INDIANA
STATE REPORT
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Federal Aid Coordination and Audits

In 2023, the Division experienced significant change in its Planning & Business unit. We experienced 100% turnover in our federal aid coordination and a significant turnover in staff in our Division of Finance. We hired a new Planning & Business Supervisor, two new federal aid coordinators and Division of Finance hired two new fiscal analysts. Despite turnover and onboarding new staff, the Division successfully completed a state audit with no hard findings and entered a WSFR federal audit that would result in Indiana's third clean WSFR audit. The team also was able to end the year by obligating $34,127,340 across 33 grants.

Changes to Rule Making

In July 2023, House Bill 1623 went into effect, requiring the Division to list every license and permit fee, all fines and civil penalties in Indiana Administrative Code. Although the license and permit fees had been approved by the Natural Resources Commission in 2022, they were not listed specifically in Indian Administrative Code. Efforts were mad to incorporate every license and permit fee, property-related fees, and all natural resource damage/fish kill fines in administrative code. If this was not completed by December 31, 2024, the Department would not be able to charge fees. This work was a heavy lift on Department legal staff and our Permit & Rule Making Supervisor. However, State Budget Agency approval was received within the required timeline and we are now going through the promulgation process with our Commission. This new law also changed our rule making process, removing the ability to use emergency rules, shortening the permanent rule time period from 7 years to 5 years for readoption, and requiring two public comment periods. This new law has changed our rule making process significantly and staff have been working on making adjustments to our rules within the required timeline, however the Division will now need to plan much further ahead and rule making will take longer than in the past.

License Sales & R3 Efforts

The Division ramped up R3 efforts in 2023 by filling all vacancies in our R3 team. A new position, Community Engagement Specialist, was created to assist us specifically with outreach to customers. The R3 and Public Engagement teams worked together to produce direct email campaigns focused on retention and reactivation, as well as developing more content for social media and newsletters on hunting, fishing and trapping. These increased outreach and engagement efforts contributed to a 4% increase in overall license sales and $888k revenue increase over 2022. Fishing license sales increased 6% compared to last year. Overall hunting and trapping license sales were up 3.5%. Specifically, deer licenses increased 4%, turkey licenses increased 6.9%, and trapping licenses increased 3.8%. Open rates on direct emails were above industry average, with many ranging between 35% - 43%. Overall, efforts to engage our customers more often have laid

the groundwork for strategic annual R3 messages in the future, as well as assisted in our goal to increase license sales and revenue.

2023 Spring Turkey Season

The 2023 Indiana Spring Turkey season began with a two-day youth season on April 22-23 before the regular season opened on Wednesday, April 26. Eighteen days later when the season closed, a new state record of 16,649 birds had been reported harvested. Interest in turkey hunting has been steadily increasing over the years in Indiana, but the 2023 season was particularly successful because it aligned with the maturation of poults hatched during the 2021 Brood X cicada emergence. The poults hatched during this emergence were now two years old, which is the peak age for a male turkey to be harvested in Indiana. Indiana had experienced several years of poor reproduction prior to the Brood X 13-year cicada emergence in 2021, so the abundance of invertebrates on the landscape in almost every Indiana county helped the turkey population have a few strong years both in recruitment and harvest. Statewide, turkey populations are stable in Indiana and some areas, like urban areas in northwestern Indiana, are seeing turkey populations grow. For the 2023 season, youth took just over 2,000 of the total harvest. For the regular season, 78% of the total harvest was reported in the first 5 days of the season. Archery equipment was used for 2% of harvested birds. Bearded hens were 1% of reported harvest, and 10% of the harvest were reported as juveniles. Of males reported, 44% had spurs greater than 1 inch and 89% had beards over 6 inches. Switzerland County, on the border with Ohio and Kentucky, and Perry County, on the border with Kentucky, were the top 2 counties for turkey harvest.

2023 Deer Program Update

Like many other states in the Midwest, Indiana has not used population estimates to manage deer because of the low accuracy, low precision, and/or high costs of methods that are available, such as crewed flights, mark-recapture techniques, and camera traps. Rather, we have relied on various indices to try to understand the trend in the deer herd and manage based on that trend. But in 2016, Indiana DNR was being challenged on its deer management methods by the public, partly because of the lack of population estimates. To address the deficiencies in the deer population data, we partnered with Purdue University to create a deer management research project to estimate deer abundance, understand human interactions with those populations, and the effects of deer on their habitat. Researchers at Purdue University produced a ‘deer density map’ which shows deer density across the landscape down to the 1/4-acre scale and is paired with a confidence map to provide biologists with a measure of confidence in each or those deer population estimates at the same scale for about 1/3 of the land area in Indiana. The high precision of this method resulted in a deer density map that is not only useful by our biologists for deer harvest management, issuing deer damage permits, and working with landowner on habitat improvement projects, and for sharing with hunter and landowners. Researchers at Purdue found that using paired recordings of infrared images and red-green-blue or ‘normal’ video in crewed airplanes was even more cost-effective than ground-based cameras…and was much faster for acquiring the data. Office-based technicians can then review the images recorded during the flight and count the number of deer observed. This method cuts down on errors that are made from trying to count deer directly in the airplane. Therefore, we have just

started another research project with Purdue to revise the deer density mapping method to use crewed flights and drones to collect the data. An advantage of this surface modeling technique paired with data collected by drones is that it can be extended to other species. Our current project with Purdue will not only create a statewide density map for deer, but also create the same product for coyotes and turkey and explore the possibility of future projects to create the same density map for other terrestrial endotherms. Once the surface model map is created, it can be updated with new wildlife density data collected on a regular basis throughout the state. This will not only improve our ability to understand the deer, turkey, and coyote populations, but will also result in data that we are confident sharing with the public, thereby increasing transparency which is a cornerstone of the Wildlife Governance Method.

Land Acquisition

The Division acquired a total of 158 acres at Tri County FWA, located in Noble County. It offers a combination of upland, woodland, and wetland habitats. One new Public Access Site was constructed on the Blue River in Rush County.

Dedication of 300th Nature Preserve

The 300th Nature Preserve, Toothwort Nature Preserve was dedicated at Crosley Fish & Wildlife Area. The nature preserve comprises 101 acres. The diverse natural upland forests, the Vernon Fork of the Muscatatuck River, and limestone bedrock ravines support habitat for rare animals and plants, including all four of Indiana's native toothwort species.

Fish & Wildlife Health Highlights 2023

The Division formalized a Fish & Wildlife Health Response Team. This team consists of three biologists, each specializing in a different taxa group (aquatics/herps, avian, and mammal). This team is primarily charged with monitoring and surveillance of wildlife health issues in Indiana and conducting public outreach to help inform the people of Indiana. The crux of this work is the use of our online Sick and Dead Wildlife Reporting tool located at on.in.gov/sickwildlife, which has been successfully in operation since 2020. Reports over the past years show the usefulness of this tool both in predicting seasonal trends of sick/dead wildlife reports and identifying events which need a response in terms wildlife health and public outreach. Within the mammal health sector, Indiana experienced a few notable cases such as a large-scale mortality event involving upwards of 1000 eastern red bats, a case of bat mange, and the detection of *Balyisascaris* in a wild beaver. In the realm of avian health, Indiana has still been detecting positive cases of H5N1 in a variety of wild waterfowl. Indiana had no notable herpetofauna health events, but there were three pollution events that caused mortality in wild fish and for which restitution was pursued. Within our hatchery system, no notifiable pathogens were detected in 2023. Finally, the health team in Indiana has been engaging more closely with wildlife rehabilitators in the state and launched a PPE distribution program that is thus far going well.

Habitat Restoration at Hovey Lake

Hovey Lake FWA developed the new 146-acre Cottonwood Slough. The wetland will become a critical component to Hovey Lake for providing exceptional habitat for migrating waterfowl at the confluence of the Ohio and Wabash Rivers in Indiana.

JC Murphey Lake Rehabilitation

JC Murphey Lake, a 1,000 acres, at Willow Slough Fish and Wildlife Area complete lake renovation is nearly done. This has been an ongoing project for three years. During this project the lake was dredged, new boat ramps installed, and over 200 fish habitat structures were constructed and placed. This past spring nearly 8,000 fish were salvaged from the heron rookery and restocked into the lake along with thousands of largemouth bass, bluegill, redear sunfish, and black crappie from our state hatchery system. The lake will be restocked with 2 million largemouth bass, 1 million bluegill, 500 thousand redear sunfish, 100 thousand black crappie, and 75 thousand channel catfish.

Low-head Dam Removed on Mississinewa River

The Charles Mill Dam, a low-head dam located on the Mississinewa River in Grant County was removed in Fall of 2023. Originally constructed in 1862, the dam was 350 ft long and 10 ft high. The pool length impacted by the dam measured 3.6 miles and will be allowed to return to its natural state. In addition to the removal a mussel survey and relocation was completed by our Non-game Aquatic Biologists. In total over 1,000 mussels including 13 species were relocated. Funding for the project was provided by the Indiana DNR Lake & River Enhancement Program, along with the City of Marion and a USFWS Fish Passage Grant.

Fisheries Dashboards:

Dashboards have been created to be more transparent with our constituents about our programs. Currently, all Division fish surveys, fish stockings, and water quality surveys data are put into our FINFO database. Data from that database is being pulled daily to refresh a fish stocking dashboard on our website that list all historic and current fish stockings. We have also developed a dashboard to show all of our status and trends statewide fish survey data. We are currently working on getting the fish survey dashboard published to our status and trends fish survey webpage.

Chinook Stocking Public Input Survey

Following the announcement of a stocking increase, a survey of Lake Michigan salmon anglers was conducted to provide angler input into a new stocking strategy for Lake Michigan salmon. Two public meetings were held, and an electronic survey was sent to all licensed anglers with trout and salmon stamp privileges. Over 100 anglers attended the meetings, and over 3,000 anglers responded to the survey. Information on angler values, opinions, and receptiveness to four stocking options were considered, and despite initial skepticism, almost all anglers were satisfied with the process and the strategy chosen.

Invasive Carp Program:

The Invasive Carp Work Unit continues to collaborate on multiple interjurisdictional projects within the Ohio River basin and has been working to build capacity to increase invasive carp harvest within Indiana. Indiana is the lead on the Abundance and Distribution of Early Life Stages of Invasive Carp in the Ohio River Work Plan and contributes work to the 3 other projects which are the Control and Containment, Early Detection, and Telemetry work.

Loggerhead Shrike Project

Survey and banding operations for the state endangered loggerhead shrike were conducted throughout southern Indiana in 2023. Nesting was found in eight breeding territories, all in the southern part of the state. Six of the eight loggerhead shrike pairs (75%) successfully raised young, with two pairs each having two broods. Eight nests were successful while three nests failed from unknown causes. Thirty-one fledglings were confirmed, with 28 fledglings still alive two weeks after leaving the nest. Productivity was well above average with 3.88 fledglings/pair (the average productivity from 2016-2023 is 2.68 fledglings/pair). Forty-four shrikes were captured and marked with color bands, many of which were birds that were hatched that year. Birds with color bands were also resighted. One significant observation was a seven year old male who turned out to be the oldest documented shrike in Indiana. The Shrubs for Shrikes program, which plants native eastern red cedars to provide nesting sites for shrikes, took a break this year with planting new bushes. However, the 70 bushes that were installed since 2020 continued to be used frequently by shrikes for shelter and hunting perches. Two broods of shrikes were seen taking cover in these planted cedars, keeping them safe from predators like hawks. We expect that the bushes will continue to help shrikes in the coming years.

2023 Hellbender Update

We got our first larval hellbender at one of the hellbender release sites on the Blue River on June 21,2023, confirming hellbender reproduction at the site for the first time since releases began in 2017. It was the first hellbender larva documented in the Blue River in at least 30 years. Full-scale hellbender releases at multiple Blue River sites began in 2017 and will continue with the release of hundreds of hellbenders this summer. Locating the single larva indicates that successful breeding and recruitment has begun at this release site and marks a major benchmark in the recovery of hellbenders in the Blue River. We plan to conduct additional larval surveys during June 2024.

Including Wildlife Considerations in Economic Development

The Division's Environmental Unit is a team of dedicated environmental biologists actively reviewing lake and floodway permits in the interest of wildlife impacts. This team reviewed over 500 lake and floodway permits in 2023. Of these permits, developers maintained or improved wildlife passage on 107 based on biologist recommendations. These recommendations include constructed benches beneath bridges, improved stream substrates in culverts, amphibian and fish passageways, dam removals, and other wildlife crossing designs. Biologists engaged in early coordination meetings with over 90 prospective permit applicants to better serve customers through technical assistance and communication. In 2023, the Division partnered with DNR State Parks and with 4 external organizations to remove and replace invasive Amur Cork Trees on a golf course in Tippecanoe County. This effort was recognized in the Tippecanoe Invasive Cooperative Task Force Newsletter.

Wildlife Conservation and Hunting Opportunities on Private Lands

The Division continues to engage with Indiana landowners to establish, maintain, and improve wildlife habitat on private lands. In 2023, DFW connected hunters with access to over

22,000 acres of private property under the Indiana Private Lands Access Program. This program continues to be extremely popular offering financial incentives to landowners who allow controlled public hunting access for gamebirds, turkey, deer, waterfowl, and small game. Of the participating landowners and hunters 84% surveyed are either happy or extremely happy with the program. The Division employs a team of 14 wildlife biologists who connect landowners to financial incentive programs and provide technical expertise in implementation and management across Indiana. State Acres for Wildlife Enhancement (SAFE) is an initiative within the Conservation Reserve Program (CRP) that provides financial and technical assistance to landowners needed to achieve species-specific wildlife habitat goals on their property. SAFE is the largest portion of CRP in Indiana, making up roughly 57,000 acres, or 30% of the program statewide. Division partners with USDA-NRCS under a contribution agreement to provide technical assistance including management plans, burn plans, status reviews, and practice certifications on SAFE and other wildlife practices through CRP. The Grasslands for Gamebirds and Songbirds Initiative (GGS) is a Regional Conservation Partnership Program (RCPP) in its second iteration after seeing outstanding success in the program's first round of funding. GGS 1.0 developed nearly 4,000 acres of habitat, contracted with roughly 300 producers, and brought 32 conservation partners together under a $1.9 million dollar conservation investment. GGS 2.0 expands the program geographically and brings over $2.6 million dollars in funding and 23 partners together to enhance wildlife habitat on private land across Indiana. This program begins sign-ups in Fall 2024.