



**NOVA**

P A R K S

Northern Virginia Regional Park Authority

# SUSTAINABILITY REPORT



“We do not inherit the earth from our ancestors, we borrow it from our children”

- (quote often attributed to Native Americans)

## INTRODUCTION

Environmental sustainability is a high concern globally in the 21st century. Global climate change is already creating more extreme storms, and warmer temperatures are stressing numerous ecosystems. And predictions call for many more impacts as a result of a warming planet. As a natural resource organization that is built around outdoor recreation, and appreciate of nature, NOVA Parks has a great stake in environmental sustainability.

We have seen numerous economic impacts from extreme weather over the last several years. The winter of 2009/2010 with extreme snowfall significantly impacted our Festival of Lights show in December and delayed the spring golf season. In 2013, the Derecho storm in July resulted in downed trees and loss of power throughout the region. In Arlington, the power was out for almost a week. Our water parks were not able to operate without power, and we suffered significant loss of food that could not be refrigerated.

Having a positive economic impact, the hotter summers have helped to drive increased use of our five waterparks in recent years.

Our economic losses due to the Derecho Storm were covered by insurance, because it was declared a State Emergencies by the Governor. NOVA Parks has policies that cover both physical damage and loss of





income for such extreme storms.

The warmer weather is also affecting our ecosystems. An increase in invasive plants and stressing of native flora and fauna, have resulted from the weather that is changing at an unprecedented pace.

## **OUR ROLE AS STEWARDS OF THE LAND**

NOVA Parks owns well over 11,000 acres of parkland, with over 90% of it in a natural state. This acreage has increased by over 1,000 acres in the last ten years, with hundreds of acres soon to join our system. But the environmental benefits are not just measured in acres; it is just as important where the land is.

Our system has focused on land adjacent to major waterways since the beginning. As a result, over 80% of our parkland buffers major rivers (Potomac, Bull Run & Occoquan), or other significant waterways (like Beaverdam). This riparian land is generally considered to be the most important land from an ecological perspective. These areas offer the best wildlife habitat and provide a natural filter to our drinking water sources, as well as the Chesapeake Bay.

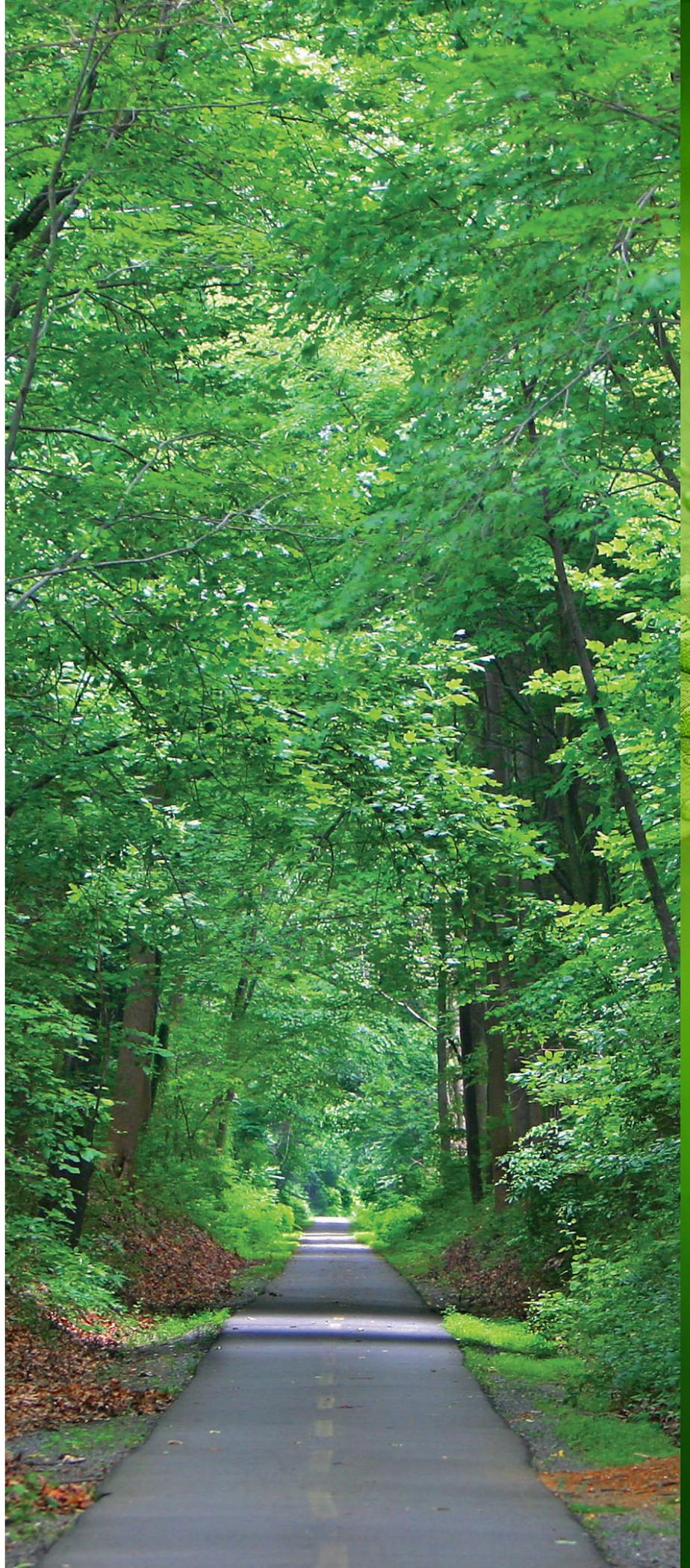
Since the majority of our parks are large blocks of land (hundreds, sometimes thousands of acres) or are connected to other parkland,

most of our parks have high ecological value as high quality native hardwood forests and riparian areas.

We have some areas that are truly special. In the Upper Potomac area, we manage habitat for the Eastern Wood Turtle, and along the Occoquan River, we protect the habitat for the Small Whorled Pogonia, both federally listed endangered species. And at Pohick Bay and other places, we have active Bald Eagle nesting. On Mason Neck, we have long owned one of the major nesting grounds for the Great Blue Heron.

The W&OD Trail has 150 years of industrial use, followed by urban/suburban development right up to its border. While today it serves as a green belt through the center of our region and a transportation corridor for wildlife, Because of its railroad past it has many invasive plants. A decade ago we developed a vegetation plan for the trail with Dominion Power which has transmission line over most of the trail. This plan specifies the kind of native trees and bushes that are planted along this 45 mile corridor.

With 31 parks spread over three counties and three cities, we have a wide variety of environments including: wetlands, riparian areas, large blocks of in-tact forests, small areas of fragmented nature, former industrial sites, and habitat for endangered species.





## AREAS OF NOVA PARKS' ENVIRONMENTAL LEADERSHIP

### RIPARIAN TREE PLANTINGS:

As part of our 2012 – 2017 Strategic Plan, we committed to ramp up our tree planting efforts, particularly targeting riparian areas. As a result of this, for the last several years we have averaged over 1,000 native trees per year planted on our parkland. These new trees help filter the air and storm water that flows to our streams and rivers. They also provide enhanced wildlife habitat.



### PESTICIDE AND FERTILIZER USE:

As part of our successful effort to be the first public agency in the Mid-Atlantic States to have our golf courses certified as Wildlife Sanctuaries by Audubon International, we realized that it was not necessary to use a significant amount of chemicals to maintain these courses. As a result of adopting best management practices on our most manicured areas, we led the way with an agency-wide pesticide and fertilizer use policy that was praised by EPA, and goes far beyond current laws related to the use of these chemicals. This policy was developed with input from federal and state officials and adopted in 2007.

## OUR CARBON FOOTPRINT:

Global warming is a result of high levels of carbon in the atmosphere. In 2005, NOVA Parks was the first park agency in the nation that signed on to the Cool Cities/Cool Counties initiative.

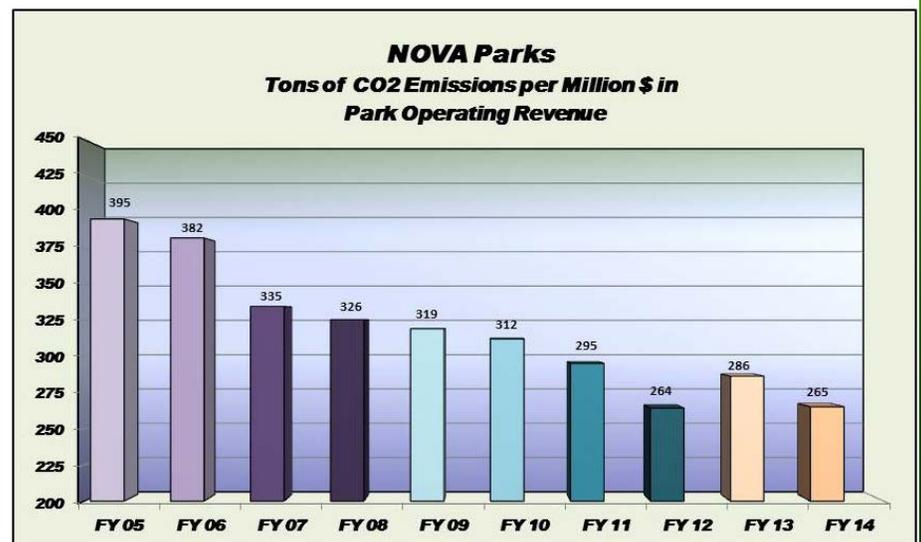
This was, and is, a voluntary effort by local governments to implement the key elements of the Kyoto Protocol. That is a commitment to reduce carbon emissions by 2% per year over 15 years.

After signing on to this initiative, we took the following steps:

- We used our accounting system to not only measure dollars, but also to measure all our units of fuel consumption: electric, propane, natural gas, gas, and diesel. This information is tracked by facility and by month. Using conversion factors, we calculate our carbon output every year.

- Every park developed an energy plan to reduce its consumption. Numerous improvements were made to lighting, weather strip-ping, insulation, and other areas to accomplish this.

- Every year at the annual All-Staff Meeting we recognize and award the park that has done the best job of reducing energy consumption in the previous year.





- We experimented with electric utility vehicles several of our largest parks. Four of our newer fleet vehicles are hybrids, and we consider fuel consumption with all our vehicle and equipment purchases.

- We have a policy to look at the life cycle costs of all energy consuming equipment rather than just the lowest purchase price.

- We employ geothermal heat pump systems and photovoltaic solar power in various buildings. Our Temple Hall Visitor Center is a LEED Gold Building, and our new Jean R. Packard Center that we will construct in 2016 will achieve LEED Gold certification.

- In 2007, we redesigned our Nature Center at Potomac Overlook and made it an energy theme center that was a first of its kind, using energy as a way to explain the natural world, and the relationship between humans and our natural environment.

- In 2006, we created an all-LED light show at Bull Run, and in 2013, we created another unique all-LED light show at Meadowlark. Collectively, about 140,000 people a year go through those light shows and see how spectacular energy efficient lights can be. These shows use just 10% of the power that would be needed for a show with conventional incandescent lights.

While NOVA Parks has taken a real

leadership role in energy conservation since 2005, the last decade has also seen our park system go from 19 to 31 parks, and from \$7 million to \$14 million in enterprise revenue. The increase in enterprise revenue is directly related to a doubling of activity (programs, facilities, and people served) during this time. So, while our carbon footprint did not go down during this time of great expansion, it did not go up in proportion to the increase in activity. Since our primary mission is to provide unique destination parks and programs for the public, it is great that we have been able to expand our protected lands and programs, and do so in a more efficient way from an energy consumption perspective.

Our efforts to control and reduce our carbon footprint have been promoted nationally in the following ways.

- January 2008, Article in Park & Recreation Magazine entitled Cool Parks.
- May 2008, Paul Gilbert, NOVA Parks Executive Director presented on the energy conservation program at the NRPA Environmental Summit in Portland, Oregon.
- August 2013, Article in Park & Recreation Magazine entitled More than Birds and Bunnies focusing on our energy education efforts at Potomac Overlook.





## PROTECTING NATIVE PLANTS:

At Meadowlark Gardens, we have created probably the best and most complete collections of the native plants of the Potomac River Basin. This collection is both a powerful educational tool to teach about native plants and a great conservation tool to have a robust collection of the native plants that will continue to be stressed by our climate change.

## EDUCATING THE PUBLIC ABOUT NATURE:

Beyond our energy -focused nature center, we have made extensive efforts to educate the public about our natural world. Last summer, our camps saw a 20% increase in usage. The majority of our day campers are going to either the nature-related camps at Potomac Overlook or Meadowlark Gardens. These children are learning a great deal about nature. Our innovative Roving Naturalist program is continuing to do great work. These naturalists and their mobile displays and animals go to wherever we have large crowds in our system. This approach brings nature education to the decks of our water-parks and into the middle of large fairs and festivals, as well as to our campground guests. In addition to the active programs, several years ago we set about adding nature education signage to almost all our parks (with the exception of some

historic sites) so that all of them could be places of learning.

People will only consider taking action to improve our environment, if they know and value the natural world. And for most people this interaction with nature happens at parks.

## ONGOING ENVIRONMENTAL EFFORTS

Since the founding of our organization 56 years ago, NOVA Parks has worked alongside community groups every year to clean up trash, maintain trails, plant trees and do other things to make our

parks the best they can be. In the last 15-20 years, there has been more of a focus on removing invasive plants and planting natives, and every year our staff works with many community groups to help with these efforts. In 2012 the Virginia Department of Forestry awarded NOVA Parks with its "Outstanding Forest Steward" award for our work to remove invasive plants at Blue Ridge Regional Park. Part of our 2007-2012 Strategic Plan was to have each park manager organize at least three stewardship activities with local groups every year in his or her park. The goals of our park managers continue to focus on engaging community groups in those activities. Our current focus on riparian tree plantings leads to numerous stewardship events.

The basic operations of our various facilities are done with a focus on environmental stewardship. Over the last several years, we have been building our preventative maintenance program for all our equipment and mechanical systems. The goal of this program is to reduce breakdowns, and also to make sure that all our systems are operating efficiently. Therefore, all our HVAC systems are inspected twice a year. All our fleet vehicles are properly maintained to run efficiently. Pumps, valves and filters are all inspected prior to the pool season to make sure they will operate efficiently. All our parks with active operations recycle the products that can be readily recycled in that area (See chart).

## CONCLUSION

While it is beyond the scope and capabilities of one park agency to solve global and regional environmental issues, we are working hard to set a good example, and show leadership where we can, and contribute to the solutions.

Millions of people engage with nature through our parks, and every one of those engagements is an opportunity to add to their understanding of the natural world. We seek to make the best of those opportunities, and demonstrate leadership wherever we can.

Recycle Bins for cardboard/office paper/alum/glass/plastic Located in:

| Park                          | Recycle Bins for cardboard/office paper/alum/glass/plastic Located in:  |          |                            |                 | Used ink cartridges/toner, etc. | Maintenance collects scrap metal for resale | Maintenance recycles Oil | Maintenance recycles paint, etc. | Computer, phones, TVs, etc. (see note below) | Fishing line | Reuses old clay pots, etc. as decorative items in gardens | Vermicomposting (worm bin) | Tires | Mulch Compost |
|-------------------------------|---|----------|----------------------------|-----------------|---------------------------------|---|--------------------------|----------------------------------|--|--------------|---|----------------------------|-------|---------------|
|                               | Large recycling dumpster  | Shelters | Campground/ Visitor Center | Throughout Park |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Bull Run                      | X   | X        | X                          | X               | X                               | X   |                          |                                  |  |              |   |                            |       |               |
| Meadowlark                    | X   |          | X                          |                 | X                               | X   |                          |                                  | X  |              | X   | X                          |       |               |
| Cameron Run                   | X   |          |                            | X               |                                 |   |                          |                                  |  | X            |   |                            |       |               |
| Fountainhead                  | X   | X        | X                          | X               | X                               | X   | X                        | X                                | X  | X            |   |                            |       |               |
| BR Shooting Center            | X   |          | X                          | X               | X                               |   |                          |                                  |  |              |   |                            |       |               |
| Carlyle House                 | X   |          | X                          |                 | X                               |   |                          |                                  | X  |              |   |                            |       |               |
| Potomac Overlook              | X   | X        | X                          | X               | X                               |   |                          |                                  | X  |              |   |                            |       |               |
| Algonkian                     | X   | X        | X                          | X               | X                               |   |                          |                                  | X  | X            |   |                            | X     |               |
| Aldie Mill                    |   |          | X                          |                 | X                               |   |                          |                                  | X  |              |   |                            |       |               |
| Temple Hall Farm              | X   | X        | X                          | X               |                                 | X   |                          |                                  |  |              |   |                            |       | X             |
| W&OD Trail                    |   |          | X                          |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Occoquan                      | X   | X        | X                          | X               |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Pohick Bay                    | X   | X        | X                          | X               | X                               | X   | X                        | X                                | X  | X            |   |                            |       |               |
| Headquarters                  | X   |          |                            |                 | X                               |   |                          |                                  | X  |              |   |                            |       |               |
| Blue Ridge                    | No Information Bins (disposed at Temple Hall)   |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Red Rock                      | No Information  |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Gilbert's Corner              | A neighbor of the Seneca property monitors the trash and recycling at the parking area. Algonkian provides them with bags and they dispose of it with regular pickup. |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Seneca                        | Trash free facility   |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| White's Ford                  | X   |          |                            | X               |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Sandy Run                     | Sandy Run encourages reusable water bottles by providing 7 water fountains and 2 hose-bibs for filling bottles quickly.   |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Bull Run Marina               | Bins (disposed at Sandy Run)  |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       | X             |
| Rust Manor                    | 2   |          |                            |                 |                                 |   | X                        |                                  |  |              |   |                            |       |               |
| Mt. Zion/Mt. Defiance/Gateway | Bins  |          |                            |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |
| Brambleton                    |   |          | X                          |                 |                                 |   |                          |                                  |  |              |   |                            |       |               |

Computer, Phones, TVs, Etc. (See Note Below)

IT Department collects and recycles the following from all facilities: printers, copiers, fax machines, printer toner, battery backups, mix wires, old phone equipment, network equipment, server equipment, whole computers: desktops and laptops, computer mixed parts: motherboards, processors, flash drives and cell phones.



Printed on recycled paper