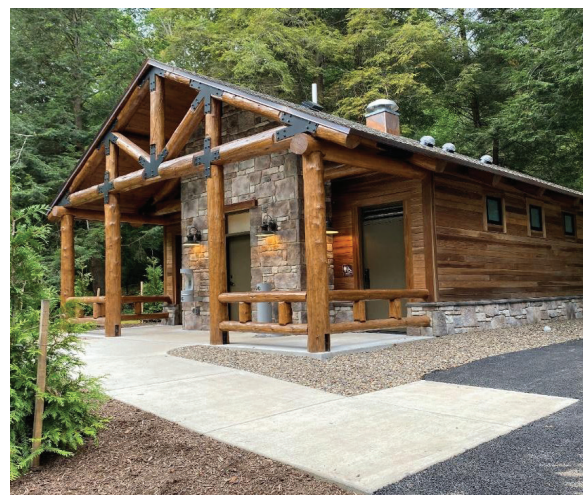




Maryland Department of Natural Resources

2022 ANNUAL REPORT

The following pages capture some of the highlights of the department's work in 2022.



CHESAPEAKE & COASTAL SERVICE



Assateague State Park Climate Change Adaptation and Resilience Planning Guide

Protecting long-term resources and opportunities in a sustainable manner



Published November 2022

Through investment in land use and annual best management practices, the Trust Fund reduced **3,212,035** pounds of nitrogen; **25,012** pounds of phosphorus; and **1,137** tons of suspended solids from reaching the mainstem of the Chesapeake Bay and Atlantic Coastal Bays.

63 applications requesting Waterway Improvement Funding were awarded grants for **19** dredging related projects, **37** public motorboat facility improvements, and acquisition of **7** safety vessels

More than 300 unique users created MyCoast-MD accounts (www.mycoast.org/md) to document nuisance and precipitation based flooding throughout Maryland

325 site visits were performed to provide technical and financial assistance and engage in restoration and assessment activities

24 projects were provided technical assistance from the Public Access, Water Trails and Recreation Planning Program towards the development and implementation of soft access for non-motorized recreational boating and water trails

1 new Maryland Clean Marina Certified and **31** Clean Marinas recertified, confirming they continue to voluntarily implement pollution practices and comply with all environmental regulations

83 marinas enrolled in the Pumpout Operations and Maintenance Program to assist marinas in keeping pumpouts operational and available to the public



1 Month celebrating the Second Annual Flood Awareness Month. The Chesapeake &

Coastal Service led developing content for the Coastal Flooding Week

4 climate change adaptation and resilience planning guides were completed to foster an understanding of climate vulnerability and threats on Maryland's public lands and offer strategies for adaptation and resilience

55,190 people visited the Chesapeake Bay National Estuarine Research Reserve. **7,890** visitors participated in onsite programs and **2,672** K-12 students were engaged. In addition, **12,888** volunteer hours were logged at the Estuarine Research Reserve sites

ENGINEERING & CONSTRUCTION



New Germany State Park

New Germany State Park – Day Use Improvements Project Total = \$1,253,000

The New Germany State Park Day Use Improvement Project renovated several structures within the day use area of the park. Two (2) CCC era timber frame pavilions were restored. The CCC Rec Hall received a new roof, repaired siding, and painted. A new beach drainage system was installed; and the old comfort station was demolished and replaced with a new timber frame bathroom designed to match the historic architecture of the CCC pavilions and provide ADA access.

Greenbrier State Park – Day Use Bathhouse Renovation Project Total = \$1,062,000

The Greenbrier State Park Day Use Bathhouse Project renovated the existing day use bathhouse adjacent to the beach areas. This work was split between two multi story buildings. The North building contained the men's room, while the South contained the women's room and lifeguard area. Each building received a complete renovation – All interior finishes were removed and replaced, and the floor plans were altered to accommodate two ADA/family restrooms accessible from the exterior of each building. Additionally, the exterior envelopes were updated with new roofing, sidewalks, and patio areas. To alleviate the demand for the building's interior facilities, exterior shower units were also installed.

Sandy Point State Park – South Beach Bathhouse Project Total = \$1.1 million

The Sandy Point State Park South Beach Bathhouse renovation consisted of a complete interior and exterior remodel. Exterior work included a new roof, doors, windows, ADA compliant sidewalk, and solar tubes. Interior work included the complete demolition of interior finishes and concrete slab, installation of new concrete slab with tile, tile walls, partitions, vinyl ceiling, and all new fixtures. The interior layout was changed to remove 12 showers and use the space to create 4 ADA/Family rooms with their own exterior entrances. Electrical and plumbing systems were replaced, and air conditioning was added to the Lifeguard First Aid Room.



Sandy Point State Park



Greenbrier State Park

Pocomoke River State Park – Milburn Landing Paving Project Project Total = \$1,788,000

Milburn Landing received a paving renovation that replaced all culverts, repaired all damaged areas, and repaved the park.

FISHING & BOATING SERVICES

Planted **219.91** million spat-on-shell (23 plantings, 134.5 total acres) and 163,292 bushels of oyster shell (26 plantings, 142 total acres) in public fishery areas.

GIS: The new Public Survey using the ArcGIS Online Survey 1,2,3 product to create the Maryland Invasive Species Tracker (MIST). dnr.maryland.gov/Invasives/Pages/default.aspx

Hydrographic Operations: placed more than 3,500 buoys, signs, and day-markers in over 320 rivers, creeks, and streams statewide. To ensure a sustainable fleet of buoy tenders and ice breakers the unit has replaced the 1941 M/V Tawes with the 2022 M/V Eddie Somers. As was the M/V Tawes' mission, the M/V Somers' mission will be a lifeline to Smith Island when the waters surrounding it freeze over, with the boat clearing a path for supply and shuttle boats, in addition to its buoy, sign, and day-marker work.



The M/V Eddie Somers

Black Bass Tournaments: Freshwater Fisheries Program permitted 381 organized bass fishing events across Maryland in 2022, supplied bass conservation tools for the Ike Foundation Bass Fishing Tournament for youth in Cecil County, worked with Maryland Bass Nation to provide logistical support for the National Paralyzed Veterans of America tournament in Charles County, and helped to develop an angler-led initiative to create a donation option in COMPASS that will financially support black bass conservation projects throughout the state.

Staff stocked more **350,000** trout statewide to meet management objectives specific to Put-and-Take and Special Trout Management areas.

The oyster restoration in St Mary's River Sanctuary was completed. **60** acres received its initial large-scale restoration. This marks the completion of Maryland's 4th tributary being restored.



Six state records were awarded in 2022: albacore tuna, common carp (pictured here), muskellunge, smooth dogfish, swordfish, and white perch.

Posted 198 angler fishing reports to our website; Processed and gave 481 FishMaryland awards for exceptional catches; 54,250 followers of our three social media accounts received 621 messages from the unit.

The **Fishery Management Plan for Tidewater Catfish** was incorporated into regulation on Aug. 8, 2022. The goal of the management plan is to maintain the ecological integrity of Chesapeake Bay ecosystems, ensure recreational and commercial harvests that support fishing and seafood industries, ensure sustainability of native and non-native, non-invasive catfish populations, and deplete invasive catfish populations. Additionally, this plan provides background information on the occurrence and natural histories of catfish inhabiting tidewater in Maryland's Chesapeake Bay, describes current recreational and commercial fisheries for catfish, and identifies existing data sources and gaps for monitoring populations of catfish. The plan's incorporation allows for the department to write regulations relating to catfish, including the invasive blue and flathead catfish. This is an important component to the management of these invasive species.

FOREST SERVICE



Distributed **37,550** bare-root tree and shrub seedlings across the state for Backyard Buffers program

2,290,625 bare-root tree and shrub seedlings grown and shipped by the John S. Ayton State Forest Tree Nursery

Worked with landowners to develop **300+** forest stewardship plans for over 13,000 acres

Through sound management of our state forests in Western Maryland, **2.8 million** board feet of sustainable timber harvest was accomplished in Green Ridge, Savage River, and Potomac-Garrett State Forests

488 Forest Product Operators licensed

19 consecutive years of Chesapeake Forest Lands maintaining dual certification for sustainable forest management by Sustainable Forestry Initiative and Forest Stewardship Council

The White Oak Initiative brought the Maryland Forest Service into a partnership with the University of Kentucky to create a new white oak orchard using acorns collected locally by staff. The initiative will advance climate change research with a keystone species of Maryland's forests.



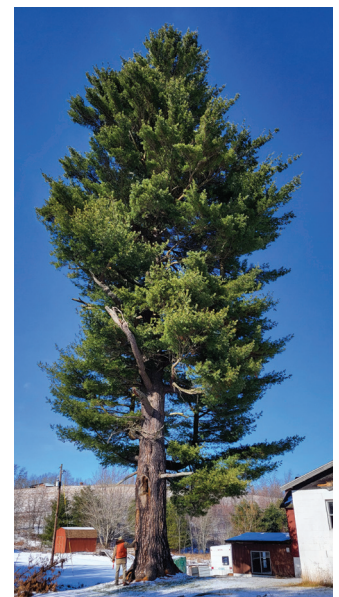
Responded to **123** wildfires covering 3,121 acres, which involved 55 personnel on 29 assignments for 19 incidents in 9 states

Managed **98** prescribed fires for 9,110 acres

5,315 trees planted under TREEmendous program

3,150 trees planted by residents using our Marylanders Plant Trees coupons

226 new trees measured for the Maryland Big Tree Program, including one for the record books. A new states champion eastern white pine was recorded in Garrett County thanks to the Hickey family and Big Tree and forestry staff. At 120' tall, with a diameter at breast height of 56 inches, this new Big Tree champion stands far and above any of the closest competitors in the county.



LAND ACQUISITION AND PLANNING



Elktonia-Carr's Beach property



Program Open Space - Stateside

Received approval for 32 acquisition projects from the Board of Public Works protecting over 2,200 acres. Program Open Space Stateside preserves natural areas for public recreation and watershed and wildlife protection across Maryland through the purchase of fee simple and conservation easement acquisitions. Fee simple purchases are managed by the department as state parks, forests, and wildlife and fisheries management areas. Check out the below highlights:

DNR partnered with the Scenic Rivers Land Trust on the Garman conservation easement acquisition (132.13 +/- acres), which preserves a block of older forest, forested wetlands, two branches of Maynadier Creek, and provides a buffer to Round Bay Bog, a Wetland of Special State Concern.

The Smith acquisition (30 +/- acres) at Green Ridge State Forest is the sixth in a series of acquisitions from the Smiths and another landowner. The acquisition provides important forest corridor along Polish Mountain, protects water quality and downstream rare, threatened, and endangered plant and animal species, and will allow for future expansion of trail networks into Pennsylvania.

The Gallagher acquisition (6 +/- acres) is located immediately across from the entrance to the Hammerman Area of Gunpowder Falls State Park.

The Merriken acquisition (5.25 +/- acres) is composed entirely of palustrine wetland and upland forest and is surrounded by Idylwild Wildlife Management Area (WMA).

Local Grants

Provided over \$123 million in grant funding for 365 local park and recreation projects across Maryland through Program Open Space Local, Local Parks and Playgrounds Infrastructure funds, and the Community Parks and Playgrounds Program including the acquisition of 267.22 acres for public recreation and open space.

This funding included \$6.4 million in state funds granted to the City of Annapolis to acquire the Elktonia/Carr's Beach property for a new 5.16-acre park with over 300 feet of sandy beach area with direct waterfront access on the Chesapeake Bay.

Rural Legacy Program

Provided \$21.9 million in Rural Legacy Program grant funds to protect over 5,200 acres.

Resident Curatorship Program

Continued management of 42 historic properties in the curatorship program. To date, curators have invested over \$15 million in the continued preservation of state owned historic resources.

LICENSING AND REGISTRATION

1,919,042 unique customers in COMPASS

549,180 unique transactions in 2022

1,143,591 products sold

192 products available

\$51,937,962.38 revenue collected

8 Service Center locations throughout the state



DNR's Licensing and Registration Service manages more than 400 licensed boat dealers and approximately 180 sport license agents

NATURAL RESOURCES POLICE



2,301 Boating Safety Certificates awarded in 2022

4,687 Hunter Ed Certificates awarded in 2022

Enforcement Actions:

Boating-related enforcement actions: 7,768

Fisheries-related enforcement actions: 6,588

Public lands-related enforcement actions: 3,432

Wildlife-related enforcement actions: 2,057



In 2022, NRP officers conducted **24,992** patrol checks of state lands, 15,500 homeland security checks of the state's critical infrastructure, conducted 5,824 vessel stops and inspections, and participated in 510 public relations events.

OFFICE OF OUTDOOR RECREATION



Lake Habeeb at Rocky Gap State Park



Attendees of Confluence of States National Conference visit Annapolis

The Office of Outdoor Recreation partnered with Rocky Gap State Park to purchase a new electric powered pontoon education boat that will provide staff the opportunity to conduct public programming on the waters of Lake Habeeb for thousands of new outdoor recreators and will allow visitors to have expanded opportunities to fish, snorkel, and view Maryland wildlife. This project will increase opportunities for equitable access to outdoor recreation and environmental education. With an education boat, Rocky Gap State Park's bilingual staff will be able to provide the park's Spanish speaking visitors the opportunity to get out onto the water and participate in guided tours and programming.

The Office of Outdoor Recreation has partnered with Frostburg State University for a regional approach to growing Western Maryland's outdoor recreation economy. Frostburg State University's Division of Regional Development and Engagement (DRDE) has been awarded a grant for \$250,000 from the Economic Development Administration (EDA) and the Maryland Department of Commerce's Office of Tourism to support a regional approach to growing Western Maryland's outdoor recreation economy by funding initiatives in workforce development and training and certification in Allegany and Garrett Counties.

The Office of Outdoor Recreation hosted the Annual Spring Confluence of States National Conference here in Maryland. The Confluence of States is an organization made up of outdoor recreation economy professionals from across the country. The group conducted collaborative working sessions during the conference that included discussions on education and workforce training, stewardship of our natural resources, and opportunities for nationwide expansion. The meetings help to enhance the outdoor recreation economy on a national level.

The Office of Outdoor Recreation in partnership with the Department of Labor is creating a new Outdoor Recreation Apprenticeship program designed to support and enhance Maryland's growing Outdoor Recreation economy.

The Office of Outdoor Recreation has partnered with Chesapeake and Coastal Services to enhance the Es Mi Parque Program. OOR assisted with purchasing outdoor recreation equipment to increase equitable access to aquatic resources across the state. Funding has been provided to purchase thirty kayaks, four kayak carts, trailers, and two storage racks. The Office was happy to bolster up outdoor recreation opportunities in Maryland and is looking forward to seeing this contribution be put to good use. OOR contributed \$66,520 to this cause.

PARK SERVICE



Secretary Kurtz touring Martinak State Park



Patapsco Valley State Park Open House



77 State Parks

From the mountains of Western Maryland to the sandy beach of Assateague, the Maryland Park Service is proud to offer wonderful opportunities for all our guests to enjoy. **There is a state park or forest within minutes of your home.**



1,173 Miles of Trails

Our state lands offer a diverse range of trails for outdoor enthusiasts, hikers, bikers, and nature lovers to explore. The Maryland Department of Natural Resources works to ensure that the state's magnificent natural resources are accessible to all citizens and visitors.

141,000 Conserved Acres
2,454 Campsites
134 Full-Service Cabins & Camper Cabins
132 Picnic Pavilions
150+ Cultural & Historic Sites



Maryland's state parks are special for a variety of reasons, each offering a unique blend of natural beauty, recreational opportunities, and cultural significance. Whether you're seeking outdoor adventure, relaxation, or a chance to connect with the state's heritage, Maryland's state parks have something for everyone to enjoy.

The Maryland Park Service operates one of America's oldest state park systems. The first state-park land was set aside in 1907 when Catonsville philanthropist John Mark Glenn donated 43 acres of his Catonsville estate to the Maryland Board of Forestry. Thanks to this early start, today most Maryland residents live within 15 miles of a state park.



RESOURCE ASSESSMENT SERVICE



Maryland Seismic Network: The Maryland Geological Earthquake sensor network measured over 34,600,000,000 data points and was increased from two broadband sensors to 5 sensors. The additional sensors are educational grade sensors that are being distributed to a variety of education centers.

Over **35,000** acres of submerged aquatic vegetation (SAV) were mapped in Maryland's portion of the Chesapeake Bay, achieving 44% of the state's 2025 restoration target in 2021.

Partnering with Shore Rivers, **1,500** pounds of extremely invasive water chestnut were removed from five creeks on the Sassafras River. DNR field biologists removed 250 pounds of water chestnut from four locations on the Bird River.

Staff partnered with Anne Arundel Community College to plant two and a half acres of SAV in the Chesapeake Bay. Four million redhead grass, widgeon grass, wild celery, horned pondweed and sago pondweed seeds were distributed in 2022.

In 2022, field biologists made over **3,000** site visits to collect water quality data throughout Maryland's Chesapeake and Coastal Bays, and their tributaries.



345 people attended the in-person 2022 annual Maryland Water Monitoring Council conference held in December.

More than **36,500** American eels passed through the eel ladder on Daniels Dam during the spring, summer, and fall of 2022, the most eels to ever use this ladder.

19,367 individual stream insects and other benthic macroinvertebrates comprising 351 taxa have been identified from 140 sites processed so far. Processing and identification of the samples from the remaining sites sampled during 2022 is ongoing.

Coal Ash: The Power Plant Research Program identified almost 1000 mine portals in Georges Creek and identified more than 150 additional coal ash sites. In addition, PPRP georeferenced dozens of mines in western Maryland, located 113 active and/or abandoned pits/quarries in and around Maryland.

DNR's Environmental Review Program received **2,086** requests for review of various projects and permit applications throughout the state during calendar year 2022.

WILDLIFE & HERITAGE SERVICE



Habitat Restoration:

Non-game wildlife staff conducted habitat restoration activities on 4697 acres of DNR and partner lands.

Wildlife Permits:

2,027 special wildlife permits were issued in 2022. Also, there 3,471 offshore blind and shoreline licenses were issued to landowners and waterfowl hunters.

Wildlife Response:

In 2022, specially trained and equipped Wildlife and Heritage Service staff responded to a total of 1,340 distinct wildlife emergencies that occurred on privately owned lands across the state. 243 of those responses took place after normal working hours.

Wildlife Management Areas:

In 2022, an additional 12 acres were acquired and added to our statewide system of Wildlife Management Areas. The Wildlife and Heritage Service manages 64 Wildlife Management Areas across the State, bringing the combined land area to 127,117 acres in total. Steady additions of public hunting lands and cooperative wildlife management agreements over time have led to an increase of well over 28,500 acres of new hunting opportunities in the last 23 years.

Environmental Review:

The environmental review staff processed 2,076 proposed projects and plans from across the state.

Maryland Black Bear Management Program:

In 2022, Wildlife and Heritage Service staff tagged 20 cubs from 8 sows in western Maryland. Since this survey began in 1986, 528 cubs have been born to 176 sows for a long-term average of 3.0 cubs per sow. Our average annual litter size has ranged between 2.5 and 3.5 cubs per sow, indicating a healthy population.

Migratory Game Bird Management:

Staff banded a total of 2,702 migratory game birds in support of flyway management and monitoring programs.

National Archery in the Schools Program:

Wildlife and Heritage Service took control of the National Archery in the Schools Program after a 12-year hiatus and jumped into tournament season. The season culminated in the Maryland State Tournament, which included more than 600 participants in grades 4-12 from across the state.

Maryland Mentored Hunt Program:

Over 350 new or lapsed hunters participated in the Maryland Mentored Hunt Program in 2022. These events are designed to help hunters of all experience levels better understand the techniques, conservation aspects, and heritage of hunting in Maryland.



R3 (Recruitment, Retention, and Reactivation) Stakeholder Summit:

The first annual R3 Stakeholder Summit was conducted in February and had over 60 participants from various state, federal, NGO, and industry stakeholder groups. The purpose of this summit was to bring all the organizations actively participating in R3 efforts in the state and other "fringe" outdoor recreation-related groups together to discuss efforts in the state and how to better unify and organize these efforts.