

ANNUAL REPORT

OHIO DEPARTMENT OF NATURAL RESOURCES

2018
FISCAL YEAR

SOUTH BASS ISLAND STATE PARK

Cover image courtesy of photographer Gabe Leidy, whose tent is pictured at South Bass Island State Park campground

MESSAGE FROM THE DIRECTOR

Over the past eight years, here at the Ohio Department of Natural Resources (ODNR), our team has focused on improving the lives of Ohioans.

These efforts can be most easily seen in the capital improvement projects that have improved Ohio's state parks system; the work being done to repair state-owned dams; legislation that makes it easier to participate in outdoor sports; and regulations that have created a safe and booming oil and gas industry.

It was noted early in the Kasich administration that Ohio State Parks was saddled with half a billion dollars of deferred maintenance at properties across the state. This led to unsafe conditions at many of our lodges, cabins and campgrounds while also creating a lack of excitement by visitors. By investing more than \$230 million in Ohio's park infrastructure, visitors are now greeted with updated camping facilities, renovated cabins and improved lodges. These enhancements, coupled with added amenities such as splash pads, pools and new hiking trails, have led to a better experience for our visitors and an increase in overnight stays.

The dam risk reduction efforts implemented seven years ago have led to an investment of more than \$317 million toward keeping Ohio communities safe from the threat of dam failures. Out of 185 state-owned dams, 53 are classified as Class I, meaning they are high-hazard dams and a failure could cause loss of life. Addressing Class I high-hazard dams has been a priority. The recent investment toward fixing dams is unprecedented, and it has made an enormous difference in Ohio. For example, in 2011, Ohio had 27 Class I dams that were deemed to require immediate action to make them safe. By the end of 2018, only six Class I dams will fall under that designation of being in some phase of rehabilitation, design or construction, the rest have been addressed.

Over the last five years, the oil and gas industry has thrived in Ohio as the Utica shale play has drawn some of the industry's largest companies to the state. ODNR has more than met the challenge of creating a regulatory program that provides the necessary framework of environmental and public safety laws and rules that both protect Ohioans while permitting the industry to operate successfully. The success of the Utica shale play and ODNR's regulatory program has helped Ohio become energy independent and revitalized many communities in eastern Ohio. In fact, the program has been so successful that Ohio is now a leader in the field of induced seismicity, and the regulations ODNR has implemented are being utilized by other states and nations.

Finally, Ohio continues to provide sportsmen and women with world-class hunting and fishing opportunities. Unfortunately, trends in licensing continue to indicate that fewer and fewer people are participating in these traditional outdoor sports. To reverse that trend and help secure the financial well-being of the ODNR Division of Wildlife, the administration crafted Senate Bill 257, which removed many of the barriers that made it difficult for sportsmen and women to participate in outdoor sports. The bill allows for

multi-year and lifetime licensing; streamlines the process for mobility-impaired hunters; creates a walleye stamp that will provide an ongoing source of revenue for the health of Lake Erie; and creates a number of conveniences that will encourage people to participate and continue to do so for years to come.

These are just a few of the efforts undertaken over the last eight years to help improve the lives of Ohioans. These projects and initiatives should have a long-lasting positive impact on Ohio's communities, and continued efforts in these areas will only bear more success stories from across the state.

It has been an honor to serve as Director over this department under the Kasich administration. We have worked to offer better customer service, provide more access for hunters and anglers, create a stringent regulatory program for our oil and gas division and invest millions into our state park infrastructure for our visitors to enjoy. Thank you for reading about the department's accomplishments during the 2018 fiscal year, and make sure to spend some time in the great outdoors right here in Ohio.



Jim Zehringer, Director
Ohio Department of Natural Resources

OHIO DEPARTMENT OF NATURAL RESOURCES SNAPSHOT

ODNR is charged with regulating natural resource extraction and promoting Ohio's recreational opportunities.

Ohio has been blessed with many natural resources, from Lake Erie and our inland lakes to the geological formations filled with natural gas, oil and coal beneath eastern Ohio.

ODNR owns and manages more than 640,000 acres of land including 74 state parks, 21 state forests, 136 state nature preserves and 150 wildlife areas. The department has jurisdiction over more than 61,500 miles of inland rivers and streams, 451 miles of the Ohio River and 2.29 million acres of Lake Erie.

ODNR is responsible for overseeing and permitting all mineral extraction, monitoring dam safety, managing water resources and mapping the state's major geologic structures and mineral resources. In addition, ODNR also oversees the registration of all of Ohio's watercraft and issues all of the state's hunting and fishing licenses.

ODNR has two main focuses, regulating the use of Ohio's vast reserve of natural resources while providing all of our visitors with the recreational opportunities that these resources provide. It is ODNR's job to continually protect Ohio's natural resources for long-term sustainability and enjoyment for all Ohioans.

FORESTRY

The ODNR Division of Forestry operates and maintains Ohio's 21 state forests, encompassing nearly 200,000 acres. The division creates recreation opportunities for Ohioans, improves the health of Ohio's public and private forests, and protects our state from forest fires, pollution and other threats. State foresters are experts at managing Ohio's largest renewable resource.



Mohican State Forest

Ohio's state forests offer visitors more than 290 miles of back country bridle trails, more than 80 miles of backpack trails, many day-use hiking and mountain biking trails, as well as camping, hunting, wildlife viewing and gathering places. Four designated all-purpose vehicle areas on state forest land are open for off-road ATV and motorcycle riding. State forests were recertified as meeting the standards of the Forest Stewardship Council® and Sustainable Forestry Initiative, remaining the only dual certified lands in Ohio.

The harvesting, milling and manufacture of wood into paper, furniture and wood products employs more than 122,000 Ohioans and contributes \$26 billion to the state's economy. Additionally, in FY 2018, the ODNR Division of Forestry distributed more than \$1.5 million from state forest timber sales to 15 rural Ohio school districts and their corresponding counties and townships. Since the Trees to Textbooks Program started in 1999, nearly \$29 million has been distributed to Ohio school districts and local governments.

The ODNR Division of Forestry administers a forest fire protection area of more than 8.6 million acres in southern and eastern Ohio. In FY 2018, 362 wildfires were reported over 906 acres, less than the state average amount, mostly due to weather. The division trained more than 500 firefighters, mostly from volunteer departments, provided 56 Volunteer Fire Assistance grants for more than \$315,000 and distributed \$41,250 to departments for wildfire reporting and suppression efforts. In addition, 32 local fire departments received wildland fire protective equipment. The division supported the national wildfire effort by sending more than 70 firefighters to the western United States from July through September 2017. Ohio firefighters assisted in Arizona, California,



Zaleski State Forest backpack trail

Montana, New Mexico, Oregon, South Dakota and Wyoming in a difficult wildfire season. To help fight wildfires here at home and to protect Ohioans, the division utilized capital funding to purchase seven crawler dozer transport vehicles, the first fleet upgrade since 2001. The beds on the transport vehicles were custom fabricated by the Ohio Department of Rehabilitation and Correction at the Chillicothe Correctional Institute.

The ODNR Division of Forestry's service forestry program is the primary source of forestry assistance for private woodland owners in the state. In 2018, the division's 19 service foresters provided one-on-one assistance to 1,637 Ohio landowners, helping them prepare for timber sales, create habitat for forest wildlife, plant trees for future forests and better understand the many benefits that their forests provide. Service foresters also assist landowners by developing woodland stewardship management plans, which include descriptions and maps of their woodlands, as well as recommendations and timelines for their woodland management activities. In 2018, service foresters wrote 434 plans covering 31,511 acres of forest land, bringing the total area of private woodlands in Ohio under stewardship plans to 283,905 acres.



The ODNR Division of Forestry's Urban Forestry Program provides communities with the organizational and technical assistance to effectively manage trees and the land on which they grow. In FY 2018, the regional urban foresters provided 38 Tree Commission Academy classes for 130 tree commissioners and municipal staff from 65 communities. Urban foresters also held 24 training programs and six regional conferences throughout the state. The Urban Forestry Program fostered many new and existing partnerships in FY 2018. Through Operation Shade, a partnership with the Ohio Department of Transportation (ODOT) and the Ohio Expo Center, the program has worked to increase tree canopy at the state fairgrounds. In November, the sixth Silva Cell installation was completed with a total of 58 trees planted in 70,000 cubic feet of soil, which has the potential to store and treat 90,000 gallons of stormwater. Further partnerships with several municipalities, tree nurseries, tree care companies and OSU Extension empowered the program to open a new branch of the popular Tree Survival School in northwest Ohio.

The ODNR Division of Forestry's Pollution Abatement Program (FPAP) has the responsibility to enforce and promote Ohio's Forestry Pollution Abatement Rules and Standards, in partnership with Ohio's 88 Soil and Water Conservation Districts (SWCDs). The division investigates logging site complaints to ensure that best management practices (BMPs) are being used and that water quality is protected. In the past year, staff also provided training to more than 130 SWCD staff and supervisors to assist in these



Treating Hocking's hemlocks for HWA

efforts. The ODNR Division of Forestry staff assisted with two statewide BMP training programs for logging companies during the year, in cooperation with the Ohio Forestry Association.

The ODNR Division of Forestry's Forest Health Program conducts surveys and suppression activities for various forest health threats, including Asian longhorned beetle, hemlock woolly adelgid, emerald ash borer and non-native invasive plants. The hemlock woolly adelgid (HWA) is an invasive insect that has killed millions of eastern hemlock trees across the Appalachian Mountain region and was discovered in southeast Ohio in 2012. Eastern hemlock forests have great ecological and economic importance in Ohio, especially in the Hocking Hills, Mohican and Lake Katharine areas. To guide the management of this forest pest, the ODNR Eastern Hemlock Conservation Plan was recently finalized. The Forest Health Program has been proactively surveying for HWA and implementing chemical and biological control measures to protect Ohio's hemlock trees where HWA has been found.



HWA soil drench treatment

The Restoring Native Hardwoods Initiative was presented to the public and approved by the Forest Advisory Council on January 31, 2018. The initiative's goal is to restore native plant and animal diversity in the Mohican State Forest by slowly managing artificial pine plantations to promote the regeneration of native and naturally regenerating hardwood tree species that are so important to a host of wildlife species. This initiative is in the form of an addendum to the five-year management plan for all state forests for the period 2015-2020.

Lastly, the Northwest Ohio Windbreak Program is a cooperative effort involving the ODNR divisions of Forestry, Wildlife, Water Resources as well as the United States Department of Agriculture (USDA) Natural Resources Conservation Service. In 2018, the program established 15 new windbreaks totaling 142,664 row feet by planting approximately 21,000 tree and shrub seedlings.

NATURAL AREAS AND PRESERVES

Today, 136 state nature preserves and natural areas have been dedicated in Ohio. These diverse areas of land contain remnants of Ohio's pre-settlement past, rare and endangered species, and wondrous geologic features.

While the majority of preserves are owned and managed by the state, some preserves are leased to local park districts for management. Other preserves are owned by non-governmental agencies. Even private landowners have dedicated their lands as preserves in order to be protected by the state. Some preserves are accessible by permit at no charge from the ODNR Division of Natural Areas and Preserves.

HERITAGE SECTION

Heritage staff coordinated the 2017 Ohio Botanical Symposium. This is one of the largest botanical symposia in the nation and has served as a model for several other states that have also started to host such events. Registration is capped at 460 attendees. All 460 spots were filled, and others were placed on a waiting list.

Heritage staff remain committed to the Ohio Natural Heritage Database (currently housed in the ODNR Division of Wildlife). Staff entered nearly 600 records – the highest amount since 2009. In addition, staff continue to monitor populations of state and federally listed species, including increased study of the McCracken Fen State Nature Preserve in Logan County. This high-quality fen habitat was completely inundated for several years with an apparent loss of the fen community. Intensive survey work has shown several fen species to be returning, including multiple state-listed species..



Heritage staff continue to review and update preserve management plans. Four plans were reviewed, updated and approved this past year.

Several preserves throughout Ohio are open to the public by obtaining a special access permit. These sites are typified by having very limited access or very delicate ecosystems that are not able to take the impacts from heavy visitation. A record 998 permits were issued for these sites this year – with a majority of those being requested for sites in the Hocking County area.

P R E S E R V E S E R V I C E S

A new East District was created in 2017, taking sites from the northeast, northwest and southeast districts. This will allow better coverage of maintenance needs in all four districts involved with the realignment effort.



Newly acquired Thompson easement

The division was able to close on two new conservation easements totaling 127.5 acres. One is located in the Hocking Hills region protecting significant sandstone rock formations and a population of the state endangered Appalachian Filmy Fern. The other is located in Logan County protecting significant wetland habitats and mature upland forest.

Hazardous tree removal continues to be a top priority. Division staff have removed several hundred trees, which are mostly dead and dying ash trees from emerald ash borer (EAB), that could potentially impact trails, parking areas and roadways.

Staff conducted controlled hunts at five state nature preserves during the statewide archery, gun and muzzleloader hunts. These controlled hunts were conducted for the purpose of decreasing the impact of the deer herds on the ecology of the sites. Each year, the ODNR Division of Natural Areas and Preserves staff evaluate which sites should be hunted based on observed impacts and deer herd size.

Ecological management activities in the form of invasive species control remain the top management activity statewide. More than 4,000 hours have been dedicated to eco-management by staff and volunteers. This work continues to improve habitats as seen with the location of new populations of listed species in the areas that have been managed.

New trail construction includes new foot bridges at Conkles Hollow, Chaparral Prairie and Lake Katharine state nature preserves. We have also replaced or repaired boardwalks at Conkles Hollow, Rockbridge and Goll Woods state nature preserves, including a staircase replacement at Clifton Gorge State Nature Preserve. Of special note was the completion of the new Americans with Disabilities Act (ADA) accessible boardwalk at Headlands Dunes, which was completed with capital improvement funds. In an effort to reduce unneeded infrastructure, staff were also able to reroute trails and remove bridges and staircases at Miller and Lake Katharine state nature preserves. A new trail was also installed at Rhododendron Cove State Nature Preserve, replacing an eroded and exceptionally steep trail with a more scenic and gently inclined trail. Nearly .8 mile of new trail and improved trail projects also occurred at Eagle Creek State Nature Preserve.

Using ODOT roadway maintenance funding, staff were able to create a fully ADA compliant entrance to Lawrence Woods State Nature Preserve. The gravel lot was paved creating a suitable approach to the previously accessible boardwalk trail at the site.

The ODNR Division of Natural Areas and Preserves resumed management duties at Old Woman Creek. The division will jointly manage the preserve and National Estuarine Research Reserve with the ODNR Office of Coastal Management.

E D U C A T I O N

The education highlight is the interpretive programming being conducted out of Boch Hollow State Nature Preserve. A new part-time permanent naturalist position was added, and in conjunction with existing staff in the southeast district, more than 70 educational programs reached more than 1,500 participants. Staff in the northeast district participated in the highly successful Bog Days sponsored by The Nature Conservancy and Kent Bog State Nature Preserve volunteers. The nature center at Clifton Gorge State Nature Preserve continues to be popular with nearly 11,700 visitors in 2017.

G O A L S F O R 2 0 1 8

There are several construction projects that the division hopes to complete or start, which will include new parking lot construction, pedestrian bridge and office renovations at Boch Hollow State Nature Preserve. Other projects include repair of pedestrian bridges and boardwalks at Clifton Gorge, Eagle Creek, Gallagher Fen and Triangle Lake Bog state nature preserves.

A significant habitat restoration project is planned for some of the reverting agricultural fields at Lawrence Woods State Nature Preserve. Field tiles will be removed, and wetland depressions will be created to increase wildlife diversity.

Staff in the northeast district have been working for several years with staff from A-Tech Technical and Career Campus on a project to propagate native herbaceous, shrub and tree species common to the beach communities along Lake Erie. Significant stock has been reared, and it is hoped that restoration of some areas of Headlands Dunes State Nature Preserve will begin soon.

Efforts to close and remove a section of Irwin Road in Lucas County will be undertaken. The section to be closed effectively bisects Irwin Prairie State Nature Preserve. Removal of the roadbed will allow for continuity of the two halves of the sedge wetland habitat, which also serves as habitat for spotted turtle and various other wildlife species. This project may be incorporated into local mitigation projects and will be conducted with approval by local government agencies and officials.

PARKS AND WATERCRAFT

During FY 2018, the ODNR Division of Parks and Watercraft continued to work through processes and procedures to streamline the merger of the Division of Parks and Recreation and the Division of Watercraft. The new ODNR Division of Parks and Watercraft continues to work on finding efficiencies through shared resources.

The division:

- Continued to upgrade infrastructure and facilities with capital investments. Restrooms, shower houses, cabins, campsites and other facilities have been upgraded to provide a better customer experience at Ohio's state parks and waterways.
- Trained and commissioned the first class of Natural Resources Officers (NROs). These officers were cross-trained to respond to incidents on land and water, adding to the resources of the ODNR Division of Parks and Watercraft.
- The newly established State Park Maintenance Fund invested \$1.3 million in facility maintenance projects during FY 2018.

WATERWAY ACCESS AND FACILITY IMPROVEMENTS

Boating remains popular among Ohioans, with more than 530,000 registered vessels in the state. With this interest in mind, the Catawba boat launch ramp on Lake Erie as well as ramps across the state at several inland lakes were improved or renovated.

Capital investments offered the ability to renovate the Alum Creek Marina, offering improved docking space for boaters. The old docks were removed and replaced, providing full hook-up facilities with water and electric at most locations. The new ADA-accessible facility can accommodate boats up to 32 feet.

The division continues to offer boating infrastructure grants to improve partner marina facilities across the state. The 2017 grant funds were awarded to Ironton Riverfront, Shrocks Marina and Cleveland MetroParks.

Nearly 14,000 students completed Ohio's Boating Education Course. The course focuses on safe boating on Ohio's waterways and is required for all boat operators born after January 1, 1982.



New restrooms at Cedar Falls

Ohio's dredging operations exceeded the 2016 sediment removal by 41,584 cubic yards for a total of 1,053,042 cubic yards of sediment removed from waterways across the state. Removing sediment is a critical part of maintaining accessible waterways for Ohio boaters.

In conjunction with the ODNR Division of Engineering, emergency action plans (EAPs) were completed for the Class I state park dams during FY 2018.

P A R K I M P R O V E M E N T S A T T R A C T M O R E V I S I T O R S

For the first time, overnight rentals at Ohio State Parks topped 700,000 nights. In addition to daily visitors, a total of 2.8 million visitors stayed overnight in 2017 at Ohio's state park campgrounds, cabins and lodges. The investment in improvements that have taken place over the last eight years has helped to drive this increase in visitors to Ohio's state parks.



Newly renovated Lonz Winery Patio and Tower

Capital investments improved amenities at many campgrounds. Primitive camping remains popular, however, campers continue to communicate their interest in camping with amenities like electricity, Wi-Fi and full hook-ups (water, electric and sewer).

Additionally, renovations were completed at the historic Lonz Winery on Middle Bass Island State Park on

Lake Erie. The facility is now open to public visitation and adds a new destination to Middle Bass Island.

ODNR worked with partners to invest in nine state park lodges, including upgrades to HVAC systems, room and cabin upgrades, roof replacements and exterior/landscaping upgrades.

V I S I T O R S A F E T Y

The division partnered with the ODNR Division of Forestry to identify and cut down thousands of hazardous trees at state parks and along waterways. Many of these compromised trees were the result of emerald ash borer infestations.

ODNR partnered with the Delaware County and the Ohio Emergency Management Agency to build a public tornado shelter at Delaware State Park.

ODNR renovated drinking water treatment plants at Punderson and Hocking Hills state parks to improve water quality and ensure reliable, potable drinking water sources.

Because of the remote location of state parks, facilities must establish safe and environmentally compliant wastewater treatment approaches. Wastewater treatment plants at Deer Creek and Hueston Woods state parks were renovated and upgraded in 2017.

RECREATIONAL OPPORTUNITY

Hocking Hills State Park staff worked to open a new 1.2-mile trail accessing the Whispering Cave area, which was dedicated on May 8, 2017. During FY 2018, ODNR was recognized by the Ohio Parks and Recreation Association for this new trail with a first place award for a capital improvement project for cost-effective innovation in improving visitor access through difficult terrain.

A total of 1,600 acres of parks property, formerly closed to hunting, was opened for archery deer hunting. A lottery was held for interested hunters to have controlled access to hunting opportunity at Deer Creek, Malabar Farm, Maumee Bay and Findley state parks.

Several parks made facility improvements, including updating and installing new fishing docks, new and updated playgrounds and expanding existing and installing new disc golf courses.

The department developed a new GIS system to map all trails, terrestrial and water, in state parks and waterways. All GIS data was collected and will be implemented in customer maps and information.

Thanks to a partnership with Keep Ohio Beautiful, more than 100 trees were donated and planted by volunteers at Mohican State Park during an Arbor Day event. ODNR was recognized nationally for this effort by Keep America Beautiful with the 2017 State Agency Partnership Award.



Family friendly fall hikes at Ohio's State Parks

INITIATIVES FOR 2018

- Continue to add to the more than 5,000 miles of trails found in Ohio's state parks.
- Add to visitor satisfaction by offering new opportunities for recreation and amenities for overnight stays, including improving hiking, biking, riding and paddling trails; upgrade day-use areas; establish dog parks; and improve fishing access to youth and family ponds.
- Offer new opportunities for overnight stays. In 2018, Ohio State Parks will open the lakehouse at North Bass Island State Park for overnight stays, the Maple Syrup Cabin at Malabar Farm State Park and Sherman cabins at Barkcamp and Mohican state parks.
- Open Jesse Owens State Park and Wildlife Area in Morgan County as Ohio's 75th state park.
- Build a new Hocking Hills State Park Visitors Center, including upgraded restroom facilities, interpretive displays and interactive safety features.
- Celebrate the 50th anniversary of Ohio's Wild and Scenic Rivers Program.
- Continue to engage local law enforcement in assisting marine patrol and safe boating efforts through training and grant opportunities.
- Upgrade the watercraft registration system.



WILDLIFE

Ohio offers world-class opportunities for fishing, hunting, trapping, bird watching, wildlife viewing and other forms of fish and wildlife recreation in 150 state wildlife areas, encompassing 204,000 acres of public land.

The ODNR Division of Wildlife manages these lands and helps Ohio landowners conserve and improve fish and wildlife resources and their habitats. The division also manages Ohio's fisheries, which cover 124,000 acres of inland water, 7,000 miles of streams, 2.29 million acres of Lake Erie and 451 miles of the Ohio River.

Fish and wildlife management and research consists of projects that affect fish and wildlife populations, their habitats and the Ohioans who benefit from a healthy, wild landscape. Projects include population and habitat management, fish and wildlife resource research, as well as fish and wildlife recreation promotion. The ODNR Division of Wildlife offers a variety of educational programs to increase the skills, knowledge and participation of those interested in wildlife.

Lake Erie offers excellent fishing opportunities for walleye, yellow perch and smallmouth bass. This year, angler success rates for walleye were among the highest ever since the division started recording angler catch rates in our annual Lake Erie creel surveys, which began lakewide in 1975.

Lake Erie had good hatches for both walleye and yellow perch, and the future continues to be bright for Ohio sport fishing. Below are some of the division's highlights from FY 2018.

S P O R T S M E N ' S B I L L

Continuing the department's goal of increasing access and opportunity for our sportsmen and women, the Sportsmen's Bill (Senate Bill 257), was passed at the end of FY 2018, and it will provide a number of customer-friendly options for hunters, anglers and trappers. This bill includes new multi-year and lifetime licensing options; creates a Lake Erie fishing stamp for out-of-state anglers with the generated funds to be invested in maintaining the health of the lake; making fishing licenses good for one year from date of purchase; allowing disabled hunters to utilize any type of ATV; and lifting some restrictions on hunting and trapping apprentice programs. The passage of this bill will be beneficial for Ohio's hunters, anglers and trappers now and into the future.

N E W W I L D L I F E K - 9 P R O G R A M

The ODNR Division of Wildlife's law enforcement joined more than 20 states in the adoption of a wildlife K-9 program. Three wildlife officers have completed handler training, and two more will begin training later in 2018. A special graduation ceremony was held to recognize Finn and Mattis, both male German shepherds, and May, a female

Labrador retriever, for completing their training and being the first K-9s in the ODNR Division of Wildlife's brand-new K-9 program. These highly skilled K-9s are trained to detect hidden wild game such as white-tailed deer, turkey, waterfowl and fish, along with other non-game scents like ginseng and gun powder. They also have the ability to track people and will be used to find lost hunters and people hunting without permission.



Our K-9s are friendly and socialized to participate in conservation programs and youth events. Our K-9 teams are performing unique and highly visible roles in helping to accomplish the ODNR Division of Wildlife's mission of conserving and improving fish and wildlife resources and their habitats for sustainable use and appreciation by all.

NEW ONLINE HUNTER EDUCATION COURSES

This version of hunter education allows students to complete the entire course online and is for Ohio residents 12 years of age or older. This new convenient option is particularly appealing to people with busy schedules or limited transportation. Students may start and stop the program as they have time to work on it, and they must pass a final exam to receive certification. There is a \$15 fee to be paid to the online vendor once individuals complete the course and pass the final course exam.



Ohio does not require bowhunter education, but the National Bowhunter Education Foundation's (NBEF) Bowhunter Education course is required to bow hunt in at least 11 states and many countries. This online bowhunter education course is only for Ohio residents (9 years of age or older) and meets this bowhunter education requirement. The online course takes approximately eight hours to complete, but individuals may stop and pick up where they left off in the course at any time. There are quizzes at the end of each unit, and individuals must pass the unit quiz to proceed to the next unit. Students must pass a final exam to receive certification. There is a fee of \$30 paid to the online course vendor once individuals have completed the course and passed the final course exam.

A E P L A N D S



Jesse Owens State Park and Wildlife Area

ODNR and American Electric Power (AEP) are moving ahead with a plan for the state to buy a portion of lands owned by AEP. On August 9, 2017, ODNR and AEP signed a memorandum of understanding, which would let the state agency buy up to 60,000 acres of AEP's ReCreation Land property in southeastern Ohio. The land acquisitions would likely be made in separate parcels over several

years. The property, known as ReCreation Land, is already being managed through a partnership between AEP and ODNR. The land is used by the public for hunting, fishing, hiking, camping, boating, dog training, picnicking and horseback riding, and it is located at the intersection of Guernsey, Morgan, Muskingum and Noble counties in southeastern Ohio. The first purchase was made encompassing approximately 4,861 acres purchased by the ODNR Division of Wildlife and 874 acres purchased by the ODNR Division of Parks and Watercraft for a total of 5,735 acres.

RECRUITMENT, REACTIVATION AND RETENTION OF HUNTERS, ANGLERS AND SHOOTERS

The ODNR Division of Wildlife has aggressively focused on tactics to identify and reach out to targeted audiences directing them to our conservation partners who offer mentored instructional experiences, which helps engage participants as they improve and become hunters, anglers and shooters. Research has shown that new participants in outdoor recreational activities are more likely to identify as a hunter, angler or shooter through multiple positive experiences with a mentor.

HARRISON STATE FOREST RANGE

As part of an ongoing effort to upgrade and expand public shooting ranges, the ODNR Division of Wildlife and ODNR Division of Forestry have completed a \$381,000 overhaul to Harrison State Forest Shooting Range. This included a \$25,000 National Rifle Association (NRA) Public Range Grant.

Upgrades include:

- Expanding the shooting line from seven benches to 12
- Raising the side berm and backstop height for safety

- Installing a new ballistic sand backstop that will make lead reclamation more efficient
- Covering the shooting line with a roof for protection in bad weather
- Addressing storm water drainage issues
- Installing a new asphalt parking lot and an ADA-compliant sidewalk.

Harrison State Forest is located in Harrison County, approximately 3 miles north of Cadiz, east of State Route 9. The primary area lies north of County Road 13, while two smaller tracts are located south of County Road 13. The 100-yard shooting range provides the public with an area to practice marksmanship or sight-in firearms. The range is available on a first-come, first-served basis.

PHIL HILLMAN ACCESS



A new Conneaut Creek angler access site in Ashtabula County was dedicated in honor of Phil Hillman, who worked for the ODNR Division of Wildlife for 37 years before he unexpectedly passed away in July 2017. Serving as fish management supervisor for 32 years, Phil made a tremendous impact on fishing access and opportunity in northeast Ohio, namely the world-class steelhead fishery that thousands of anglers enjoy annually.

A parking lot was created and a trail was cut to provide access to the creek. By connecting this piece with property from the Ohio Scenic Rivers program, anglers can easily access this section of the creek to pursue steelhead. This area is now named the Phil Hillman South Ridge Road Access area.

ENGINEERING

The ODNR Division of Engineering has an outstanding record of achievement during the Kasich Administration:

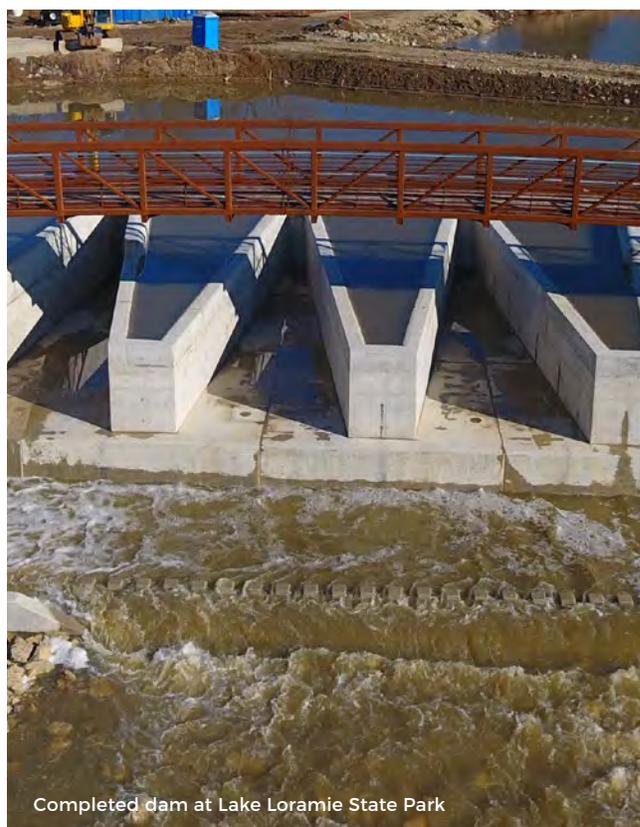
- Since 2011, the division has managed more than \$800 million in project planning, design and construction.
- This includes \$329 million in dam risk reduction funding that has significantly improved the safety of Ohioans.
 - In 2011, ODNR had 20 Class I dams requiring immediate action due to safety concerns. Today, all 20 are in some phase of rehabilitation design or construction; with 13 complete or in construction.
 - In 2012, the emergency action plans for Class I dams did not meet current safety standards. Today, 48 of the 53 dams have approved emergency action plans that meet current standards; with the remaining emergency action plans to be finalized after construction is complete.

The ODNR Division of Engineering functions as a supporting services division, which gives it a foundation of diverse knowledge regarding how other divisions and offices function within ODNR. The chief engineer and his staff implement the statutory requirements of the Ohio Revised Code, as amended in 2015, including:

- Providing engineering, architectural, land surveying and related administrative and maintenance support services to other divisions within ODNR.
- Implementing the department's capital improvement program and facility maintenance projects, including all associated planning, design, contracting, surveying, inspection and management responsibilities and requirements.
- Acting as contracting officer in departmental engineering, architectural, surveying and construction matters regarding capital improvements, except for those matters otherwise specifically provided for in law.
- Coordinating the department's roadway maintenance program with ODOT.
- Assisting the department and its divisions by providing department-wide planning, including master planning, comprehensive planning, capital improvements planning and special purpose planning.
- Adhering to additional provisions included within the Ohio Revised Code, Chapter 1507.01 (2015).

ACCOMPLISHMENTS

- In March 2015, Ohio Gov. John Kasich announced that the nearly 200-year-old 4.1-mile earthen dam at Buckeye Lake in Fairfield and Licking counties would be replaced following a report by the U.S. Army Corps of Engineers saying the likelihood of a catastrophic failure of the dam at Buckeye Lake was high. More than 3,000 people live and work in the inundation zone of the dam at Buckeye Lake, and safety was the Governor's top priority. Phase One construction began in September 2015 for a new seepage barrier and stability berm. Phase Two construction began in May 2017 for soil-mix buttress, concrete cap, final grading and site restoration. The project is coming in on time and under budget and should be completed in late 2018. Addressing this decades-old issue was critical to ensure the safety of the residents and visitors at Buckeye Lake State Park.
- Groundbreaking held for construction of a new 11,500-square-foot visitors center at Hocking Hills State Park, which replaces an outdated and smaller structure. The new Hocking Hills Visitors Center is scheduled to open in December 2018 and will serve more than 2 million annual park visitors.
- Substantial completion of spillway and dam safety improvements at Lake Loramie, Mt. Gilead and Indian Lake state parks; ongoing dam safety improvement projects at Blue Rock, Buckeye Lake, Portage Lakes and Lake White state parks.





Completed dam at Indian Lake State Park

- Development of a 10-year capital improvement master plan for Class I dams, which notes the decommissioning of three Class I high-hazard potential structures owned by the ODNR Division of Wildlife. Assessments and project design planning also were in progress for risk reduction improvements to dam structures at A.W. Marion, Grand Lake St. Marys, Lake Logan, Lake Milton and Muskingum River state parks.
- Completion of a new marina facility at Alum Creek State Park to replace an aging structure. This new facility features larger boat slips, along with new docks and piers.
- Continued planning, design and construction administration of various state park facility improvements that include public restroom upgrades; overnight accommodations such as family cabins; water-based recreation such as marinas and boat launch ramps; land-based recreation such as playgrounds and trails; and transportation amenities, including roadways and parking lots.

GEOLOGICAL SURVEY

Ohio's abundant natural resources depend, in large part, on the underlying geology. The topography and chemistry of Ohio's underlying rocks and soils help dictate what plants and animals live and thrive here.

Ohio's biggest determinants on the topography were two periods of glacial activity, the Illinoian and Wisconsinan Periods. Both periods witnessed large ice sheets covering two-thirds of the state. These ice sheets flattened the pre-existing topography and left in their wake ancient shore lines, beach ridges, lake beds, ground moraines, bogs, kettles and one of the largest freshwater resources in the world, the Great Lakes, including our beloved Lake Erie. These glacial deposits have had an enormous impact on the plants, wildlife and human occupation of Ohio.

At the ODNR Division of Geological Survey, study of these glacial remnants has been the subject of several ongoing research interests, including surficial mapping, geological study of Lake Erie and study of groundwater resources.

S U R F I C I A L G E O L O G Y A N D G R O U N D W A T E R R E S O U R C E S

The division's Geologic Mapping Group continued progress on its five-year plan to complete the remaining unmapped areas of the state before 2022. The project is on track to create a seamless, geographic information system (GIS)-based, statewide, surficial map that will be used for construction planning, determining mineable deposits of sand-and-gravel, limestone and sandstone resources, as well as numerous other activities.

The mapping group also completed a coal resource study funded by the Ohio Coal Development Office. Maps and coal resource estimations were created for the Lower Kittanning (No. 5) and Middle Kittanning (No. 6) coals in eastern Ohio. A new study of the Brookville (No. 4) and Clarion (No. 4a) coals is in progress.

The glaciers that covered Ohio left immense resources of sand and gravel. These are quarried and create tremendous economic benefit. Limestone resources have been exposed in those areas where the glacial cover is thin, and these have also been mined. A summary of all the mined resources can be found in the 2016 Report on Ohio Mineral Industries, published by the division in fall 2017. This information is used by industry and local, state and federal governments for analysis and planning. The report is part of the division's ongoing commitment to the wise utilization of Ohio's mineral resources. The Mapping Group currently is compiling data for the 2017 Report on Ohio Mineral Industries, which will be released in fall 2018.

Ohio's largest glacial remnant is, of course, Lake Erie, and the study of the geology of Lake Erie fits well into the mission of the ODNR Division of Geological Survey. This past year, the Coastal Erosion Area map initiative, with new maps and erosion data generated

from aerial imagery and LiDAR data, was released in early January. This is the third round of mapping conducted since the program's inception in the 1990s. Although still in preliminary draft form, the latest maps indicate that when compared to the first maps released two decades ago, erosion affects a smaller portion of the Ohio coast. This is likely a result of continuing land development and shore protection. The division currently is accepting comments and making corrections for the maps to be finalized in 2018.

The deposits left by the glaciers form some of Ohio's most productive groundwater aquifers. Groundwater is very important for agriculture, industry and human activity. The division maintains a Groundwater Resources Group, which oversees the inventory of Ohio's groundwater resources. This group responded directly to more than 1,400 requests for groundwater information. Through the website search functions, groundwater data was provided to more than 68,000 customers who viewed more than 360,000 water well records. During the past year, more than 8,000 water well records and 11,000 well sealing reports were added to the state database, which currently contains more than 845,000 water well records and 83,000 well sealing reports.

The Groundwater Resources Group also has been making updates to its field equipment to better serve the needs of Ohioans. Upgrades are also being made to the state's 139 observation wells.

S U B S U R F A C E G E O L O G I C R E S E A R C H

Deep into the subsurface, beyond the influence of the glaciers, the ODNR Division of Geological Survey has research interests, one of which is in seismic activity. The Ohio Seismic Network recently purchased and permitted the siting of five additional broadband seismometer stations, effectively doubling the high-quality seismic coverage in the state. These stations will be installed and begin collecting data by the end of FY 2018. OhioSeis also built a new server to run Earthworm 7.9 software, store OhioSeis 2.0 seismic data and create a stable system with no points of failure.

During the past year, the ODNR Division of Geological Survey's Energy Resources Group also conducted subsurface geology research on the state's salt resources, Devonian shales and structural geology. As part of the Midwest Regional Carbon Sequestration Partnership project, the division produced 56 maps showing the structure and isopach (thickness) of Silurian- and Devonian-age rocks in eastern





Ohio that may serve as potential reservoirs and seals for carbon dioxide sequestration. Additionally, the division published a new analysis of the lower portion of the Devonian Huron Shale, which may hold potential for hydrocarbon production.

Other Energy Group projects currently underway include a detailed study of the extent and thickness of the state's salt resources; a correlation of Silurian geologic units across southwestern Ohio; and detailed structure and thickness mapping of the Black Hand Sandstone, which—in addition to creating many picturesque rock formations—acts as an important aquifer in several areas of eastern and southeastern Ohio.

P U B L I C A T I O N S , A R C H I V E S A N D O U T R E A C H

To better disseminate information to the public, the ODNR Division of Geological Survey continued archiving and cataloging its research holdings, laying the groundwork for eventually making more of its records available to the public, researchers, industry representatives, government agencies and ODNR employees. Also, during the past year, the ODNR Division of Geological Survey has published seven technical reports and 64 geologic maps, as well as several articles on its website. Staff members represented the division at several outreach events. These include several rock-and-mineral shows throughout the state, annual meetings for the Science Education Council of Ohio (SECO) and the Ohio Educational Technologies Conference (OETC), the annual Fossil Fest in Cincinnati, the Ohio State Fair and other educational events. The division also sponsored numerous hikes and talks throughout Ohio parks and preserves during Earth Science Week in October and visited several classrooms to speak to students about Ohio geology.

MINERAL RESOURCES

The ODNR Division of Mineral Resources Management provides for the safe and environmentally sound development and restoration of coal and industrial minerals extraction sites. Multiple programs address the environmental and safety aspects related to coal and industrial minerals mining.

Program and support services include permitting, hydrology, bonding, inspection and enforcement, abandoned mine land reclamation, engineering and design, mine safety, data and records management, geographic information systems (GIS) and central services support. Expertise is provided by a professional and seasoned staff of geologists, environmental specialists, engineers, blasting specialists, soil scientists, hydrologists, archaeologists, inspectors, GIS specialists and program managers. Division staff work diligently to maintain a high standard of regulatory effectiveness.

INDUSTRIAL MINERALS PERMITTING AND REGULATORY PROGRAM

Ohio is a major producer of non-fuel minerals, also known as industrial minerals. There are currently 610 permitted sites located in all 88 counties of Ohio. In 2017, 112 million tons of non-fuel industrial minerals were estimated to have been mined throughout the state.

Industrial minerals produced in Ohio, listed in order of minerals and highest estimated tonnages produced, include:

- limestone and dolomite (67,641,420 tons)
- sand and gravel (36,131,633 tons)
- salt (4,608,820 tons)
- sandstone and conglomerate (1,709,915 tons)
- clay (1,132,437 tons)
- shale (734,841 tons)



Limestone processor in Ottawa County

During FY 2018, the division issued 18 new or amended industrial minerals permits for a total of 1,125 additional permitted acres for mining. Staff reviewed and approved 107 modifications to permits. Staff also conducted 22 investigations related to blasting, hydrology and mining limitations while conducting 1,812 general inspections.

COAL PERMITTING AND REGULATORY PROGRAM

During the past year, permitting staff reviewed and approved permit applications on a total of 318 acres of surface coal mines. Reclamation was completed on 3,292 reclaimed acres after 92 performance security release requests were reviewed.

During the past year, coal mineral resource inspectors:

- Conducted 1,972 coal mining operation inspections
- Responded to 10 public complaints on coal mining operations
- Conducted 160 bond release inspections recommending approval on 147 reclamation segments totaling 8,053 acres
- Conducted three inspection releases on 26.7 acres re-affected by other regulated activities.

Coal regulatory staff also investigated 14 complaints related to subsidence, blasting, water, flooding and reclamation.

REMINING

More than 150,000 acres of abandoned mine lands exist in Ohio, posing health, safety, and environmental problems. One of the most effective tools in reclaiming abandoned mined lands is for active coal companies to extract the remaining coal and reclaim the sites via remining.

Through a Remining Taskforce, the division is fostering public educational efforts regarding the benefits of remining. A remining educational video was developed to capture reclaimed remining sites, remining operations in progress, and previously mined and abandoned lands in Stark, Perry, Noble and Washington counties. The goal is to provide an additional avenue to highlight the benefits of remining, to explain best management practices that are used during remining, and to discuss incentives offered at the state and federal levels to encourage remining.

During FY 2018, the division successfully approved and issued two new permits, which allow for the remining of previously disturbed areas. Combined, these two permits are expected to eliminate approximately 373 acres of previously-mined and unreclaimed areas and 28,241 linear feet of unreclaimed highwalls.

ABANDONED MINE LAND (AML) PROGRAM

The AML staff's work resulted in the following accomplishments:

- Reclaimed 23.9 acres of dangerous coal refuse piles

- Stabilized 22.8 acres of landslides and seepage
- Eliminated one hazardous water body
- Sealed 21 mine portals and vertical openings
- Stabilized nine mine subsidence sinkholes
- Contracted 28 projects
- Designed and started \$5.9 million in projects and completed \$5.8 million in final reclamation
- Removed four abandoned hazardous mining related facilities



Reclaimed sand and gravel lake

In addition to the typical program work, an AML Reclamation Economic Development Pilot program was funded in 2017 that focuses on AML projects that have an economic impact to the coal region of Ohio. The program was funded for two years at \$10 million annually to the ODNR Division of Mineral Resources Management through grants from the Office of Surface Mining Reclamation and Enforcement. The division will work with local and regional partners to develop projects that improve local economies affected by historic mining and current reductions in coal mining related jobs. Projects will be implemented in a three-year period once the grant funds are received. Currently, a total of eight projects for the first year of funding are being developed. These projects include the reclamation of dangerous highwalls on publicly-owned property that allow for expansion of outdoor activities, including hiking; hunting; campgrounds; improved wildlife habitat; and site development for post-reclamation industrial uses that provide critical local jobs.

M I N E S A F E T Y P R O G R A M

The new Ohio Mine Safety Training Center facility recently opened in Cadiz in Harrison County. It will house staff and host mine rescue related events in new training spaces for various public groups including, miners, emergency medical services (EMS), firefighters, law enforcement and any others requiring classroom or hands-on training. The division's Surface Mine Safety Inspectors trained 4,655 miners in Annual Refresher Training (ART), first aid and CPR as required by provisions of the Mine Act, and 517 miners were provided with New Miner Training. During the year, mine rescue operations coordinators also trained 817 miners in mine rescue, and inspection staff trained 42 miners in electrical ART. In 2017, mine safety certification staff conducted examinations for miners seeking required certifications for work in key mining positions in Ohio's underground and surface mines. This includes the certifications of mine foreman, coal mine electricians and mine medical responders. Of those examined, 89 earned certification.

OIL AND GAS

The ODNR Division of Oil and Gas Resources Management regulates Ohio's oil and natural gas industry by protecting Ohioans and our environment while ensuring that the state's natural resources are managed properly.

The division oversees a number of aspects of the oil and natural gas industry: well pad construction, permitting, drilling, completion and production of oil and natural gas; the disposal of produced fluids and brine; and the plugging of wells and reclamation of well sites after production ends. The division also regulates brine disposal wells, natural gas storage wells and salt solution mining wells.

PRODUCTION AND PERMITTING

The Utica/Point Pleasant shale play continued to produce record volumes of oil and natural gas in calendar year 2017. Horizontal shale wells totaled 16,535,808 barrels of oil and 1,725,495,877 Mcf of natural gas. Ohio law does not require the separate reporting of Natural Gas Liquids (NGLs). Operators of horizontal wells submit production reports on a quarterly basis:

	2017 Q1	2017 Q2	2017 Q3	2017 Q4	TOTAL
Barrels of Oil	4,090,500	4,044,072	4,207,674	4,193,562	16,535,808
Mcf of Gas	371,921,659	389,662,485	460,844,826	503,066,907	1,725,495,877

Natural gas production in 2017 exceeded production in 2016 as natural gas production grew by 24 percent while oil production decreased by 8 percent. Natural gas production in Ohio exceeds the state's consumptive demand, as estimated by the federal Energy Information Agency, providing an efficient source for home heating, electric generation and manufacturing feedstock.

	2017 (SHALE)	2018 (SHALE)	PERCENTAGE CHANGE
Barrels of Oil	18,015,346	16,535,808	(8.21 %)
Mcf of Gas	1,388,656,313	1,725,495,877	24.26%

At the end of 2017, a total of 2,786 horizontal shale wells targeting the Utica/Point Pleasant or Marcellus shale formations were permitted, with 2,272 wells drilled and 1,807 wells capable of production. An additional 40,000 conventional wells also produce oil and natural gas across nearly every county in the state.

DIVISION ACTIVITIES

The division's mission is implemented by a dedicated staff, including inspectors, geologists, engineers, hydrologists, seismologists, attorneys and other skilled professionals. A majority of the division's employees are field inspectors who live and work in the counties and communities where oil and gas is produced. County-based inspectors are readily available for frequent, unannounced inspections and to witness priority stages of well construction.

Horizontal well drilling continues as the predominant method of oil and gas exploration and production. Horizontal well sites are designed by a professional engineer, receive approval from the division and are frequently inspected by engineer technicians. Additionally, facilities that treat, store or otherwise handle oilfield wastes are reviewed and inspected by the division's engineers and Radiation Safety section to facilitate the protection of human health and safety and the environment. The reporting of oilfield incidents through the division's "One-Call" incident notification system allows the Emergency Operations and Response section to quickly dispatch specialized responders to assist local first responders and coordinate state resources, expediting mitigation measures to protect Ohioans and the environment.

A continued emphasis on regulatory enforcement has created two additional sections focusing on regulatory enforcement and internal and external auditing. Along with the legal section's oversight, these sections ensure that operators follow the division's laws and rules and that the division promptly responds to complaints from landowners. A robust public information section responds to more than 1,200 public records requests annually, prioritizing data disclosure and division transparency.

The Orphan Well Program remains an integral component of the division's mission. Funded by a portion of the state tax on oil and gas production, the program plugs improperly abandoned oil and natural gas wells. If unaddressed, orphan wells may pose a significant threat to public health and safety, the environment, conservation of natural resources and economic development. An overhaul of the contract utilized for employing vendors to plug orphan wells has led to a record number of orphan wells plugged. The division continues to address the challenge of orphan wells by increasing staff within the program and routinely providing contract opportunities to plug wells.

Additional sections of the division maintained regulatory responsibility over the oil and gas industries. The division's Underground Injection Control (UIC) program continued its role as the primacy authority over Ohio's Class II brine disposal injection wells and Class III solution mining wells. The OhioNet seismic network accesses more than 90 seismographs to detect seismicity in real-time and inform seismologists in real-time. This network ensures a quick regulatory response should seismicity be detected in proximity to oil and natural gas operations. Finally, continued prioritization of administrative rule making, and an overhaul of the division's electronic database will propel the division to stronger, more efficient regulation in the years to come.

WATER RESOURCES

At the beginning of FY 2018, the ODNR Division of Water Resources had four primary programs: Dam Safety; Floodplain Management; Water Inventory and Planning; and Groundwater Monitoring and Technical Assistance. The Groundwater Monitoring and Technical Assistance Program was eventually transferred to the ODNR Division of Geological Survey.

D A M S A F E T Y P R O G R A M

The Dam Safety Program is responsible for ensuring that life, health and property are protected from dam and levee failures. In order to meet this responsibility, the program conducts periodic safety inspections of all regulated dams (approximately 1,500); reviews and approves necessary repairs to dams and levees; issues construction permits for new dams and levees; reviews and approves emergency action plans; takes enforcement actions against deficient dam owners; and responds to dam and levee emergencies as necessary.



The FY 2018 accomplishments of the Dam Safety Program include:

- Completed periodic inspections of more than 335 dams.
- Reviewed and approved updates to more than 280 emergency action plans (EAPs).
- Performed the five-year review and obtained approval through the Joint Committee on Agency Rule Review (JCARR) of several changes and additions to the Ohio Administrative Code governing dam and levee safety.
- Continued work with the ODNR Division of Engineering and the dam-owning divisions to reconstruct, repair and improve the safety of many ODNR-owned dams.
- Coordinated closely with county emergency management agencies and dam owners to increase awareness and understanding of the importance of emergency action planning.

- Issued 13 notice of violations and two administrative chief's orders to owners of severely deficient dams, and six dilapidated dams were breached or modified to reduce public safety risk.
- Began work with the U.S. Army Corps of Engineers to conduct one-time safety inspections and assessments of several high-hazard levees throughout the state.

F L O O D P L A I N M A N A G E M E N T P R O G R A M

Flooding is the most prevalent natural hazard in Ohio and the United States. To reduce the risk of flood damage, the Floodplain Management Program works with the Federal Emergency Management Agency (FEMA) and 751 Ohio municipalities and counties to implement the National Flood Insurance Program (NFIP) statewide. Community participation in the NFIP makes federal flood insurance and additional forms of disaster assistance available to residents.

The Floodplain Management Program provides technical guidance and assistance to communities, agencies and citizens by ensuring NFIP compliance, evaluating local floodplain management programs and recommending improvement measures. The program also provides various training opportunities, coordinates with FEMA on flood hazard mapping initiatives, assists with Community Rating System (CRS) participation and organizes the annual Ohio Statewide Floodplain Management Conference.

The FY 2018 accomplishments of the Floodplain Management Program include:

- Provided outreach to communities affected by flooding in November 2017 and February 2018.
- Collaborated with the Ohio Building Officials Association to revise and standardize a recommended damage assessment process.
- Coordinated with the Ohio Department of Commerce - Division of Industrial Compliance to ensure proper compliance for manufactured home installation and removal as they assume authority from the Ohio Manufactured Homes Commission.
- Hosted the annual Ohio Statewide Floodplain Management Conference.
- Completed closure of Cooperating Technical Partners grants.

W A T E R I N V E N T O R Y A N D P L A N N I N G P R O G R A M

The Water Inventory and Planning Program is responsible for implementing and enforcing Ohio's rules, regulations and contracts related to water supply and water resource development. This is accomplished by executing and administering contracts for the sale of state-owned water stored in federal, state and local reservoirs; registering large capacity water users; and collecting, compiling and disseminating water use data

for water resources development, planning and management. The program is also responsible for water withdrawal and consumptive use permitting and for implementing the provisions of the Great Lakes-St. Lawrence River Basin Water Resources Compact (Great Lakes Compact) and the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement.

Some of the FY 2018 accomplishments of the Water Inventory and Planning Program:

- Mailed a record 2,251 water withdrawal annual reporting forms in calendar year 2017 to all active, registered water withdrawal facilities in the state.
- Received completed annual reports from more than 99 percent of all registered water withdrawal facilities for the third year in a row
- Continued the testing phase of the online annual water withdrawal report filing form and the associated database.
- Received and processed 183 new water withdrawal facility registration forms. This is the highest number of forms ever received in a year.
- Compiled and submitted all of Ohio's known Lake Erie basin water withdrawal, consumptive use and diversion data to the Great Lakes Commission.
- Reviewed and revised the division's water conservation and efficiency web pages. Ohio's voluntary water conservation program is a requirement of the Great Lakes Compact.
- Participated in a Great Lakes Compact Council and Regional Body subcommittee that is reviewing and revising diversion rules, guidelines and procedures.

COASTAL MANAGEMENT

The ODNR Office of Coastal Management is at the forefront of helping communities plan and implement sustainable restoration and enhancement projects that support their local economy.

In FY 2018, the ODNR Office of Coastal Management continued to collaborate with the Ohio Lake Erie Commission, the city of Sandusky, Erie Conservation District and others on implementation of the multi-year Sandusky Bay Initiative. By strategically restoring a series of connected in-water wetlands and nature-based living shorelines, water quality will progressively improve as it moves through the 64 square miles of surface water in Sandusky Bay toward Lake Erie and further enhance coastal habitat conditions. With an initial state investment of \$1 million, the ODNR Office of Coastal Management leveraged an additional \$1 million through state and federal grants to initiate eight projects in FY 2018 under the initiative. The accomplishments in FY 2018 include:

- Provided financial assistance to the city of Sandusky to initiate the Strategic Restoration Initiative that will result in a portfolio of projects throughout Sandusky Bay to improve water quality and enhance coastal habitat in Sandusky Bay.
- Applied for and received two Landscape Conservation Cooperative grants through the U.S. Environmental Protection Agency (EPA). The projects include a partnership with the Erie Conservation District and private entities to restore shore and wetland habitat at two locations in Sandusky Bay.
- Provided financial assistance to Ohio Sea Grant, which in turned provided sub-

SANDUSKY BAY INITIATIVE



awards to Bowling Green State University, Heidelberg University and Kent State University for research and monitoring projects in Sandusky Bay.

- Provided project coordination and fiscal management with the city of Sandusky, a local steering committee and consultant teams for the engineering and design of three project sites for coastal wetland enhancement and beneficial reuse areas within Sandusky Bay through the Healthy Lake Erie Initiative.
- Served as a partner with Ohio EPA, U.S. EPA and a consultant team that resulted in a Nine-Element Plan and the initial development of a 3D Eutrophication and Hydrodynamic Model for Sandusky Bay.

THE ODNR OFFICE OF COASTAL MANAGEMENT ACHIEVEMENTS

- In response to sustained high lake levels and severe erosion along the shore of Lake Erie, developed and implemented a Temporary Shore Structure Permit to provide Lake Erie coastal property owners with an opportunity to quickly address any severe erosion damage that their property may be experiencing.
- Assumed oversight of Old Woman Creek National Estuarine Research Reserve.
- Administered the Shore Structure Permit and Submerged Lands Lease programs, issuing 32 permits, and executing 13 Submerged Lands Leases and 29 other lease actions (modifications, consents to assignment, etc.).
- Disbursed \$181,564 of Submerged Lands Lease rentals collected by ODNR to the local jurisdictions in which the leased areas are located.
- Collaborated with the ODNR Division of Geological Survey on updates to the Coastal Erosion Area maps. Public meetings were held in each of the eight coastal counties, notification letters were sent to property owners and associated fact sheets were prepared.
- Passed through Healthy Lake Erie funds to Heidelberg University for the Blanchard River Sediment Reduction Project. The goal of the project is to identify and implement innovative strategies to harvest and beneficially use bed load sediments from the Blanchard River in the Lake Erie watershed.



Pickerel Creek, Sandusky Bay

- Provided funding to Bowling Green State University to determine the effectiveness of grates in Lake Erie wetlands in allowing northern pike to access the spawning and nursery habitat in those wetlands.
- Provided funding to Ohio Sea Grant to update and expand the “Ohio Shipwrecks and Maritime Tales” website, which was launched in 2008.
- Provided funding for a third year of nearshore fish monitoring conducted in partnership with the University of Toledo, ODNR Division of Wildlife and Ohio EPA.
- Provided funding and coordination with the University of Toledo on developing a geospatial model to identify and prioritize nearshore habitat areas.
- Provided funding for two Biomimicry Fellows through the Cleveland Water Alliance and the University of Akron to research innovative design and planning resources that may assist in future coastal resource management.
- Began a two year project to quantify wetland phosphorus retention capacity in Old Woman Creek and other coastal wetlands. It will also provide tools and recommendations for incorporating water quality objectives into wetland management and restoration.
- Provided outreach and education to approximately 750 kindergarten through 12th grade students at Old Woman Creek National Estuarine Research Reserve as part of the K-12 Estuarine Education Program.

LAW ENFORCEMENT

The ODNR Office of Law Enforcement administers and coordinates the law enforcement activities, training and policies of ODNR. There are approximately 300 commissioned ODNR officers employed throughout the entire state of Ohio, including natural resources officers and wildlife officers.

Duties of the ODNR Office of Law Enforcement include:

- coordinating the enforcement of state laws and ensuring public safety at state parks, state forests, state wildlife areas and on public waterways;
- serving as the department's liaison with other law enforcement agencies and jurisdictions;
- representing the Director in situations concerning law enforcement activities;
- conducting and/or coordinating internal investigations of department employees;
- performing other functions related to the department's law enforcement activities, training and policies as assigned by the Director.

A C C O M P L I S H M E N T S

- The ODNR Office of Law Enforcement conducted 10 classes in civilian response to active threats and opioid awareness seminars throughout the state in FY 2018. These trainings were provided to ODNR employees as well as several other state and local agencies.
- Law enforcement training is now centralized through the ODNR Office of Law Enforcement for all ODNR officers. All officers are required to take several hours of training and participate in training exercises throughout the year.
- During FY 2018, the fire panels in all buildings at the ODNR headquarters in Columbus were upgraded, and the security cameras on campus were changed from analog to digital, which included adding new security software campus-wide and a dedicated security fiber network.
- The ODNR Office of Law Enforcement continues to be compliant with the Ohio Collaborative Community-Police Advisory Board (Ohio Collaborative) standards of policing, which was initiated by Governor John Kasich.