

# Building an Outdoor Legacy in Delaware



Statewide Comprehensive Outdoor Recreation Plan  
2018-2023

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GOVERNOR

PHONE (302) 744-4101  
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October 23, 2018

Dear Outdoor Enthusiast,

It is my pleasure to present to the National Park Service Delaware's 2018-2023 Statewide Comprehensive Outdoor Recreation Plan (S.C.O.R.P.). Delaware's S.C.O.R.P.: *Building an Outdoor Legacy in Delaware* assesses the public need for outdoor recreation to guide future investments that will expand outdoor recreation opportunities and enhance experiences throughout the state.

Outdoor Recreation is an important priority in my administration, and a key part of my Action Plan for Delaware. Among these priorities, we must protect our environment so our children inherit a Delaware whose natural beauty is preserved. We must take decisive steps to invest in our natural resources, to improve public health, sustain and grow our tourism economy, and create new and good jobs. Improving recreational opportunities outdoors and investing in open space preservation are among my goals to achieve this.

Each year, millions of Delawareans and visitors enjoy our dynamic and spectacular parks and conservation areas, and our growing network of trails and pathways connecting communities and recreational areas. Delaware's world-class wildlife habitat is repeatedly recognized as globally significant ecologically. The state is increasingly noted as a destination for our beaches, parks, open space, trails, birding, boating, hunting, and fishing opportunities. These experiences are available not only to our residents, but also to the 30 million people living within a three-hour drive of the First State.

The Land and Water Conservation Fund (LWCF) has been extraordinarily valuable in meeting the recreation needs of residents and visitors. For more than 50 years, the LWCF Program has provided matching funds for parkland acquisition, and park planning and development. These outdoor recreation investments encourage healthy lifestyles, support sustainable communities, and are available for all to enjoy. We are proud of the state's partnership with the National Park Service to implement the grant funds and expand safe and enjoyable opportunities statewide. Our S.C.O.R.P. will help guide local and regional investments and provide goals and strategies for implementation. This plan is an essential guide for achieving Delaware's vision for outdoor recreation facilities, parks, trails, ecological destinations, and conservation areas, now and in the future.

*Building an Outdoor Legacy in Delaware* was developed with input from our citizens and experts who are committed to quality outdoor experiences and healthy lifestyles. We will continue to work diligently to expand our park and conservation estate, creating a legacy of special places, and growing outdoor recreational opportunities. By continuing to invest in parks, trails, wildlife areas, open spaces, and outdoor recreation amenities, we will enhance Delaware's

quality of life, attracting new businesses and improving our economic competitiveness at the same time.

Sincerely,

A handwritten signature in blue ink that reads "John C. Carney". The signature is written in a cursive style with a large, stylized initial "J".

John C. Carney  
Governor, State of Delaware



## *Foreword*

*By Shawn M. Garvin, Secretary*

*Department of Natural Resources & Environmental Control*

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In today's world, with so many options to fill our time, it is more important than ever for our physical and mental well-being to make time to get outside to discover, explore, and connect with our natural world. Delawareans have a strong and diverse interest in natural resources and outdoor recreation. This is evident by the number of Delawareans and visitors to municipal, county and state parks, and wildlife areas throughout the First State, who enjoy miles of trails, historic sites, recreation facilities, and education programs, all within a short walk or drive.

This Statewide Comprehensive Outdoor Recreation Plan (S.C.O.R.P.) update is a comprehensive evaluation of the demand for, and supply of, outdoor recreation resources and facilities in the state, providing goals and recommendations to guide recreation investments for the next five years. A public phone survey of 2,000 Delaware residents conducted earlier in the year, along with input from 38 outdoor recreation professionals, is the foundation of the S.C.O.R.P. update. The survey highlights expected participation in outdoor recreation and preferences to help guide future investments.

Trail-related activities continue to be the most popular in the state, and trend data indicates an increased interest in nature-based outdoor recreation pursuits, including camping, fishing, and hunting. A network of public outdoor recreation opportunities and experiences is available in Delaware, and I encourage you to take advantage of them.

The S.C.O.R.P. is a tool to help identify necessary facilities and direct investments to meet the close-to-home recreational needs of residents and visitors. By enhancing these outdoor opportunities, we are making Delaware a healthier, more active, more vibrant, and more attractive place to live, work, and visit.

See you in the outdoors,



Shawn M. Garvin  
Secretary, DNREC

## Introduction

### *Statewide Comprehensive Outdoor Recreation Plan*

*Building and Outdoor Legacy in Delaware* 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 Federal Land and Water Conservation Trust Fund (LWCF) and Delaware Outdoor Recreation, Parks, and Trails Program (ORPT) 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 Statewide Comprehensive Outdoor Recreation Plan (SCORP) every five years.

During the development of this 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 local, regional, state, federal and non-governmental organizations, met several times to inform and guide plan development.

In developing and researching the findings reported in the 2018 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 (96%) indicate outdoor recreation is important to their quality of life.
- 55% of residents participate in outdoor recreation for their physical fitness and to lead a healthier lifestyle.

The main purpose of the SCORP update is to direct future outdoor recreation investments. There are two core components to determine future outdoor recreation needs. The first is identifying the public's demand and anticipated participation in outdoor recreation activities. The second is understanding the locations and conditions of outdoor recreation facilities and opportunities. 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. Identifying and prioritizing areas with the largest recreation gaps provide valuable information that direct future funding for outdoor recreation facilities.



### *Considerations and Challenges*

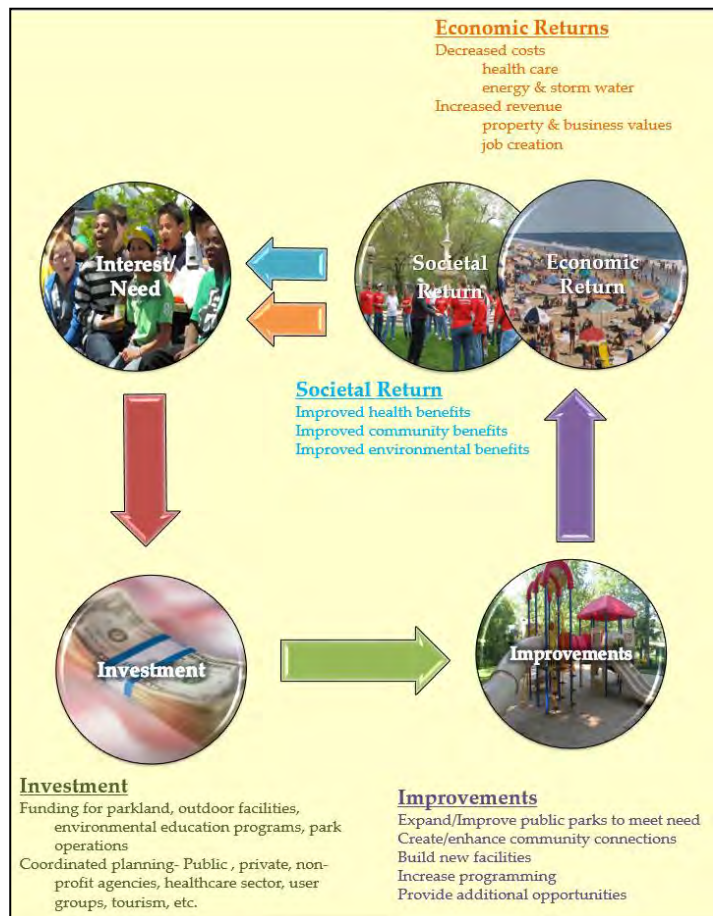
Delaware faces many challenges as it conserves land and water resources, strives to meet growing outdoor recreation needs of a changing population, as well as updating a backlog of deferred maintenance or rehabilitation of existing outdoor recreation facilities. State population projections show Delaware continuing to grow throughout the next decade. The largest demographic increase is predicted to be the 60 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.

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.

### *Investment in Outdoor Recreation*

Investments in outdoor recreation spark 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.

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.<sup>1</sup> 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”.



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<sup>1</sup> [www.nps.gov/lwcf](http://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. Annual funding levels for the LWCF Program have varied over the years. Delaware's apportionment is roughly 1% of the states' allocation.

### *Outdoor Recreation, Parks, and Trails Program (ORPT)*

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 established 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. This law was amended in 2014 and formally renamed the grants program to the Outdoor Recreation, Parks, and Trails Program (ORPT). Sourced funds were invested to generate earnings. A portion of the value of the funds are distributed annually into the ORPT and then made available for municipal and county parkland, open space, 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 ORPT Program has assisted over 59 eligible agencies with 330 completed projects. The \$27.7 million of ORPT assistance has leveraged over \$79.5 million in local community investment. About three quarters of the ORPT projects (248) resulted in park development, 48 in park land acquisition, and 32 were directed to park planning.

### *Trails and Pathways Initiative*

Trail related activities including walking, jogging, and biking have always been popular in Delaware. In fact, walking/jogging has been the most popular activity statewide, in all five regions, and in every oversampled municipality over the last 16 years. The Trails and Pathways Initiative (July 2011) stimulated close-to-home investments in expanding existing trail networks, making community connections, and creating new bicycle and pedestrian systems for the recreating public. The focus was on providing safe and convenient ways to bicycle or walk to local work, shops, schools, recreational sites, and transit. At the request of Governor Markell in 2011, the General Assembly allocated \$7 million within the Fiscal Year 2012 Capital Improvements Budget (the Bond Bill) to begin this work. Bringing together federal, state, county, and municipal funds totaling over \$40 million, improvements and expansion of the state trail network is going strong. These investments have been a successful partnership between DNREC, DelDOT, counties, and municipalities resulting in new trails and connections as well as a comprehensive vision for future trail connections. A network of trails is not only a recreational amenity, but a necessity for a thriving healthy community.



### *Recreational Trails Program*

The Recreational Trails Program (RTP) was established with the National Recreational Trails Fund Act Part B of the Intermodal Surface Transportation Efficiency Act of 1991. RTP is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA), and is administered through the state Division of Parks and Recreation in Delaware. The program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Since 1991 over 160 maintenance, construction, and educational projects have been completed across Delaware with expenditures totaling over \$10 million. Nationally, RTP has helped fund thousands of projects by providing over \$1 billion in assistance. The current RTP was reauthorized in 2015 under FAST Act Section 1109(b)(7) amending 23 U.S.C. 133(h) and will expire in 2020.



### *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



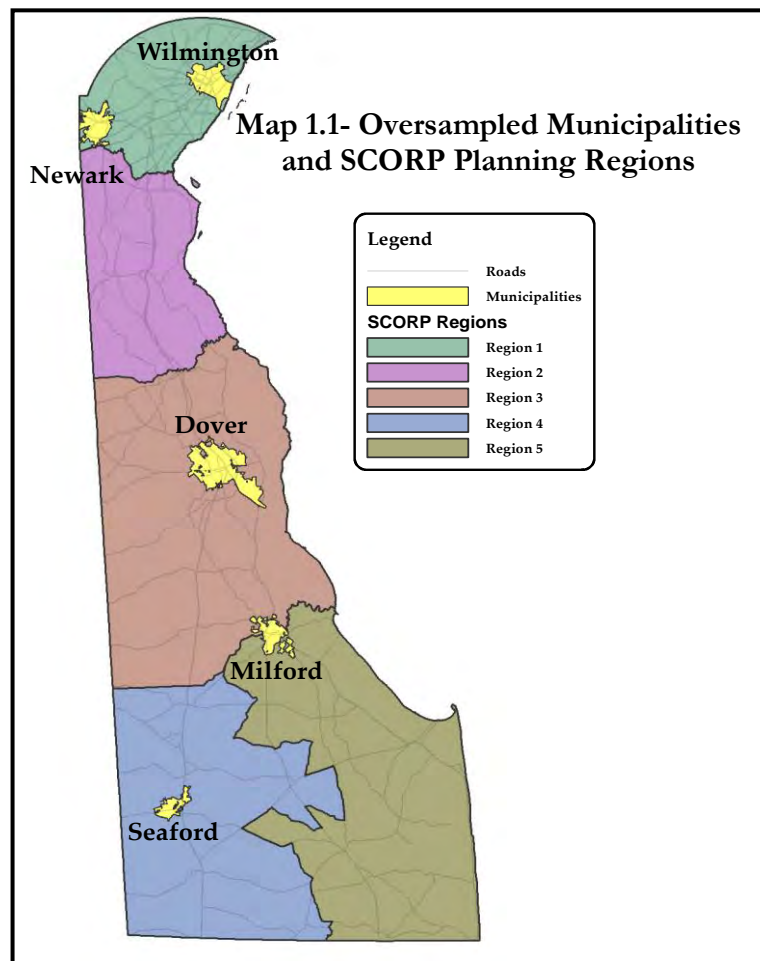
municipality to review their adopted Comprehensive Land Use Plan every five years, and then revise, update or amend the plans as necessary, and re-adopt them at least every ten years. Comprehensive plans for municipalities with populations above 2,000 are required to address open space and recreation 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 provide 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 were first adopted in 2002 in an effort to track trends (see Map 1.1). Region 1 includes northern New Castle County, north of Red Lion and Glasgow; Region 2 is the remaining southern portion of New Castle County; Region 3 includes all of Kent County; Regions 4 and 5 respectively divide western and eastern Sussex County, the state's largest and fastest growing county.

### *Oversampled Municipalities*

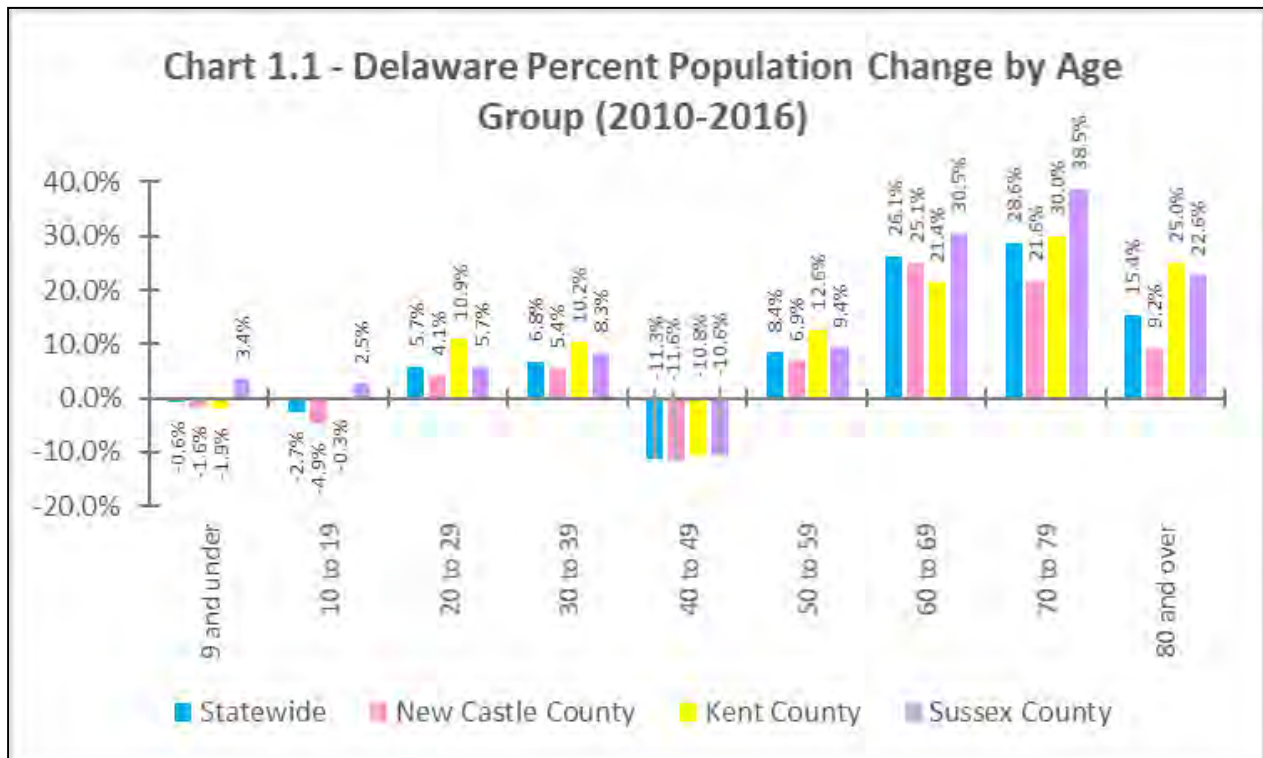
Additional surveys were collected to conduct a separate analysis of five Delaware municipalities: Wilmington,



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, also depicted in Map 1.1, 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 6.9% from 2010 to 2017. With 961,939 estimated residents in 2017, Delaware ranks the 8<sup>th</sup> most dense state in America. 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 2016. Population growth adds pressure on local recreation facilities and amenities. Large population growth was particularly seen in Kent and Sussex County.



State population projections show growth continuing into the next decade although growth rates are anticipated to be slower than in recent years. Projection data shows the state population increasing to 1,019,558 residents by 2025. Sussex County is projected to have the greatest amount of growth (11.7%) between 2015 and 2025. Table 1.1 Shows projected population trends statewide and by county.<sup>2</sup>

**Table 1.1 - Population Trends by County**

	2010	2015	2020	2025	% change 2010-2015	% change 2015-2020	% change 2020-2025
Statewide	899,778	949,337	989,665	1,019,558	5.5%	4.2%	3.0%
New Castle Count	538,912	556,999	574,407	589,665	3.4%	3.1%	2.7%
Kent County	162,978	176,716	184,920	189,023	8.4%	4.6%	2.2%
Sussex County	197,888	215,622	230,338	240,870	9.0%	6.8%	4.6%

Local governments in Delaware issued building permits for 28,565 residential units between 2011 and 2016 (13,933 in Sussex County alone). A total of 5,927 residential building permits were issued in 2016, which is almost double the number issued in 2011. Land use decisions affect everyone and require quality comprehensive plans, community design standards and land use ordinances to direct growth, and its associated infrastructure, while minimizing impacts to vital natural and environmental



<sup>2</sup> Delaware Population Consortium

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 community services.

### *Strategies for State Policies and Spending*

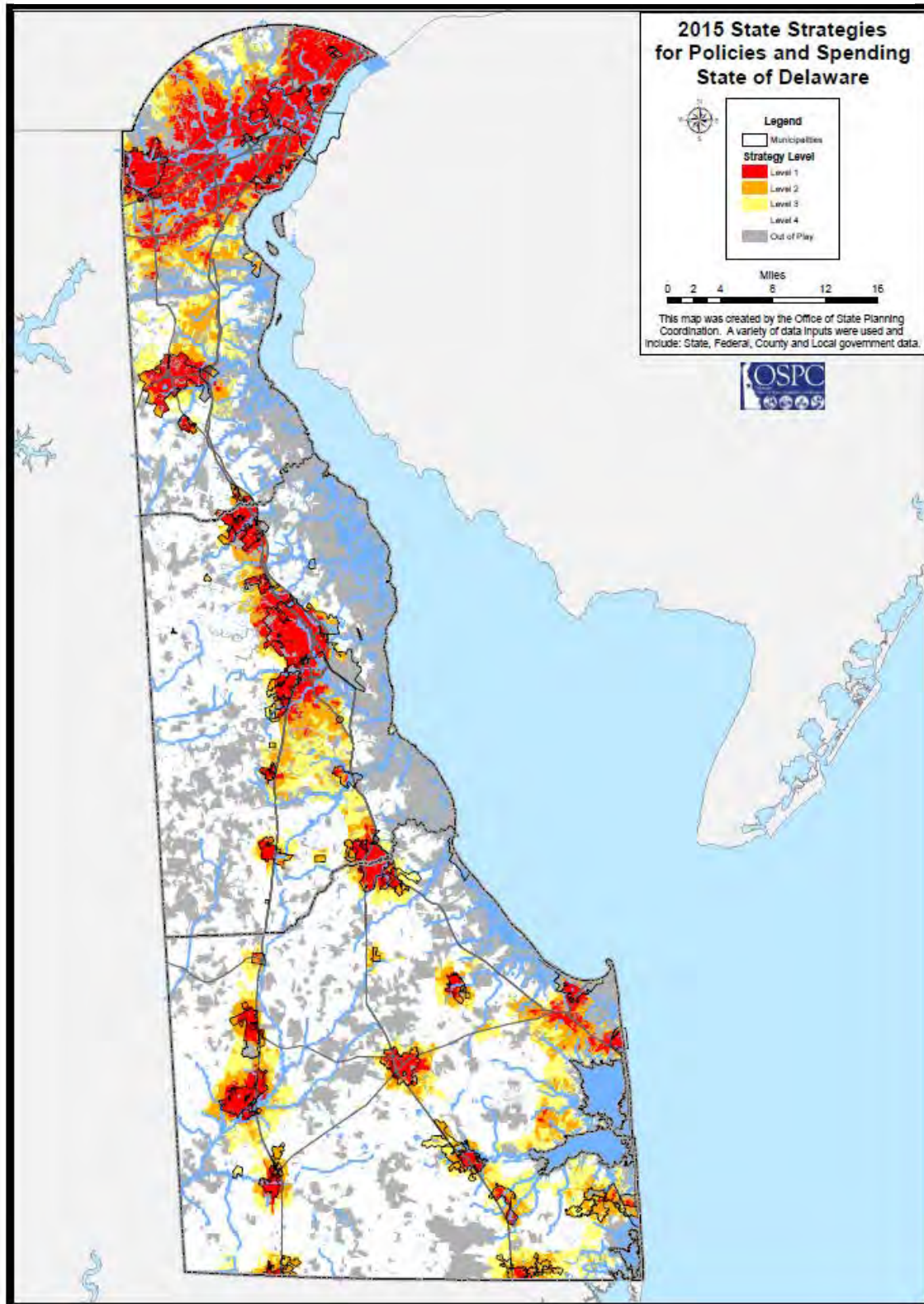
Resultant from Title 29, Chapter 91 of the Delaware Code, the *Strategies for State Policies and Spending* is a key policy document to better coordinate land-use decision-making. It provides a framework for infrastructure and service investments that makes the best use of our natural and fiscal resources. The currently available version (2015) of the *Strategies for State Policies and Spending* builds on the groundwork laid in previous years. 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 document identifies Levels 1 and 2 which are areas 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 1.2 exhibits the geographic areas in Levels 1 through 4.

*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. 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.

Map 1.2 – State Strategies for Policies and Spending



## Outdoor Recreation Research and Findings

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 the Spring of 2018. Survey respondents were queried about their personal recreational activities and those of their household. Responsive Management obtained a total of 2,002 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 the sample size for the regions and oversampled municipalities matched the actual populations for the corresponding areas. 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 five content areas:

- Importance of, and participation in, outdoor recreation
- 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, 2008, and 2011 and are

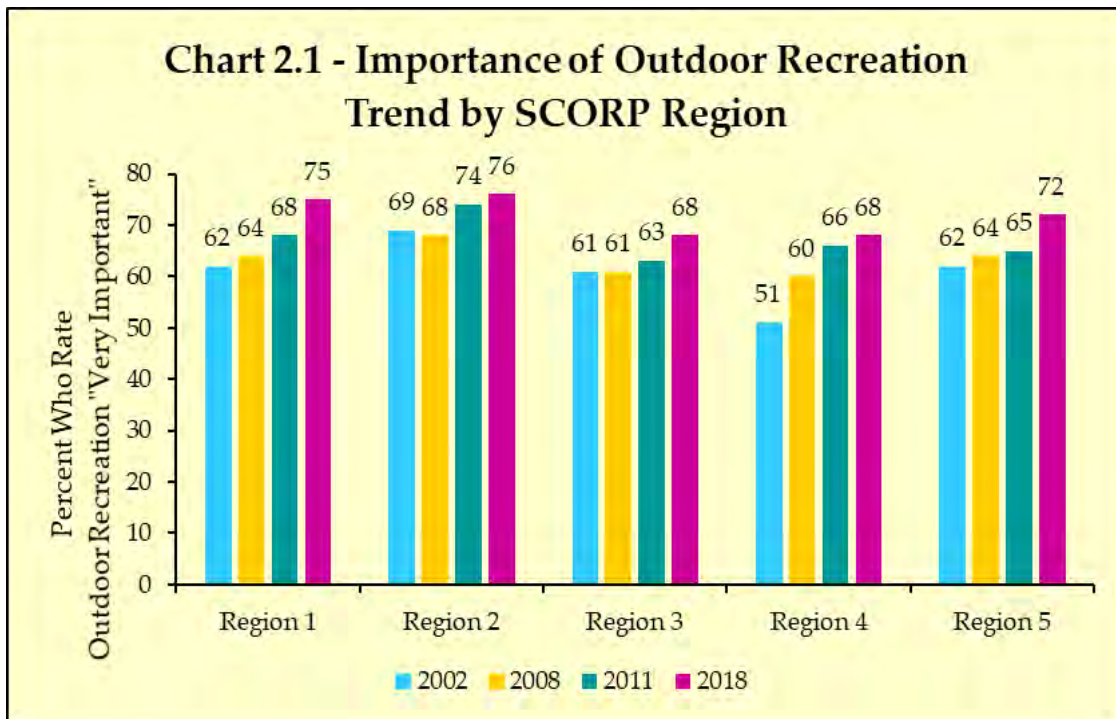


useful for comparisons and revealing outdoor recreation trends. The 2018 SCORP phone survey methodology, instrument, and demographics can be found in Appendices B and C.

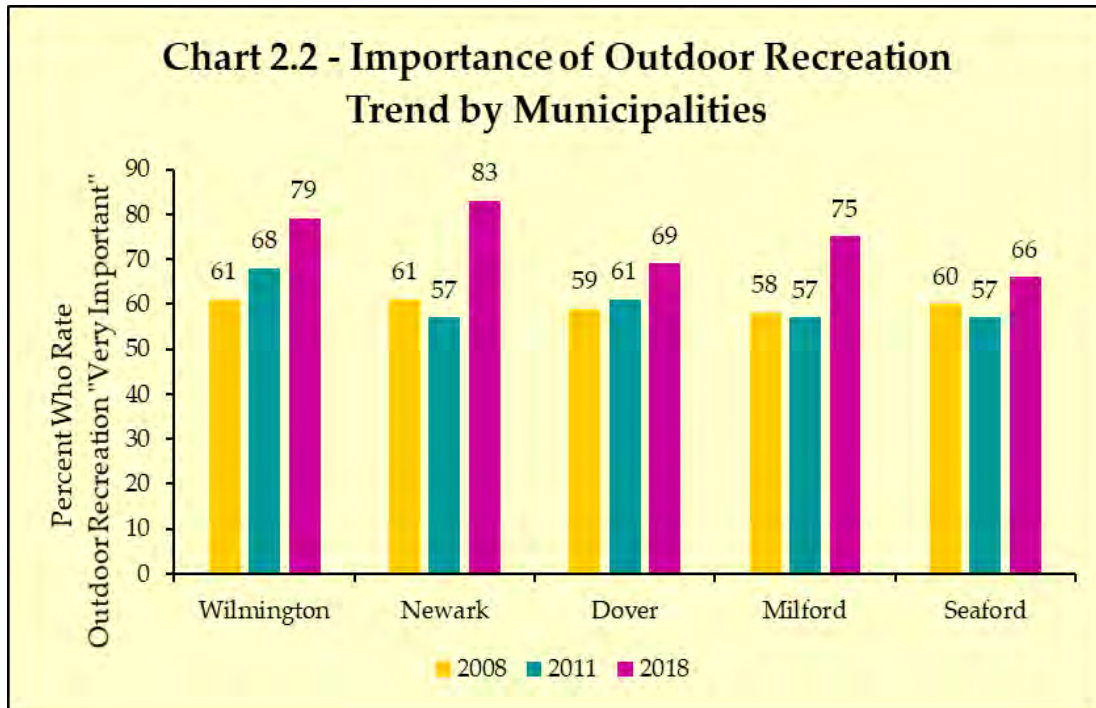
### *Importance of Outdoor Recreation*

When looking at the findings from the 2018 SCORP telephone survey, it is clear that Delawareans place a high importance on outdoor recreation. Statewide, 73% of Delaware residents indicated that outdoor recreation was ‘very important’ to them personally, while 96% said it had some importance in their lives. These findings are a slight increase from the results of the same question asked in the three previous surveys (2002, 2008, 2011). Responses over the past sixteen years indicate continued demand for outdoor recreation opportunities throughout the state. As exhibited in Chart 2.1, residents indicating that outdoor recreation is ‘very important’ to their quality of life has increased in every SCORP Region. Similarly, Chart 2.2 reflects that residents of the five municipalities sampled increasingly value outdoor recreation.

*96% of Delaware residents indicate outdoor recreation is important*







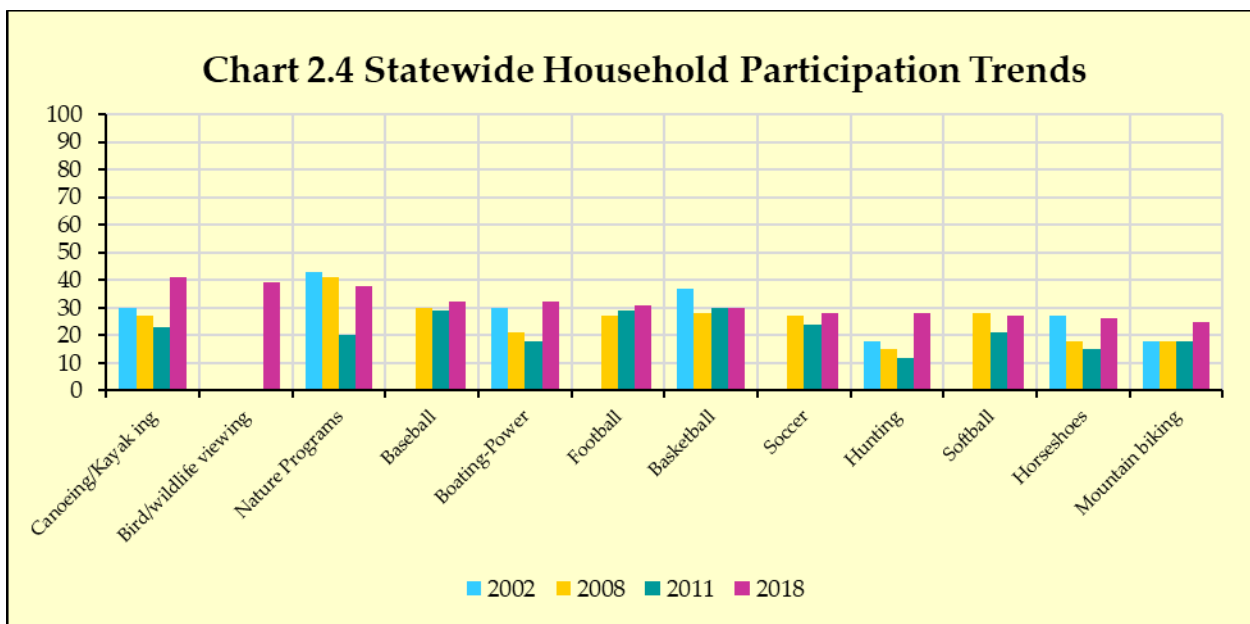
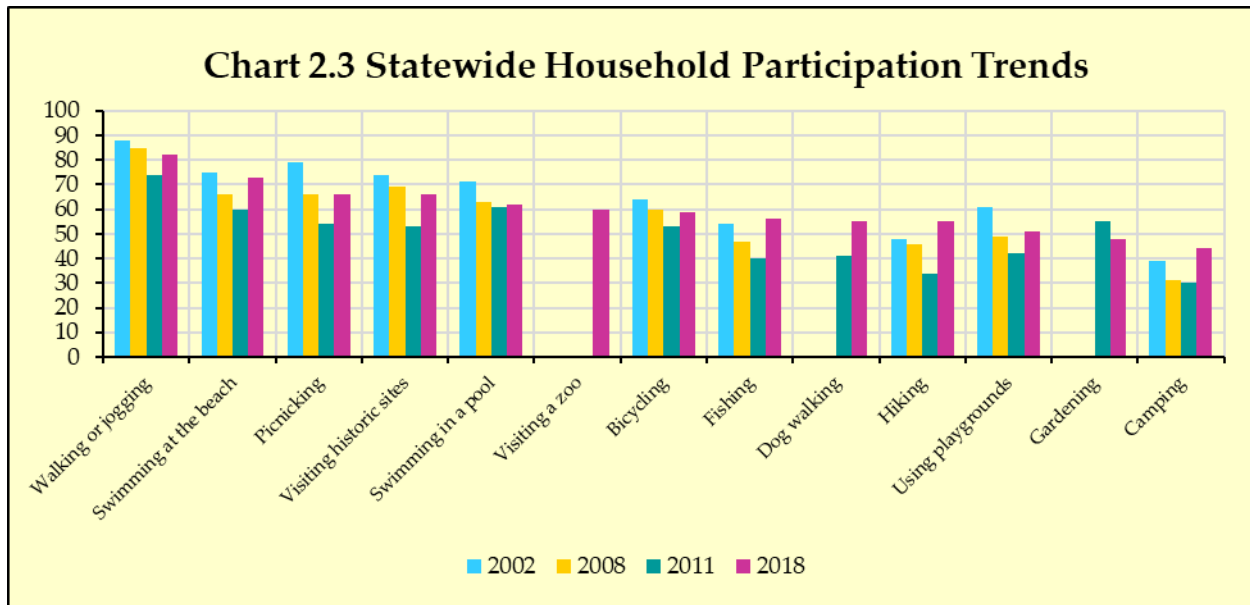
### *Participation in Outdoor Recreation*

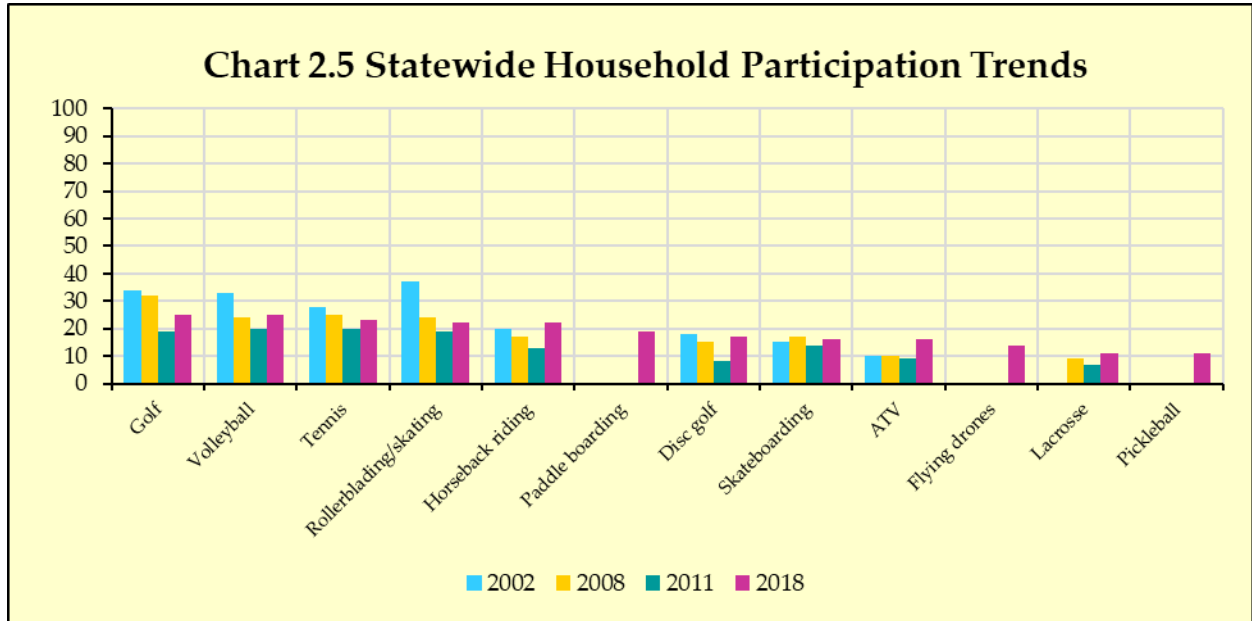
Delawareans participate in a variety of outdoor recreation activities. During the 2018 Survey, Delaware residents were asked which three activities have they personally participated most often in the last 12 months. Statewide, well over one-third of the respondents (39%) have personally walked or jogged, making this the most popular individual outdoor activity. Other popular individual activities include: hiking (22%); fishing (18%); swimming at the beach (17%); dog walking (16%); bicycling (15%); hunting (9%); and camping (8%). Interestingly, five percent (5%) of residents responded that they have not participated in any kind of outdoor recreation activity in the past year.

In addition, respondents were asked 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 (82% planned household participation). Subsequent top responses include: swimming at the beach (73%); visiting historic sites (66%); picnicking (66%); swimming in a pool (62%); visiting a zoo (60%); bicycling (59%); fishing (56%); dog walking (55%); hiking (55%); and using playgrounds (51%). Although there are

some regional variations, there is similarity in the top activities among the Planning Regions and oversampled municipalities (see Charts 2.10 through 2.20).

Almost every outdoor recreational activity in the survey has seen an increase in participation since 2011. This reverses the downward trend seen among the 2002, 2008, and 2011 surveys. That decline in participation was most likely attributed to the slow-down in the economy. Leisure time activities were likely sacrificed when households cutback their spending. More recently, the economy is improving. Charts 2.3 through 2.5 illustrate the 16 year statewide outdoor recreation participation trend for Delaware households. Some activities were added to the survey questionnaire that were not



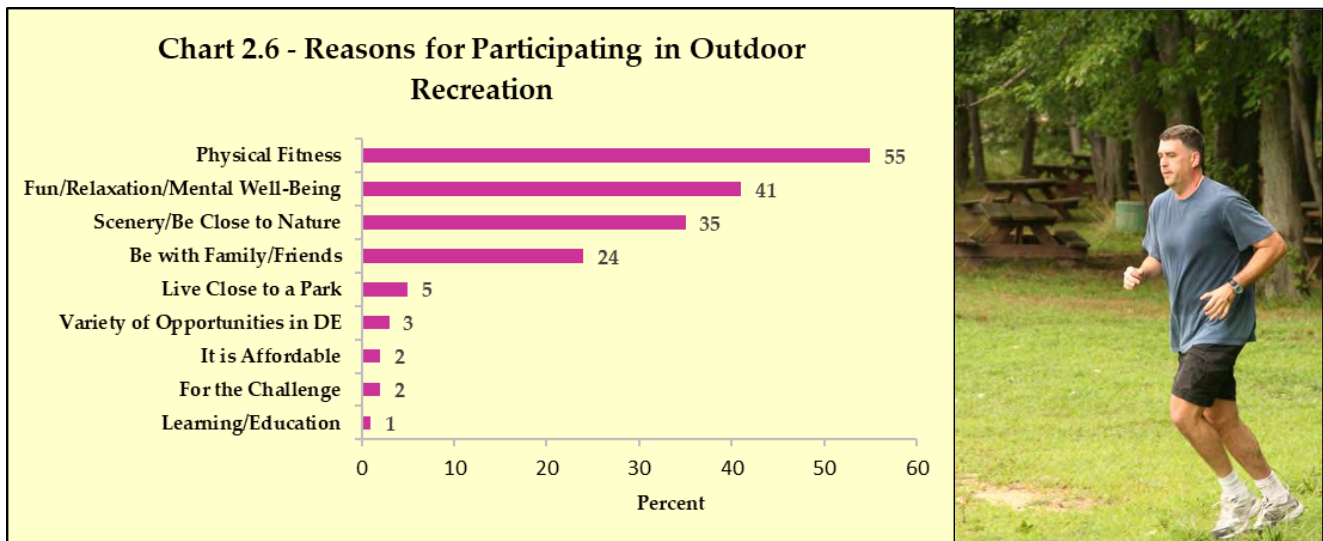


asked in previous surveys.

Walking/Jogging and Swimming at the Beach are the top two activities in all regions. There is variation in the remaining activities among regions. Activities with the largest regional variations in household participation include powerboating, fishing, hiking, and visiting a zoo. These variations are most likely due to access and availability.

### *Reasons for Participation and for Choosing Specific Areas*

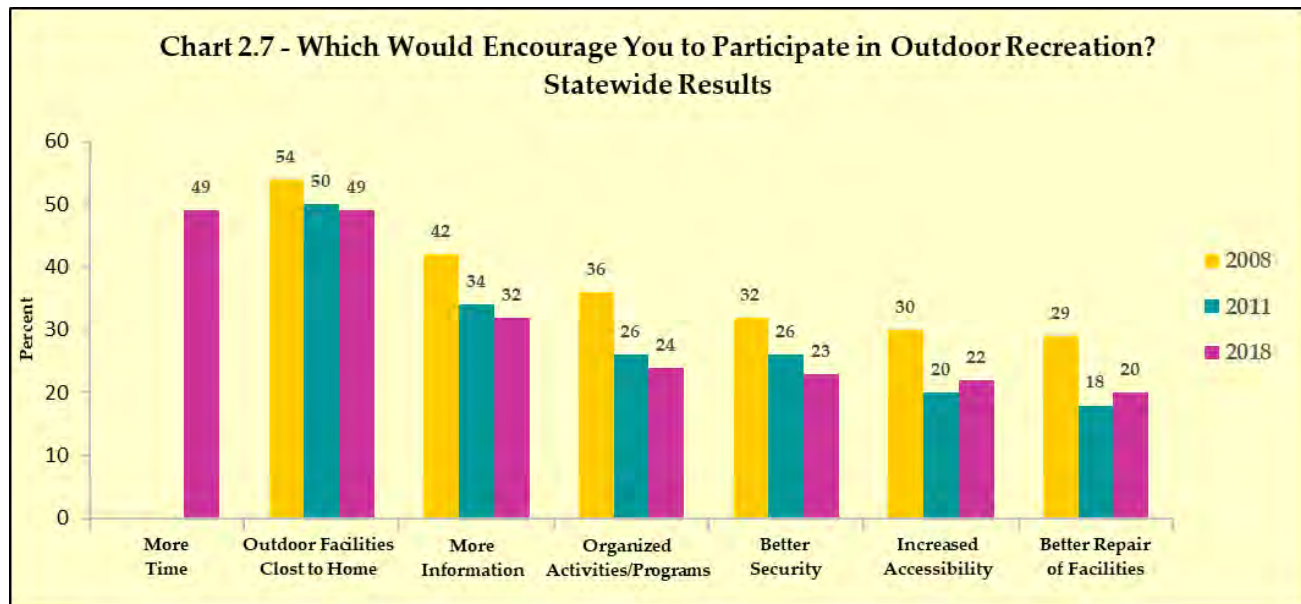
The top reasons that residents gave for participating in outdoor recreation is for physical fitness (55%), followed by fun/relaxation/mental well-being (41%), to enjoy the scenery/be close to nature (35%), and to be with family and friends (24%). These and





other reasons are shown in Chart 2.6. Physical fitness continues to be the biggest motive for participating in outdoor recreation. Similar responses are seen in each SCORP Planning Region and Oversampled Municipality, though some show fun/relaxation/mental well-being above physical fitness. 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. It is still second in Milford at 34% but behind fun/relaxation/mental well-being at 54%.

The survey respondents were asked whether each of seven items (listed in Chart 2.7 below) would increase their participation in outdoor recreation in Delaware. More time (49%) and proximity to recreational facilities (49%) were tied as the most important factors for increasing participation in outdoor recreation in Delaware. This is followed by having more information about facilities and recreation opportunities (32%); more opportunities to participate in organized activities/programs (24%); better security within facilities (23%); increased ADA accessibility (22%); and better repair of facilities (20%). The regional survey results show some differences; “more outdoor facilities and opportunities close to where you live” had a higher response by Western Sussex County residents (Region 4) compared to other regions. Chart 2.7 outlines a 10-year trend (three survey periods) in what would encourage residents to more actively participate in outdoor recreation in Delaware.



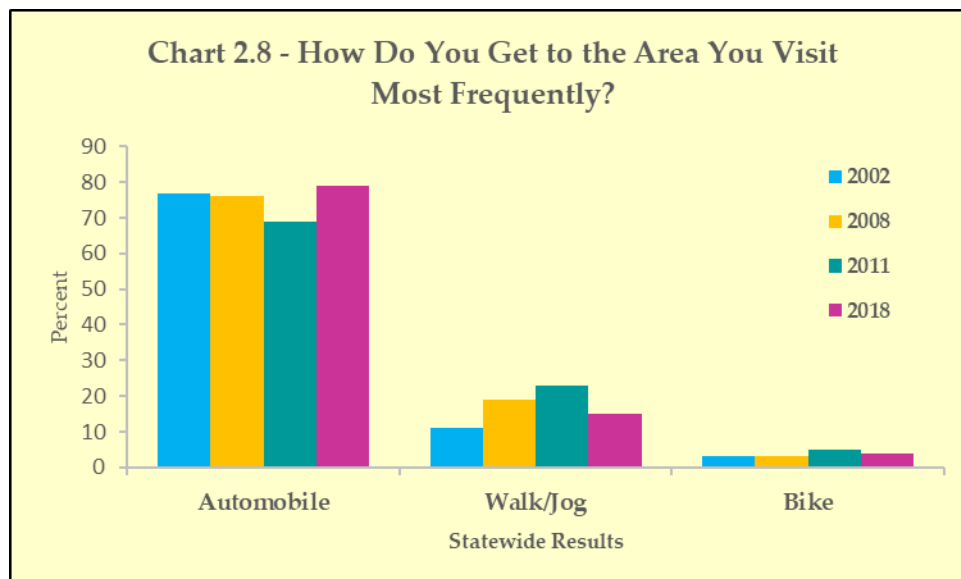
About 41% of Delaware residents said that there is a facility that they would like to see added to a park in their community. Most commonly, they wanted restrooms,

indoor recreation facilities, off-leash dog areas, hiking/walking trails, and playgrounds. Some categories could be combined. For example, the categories of ‘hiking/walking trails’, ‘paved walkways’, ‘trails/paths’, and ‘trails for bikes/pedestrians’ could be generalized into one category. If you combine categories in this way, pathways/trails, playgrounds, and restrooms become the top three facilities wanted in every region.

### *Accessing Facilities and the Built Environment*

The majority of Delaware residents who have participated in at least one outdoor activity in the past twelve months (58%) live within 5 miles of the outdoor recreation area they most frequently visit. Nonetheless, there are some who travel farther, with 30% of these respondents traveling 10 or more miles. New Castle County residents have the shortest travel distance. They have the lowest mean distance (6.6 miles), and they have the highest percentage that live within the ≤5 mile range (74%). Residents of western Sussex County (Region 4) have the longest travel distance, a mean of 15.2 miles to the area they visit the most.

The automobile (79%) is the most common mode of transportation that people use to get to their most visited outdoor recreation area, distantly followed by walking/jogging (15%), bicycling (4%), and to a lesser extent, public transportation (<0.5%) or motorcycle (0.5%). While the trend for walking/jogging increased in the 2008 and 2011 surveys, it dipped in 2018. This may be due, at least in part, to gas prices being significantly lower than in 2008 and 2011.



Due to the number of alternative transportation facilities, the regional breakdown shows that residents of Region 1 (northern New Castle County) are most likely to walk or jog. Residents of Region 5 (eastern 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.

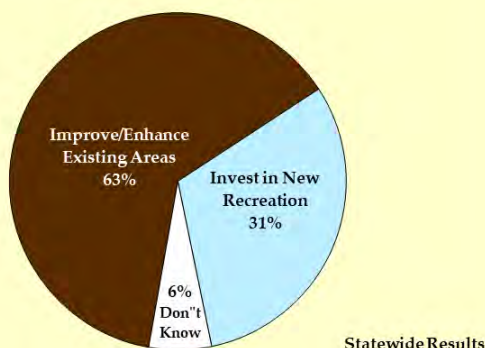
Survey respondents who did not walk or bike to the area they use the most were asked about reasoning. Statewide, respondents listed distance/too far (61%) as the top reason for not walking or biking to the park or recreation area they use the most. Other responses included feeling unsafe/dangerous roads (28%), too much to bring/have children or pets with me (9%), health and/or age (7%), and other (6%) which includes lack of sidewalks/travel lanes/signals.

### *Priorities for Funding and for State and Local Officials*

Parks and recreation facilities should be considered essential components of a vibrant community. When asked if public recreation programs are a luxury rather than a necessity, a majority of Delaware residents (66%) feel programs are a necessity. Another example of the importance of parks and open spaces is related to funding. A large majority of Delaware residents (70%) agree that parks, wildlife areas, and state forests 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 (63%) rather than to be used for construction of new parks and recreation areas (31%). Region 3 residents are the most likely to say that they want to improve/enhance existing parks and recreation areas. In the municipal analysis, Milford residents are most likely to want improvements and enhancements to existing parks and recreation areas.

Chart 2.9 If Funding Were Available, How Should It Be Spent?





As mentioned in the Introduction, a core component necessary to determine outdoor recreation priorities is understanding future recreation participation. The following charts (Charts 2.10 through 2.20) illustrate survey responses in which any member of the household participates in a list of 37 outdoor recreation activities over the next 12 months. The results approximate the demand for facilities in the future and indicates outdoor recreation needs statewide, regionally, and locally. These findings vary regionally and locally and are a good starting point for discussing future investments. The TAC has agreed upon regional priorities as indicated in Figure 2.1. The 'High Priorities' are based on household participation at 50% or greater. The 'Moderate Priorities' are based on household participation at 20% through 49%. The previous SCORP divided categories based upon breaks or greater differences in participation levels, which were not consistent among regions.

Chart 2.10 - Household Outdoor Recreation Participation  
 Statewide

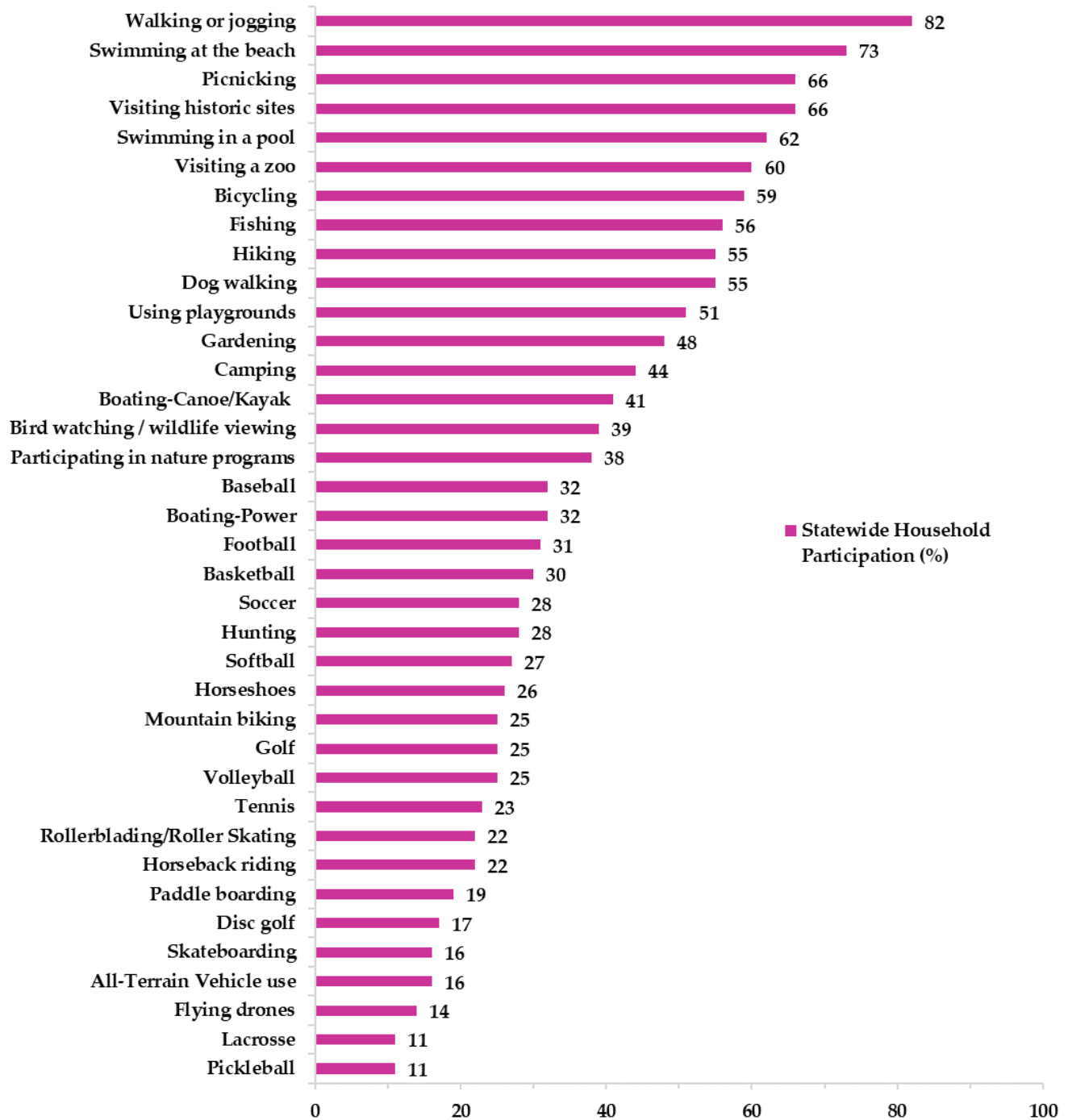


Chart 2.11 - Household Outdoor Recreation Participation  
 Region 1

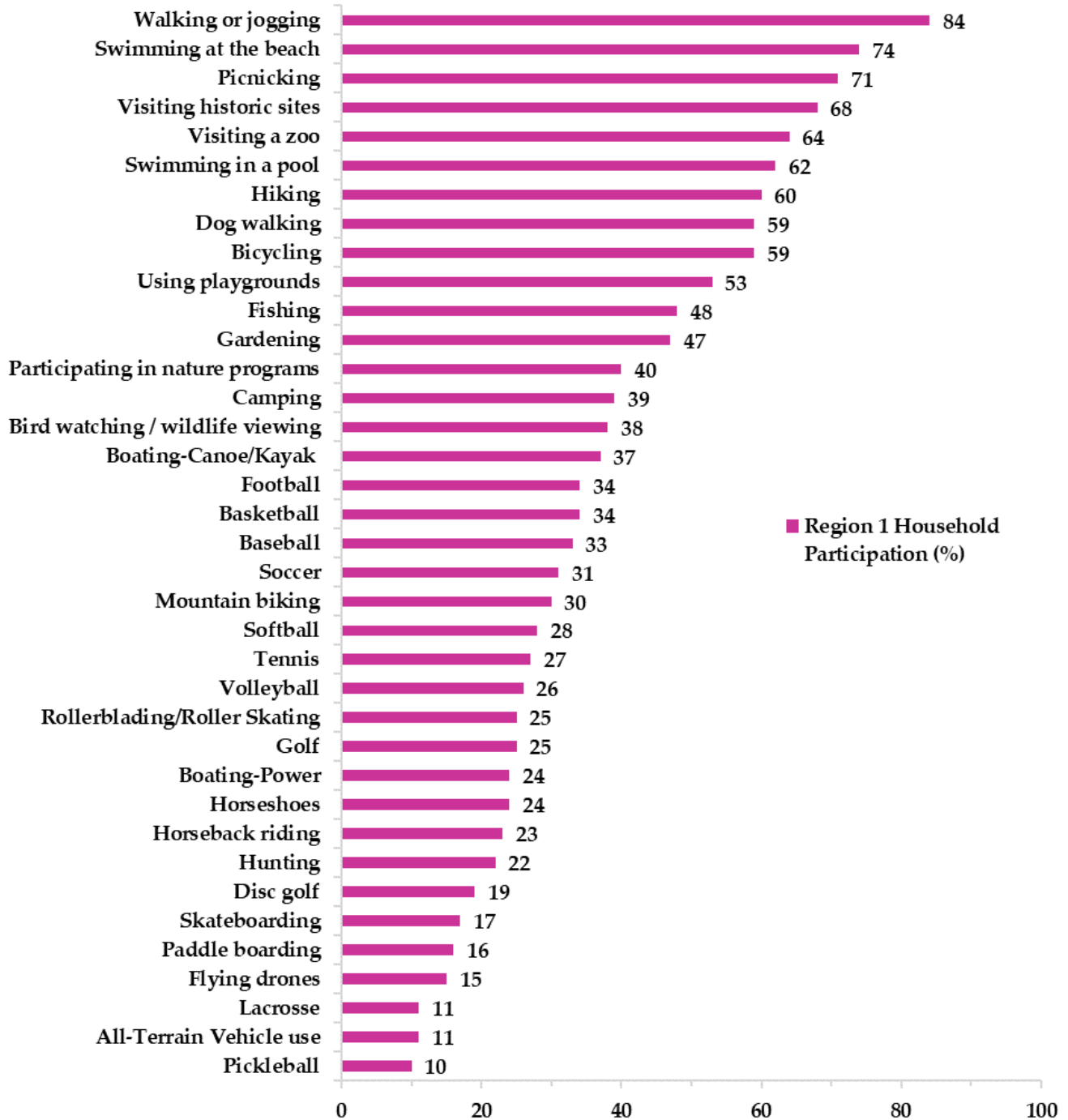




Chart 2.12 - Household Outdoor Recreation Participation  
 Region 2

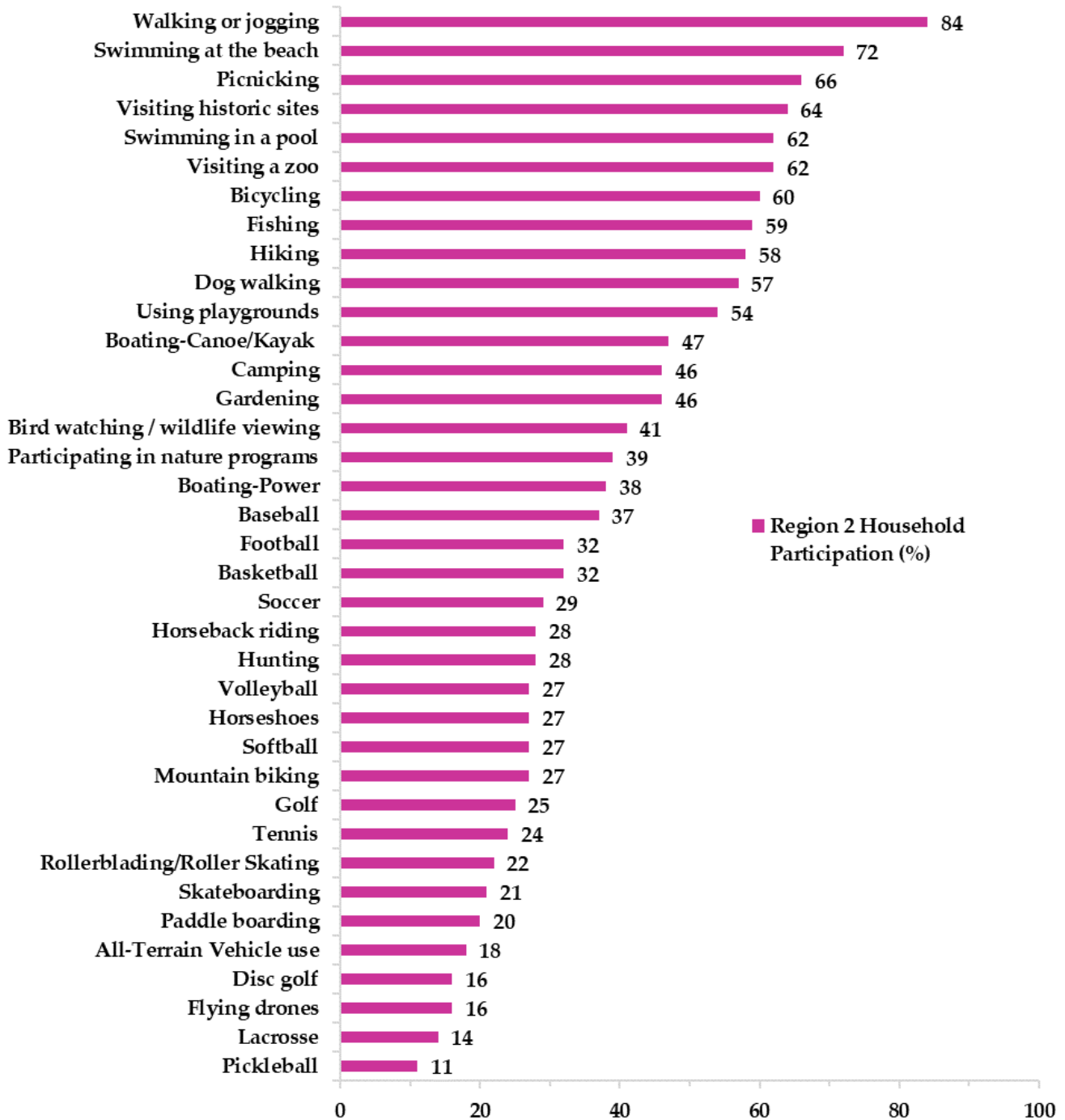
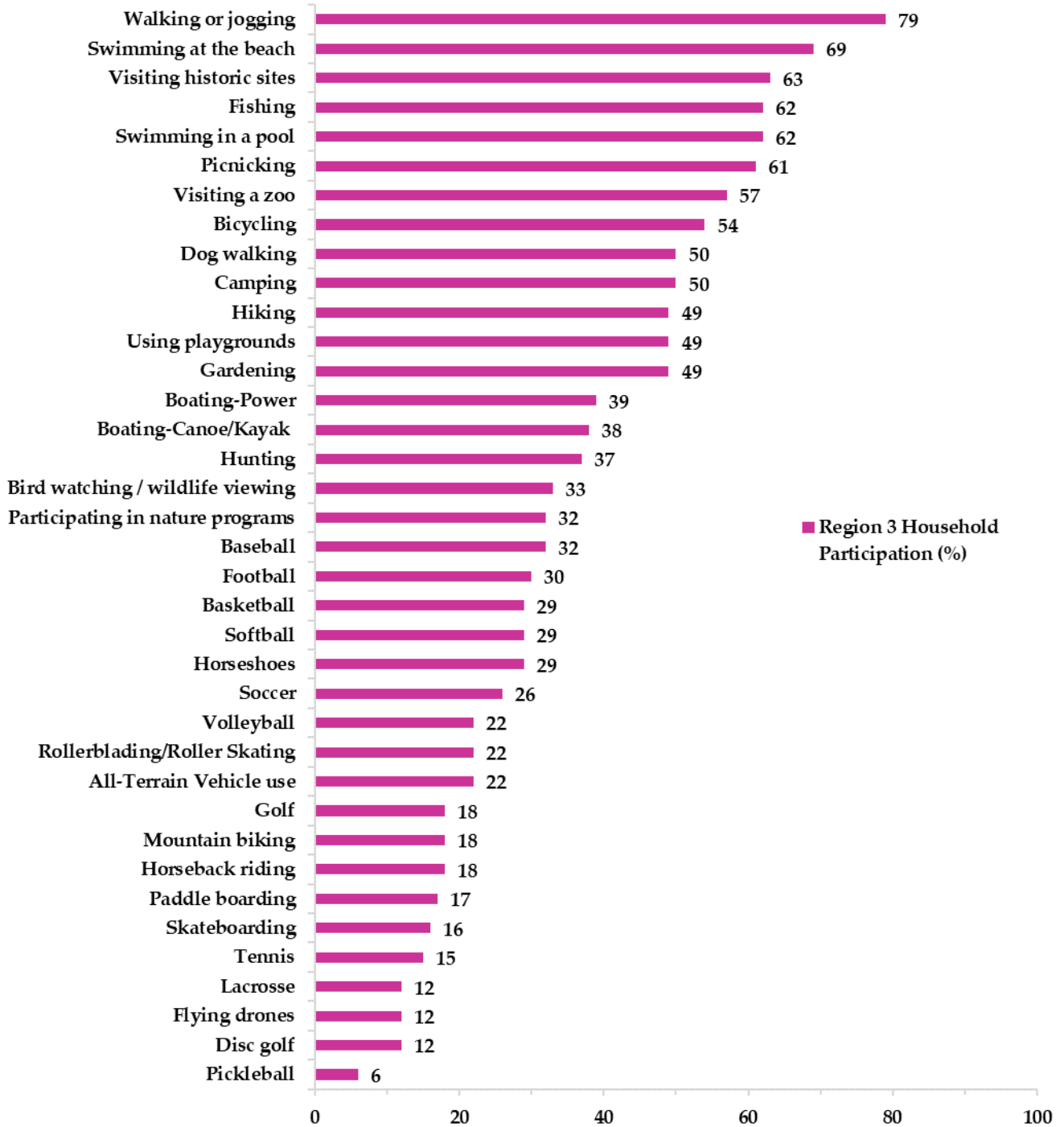


Chart 2.13 - Household Outdoor Recreation Participation  
 Region 3



**Chart 2.14 - Household Outdoor Recreation Participation  
 Region 4**

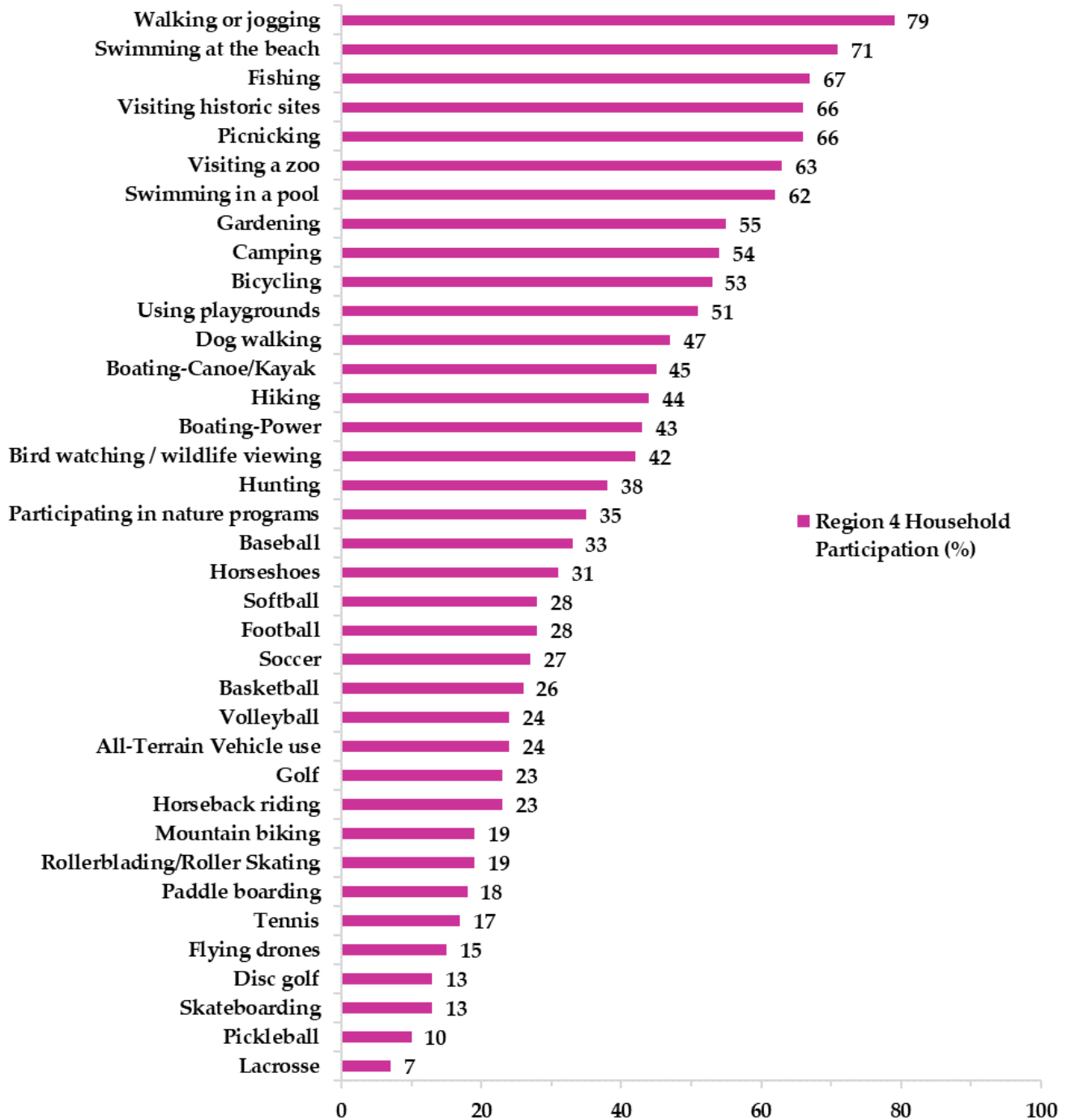




Chart 2.15 - Household Outdoor Recreation Participation  
 Region 5

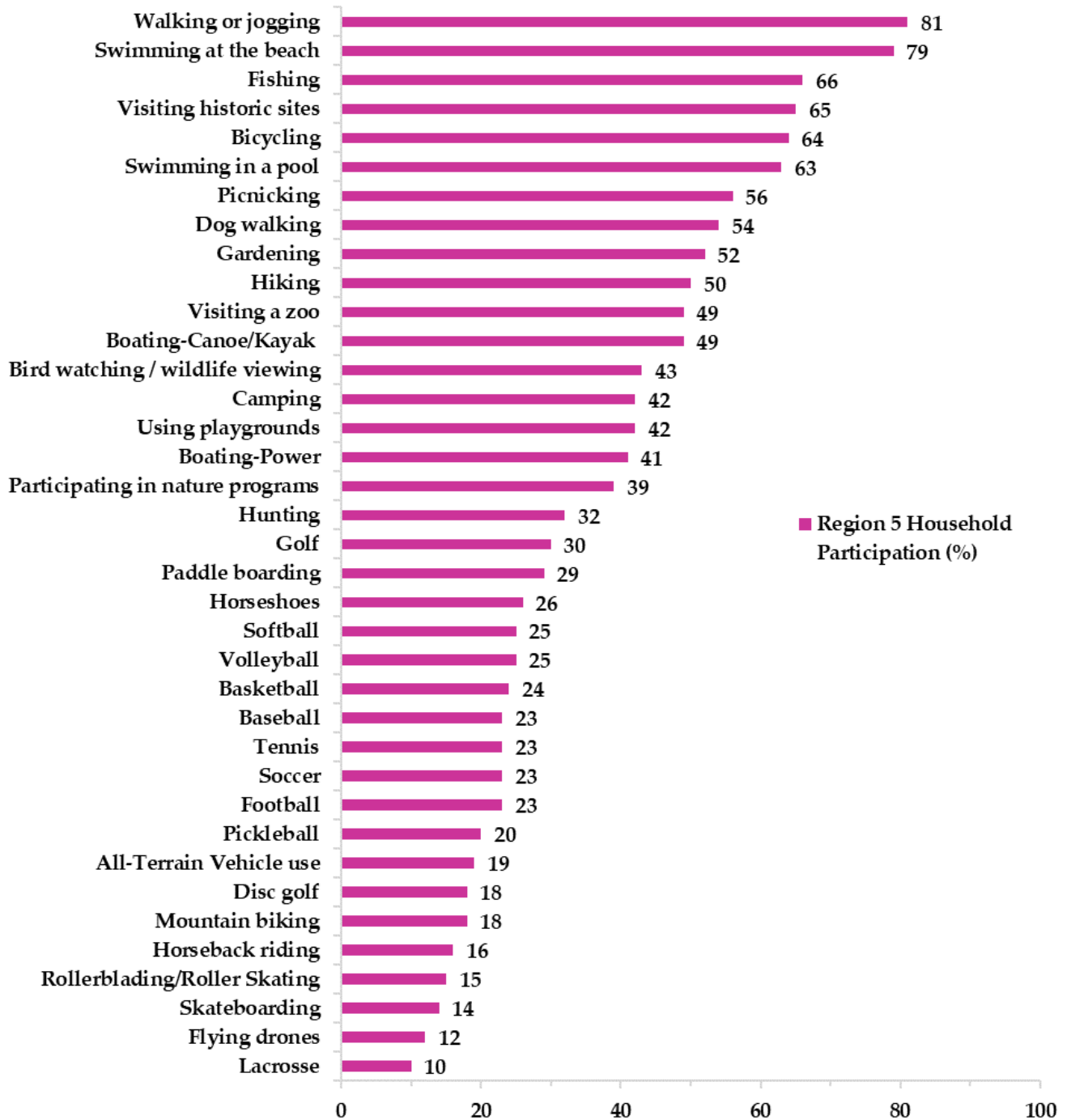
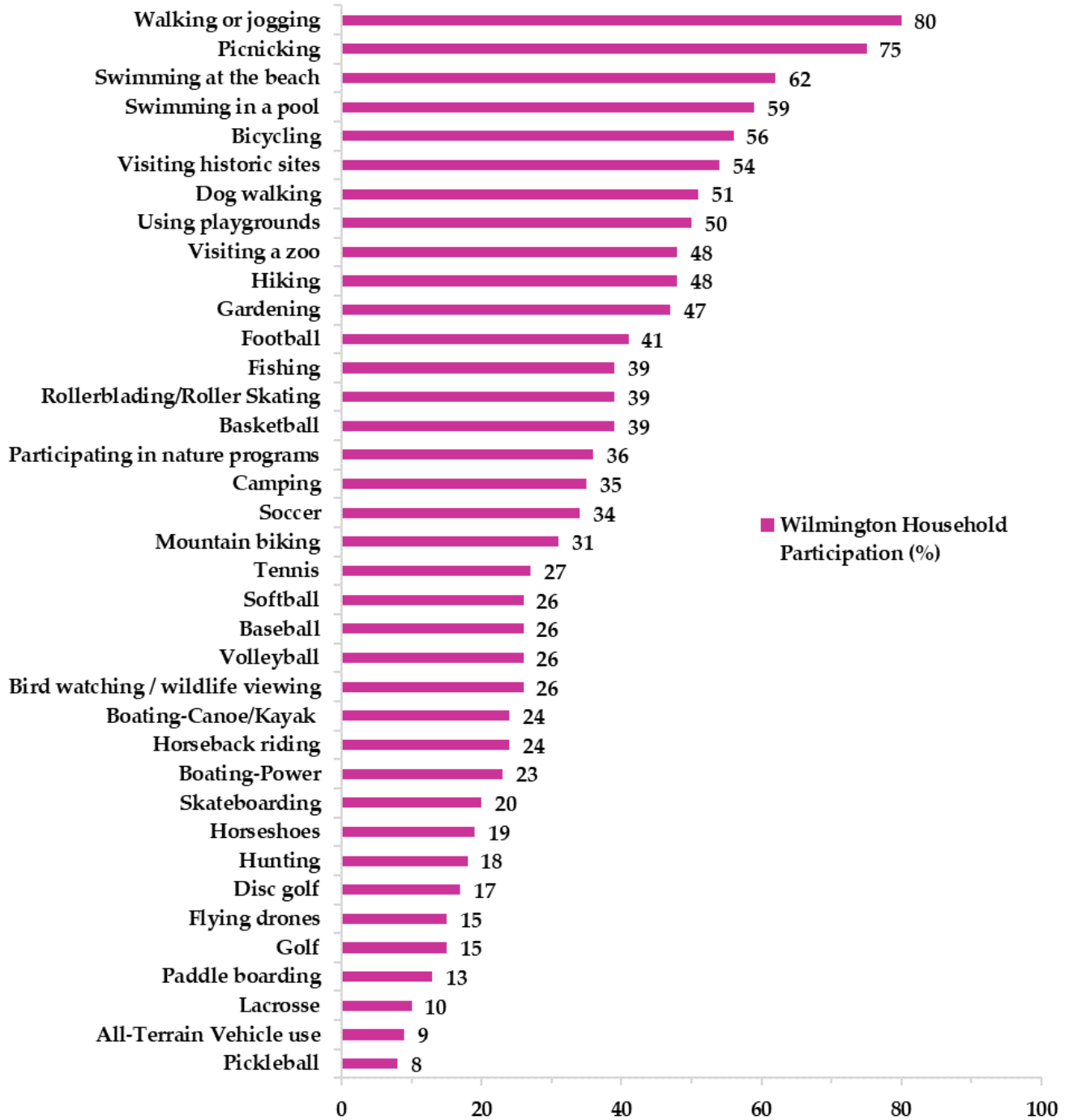
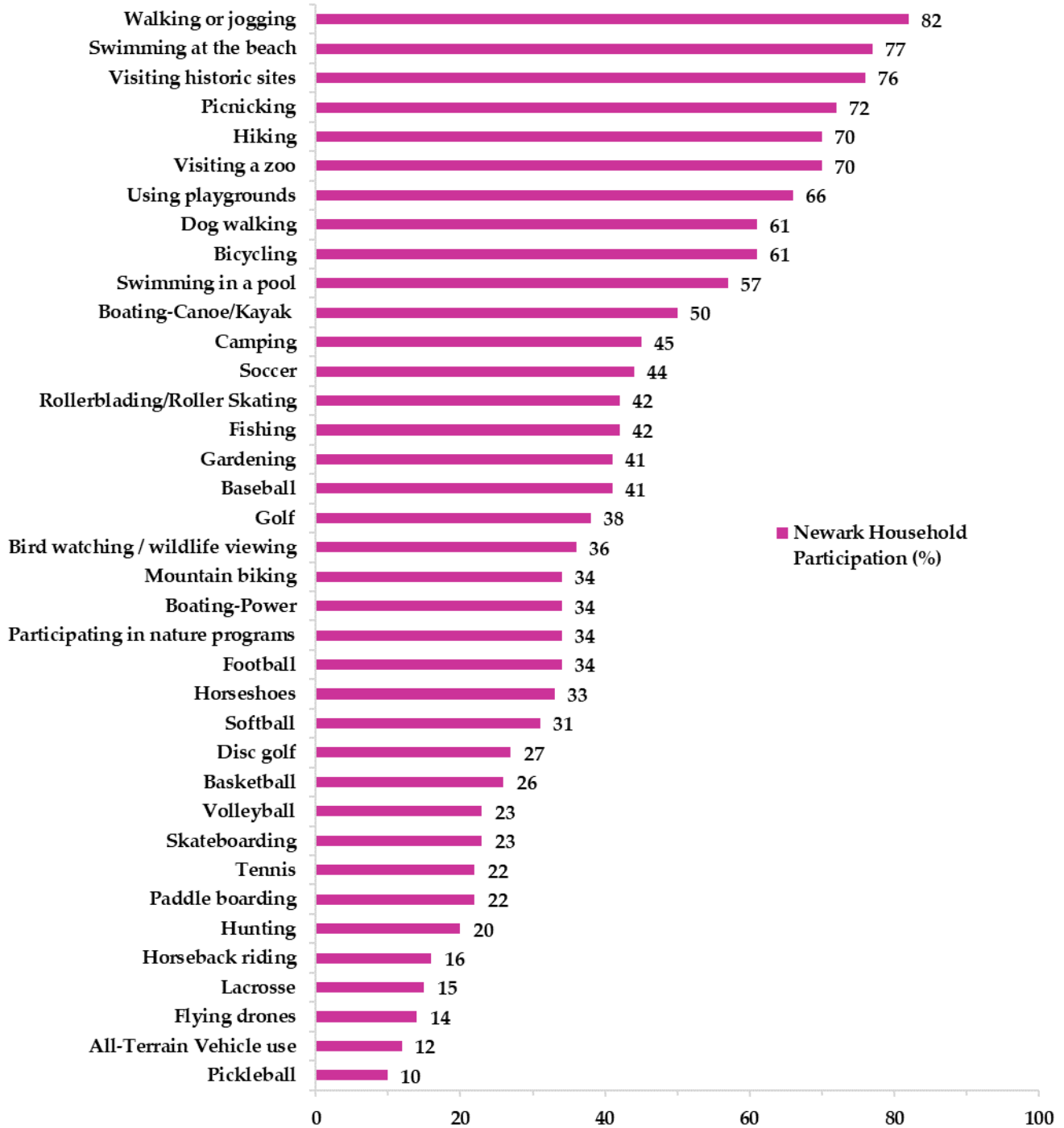


Chart 2.16 - Household Outdoor Recreation Participation  
Wilmington



**Chart 2.17 - Household Outdoor Recreation Participation  
 Newark**



**Chart 2.18 - Household Outdoor Recreation Participation  
 Dover**

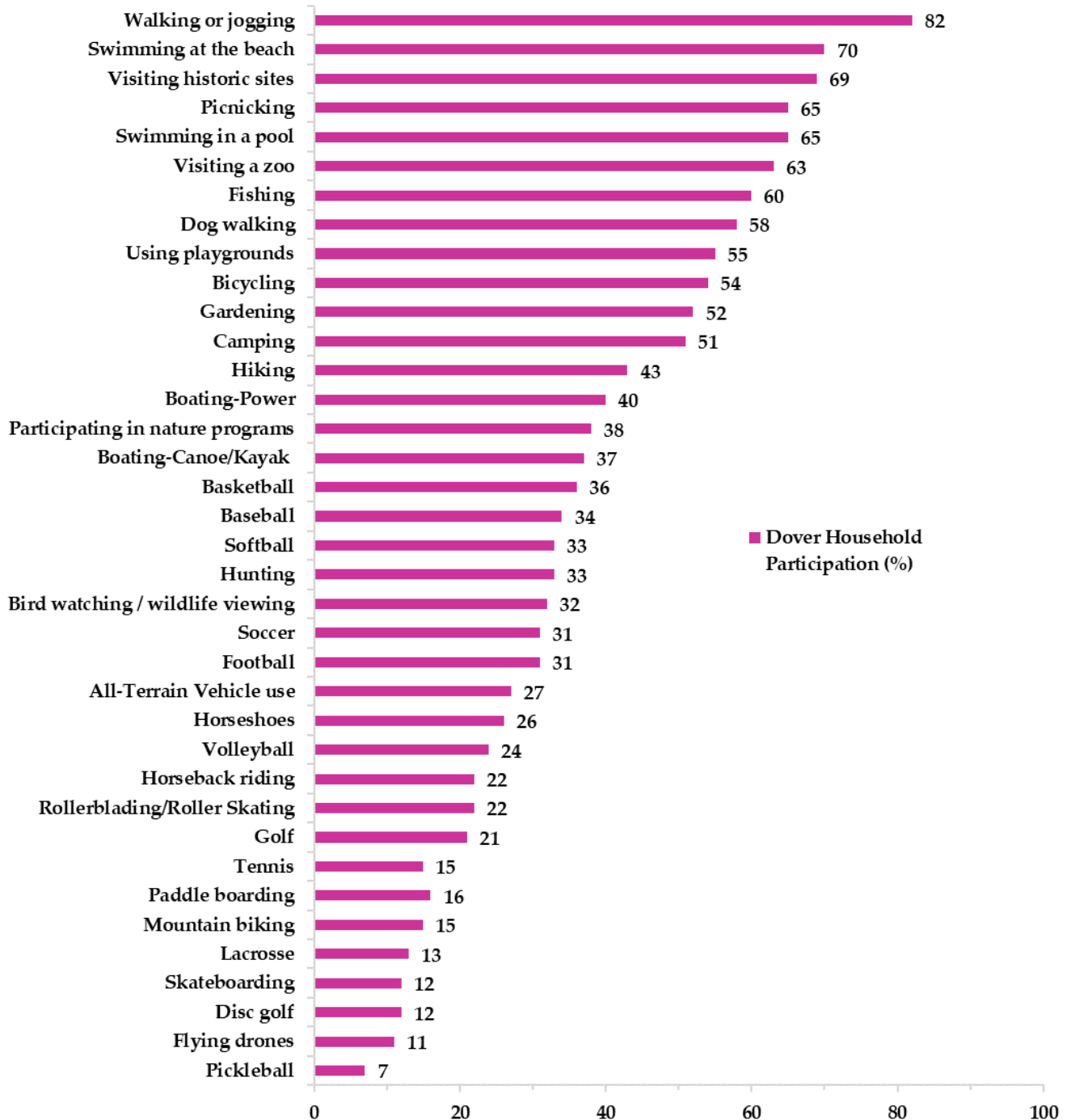




Chart 2.19 - Household Outdoor Recreation Participation  
Milford

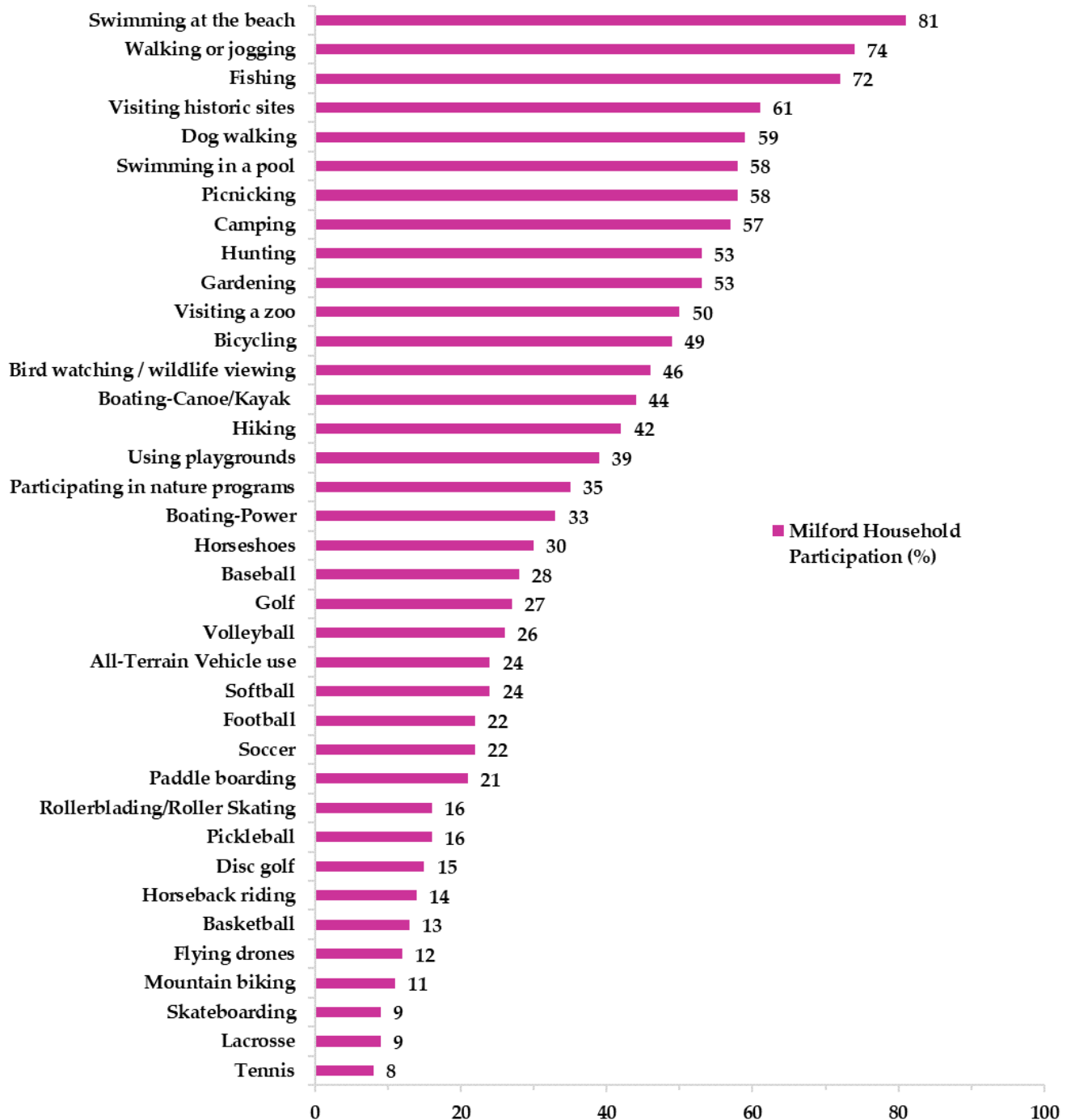
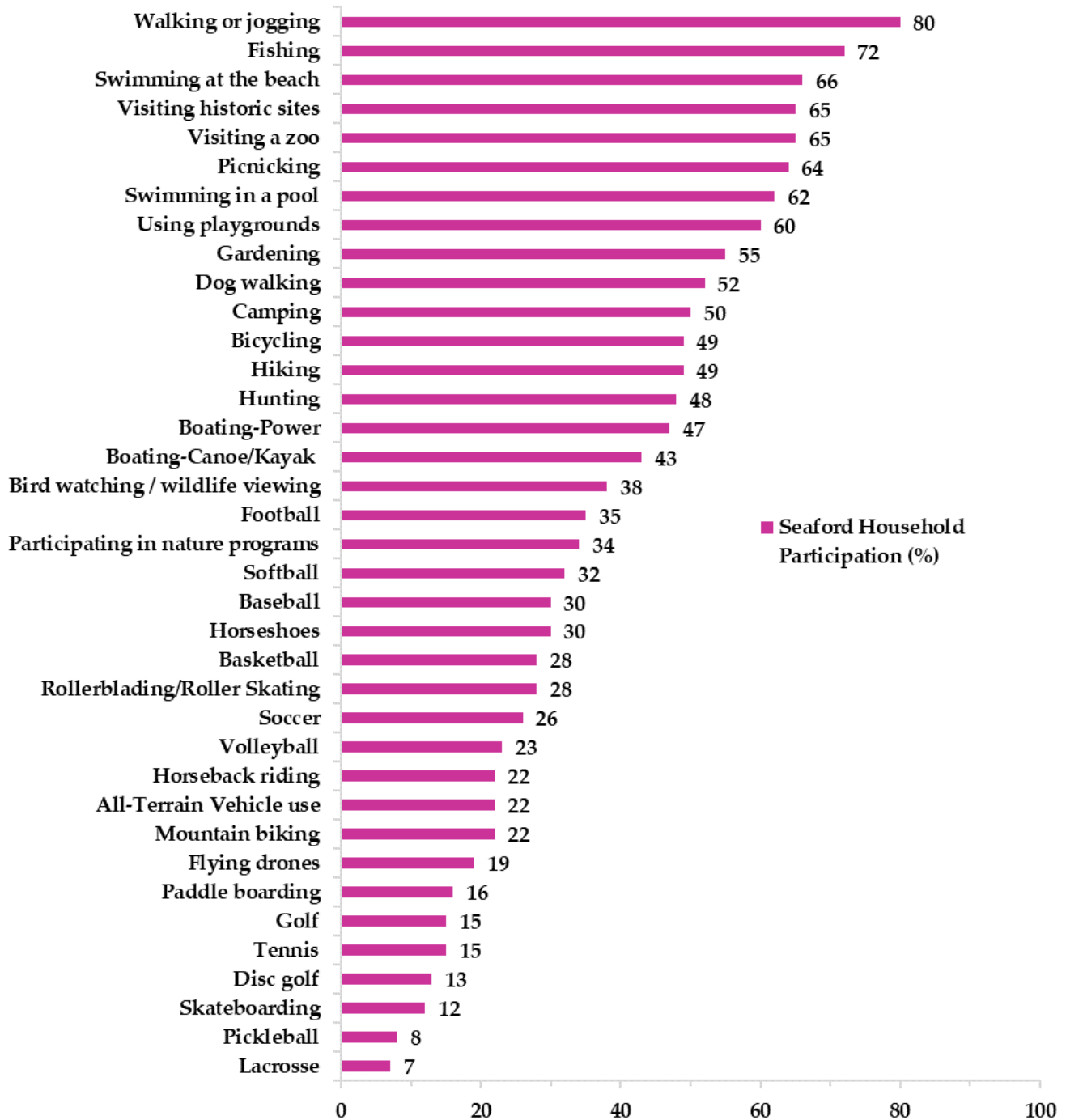


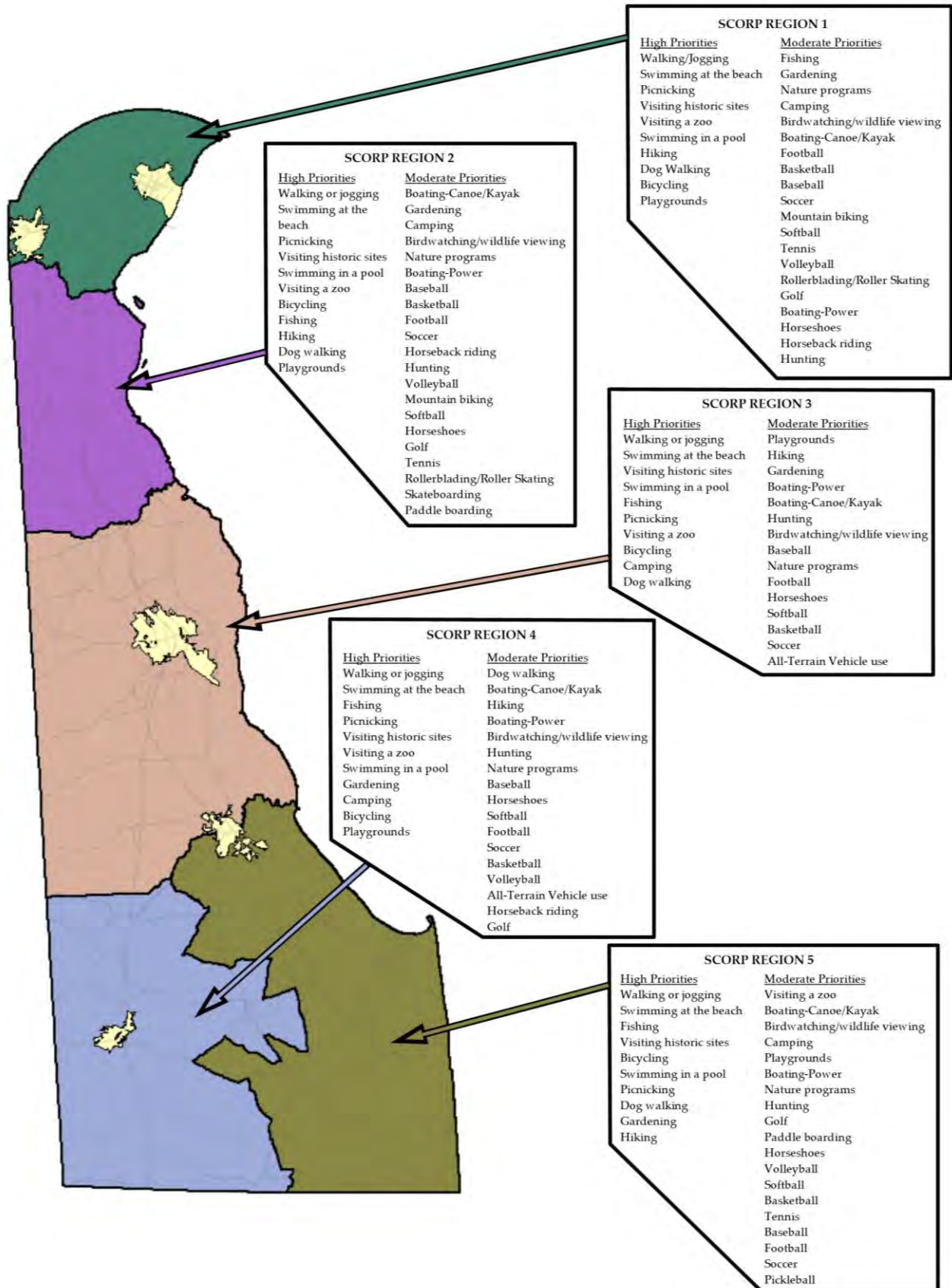
Chart 2.20 - Household Outdoor Recreation Participation  
 Seaford



# DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY

## Statewide Comprehensive Outdoor Recreation Plan

Figure 2.1 – SCORP Regional Priorities



## Outdoor Recreation and Conservation Focus Areas

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Throughout the preparation of the 2018 SCORP, meaningful comments were gathered from numerous public and professional venues including the phone survey, online surveys, and workshop discussions. Furthermore, issues were identified by 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.

A table of goals and recommendations can be found at the end of each section. A complete, combined list of all recommendations 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 (TAC) 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 are identified in the tables of recommendations. It is important to note that implementation should not be limited to those individuals or organizations that are listed. Also the TAC suggested an annual meeting to review SCORP Recommendations and accomplishments to serve as progress updates and an implementation reminder.



### Acronyms for Implementers

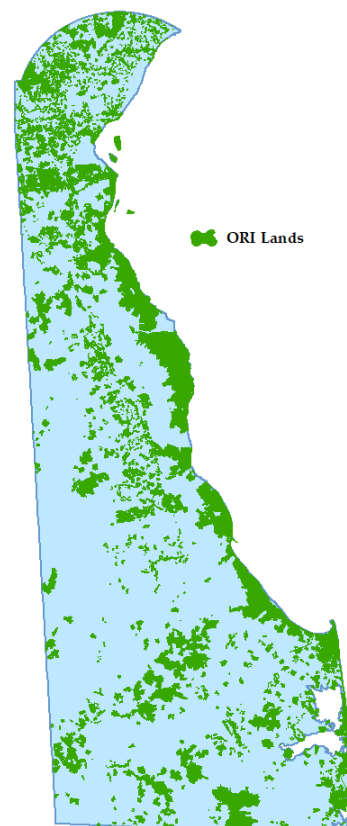
CIN	Children In Nature Taskforce
DAEE	Delaware Association for Environmental Education
DART	Delaware Transit Corporation
DE HEAL	Delaware Coalition for Healthy Eating and Active Living
DeIDOT	Delaware Department of Transportation
DF&W	Delaware Division of Fish and Wildlife
DNREC	Delaware Department of 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
DSBDT	Delaware Division of Small Business, Development, and Tourism
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

## Outdoor Recreation Inventory

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

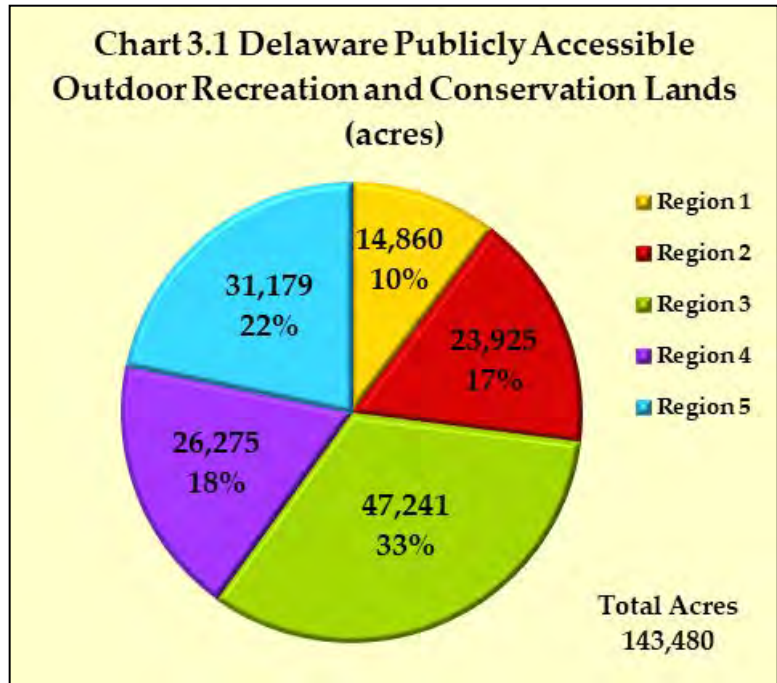
In order to analyze and prioritize outdoor recreation needs, understanding the location and condition of existing facilities is essential. The Delaware Division of Parks and Recreation maintains an Outdoor Recreation Inventory (ORI) for the state. The ORI is an asset registry of open space, protected 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; National Parks 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. One park district, fifty-seven municipalities, and three county governments own and manage park lands and outdoor recreational facilities.

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, 2011 and 2017. These site visits are conducted for the SCORP update to verify the parklands that were purchased or improved with LWCF grants remain safe and inviting outdoor recreation destinations for the public to enjoy. In addition to verifying boundaries and GPS locations of all park amenities, this most recent update includes



facility condition, levels of accessibility, and approximate age of facilities. Chart 3.1 displays the recreation-related acreage for local, county, state, and federal public lands by SCORP Planning Region and Table 3.1 summarizes individual outdoor recreation facilities for each Region.

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 144,000 acres of land that is publicly accessible for active and eco-based outdoor recreation. Delaware’s outdoor recreation estate is distributed among the five SCORP planning regions with Region 3 having the largest percentage (32.9%) of land dedicated as public recreation space. Region 5 (21.7%), Region 4 (18.3%), and Region 2 (16.7%), follow with slightly less land dedicated for public outdoor recreation. Region 1 (10.4%) has the least acreage in the public domain, though it is the most densely populated Region.

Region 3 has the largest acreage, but most of that land consists of large tracts of conservation lands, wetlands, and wildlife refuges that are suited for passive recreation activities. Despite having the smallest acreage, Region 1 has the most freshwater fishing areas, sport fields, playgrounds, and other active recreation facilities. The ORI captures the multiple factors involved with assessing recreational opportunities and allows for faster and easier analyses by those who manage recreation.

**Table 3.1 – 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	16	17
	Swimming Pool	9	3	1	1	1	15
	Spray Park	5	0	0	0	0	5
	Fishing Area (saltwater)	2	7	7	0	31	47
	Fishing Area (freshwater)	43	8	26	24	22	123
	Piers	3	11	11	7	25	57
	Marinas	0	1	0	1	2	4
	Boat Ramps	2	10	26	13	23	74
Field Sport Facilities	Baseball/Softball Fields	179	28	57	40	28	332
	Football Fields	6	4	2	5	0	17
	Soccer Fields	47	4	15	13	2	81
	Tracks	2	1	0	1	0	4
	Multipurpose Fields	29	12	15	5	3	64
Court Sport Facilities	Tennis Courts	104	20	10	5	12	151
	Basketball Courts	168	14	15	3	13	213
	Volleyball Courts	16	2	12	2	6	38
Picnic & Playground Facilities	Playgrounds	239	83	43	14	26	405
	Tot Lots	136	39	21	11	17	224
	Swings	382	63	63	46	35	589
	Tot Swings	401	64	41	17	27	550
	Pavillion	84	52	38	22	54	250
	Picnic Area	142	33	27	22	34	258
Camping Facilities	RV & Tent Camping	0	1	1	1	3	6
	Youth Camping	2	1	1	1	2	7
	Primitive Camping	1	5	1	0	0	7
	Cabins	0	0	12	9	12	33
	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	3	4	2	0	1	10
	Disc Golf	4	2	3	1	1	11
	Golf	4	2	2	1	1	10
	Dog Areas	7	5	4	0	0	16
	Nature Centers	5	2	6	2	4	19

*This chart does not represent recreational facilities on school grounds.*



As Delaware's outdoor recreational inventory continues to grow, either with new lands or development of existing ones, it is crucial to update the ORI database. An accurate database enables a better understanding of facilities available for public use. The Division of Parks and Recreation continues to update the spatial ORI dataset and shares this information with local, county, and other state agencies. Information that is collected and updated include ownership, management, acreage, specific amenities and their locations, conditions, approximate age, and accessibility. The ORI is a critical tool for locating and mapping publicly-held parks, forests, wildlife areas, and outdoor recreation facilities. The Play Outside web-application (see below) also provides mapping and general ORI information on the internet.

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 more thorough analysis of outdoor recreation supply.

With recommendation from the previous SCORP, the Delaware Division of Parks and Recreation has created a searchable online website for statewide recreation resources. This web application is called Play Outside ([de.gov/playoutside](http://de.gov/playoutside)). Using an interactive online interface, the ORI may 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 close-to-work opportunities. For data managers, the information assists in monitoring all publicly-owned park, recreation, and conservation sites for maintenance and stewardship responsibility. With additional improvements to the ORI, there can be better tracking of additional facility conditions. Play Outside can also be improved, such as identifying areas with Americans with Disabilities Act compliant facilities. See Appendix A for a Play Outside overview.

### *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, 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 developed a location-based application, to create GIS models that assist in park and recreation planning. The three models developed use spatial 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. A network analysis can easily and accurately assist park planners at a local or regional level. The Delaware Division of Parks and Recreation continues to maintain and update the data for level of service analysis. The information can help prioritize funding decisions and better position governments to meet outdoor recreation needs. The following sections are examples of how the spatial analysis tools can be utilized.

### *Walkshed and Driveshed Analyses*

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. The walkshed analysis provided by the Division of Parks and Recreation is the most accurate tool to estimate a park or recreation facility's level of service. Figures 3.1 through 3.5 demonstrate level of service analyses for playgrounds in each SCORP Region using a 5-minute and a 15-minute walkshed. The models show that Region 1 has the highest portion of its population within a 5-minute walk to a playground (25%), and Region 5 has the lowest portion of population within a 15-minute walk to a playground (17%).

Figure 3.1 – Walkshed Level of Service Analysis for Playgrounds in Region 1

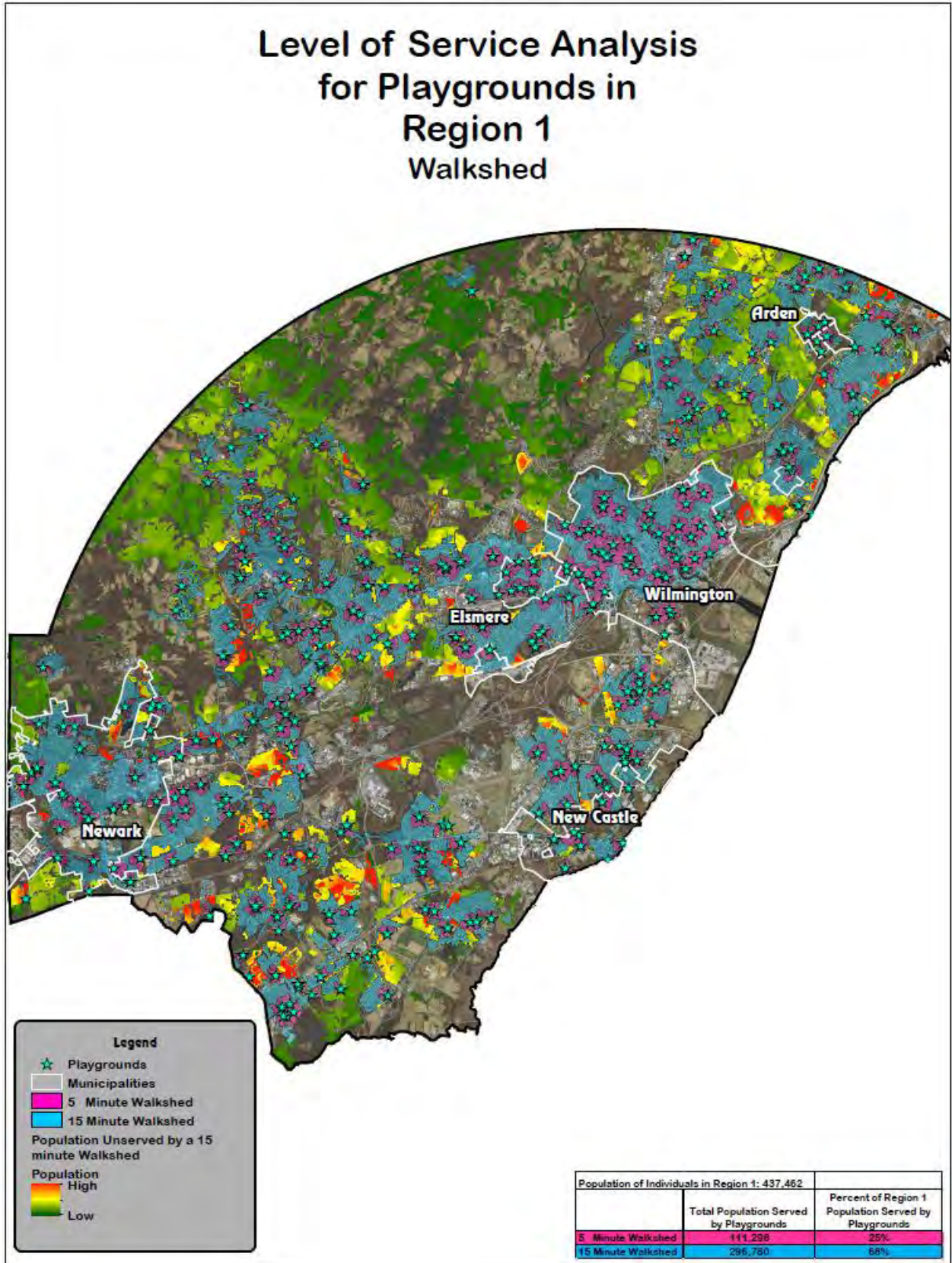




Figure 3.2 – Walkshed Level of Service Analysis for Playgrounds in Region 2

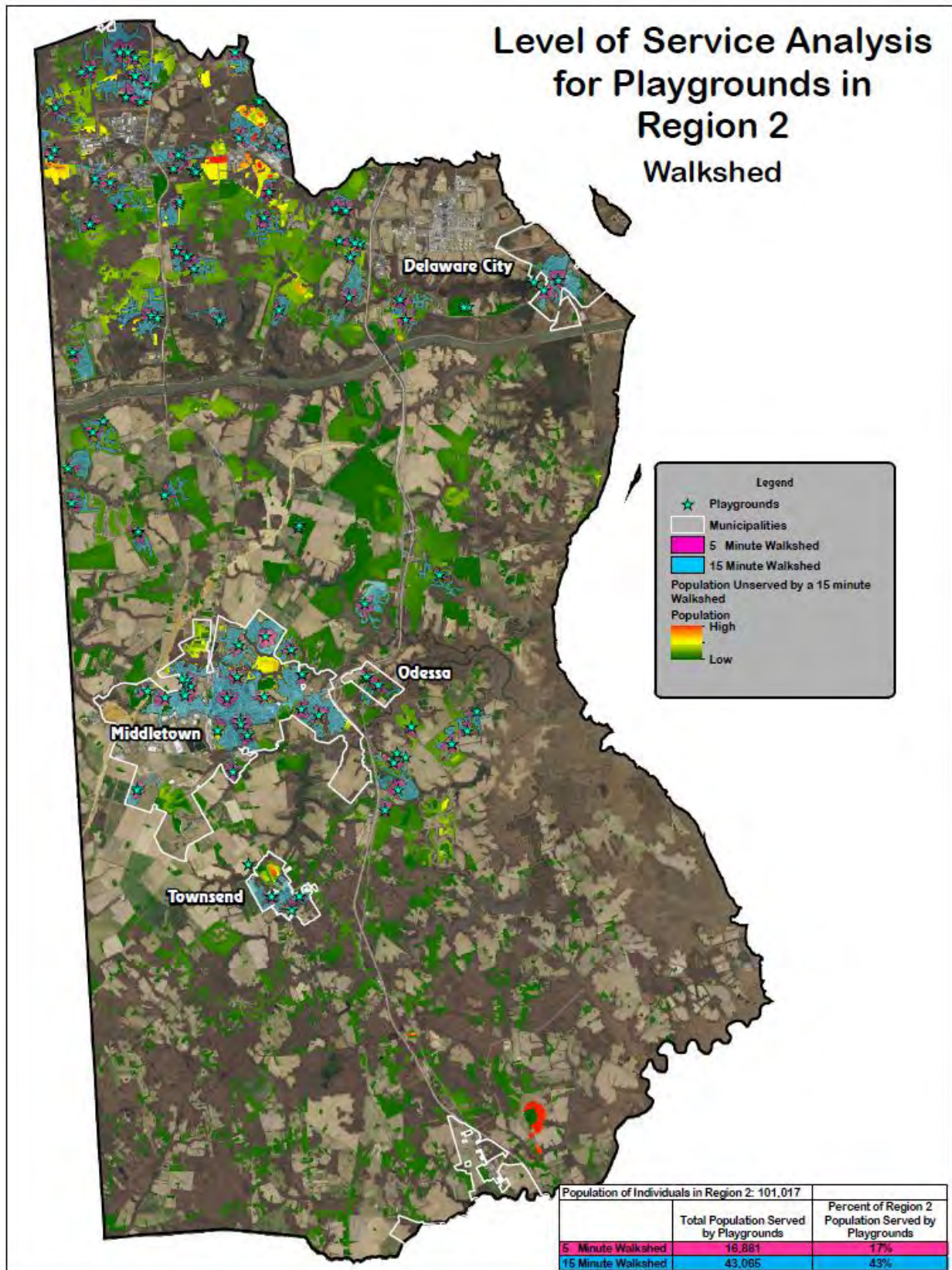




Figure 3.3 – Walkshed Level of Service Analysis for Playgrounds in Region 3

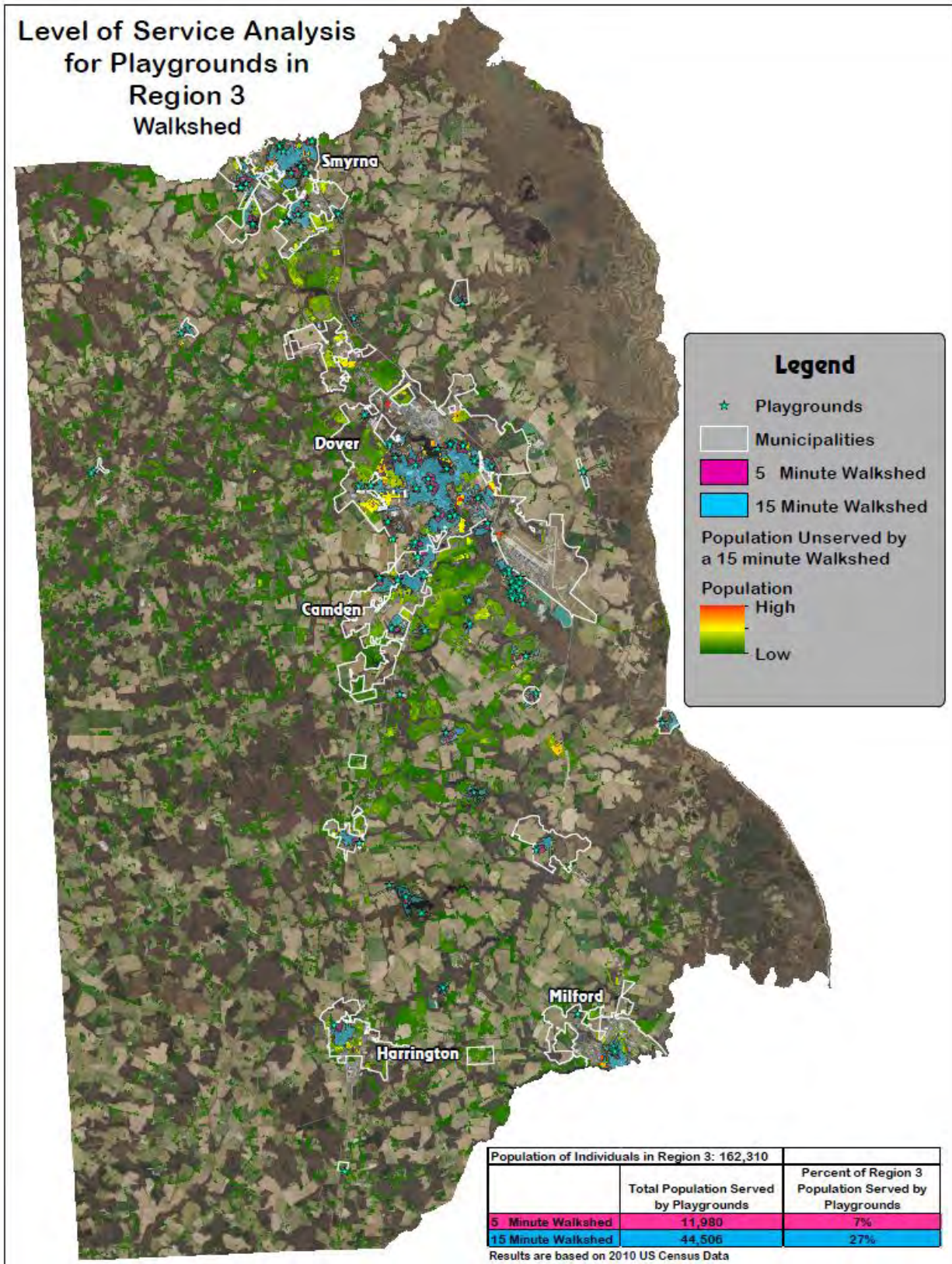




Figure 3.4 – Walkshed Level of Service Analysis for Playgrounds in Region 4

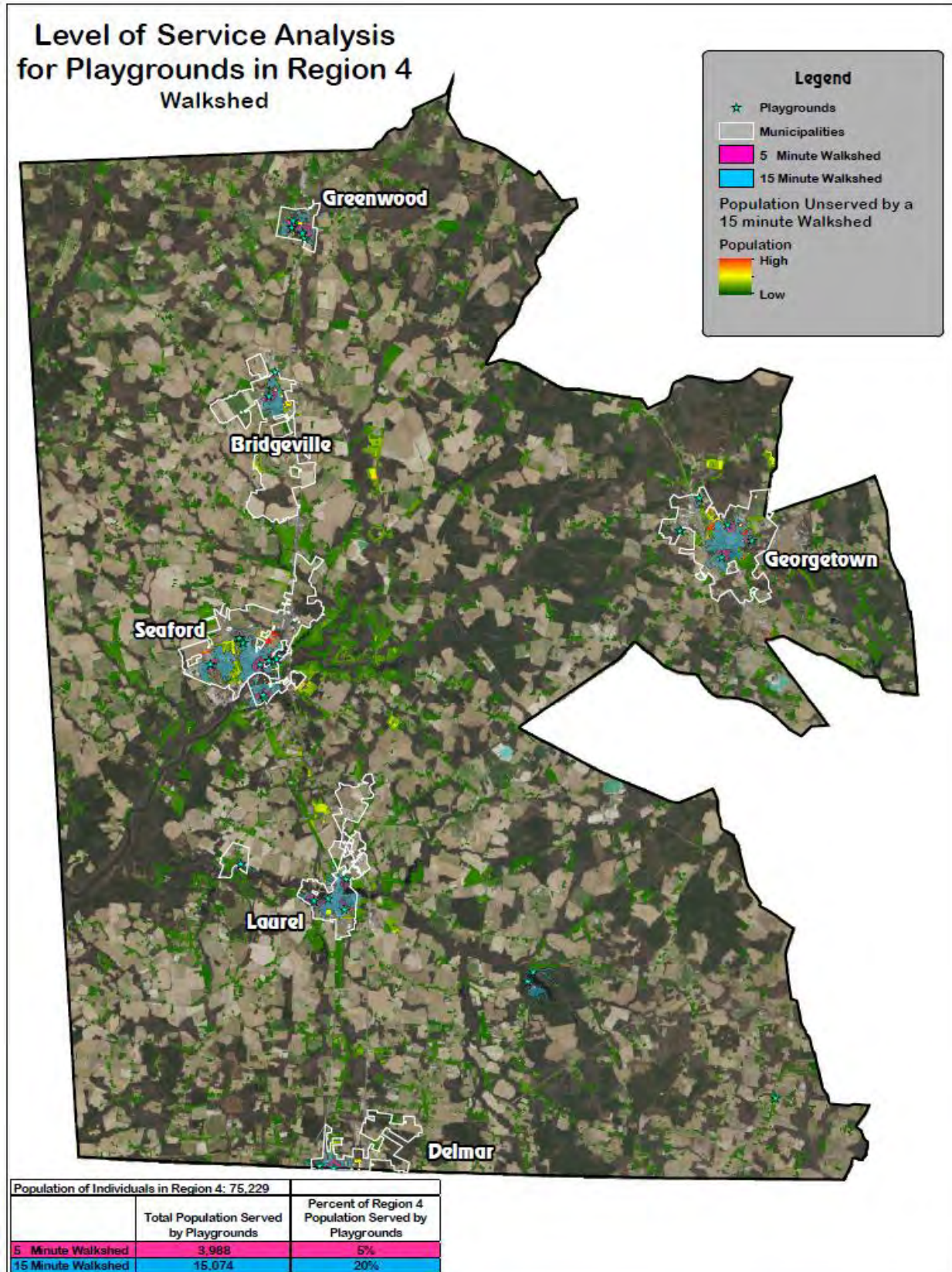
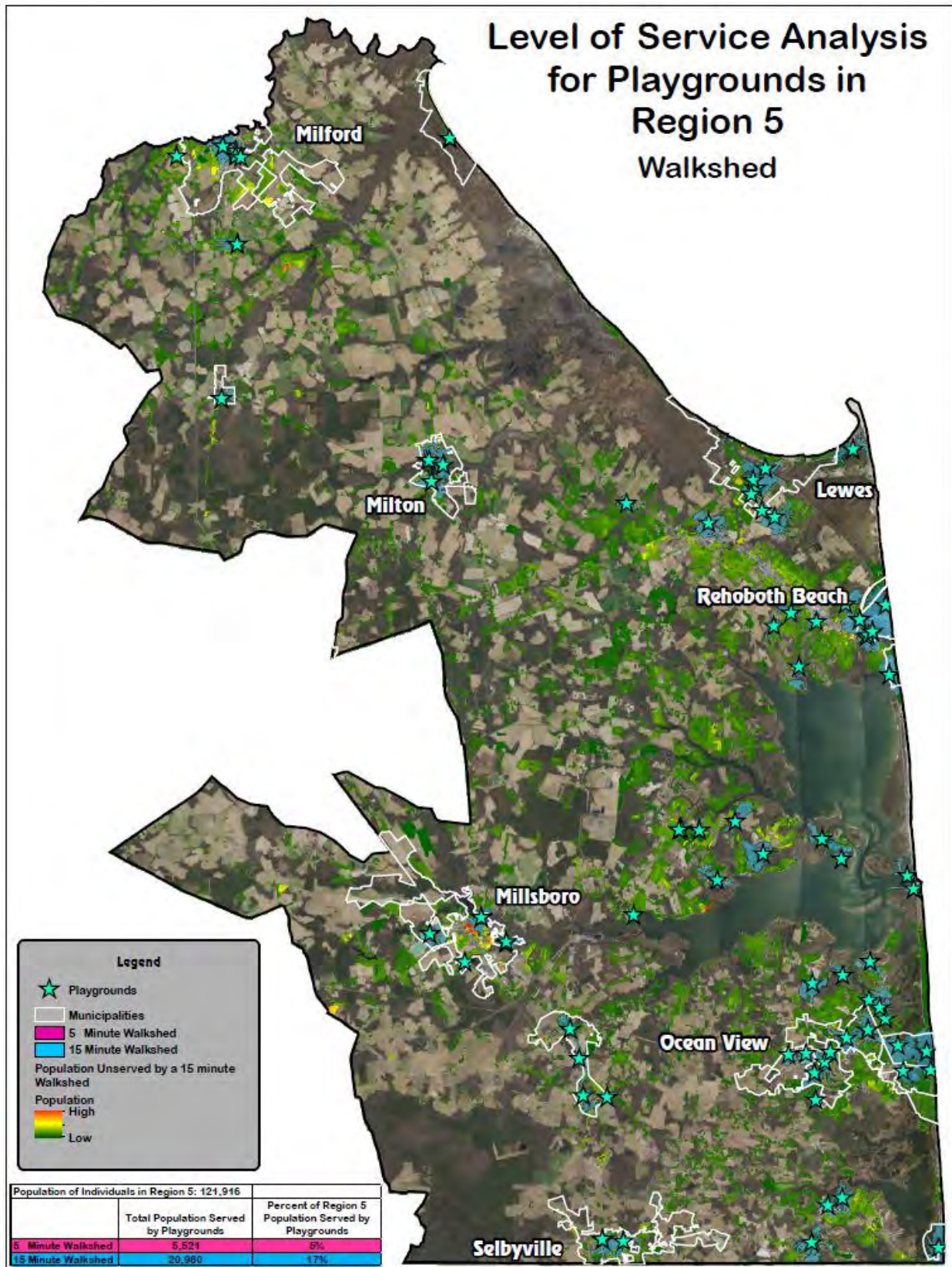




Figure 3.5 – Walkshed Level of Service Analysis for Playgrounds in Region 5



Using the state road network, the same type of spatial network analyses can be conducted to identify drivesheds for parks and recreation facilities. Similar to a walkshed, a driveshed is a vehicular travel zone defined by a road network around a particular point of interest. A driveshed 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. Driveshed analyses may be more useful for parks and recreation areas that have unique features and amenities that are designed to serve a larger population because people are willing to drive further.

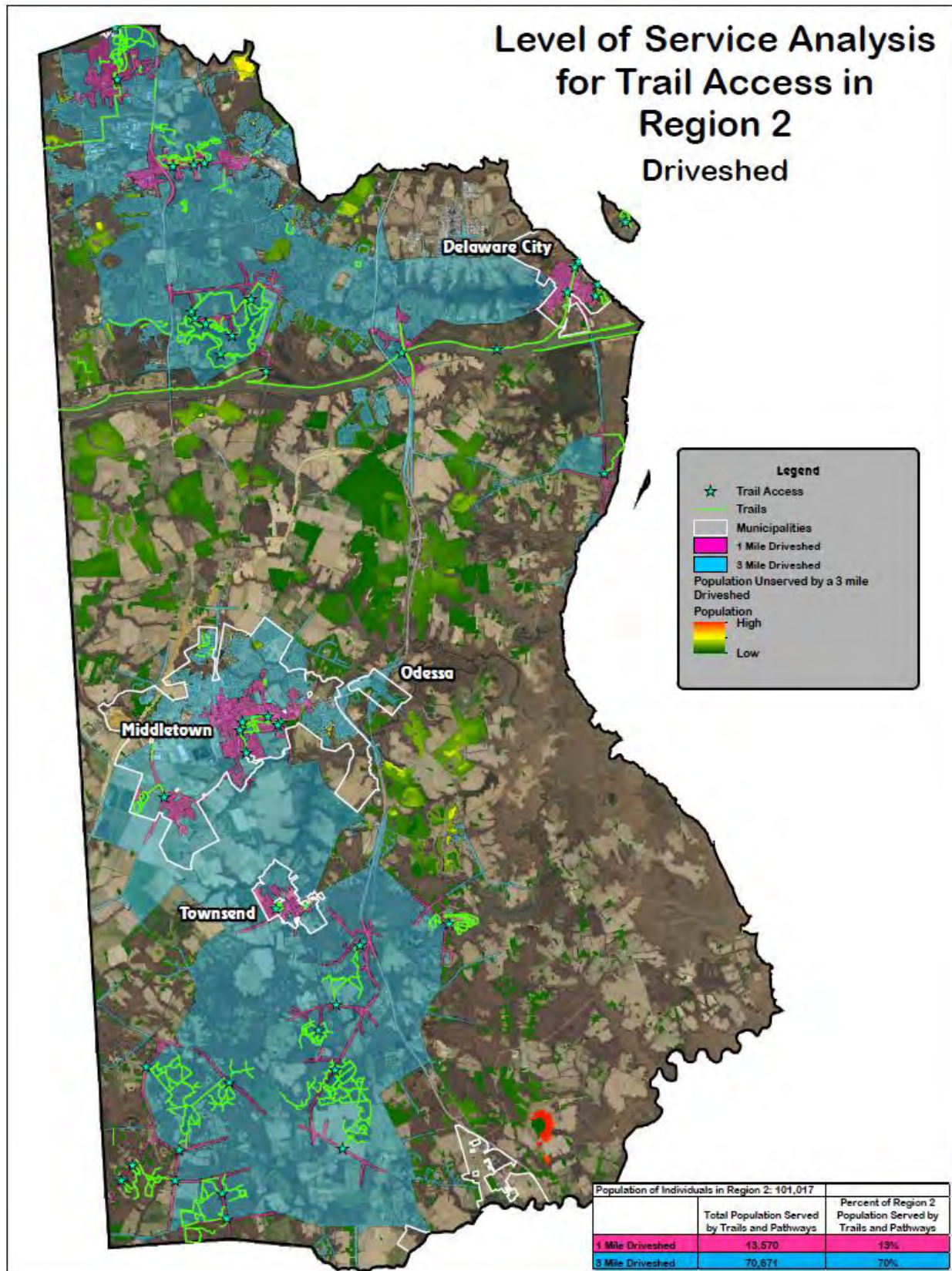
Driveshed analyses can be adjusted by varying the distance of interest or the type of facility. One can compare the percentage of a population served in a driveshed and that in a walkshed for a specific outdoor recreational facility to better understand supply and how the public access those facilities. Analyses can also be compared to results in other Regions and compared to demand.

Figure 3.6 demonstrates level of service analyses for trail access in SCORP Region 2 using a 1-mile and a 3-mile driveshed. The model shows that Region 2 has a high portion of its population (70%) within a 3-mile drive to a trail access point. This is very positive. However if the focus is on walkable communities, the evaluation should consider the walkshed. Region 2 has just 7% of the population within a 15-minute walk to a trail access point.

These types of analyses are also important in planning new facilities. Service level analysis identifies areas and portions of populations that are underserved. Modeling has been used to locate future parks and locate trail access points that provide the fastest connections to the largest number of people. Because of the visualizations (maps) and clear data that are provided, those that are involved with managing outdoor recreation in Delaware can benefit hugely by utilizing service level analyses.



Figure 3.6 – Driveshed Level of Service Analysis for Trail Access in Region 2

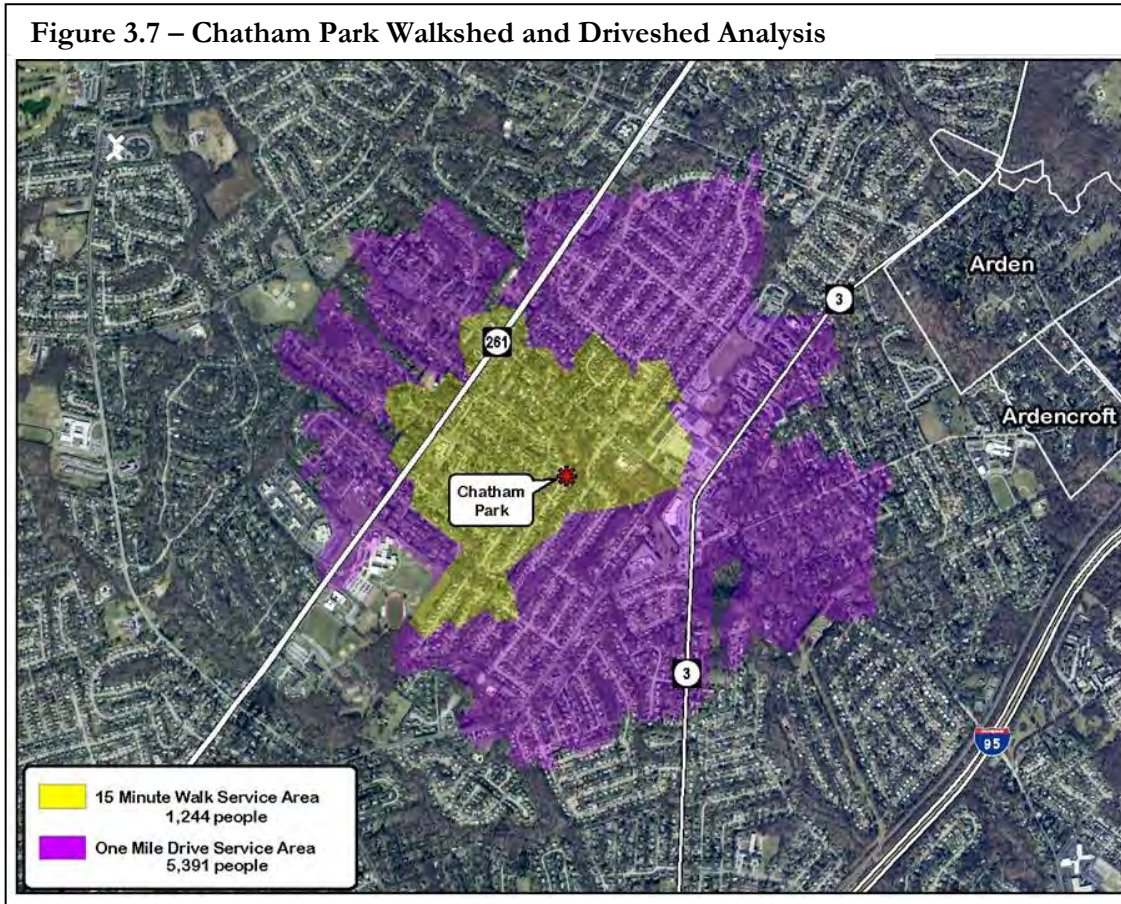




### *Replacement of Aging Facilities*

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 3.7 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.

### *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.

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.

### *Assistance Available*

The Division of Parks and Recreation can assist municipal and county agencies with identifying ideal locations for new parks or specific amenities most needed in an existing park. Spatial modeling can also identify the impacts of making a bicycle/pedestrian connector will have on the service area. The Division's analysis was shared with New Castle County's Park Task Force to evaluate potential park properties in southern New Castle County. The results of the driveshed modeling was a major factor in determining the best sites for future parkland. Another recent example was the City of Dover who was making an investment in playgrounds and wondered which existing park would serve the most people. Mallard Pond Park was the location with the greatest number of people not served by playground of any park. It was also shared that a pathway within the park would connect three communities that did not have a pedestrian connection otherwise. The City made both playground and pathway investments their priority for that year.



## Outdoor Recreation Inventory

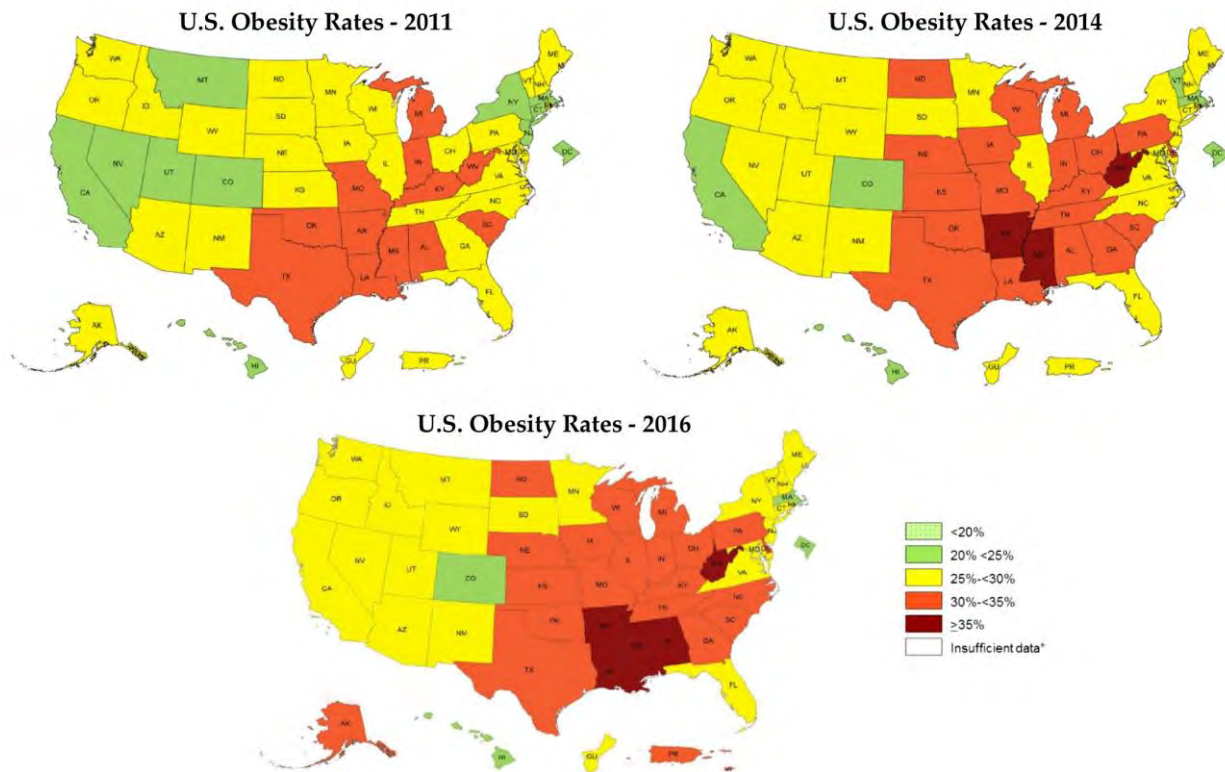
*Goal: Incorporate the Outdoor Recreation Inventory in state and local planning decisions and educational outreach*

<b>RECOMMENDATIONS</b>	<b>IMPLEMENTERS</b>
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.	<i>DPR, State and Local recreation officials</i>
2. Broaden the Outdoor Recreation Inventory to include facility age, condition, and accessibility analyses.	<i>DPR, State and Local recreation providers</i>
3. Identify missing information needed to conduct more accurate spatial analyses.	<i>DNREC, DELDOT, State and Local planning agencies and parks departments, SCORP TAC</i>
4. Identify private recreation facilities to be incorporated in a statewide level of service analysis.	<i>Outdoor Recreation Industry, State and Local recreation providers, DPR</i>
5. Conduct outdoor recreation spatial analyses to inform health impact assessments for local and regional community designs.	<i>DE HEAL, DPH, OSPC, DNREC, DE Greenways, WILMAPCO, Kent/Sussex MPO</i>
6. Maintain and improve an online clearinghouse (Play Outside) of resources that disseminates detailed information for all recreation facilities in Delaware.	<i>DNREC, USFWS, State and Local recreation providers.</i>

## Improving Public Health

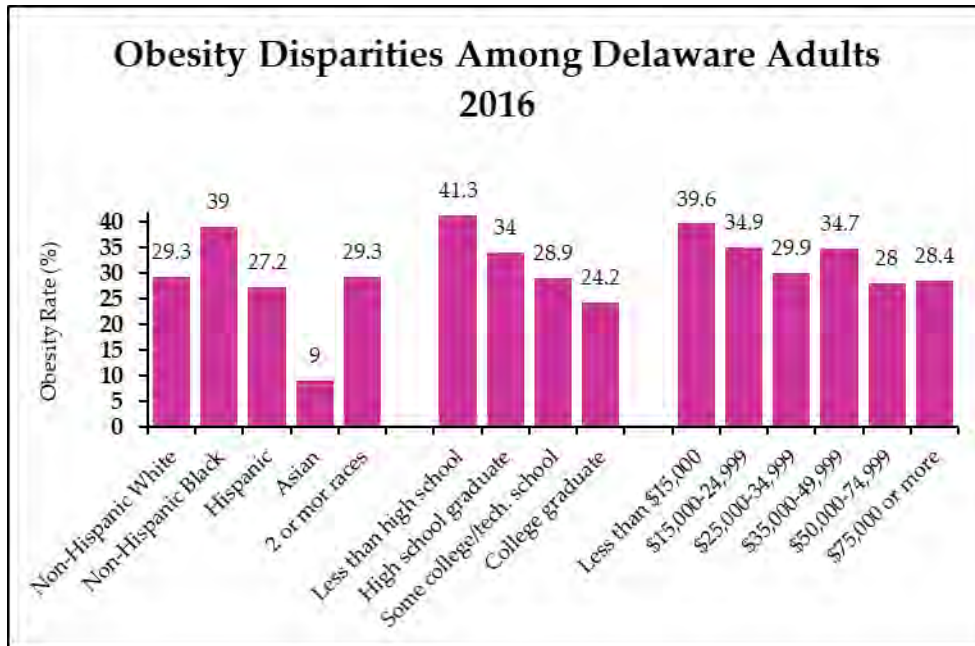
*Goal: Increase availability to convenient and safe places to be active and lead healthy lifestyles*

Good health is a fundamental component of an individual's life and can impact success in 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. By 2010, no state had an obesity rate below 20%. This was still true in 2011, though the methodology for estimating obesity had changed. As of 2016, 25 states have obesity rates that exceed 30% of their population.



Source: [www.cdc.gov/obesity/downloads/data/overall-obesity-prevalence-map2016.pdf](http://www.cdc.gov/obesity/downloads/data/overall-obesity-prevalence-map2016.pdf). Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

Delaware’s obesity rates are close to those of the nation. In 2017, Delaware was ranked 23<sup>rd</sup> among states in the nation with an adult obesity rate of 31.8%. Although the obesity rate has remained level for the past 7 years, in 2011 Delaware had a combined obesity and overweight rate of 63.8%. Most recent statistics (2017) indicate that combined rate has reached 68.5%.



Delaware’s overweight and obesity trends also include troubling demographic disparities. Adult obesity rates in Delaware were 39% for Non-Hispanic Black compared to 29.3% for Non-Hispanic White and 27.2% for Hispanic. There are also higher rates of obesity for those who have not graduated high school and those earning less than \$15,000.

There is a correlation between lack of physical activity and overweight and obesity.<sup>i ii iii</sup> The Center for Disease Control recommends that adults need muscle strengthening activities that work all major muscle at least two days a week along with either 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. Since 2011, the number of adults participating in enough aerobic and muscle strengthening exercises to meet guidelines has decreased.<sup>iv</sup>

### *Increasing Activity through Increased Access*

Our surroundings either promote or prevent our ability and decisions to participate in active and recreational daily 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.<sup>v</sup> Regular physical activity can be achieved by actively

commuting to work or school (walking or biking); accessing hiking and walking trails; or playing on ball fields, playgrounds, and open green spaces. Delaware is home to approximately 143,480 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.<sup>vi</sup> However, only an estimated 15% of Delawareans are living within a 5 minute walkshed of outdoor recreational facilities, such as parks and trails, according to the Division of Parks and Recreation's walkshed analysis by county.

Access to parks, trails and recreation spaces is associated with increased physical activity levels.<sup>vii</sup> 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.<sup>viii</sup> 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.<sup>ix</sup>

#### *Delawareans Physical Activity*

- 28% met guidelines for aerobic physical activity
- 10.1% met both guidelines for strengthening physical activity
- 20.2% met both aerobic and strengthening guidelines
- 41.7% did not meet guidelines for physical activity





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. Delaware now has the Play Outside web-application (<http://maps.dnrec.delaware.gov/playoutside>), which is publicly available to easily locate and identify information about parks and facilities. Residents can find a specific recreational facility or characteristic in any given area of the state. For planners, the application assists in monitoring park and recreation sites for maintenance and stewardship responsibility associated with LWCF and DTF sites. As discussed in the Outdoor Recreation Inventory section of this report, there are opportunities to improve Play Outside by adding facility age, condition, and accessibility analysis. But the Play Outside web-application will continue to increase activity by increasing awareness among the public and recreation providers.

### *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 2018 the Jack A. Markell Trail opened, extending over 7 miles from the Wilmington Riverfront to historic Old New Castle. This connection provides a safe corridor for walking, jogging, and bicycling with only one road crossing. There has already been an increase in people who enjoy the area. Smaller infrastructure additions and modifications in our communities can have equally huge impacts by providing connections that facilitate physical activity.

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 an enjoyable way to increase physical activity and encourage weight loss.

## Improving Public Health

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

<i>RECOMMENDATIONS</i>	<i>IMPLEMENTERS</i>
1. Provide technical assistance to ongoing statewide health initiatives (Delaware HEAL & Governor’s Council on Health Promotion and Disease Prevention).	<i>DE HEAL, GCHPDP, OSPC</i>
2. Support the Children in Nature Taskforce Report (released Oct. 2012).	<i>CIN Taskforce, NHPS, DSP, Municipal &amp; County Parks, local pediatricians</i>

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS)

<sup>5</sup> Srinivasan, S., O’Fallon, L.R., Deary, 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.

<sup>6</sup> Nemours Health and Prevention Services (2010), Investment in Parks and Recreation is Necessary for Children’s Health

<sup>7</sup> 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

<sup>8</sup> 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 *Case: 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

<sup>9</sup> 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](http://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 *Outdoor Participation Report 2018*, looked at what sparks consumers' involvement in the outdoors and barriers to



participation. According to the study, 83% of adults who do not participate in outdoor activities did not have outdoor experiences as children. This makes 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 is declining slightly over the last five years. The study shows that Black populations have a significantly lower outdoor recreation participation rate (34%) compared to White, Hispanic, and Asia populations (51%, 49%, and 51% respectively).

There similarities in the most participated outdoor recreation activities for children and adults. Road/Mountain/BMX Biking, Fishing, Running/Jogging/Trail Running, Car/Backyard/Backpacking/RV Camping, and Hiking are the top five activities. It is important to note that while some activities have lower participation, frequency of participation may be higher. There may not be as many participants, but those who are participating are doing so much more than other activities.

The Delaware Children in Nature Taskforce was formed to address the challenge of reconnecting children with nature. The resulting work of the Children in Nature Taskforce was a report and recommendation document presented in 2012 titled *The State of Delaware Children in Nature / No Child Left Inside Initiative Taskforce Report*. Two Taskforce initiatives have focused on different approaches to get kids outside: school-based and community-based education. Both efforts strive to ensure that every Delaware child has the opportunities and benefits of exploring, growing, and learning from our diverse natural environment.

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.

### *Importance of School Facilities*

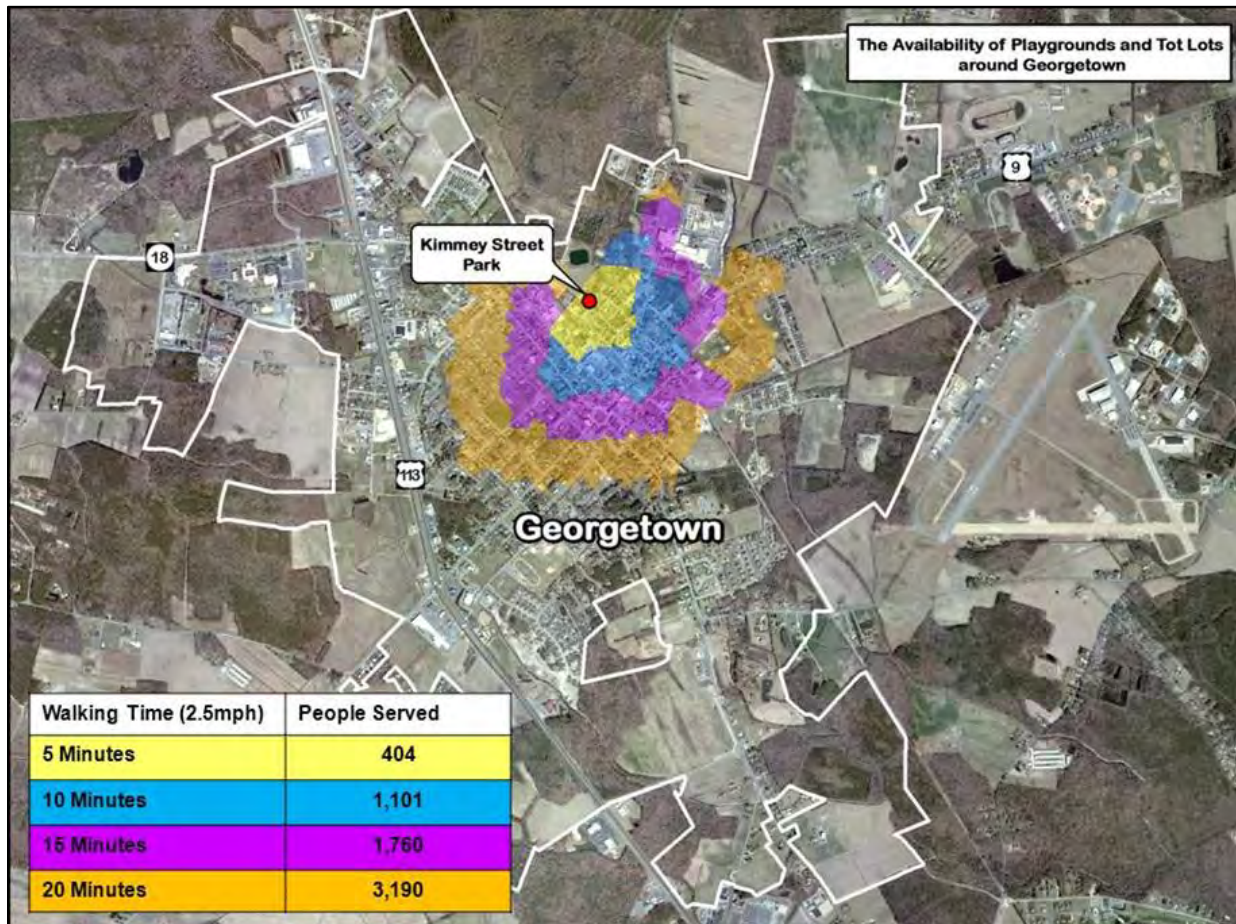
Today, more than ever, there is a lack of integration between indoor classroom instruction and experiential outdoor learning and free play exploration. What is widely perceived by the public as the 'culture of testing' in our schools has taken precedence

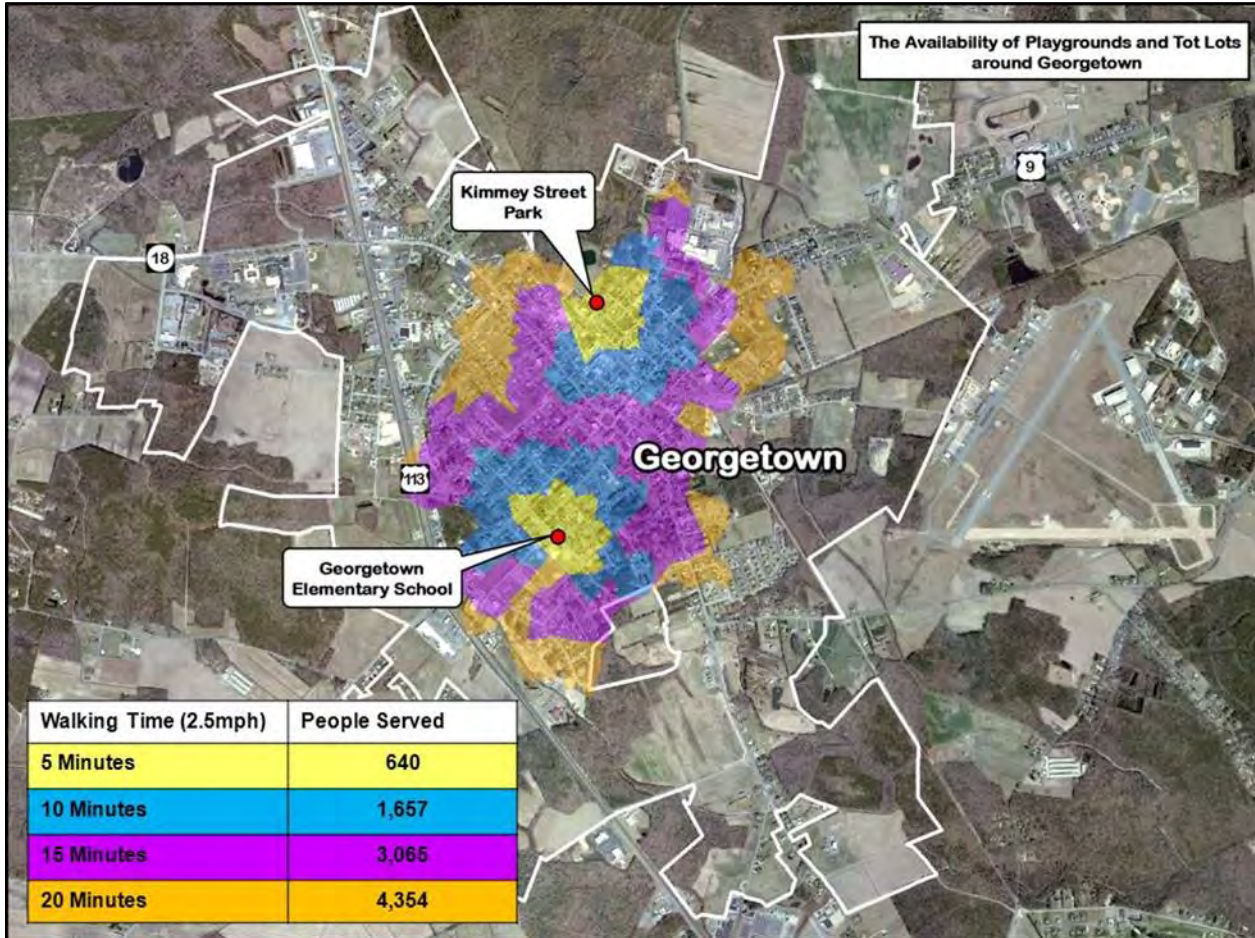




and funding away from experiential outdoor learning. Twentieth century land use patterns, school design (no windows) and community design have moved schools away from community centers creating an atmosphere of isolation, and thus, misses the opportunity to engage children in walking and bicycling to 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.



## Getting Children Outdoors

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

<i>RECOMMENDATIONS</i>	<i>IMPLEMENTERS</i>
1. Continue to conduct outdoor recreation participation studies aimed at specific user groups and demographics.	<i>DPR, Nemours, DF&amp;W, DE Greenways, DSBDT, local governments</i>
2. Provide technical assistance to organizations working towards goals published in the Children in Nature Taskforce Report.	<i>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</i>
3. Provide training to develop schoolyard habitats, outdoor classrooms and/or school gardens to assist in reconnecting youth to their environment.	<i>Center for Inland Bays, Delaware Nature Society, Delaware Dept. of Agriculture, DAEE</i>
4. Establish and maintain an environmental education resource clearinghouse.	<i>DNREC, Delaware Dept. of Agriculture, DNS, Delaware Greenways, UD, DSU, DAEE</i>
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.	<i>DNREC, DOE, American Heart Association, DE HEAL</i>
6. Identify public school facilities that are not publicly available during non-school time to increase community access.	<i>DOE, DE HEAL, NHPS, DNREC</i>
7. Ensure long-term maintenance and safety of all recreation facilities.	<i>DNREC, Local Recreation Organizations, DOE</i>

## 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 more 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. Facilities for children
5. Clean

*Source: 2018 Outdoor Recreation in Delaware 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, bikeability, 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.

Moreover, perceived and real public 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.<sup>i ii iii iv</sup> 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.

### *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

### *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.

fields stimulate higher levels of activity.<sup>v vi</sup> 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.<sup>vii viii</sup> 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.<sup>ix</sup>

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.

### *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.<sup>x</sup>



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.<sup>xi</sup>



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. Using 2015 data, BRFSS researchers reported that 42.6% of the Delaware adults with disabilities are likely to be inactive.

Disability costs in the form of healthcare expenditures are estimated at \$1.2 billion per year in Delaware.

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.



## Accessible Recreation

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

<b>RECOMMENDATIONS</b>	<b>IMPLEMENTERS</b>
1. 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.	<i>Counties, Municipalities, DRPS, DPR, OSPC, DE HEAL, NHPS, DelDOT</i>
2. Provide on-going training to assist agency planners to remain current on best practices for park management and playground safety.	<i>DRPS, DPR, Local Parks and Recreation Agencies</i>
3. Provide technical assistance to state and local officials during comprehensive planning processes to incorporate trails, parks and recreation spaces in local planning efforts.	<i>DPR, DPH, OSPC, DE HEAL, Municipal planners, UD-IPA</i>
4. Obtain a clear understanding of the level of public transportation services to parks and recreation facilities.	<i>DART, DELDOT, DNREC, Local Parks and Recreation Agencies</i>
5. Gather information necessary to complete in-depth spatial analyses of outdoor recreation facilities for underserved and urban populations.	<i>DPR, OSPC, County and Municipal governments</i>
6. Create an accessibility tool/feature for all public outdoor recreation facilities in Play Outside.	<i>DNREC, USFWS, NPOs, UD-CDS</i>
7. Develop guidance tools that address best practices for universal accessibility to outdoor recreation facilities.	<i>DNREC, USFWS, NPOs, UD-CDS</i>
8. Ensure representation from the disability community throughout the conservation and recreation planning processes.	<i>UD-CDS, DPH</i>
9. Provide technical assistance to elected officials or municipalities on the use of Community Transportation Funds or Municipal Street Aid Funding that can be applied to support Accessible Recreation types of projects.	<i>DelDOT</i>

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- <sup>i</sup> Miles, R. (2008). Neighborhood Disorder, Perceived Safety, and Readiness to Encourage Use of Local Playgrounds. *American Journal of Preventive Medicine*, 34(4), 275-281.
- <sup>ii</sup> 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.
- <sup>iii</sup> L. Weir, D. Etelson, D. Brand Parents' perceptions of neighborhood safety and children's physical activity *Preventive Medicine*, 43 (3) (2006), pp. 212-217.
- <sup>iv</sup> Kelling GL, Coles CM. Fixing broken windows: restoring order and reducing crime in our communities. New York: Free Press, 1996.
- <sup>v</sup> Active Living Research. Parks, Playgrounds, and Active Living Research Synthesis, February 2010. [www.activelivingresearch.org/files/Synthesis\\_Mowen\\_Feb2010.pdf](http://www.activelivingresearch.org/files/Synthesis_Mowen_Feb2010.pdf). Accessed 1/20/13.
- <sup>vi</sup> 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.
- <sup>vii</sup> 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](http://activelivingresearch.org/files/PolicyBrief_ParkDisparities_0.pdf). Accessed 1/20/13.
- <sup>viii</sup> 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.
- <sup>ix</sup> Active Living Research- [www.activelivingresearch.org/node/12518](http://www.activelivingresearch.org/node/12518)
- <sup>x</sup> 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.
- <sup>xi</sup> 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.

## Trails & Pathways

*Goal #1: Make Delaware walkable and bikeable by creating and maintaining a premier interconnected network of multi-use bicycle and pedestrian 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 \$1 million or more annually to a community, depending on how well the town embraces their trail system.<sup>i</sup> 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.<sup>ii</sup>

Trail-related pursuits are the number one outdoor recreation activities in Delaware with 82% of Delaware households walking or jogging; 59% bicycling; 55% hiking; 41% canoe/kayaking; 25% mountain biking; and 22% horseback riding. Based on a comparison of findings (from previous SCORP surveys published in 2002, 2008, and 2011), the trend for trail related activities continues to be popular among the recreating public. The overwhelming demand for linear facilities resonates throughout every SCORP Planning Region as well as all five oversampled municipalities.

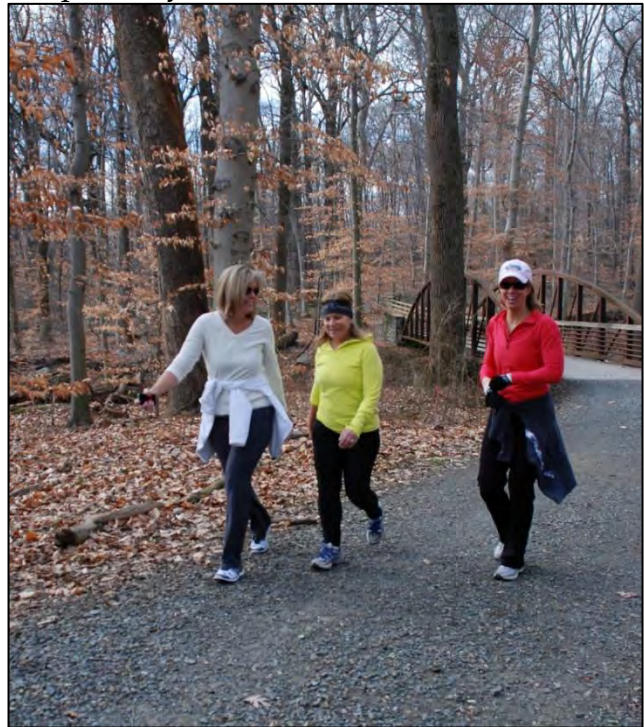
### *The New Imperative: Building the Case for Trails and Pathways*

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 that do not have these features.*

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.<sup>iii</sup>

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, 68% of the population is 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.<sup>iv</sup> Parks and trails provide children outlets for engaging in positive energetic activities. Studies show evidence demonstrating that healthier citizens means reduced overall healthcare costs.<sup>v</sup>

Though some might assume park and recreation facilities are regarded plainly as ‘nice to have’, only 25% of Delawareans agree that parks, trails, and natural areas are a luxury 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. The Delaware Division of Air Quality recognizes the connection between trail and shared pathways and benefits to air quality.

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 (much more if an overnight stay is included). 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.<sup>vi</sup> 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.<sup>vii</sup>

Delaware is in the geographic center of the heavily populated Mid-Atlantic region, a short day trip from major U.S. cities. Over 17 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 \$887 billion annually (37% increase from 5 years ago) to the U.S. economy and supports nearly 7.6 million jobs annually (25% increase from 5 years ago). In Delaware, the outdoor recreation industry contributes



\$3.1 billion annually to the local economy and directly supports 29,000 jobs (more than double than biopharmaceutical).<sup>viii</sup>

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.<sup>ix</sup> Aside from property value increases, households can save commuting costs by using these close to home pathways.

### *Growing Local Demand*

A 2017 survey by National Association of Realtors found the majority of Americans favor walkable mixed-use neighborhoods over ones that require more driving between home, work and other destinations. About 60% of Americans would pay more to live in a walkable community. <sup>x</sup>

Walking or Jogging is the most popular outdoor recreation activity statewide and in each SCORP region. Bicycling is consistently in the top ten outdoor recreation activities. When asked about facilities wanted in parks and recreation areas, Delawareans want to see trails and pathways above other types of facilities or amenities. The demand for trails and pathways in Delaware is high and has shown growth since the last survey (2011).

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

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

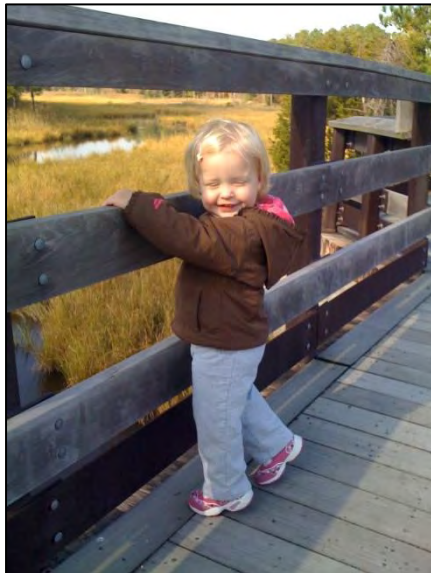


high among different ethnic groups and across age categories. This informs citizens, advocates, planners and policymakers that more linear facilities are essential to keep pace with the population growth and the public's participation in trail-related outdoor activities.

Delawareans are clear in their overwhelming demand for trails and pathways. Ninety percent of survey participants reported that bike and pedestrian pathways between work, schools, shopping areas, and neighborhoods are important funding priorities for state and local policymakers (64% very important, 26% somewhat important). To strengthen this finding, only 25% of Delawareans think that parks, trails, and natural areas are a luxury rather than a necessity.

### *Existing Conditions*

Currently, there are over 550 miles of trails and multi-use pathways in our state, of which 155 miles are 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.

### *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.



## Statewide Trails & Pathways Initiative

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

<b>RECOMMENDATIONS</b>	<b>IMPLEMENTERS</b>
1. Increase the system of interconnected trails and pathways by extending existing trail hubs within municipalities and state parks.	<i>DNREC, DelDot, local parks and recreation departments, County and Municipal planners</i>
2. Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails.	<i>DelDOT, DNREC, county partners, trail users, bike commuters</i>
3. Allocate a steady and reliable funding stream for trails and pathways that builds on and extends the existing network.	<i>DNREC, DelDot, local parks and recreation departments, County and local officials, NHPS, Bike Delaware, trail advocates, Metropolitan Planning Agencies</i>
4. Coordinate planning efforts to connect neighborhoods with places of work, schools, businesses, park and other community facilities.	<i>DNREC, DelDot, Office of State Planning &amp; Coordination, County and Municipal planners, Metropolitan Planning Agencies</i>
5. Identify gaps in bicycle and pedestrian networks to prioritize critical community connections.	<i>DNREC, DelDot, local parks and recreation departments, County and Local government officials, trail advocates, trail users, volunteers</i>
6. Identify needed land and support the development of future trail extensions and connections that encourage healthy lifestyles and increase recreational opportunities.	<i>DNREC, DelDot, local parks and recreation departments, County and Municipal planners, Metropolitan Planning Agencies, Delaware Greenways Inc.</i>



**DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY**

Statewide Comprehensive Outdoor Recreation Plan

7. Conduct a detailed spatial analysis to determine geographical representation of trail, pathway and sidewalk related needs.	<i>DNREC, DelDot</i>
8. Conduct trail volume and use surveys to better understand and enhance trail use.	<i>DNREC, DelDot, local trail managers</i>
9. Conduct local walkability and bikeability analyses.	<i>DNREC, DelDot, DRPS, County and Local officials, NHPS, Sussex Outdoors, DE Heal, Trail users, trail advocates</i>
10. Promote and support bicycle and shared-use trail safety campaign.	<i>DNREC, DelDot, DRPS, NHPS, DE Trails and Pathways Initiative partners, Bike Delaware</i>
11. Develop a unified statewide trail classification and signage marking system.	<i>DNREC, DelDot, County and Municipal officials, local parks and recreation departments, County and Municipal planners, Bike Delaware, trail advocates</i>
12. Conduct trail and pathway grade analyses to identify unsustainable and inaccessible trail sections.	<i>DNREC, DelDot, Trail managers, volunteers, UD-Center for Disability Studies, DPH</i>
13. Define and adopt universal sustainability and trail maintenance standards for trail and pathway design and construction.	<i>DNREC, DelDot, DRPS, trail managers, trail builders, trail advocates, trail users, volunteers</i>
14. Share trail standards and design knowledge and skills with counties, municipalities and volunteer organizations.	<i>DNREC, DelDot, DRPS, local parks and recreation departments, trail builders, trail advocates, volunteers</i>

<sup>i</sup> Delaware Trails & Pathways Initiative; Economic Benefits of Trails and Pathways-  
[www.trails.delaware.gov/EconomicBenefits.aspx](http://www.trails.delaware.gov/EconomicBenefits.aspx)

<sup>ii</sup> 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). <http://www.activelivingresearch.org/node/12695>. Accessed 1/20/13.

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- <sup>iii</sup> 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](http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf)
- <sup>iv</sup> 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>
- <sup>v</sup> 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](http://www.americantrails.org/resources/health/trailinvest.html)
- <sup>vi</sup> 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](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36%28103%29_FR.pdf)
- <sup>vii</sup> Delaware Greenways, Junction & Breakwater Rail-Trail 2011 Trail Use Study and Economic Analysis, January 2012
- <sup>viii</sup> Outdoor Industry Association, Delaware Outdoor Recreation Economy Report 2017  
[https://outdoorindustry.org/wp-content/uploads/2017/07/OIA\\_RecEcoState\\_DE.pdf](https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_DE.pdf)
- <sup>ix</sup> 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](http://www.ce.udel.edu/dct/publications_files/Rpt.%20188%20Bike%20Paths.pdf)
- <sup>x</sup> National Association of Realtors, 2017Community and Transportation Preferences Survey.  
<https://www.nar.realtor/reports/nar-2017-community-preference-survey>

## Partnerships for Conservation, Recreation, and Tourism

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

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 \$887 billion to the U.S. economy, support more than 7 million jobs, and produces over \$65 billion in annual federal tax revenue.<sup>1</sup> Delaware is the tiny gem of the mid-Atlantic that hosts about 9 million visitors per year. With each visitor spending more than \$384 per trip, Delaware's tourism industry is a key part of the economy.





The tourism industry is the fourth largest private employer in the state supporting nearly 43,000 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 \$1,434 in additional taxes. Delaware has more than 143,480 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 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. Three of the seven most popular visitor activities in Delaware relate to outdoor recreation.<sup>ii</sup>

### *Delaware Outdoor Recreation Economy*

*\$3.1 Billion in consumer spending*

*29,000 Direct Delaware jobs*

*\$959 million in wages and salaries*

*\$145 million in state and local tax  
revenue*





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 generated 39,900 jobs – over \$1.5 billion in labor income in 2011.<sup>iii</sup>

### *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.<sup>iv</sup>



### *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 in 2008. 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).<sup>v</sup>

### *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.<sup>vi</sup>



### *Delaware Tourism Study*

An Economic Impact Study of Tourism in Delaware was conducted for 2016.<sup>vii</sup>

Key findings are:

- Tourism's total contribution to Delaware's 2016 Gross Domestic Product (GDP), the total market value of goods and services produced by the State's economy, is \$3.3 billion.
- A total of 1.65 million people traveled to Delaware on business and 7.35 million traveled for leisure.
- On average, the typical 2016 visitor to Delaware was 47 years of age with a household income of \$101,981 which was higher than the national average.
- Tourism generated \$504 million in state and local government taxes/fees in 2016.

Though national data reveals the economic benefits of parks and outdoor recreation, it has become increasingly important to calculate the economic values 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.

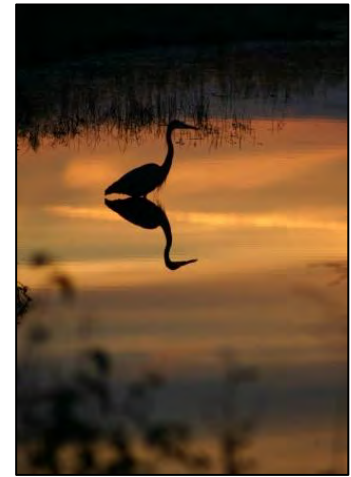
### *Working Together for the Great Outdoors*

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. 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.

[www.dnrec.delaware.gov/Pages/Delaware-Bayshore.aspx](http://www.dnrec.delaware.gov/Pages/Delaware-Bayshore.aspx)



### *Scenic Byways*

Scenic byways are treasures to natural resource and recreation enthusiasts. Currently Delaware only has one National Scenic Byway; the Brandywine Valley Scenic Byway. The Delaware Department of Transportation and partners are working to qualify additional roadways as National Scenic Byways.

Delaware's Bayshore Byway is a scenic two-lane road that follows roads and views along the Delaware River and Bay Estuary. From New Castle to the beach resorts just outside Lewes, the byway corridor offers visitors and locals an intimate experience with the largest preserved coastal marshlands and historic river town's along the east coast. The



byway covers much of the state geographically and is approximately 100 miles of travel depending on your route selection. See all sorts of wildlife and understand the importance of bird migratory flyway zones & resting areas. Most of all, discover the small natural beaches and tranquil open vistas.

The Nanticoke Heritage Byway moves through the western Sussex County landscape, encompassing many of Delaware's historic treasures and important natural features. Visually, the route alternates between farmlands, wooded areas, and small towns, providing a variety of views and different types of landscapes. There are many recreational opportunities for hiking, bicycling, boating, and other activities. The three towns and other sites along the route also relate to many historic centers for trade and shipbuilding from the Colonial period through the nineteenth century.



[www.deldot.gov/Programs/byways/index.shtml](http://www.deldot.gov/Programs/byways/index.shtml)

### *Nanticoke River Area*

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 17<sup>th</sup>-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.



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](http://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.

<https://destateparks.com/LakesRivers/TrapPond>

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.

<https://www.seafordhistoricalsociety.com/visit/seaford-museum/>

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](http://www.paddlethenanticoke.com)

### *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.<sup>viii</sup> Delaware currently has seven designated National Recreation Trails: the Brandywine Trail, Hagley Museum Trail System, Northern Delaware Greenway Trail, James F. Hall Trail, Pomeroy and Newark Rail Trail, Junction and Breakwater Trail, and Pinelands Nature Trail.

[www.americantrails.org/national-recreation-trails](http://www.americantrails.org/national-recreation-trails)

## Partnerships for Conservation, Recreation and Tourism

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

<i>RECOMMENDATIONS</i>	<i>IMPLEMENTERS</i>
1. Foster public/private partnerships and tourism packaging that promote the ecological beauty and recreational opportunities in Delaware.	<i>DNREC, DSBBDT, Delaware Dept. of Agriculture, USFWS, DelDOT, private conservation and recreation organizations</i>
2. Conduct park and recreation economic studies to assess the benefits of parks, wildlife, conservation areas, and Delaware’s outdoor recreation economy.	<i>DNREC, local parks and recreation departments, DSBBDT, USFWS, private conservation and recreation organizations</i>
3. Preserve and enhance large scale land conservation partnerships to make Delaware a destination for outdoor enthusiasts.	<i>DNREC, Delaware Dept. of Agriculture, DelDOT, USFWS, private recreation and conservation organizations, local governments</i>
4. Build on public/private partnerships by leveraging state, federal, and private resources for: Conservation and ecological restoration - connect wildlife areas by acquisition or easement of unprotected lands; restore native habitat; and protect resources. 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. 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.	<i>DNREC, DelDot, DE Dept. of Agriculture, USFWS, private recreation organizations, private conservation organizations, private industry</i>
5. Further promote and foster the six recognized Byway Programs and DNREC’s Bayshore	<i>Byway Management Groups, DNREC, DelDOT, DE Greenways, municipalities, Tourism Offices, Chambers of Commerce</i>



## DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY

### Statewide Comprehensive Outdoor Recreation Plan

Initiatives per their Corridor Management and Action Plans.	
6. Promote the management of recreation areas to protect unique natural, historical and cultural resources while providing a wide variety of outdoor recreation opportunities.	<i>DNREC, State Historical and Cultural Affairs, private recreation and conservation organizations, outdoor enthusiasts, sportsmen/women</i>
7. Conserve lands, provide additional interpretive information, and encourage recreational use of the Nanticoke watershed.	<i>Nanticoke River Water Trail Working Group, DNREC, private conservation organizations</i>
8. Increase the number of National Recreation Trail designations in Delaware.	<i>DNREC, Trail managers, Trail enthusiasts</i>

<sup>i</sup> The Outdoor Recreation Economy Report. Outdoor Industry Association. 2017

<sup>ii</sup> 2016 Value of Tourism Report. Delaware Tourism Office. [www.visitdelaware.com/industry/tourism-statistics](http://www.visitdelaware.com/industry/tourism-statistics)

<sup>iii</sup> Latham, William and Kenneth Lewis. (2012). *The Contribution of the Coastal Economy to the State of Delaware*. University of Delaware. Newark, DE. [www.deseagrant.org](http://www.deseagrant.org)

<sup>iv</sup> Brown, Daniel. (2012). *The Fiscal Impact of the Wilmington Riverfront*. University of Delaware. Newark, DE. <http://128.175.63.72/projects/DOCUMENTS/Final%20Report.pdf>

<sup>v</sup> The Trust for Public Land's Center for City Park Excellence. (2009). *How Much Value Does the City of Wilmington Receive from Its Park and Recreation System?*. Washington, D.C. [www.dnrec.delaware.gov/parks/Information/Documents/Wilmington%20Parks%20Economic%20Study.pdf](http://www.dnrec.delaware.gov/parks/Information/Documents/Wilmington%20Parks%20Economic%20Study.pdf)

<sup>vi</sup> Delaware Greenways. JUNCTION AND BREAKWATER TRAIL 2011 TRAIL USE STUDY & ECONOMIC ANALYSIS. Prepared for the Delaware Division of Parks and Recreation. <http://trails.delaware.gov/JBEconomicStudy.pdf>

<sup>vii</sup> Rockport Analytics. *2016 Value of Tourism Report*. Delaware Office of Tourism. Dover, DE. [www.visitdelaware.com/industry/tourism-statistics](http://www.visitdelaware.com/industry/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.

As shown in the Population Growth and Trends subsection of this report, Delaware is becoming more built-out over time. With few large tracts of undeveloped land suitable for hunting, fishing, and other outdoor recreation activities, there should be greater priority placed on protecting the remaining areas that do provide these opportunities.



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.

### *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 enables a matching grant program administered by the State Division of Parks and Recreation within the Department of Natural Resources and Environmental Control. This grant program called the Outdoor Recreation, Parks, and Trails Grant Program (ORPT) 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 used by the ORPT to fund park and trail projects.

ORPT 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 ORPT Program has assisted 50 eligible agencies with over 326 completed projects. The \$27M of ORPT assistance has leveraged \$78 million in local investment. About three-quarters of the projects (246)





have been for park development, 48 for acquisition projects, and 32 for planning projects.

### *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 brought before the Council 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.

Assessing the priority of a given property for preservation is a process that involves a qualitative and quantitative evaluation. The evaluation process is intended to provide a strategic way of preserving open space.

This evaluation process is supported by science, management priorities, and public needs. The evaluation criteria assign points across five broad areas: ecological value, land use, water quality, recreation, and cultural resources. Once evaluated



quantitatively, 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 Guidelines to Evaluate Land Being Considered For Permanent Protection 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 July 2018 the Open Space Program completed 446 fee simple acquisition, donation, and conservation easement projects, resulting in the permanent protection of 61,158 acres. Over \$247,166,000 of Open Space funds and \$92,124,000 of other funds were expended on these projects. A breakdown by county is included here.

<b>Open Space Program Summary By County – Life of Program (1990-2018)</b>					
<b>County</b>	<b>Projects</b>	<b>Acres</b>	<b>Open Space Funds</b>	<b>Other Funds</b>	<b>Total Cost</b>
New Castle	169	13,174.8	\$127,157,172.64	\$20,513,883.33	\$149,722,123.72
Kent	80	9,837.6	\$19,421,631.03	\$3,673,237.42	\$22,814,243.25
Sussex	197	38,145.7	\$100,587,288.67	\$67,937,318.81	\$67,937,318.81
<b>Total</b>	<b>446</b>	<b>61,158.1</b>	<b>\$247,166,092.34</b>	<b>\$92,124,439.56</b>	<b>\$240,473,685.78</b>

The slowed economy and tight state budgets in recent years resulted in funding for the Open Space Program being significantly reduced or eliminated. The FY2019 budget restored funding to the Open Space Program which will allow the State to protect more outdoor recreation and conservation resources.

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.

<b>Open Space Program Summary By County – Last Five Years (2014-2018)</b>					
<b>County</b>	<b>Projects</b>	<b>Acres</b>	<b>Open Space Funds</b>	<b>Other Funds</b>	<b>Total Cost</b>
New Castle	20	1,049.4	\$2,086,720.45	\$4,269,229.70	8,305,717.90
Kent	16	1,314.9	\$3,188,996.70	\$2,659,478.86	\$5,567,850.36
Sussex	33	3,349.0	\$7,215,417.50	\$5,012,449.67	\$14,035,069.57
<b>Total</b>	<b>69</b>	<b>5,713.2</b>	<b>\$12,491,134.65</b>	<b>\$11,941,158.23</b>	<b>\$19,602,919.93</b>

### *Nature Preserve Program*

Within the Division of Parks and Recreation there a Nature Preserves Program. The Program works to identify and permanently protect Delaware’s natural, geologic, and archeological resources. The Program works with the Division of Fish and Wildlife, State Historic Preservation Office, the Delaware Geological Survey, and other appropriate resource professionals to evaluate and select state-recognized Natural Areas. Once an area has been formally included in the State Natural Areas Registry, the landowner, private or public, can permanently preserve all or a portion of the Natural Area by dedicating it as a Nature Preserve. Legal documentation, a conservation easement or articles of dedication, identifies restrictions on the property after dedication to ensure the protection of the conservation values specific to the site. The purpose of dedicating property as Nature Preserve is to permanently protect important features of natural, geological, or archaeological heritage of Delaware and guarantee their existence into the future. Some Nature Preserves remain private and some are open for public use. Many are part of Delaware State Parks and offer a wide variety of experiences for visitors.



## Protecting Lands for Conservation and Recreation

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

<i>RECOMMENDATIONS</i>	<i>IMPLEMENTERS</i>
1. Identify and prioritize lands for acquisition to protect and maintain large landscapes and avoid fragmentation of resources (e.g. conservation corridors).	<i>Open Space Council, Greenways &amp; Trails Council, DNREC, DE Dept. of Agriculture, DelDOT, private conservation organizations</i>
2. Identify conservation opportunity areas for inclusion in the natural resource element of local comprehensive land use plans.	<i>DNREC, OSPC, County and Local officials, environmental advocates</i>
3. Protect rare landscape elements, cultural resources, sensitive areas, and associated species.	<i>DNREC, DE Dept. of Agriculture, Delaware Historical and Cultural Affairs, , DelDOT, USFWS</i>
4. Balance resource protection with resource use.	<i>DNREC, DE Dept. of Agriculture, USFWS, DPH, local parks and recreation departments, private recreation and conservation organizations</i>
5. Leverage partnerships with state and federal agencies, conservation organizations and private landowners.	<i>State and Federal Environmental agencies, conservation organizations and private landowners</i>
6. Develop a guide of funding sources and incentives to protect high priority conservation and recreation areas.	<i>DNREC, De Dept. of Agriculture, private industry</i>
7. Manage core natural areas to minimize direct disturbances and the introduction and spread of non-native and invasive species.	<i>Federal, State, and local land managers, private landowners, volunteer groups</i>

## Appendix A. Overview of 'Play Outside'



In an effort to encourage more children and their families to enjoy the outdoors and outdoor-related activity year-round, Delaware State Parks has launched “Play Outside,” a new website for Delaware residents and visitors that provides convenient and detailed information about public parks and facilities in Delaware.

Residents and visitors can now find nearby public outdoor recreation areas including municipal, county and state park lands or recreational facilities such as playgrounds, ball fields, fishing piers, trails, parking and even restrooms, using an interactive online web map. The site is mobile device - friendly and can also track users’ current locations to help them navigate along the many miles of trails that Delaware has to offer.

Play Outside is a single online information source that allows users to find public parks as well as exact locations of outdoor recreation facilities within parks and wildlife areas throughout the state. It includes all areas in the public trust managed by towns, cities, counties and state agencies in Delaware. The website is designed to serve those looking for outdoor recreation opportunities, places to be immersed in nature or to conduct active lifestyles. Users can locate parks close to home or in less-developed places such as wildlife areas.

By clicking on a park, recreation area, or trail the user can also identify the managing agency of the facility and if there are any protections on the property (e.g. LWCF).

Play Outside was developed in partnership with DNREC, the Division of Parks & Recreation and the Delaware Department of Technology and Information.

Find the Play Outside website at: [de.gov/playoutside](https://de.gov/playoutside)

## 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 2,002 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 March through May 2018. 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 2.19 percentage points.

The survey narrative and questions are below (the order of questions was randomly varied, so the sequence was not the same for all respondents):

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?

1. In general, how important is outdoor recreation in Delaware to you personally?  
 Very important  
 Somewhat important  
 Not at all important  
 Don't know
  
2. How important is it to you personally to have the State of Delaware invest in land for parks, trails, and natural areas?  
 Very important  
 Somewhat important  
 Not at all important  
 Don't know
  
3. 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.  
(READ LIST) (CHECK ALL THAT APPLY)  
 1. All-Terrain Vehicle use (ATVs)  
 2. Baseball  
 3. Basketball  
 4. Bicycling  
 5. Bird watching / wildlife viewing  
 6. Boating (by canoe or kayak)  
 7. Boating (by power boat)  
 8. Camping  
 9. Disc golf  
 10. Dog walking  
 11. Fishing  
 12. Flying drones  
 13. Football  
 14. Gardening  
 15. Golf  
 16. Hiking  
 17. Horseback riding  
 18. Horseshoes  
 19. Hunting  
 20. Lacrosse



- 22. Mountain biking
- 23. Paddle boarding
- 24. Participating in nature programs
- 25. Pickleball
- 26. Picnicking
- 27. Rollerblading/Roller Skating
- 28. Skateboarding
- 29. Soccer
- 30. Softball
- 31. Swimming at the beach
- 32. Swimming in a pool
- 33. Tennis
- 34. Using playgrounds
- 35. Visiting historic sites
- 36. Visiting a zoo
- 37. Volleyball
- 38. Walking or jogging
- 39. (DNR) None on this list
- 40. (DNR) Don't know

4. Are there any other outdoor recreation activities in which any member of your household, including yourself expect to participate in the next 12 months?

- 2. Yes (GO TO QUESTION 22)
- 3. No
- 4. Don't know

SKIP TO QUESTION 23

5. What other outdoor recreation activities do you expect to participate in the next 12 months?

---

6. In which three of the activities I just read did you personally participate most often in the past 12 months?

(QUESTION ASKED THREE TIMES TO IDENTIFY THE FIRST, SECOND, AND THIRD ACTIVITY MOST PARTICIPATED)

- 1. All-Terrain Vehicle use (ATVs)
- 2. Baseball
- 3. Basketball
- 4. Bicycling
- 5. Bird watching / wildlife viewing
- 6. Boating (by canoe or kayak)
- 7. Boating (by power boat)
- 8. Camping
- 9. Disc golf
- 10. Dog walking
- 11. Fishing
- 12. Flying drones
- 13. Football
- 14. Gardening
- 15. Golf
- 16. Hiking
- 17. Horseback riding
- 18. Horseshoes
- 19. Hunting
- 20. Lacrosse
- 22. Mountain biking
- 23. Paddle boarding
- 24. Participating in nature programs
- 25. Pickleball
- 26. Picnicking
- 27. Rollerblading/Roller Skating
- 28. Skateboarding
- 29. Soccer
- 30. Softball
- 31. Swimming at the beach
- 32. Swimming in a pool
- 33. Tennis
- 34. Using playgrounds

35. Visiting historic sites

36. Visiting a zoo

37. Volleyball

38. Walking or jogging

39. (DNR) Did not participate in any activities in the past 12 months (GO TO QUESTION 73)

IF LESS THAN THREE OPTIONS CHOSEN, SKIP TO QUESTION 7

7. DOES RESPONDENT HAVE MORE ACTIVITIES HE/SHE PERSONALLY PARTICIPATED IN MOST OFTEN?

2. Yes

3. No

8. Overall, how would you rate the facilities available close to your home for participating in [TOP THREE ACTIVITIES PARTICIPATED]? (ASKED FOR EACH ACTIVITY)

2. Excellent

3. Good

4. Fair

5. Poor

6. Don't know

9. Now please tell me the MOST IMPORTANT reasons you participate in outdoor recreation activities in Delaware.

(DNR LIST; CHECK ALL THAT APPLY)

1. I live close to a park

2. It is affordable

3. To be with family and friends

4. For fun / for relaxation / mental well-being

5. To enjoy the scenery / to be close to nature

6. For my physical fitness

7. For the challenge

8. Because of the variety of opportunities available in Delaware

9. Other

10. Don't know

10. Now I'd like to know a little about where you participate in outdoor recreation activities.

11. What is the name of the park or other outdoor recreation area you visit most frequently?

\_\_\_\_\_

12. 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. Is pet friendly
- 8. It has convenient hours
- 9. Friendly / knowledgeable staff
- 10. Clean
- 11. Safe
- 12. Other
- 13. Don't know

13. And thinking about the area you visit most frequently, approximately how many miles from your home is this area located?

14. How do you usually get to the area that you visit most frequently?

(DNR LIST)

- 2. Walk / jog
  - 3. Bike
  - 4. Automobile
  - 5. Motorcycle
  - 6. Public transportation
  - 7. Don't know
  - 8. Other (GO TO QUESTION 15)
- IF NOT WALK/JOG OR BIKE GO TO #16

15. ENTER OTHER MEANS OF TRAVEL.

\_\_\_\_\_



16. What is the main reason you do not walk, jog, or ride a bike to the area that you visit most?

\_\_\_\_\_

17. Are you able to walk, jog, or ride a bike to ANY park and/or outdoor recreation areas that are near where you live?

2. Yes (GO TO QUESTION 19)

3. No (GO TO QUESTION 18)

4. (DNR) Don't know SKIP TO QUESTION 73

18. 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. Lack of time

9. (DNR) None of these

10. (DNR) Don't know

19. 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. More time

8. (DNR) None of these

9. (DNR) Don't know

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

2. Yes (GO TO QUESTION 21)

3. No

4. Don't know

21. What else would encourage you to participate or to participate more actively in outdoor recreation in Delaware?

---

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

2. Yes (GO TO QUESTION 23)

3. No

4. Don't know

SKIP TO QUESTION 86

23. What facilities would you like to see added to a park in your community?

(AREAS FOR DIFFERENT KINDS OF SPORTS IN THE CONTINUED/NEXT LIST)

(DNR LIST; CHECK ALL THAT APPLY)

1. Playgrounds for ages 2 to 5

2. Playgrounds for ages 6 to 12

3. Playgrounds (ages unspecified)

4. Campgrounds

5. Fishing areas / fishing piers

6. Outdoor public swimming pools

7. Biking paths / mountain biking trails

8. Paved walkways

9. Hiking / walking trails

10. Trails / paths (did not specify if for walking, biking, or hiking)

11. Boating access in coastal waters

12. Boating access in fresh water, such as streams, lakes, and rivers

13. Access for canoes and kayaks

14. Boating access (did not specify type of waters)

15. Community gardens

16. Off-leash dog areas

17. Skateboarding / BMX facilities

18. Football fields

- 19. Soccer fields
- 20. Public tennis courts
- 21. Outdoor basketball courts
- 22. Public golf courses
- 23. Baseball or softball fields
- 24. Indoor recreational facilities, such as indoor basketball courts,
- 25. volleyball courts, and swimming pools
- 26. Wildlife viewing platforms
- 27. Pickleball
- 28. Restrooms
- 29. Other
- 30. None of these
- 31. Don't know

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.

24. 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?

- Very important priority
- Somewhat important priority
- Not an important priority
- Don't know

25. 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?

- Very important priority
- Somewhat important priority
- Not an important priority
- Don't know

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.

26. 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?
- Very important priority
  - Somewhat important priority
  - Not an important priority
  - Don't know
27. What about acquiring more land for parks and wildlife areas in the state of Delaware?
- Very important priority
  - Somewhat important priority
  - Not an important priority
  - Don't know
28. What about acquiring more historic and cultural resource sites?
- Very important priority
  - Somewhat important priority
  - Not an important priority
  - Don't know
29. What about bike and pedestrian pathways between places of work, schools, shopping areas, and neighborhoods?
- Very important priority
  - Somewhat important priority
  - Not an important priority
  - Don't know
30. 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?
- Improve / enhance existing parks and recreation areas
  - Invested in new parks and recreation areas
  - (DNR) Don't know



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.

31. Health and fitness?

Very important

Somewhat important

Not very important

Not at all important

(DNR) Don't know

32. Enhancing property values?

Very important

Somewhat important

Not very important

Not at all important

(DNR) Don't know

33. Preserving open space?

Very important

Somewhat important

Not very important

Not at all important

(DNR) Don't know

34. Protecting natural resources?

Very important

Somewhat important

Not very important

Not at all important

(DNR) Don't know

35. Cleaner air and water?

Very important

Somewhat important

Not very important

Not at all important

(DNR) Don't know

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.

36. Parks, trails and natural areas are a luxury rather than a necessity.

Strongly agree

Moderately agree

Neither agree nor disagree

Moderately disagree

Strongly disagree

(DNR) Don't know

37. Public recreation programs are a luxury rather than a necessity.

Strongly agree

Moderately agree

Neither agree nor disagree

Moderately disagree

Strongly disagree

(DNR) Don't know

38. Parks, wildlife areas and state forests should be priorities in the State budget even during economic hard times.

Strongly agree

Moderately agree

Neither agree nor disagree

Moderately disagree

Strongly disagree

(DNR) Don't know

39. How many children, age 17 or younger, do you have living in your household?

40. What are the ages of the children living in your household?

Great! We are just about through. The final questions are for background information and help us analyze the results.

41. What is your zip code?

42. What county do you live in?

|\_\_| Kent

|\_\_| New Castle

|\_\_| Sussex

43. What is the highest level of education you have completed?

44. What races or ethnic background do you consider yourself?

45. May I ask your age?

That's the end of the survey. Thank you for your time and cooperation.

46. Respondent's gender (observed, not asked)

## Appendix C. Demographics of Delaware Residents

Demographic Characteristic	2017 Census Estimate	2018 Survey Respondents
<b>Gender</b>		
Male	48.4%	48%
Female	51.6%	52%
<b>Race/Ethnicity</b>		
White or Caucasian	69.7%	73%
Black or African American	22.8%	15%
Hispanic or Latino	9.3%	2%
Other Races/Ethnicities	7.4%	10%
<b>Age Demographics</b>		
15 to 24	12.4%	11%
25 to 34	13.6%	15%
35 to 44	11.5%	14%
45 to 54	12.9%	17%
55 to 64	13.9%	16%
65 and over	18.0%	18%
<b>Education</b>		
Less than H.S. Diploma	7.7%	3%
High School Graduate or Eq.	25.9%	26%
Some College or Trade Sch.	17.4%	19%
Associate's Degree	5.4%	15%
Bachelor's Degree	13.6%	19%
Graduate or Prof. Degree	9.5%	12%

Regarding the Survey questions about demographic information, some respondents did not know or preferred not to answer.



## Appendix D. 2018-2023 SCORP Recommendations

	<i>RECOMMENDATIONS</i>	<i>IMPLEMENTERS</i>
<b>Outdoor Recreation Inventory</b>	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.	<i>DPR, State and Local recreation officials</i>
	Broaden the Outdoor Recreation Inventory to include facility age, condition, and accessibility analyses.	<i>DPR, State and Local recreation providers</i>
	Identify missing information needed to conduct more accurate spatial analyses.	<i>DNREC, DELDOT, State and Local planning agencies and parks departments, SCORP TAC</i>
	Identify private recreation facilities to be incorporated in a statewide level of service analysis.	<i>Outdoor Recreation Industry, State and Local recreation providers, DPR</i>
	Conduct outdoor recreation spatial analyses to inform health impact assessments for local and regional community designs.	<i>DE HEAL, DPH, OSPC, DNREC, DE Greenways, WILMAPCO, Kent/Sussex MPO</i>
	Maintain and improve an online clearinghouse (Play Outside) of resources that disseminates detailed information for all recreation facilities in Delaware.	<i>DNREC, USFWS, State and Local recreation providers</i>
<b>Improving Public Health</b>	Provide technical assistance to ongoing statewide health initiatives (Delaware HEAL & Governor’s Council on Health Promotion and Disease Prevention).	<i>DE HEAL, GCHPDP, OSPC</i>
	Support the Children in Nature Taskforce Report (released Oct. 2012).	<i>CIN Coalition, NHPS, DSP, Municipal &amp; County Parks, local pediatricians</i>
<b>Getting Children Outdoors</b>	Continue to conduct outdoor recreation participation studies aimed at specific user groups and demographics.	<i>DPR, Nemours, DF&amp;W, DE Greenways, DSBBDT, local governments</i>
	Provide technical assistance to organizations working towards goals published in the Children in Nature Taskforce Report.	<i>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</i>

## DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY

### Statewide Comprehensive Outdoor Recreation Plan

<b>Getting Children Outdoors</b>	Provide training to develop schoolyard habitats, outdoor classrooms and/or school gardens to assist in reconnecting youth to their environment.	<i>Center for Inland Bays, Delaware Nature Society, Delaware Dept. of Agriculture, DAEE</i>
	Establish and maintain an environmental education resource clearinghouse.	<i>DNREC, Delaware Dept. of Agriculture, DNS, Delaware Greenways, UD, DSU, DAEE</i>
	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.	<i>DNREC, DOE, American Heart Association, DE HEAL</i>
	Identify public school facilities that are not publicly available during non-school time to increase community access.	<i>DOE, DE HEAL, NHPS, DNREC</i>
	Ensure long-term maintenance and safety of all recreation facilities.	<i>DNREC, Local Recreation Organizations, DOE</i>
<b>Accessible Recreation</b>	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.	<i>Counties, Municipalities, DRPS, DPR, OSPC, DE HEAL, NHPS, DelDOT</i>
	Provide on-going training to assist agency planners to remain current on best practices for park management and playground safety.	<i>DRPS, DPR, Local Parks and Recreation Agencies</i>
	Provide technical assistance to state and local officials during comprehensive planning processes to incorporate trails, parks and recreation spaces in local planning efforts.	<i>DPR, DPH, OSPC, DE HEAL, Municipal planners, UD-IPA</i>
	Obtain a clear understanding of the level of public transportation services to parks and recreation facilities.	<i>DART, DELDOT, DNREC, Local Parks and Recreation Agencies</i>
	Gather information necessary to complete in-depth spatial analyses of outdoor recreation facilities for underserved and urban populations.	<i>DPR, OSPC, County and Municipal governments</i>
	Create an accessibility tool/feature for all public outdoor recreation facilities in Play Outside.	<i>DNREC, USFWS, NPOs, UD-CDS</i>
	Develop guidance tools that address best practices for universal accessibility to outdoor recreation facilities.	<i>DNREC, USFWS, NPOs, UD-CDS</i>
	Ensure representation from the disability community throughout the conservation and recreation planning processes.	<i>UD-CDS, DPH</i>
	Provide technical assistance to elected officials or municipalities on the use of Community Transportation Funds or Municipal Street Aid Funding that can be applied to support Accessible Recreation types of projects.	<i>DelDOT</i>

# DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY

## Statewide Comprehensive Outdoor Recreation Plan

Trails and Pathways	Increase the system of interconnected trails and pathways by extending existing trail hubs within municipalities and state parks.	<i>DNREC, DelDot, local parks and recreation departments, County and Municipal planners</i>
	Develop concept plans with focus on identifying new trail and pathway corridors that extend existing trails.	<i>DelDOT, DNREC, county partners, trail users, bike commuters</i>
	Allocate a steady and reliable funding stream for trails and pathways that builds on and extends the existing network.	<i>DNREC, DelDot, local parks and recreation departments, County and local officials, NHPS, Bike Delaware, trail advocates, Metropolitan Planning Agencies</i>
	Coordinate planning efforts to connect neighborhoods with places of work, schools, businesses, park and other community facilities.	<i>DNREC, DelDot, Office of State Planning &amp; Coordination, County and Municipal planners,</i>
	Identify gaps in bicycle and pedestrian networks to prioritize critical community connections.	<i>DNREC, DelDot, local parks and recreation departments, County and Local government officials, trail advocates, trail users, volunteers</i>
	Identify needed land and support the development of future trail extensions and connections that encourage healthy lifestyles and increase recreational opportunities.	<i>DNREC, DelDot, local parks and recreation departments, County and Municipal planners, Metropolitan Planning Agencies, Delaware Greenways Inc.</i>
	Conduct a detailed spatial analysis to determine geographical representation of trail, pathway and sidewalk related needs.	<i>DNREC, DelDot</i>
	Conduct trail volume and use surveys to better understand and enhance trail use.	<i>DNREC, DelDot, local trail managers</i>
	Conduct local walkability and bikeability analyses.	<i>DNREC, DelDot, DRPS, County and Local officials, NHPS, Sussex Outdoors, DE Heal, Trail users,</i>
	Promote and support bicycle and shared-use trail safety campaign.	<i>DNREC, DelDot, DRPS, NHPS, DE Trails and Pathways Initiative partners, Bike Delaware</i>
	Develop a unified statewide trail classification and signage marking system.	<i>DNREC, DelDot, County and Municipal officials, local parks and recreation departments, County and Municipal planners, Bike Delaware, trail advocates</i>

**DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY**

Statewide Comprehensive Outdoor Recreation Plan

<b>Trails and Pathways</b>	Conduct trail and pathway grade analyses to identify unsustainable and inaccessible trail sections.	<i>DNREC, DelDot, Trail managers, volunteers, UD-Center for Disability Studies, DPH</i>
	Define and adopt universal sustainability and trail maintenance standards for trail and pathway design and construction.	<i>DNREC, DelDot, DRPS, trail managers, trail builders, trail advocates, trail users, volunteers</i>
	Share trail standards and design knowledge and skills with counties, municipalities and volunteer organizations.	<i>DNREC, DelDot, DRPS, local parks and recreation departments, trail builders, trail advocates, volunteers</i>
<b>Partnerships for Conservation, Recreation, and Tourism</b>	Foster public/private partnerships and tourism packaging that promote the ecological beauty and recreational opportunities in Delaware.	<i>DNREC, DSBDT, Delaware Dept. of Agriculture, USFWS, DelDOT, private conservation and recreation organizations</i>
	Conduct park and recreation economic studies to assess the benefits of parks, wildlife, conservation areas, and Delaware’s outdoor recreation economy.	<i>DNREC, local parks and recreation departments, DSBDT, USFWS, private conservation and recreation organizations</i>
	Preserve and enhance large scale land conservation partnerships to make Delaware a destination for outdoor enthusiasts.	<i>DNREC, Delaware Dept. of Agriculture, DelDOT, USFWS, private recreation and conservation organizations, local governments</i>
	Build on public/private partnerships by leveraging state, federal, and private resources for:	
	Conservation and ecological restoration - connect wildlife areas by acquisition or easement of unprotected lands; restore native habitat; and protect resources.	
	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.	<i>DNREC, DelDot, DE Dept. of Agriculture, USFWS, private recreation organizations, private conservation organizations, private industry</i>
	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.	



**DELAWARE OUTDOORS: BUILDING AN OUTDOOR LEGACY**

Statewide Comprehensive Outdoor Recreation Plan

<b>Partnerships for Conservation, Recreation, and Tourism</b>	Further promote and foster the six recognized Byway Programs and DNREC’s Bayshore Initiatives per their Corridor Management and Action Plans.	<i>Byway Management Groups, DNREC, DelDOT, DE Greenways, municipalities, Tourism Offices, Chambers of Commerce</i>
	Promote the management of recreation areas to protect unique natural, historical and cultural resources while providing a wide variety of outdoor recreation opportunities.	<i>DNREC, State Historical and Cultural Affairs, private recreation and conservation organizations, outdoor enthusiasts, sportsmen/women</i>
	Conserve lands, provide additional interpretive information, and encourage recreational use of the Nanticoke watershed.	<i>Nanticoke River Water Trail Working Group, DNREC, private conservation organizations</i>
	Increase the number of National Recreation Trail designations in Delaware.	<i>DNREC, Trail managers, Trail enthusiasts</i>
<b>Protecting Lands for Conservation and Recreation</b>	Identify and prioritize lands for acquisition to protect and maintain large landscapes and avoid fragmentation of resources (e.g. conservation corridors).	<i>Open Space Council, Greenways &amp; Trails Council, DNREC, DE Dept. of Agriculture, DelDOT, private conservation organizations</i>
	Identify conservation opportunity areas for inclusion in the natural resource element of local comprehensive land use plans.	<i>DNREC, OSPC, County and Local officials, environmental advocates</i>
	Protect rare landscape elements, cultural resources, sensitive areas, and associated species.	<i>DNREC, DE Dept. of Agriculture, Delaware Historical and Cultural Affairs, , DelDOT, USFWS</i>
	Balance resource protection with resource use.	<i>DNREC, DE Dept. of Agriculture, USFWS, DPH, local parks and recreation departments, private recreation and conservation organizations</i>
	Leverage partnerships with state and federal agencies, conservation organizations and private landowners.	<i>State and Federal Environmental agencies, conservation organizations and private landowners</i>
	Develop a guide of funding sources and incentives to protect high priority conservation and recreation areas.	<i>DNREC, De Dept. of Agriculture, private industry</i>
	Manage core natural areas to minimize direct disturbances and the introduction and spread of non-native and invasive species.	<i>Federal, State, and local land managers, private landowners, volunteer groups</i>

## Appendix E. Delaware Open Space Program Guidelines to Evaluate Land Being Considered

### Guidelines to Evaluate Land Being Considered For Permanent Protection

The State agencies<sup>1</sup> shall use these guidelines to evaluate lands which a landowner has offered for permanent protection to ensure that permanently protecting the land furthers the purposes of the Land Protection Act, 7 Del. C. Chapter 75.

ECOLOGICAL VALUE	20 points	15 points	10 points	5 points	0 points
Plants	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 <sup>2</sup> documented on site or adjacent lands that may benefit from habitat protection	S2 species <sup>3</sup> documented on site or adjacent lands that may benefit from habitat protection	S3 species <sup>4</sup> documented on site or adjacent lands that may benefit from habitat protection	S1-S3 species not likely to benefit from habitat protection
Animals	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 <sup>5</sup> likely to benefit from habitat protection	SGCN not likely to benefit from habitat protection
Habitat of Conservation Concern (HCC) <sup>6</sup>	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
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		

<sup>1</sup> 7 Del. C. § 7504 - The Department of Natural Resources and Environmental Control, Divisions of Parks and Recreation and Fish and Wildlife; the Delaware Department of Agriculture, Delaware Forest Service; and the Department of State, Division of Historic and Cultural Affairs

<sup>2</sup> S1 Species- Extremely rare with typically 5 or fewer occurrences statewide.

<sup>3</sup> S2 Species- Very rare with typically 6 to 20 occurrences statewide.

<sup>4</sup> S3 Species- Rare to uncommon with approximately 21 to 100 occurrences statewide.

<sup>5</sup> 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.

<sup>6</sup> 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
Forest/Non-Forested Wetland % Cover	76-100	51-75	26-50	10-25	<10
ESH <sup>7</sup> % Cover		76-100	51-75	26-50	
<b>Total (115)</b>					

LAND USE	20 points	15 points	10 points	0 points	-10 points
Proximity to Existing Preserved Lands	Inholding/ Adjacent to existing protected lands	Provides a corridor between existing protected lands	Potential connector or corridor between existing protected lands	Stand alone	
Development Pressure	Takes away the potential of developing >5 residences on site				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
Size of Property	>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 necessary	Poor access	No access
Public Utilities <sup>8</sup>					Above ground utilities present
Sea Level Rise (SLR) Adaptation <sup>9</sup>	Provides for inland migration			Predicted to be under water based on current models	Currently under water at MHW <sup>10</sup>
<b>Total (125)</b>					

<sup>7</sup> ESH – Early Successional Habitat, including mixed stand of grasses and forbs, old field habitat, pastureland, and shrubland.

<sup>8</sup> 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).

<sup>9</sup> DNREC Sea Level Rise Scenarios. Adaptations allow for landward migration of a resource or loss of land due to sea level rise.

<sup>10</sup> MHW = Mean High Water



CULTURAL/HISTORICAL RESOURCES	40 points	20 points	10 points
Cultural/Historical Resources <sup>11</sup>	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	
<b>Total (80)</b>			

WATER FEATURES	25 points	15 points	5 points	0 points
Water Features Present	Unchannelized, buffered	Unchannelized, unbuffered	Channelized, buffered	Channelized, unbuffered
Waterway Frontage	>1000 linear feet	500-999 linear feet	250-499 linear feet	0-249 linear feet
Buffer Size	>200'	100-199'	50-100'	0-50'
Wetlands on Site	Freshwater	Other		
Water Quality Improvement Potential	Potential for wetland restoration	Potential to restore degraded streams	Potential for enhancement and/or buffering	
<a href="#">Nutrient Management Critical Priority Areas</a> <sup>12</sup>	Low	Medium		High
<a href="#">ERES Waters</a> <sup>13</sup>	Within ERES waters		Adjacent to ERES waters	Outside ERES waters
<a href="#">Watershed Impairment</a> <sup>14</sup>	0-50%	50-74%	75-99%	100%
<b>Total (200)</b>				

<sup>11</sup>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. C. §1803).

<sup>12</sup> The Delaware Nutrient Management Act (3 Del. C. Ch.22) was enacted in June 1999 as part of an effort to address water quality concerns in Delaware. Nutrient management critical area priorities were established to help the Delaware Nutrient Management Commission decide where to focus their efforts with respect to their Nutrient Management Planning and Nutrient Relocation programs.

<sup>13</sup> The designation requiring the highest level of protection is for waters that are of "Exceptional Recreation or Ecological Significance" (ERES). These waterways are important habitats for a multitude of wildlife and are also popular recreation destinations.

<sup>14</sup> Section 305(b) of the Clean Water Act (CWA) requires reporting of the conditions of the waters of the State. Section 303(d) of the CWA requires listing of the impaired waters (waters that do not meet their standards). If monitoring reveals that a stream has high pollutant levels that prevent it from achieving all of its designated uses, it is considered impaired and will be placed on the 303(d) list. This information is organized by watershed, or the land area draining to a particular water body.



<b>RECREATION</b> (Must not adversely affect ecological resources to receive points)	<b>20 points</b>	<b>15 points</b>
Potential for High Priority Outdoor Recreation Needs as Defined in the SCORP <sup>15</sup> (see Recreation Use section below for specific uses)	3+	1-2
Recreational Uses (see Recreation Use section below for specific uses)	3+	1-2
Proximity to Population Base <sup>16</sup>	Level 1	Level 2
Within a Fisheries Access Area <sup>17</sup>	Yes	
<b>Total (80)</b>		

<b>RECREATIONAL USES</b> (Must not adversely affect ecological resources to receive points)	<b>Check All That Apply</b>
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	
<b>Total Number of Recreational Uses</b>	

<sup>15</sup> Statewide Comprehensive Outdoor Recreation Plan (SCORP) is a planning and policy document that identifies needs in outdoor recreation throughout the state of Delaware.

<sup>16</sup> [Strategies for State Policies and Spending](#) - Level 1 and Level 2 Areas of Investment.

<sup>17</sup> An area where fish could be caught, such as a shoreline or pier or somewhere a boat could get access to the water for the purpose of fishing.

<b>Total Points For All Categories</b>	<b>Total Points</b>
Ecological Value ( /115)	
Land Use ( /125)	
Cultural/Historical ( /80)	
Water Features ( /200)	
Recreation ( /80)	

## DESCRIPTIVE EVALUATION/PROJECT-SPECIFIC QUESTIONS

The following qualitative portion may be weighted more heavily than the quantitative portion depending on the specific property.

**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, Bayshore Initiative, Bird Conservation Region 30, Blackbird-Millington Corridor Plan, Captain John Smith Chesapeake National Historic Trail, Chesapeake Watershed Implementation Plan, Delaware Forest Action Plan, Delaware Bayshore Initiative, Delaware Wildlife Action Plan, Forest 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, SCORP, Wildlife Action Plan)

**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 conservation easement, and why?**

**Is there a discount offered on the purchase price?** Please note all endowment and monitoring contributions are voluntary, but priority may be given to properties whose owners offer financial incentives, such as a discount or endowments, to the State.

**Are there opportunities to leverage non-Open Space Program 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.**

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



**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:



**Landowner Permission to Access Land/Limitations on Use and Disclosure of Data**

**Agreement**

As required by 7 Del. Code § 7507B, a representative of the State agency may access land being considered for permanent protection only after the landowner executes a written permission form granting State agency representative permission to access the land. This form shall serve as that written permission.

Any data collected during this visit shall not be used for any of the following purposes:

- (1) To incorporate the data into a comprehensive plan; overlay zoning ordinance; guideline; specific or technically-based performance standard, design criterion, or mitigation requirement; or for any other restrictions on land use.
- (2) To deny, delay, or recommend the denial or delay of a permit or license.
- (3) To place any condition or restriction on a permit or license.
- (4) To charge additional fees on a permit or license.

Nothing shall prohibit the State agency representative from reporting to the proper authorities any information or data obtained about the property concerning a violation of any environmental, public health, or safety laws or regulations or information that is otherwise required to be reported.

Data collected under this section related to negotiations that do not result in the permanent protection of land are not public records and may not be disclosed under Chapter 100, Title 29.

Name and agency of representative: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Landowner Permission Form (Agency representative to retain)**

This certifies that \_\_\_\_\_ (and \_\_\_\_\_ additional staff) is/are authorized  
Name of agency representative

to enter upon the property of \_\_\_\_\_ located at \_\_\_\_\_  
Landowner's full name Property address or description

for the purpose of examining the property for its suitability for permanent protection by the State of Delaware.

Name of Landowner: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Contact information: \_\_\_\_\_

## Appendix F. 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% 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 Wetland Management Plan (2015) 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 2020.

The Delaware Wetland Management Plan outlines seven 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:

- A. Mapping - Update wetland mapping tools and improve access to wetland related spatial data.
- B. Monitoring - Increase monitoring efficiency and effort to provide insight into wetland function and health.
- C. Climate Adaptation - Use available science and research to better understand and plan for the effects of climate change and sea level rise on wetland habitats.
- D. Restoration - Advance wetland restoration , creation and enhancement to increase wetland acreage, condition and function.
- E. Collaboration - Facilitate collaboration and project sharing among wetland science programs, educators and regulators.

- F. Education - Enhance education and outreach efforts to broaden understanding and strengthen wetland stewardship among all wetland stakeholders.
- G. Conservation - Work with partners to support and enhance wetland conservation program that are not covered by state or federal regulations

The Delaware Wetland Management Plan can be found online at:

<http://www.dnrec.delaware.gov/Admin/DelawareWetlands/Documents/2015%20Delaware%20Wetlands%20Management%20Plan.pdf>