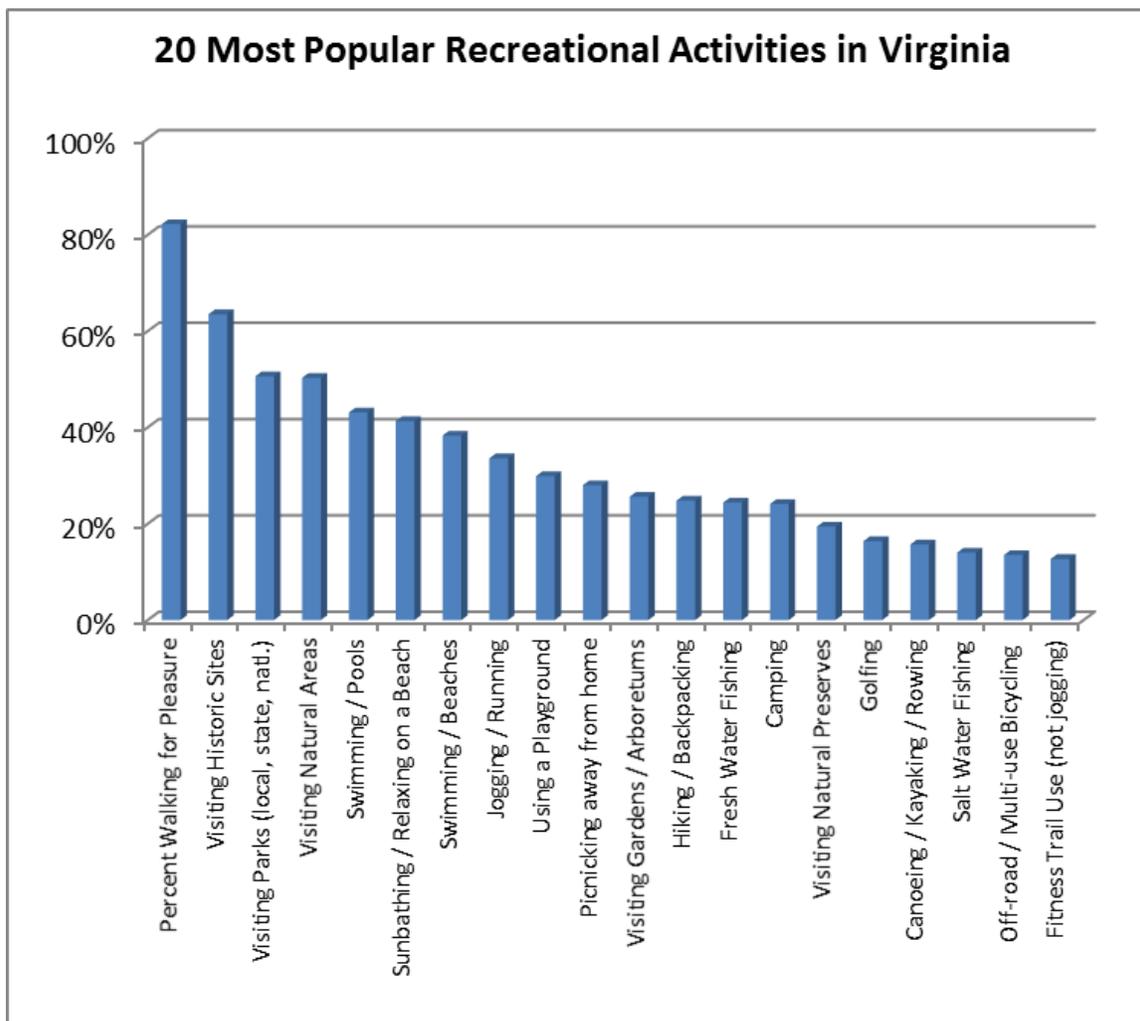


PARKS AND RECREATION

2015 Summary

Virginia’s public parks and recreation infrastructure are a diverse combination of national, state and local parks and facilities. This system of parks is described in the Virginia Outdoors Plan (VOP) which is the state’s official document for land conservation, outdoor recreation and open space planning. The 2013 VOP was the 10th edition, and it was based heavily on the 2011 Virginia Outdoors Demand Survey (VODS). Both reports encompass all aspects of our parks and recreational infrastructure in Virginia, and they provide an excellent basis for the information contained in this ASCE state report card. A ranking of the most popular activities is shown below (VODS, 2011)



Future updates to this ASCE report card should continue “hand in hand” with revisions to the Virginia Outdoors Plan and the Virginia Outdoors Demand Survey, so that ASCE can help promote a better understanding of infrastructure needs and opportunities in a cooperative and complimentary way. This report card also highlights the economic contributions of outdoor recreation in Virginia and its influence on tourism as part of the larger infrastructure conversation. Connections between outdoor recreation and tourism are very strong in Virginia, and the Virginia Tourism Plan embraces the economic importance of outdoor recreation. Long-term projections show that participation in tourism and outdoor recreation has grown steadily since the 1980’s however during the recent economic downturn, 40% of outdoor participants cut back on non-essentials, including outdoor recreation. In spite of this economic downturn, a report from the Outdoor Industry Association shows Virginia still receives more than \$18 billion in economic benefits annually from outdoor recreation, as described in more detail below.

ASCE National Report Card



In its 2013 assessment of national infrastructure needs, the American Society of Civil Engineers graded the nation’s public parks and recreation facilities a “C-” based primarily on the continued loss of open space in our urban areas despite vigorous state and local spending; the unaddressed \$11 billion backlog of maintenance needs for the National Park Service (up from \$7 billion) as well as more than \$18 billion in unmet local needs that were reported in 2011.

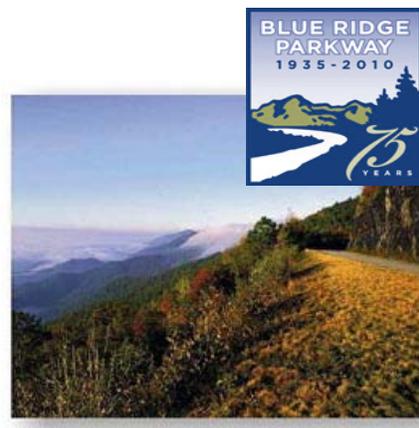
Positive notes in the ASCE national report card included the citation of wide public support for parks and recreation initiatives, with over 140 million Americans making use of parks in their daily lives. These activities also contributed \$646 billion to the nation’s economy, supporting 6.1 million jobs nationwide.

Federal Lands

Federal recreational lands in Virginia are primarily managed by the National Park Service, the USDA Forest Service, and the US Fish and Wildlife Service.

National Park Service

The National Park Service (NPS) has a significant presence in Virginia with 20 parks and a combined land area of approximately 400,000 acres. The NPS parks in Virginia have 14 million visitors annually and generate \$263 million in economic activity, providing 6,100 jobs statewide. This is approximately 2% of the total travel and tourism-related spending in the state. The NPS also enhances the capacity of the state, local communities and private organizations through its partnership programs and outreach activities.



USDA Forest Service

In addition to the NPS facilities, the United States Department of Agriculture’s Forest Service manages the 1.8 million-acre George Washington and Jefferson National Forests (GW-Jeff) in Virginia. Virginia’s national forest lands constitute nearly 50% of the total outdoor space that is accessible to the public in

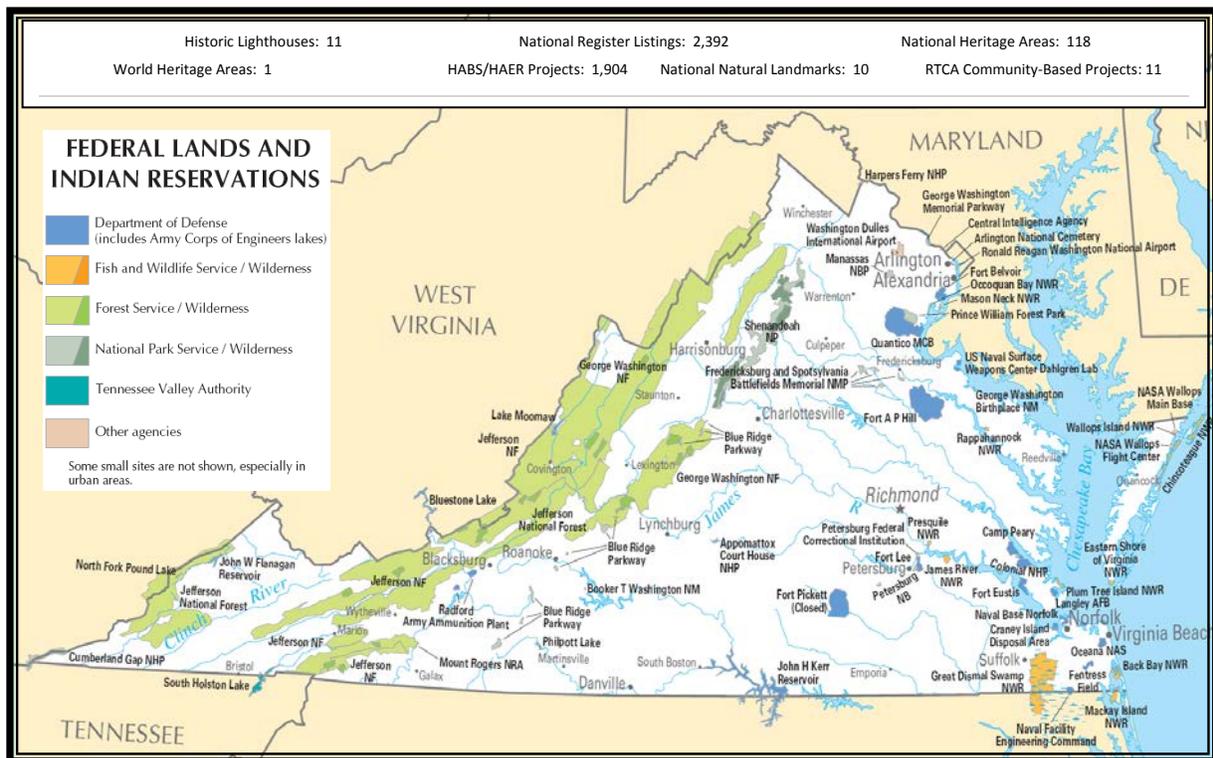
the Commonwealth. The National Forests stretch the length of the western portion of the state, through 31 counties, and offer more than 2,000 miles of trails.

Recreational use at the George Washington and Jefferson National Forests for fiscal year 2011 was estimated at 2.3 million visits, up from an estimated 1.63 million in 2006. The lands provide the only publicly managed motorized trails in Virginia and include comprehensive equestrian trail systems with campgrounds, a range of trail types and lengths, and support facilities for horse riders. The estimated economic impact is more than \$203 million annually.

US Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) manages 14 National Wildlife Refuges (NWR) and one national fish hatchery in Virginia, comprising more than 150,000 acres. The refuges are managed primarily to provide habitat and to protect natural ecosystems however, they also provide outdoor recreation opportunities.

The refuges help fulfill conservation objectives to preserve, restore and enhance natural ecosystems including endangered or threatened species; perpetuate migratory bird resources; preserve the natural diversity of plants and animals; and provide an understanding of wildlife ecology while offering visitors safe, wholesome and enjoyable recreational experiences. The figure below shows the geographic distribution of these federal recreational assets around Virginia.



Federal Parks, Forests and Monuments (Source: National Atlas, U.S. Dept. of Interior, 2003)

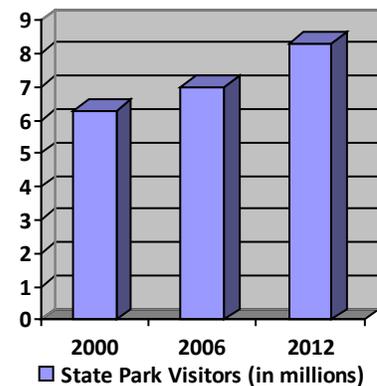
State Lands

The federal lands described above are complimented in Virginia by a large number of state facilities including parks, historical sites and natural areas.

Department of Conservation and Recreation

Virginia opened its first 6 state parks, in 1936. Since then, the development and demand for state park facilities in Virginia has continued to grow. As of 2013, the Virginia Department of Conservation and Recreation (DCR) was managing 40 state parks with more than 70,000 acres of parklands, which includes four state parks which are “land-banked” and are still under development at this time.

Through the continued expansion of state parks, attendance and popularity has also grown. Attendance at state parks in 2012 exceeded 8.3 million with a projected economic impact close to \$199 million. This compares to 7.0 million visitors in 2006; and 6.3 million visitors in 2000. When comparing the revenue generated by state parks to the economic investment in the state’s general fund, it represents **a return on investment of almost \$11 for every \$1 of general fund spending**. This is particularly important for many of the rural communities in which state parks are often located.



Virginia Department of Forestry

While the majority of Virginia’s forests are privately owned, the Virginia Department of Forestry (VDOF) manages almost 70,000 acres of state forest land. This includes 2 seed nurseries and 19 forests. These forests are extremely diverse and important in cleansing the air, purifying water, providing forest products (and jobs) and supporting outdoor recreation. The forest products, wildlife habitat and aesthetic contributions of Virginia’s forests cannot be overlooked, since they create an ecological balance that improves our quality of life.

With 15.8 million acres of forested land, including public and private lands, Virginia is 58% forested by current estimates. According to the U.S. Forest Service, however, urban growth and development in Virginia continues to create a net loss of forested land. Recent estimates are an average net loss of 16,000 acres per year.

This continued loss of forest land has an adverse impact on the timber industry, where forests in Virginia provide more than 144,000 jobs, with \$23.4 billion in revenue including \$350 million received annually by private landowners for harvested timber. Societal and ecological benefits of forestry are reported to add another \$4.1 billion annually.

Virginia Department of Game & Inland Fisheries

The Department of Game and Inland Fisheries (DGIF) manages the Commonwealth’s wildlife population and inland fisheries, and assists in protecting state and federally threatened or endangered species. The mission of DGIF is to maintain optimum populations of all species of wildlife and fish to serve the needs of the Commonwealth; to provide opportunities to enjoy wildlife, inland fishing, boating and related outdoor recreation; and to promote safety for persons and property in connection with fishing, boating, and hunting.



DGIF also provides access to lands owned by both public and private entities through cooperative management agreements and by acquiring and managing wildlife management areas. There are 39 wildlife management areas in Virginia comprising over 200,000 acres. DGIF also maintains 4 wildlife refuges totaling an additional 1,060 acres of wildlife habitat where hunting and fishing are not permitted.

Of 54 outdoor recreation activities in the 2011 Virginia Outdoor Demand Survey, fresh water fishing was the 13th most popular activity. License fees for fishing help DGIF maintain access to 35 public fishing lakes (totaling over 3,318 acres); fund contract fishery operations on 24 large reservoirs and 166 small impoundments (totaling over 173,000 acres); and assist the DGIF with the maintenance of public access and the management of 3,000 miles of native and stocked trout waters, as well as 25,000 miles of warm water streams and rivers. According to a 2011 USFWS National Survey, Virginia's economic benefits from fishing, including both fresh and salt water, was \$1.1 billion for 833,000 anglers.

Virginia's Watchable Wildlife Program is also worth noting for its tourism connections. The program supports the expansion of wildlife viewing opportunities and promotes wildlife-conservation awareness and education. One example, the Virginia Birding and Wildlife Trail, was the first statewide wildlife viewing trail developed anywhere in the United States. The trail links over 650 sites statewide, and encourages improvement of wildlife habitats in local communities. Additionally, the Virginia Master Naturalist Program continues to be very successful in promoting citizen volunteers to participate in local programs.

Virginia Marine Resources Commission

In addition to the outstanding freshwater fishing resources managed by DGIF, the Commonwealth of Virginia is endowed with more than 5,242 miles of tidal shoreline, encompassing 2,300 square miles of water surface and 1,472,000 acres of state-owned bottom lands. These submerged lands, greater in land area than the entire State of Delaware, harbor some 21,000 acres of Chesapeake Bay grasses. Oversight of these resources is managed by the Virginia Marine Resources Commission (VMRC), the lead agency for protecting our state's saltwater and tidal environment.

These lands are a public resource and a valuable habitat for shellfish, crabs and finfish. Along the fringes of the coves, creeks, great rivers and bays of the Chesapeake estuary are 225,000 acres of vegetated tidal wetlands. These vegetated areas, particularly the salt marshes, provide a vital spawning and nursery area and are an important element of the food chain for the marine resources of the Commonwealth.

Local Parks

The national and state parks across Virginia are mostly dedicated to preservation, conservation, historical sites, and natural resource interpretation. They also tend to lean heavily on passive recreational opportunities (i.e. hiking, hunting, camping, and picnicking). This means our local parks are essential to accommodating active and passive recreational needs within the communities they serve.

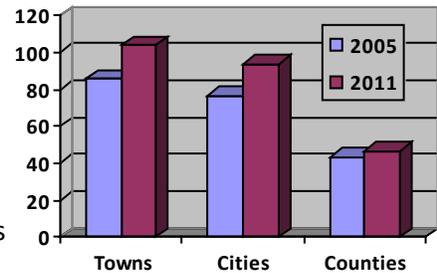


Chesapeake Bay Region – 2002 Landsat Image
(Source: USGS EROS Datacenter)

As stated in the 2013 Virginia Outdoors Plan, “local and regional parks and recreational facilities are the foundation of the Commonwealth’s outdoor recreation system.” It is the local jurisdictions and local clubs/organizations that provide athletic fields, multi-use courts, playgrounds, community centers, trails, zoos, gardens, and other recreational facilities to their citizens.

Our local parks also provide some of the best opportunities to develop youth sports programs which build fitness and social skills such as teamwork and competitiveness in our children. This vital link to our community supplements the sometimes shrinking youth sports programs in the public schools and contributes to healthy living objectives. In some ways, the contributions of local parks to our communities can be one of the best benefits derived from a well developed and maintained local park system. Local parks and the associated structured recreation programs can be a positive influence to the economy and the health of a community. In heavily urbanized areas, local parks and trails are the underpinning for connectivity and a framework for diverse social and cultural community events.

The front line for planning and implementing local parks is our local parks and recreation departments. Virginia currently has 71 counties, 21 towns and all but one city that provide full-time parks and recreation departments. Funding of park services varies from locality to locality, with towns spending more per capita (\$103.57) than cities (\$93.47) or counties (\$46.62). 2011 spending is reported to have increased from the 2005 report, as shown to the right.



Since late 2006/07, most Virginia localities have experienced reduced operating budgets due to the economic downturn. This is not to say that there has been no growth in parkland acquisition and development; but rather, limited forward movement for all but the most proactive communities typically. In addition, some localities have reduced or eliminated government recreation services, leaving gaps that may or may not be met by other providers (i.e. YMCA, Boys and Girls Clubs, etc.). This reduction in service stands in opposition to the growing evidence that local parks contribute to improved and sustained individual health.

In our national and state parks, maintenance of facilities has been difficult to fund in recent years and likewise this has proven challenging to local parks. “Doing more with less” has been the mantra. In an effort to maintain municipal and local parks, agencies have had to impose or raise user fees, partner more often with local stakeholders, and develop sponsorship packages in an effort to offset costs; or, strategically reduce the level of maintenance standards across park systems. Many localities have deferred funding for capital improvement and maintenance projects, creating a backlog of needs.



Economic Impacts

The economic impact of outdoor recreation on tourism relies on a well developed and connected park system. Citizens need outdoor recreation opportunities close to where they live. Over 50% of those surveyed in 2011 visited local, state or national parks. The high importance Virginia citizens place on parks means local, regional and state parks and recreation resources along with private lands, including public-private partnerships and volunteerism are important in meeting Virginia’s outdoor recreation needs collectively.

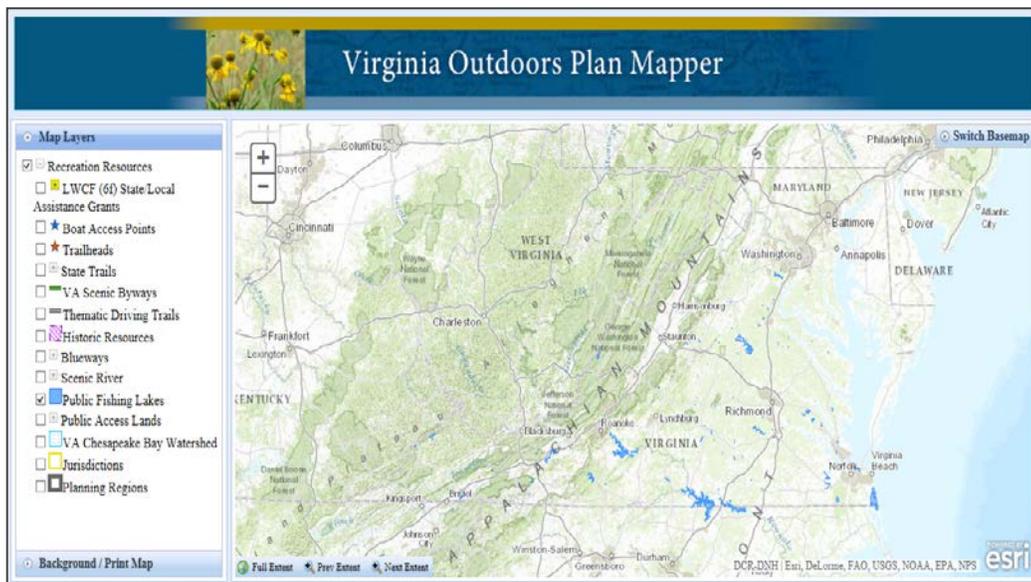
According to the Virginia Auditor of Public Accounts in the 2011 *Comparative Report on Local Government Revenues and Expenditures* statewide per capita spending on parks is \$62.81. This low cost for public parks can be attributed to the fact that many outdoor recreation facilities are supported by user fees, friends groups, and park foundations. These groups link to private sector resources and provide private funding and volunteer support to supplement outdoor recreation across the Commonwealth.

New Interactive Mapping

The 2013 Virginia Outdoor Plan (VOP) takes advantage of technological advancements and meets the changing needs for recreation planning by “going digital”. The VOP Mapper is the first VOP-focused interactive mapping website, developed to provide a single, integrated source for mapping and information about all of Virginia’s recreation resources.

For this reason, this 2014 Report Card eliminates many of the images in the 2009 report card which showed state maps of different amenities by category. Instead, we encourage our readers to go to the VOP Mapping Website when planning outdoor recreation activities.

http://www.dcr.virginia.gov/recreational_planning/vopmapper.shtml



Planning for the Future

The Virginia Outdoors Demand Survey (VODS) is conducted every 5 years. It is used to measure attitudes about outdoor recreation and demand for recreational activities. Recreation providers across the Commonwealth also use the survey results to guide strategic planning for facilities at the local level. Respondents who consider access to outdoor recreation as “very important” increased slightly in 2011, from 50 to 56 percent. The majority of respondents, and especially middle-aged respondents, participate in outdoor recreation “mostly on weekends” according to the latest survey. Respondents aged 18-24 were especially likely to consider such access to be “very important.”

Participation in recreation related to tourism has increased steadily since the 1980's. The Virginia Tourism Plan embraces outdoor recreation as a top activity for travelers. The economic impact of the tourism industry in 2011 was \$20.4 billion, with international travelers providing \$390 million of that. Tourism is the state's fifth largest non-farm industry, supporting 207,000 jobs. This makes outdoor recreation a key to economic development across the Commonwealth.

The Virginia Outdoors Plan (VOP) is a comprehensive document that addresses all aspects of outdoor recreation. Along with the Virginia Outdoors Survey and other related studies, these plans provide a framework for maintaining and improving the park system and should continue to be developed on a periodic basis. In addition, local and regional planning agencies are needed, with full-time directors, to champion and implement the strategies established in the plans. Local leaders can also help encourage land use planning at the local level, including conservation and preservation, clustering of development plans where appropriate to reduce environmental impacts, and other smart growth and green design initiatives.

The Virginia Outdoors Plan (VOP) is a guide for outdoor recreation that:

- Identifies Virginia's long-range outdoor recreation and land conservation needs.
- Assists governmental agencies, local and regional planners and private-sector partners.
- Highlights the importance of state-recognized scenic resources.
- Identifies outdoor recreation trends.
- Supports outdoor recreation and land conservation across the Commonwealth.

ASCE REPORT CARD GRADE: C+

Assigning an overall grade to Virginia's parks and recreational infrastructure is based on an evaluation of the accessibility, reliability, current and future capacity, sustainability and economic trends of Virginia's recreation areas. The ASCE Virginia Section is lowering the report card grade for parks in Virginia from "B-" to a "C+" because:

1. The maintenance backlog for the National Park Service has jumped from 7 to 11 billion, and continues to climb. This same type of downward spiral is reflected in Virginia's National Parks as well as other recreational types of facilities at the federal, state and local levels.
2. DCR has four "land banked" parks with inadequate funding for continued development and access improvements, park staffing or long-term maintenance needs. These unfinished projects are evidence of a lack of understanding as to the economic, societal and health benefits of these new state parks to the local communities.
3. Virginia has more localities with vacant or missing positions for parks directors than we had 4 years ago. This includes 26 counties mostly in the Northern Neck, Southside Virginia and Southwest Virginia.
4. There have been no additional general obligation bonds since 2002 to continue the acquisition of lands, and the development of state parks.

On the positive side (...and why it's not a "C-")

1. The state has begun developing 4 "land banked" state parks. They just need funding to make the facilities fully functional and open to the public.

2. The state recently acquired the Natural Bridge and surrounding properties protecting this landmark from development impacts for future generations and preserving it as a tourist destination.
3. The economic benefits of state parks in Virginia continue to increase with the development of our parks. For every dollar spent, there is 11 dollars in revenue generated. This is strongly linked to tourism benefits in current plans and the VOP Mapper will make it even easier for tourists to find recreational destinations of all types.

Virginia's favorable rating as compared to the "C-" grade for the ASCE national report card is primarily due the wide variety and diverse nature of recreational opportunities available to Virginians. Existing facilities are very diverse and the inventory of state and local parks continues to grow.

Recommendations

Virginia
Parks
2015
GRADE
C+

Due to the diverse infrastructure and tremendous natural resources available to Virginians through our parks and recreation facilities, the number and types of recommendations can be quite extensive. This report card focuses on recommendations tied to economics since those can help sustain future needs and improve report card grades. Our top recommendations for state, local and regional parks include:

1. Create a source of dedicated funds for outdoor recreation, including fully funding the Land and Water Conservation Fund, Recreation Trails Program and Transportation Enhancement Program at the federal and state levels.
2. Continue efforts to increase State Park funding to achieve full staff levels at all existing parks, and to develop and operate "land-banked" parks as a top priority.
3. Continue to communicate the economic, tourism, and health benefits of outdoor recreation activities, prioritizing the expansion of the most popular activities in Virginia to elected officials, business and community leaders.
4. Develop better estimates for the overall cost of infrastructure operations and maintenance within our parks, and encourage park user fees to help defray those costs, including fully staffing our parks, creating jobs and maximizing the enjoyment and satisfaction of park visitors and tourists, to maximize the economic and tourism benefits.
5. Develop programs and processes to encourage conservation and recreational easements for small acreage areas in cities and urban environments.