Iron Hill Museum	Delaware Academy of Science	Historical Site
Iron Hill Park	New Castle County	Park
James F. Hall Trail	City of Newark	Active Recreation
James T. Corcoran Jr. Memorial Park	New Castle County	Park
Jamestowne Park	New Castle County	Park
Jefferson Farms Park	New Castle County	Park
Jennie Weaver Playground	City of Wilmington	Park
Jester Property	New Castle County	Open Space
Johnston Playground	City of Wilmington	Park
Joseph R. Walling Park	Town of Elsmere	Park
Judy Johnson Park	City of Wilmington	Park
Junction Street Park	Town of Elsmere	Park
Justison Landing	City of Wilmington	Open Space

Kalmar Nyckel Site	City of Wilmington	Historical Site
Kalmar Nyckel Walkway	City of Wilmington	Historical Site
Karpinski Park	City of Newark	Park
Kells Park	City of Newark	Park
Kentmere Parkway	Delaware State Parks	Open Space
Kershaw Park	City of Newark	Park
Kershaw Park Access Path	City of Newark	Open Space
Kimberton Park	New Castle County	Park
Kings Croft Park	New Castle County	Park
Kingswood Community Center	City of Wilmington	Active Recreation
Kirkwood Park	City of Wilmington	Park
Klair Estates Park	New Castle County	Park
Knollwood	New Castle County	Open Space
Knollwood Park	New Castle County	Park
Kosciuszko Park	City of Wilmington	Park
Kruse Playground	City of Wilmington	Park
Lafayette Boulevard Median	City of Wilmington	Open Space
Lafayette Hill	New Castle County	Open Space
Lake Street Park	Town of Middletown	Park
Lakeside Park	Town of Middletown	Park
Lancashire Elementary School	Brandywine School District	School
Leroy Hill Park	City of Newark	Active Recreation
Lesher Memorial Park	New Castle County	Park
Lewden Green Park	New Castle County	Park
Lewis Park	City of Newark	Park
Liberty Triangle	City of Wilmington	Open Space
Limestone Hills	New Castle County	Open Space
Limestone Hills 2	Limestone Hills Maintenance Corp.	Park
Limestone Hills Park	Limestone Hills Maintenance Corp.	Park
Linden Heath Park	New Castle County	Park
Linden Hill Village	New Castle County	Open Space
Llangollen Park	New Castle County	Park
Lombardy Elementary School	Brandywine School District	School
Longcome Park	New Castle County	Open Space
Louis L. Redding Park	City of Wilmington	Open Space

Lumbrook Park	City of Newark	Park
Lums Pond State Park	Delaware State Parks	Park
Lynnfield Park	New Castle County	Park
M.O.T. Youth Football Fields	M.O.T. Youth Football League	Active Recreation
Mack Park	City of Wilmington	Park
Madison & 23rd Triangle	City of Wilmington	Open Space
Madison Street Playground	City of Wilmington	Park
Madison Street Tot Lot	City of Wilmington	Park
Main Street Square	Town of Middletown	Historical Site
Mansion Farms Park	New Castle County	Park
Maple Avenue Park	Town of Elsmere	Park
Maple Lane Elementary School	Brandywine School District	School
Marian Coffin Gardens at Gibraltar	Preservation Delaware, Inc.	Historical Site
Market Square	Delaware State Parks	Historical Site
Marshallton Hights Park	New Castle County	Open Space
Matson Run Parkway	City of Wilmington	Open Space
McVey Elementary School	Christina School District	School
Meadow Green	Town of Arden	Open Space
Meadowood Park	New Castle County	Park
Melody Meadows Park	New Castle County	Park
Mendenhall Village Park	New Castle County	Open Space
Michaels Playground	City of Wilmington	Park
Middle Run Valley Natural Area	New Castle County	Natural Area
Middletown Academy	Town of Middletown	Historical Site
Middletown Crossing	Town of Middletown	Open Space
Middletown Nature Area	Town of Middletown	Natural Area
Middletown Village Park	Town of Middletown	Active Recreation
Midway Girls Softball Fields	Midway Girls Softball	Active Recreation
Mill Creek Road Open Space	New Castle County	Open Space
Milltown Park	New Castle County	Park
Montclare Park	New Castle County	Park
Montgomery Tot Lot	City of Wilmington	Park
Mount Pleasant Elementary School	Brandywine School District	School
Mount Pleasant High School	Brandywine School District	School
Naamans Creek Access	Town of Arden	Open Space

Neilia Hunter Biden Park	New Castle County	Park
New Castle Battery Park	City of New Castle	Park
New Castle Common	Trustees of New Castle Commons	Historical Site
New Castle Entrance Park	City of New Castle	Park
Newark National Little League	Newark National Little League	Active Recreation
Newark Reservoir	City of Newark	Park
Newkirk Estates Park	New Castle County	Open Space
Norma B. Handloff Park	City of Newark	Park
Northcrest Park	New Castle County	Park
Northminster	New Castle County	Open Space
Northpointe	New Castle County	Open Space
Northpointe Park	Limestone Hills Maintenance Corp.	Park
NVF Site	Delaware State Parks	Mitigation
Oak Hill	Town of Elsmere	Open Space
Oakmont Park	New Castle County	Park
Odessa Access Area	Division of Fish & Wildlife	Boat Ramp
Odessa Memorial Park	Town of Odessa	Park
Olan Thomas Park	City of Newark	Park
Old Academy Park	Town of Odessa	Park
Old Mill Manor	New Castle County	Park
Old Paper Mill Road Park	City of Newark	Open Space
Ommelanden Hunter Education Center	Division of Fish & Wildlife	Park
Orville A. Clark Park	City of Newark	Open Space
Oversee Property	Delaware State Parks	Park
P.S. DuPont Elementary School	Brandywine School District	School
PAL Hockessin Park	Hockessin Police Athletic League	Active Recreation
Paper Mill Falls Open Space	City of Newark	Open Space
Paper Mill Park	New Castle County	Park
Park Place East Open Space	City of Newark	Open Space
Pencader Park	New Castle County	Park
Penn Acres Park	New Castle County	Park
Penn Manor	New Castle County	Open Space
Penn Valley Park	City of New Castle	Park
Pennwood Park	New Castle County	Park
Phillips Park	City of Newark	Park

Pinecrest Park	New Castle County	Park
Pleasant Hills Park	New Castle County	Open Space
Pomeroy Trail	City of Newark	Active Recreation
Port Penn Interpretive Center	Delaware State Parks	Historical Site
Port Penn Wetlands Trail	Delaware State Parks	Historical Site
Porter Square Park	New Castle County	Park
Powell Ford Park	New Castle County	Park
Prior Tract Park	New Castle County	Open Space
Pulaski Triangle	City of Wilmington	Open Space
Radnor Green Park	New Castle County	Park
Rahway Park	City of Newark	Park
Rambleton Acres	New Castle County	Park
Rambleton Acres Park	New Castle County	Open Space
Ramblewood Park	New Castle County	Open Space
Rebekah G. Leithren Park	New Castle County	Park
Red Mill Park	New Castle County	Park
Richardson Park	New Castle County	Park
Ridgewood Glen Park	City of Newark	Park
Rittenhouse Park	City of Newark	Park
River Road Park	New Castle County	Park
Robert J. Quillen Memorial Field	New Castle Little League	Active Recreation
Robinson House	Division of Historical & Cultural Affairs	Historical Site
Robscott Manor Park	New Castle County	Park
Rock Manor Golf Course	City of Wilmington	Active Recreation
Rockford Park	Delaware State Parks	Park
Rockwood Park	New Castle County	Historical Site
Rockwood Woods	New Castle County	Open Space
Rodney & 3rd Tot Lot	City of Wilmington	Park
Rodney & 4th Tot Lot	City of Wilmington	Park
Rodney & 5th Tot Lot	City of Wilmington	Park
Rogers Manor Park	New Castle County	Park
Rolling Park	New Castle County	Open Space
Rosegate Park	New Castle County	Park
Rosehill Park	New Castle County	Park

Roser Park	New Castle County	Active Recreation
Russell W. Peterson Wildlife Refuge	Delaware Nature Society	Wildlife Area
Rutherford Park	New Castle County	Park
Rutledge Park	New Castle County	Park
Sandy Poppiti Memorial Park	Town of Middletown	Park
Sellers Park	City of Wilmington	Park
Sharpley	New Castle County	Open Space
Shellburne Park	New Castle County	Open Space
Shellpot Park	New Castle County	Park
Sheridan Square Park	New Castle County	Park
Sherwood Green	Town of Arden	Park
Sherwood Park	New Castle County	Park
Sherwood Park II	New Castle County	Open Space
Silver Lake Park	Town of Middletown	Park
Simonds Gardens	New Castle County	Open Space
Simonds Gardens Park	New Castle County	Park
Soldiers & Sailors Monument	City of Wilmington	Historical Site
South Cox Street Park	Town of Middletown	Park
South Wells	City of Newark	Open Space
Sparrow Run Park	New Castle County	Park
Speakman Park	City of Wilmington	Park
Springer Middle School	Brandywine School District	School
Stafford Park	City of Newark	Park
Stapler Park	City of Wilmington	Park
Stoney Davis Park	City of Wilmington	Park
Stuyvesant Hills Park	New Castle County	Park
Summit North Marina	Delaware State Parks	Boat Ramp
Surratte Park	New Castle County	Park
Surrey Park	New Castle County	Open Space
Susi Park	City of New Castle	Park
Swanwyck Park	New Castle County	Park
Swift Bicentennial Park	New Castle County	Park
Sycamore Gardens Park	New Castle County	Park
Talley Day Park	New Castle County	Park
Talley Middle School	Brandywine School District	School

Tarleton Park	New Castle County	Park
Tatnall Playground	City of Wilmington	Park
The Cannery Lot	Delaware State Parks	Historical Site
The Cauffiel Estate	Delaware State Parks	Open Space
The Mall	Town of Arden	Open Space
Tilton Park	City of Wilmington	Park
Todd Estates IV Park	New Castle County	Park
Townsend Elementary School	Appoquinimink School District	School
Townsend Municipal Park	Town of Townsend	Park
Townsend Park	New Castle County	Park
Tri-Woods Park	New Castle County	Park
Tuxedo Park	New Castle County	Park
Tweeds Park	DelDOT	Park
UD Laird Easement	University of Delaware	Natural Area
Urban Environmental Center	City of Wilmington	Open Space
Valley Garden Park	City of Wilmington	Park
Valley Run	New Castle County	Open Space
Valley Stream	City of Newark	Open Space
Van Dyke Park	City of New Castle	Park
Varlano Park	New Castle County	Park
Veterans Memorial Park	Town of Elsmere	Park
Veterans Memorial Park	Delaware River & Bay Authority	Historical Site
Veterans Memorial Triangles	Town of Newport	Historical Site
Village of Arden Memorial Garden	Town of Arden	Open Space
Village of Lindell Park	New Castle County	Park
Village Park	Town of Elsmere	Park
Vilone Park	Town of Elsmere	Park
Wawaset Parkway	City of Wilmington	Open Space
Weather Hill Farm Park	New Castle County	Park
Weiss Park	New Castle County	Park
Weldin Park	New Castle County	Open Space
Wellington Woods Park	New Castle County	Open Space
Westgate Farms Park	New Castle County	Park
Westview Park	New Castle County	Park
White Chapel Park	City of Newark	Park

White Clay Creek Dam	City of Newark	Open Space
White Clay Creek State Park	Delaware State Parks	Park
White Clay Creek State Park	Delaware State Parks	Park
Wiggins Mill Park	New Castle County	Park
William "Hicks" Anderson Community Center	City of Wilmington	Park
William M. Coverdale Memorial Park	City of Newark	Open Space
William M. Redd Park	City of Newark	Park
Willing & 6th Plaza	City of Wilmington	Open Space
Willow Run Park	New Castle County	Open Space
Wilmington & Western Railroad	Historic Red Clay Valley, Inc.	Historical Site
Wilmington Historic Trail	City of Wilmington	Historical Site
Wilmington Manor Gardens Park	New Castle County	Park
Wilton Park	New Castle County	Park
Windy Mill Park	New Castle County	Open Space
Winterthur	Winterthur Museum, Inc.	Historical Site
Wollaston Street Tot Lot	City of Wilmington	Park
Woodcreek	New Castle County	Open Space
Woodcreek Park	New Castle County	Park
Woodland Park	New Castle County	Open Space
Woodland Run	New Castle County	Open Space
Woodland Run Park	New Castle County	Open Space
Woodlawn	Woodlawn Trustees, Inc.	Wildlife Area
Woodlawn Library Park	City of Wilmington	Park
Woodlawn Park	City of Wilmington	Park
Woodley Park	New Castle County	Open Space
Woodmill Park	New Castle County	Open Space
Woods Haven Kruse Park	New Castle County	Park
Wrangle Hill Park	New Castle County	Park
Young Street Park	City of New Castle	Open Space

Publicly Accessible Outdoor Recreation Facilities- Sussex County

Name	Management Agency	Use
1812 Memorial Park	City of Lewes	Park
Abbotts Mill Nature Center	Delaware Nature Society	Nature Preserve
Abbotts Pond	Division of Fish & Wildlife	Wildlife Area
Alfred A. Stango Park	City of Lewes	Park
Angola Neck Nature Preserve	Delaware State Parks	Nature Preserve
Assawoman Canal	Delaware State Parks	Natural Area
Assawoman Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Baltimore Avenue Restroom	City of Rehoboth	Park
Barnes Woods Nature Preserve	Delaware State Parks	Nature Preserve
Beach Plum Island Nature Preserve	Delaware State Parks	Nature Preserve
Bear Trap Dunes Golf Club	Bear Trap Partners LLC	Active Recreation
Bedford Street Park	Town of Georgetown	Park
Bethany Beach	Town of Bethany Beach	Park
Bethany Beach Nature Center & Conservation Area	Town of Bethany Beach	Park
Bethel Historical Museum	Bethel Historical Society, Inc.	Park
Bethel Memorial Park	Town of Bethel	Park
Black Harrys Spring	City of Lewes	Historical Site
Brenda Jones Memorial Park	Town of Greenwood	Park
Bridgeville Community Playground	Town of Bridgeville	Park
Bridgeville Gateway	Town of Bridgeville	Open Space
Bridgeville Little League	Bridgeville Little League	Active Recreation
Bridgeville Municipal Park	Town of Bridgeville	Park
Bridgeville Museum & Park	Town of Bridgeville	Park
Broad Creek	Division of Fish & Wildlife	Wildlife Area
Broad Creek Greenway	Town of Laurel	Park
Canal Front Park	City of Lewes	Park
Cape Henlopen State Park	Delaware State Parks	Park
Cedar Creek	Division of Fish & Wildlife	Boat Ramp
Central Park	City of Rehoboth	Open Space

Chapel Branch Nature Preserve	Nanticoke River Watershed Conservancy	Natural Area
Charles P. West Community Park	Sussex County	Park
Clifford F. Lee Memorial Park	Laurel Little League	Active Recreation
Concord Pond	Division of Fish & Wildlife	Wildlife Area
Craigs Pond	Division of Fish & Wildlife	Wildlife Area
Cupola Park	Town of Millsboro	Park
Deauville Beach	City of Rehoboth	Park
Deer Park	City of Rehoboth	Open Space
Delaware Seashore State Park	Delaware State Parks	Park
Dewey Beach	Town of Dewey Beach	Park
Edward H. McCabe Preserve	The Nature Conservancy	Nature Preserve
Edward R. Koch Canoe Launch	Division of Fish & Wildlife	Park
Ellendale Town Hall	Town of Ellendale	Open Space
Ellendale Town Park	Town of Ellendale	Park
Ellendale Town Square	Town of Ellendale	Open Space
Fenwick Island Beach	Town of Fenwick Island	Park
Fenwick Island Canoe Launch	Town of Fenwick Island	Open Space
Fenwick Island Community Park	Town of Fenwick Island	Park
Fenwick Island State Park	Delaware State Parks	Park
Fresh Pond	Delaware State Parks	Park
George H.P. Smith Park at Blockhouse Pond	City of Lewes	Park
Georgetown Circle	Town of Georgetown	Open Space
Georgetown Little League	Georgetown Little League, Inc.	Active Recreation
Grove Park	City of Rehoboth	Park
Hearns Pond	Division of Fish & Wildlife	Wildlife Area
Holts Landing State Park	Delaware State Parks	Park
Horseys Pond	Division of Fish & Wildlife	Boat Ramp
Industrial Forest Lands	Division of Fish & Wildlife	Natural Area
Ingram Pond	Division of Fish & Wildlife	Wildlife Area
James Branch Nature Preserve	Delaware State Parks	Nature Preserve
James Farm Ecological Preserve	Delaware Center for the Inland Bays	Nature Preserve

Janosik Park	Town of Laurel	Park
John Waples Memorial Playground	Town of Dewey Beach	Park
John West Park	Town of Ocean View	Park
Katie Helm Park	Town of Dagsboro	Park
Kimmey Street Park	Town of Georgetown	Park
Kiwanis Park	City of Seaford	Park
Lake Gerar Park	City of Rehoboth	Park
Laurel Basketball Court	Town of Laurel	Active Recreation
Laurel River Park	Town of Laurel	Park
Layton Park	Town of Georgetown	Park
Lee Street Park	City of Rehoboth	Open Space
Lewes Beach	City of Lewes	Park
Lewes Boat Ramp	Division of Fish & Wildlife	Boat Ramp
Lewes Little League	Lewes Little League	Active Recreation
Library Park	Town of Greenwood	Park
Lightship Overfalls	Overfalls Maritime Museum	Historical Site
Loop Canal Park		Park
Love Creek Fishing Access	Division of Fish & Wildlife	Wildlife Area
Lower Sussex Pop Warner Football	Town of Selbyville	Active Recreation
Lulu Ross Elementary School	Milford School District	School
Market Square	Town of Laurel	Park
Marshalls Pond Park	City of Milford	Park
Marshy Hope Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Marvel Square Park	City of Milford	Park
Mary E. Vessels Memorial Park	City of Lewes	Park
Masseys Landing Boat Launch	Division of Fish & Wildlife	Boat Ramp
Michael A. Hastings Tennis Complex	Seaford School District	School
Midlands Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Milford Little League	Milford Little League	Active Recreation
Milford Memorial Park	City of Milford	Park
Milford Millponds Nature Preserve	Division of Fish & Wildlife	Nature Preserve
Millsboro Pond	Division of Fish & Wildlife	Boat Ramp

Millsboro Public Library	Town of Millsboro	Open Space
Millville Community Playground	Indian River School District	School
Milton Bicentennial Gardens	Town of Milton	Park
Milton Fishing Pier	Division of Fish & Wildlife	Wildlife Area
Milton Governors Walk	Town of Milton	Park
Milton Little League	Milton Little League	Active Recreation
Milton Memorial Park	Town of Milton	Park
Milton Rail - Trail	Town of Milton	Active Recreation
Mispillion Marine Reserve	Division of Fish & Wildlife	Wildlife Area
Nanticoke River Marina Park	Blades Economic Development Corp.	Park
Nanticoke Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Newton Pond	Division of Fish & Wildlife	Wildlife Area
North Street Pier	City of Seaford	Park
Nutter Park	City of Seaford	Park
Old Furnace Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Otis H. Smith City Dock	City of Lewes	Park
Paul Laurence Dunbar Elementary School	Laurel School District	School
Pemberton Forest Preserve	The Nature Conservancy	Nature Preserve
Portsville Pond	Division of Fish & Wildlife	Wildlife Area
Prime Hook National Wildlife Refuge	US Fish and Wildlife Service	Wildlife Area
Prime Hook Wildlife Area	Division of Fish & Wildlife	Wildlife Area
Raccoon Pond	Division of Fish & Wildlife	Wildlife Area
Records Pond	Division of Fish & Wildlife	Wildlife Area
Redden State Forest	Delaware Forest Service	State Forest Lands
Rehoboth Beach & Boardwalk	City of Rehoboth	Park
Rehoboth Beach Bandshell	City of Rehoboth	Park
Richard Hall Memorial Park	Town of South Bethany	Open Space
Riverview Park	City of Seaford	Park
Rosedale Beach	Division of Fish & Wildlife	Boat Ramp
Salt Pond	Sussex County	Wildlife Area
Seaford Ball Fields	Seaford School District	School

Seaford Boat Ramp	Division of Fish & Wildlife	Boat Ramp
Seaford Canoe Launch	City of Seaford	Boat Ramp
Seaford Central Elementary School	Seaford School District	School
Seaford Community Pool	City of Seaford	Active Recreation
Seaford Gateway Park	City of Seaford	Park
Seaford Golf & Country Club	Seaford Golf & Country Club	Active Recreation
Seaford High School	Seaford School District	School
Seaford Middle School	Seaford School District	School
Seaford River Walk	City of Seaford	Park
Seaford Sports Complex	City of Seaford	Park
Silver Lake	Division of Fish & Wildlife	Wildlife Area
Silver Lake Park	City of Rehoboth	Park
Silver Lake Park	City of Milford	Park
Slaughter Beach	Division of Watershed Stewardship	Wildlife Area
Slaughter Beach Community Park	Town of Slaughter Beach	Park
Soroptimist Park	City of Seaford	Park
South Bethany Beach	Town of South Bethany	Park
St. Lukes Community Playground	St. Lukes Episcopal Church	Park
State Street Park	Town of Delmar	Park
Sunset Park	Town of Dewey Beach	Park
Thompson Island Nature Preserve	Delaware State Parks	Nature Preserve
Town of Blades Public Park	Town of Blades	Park
Town of Frankford Municipal Park	Town of Frankford	Park
Trap Pond State Park	Delaware State Parks	Park
Triangle Park	Town of Blades	Park
Tussock Pond	Division of Fish & Wildlife	Boat Ramp
W.B. Atkins Memorial Park	Town of Millsboro	Park
Wagamons Pond	Division of Fish & Wildlife	Boat Ramp
West Del Mar Tot Lot	Town of Delmar	Park
Western Sussex Boys & Girls Club	Boys & Girls Club of Delaware, Inc.	Active Recreation
Williams Pond Park	City of Seaford	Park
Wilson Park	Town of Georgetown	Park

Woodbridge Little League - Greenwood Field	Woodbridge Little League	Active Recreation
Zwaanendael Park	City of Lewes	Park

Appendix B. Phone Survey Instrument & Methodology

Responsive Management Inc. is a Virginia-based public opinion polling and survey research firm specializing in natural resources, fisheries, wildlife, outdoor recreation and environmental issues. This study was conducted for the Delaware Department of Natural Resources and Environmental Control, Division of Parks and Recreation to assess Delaware residents' (16 years and older) outdoor recreation patterns, trends, and their future outdoor recreation needs. This study entailed a telephone survey of 2,064 Delaware residents.

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones among Delaware residents (both landlines and cell phones were called). Additionally, telephone surveys, relative to mail or internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than to mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

The telephone survey questionnaire was developed cooperatively by Responsive Management and the Division, based on the research team's familiarity with outdoor recreation. Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m. Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The survey was conducted in August 2011. The software used for data collection was Questionnaire Programming Language.

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. Findings of the telephone survey are reported at a 95% confidence interval (or higher) with a sampling error at most plus or minus 2.15 percentage points.

The survey narrative and questions are below:

INTRODUCTION: Hello, my name is _____, and I'm calling on behalf of the state and local recreation agencies to ask some questions about outdoor recreation in Delaware. I am not selling anything and your answers will be kept strictly confidential. Your responses will be used to determine the future plans for outdoor recreation facilities and resources in Delaware. May I speak with someone in the household who is 16 years of age or older?

[begin survey]

For this survey, outdoor recreation includes any activity that takes place in a park, playground, or other outdoor environment. Examples might include, but are not limited to: walking, roller skating, boating, hiking, team sports, or nature activities.

Q1. In general, how important is outdoor recreation in Delaware to you personally? (read list; check only one)

1. Very important
2. Somewhat important
3. Not at all important
4. DNR: Don't know

Q2. Now I'm going to read you a list of outdoor recreation activities. Please tell me if you expect any member of your household, including yourself, to participate in each activity in Delaware during the next 12 months.

1. All-Terrain Vehicle Use (ATVs)
2. Baseball
3. Basketball
4. Bicycling
5. Boating (by canoe or kayak)
6. Boating (by power boat)
7. Camping
8. Disc golf
9. Dog walking
10. Fishing
11. Football
12. Gardening
13. Golf
14. Hiking
15. Horseback riding
16. Horseshoes
17. Hunting
18. Lacrosse
19. Mountain Biking
20. Participating in nature programs
21. Passive rec. in the outdoors (birding/painting/enjoying nature)
22. Picnicking
23. Rollerblading/Roller Skating

24. Roller Hockey
25. Skateboarding
26. Soccer
27. Softball
28. Swimming at the beach
29. Swimming in a pool
30. Tennis
31. Using playgrounds
32. Visiting historic sites
33. Volleyball
34. Walking or jogging
35. DNR: None of these
36. DNR: Don't know

Q3. Are there any other outdoor recreation activities in which any member of your household, including yourself, expect to participate in the next 12 months?
1. Yes (go to Q4)
2. No (go to Q5)
3. DNR: Don't know (go to Q5)

Q4. In what other outdoor recreation activities do you expect to participate in the next 12 months? (open-ended; enter specifics)

Q5. In which three of the activities I just read did you personally participate most often in the past 12 months? (read items from above list as necessary; check only three)

Q6. Overall, how would you rate the facilities available to you in YOUR COMMUNITY for participating in [3 activities in which respondent most often participates]? (read list; check only one)
1. Excellent
2. Good
3. Fair
4. Poor
5. DNR: Don’t know

Q7. Overall, how would you rate the facilities available to you in THE STATE OF DELAWARE for participating in [3 activities in which respondent most often participates]? (read list; check only one)

1. Excellent
2. Good
3. Fair
4. Poor
5. DNR: Don't know

Q8. Now please tell me the MOST IMPORTANT reasons you participate in outdoor recreation activities in Delaware. (do not read list; check all that apply)

1. I live close to a park
2. It is affordable
3. To be with family and friends
4. To spend time by myself
5. To enjoy the scenery
6. For my mental well being
7. For my physical fitness
8. For relaxation
9. For the challenge
10. To be close to nature
11. Because of the variety of opportunities available in Delaware
12. DNR: Other (enter specifics)
13. DNR: Don't know

Q9. I'd like to know a little about where you participate in outdoor recreation in Delaware. What is the name of the public outdoor recreation area you visit most frequently? (enter name)

Q10. What city or town is this public outdoor recreation area in? (enter city/town name)

Q11. Thinking about the public outdoor recreation area you visit most frequently, what are the main reasons you choose this area? (do not read list; check all that apply)

1. Live close by
2. Work close by
3. No other parks in the area
4. Aesthetics/like the look of it
5. It has facilities for activities of interest

6. It has facilities for children
7. It has convenient hours
8. Friendly/knowledgeable staff
9. Clean
10. Safe
11. DNR: Other (enter specifics)
12. DNR: Don't know

Q12. And thinking about the area you visited most frequently, approximately how many miles from your home is this area located? (enter number of miles)

Q13. How do you usually get to the area that you visit most frequently?
2. Walk/Jog (skip to Q17)
3. Bike (skip to Q17)
4. Automobile (go to Q14)
5. Motorcycle (go to Q14)
6. Public transportation (go to Q14)
7. DNR: Other (enter specifics)
8. DNR: Don't know (skip to Q14)

Q14. What is the main reason you do not walk, jog, or ride a bike to the area that you visit most frequently? (open-ended; enter reasons)

Q15. Are you able to walk, jog, or ride a bike to ANY park and/or outdoor recreation areas that are near where you live?
1. Yes (skip to Q17)
2. No (go to Q16)
3. DNR: Don't know (skip to Q17)

Q16. Since you told me that you are unable to walk, jog, or ride a bike to any park and/or outdoor recreation areas near where you live, can you tell me which of the following are obstacles for you? (read list; check all that apply)
1. Poor maintenance of sidewalks, bike trails, and bike lanes
2. Lack of sidewalks, crosswalks, and/or pedestrian signals
3. Lack of bike trails or designated bike lanes
4. Traffic/dangerous roads
5. Fear of crime

6. Too far away
7. Physically unable to walk, jog, or a ride a bike to the area
8. DNR: None of these
9. DNR: Don't know

Q17. Are you able to walk, jog, or ride a bike to any walking or biking paths that are near where you live?
1. Yes (skip to Q19)
2. No (go to Q18)
3. DNR: Don't know (skip to Q19)

Q18. Since you told me that you are unable to walk, jog, or bike to any walking or biking paths near where you live, can you tell me which of the following are obstacles for you? (read list; check all that apply)
1. Poor maintenance of sidewalks, bike trails, and bike lanes
2. Lack of sidewalks, crosswalks, and/or pedestrian signals
3. Lack of bike trails or designated bike lanes
4. Traffic/dangerous roads
5. Fear of crime
6. Too far away
7. Physically unable to walk, jog, or a ride a bike to the paths
8. DNR: None of these
9. DNR: Don't know

Q19. Which of the following would encourage you to participate or to participate more actively in outdoor recreation activities in Delaware? (read list; check all that apply)
1. More outdoor FACILITIES AND OPPORTUNITIES close to where you live
2. More INFORMATION about facilities and opportunities
3. Better REPAIR of facilities
4. Better SECURITY within facilities
5. Increased ACCESSIBILITY for persons with disabilities
6. More opportunity to participate in ORGANIZED ACTIVITIES/PROGRAMS
7. DNR: None of these
8. DNR: Don't know

Q20. Is there anything else that would encourage you to participate or to participate more actively in outdoor recreation in Delaware?

1. Yes (go to Q21)
2. No (skip to Q22)
3. DNR: Don't know (skip to Q22)

Q21. What else would encourage you to participate or to participate more actively in outdoor recreation in Delaware? (open-ended; enter specifics)

Q22. Do you agree or disagree with the following statement: I would buy healthier foods and beverages in the vending machines and concession stands in parks and outdoor recreation facilities if they were available. (read list as necessary; check only one)

1. Strongly agree
2. Moderately agree
3. Neither agree nor disagree
4. Moderately disagree
5. Strongly disagree
6. DNR: Don't know

Q23. Are there any facilities you would like to see added to a park in your community?

1. Yes (go to Q24)
2. No (skip to Q25)
3. Don't know (skip to Q25)

Q24. What facilities would you like to see added to a park in your community? (do not read list; check all that apply)

1. Playgrounds for ages 2 to 5
2. Playgrounds for ages 6 to 12
3. Campgrounds
4. Fishing areas
5. Outdoor public swimming pools
6. Biking paths
7. Paved walkways
8. Hiking/walking trails
9. Boating access in coastal waters
10. Boating access in fresh water, such as streams, lakes, and rivers
11. Access for canoes and kayaks
12. Fishing piers
13. Community gardens

14. Mountain biking trails
15. Off-leash dog areas
16. Skateboarding/BMX facilities
17. Football fields
18. Soccer fields
19. Public tennis courts
20. Outdoor basketball courts
21. Public golf courses
22. Baseball fields
23. Softball fields
24. Indoor recreational facilities, such as indoor basketball courts, volleyball courts, and swimming pools
25. DNR: None of these
26. DNR: Other (enter specifics)
27. DNR: Don't know

Q25. Overall, how would you rate the upkeep of parks and outdoor recreation areas in your community? (read list; check only one)

1. Excellent
2. Good
3. Fair
4. Poor
5. DNR: Don't know

Q26. Now I'm going to read a list of programs, and I'd like to know whether you think each item should be a very important, a somewhat important, or not an important priority for STATE AND LOCAL FUNDING.

Q27. First, do you think that more historic education programs should be a very important, a somewhat important, or not an important priority for state and local funding? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q28. Do you think that more nature education programs should be a very important, a somewhat important, or not an important priority for state and local funding? (check only one)

5. Very important priority
6. Somewhat important priority
7. Not at all important priority
8. DNR: Don't know

Q29. What about more organized leagues for team sports?
1. Very important priority (go to Q30)
2. Somewhat important priority (go to Q30)
3. Not an important priority (skip to Q31)
4. DNR: Don't know (skip to Q31)

Q30. For which team sport(s) would you like to see more organized leagues? (do not read list; check all that apply)
1. Soccer
2. Baseball
3. Football
4. Basketball
5. Softball
6. Volleyball
7. Hockey
8. Lacrosse
9. Field hockey
10. DNR: Other (enter specifics)
11. DNR: Don't know

Q31. What about more outdoor recreation programs for senior citizens, that is, those citizens who are 65 years of age or older? (check only one)
1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q32. What about outdoor recreation programs for children ages 4-12? (check only one)
1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q33. What about more outdoor recreation programs for teens ages 13-17? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q34. What about outdoor recreation programs for persons with disabilities? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q35. What about more cultural and arts programs? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q36. Next please tell me whether you think each of the following items should be a very important, a somewhat important, or not an important priority for STATE AND LOCAL decision makers in Delaware.

Q37. First, do you think funding for public parks should be a very important, a somewhat important, or not an important priority for state and local decision makers in Delaware? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q38. What about acquiring more land for parks and open space in the state of Delaware? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q39. What about bike and pedestrian pathways between places of work, schools, shopping areas, and neighborhoods? (check only one)

1. Very important priority
2. Somewhat important priority
3. Not at all important priority
4. DNR: Don't know

Q40. If funding for parks and recreation areas was available, would you rather it be used to improve and enhance EXISTING areas or invested in NEW parks and recreation areas? (check only one)

1. Improve/enhance existing parks and recreation areas
2. Invested in new parks and recreation areas
3. DNR: Don't know

Q41. I'd like to ask you about some possible benefits that people associate with park or recreation areas. I'm going to name several benefits and I'd like to know if you think each one is a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area.

Q42. Health and fitness? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q43. Connecting with nature? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q44. A sense of peace and stress relief? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q45. Positive family activities? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q46. Healthy childhood development? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q47. Attracting businesses? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q48. Enhancing property values? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q49. Preserving open space? (Is this a very important, somewhat important, not very important, or not at all important benefit of living near a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q50. Protecting natural resources? (Is this a very important, somewhat important, or not at all important benefit of a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q51. Cleaner air and water? (Is this a very important, somewhat important, or not at all important benefit of a park or recreation area?) (check only one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
5. DNR: Don't know

Q52. I'm going to read several statements regarding the value of parks and recreation areas and I'd like for you to tell me if you agree or disagree with each one. For each statement, please tell

me if you strongly agree, moderately agree, neither agree nor disagree, moderately disagree, or strongly disagree.

Q53. Parks, open spaces and conservation areas are a luxury rather than a necessity. (read list as necessary; check only one)

1. Strongly agree
2. Moderately agree
3. Neither agree nor disagree
4. Moderately disagree
5. Strongly disagree
6. DNR: Don't know

Q54. Public recreation programs are a luxury rather than a necessity. (read list as necessary; check only one)

1. Strongly agree
2. Moderately agree
3. Neither agree nor disagree
4. Moderately disagree
5. Strongly disagree
6. DNR: Don't know

Q55. Parks, open space and conservation areas should be budget priorities even during economic hard times. (read list as necessary; check only one)

1. Strongly agree
2. Moderately agree
3. Neither agree nor disagree
4. Moderately disagree
5. Strongly disagree
6. DNR: Don't know

Q56. What is your zip code? (enter zip code)

Q57. How many children, age 17 or younger, do you have living in your household? (if no children under age 17 living in the household, skip to Q66)

Q58. What are the ages of the children living in your household? (enter age of each child based on response to Q57 [i.e., computer will provide separate follow-ups according to number of children])

Q59. I'd like to ask you some questions about [your child's/one of your children's] moderate and vigorous physical activity. [IF MORE THAN ONE CHILD UNDER AGE 17 LIVING IN HOUSEHOLD: For the following questions, please answer for the child in your household who had the most recent birthday.] Moderate physical activities cause small increases in breathing or heart rate; vigorous physical activities cause sweating, hard breathing, and larger increases in heart rate. For these next questions, we are interested in your child's amount of both types of physical activity.

Q60. On a typical WEEKDAY, how many minutes or hours does [your child/your child with the most recent birthday] spend doing physical activity? Please consider the total amount of time your child spends on activities such as playing actively outside, doing sports, exercising in gym class, walking to school, or any other kind of physical activity. (specify number of minutes or hours)

Q61. How many minutes or hours of this WEEKDAY physical activity take place in a public recreation area such as a park, trail, or playground? (specify number of minutes or hours, not to exceed amount entered in Q60)

Q62. On a typical WEEKEND day, how many minutes or hours does [your child/your child with the most recent birthday] spend doing physical activity? Please consider the total amount of time your child spends on activities such as playing actively outside, doing sports, exercising in gym class, walking to school, or any other kind of physical activity. (specify number of minutes or hours)

Q63. How many minutes or hours of this WEEKEND day physical activity take place in a public recreation area such as a park, trail, or playground? (specify number of minutes or hours, not to exceed amount entered in Q62)

Q64. During the past 7 days, how many days was [your child/your child with the most recent birthday] physically active for at least 60 minutes per day? Please consider all the time [your child/your child with the most recent birthday] spent in any kind of physical activity that increased his/her heart rate and made him/her breathe hard some of the time. (enter number of days, not to exceed 7)

Q65. How much of this activity, in minutes or hours, took place in a public recreation area such as a park, trail, or playground? (specify number of MINUTES OR HOURS, not days)

Q66. What is the highest level of education you have completed? (read list as necessary; check only one)

1. Not a high school graduate
2. High school graduate or equivalent
3. Some college or trade school, no degree
4. Associate's degree or trade school degree
5. Bachelor's degree
6. Master's degree
7. Professional or doctorate degree (e.g., M.D. or Ph.D.)
8. DNR: Other (enter specifics)
9. DNR: Refused
10. DNR: Don't know

Q67. What races or ethnic background do you consider yourself? (read list as necessary; check all that apply)

1. White or Caucasian
2. Black or African-American
3. Hispanic or Latino (includes Mexican, Central American, etc.)
4. Native American or Alaskan native or Aleutian
5. Korean
6. Japanese
7. Chinese
8. Filipino
9. Native Hawaiian or other Pacific Islander
10. Vietnamese
11. Middle Eastern
12. African (NOT African-American)
13. South Asian (from India, Pakistan, Bangladesh, etc.)
14. DNR: Other (enter specifics)
15. DNR: Refused
16. DNR: Don't know

Q68. May I ask your age? (enter age)

Q69. Respondent's gender (observed, not asked: male/female).

Appendix C. Demographics of Delaware Residents

Demographic Characteristic	2010 Census Percent (%)	2011 Responsive Management Percent (%)
Gender		
Male	48.4	48
Female	51.6	52
Race/Ethnicity		
White or Caucasian	68.9	71
Black or African American	21.4	18
Hispanic or Latino	8.2	3
All Other Races	10.3	8
Age Demographics		
15-24	14.2	13
25-34	12.4	15
35-44	12.9	17
45-54	14.9	18
55-64	12.4	14
65+	14.4	17
Education		
Less than H.S. Diploma	12.7	5
High School Graduate or Equivelant	31.7	28
Some College or Trad School	20.3	18
Associate's Degree	7.4	8
Bachelor's Degree	16.7	23
Graduate or Professional Degree	11.3	17

Appendix D. 2013-2018 SCORP Recommendations

Outdoor Recreation Inventory

- Identify private recreation facilities to be incorporated in a statewide level of service analysis.
- Broaden the Outdoor Recreation Inventory to include facility age and condition analyses.
- Identify missing information needed to conduct more accurate spatial analyses.
- Assist county and local parks and recreation officials with level of service and spatial analyses of their local park and recreation facilities to determine geographical representation of recreational facility needs.
- Conduct outdoor recreation spatial analyses to inform health impact assessments for local and regional community designs.
- Develop an online clearinghouse of resources that disseminates detailed information for all recreation facilities in Delaware.

Statewide Trails and Pathways Initiative

- Increase the system of interconnected trails and pathways by extending existing tail hubs within municipalities and state parks.
- Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails into county regions. Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails into county regions.
- Allocate a steady and reliable funding stream for trails and pathways that builds on and extends the existing network.
- Coordinate planning efforts to connect neighborhoods with places of work, schools, businesses, park and other community facilities.
- Identify gaps in trail and pathway systems to prioritize critical community connections.
- Identify needed land and support the development of future trail extensions and connections that encourage healthy lifestyles and increase recreational opportunities.

- Conduct a detailed spatial analysis to determine geographical representation of trail, pathway and sidewalk related needs.
- Conduct trail volume and use surveys to better understand and enhance trail use.
- Advocate and identify funding sources to conduct local walkability and bikability analyses.
- Promote and support bicycle and shared-use trail safety campaign.
- Develop a unified statewide trail classification and signage marking system.
- Conduct trail and pathway grade analyses to identify unsustainable and inaccessible trail sections.
- Adopt universal sustainability and trail maintenance standards for trail and pathway design and construction.
- Share trail standards and design knowledge and skills with counties, municipalities and volunteer organizations.

Accessible Recreation

- Create locally specific policy briefs highlighting the importance of outdoor recreation, walkability, and inter-connectivity.
- Brief local governments on findings from in-depth spatial analyses and demonstrate the need to update local development codes to improve walkability, interconnectivity, and active recreation.
- Provide on-going training to assist agency planners to remain current on best practices for park management and playground safety.
- Provide technical assistance to state and local officials during comprehensive planning processes to incorporate trails, parks and recreation spaces in local planning efforts.
- Obtain a clear understanding of the level of public transportation services to parks and recreation facilities.
- Identify and assess outdoor recreation facility conditions to be used in spatial analyses, DTF and LWCF grant distribution and facility maintenance planning.
- Explore a State Park pass loan initiative to encourage park use and promote healthy lifestyles in economically challenged areas.
- Conduct spatial analyses of park locations juxtaposed to crime incidences.
- Gather information necessary to complete in-depth spatial analyses of outdoor recreation facilities for underserved and urban populations.

- Create an accessibility guide to all public outdoor recreation spaces.
- Develop guidance tools that address best practices for universal accessibility to outdoor recreation facilities.
- Ensure representation from the disability community throughout the conservation and recreation planning processes.

Improving Public Health

- Develop an online clearinghouse of all public outdoor recreation resources.
- Provide technical assistance to ongoing statewide health initiatives (Delaware HEAL & Governor's Council on Health Promotion and Disease Prevention).
- Identify sidewalk/pathway gaps that are needed to connect people to parks.
- Support the Children in Nature Task Force Report (released Oct. 2012) to expand the model of Prescription for Health beyond Sussex County.

Partnerships for Conservation, Recreation and Tourism

- Foster public/private partnerships and tourism packaging that promote the ecological beauty and recreational opportunities in Delaware.
- Conduct park and recreation economic studies to assess the benefits of parks, wildlife, conservation areas, and Delaware's outdoor recreation economy.
- Preserve and enhance large scale land conservation partnerships to make Delaware a destination for outdoor enthusiasts.
- Build on public/private partnerships by leveraging state, federal, and private resources.
- Develop the Route 9 Corridor Management Plan.
- Seek Federal designation for the Route 9 Coastal Heritage Scenic Byway.
- Examine potential corridors that would extend the existing Bayshore Byway south.
- Continue to support the establishment of the Delaware National Historic Park units.
- Promote the management of recreation areas to protect unique natural, historical and cultural resources while providing a wide variety of outdoor recreation opportunities.
- Provide additional interpretive information along the Captain John Smith Water Trail.
- Conserve lands within the Nanticoke watershed that are evocative of the landscapes encountered by Captain John Smith and his crew.
- Increase access to the Nanticoke River Water Trail.

- Protect water access sites identified in the National Park Service's Access Plan.
- Collaborate to improve the shared goals of the White Clay Creek Watershed Management Plan.
- Increase the number of National Recreation Trail designations in Delaware.

Protecting Lands for Conservation and Recreation

- Identify and prioritize lands for acquisition to protect and maintain large landscapes and avoid fragmentation of resources.
- Identify conservation opportunity areas for inclusion in the natural resource element of local comprehensive land use plans.
- Protect rare landscape elements, cultural resources, sensitive areas, and associated species.
- Balance resource protection with resource use.
- Protect land to create conservation corridors.
- Leverage partnerships with state and federal agencies, conservation organizations and private landowners.
- Develop a guide to funding sources and incentives to protect high priority conservation and recreation areas.
- Manage core natural areas to minimize direct disturbances and the introduction and spread of non-native and invasive species.

Getting Children Outdoors

- Continue to conduct outdoor recreation participation studies aimed at specific user groups and demographics.
- Provide technical assistance to the Children In Nature Task Force.
- Provide training to develop schoolyard habitats, outdoor classrooms and/or school gardens to assist in reconnecting youth to their environment.
- Establish and maintain an environmental education resource clearinghouse.
- Coordinate discussion between Department of Education, the Department of Natural Resources and Environmental Control and other outdoor recreation providers to share outdoor recreation facilities and resources.

- Increase community access to school recreation facilities by reducing barriers associated with use.
- Identify public school facilities that are not publicly available during non-school time.
- Ensure long-term maintenance and safety of all recreation facilities.

Appendix E. Delaware Open Space Program Acquisition Ranking Criteria

OPEN SPACE PROGRAM

PROPERTY RANKING PROCESS

As established by the Delaware Land Protection Act, the Open Space Program is to acquire interest in real property to carry out conservation programs of the State. Under the purpose of the law, the State is "to protect and conserve all forms of natural and cultural resources; to protect and conserve the biological diversity of plants and animals and their habitat; to protect existing or planned parks, forests, wildlife areas, nature preserves or other recreation, conservation or cultural sites by controlling the use of contiguous nearby lands; to preserve sites of special natural, cultural or geological interest; to connect existing open spaces into a cohesive system of greenways and resource areas; to provide for public outdoor recreation; and to allow for water resource conservation.".

In order to carry out the purpose of the Open Space Program, the Open Space Council is to review and recommend to the Secretary of the Department of Natural Resources and Environmental Control for adoption a ranking process that establishes land preservation priorities. Typically working in a constrained environment of limited funding, the ranking process is intended to provide a strategic way of preserving open space by evaluating a property on its own features and against other similarly ranked properties in order to maximize resource benefits and leverage all relevant funding sources.

Any property proposed for preservation is first screened by the following state land managing agencies for any specific interest: Division of Fish and Wildlife (Wildlife Areas and Natural Heritage sites), Division of Parks and Recreation (State Parks, Natural Areas and Nature Preserves), Delaware National Estuarine Research Reserve, Delaware Forest Service (State Forests and Forest Legacy Areas), or Division of Historical and Cultural Affairs. Typically a property of interest is an inholding to, expansion of or connection between lands protected or managed by these agencies. Additionally a property of interest may be a stand-alone site that contains critical resources. The property is also reviewed against resource plans or resource analyses, including the Delaware Ecological Network[1].

Assessing the priority of a given property for preservation, either through fee-simple acquisition, donation or conservation easement is a process that involves ranking and descriptive evaluation. This ranking process is supported by science, management priorities and public needs. The ranking criteria assign points across five broad areas: ecological value, land use, water quality, recreation, and cultural

---

1 Weber, T. 2007. Development and application of a statewide conservation network in Delaware, *U.S.A. Journal of Conservation Planning*, Vol 3: 17-46.

resources. Once ranked, a property is evaluated qualitatively by describing other potential benefits, challenges or factors affecting preservation of the property.

RANKING CRITERIA

ECOLOGICAL VALUE	20 points	15 points	10 points	5 points	0 points
Plants[i]	Federally listed or candidate species, globally rare, or proposed state listed species documented on site or adjacent lands that may benefit from habitat protection	S1 species[2] documented on site or adjacent lands that may benefit from habitat protection	S2 species[3] documented on site or adjacent lands that may benefit from habitat protection	S3 species[4] documented on site or adjacent lands that may benefit from habitat protection	S1-S3 species not likely to benefit from habitat protection
Animals[ii]	Federally listed or candidate species, globally rare, state listed or proposed state listed species documented on site or adjacent lands that may benefit from habitat protection	S1 species documented on site or adjacent lands that may benefit from habitat protection	S2 species documented on site or adjacent lands that may benefit from habitat protection	At least 1 SGCN[5] likely to benefit from habitat protection	SGCN not likely to benefit from habitat protection
Habitat of Conservation Concern (HCC)[6iii]	Protects an existing HCC documented on site	Protects a corridor connecting two HCCs	Protects land adjacent to an HCC (potential for expansion of HCC through restoration)	Potential for establishing an HCC (must be in close proximity to other HCCs)	No potential for establishing a HCC

[2] S1 Species- Extremely rare with typically 5 or fewer occurrences statewide.

[3] S2 Species- Very rare with typically 6 to 20 occurrences statewide.

[4] S3 Species- Rare to uncommon with approximately 21 to 100 occurrences statewide.

[5] SGCN, or Species of Greatest Conservation Need, are identified according to a set of criteria provided in the *Delaware Wildlife Action Plan*. SGCN are species indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, may be vital components of certain habitats, and / or may have a significant portion of their population in Delaware.

[6] HCC, or Habitat of Conservation Concern, are habitats that are rare, have special significance in Delaware, are particularly sensitive to disturbance, and/or have a high diversity of rare plants. Because of these factors, they are known – or expected – to harbor SGCN, especially insects that are often dependent on specific host plants.

ECOLOGICAL VALUE	20 points	15 points	10 points	5 points	0 points
Fisheries Resource Protection Areas	Protects critical nursery or spawning habitat for anadromous fish, bivalves, and shellfish	Adjacent to critical nursery or spawning habitat for anadromous fish, bivalves, and shellfish	Potential to protect and/or improve nursery or spawning habitat for anadromous fish, bivalves, and shellfish		
Forest % Cover	76-100	51-75	26-50	10-25	<10
Non-forested Wetland % Cover	76-100	51-75	26-50	10-25	<10
ESH[7] % Cover[iv]		76-100	51-75	26-50	
Total (135)					

LAND USE	20 points	15 points	10 points	0 points	-10 points
Proximity to Existing Preserved Lands	Necessary to use of existing preserved lands/ inholding	Adjacent to existing preserved lands	Provides a corridor between existing preserved lands		
Development Pressure	No residences or commercial structures within 0.5 miles of property	No residences or commercial structures on adjacent parcels	<5 residences or commercial structures on adjacent parcels	>5 residences or commercial structures on adjacent parcels	Proposed / approved development on property being considered (not cost effective)
On-site Buildings			Property with no building	Property with 1 building	Property with >1 building
Site Restrictions[8]			No site restrictions		Site restrictions
Size of Property[v]	>200 acres	100 - 199 acres	25 - 99 acres	< 25 acres	
Use of Property	Primarily in a natural state (>50%)	Primarily agricultural lands (>50%)	Residential/commercial use (<25% land disturbance)	Residential/commercial use (>25% land disturbance)	Intense residential use, borrow pits, waste treatment facilities, spray irrigation, landfills etc.
Access			Access exists; no improvements necessary	Access exists but improvements	Poor or no access

[7] ESH – Early Successional Habitat, including mixed stand of grasses and forbs, old field habitat, pastureland, and shrubland.

[8] Any restrictions that would affect the use of the site. For example, a former landfill which would not allow for public use.

LAND USE	20 points	15 points	10 points	0 points	-10 points
				necessary	
Public Utilities[9]					Above ground utilities present
Sea Level Rise (SLR) Adaptation[10vi]	Adjacent to land predicted to be under water at 1.5m SLR			Predicted to be under water at 0.5m, 1.0m or 1.5m SLR	Currently under water at MHW[11]
Total (130)					

CULTURAL/ HISTORICAL RESOURCES	40 points	20 points	10 points
Cultural / Historical Resources[12vii]	Listed on National Register of Historic Places	Eligible for listing on National Register	Some cultural/ historic interest
Threat to Cultural Resources	Immediate – approved subdivision	Potential – submitted subdivision	
Total (80)			

WATER FEATURES	15 points	10 points	5 points	0 points
Perennial (primary) Water Features Present[viii]	Unchannelized		Channelized	
Intermittent (secondary) Water Features Present[ix]	Unchannelized		Channelized	
Ditch (secondary) Water Features Present[x]			Buffered	No buffer
Waterway Frontage	>1000 linear feet	500-999 linear feet	250-499 linear feet	0-249 linear feet
Riparian Forest Buffer Size	>200′	100-199′	50-100′	0-50′
Other Vegetated Buffer		>200′	100-199′	<100′
Nutrient Management Critical Priority Areas	Low	Medium		High
ERES[13] Waters	Within ERES waters		Adjacent to ERES waters	Outside ERES waters
Watershed Impairment	0-50%	50-74%	75-99%	100%

[9] Utilities – aboveground public utilities that serve more than one entity (e.g. electric transmission/distribution lines, fiber optic/cable lines, cell tower, solar panel array).

[10] DNREC Sea Level Rise Scenarios. Adaptations allow for landward migration of resource or loss of land due to sea level rise.

[11] MHW = Mean High Water

[12] Cultural/Historic resources means those structures, improvements, sites or lands that are listed as significant in or eligible for listing in the National Register of Historic Places, either as individual listings or as contribution elements in listed or eligible historic districts (30 Del Code §1803).

[13] ERES – waters of exceptional recreational or ecological significance.

WATER FEATURES	15 points	10 points	5 points	0 points
Total (135)				

RECREATION (Must not adversely affect ecological resources to receive points)	20 points	15 points
Potential for High Priority Outdoor Recreation Needs as Defined in the SCORP[14xi]	3+	1-2
Recreational Uses (see below)	3+	1-2
Proximity to Population Base[15]	Level 1	Level 2
Within a Fisheries Access Area (shoreline, piers, boat access)	Yes	
Total (80)		

RECREATIONAL USES (Must not adversely affect ecological resources to receive points)	Check All That Apply
Hunting	
Fishing	
Wildlife viewing (unique species or habitat)	
Boating/kayak access (ramps and / or parking)	
Walking, jogging or bike paths / ATV, hiking, mountain biking or equestrian trails	
Sport courts	
Multi-purpose fields	
Water park/ swimming pool	
Dog park/ dog training areas	
Beach access	
Access to historic sites	
Disc golf courses	
Golf courses	
Playgrounds	
Picnic areas	
Camping areas	
Rollerblading, roller skating or roller hockey areas / skate parks	
Total Number of Recreational Uses	

[14] SCORP – Statewide Comprehensive Outdoor Recreation Plan.

[15] Strategies for State Policies and Spending 2010 update - Level 1 and Level 2 Areas of Investment

Total Points For All Categories	Total Points
Ecological Value (/135)	
Land Use (/130)	
Cultural / Historical (/80)	
Water Features (/135)	
Recreation (/80)	

DESCRIPTIVE EVALUATION / PROJECT-SPECIFIC QUESTIONS

Does the acquisition support state or regional preservation and restoration priorities or management plan goals? (e.g., Atlantic States Marine Fisheries Council's Interstate Fisheries Management Plans, Bird Conservation Region 30, Blackbird-Millington Corridor Plan, Captain John Smith Chesapeake National Historic Trail, Chesapeake Watershed Implementation Plan, Coastal and Estuarine Land Conservation Program, Delaware Forest Action Plan, Delaware Bayshore Initiative, Delaware Wildlife Action Plan, Inland Bays Watershed Restoration Plan, Nanticoke Watershed Restoration Plan, North American Wetlands Conservation Act, Partners in Flight Priority Species, National Fish and Wildlife Foundation) **List Regional Priorities and / or Management Plan Goals here:**
Describe why the property is considered for preservation. (e.g., critical wildlife habitat, water quality protection, recreational opportunities, cultural resource preservation)
Are preservation / management goals best achieved through fee title or easement, and why?
Is there a discount offered on the purchase price?
Are there opportunities to leverage non-Open Space funds? If so, identify the funding sources and percentages.
Describe any potential management challenges and / or costs.
Is there a near term plan for development?
For stand-alone sites, are the resources on the property significant enough to justify preservation?
Describe geological features of interest on site?

Will preserving this property protect a viewshed? If so, describe the viewshed?
Is this property on the State Registry of Natural Areas?
Is there public interest in acquiring the property?
Is the owner requesting provisions in the contract / easement that would reduce the property's primary conservation values or appropriate management?
Is the property a potential restoration site?
Does the property contain a floodway? Is it in the 100 year floodplain?
Other comments:

PROJECT SUMMARY

GENERAL PROPERTY INFORMATION

Owner Contact Information:

Tax Parcel:

Acreage:

Uplands:

Wetlands:

Watershed:

Agency Contact:

Ranking Score:

ACQUISITION DATA

Full Fair Market Purchase: _____ **Bargain Sale:** _____ **Donation:** _____

Leveraged Funds:

Endowment/Monitoring Contribution:

Contract Price:

Comments:

APPRAISAL DATA

Appraiser:

Date of Appraisal:

Appraised Value:

Per Acre Value:

Uplands:

Wetlands:

Comments:

---

[i] EO Dots 2010
[ii] EO Dots 2010
[iii] Key Wildlife Habitats
[iv] J:\Early Successional Habitat2004.mdb
[v] Parcel data
[vi] J:\GISData\DNREC Sea Level Rise Scenarios
[vii] J:\parks\GISLab\Shapes\CulturalHistoric\National_Register(2010)
[viii] J:\GISData\NHDWater.gdb\Hydrography\NHDFlowline
[ix] J:\GISData\NHDWater.gdb\Hydrography\NHDFlowline
[x] J:\GISData\NHDWater.gdb\Hydrography\NHDFlowline
[xi] J:\parks\GISLab\Shapes\SCORP

Appendix F. Delaware Open Space Program Acquisition Inventory
2008-2012 Five Year Report

Managing Agency	General Location	Name	Acquisition Date	Open Space Funds	Total Funds	Acres	General Description
Kent County							
Fish and Wildlife	Little Creek Wildlife Area	The Nature Conservancy	December 17, 2009	$0.00	$120,000.00	59	Tidal Wetlands
Parks	Fork Branch Nature Preserve	Ashburn Homes, Inc.	August 5, 2010	$0.00	$0.00	0.9265	Forested Wetlands
Fish and Wildlife	Spring Creek	Kent County Levy Court (Cons. Ease.)	August 14, 2012	$0.00	$0.00	262.87	Tidal Wetlands, Forest, Agricultural Land
Five Year Kent County Total				**$0.00**	**$120,000.00**	**322.80**	
New Castle County							
Parks	Auburn Heights Preserve	Marshall	November 25, 2008	$0.00	$0.00	4.307	Cultural Site
Parks	Sunset Lake	Newark Anglers Association (Cons. Ease.)	December 18, 2008	$650,000.00	$650,000.00	65.6	Pond, Forest
Parks	Auburn Heights Preserve	Yorklyn Preservation, LLC (Cons. Ease.)	November 30, 2009	$565,000.00	$1,000,000.00	47.21	Cultural Site, Meadow, Conservation Corridor, Scenic Viewshed
Parks	Auburn Heights Preserve	NVF Company	June 15, 2010	$0.00	$0.00	3.69	Cultural Site
Parks	Pike Creek Watershed	Independence School, Inc (Cons. Ease.)	August 2, 2010	$0.00	$0.00	9.095	Non-Tidal Wetlands, Conservation Corridor
Parks	Auburn Heights Preserve	NVF Company	September 24, 2010	$450,000.00	$1,250,000.00	23.37	Cultural Site, Forest, Floodplain
Forestry	Blackbird State Forest	Borthwick	December 22, 2010	$313,789.20	$313,789.20	26.1491	Agricultural Land, Conservation Corridor
Forestry	Blackbird State Forest	Borthwick	December 22, 2010	$365,880.00	$365,880.00	30.49	Floodplain, Forest, Agricultural Land, Conservation Corridor
Parks	Auburn Heights Preserve	NVF Company	December 22, 2010	$0.00	$0.00	15.01	Floodplain, Cultural Site, Conservation Corridor
Parks	Brandywine Creek	Durham/Evans (Cons. Ease.)	December 29, 2010	$0.00	$0.00	4.216	Conservation Corridor, Meadow
Parks	Auburn Heights Preserve	Reynolds (Cons. Ease.)	February 4, 2011	$1,180,000.00	$1,180,000.00	32.84	Forest, Cultural Site, Conservation Corridor, Scenic Viewshed
Fish and Wildlife	New Castle	New Castle, City Of (Cons. Ease.)	September 22, 2011	$0.00	$0.00	60.34	Tidal Wetlands, Conservation Corridor

Parks	Auburn Heights Preserve	Thomas (Cons. Ease.)	September 28, 2011	$200,000.00	$200,000.00	8.4	Forest, Conservation Corridor, Scenic Viewshed
Fish and Wildlife	Blackbird Creek Watershed	Jacobs	December 21, 2011	$0.00	$159,402.70	2	Floodplain, Forest
Parks	Brandywine Creek State Park	Rockford Woodlawn Fund, Inc.	February 10, 2012	$0.00	$100,000.00	13.77	Floodplain, Forest
Fish and Wildlife	Cedar Swamp Wildlife Area	Harmon	May 22, 2012	$0.00	$0.00	97.58	Agricultural Land, Non-Tidal Wetlands
Forestry	Blackbird State Forest	Sheats/Sheats	June 15, 2012	$223,300.00	$223,300.00	22.33	Forest, Forested Wetlands
Fish and Wildlife	Augustine Wildlife Area	Yardley Dale, LLC	September 21, 2012	$1,003,000.00	$1,003,000.00	194	Tidal Wetlands, Forest, Agricultural Land
Parks	Auburn Heights Preserve	Yorklyn Hills, LLC (Cons. Ease.)	October 5, 2012	$500,000.00	$500,000.00	8.315	Forest, Scenic Viewshed
Parks	White Clay Creek State Park	Dupont, William	October 31, 2012	$810,000.00	$810,000.00	30.03	Forest
Parks	Auburn Heights Preserve	Delaware Nature Society, Inc.	December 18, 2012	$0.00	$50,000.00	22.538	Floodplain, Forest, Conservation Corridor
Five Year New Castle County Total				**$6,260,969.20**	**$7,805,371.90**	**721.28**	

Sussex County							
Forestry	Redden State Forest	Fischer	April 23, 2008	$380,000.00	$380,000.00	39.31	Forest, Forested Wetlands
Parks	Cape Henlopen State Park	Rustic Lands, LLC (Cons. Ease.)	May 9, 2008	$2,626,919.01	$2,626,919.01	11.4	Agricultural Land, Scenic Viewshed
Fish and Wildlife	Inland Bays	The Nature Conservancy	May 23, 2008	$48,446.37	$48,446.37	118.3	Agricultural Land, Scenic Viewshed
Parks	Assawoman Canal	Elechko	July 22, 2008	$0.00	$490,000.00	0.752	Tidal Wetlands, Open Land
Forestry	Redden State Forest	ABC Woodlands, LLC (Cons. Ease.)	November 14, 2008	$2,050,000.00	$2,050,000.00	302.6765	Forest, Agricultural Land, Scenic Viewshed
Fish and Wildlife	Inland Bays	Biffen Company, LTD	January 8, 2009	$3,819,447.20	$3,819,447.20	91.9	Agricultural Land, Scenic Viewshed
Parks	Assawoman Canal	Mitchell	March 27, 2009	$775,000.00	$775,000.00	0.9744	Open Land, Scenic Viewshed
Parks	Cape Henlopen State Park	Rustic Lands, LLC	April 27, 2009	$80,500.00	$80,500.00	0.7	Forest, Conservation Corridor
Parks	Cape Henlopen State Park	Rustic Lands, LLC (Cons. Ease.)	April 27, 2009	$422,500.00	$422,500.00	4.3	Forest, Conservation Corridor
Parks	Holts Landing State Park	Murray Family LP/Rickards	June 30, 2009	$350,000.00	$350,000.00	2	Agricultural Land, Conservation Corridor

Parks	James Branch Nature Preserve	Durham Trust/D & N Properties, LLC	July 6, 2009	$420,000.00	$420,000.00	11.082	Forest, Agricultural Land, Scenic Viewshed
Fish and Wildlife	Midlands Wildlife Area	Shelah Branch Farms, LLC	October 2, 2009	$1,275,000.00	$1,275,000.00	127.413	Forest, Agricultural Land, Conservation Corridor
Fish and Wildlife	Midlands Wildlife Area	Delaware Technical & Community College Ed. Found.	December 17, 2009	$2,189,934.00	$2,189,934.00	246.06	Forest, Agricultural Land, Conservation Corridor
Fish and Wildlife	Nanticoke Wildlife Area	Niblett	December 17, 2009	$0.00	$0.00	0.59	Forest, Scenic Viewshed
Parks	Great Marsh Preserve	Lifetime Living, LLC	June 29, 2010	$0.00	$0.00	24.949	Tidal Wetlands, Forested Wetlands
Parks	James Branch Nature Preserve	Larrimore/Hitchens (Cons. Ease.)	July 15, 2010	$588,247.00	$588,247.00	106.954	Agricultural Land
Parks	Assawoman Canal	Short (Cons. Ease.)	August 27, 2010	$324,276.00	$324,276.00	4.529	Forest, Scenic Viewshed
Fish and Wildlife	Midlands Wildlife Area	Hope Farm Investments, LLC	September 30, 2010	$0.00	$425,000.00	65.31	Agricultural Land, Forest, Conservation Corridor
Fish and Wildlife	Midlands Wildlife Area	Saletnig/Stecklein	October 1, 2010	$0.00	$578,000.00	111.23	Forest, Forested Wetlands, Conservation Corridor
Parks	Salt Pond	Bethany Woods, LLC	October 28, 2010	$0.00	$0.00	24.21	Pond
Fish and Wildlife	Mispillion Harbor Reserve	Fitzgerald et al.	November 15,2010	$0.00	$130,000.00	48.5	Tidal Wetlands
Parks	James Branch Nature Preserve	The Conservation Fund	November 22, 2010	$933,633.00	$933,633.00	103.737	Forest, Forested Wetlands
Forestry	Redden State Forest	Glatfelter Pulp Wood Company	January 26, 2011	$500,000.00	$2,700,000.00	377	Forest
Parks	James Branch Nature Preserve	Windsor	July 30, 2011	$49,000.00	$49,000.00	16.92	Forest, Floodplain, Conservation Corridor
Fish and Wildlife	Nanticoke Wildlife Area	The Conservation Fund	October 31, 2011	$565,000.00	$1,365,000.00	210	Forest, Floodplain, Conservation Corridor
Fish and Wildlife	Milford Neck Wildife Area	Fort Saulsbury, LLC (Cons. Ease.)	December 21, 2011	$0.00	$0.00	5.94	Tidal Wetlands, Forested Wetlands
Forestry	Redden State Forest	J.G. Townsend, Jr. & Co.	December 22, 2011	$385,000.00	$1,540,000.00	216.7445	Forest, Conservation Corridor
Forestry	Redden State Forest	Marvel Investments, LLC/RJDJH, LLC	May 24, 2012	$670,000.00	$2,680,000.00	339.16	Forest
Parks	Inland Bays	Millsboro, Town Of (Cons. Ease.)	June 8, 2012	$0.00	$0.00	153.6607	Forest, Forested Wetlands, Floodplain, Conservation Corridor
Fish and Wildlife	Nanticoke River	Royal et al.	August 2, 2012	$300,000.00	$300,000.00	0.5	Floodplain, Open Land, Scenic Viewshed
Fish and Wildlife	Mispillion Harbor Reserve	Swain	August 31, 2012	$600,000.00	$600,000.00	3.601	Floodplain, Open Land, Scenic Viewshed
Parks	Angola Neck Preserve	Beigbeder et al.	September 20, 2012	$15,000.00	$15,000.00	7.41	Tidal Wetlands, Forested Wetlands, Scenic Viewshed

Parks	James Branch Nature Preserve	Trap Investments, LLC	November 1, 2012	$926,000.00	$926,000.00	98.509	Forested Wetlands, Forest, Agricultural Land
Fish and Wildlife	Assawoman Wildlife Area	Carey et al.	December 27, 2012	$0.00	$0.00	22.37	Tidal Wetlands
Five Year Sussex County Total				**$20,293,902.58**	**$28,081,902.58**	**2,898.69**	
Five Year Statewide Total				**$26,554,871.78**	**$36,007,274.48**	**3,942.77**	

Appendix G. Wetlands Priority Component

Delaware is endowed with exceptional wetland resources that improve our water quality, protect us from storms and flooding, provide food and shelter for wildlife species and nursery grounds for commercial fisheries, improve air quality, and beautify our landscape. But, since colonial times, Delaware has lost approximately 50 percent of our wetland resources primarily due to ditching and draining and direct conversion to agriculture. More recently, pressure from development threatens our forested wetlands. Additionally, the wetlands that remain are often degraded by human activities causing altered water flow, introduction of invasive species, and habitat alterations such as filling, dredging and fragmentation.

The Department of Natural Resources and Environmental Control is working to reverse the damage of the past and prevent any additional harm while sharing the dynamic beauty and function of wetlands with the people who live here. The Delaware Wetlands Conservation Strategy is a collaborative effort among DNREC, other State agencies, and conservation partners to slow wetland loss and improve existing wetland conditions. This strategy will guide improvement of Delaware's wetland resources through increased agency coordination, data availability, education, monitoring, and restoration efforts. Initiatives will be implemented over five years and will be reevaluated in 2013.

The Delaware Wetlands Conservation Strategy outlines six goals to focus efforts with the aim of maximizing the use of resources to best protect wetland resources in the state and the services that they provide:

1. Update wetland inventory maps and improve access to wetland related data.
2. Increase monitoring efficiency and effort to provide insight into wetland function and health.
3. Integrate wetland restoration, creation, enhancement, and protection efforts to ensure efficient use of resources.
4. Coordinate information and resources sharing among wetland protection programs, professionals, and agencies.
5. Enhance education and outreach efforts to broaden wetland stewardship among all wetland stakeholders.

6. Work with partners to provide support and enhancement for existing regulatory programs and to provide protection of wetlands that are not covered by state and federal regulations.

The Delaware Wetlands Conservation Strategy fulfills the Emergency Wetlands Act of 1986 requirement. The complete document can be found online at: http://www.dnrec.delaware.gov/Admin/DelawareWetlands/Documents/Delaware%20Wetlands%20Conservation%20Strategy%2008.29.08.pdf