

# INDIANA STATE REPORT

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## **Strategic Plan**

The Division of Fish & Wildlife (DFW) hired a Business Strategist to facilitate implementation of its 5-year strategic plan. A presentation was recorded for all staff that detailed the structure of the planning process, defined roles and responsibilities and institutionalized a common language for planning. The leadership team, comprised of regional supervisors, met to discuss decision-making processes and formed working groups. The strategies within the plan, largely guided by the Fish & Wildlife Relevancy Roadmap and the America's Wildlife Values report, have an increased emphasis on offering Conservation Appreciation services (i.e., targeting audiences with pluralists and mutualists value orientations) and enhancing R3 efforts (i.e., for citizens with traditionalist value orientations). There is also recognition that the DFW strategic plan ought to inform resource allocation decisions and as a result, the DFW is actively working to modernize budgeting processes. Moreover, the DFW is implementing a new employee performance management system and the leadership team is actively working to systematically cascade elements of the strategic plan into the work profiles of employees throughout the organization.

## **Recruitment, Retention and Reactivation of Hunters and Anglers (R3):**

DFW conducted 75 "Learn To" workshops reaching 1,200 participants across the state. The Learn to Hunt, Trap, & Shoot program offers instruction for those interested in learning more about these outdoor activities by promoting, supporting and conducting events for novices of all ages. The Learn to Fish program offers instruction and opportunities for people to learn more about fishing. While most of the events are tailored to novices, some workshops teach advanced skills while others train adults to become fishing instructors. Both of these programs use participant data collected from pre-workshop and post-workshop surveys to evaluate program needs and successes.

DFW held Indiana's first Statewide R3 Summit in March 2019. It was attended by internal and external partners, representing fishing, hunting, trapping, sport shooting, and outdoor recreation. The Summit helped increase awareness and understanding of the importance of focused R3 efforts needed to reverse negative trends of participation in hunting and angling in Indiana. Since the Summit, partners have been more engaged to help address current challenges and barriers to R3 efforts as a community.

## **Land Acquisition**

DFW acquired 496 acres in 2019. The additions included 300 acres for Fish & Wildlife Areas and 1 acre (two tracts) that were donated for Public Access sites. Indiana's Healthy Rivers Initiative (HRI), the state's largest land conservation initiative, added 195 acres.

## **Private Lands Expansion**

DFW continues to expand wildlife habitat and recreational opportunities on private lands. Efforts include implementation of the Grasslands for Gamebirds and Songbirds (GGS) program and expansion of hunting opportunities on private lands. By leveraging an RCPP agreement with NRCS, GGS has brought \$2 million in funds for conservation to Indiana private lands, the creation of 3 new grassland biologists, and 2 new habitat teams which conduct work on private properties. This move has resulted in 1,820 acres of enhanced native grass, wildflower, and shrub habitat. Also through funding from the GGS program, 2,000 acres have been opened to public gamebird hunting.

DFW was recently awarded funding for a Voluntary Public Access (VPA) agreement with NRCS. VPA funding will be used to expand access acreage and also provide new opportunities for waterfowl and deer hunting.

Recreational opportunities have also been expanded through DFW's Community Hunting Access Program (CHAP). By working with partners from City government, conservancy districts and land trusts, DFW has opened 3,191 acres to recreational deer hunting to date. CHAP partners are able to improve deer management efforts while allowing recreational deer hunting on their properties.

## **Asian Carp Management**

As part of efforts to increase Asian Carp management capacity, DFW created and filled an Asian Carp Specialist position. This full time position focuses on coordination with neighboring states, securing funding for carp removal efforts and expanding the scope of research and population monitoring efforts. The carp specialist is working with neighboring states to expand commercial harvest on the Wabash River, expand working knowledge of preferred habitats, primary reproductive areas and population modeling. The specialist is also working to further develop carp communication tools including updated webpages and fact sheets.

## **Increased use of technology to better manage wildlife resources**

DFW has recently increased the use of technology to increase transparency and to make better informed management decisions. Increased usage of GIS web-map technology has allowed for greater access and use of wildlife data. Data such as distribution of habitat projects and wildlife conflict hotspots helps inform decisions, such as work load distribution and prioritization of efforts. GIS web-map data helps establish cost/benefit summaries for programs and makes reporting much more efficient.

DFW recently invested in Qualtrics to better meet surveying needs. The platform has been used to research both hunting and non-hunting customer's opinions concerning deer populations and management, waterfowl, small game, and other questions of importance to the public.

DFW has also increased the speed at which data is shared with the public. Using technologies such as Tableau, we have been able to provide near real-time data on deer and turkey harvest, disease outbreaks such as a recent epizootic hemorrhagic disease event, and other data sharing that is of interest to the public. Older technology, such as PDF reports are also used to share more in-depth data. The effects of these new technologies for data sharing are being researched to determine their effect on trust between DFW and the public.

### **Response to 2019 Outbreak of Epizootic Hemorrhagic Disease (EHD)**

In 2019, Indiana DNR received 981 reports of potential EHD cases involving 1,719 deer from 85 counties. Indiana DNR tests deer to confirm only the presence of EHD in a county and not the total number of infected animals. A total of 61 deer from 43 counties were tested, and 48 (79%) deer from 36 counties were positive for EHD. A total of 1,297 deer were reported in these 36 counties over an area of 14,102 square miles (approx. 0.09 deer/square mile). The number of deer tested in each county ranged from zero to four. Prior to 2019, the last major outbreak of EHD in Indiana occurred in 2012. A less-widespread but significant outbreak occurred in 2013. In response to reports of potential EHD, Indiana DNR reduced the county bonus antlerless quotas to two in 27 counties in which EHD was confirmed. These changes were enacted just prior to the start of the 2019 hunting season. Overall hunter opinion of the actions taken by Indiana DNR were positive.

### **IN Shrubs for Shrikes and Adopt-A-Shrike Programs**

The loggerhead shrike, a state endangered bird, has experienced precipitous declines in recent years in Indiana. Ongoing monitoring efforts now identify fewer than 10 breeding pairs annually in the state. In 2019, a Shrubs for Shrikes program was initiated by DFW to improve habitat for shrikes on private land in areas where shrike breeding territories have recently been found. Habitat enhancements focused on planting nest trees, which are very limited in these areas. DFW reached out to 12 landowners that own property in shrike hotspots and these landowners agreed to the planting of native Eastern Red Cedars to create nesting habitat. Convincing landowners to plant Eastern Red Cedars in their pastures, however, was not an easy task. To make this happen, DFW joined forces with 2 partner organizations, the U.S. Fish and Wildlife's Partners in Fish and Wildlife (PFW) and the Indiana Audubon Society, to incentivize landowners to allow the DNR to plant cedars, which are considered a nuisance in pastures, and to pay for a landscaping company to supply and plant the cedars. DFW provided \$7,000 to pay for the cedars through its Nongame Wildlife Fund and \$2,800 through its Cost-Share program to incentivize landowners to plant and maintain the cedars for 10 years. PFW dedicated nearly \$4,000 to cover the costs of labor and supplies and established 10-year contracts with landowners to improve and retain shrike habitat. Finally, the Indiana Audubon Society, in partnership with DNR ornithologists, began the Adopt-A-Shrike Program to annually incentivize landowners to retain cedars for future generations of both shrikes and people. The program lets the public "adopt" a banded shrike through monetary donations and members are updated annually on the shrike's activities. Members receive a t-shirt and other forms of shrike "swag," which helps to promote shrike awareness throughout Indiana.

### **Freshwater Mussels: Die-off Response Development and One Health Assessment Study**

Freshwater mussels are among North America's most imperiled species. Die-offs are increasingly recognized as population threats, with causes frequently undetermined. Minimal health and disease data exists for freshwater mussels and detailed plans and descriptions of

techniques for thorough and rapid diagnostics to guide a targeted die-off response are lacking. The objectives of this project are to develop die-off response protocols in coordination with partners nationwide and establish and compare baseline health parameters for freshwater mollusks in Indiana waterways. Study species include native Fatmucket (*Lampsilis siliquoidea*) and Plain Pocketbook (*Lampsilis cardium*) and non-native Asian clam (*Corbicula fluminea*), all common in Indiana. During the summer 2019 study period, methods involved: 1) collection of mollusks (20 per species per site) from three Wildcat Creek drainage sites under assessment for mussel translocation suitability, 2) determination of microbial populations (viral, bacterial, parasitic, and fungal) and antibiotic resistance of bacteria cultured, 3) assay of hemolymph and tissue samples to determine analyte levels (including glycogen, stable isotopes, contaminants) and histologic tissue evaluation, and 4) habitat assessments. This project establishes baseline health parameters of multiple species at varied sites which is critical for interpretation of results in the event of a die-off.

### **J.C. Murphey Lake Renovation**

In August of 2019, DFW held a public meeting to discuss upcoming renovations on J. C. Murphey Lake at Willow Slough Fish & Wildlife Area. Leading up to the meeting property staff and other biologists coordinated with human dimensions and outreach staff to formulate a solid game plan for the public meeting.

The lake is unique in that it is extremely shallow, with average depths of only three feet. The lake requires periodic renovations to maintain habitat for the maximum number of species and recreational opportunities. DFW looked at a variety of factors when determining the need for a renovation, including vegetative characteristics, furbearer numbers, fish size and growth rates, requirements of species of greatest conservation need, waterfowl counts and harvest, as well as infrastructure concerns.

The meeting was well attended with about 115 citizen stakeholders. Property staff gave a presentation and fielded questions from the public. The main concerns were budget related, the depth of the lake, and what would be done with fish. After consultation with biologists from a variety of disciplines (fish, waterfowl, non-game bird, furbearer & non-game mammal), permitting & regulatory staff, outreach staff, as well as with over 100 citizen stakeholders, it was decided to proceed with the renovation plan. The overall success of the potentially contentious meeting is largely attributed to the “front-end” work performed by staff in preparing for the meeting.

The drawdown of the lake will begin in spring of 2022 and last until fall of 2023. This 18 month draw down should allow the plant community establish and ideally provide habitat for another 15 years.

### **Ten years of Glacial Lake Status & Trends**

Keeping tabs on the more than 400 glacial lakes, totaling more than 40,000 acres across northern Indiana is a monumental task. Over the past 10 years, North Region fisheries biologists completed 164 surveys at 119 different glacial lakes to describe fish community and habitat trends at a landscape level while minimizing bias in the sampling frame. The results of these surveys include nearly 114,000 fish representing 59 different species, spatial distributions of 37 aquatic plant species, and descriptions of water quality at each lake sampled. Information

collected through the Status and Trends program has already been utilized extensively to identify lakes in need of further management, prepare of species specific strategic plans, inform vegetation management, and identify focus catchments for the State Wildlife Action Plan.

### **Big Long Lake Largemouth Bass**

Big Long Lake in LaGrange County historically supported a bass population that was roughly five times greater than the average of surrounding glacial lakes. The bass were stunted, slow growing and never exceeded the 14-inch minimum size limit. A 12-15 inch protective slot limit was implemented in 2014 in hopes of reducing bass numbers while increasing growth and size structure. DFW biologists sampled in 2019 and results were profoundly different than 2014. Bass numbers had decreased by eighty percent and were more in line with regional glacial lake averages while both growth and size structure improved. Legal-sized bass comprised 17% of the total catch with eleven bass over the 18-inch mark and 3 exceeding 20 inches. Overall, biologists are excited about the changes observed in the fishery at Big Long Lake and are working on identifying other potential candidate lakes that may benefit from similar regulations.

### **Mississinewa Reservoir Habitat Improvement Project**

A partnership between DFW, the Army Corps of Engineers, Bass Unlimited, and Slab masters (local group), completed a habitat improvement project at Mississinewa Reservoir. The collaborative placed around 700 Christmas trees in two different locations and added some much needed structure in an aging reservoir. This project was one of the first ones to take place in the northern part of the state. Similar projects are being discussed and will take place in the coming years.

### **Crooked Lake Biological Station**

In 2019 DFW, in partnership with the Division of Nature Preserves, purchased the Crooked Lake Biological Station property. The property is located on the north shore of Crooked Lake in southern Noble County. This acquisition now protects 20 acres of land in the Crooked Lake watershed and nearly 1/4 mile of the Crooked Lake shoreline. Crooked Lake is a 206-acre lake in the headwaters of the Tippecanoe watershed. The lake is unique because its fish community includes Cisco (*Coregonus artedi*), which is the only native coldwater fish species inhabiting Indiana glacial lakes. Cisco were once found in as many as 42 glacial lakes, but decades of coldwater habitat loss resulting from anthropogenic watershed modifications have now restricted the species to seven lakes. The acquisition of the Crooked Lake Biological Station represents the most substantial step DFW has ever taken to protect Indiana Cisco and glacial lake coldwater habitat.

### **Reservoir Habitat Enhancement Program**

DFW has been working on aquatic habitat projects at Monroe and Patoka Lakes. In 2019 the Monroe project was finished with a total of nearly 300 fish structures added to the lake. The planning phase for the Patoka Lake habitat project was finished in 2019, which outlined habitat work to be started in 2020. The Division has partnered with Bass Unlimited, the Indiana Bass Federation, and the Division of State Parks with these aquatic habitat projects.

### **Hellbender Project Update**

Indiana's hellbender (*Cryptobranchus alleganiensis*) program reached a milestone in 2019 with the release of its 200<sup>th</sup> captive-raised hellbender since strategic recovery efforts began in 2017. The 81 hellbenders released in 2019 were originally collected from the Blue River as

eggs in 2013, and were released back into the river at two sites containing suitable habitat. Indiana's hellbender recovery program has been the product of a collaborative partnership between the Indiana Department of Natural Resources and Purdue University, and has involved a number of other key players including The Nature Conservancy, conservation agencies in the states of Ohio and Kentucky, and several Indiana zoos. The next hellbender releases are scheduled for the summer of 2020, and will take place at two additional sites on the Blue River.

### **Goose Pond Fish & Wildlife Area Visitor Center Interpretive Exhibit**

Through a collaborative effort with Duke Energy, Friends of Goose Pond, and the Indiana Natural Resources Foundation, the Division opened its first ever interpretive exhibit in March 2020. The exhibit invites visitors to experience the property in a novel way for the Division and recognizes the potential of Goose Pond Fish & Wildlife Area to speak to a broader audience about conservation and its value to people.

During the first phase, interpretive displays about property management and wildlife at Goose Pond were installed in the visitor center. The displays bring special attention to grasslands and farmlands. A timeline highlights the history of Goose Pond and the donor recognition wall recognizes partners and donors who have contributed to the establishment, restoration, and maintenance of the property. In addition to the internal displays, property staff have started work on an interpretive trail. The developing interpretive trail is a half-mile loop around the visitor center with five stops highlighting Goose Ponds unique habitat features.

The next phase of the project will build on the existing visitor center displays to provide information about wetlands and wetland habitat. Taxidermy and models of charismatic migratory bird species will also be suspended from the ceiling to create a flyway

### **Give Adventure**

DFW received the first \$10,000 Give Adventure grant from the Indiana Natural Resources Foundation and secured an additional \$14,000 in project funds from Reconnecting to Our Waterways for the Give Adventure project. The project had four major events. The first involved engaging an underserved Indianapolis school and local non-profit in planting native habitat at the school. For the second event, the team hosted a workforce development day for 26 of the non-profit's youth workers at a fish & wildlife area near the city. The third event was a Project WILD workshop conducted with 55 teachers highlighting the school's habitat installations and how to incorporate them into school curriculum. Lastly, the team, partners, and other DFW staff hosted a culminating community festival at the city park next to the school.