

INDIANA STATE REPORT

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Covid-19 Response

On March 6, the State of Indiana confirmed its first case of COVID 19. Ten days later, Indiana DNR began following CDC guidance for large gatherings and staff were asked to begin working from home. Shortly thereafter, Governor Holcomb executed a stay-at-home order that would result in a series of weekly Executive Orders that would impact Indiana Division of Fish & Wildlife (DFW) daily business through the remainder of the year. While people were told to stay home, the Governor did encourage local outdoor recreation. Public lands remained open and DFW made countless adjustments in ensuring access to our outdoor recreation opportunities remained open while complying with the ever-changing CDC guidelines and sanitation best practices to keep our staff and customers safe. Annual hunting and fishing licenses set to expire on March 31 were extended through June 30. While there is no doubt that 2020 proved to be one of the most challenging years in most of DFW staff's lifetime, staff stepped up to the plate to ensure we continued to fulfill our mission to enrich the quality of life for present and future generations by balancing the biological, ecological, recreational, and economic benefits of Indiana's fish, wildlife, and their habitats. As a result, we saw increased use of public lands and access sites, increased participation in outdoor recreation, increased engagement on social media channels, and increased activity on our websites.

License Sales

One positive of COVID 19, despite continued license extensions was the increase in our license sales. We observed a 15% year-over-year increase in overall license sales in 2020. The two largest revenue-generating licenses – the annual fishing and deer bundle licenses – increased by 21% and 16%, respectively. Hunting and trapping license sales increased by 10%, while all other fishing license sales (excluding the annual fishing license) rose by 15%. Deer and turkey license sales increased by 9% and 21%, respectively. The hunt/fish combo license increased by 28%. The increase in license sales among women (32% gain) outpaced that of men (13% gain). The 35-44 age group showed the largest year-over-year increase (20%), followed by the 18-24 and 25-34 (18%), 45-54 (13%), 55-64 (11%), and 65+ (9%) age groups. Customers were more apt in 2020 to purchase licenses online (38% gain) than by traditional retail channels (-6% loss).

Recruitment, Retention and Reactivation of Hunters and Anglers (R3)

In 2020, many workshops and trainings were cancelled due to COVID-19. Throughout the year, efforts were made to replace in-person events with virtual options. While many workshops were cancelled, a few went virtual. Workshops were held throughout the state, including in 12 targeted urban areas and attended by urban and suburban participants. Of those hunting and fishing workshop participants that completed a Post-workshop survey, 92% and 95% were confident or slightly confident of the newly learned skill, respectively. Participants were searched in the license database to determine if participants purchased licenses before or after the workshop. A greater percentage of participants (compared to 2019) plan to purchase a hunting, fishing, and/or trapping license in 2021-2022 season: Hunting- 44%, Fishing- 67%, and Trapping- 6%.

The Division's R3 Specialist position overseeing our hunting, shooting, and trapping programs was vacant for most of 2020.

Public Lands

2020 was an exceptionally challenging year for Indiana's public lands program. Public use of properties and access sites was up nearly 30% from pre-pandemic times and many of those new users were unfamiliar with property rules or even basic public land etiquette. Staff not only had to navigate the challenges of a pandemic but had to do so while dealing with tens of thousands of new visitors. DFW properties and access sites remained open throughout 2020. Staff developed protocols and processes to continue to host in-person draws for hunting opportunities, hosting 806 in person draws. Not a single draw was missed as staff managed around family and coworker quarantines. Shooting ranges remained open at 50% capacity in accordance with CDC guidelines and Executive Orders. Hatcheries did suffer some reduction in production because of COVID first hitting the state during Walleye and Muskie egg take. While 2020 presented many challenges, it did bring many new visitors that the Division plans to work on retaining into 2021.

Land Acquisition

DFW acquired 1,089 acres which included 366 acres for Fish & Wildlife Areas, 50 acres for game bird areas and one small tract for a public access site. In addition, the Indiana Department of Transportation donated 673 acres of land that was acquired for mitigation purposes. Once the mitigation process is complete, these acres will open to the public.

DFW started a new Sport Fish Restoration grant to fund acquisition of land for public access sites. This grant will result in increased opportunities for fishing activities and protect high-priority lands for public access.

Promoting Recreational Hunting as a Preferred Management Tool

DFW continues to partner with local communities to facilitate the use of recreational hunting as a deer management tool. Many communities face overpopulated deer herds resulting in damage to property and threats to human safety. Communities often lack the technical knowledge needed to utilize hunting as a management tool and either choose to do nothing or take steps that are not effective. To assist communities, DFW developed a method for providing financial assistance to communities for hiring a hunt coordinator professional. These professionals receive training facilitated by DFW and are experienced in hunt coordination. Communities also gain momentum for hunting by associating their efforts with a DFW program. In 2020 DFW partnered with 6 communities to open 3,353 acres to recreational hunting and help citizens manage wildlife resources.

Working to Improve Wildlife Connectivity

DFW environmental biologists worked with partners to increase wildlife connectivity on a variety of projects. In Indiana's natural lakes region, the team provided technical assistance to lake associations to encourage residents to create healthier shorelines. Biologists assisted the Winona Lake Association with developing the Healthy Shorelines Initiative which provides financial assistance for property owners to implement shoreline practices that create more space for wildlife and allow for greater connectivity along the lake shore.

The team also worked with roadway and bridge designers to promote wildlife friendly designs such as natural benches along roadways and under bridges that allow for better wildlife passage. Natural benches provide increased wildlife passage when compared with infilled riprap embankments.

Expansion of technical services provided to private landowners

DFW recently worked to secure new federal monies through the implementation of a CRP agreement with the NRCS. Monies secured from the agreement will be used to hire two new full time private lands biologists. These new positions will work with agricultural producers to provide more and better wildlife habitat on their lands. By providing additional technical assistance for federal programs such as CRP, DFW ensures that wildlife benefit from farm bill monies is being maximized.

Epizootic Hemorrhagic Disease

In 2020, DFW received 126 reports of potential EHD cases involving 258 sick or dead deer from 37 counties. Testing for EHD requires fresh samples of the spleen, liver, kidney, or blood. DFW tested deer to confirm only the presence of EHD in a county and not the total number of infected animals. A total of 11 deer from 10 counties were tested, and 5 (45%) deer from 5 counties tested positive for EHD. Reports of EHD were clustered in the northwest, northeast, and southeast corners of the state. The spread of EHD this year was less widespread in comparison to the 2019 outbreak that occurred in over half of the States' counties. Prior to 2019, the last major outbreak of EHD in Indiana occurred in 2012. A less widespread but significant

outbreak occurred in 2013. Maps of deer reported, tested, and confirmed to have EHD are available online and updated daily.

Chronic Wasting Disease

After the CWD surveillance efforts in northwest and northeast Indiana during the 2019 season, DFW returned to those areas during three weekends in November 2020 to conduct targeted CWD surveillance. Biologists were stationed at 8 northwest locations throughout Newton, Jasper, Lake, LaPorte, Porter, Pulaski, St. Joseph, and Starke counties, and at 5 northeast locations throughout Steuben, LaGrange, Noble, and DeKalb counties. Submission of samples for CWD testing was voluntary, and hunters received a metal tag reminiscent of historic confirmation tags for participating. In 2020 a total of 855 hunter-harvested deer, 13 road-killed deer, and 15 targeted deer from Indiana were tested statewide. To date, no wild deer from Indiana have tested positive for CWD.

Gray Fox Investigations

Gray foxes are a valuable and understudied furbearer not only in Indiana, but across their entire range. Several indices suggest populations declined between the 1970s and 2010s in Indiana and other Midwest states. Indiana DFW has initiated a comprehensive study with Wildlife Ecology Institute and Luther College to assess factors potentially contributing to the long-term declines. Multi-county study sites were established in central and southern Indiana, and 12 foxes were fitted with GPS collars during the fall 2020 field season. Location data from collared foxes will be used to assess habitat use, home ranges, and cause-specific mortality. Carcasses from 32 additional gray foxes were collected from trappers and DNR staff for ongoing genetics, disease, and diet studies. Field seasons are planned for 2021 and 2022 to coincide with Indiana's regulated trapping season for gray fox.

Effects of Harvest and Habitat Conditions on Northern Bobwhite

Indiana DFW initiated a research project with the University of Georgia to better understand the effect harvest regulations, habitat conditions, and their interaction have on population growth and density of northern bobwhites. The study, now in its 2nd field season, is being conducted on Goose Pond Fish & Wildlife Area in southwest Indiana. Ultimately, the empirical data collected during this three-year project will be used to develop an adaptable framework to inform harvest management on public land areas using site-specific habitat and population characteristics.

White Nose Syndrome

During late-winter of 2020, White Nose Syndrome (WNS) related projects included elements of disease surveillance and population monitoring. Winter bat surveys were conducted in 20 hibernacula during January and February. Counts of little brown (*Myotis lucifugus*), big brown (*Eptesicus fuscus*), and tri-colored (*Perimyotis subflavus*) bats all

increased marginally since 2018, and Indiana bat populations increased significantly. This increase in Indiana bats is attributed to hibernacula-shifting, which has been observed across all Indiana hibernacula. All four species have declined since the first detection of WNS in Indiana in 2011. Little brown and tri-colored bats have been hit especially hard, with both species declining approximately 90%. Populations generally appear to be stabilizing in recent years, although multiple little brown bats still exhibited signs of WNS at the time of the 2020 surveys.

Online Sick or Dead Wildlife Reporting Tool

Indiana DNR launched a new website for public reporting of sick or dead wildlife in 2020. The new online tool is designed to collect information about Indiana wildlife that appears sick or has died without an apparent cause. Reports are added to an active database that helps DNR track wildlife health over time and detect wildlife disease outbreaks.

White River Survey

Fish community, water chemistry, and benthic macroinvertebrate sampling were conducted on the West Fork White River and White River mainstem from its headwaters to its confluence with the Wabash River in 2020. This was a collaborative effort between the Indiana DNR, Indiana Department of Environmental Management, and the Muncie Sanitary District's Bureau of Water Quality.

Over 17,000 fish comprising 94 species were collected from the 62 fish sample stations. Some of the less commonly found species collected were the American Eel, Shovelnose Sturgeon, Mountain Madtom, and Harlequin Darter. Sites will be evaluated using the Index of Biotic Integrity which gives a site a numerical value representing the overall health of the fish community. More detailed information was collected on game fish species including Smallmouth Bass, Rock Bass, and catfish species.

Fisheries Information System (FINFO)

2020 was the first full year for Fisheries Information System (FINFO) to be in use. FINFO was developed to store pertinent fish survey, water quality survey, and fish stocking data into one central database. A total of 252 fish surveys including over 50,000 fish, 695 water quality surveys, and 540 fish stockings have been entered into the system. Having all the data centralized will be advantageous for research initiatives, data security, providing timely information to the public, and grant reporting.

DNR assumes long-running yellow perch survey

DFW had contracted Ball State University to conduct perch survey and research on Lake Michigan for over 40 years. The resulting dataset is one of the longest running and complete surveys in the Great Lakes. DNR purchased a new Lake Michigan research vessel which made in-house completion of the perch survey possible. During 2020 the Lake Michigan office

completed the first full field season of DNR-conducted yellow perch survey work. Gillnet assessments for adult spawning stock, summer adult gillnetting, young-of-year trawling, and micromesh gillnetting to assess juvenile yellow perch were completed at 4 different sites across Indiana's lakefront. Among notable results were a large uptick in adult yellow perch catches during the spawning assessment, low observed recruitment of juvenile perch, and a record amount of alewife captured during the summer adult perch gillnet survey.

Online Muskie Angler Reporting Survey

An online tool for Muskie anglers to report their fishing trip info to DNR biologists was created in the spring of 2020. The muskie survey was designed as a pilot to test software, gauge use/interest and what data could be collected electronically from anglers. Using Survey123 anglers are asked a series of questions about their fishing trip. Biologists plan to use this info to help manage muskie fisheries across the state. A real time "Live Summary" of submissions was also created using ArcGIS Dashboards to display # of trips, muskie caught, and numbers of follows. In the 1st year a total of 140 fishing trips were submitted with 124 muskies being caught. Biologists hope to see that number increase in 2021.

Where to Fish in Indiana Interactive Map

The where to fish interactive map web page is a resource for anglers and other recreational water users to get information on what opportunities are available. In 2020, the site had major updates including information on over 600 access sites, individual lake fisheries reports, lake depth contour maps, public lands property boundaries, low head dam locations, navigable streams, and fish consumption advisory for "do not eat" waters.

Relevancy Roadmap Pilot

The Relevancy Roadmap pilot project focused on understanding how the Relevancy Roadmap can apply to the DFW Stewardship Program, which is managed statewide by one DFW employee. Using an exploratory qualitative approach, DFW chose to understand the values, motivations, and barriers to volunteering on an urban-adjacent and a rural fish & wildlife area, each of which are in the southwest part of the state. During the interviews, a variety of social and psychological processes were uncovered, such as social identity, psychological distance, and beliefs about appropriate use of resources, that may play a role in DFW's ability to recruit and retain volunteers. Findings indicated blind spots in the approach or traditional framing of volunteer activities in terms of recreation, which may exacerbate social conflict among all DFW users. When examined through theoretical lenses, DFW was able to gain key insights into opportunities to frame volunteering as something that is relevant to a broader set of individuals. This project showcased how using a theoretical social science lens can help shape program decisions and better achieve program outcomes.