



Indiana DNR Division of Fish & Wildlife *State of the State Report*



May 2017



Goose Pond Fish & Wildlife Area Office and Visitor's Center

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Public Lands Program

The Healthy Rivers Initiative, led by the IDNR, is the largest conservation initiative to be undertaken in Indiana. The initiative includes a partnership of resource agencies and organizations who are working with willing landowners to permanently protect 43,000 acres located in the floodplain of the Wabash River and Sugar Creek in west-central Indiana and another 26,000 acres of the Muscatatuck River bottomlands in southeast Indiana. HRI partners include the IDNR, U.S. Fish & Wildlife Service, NRCS, and The Nature Conservancy of Indiana.



Nearing the conclusion of the first seven years of the HRI, in May of 2017, **35,841 acres of land are permanently protected**, with 10,514 acres acquired by DNR in the Wabash River and Sugar Creek Project Areas, 3,325 acres enrolled in the USDA Wetlands Reserve Program (WRP) that are not owned by DNR to complement the existing 12,723 acres of state-owned land. In the Muscatatuck River Project Area, 4,405 acres were acquired; 2,385 acres were enrolled in the WRP that are not owned by DNR, complementing the existing 2,489 acres of state-owned land. **To date, a total of 13,663 acres are now open to the public** for hunting, fishing, trapping, boating, and birdwatching.

The Public Lands Unit program has also made ardent strides in adding new facilities that are now available to the public. This includes two, new state of the art shooting ranges (one at Willow Slough Fish and Wildlife Area and one at Deer Creek Fish and Wildlife Area) as well as a new visitor's center at Goose Pond Fish and Wildlife Area.

The shooting ranges at Willow Slough and Deer Creek Fish and Wildlife Areas are respectively located in Morocco and Cloverdale Indiana. The Willow Slough Shooting Range opened in August of 2016, and the Deer Creek Shooting Range opened in February of 2017 (Celebrated with Governor Eric Holcomb and First Lady, Janet Holcomb). Both shooting ranges provide professional service and safety, including multiple Range Safety Officers (RSOs) that manage the shooting lanes at all times. Both shooting ranges provide 37 shooting lanes, including target distances of 10, 15-25, 50, and 100 yards, as well as shotgun trap lanes at Deer Creek. There are also on-site pro shops at both locations that offer ammunition and accessories for any shooter's needs.

Photo (left): Deer Creek Shooting Range

The new Visitor's Center at Goose Pond Fish and Wildlife Area, located in Linton, opened to the public in September. This state of the art facility offers visitors a chance to learn more about Goose Pond Fish and Wildlife Area, as well as education on conservation efforts. There will be an interactive, self-guided tour exhibit (for all ages) within the facility that focuses on education and understanding of modern conservation practices. (Pictured on front cover.)



Marketing

The Indiana Division of Fish and Wildlife amped up its marketing effort this past year. Three staff members attended the RBFF marketing meeting in 2016, as well as the NSSF summit.

A strategic email marketing program is in its third year of development that includes thank you emails to nongame fund donors and license buyers, reminders on upcoming seasons including hunting and fishing tips, events, reminders of annual license expiring, contacting lapsed anglers before free fishing days, and results of reserved hunt draws. Open rates on targeted emails ranged from 20 to 74 percent open rates, way above the average government open rate of 15%. In addition to targeted email communication, an e-newsletter, Wild Bulletin, is sent out on a monthly basis to over 490,000 subscribers (an 33% increase throughout 2016 & early 2017) and offers DNR news, events, and license purchasing information. In 2016, DFW emails had 1,775,667 (increased of 64%) unique opens with an average open rate of 29% (up 5% from 2015).

Social media is another marketing and communications tool utilized by DFW. The DFW has both facebook and twitter accounts, as well as a DNR-wide YouTube channel, and DNR instagram. In 2016, our facebook audience increased by 29% and our twitter following by 16%. Posts on free fishing days, a video on the wavyrayed lampmussel, and numerous black bear posts were our most popular.

The Indiana Nongame Wildlife Fund took a large hit in donations in 2016. A strategic marketing campaign to increase donations was rolled out towards the end of 2016. From facebook and twitter posts, to a week-long promotion on Instagram to a donations email. Online donations have increased significantly. The greatest success was an email send on Dec. 31, 2016 that garnered over \$6500 in donations to the nongame fund and would garner a match of over \$17,000 in State Wildlife Grant funds..

(photo from email)

A printed hunting/trapping and fishing guide is available through a contract with J.F. Griffin, information and regulations are shared in these guides annually. For the second year, a Spanish fishing guide was published on our website. Plans for 2017 include an abridged version of the hunting guide in Spanish.

A promotional graphic for the Indiana Nongame Wildlife Fund. It features a close-up of a white owl's face in the foreground, with a blurred background of yellow flowers. In the top left corner, there is a small circular profile picture of a person. Handwritten-style text on the right side asks, "When does \$5 equal \$14?". Below this, a paragraph explains the match: "When you give to the Indiana Nongame Wildlife Fund. For every \$5 donated another \$9 is awarded through federal funds". A green button with white text says "Donate now!". At the bottom, it says "Donate online OR through your state tax forms just look for Schedule IN-Donate."/>

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Private Lands Program

In Indiana, 96% of the land is privately owned. In order to meet the Division's mission of professionally managing Indiana's fish and wildlife resources balancing ecological, recreational, and economic benefits, wildlife conservation in Indiana must include a focus on restoring, maintaining, and managing wildlife populations and wildlife habitat in private ownership.

The Private Lands Program in Indiana consists of 16 employees. An additional 4 partnership biologists funded through the Natural Resources Conservation Service (NRCS), Pheasants Forever/Quail Forever (PF/QF), and DFW also assist with Private Lands Programs in Indiana. The makeup of the Private Lands Program includes: 8 District Wildlife Biologists that cover a 9 to 10 county area of the state, 2 Urban Biologists that focus their efforts on conservation in the urban landscapes of Indiana, 2 Landscape Biologists that work to coordinate and implement conservation on a larger, landscape scale throughout the state, a Landscape Conservation Initiative Liaison that facilitates landscape initiatives and manages landscape level programs throughout the state, two regional supervisors, and a Program Manager. The 4 partner Farm Bill Biologists each cover approximately ¼ of Indiana as their work focal area.

In fiscal year 2016-2017, the Urban Wildlife Program mitigated nuisance wildlife conflicts, established habitat in urban environments, conducted outreach to educate the public about the importance of conservation, and worked with planners and developers to incorporate conservation minded practices into areas being developed. The program established 82.1 acres of quality habitat in high profile, urban environments. This program also began implementation of a new initiative, CHAP (Community Hunter Access Program) to increase hunting access in urban environments for white-tailed deer.

With assistance from various members of the entire work unit, the Landscape Management Program developed multiple new initiatives while continuing existing landscape level conservation efforts in fiscal year 2016-2017. Existing landscape level efforts such as the Healthy Rivers Initiative (HRI) continued to progress. Meanwhile, three new programs to address inadequate grassland and pollinator habitats were developed. These programs included: 1) CORRIDORS (Conservation On Rivers & Roadways Intended To Develop

Opportunities For Resources & Species), 2) the Grasslands For Gamebirds & Songbirds Initiative (GGS), and 3) Indiana's participation in the Monarch Wings Across the Eastern Broadleaf Forest (MWAEBF).

CORRIDORS is a partnership program between the NRCS, DFW, the Indiana Department Of Transportation (INDOT), and PF/QF. The intent of this program is to use multiple funding sources to increase connectivity of corridors of grasslands and pollinator habitats throughout SWAP Conservation Opportunity Areas (COAs) and other strategic conservation focal regions in Indiana.



Private Lands Program [Cont.]

The Grasslands for Gamebirds and Songbirds program is still in development. It will fund the development and management of grassland and pollinator habitat needs for imperiled grassland dependent bird species. The initial 3 year goal of the initiative is to establish an additional 2,500 acres of grassland and pollinator habitat within strategic focal regions of Indiana. This program has been submitted for a Regional Conservation Partnership Program (RCPP) proposal of funding from NRCS. It is also supported by an Indiana Natural Resources Foundation funding account with an excess of 50 partnership sponsors.

The Monarch Wings Across the Eastern Broadleaf Forest (MWAEBF) is sponsored by a grant from the National Fish and Wildlife Federation to the non-profit Pollinator Partnership. This program seeks to increase monarch habitat by engaging public land managers and private land stewards through a series of monarch habitat enhancement activities with the goal of establishing 4,688, acres of monarch habitat. A network of volunteer seed collectors will be recruited and trained in each state to collect seeds from 20 monarch friendly plant species on predetermined seed collection sites throughout the state. Seed will be processed, tested for weeds and germination, and then used for seedling propagation or re-seeding efforts at project sites for monarch habitat establishment back in their state and eco-region of origin.

An access program is also being developed through the Landscape Management Program that will provide increased public access for gamebird hunting opportunities via reserved draw on private lands throughout Indiana. This program, APPLE (Access Program Providing Land Easements) incentivizes landowners to establish quality grassland habitats on their property and then open their properties to limited public hunts for gamebirds.

The contemporary Private Lands Programs (District Biologists) continued to resolve wildlife conflicts; provide technical and financial assistance to landowners interested in habitat management; and educate the public about wildlife and its importance in Indiana.

In fiscal year 2016-2017, all the Private Lands Biologists (from all three programs combined) provided technical assistance regarding wildlife habitat to 1061 landowners, implemented 441 wildlife habitat management plans impacting 7,497 acres including the development of 4,792 acres of idle nesting and brood rearing cover, 1,103 acres of invasive fescue eradication, and 767 acres of voluntary CRP mid-contract management. Biologists also addressed 2,707 nuisance wildlife complaints, including 480 deer and 477 goose complaints. As of January of 2017, Indiana had 231,958 acres enrolled in CRP. This includes 10,429 acres of the popular CP33 (Field Borders for Bobwhite Quail). To date 47,725 acres have been enrolled in one of six priority areas (Ring-Necked Pheasant, American Woodcock, Indiana Bat, Northern Bobwhite Quail, Henslow's Sparrow, Sedge Wren/Grasshopper Sparrow) included in CRP- CP38 (SAFE) in Indiana.

The 4 partnership Farm Bill Biologists focused on providing technical and financial assistance to landowners interested in wildlife habitat management through various Farm Bill Programs and in cooperation with local Pheasants Forever/Quail Forever Chapters. In fiscal year 2016-2017, the 4 Farm Bill Biologists developed 1883 acres of habitat.

Grasslands for Gamebirds and Songbirds
It's more than just "for the birds!"
Sponsorship Opportunities

\$50,000 and up Northern Bobwhite Quail Sponsor (Gold Level)	What gold gets you*: A half page promotion in hunting guide, promotional space in the Indiana online licensing system, promotional space on online reserved hunt system plus recognition in Outdoor Indiana magazine. More than 652,000 views of your message.
\$25,000 to \$49,999 Ring-necked Pheasant Sponsor (Silver Level)	What silver gets you*: Promotional space in the Indiana online licensing system, promotional space on online reserved hunt system, plus recognition in Outdoor Indiana magazine. More than 312,000 views of your message.
\$5,000 to \$24,999 Loggerhead Shrike Sponsor (Bronze Level)	What bronze gets you*: Promotional space on online reserved hunt system and recognition in Outdoor Indiana Magazine. More than 60,000 views of your message.

*Additionally gold, silver, and bronze levels will be recognized in Wild Bulletin (475,000 subscribers)

**Is there another amount you're willing to give?
Be a Prairie Chicken Level Sponsor, all contributions
will get recognition in Wild Bulletin, our
monthly e-newsletter (475,000 subscribers)**

*With your help
we could have more.*

- More wildlife habitat.
- More species diversity.
- More recreational opportunities.
- More hunting & birding opportunities.
- More funds coming to local economies.

*With your help
we can improve.*

- Improve soil health.
- Improve water quality.
- Improve human health.
- Improve cultural heritage preservation.

Wildlife Science Unit

The Wildlife Science Unit is a comprehensive, science-based resource management program comprised of taxa-specific experts that serve as the research and monitoring arm of the Wildlife Section. Major personnel actions in 2016 included filling three important positions that have statewide responsibilities: deer biologist, nongame mammalogist, and assistant deer biologist.

In August, a wild white-tailed deer removed from a bovine tuberculosis (bTB) affected cattle farm in southeast Indiana tested positive for bTB. In response, the DFW increased disease surveillance in the surrounding area and ultimately collected samples from 2,047 hunter-harvested deer, all of which tested negative for bTB. In July, Indiana experienced its second dispersing black bear in two years, this time entering the state from the south. Media events were held in central and southeast Indiana to inform the public of the bear's activities and encourage behaviors to reduce the potential for bear-human conflicts.

In August, Indiana received 3,000 northern riffleshell and 3,000 clubshell (photo) salvaged from a bridge project in Pennsylvania and placed them into Tippecanoe and Eel rivers. This was the second year contributing to recovery efforts for these endangered mussels. Other highlights include the launch of a web-based brood reporting system for wild turkeys, the second regulated trapping season for river otters, and reaching an all-time high of 300 nesting pairs of bald eagles statewide. Wildlife Science staff continued to participate in feral swine control and disease surveillance including highly pathogenic avian influenza, chronic wasting disease, white-nose syndrome, and salamander chytrid fungus. Complete information on all Wildlife Science activities is available in the 2016 annual report (<http://www.in.gov/dnr/fishwild/3347.htm>).



In addition, federal funds for five new external research projects were obligated in 2016:

- *Movement and Harvest of Local Mallards from Urban Environments of Indiana*: This 4-year project will use band return data to determine the seasonal movements and annual contribution to the statewide harvest of adult mallards that breed or juveniles that hatch in urban areas in central Indiana.
- *Efficacy of Using eDNA to Detect Kirtland's Snake*: A 2-year study to develop methods using eDNA processes to detect the Kirtland's snake, a secretive species under review for federal listing.
- *Status of the Blanding's Turtle and Spotted Turtle in Indiana*: This comprehensive study seeks to determine the distribution of two rare species of wetland turtles, the genetic variation within and among populations, and delineate ecologically-functional management units to inform conservation strategies.
- *Snake Fungal Disease Testing in Indiana*: A 2-year study to determine the presence, prevalence, and spatial & demographic occurrence of snake fungal disease, an emerging pathogen caused by the fungus *Ophidiomyces ophiodiicola*, in Indiana.

State Wildlife Action Plan

The State Wildlife Action Plan Coordinator position was created and filled in 2016. Some of the top priorities of the position are to facilitate better communication and collaboration among Hoosier conservation partners, track and report on fish and wildlife conservation actions throughout Indiana and update the action plan as new information warrants. Several partner meetings have been conducted.

There are 4 major themes that emerged from Indiana's Wildlife Action Plan.

1. Environment – Ranks threats and actions to species of greatest conservation need and their habitats. Also identifies Conservation Opportunity Areas throughout the state.
2. Conservation Community – Recognizes the need for broad-based collaborations to achieve successful Fish & Wildlife conservation.
3. Citizens – Recognizes the need for more transparency, greater citizen engagement in and increased citizen value of Fish & Wildlife conservation.
4. Funding – Recognizes the need to secure a more robust and sustainable funding source for Fish & Wildlife conservation.

Find the plan here: [Indiana's State Wildlife Action Plan](#).



Recruitment, Retention & Reactivation (R3)

The Indiana Division of Fish & Wildlife's (DFW) R3 unit is made up of the Hoosier Outdoor Heritage and Go FishIN programs. These programs along with their state, local, non-government partners conducted many events across the state in 2016. R3 events focused on hunting, angling, trapping, and shooting sports. The events ranged from single day (2-4 hrs.) to multi-day workshops and cover material tailored for sportsmen and women of all experience levels. Most events were open to the public and were free of charge to participants.

These R3 programs are designed to meet the goals and objective laid out in the Indiana Division of Fish & Wildlife R3 Plan. This plan was designed around the recommendations found within the Nation Hunting and Shooting Sports Action Plan developed by the Council to Advance Hunting and the Shooting Sports (CAHSS, 2016) and the Recommendations and Strategic Tools for Effective Angler R3 Efforts developed by the Aquatic Resources Education Association and The Recreational Boating & Fishing Foundation (AREA & RBFF, 2016). These documents both share the same model approach, named the Outdoor Recreation Model. This approach allows participants to build their knowledge and skills to become better hunters, anglers, trappers, or sport shooters. The ultimate goal is to create individuals that have the confidence and ability to participate in these activities on their own.

The Hoosier Outdoor Heritage program facilitated a total of 40 events, reaching 758 participants in 2016. These events were held in the form of 25 hunting, 13 shooting, and 2 trapping events across 20 counties. The hunting events focused on six different species: white-tailed deer, wild turkey, mourning dove, pheasant, squirrel, rabbit, and Canada geese. Shooting events ranged from family range days to our wildly successful ladies range day that hosted over 250 participants. The Indiana State Fair's Taste of the Wild (Wild Game Cookout) had 1,000 participants sample nine different wild game dishes.



Recruitment, Retention, & Reactivation (R3) [Cont.]



The DFW Go FishIN program continues to grow, and in 2016 reached 18,400 participants through Free Fishing Day (FFD) events and the Loaner Tackle Program (LTP), which is 2,000 more than in 2015. At FFD events, 2,445 people participated in casting and fishing activities. These events included 13 Family Learn to Fish workshops where the entire family gained basic angling knowledge and skills. These are held in conjunction with FFD, so parents can try fishing without a license. The LTP allows trained Go FishIN Crew Captains to borrow tackle and materials from 60 Loaner Sites across the state for local events. These volunteers got nearly 17,000 people casting or fishing and learning about Indiana fish. The

LTP played a vital role during FFD, supplying equipment to nearly half of the FFD participants. In addition to FFD events and the LTP, Go FishIN hosted 3,200 kids at the State Fair Fishing Pond (<http://www.in.gov/dnr/5495.htm>).

DFW believes in the importance of promoting next step opportunities to our event participants. With the Hoosier Outdoor Experience being moved from September to June 2017, Go FishIN ran two family fishing days on the traditional Outdoor Experience weekend. In early October, Go FishIN ran a bluegill & catfish fishing, filleting, and cooking workshop for families that attended events earlier in the year – this may be the first public event of its kind in Indiana. Other events run by DFW staff included, field days and youth trout fishing derbies.

The Go FishIN in the City program is the DFW's urban fishing program enacted in 2013. This program promotes shore fishing opportunities for Hoosiers that live in heavily populated urban areas. With the help of local partners, DFW intensively stocks catchable-size channel catfish and rainbow trout throughout the year in city park ponds that are family friendly and well maintained. Several Family Learn to Fish workshops were held at these lakes throughout the state to promote fishing and family outdoor activities close to home (<http://www.in.gov/dnr/fishwild/7508.htm>).



Fisheries Management and Research

The work of the Fisheries Research and Management unit hits on all three components of a fishery: the fish, the habitat they occupy, and the people that value them. The scope of this work reaches more broadly than just traditional sport-fish to species that are less common yet still pursued by anglers and valued by other conservation partners. Work completed in 2016 highlights DFW's ongoing commitment to fulfilling our charge to manage aquatic resources for the benefit of all of Indiana's citizens

A report completed in early 2017 marks the culmination of four years of work documenting the status of Cisco in Indiana's inland lakes. Historically Cisco were known to inhabit at least 49 glacial lakes in Northern Indiana. However, due to habitat degradation, all but eight of these populations are now classified as "probably extirpated" or "extirpated". Indiana Cisco live at the extreme southern edge of their range, and as a result serve as the canary in the coal mine for populations across the Midwest. As an obligate cold-water species, impacts from factors such as accelerated eutrophication and climate change have generally diminished the amount of Cisco habitat available in the remaining lakes. Under Indiana's recently completed State Wildlife Action Plan, the Cisco is identified as a Species of Greatest Conservation Need and the catchments of all remaining Cisco lakes have been identified as Conservation Opportunity Areas, underscoring the commitment of DFW and Indiana's conservation community to the preservation of this unique species.

The Impoundment Habitat Enhancement Plan (photo) was initiated in 2015 with the first project lake being Sullivan Lake. In 2016, a total of 135 fish habitat structures were built and placed in Sullivan Lake. Porcupine cribs, porcupine crib juniors, Georgia cubes, and black bass nesting structures were all placed out in clusters around the lake enhancing 13% of the targeted habitat enhancement zone. In 2017, Harden Lake will be the project lake. This past winter rock pile complexes were placed while the lake was drawn



down. Work will continue on Harden throughout the year and into 2018 as more rock piles will be added along with porcupine cribs, felled trees, cedar tree brush piles, and stake beds.

Anglers are an important customer group to the Division of Fish & Wildlife. To better understand their values and views on a myriad of resource issues, DFW conducts surveys of licensed anglers periodically with the goal of serving them better. The statewide Licensed Angler Survey the largest of these regular efforts and is completed roughly once every decade. DFW staff, working with Responsive Management, solicited responses from 8,400 anglers who held Indiana fishing licenses in 2016. Over a 4-month period, more than 2,800 anglers responded, answering important questions that will help guide the direction of fisheries management in Indiana in the coming years. Some key results of the survey were that 93% of respondents had fished within the past year and 70% fished every year over the past 5 years. When it comes to angler preference for species, bluegill reigns as king with 62.6% of anglers listed them among the top three species they fish for the most, while Largemouth Bass follow closely behind (50.9%). Roughly 61% had positive views of the quality of fishing Indiana while 65% gave the Fisheries Section a favorable rating.

Fish Hatcheries & Stocking

Indiana DNR's statewide hatchery program is using innovative and creative approaches to improve the effectiveness of the fish produced and stocked for Indiana public fishing programs.



During the past four years, tens of thousands of Indiana stocked Lake Michigan chinook salmon have received nose implants of coded wire tags (CWT), to help research biologist improve the understanding of their survival, origin and behavior patterns. Beginning in 2017 fish marking trailers will be located at both of Indiana's Lake Michigan hatcheries to insert tags into tens of thousands of juvenile steelhead trout. Information recovered from tagged adult steelhead will help biologist understand the age composition, movement patterns and survival rates for different stocking locations. This information will be used to fine tune and optimize the use of hatchery stocked fish.

Within the past year innovative efforts to improve the efficiency and effectiveness of Fawn River Hatchery took a creative leap forward when the entire facility was shutdown and all water supply lines and production ponds and tanks were treated to eradicate zebra mussels from the facility. A new high capacity deep water well was added so the hatchery operated on a protected (well) water supply following the eradication. It's anticipated that 15 years of stocking restrictions will be lifted in 2018 if no zebra mussels are detected at the hatchery in 2017. This creative approach will improve the effectiveness and performance of the statewide hatchery program once the constraints of stocking restrictions are removed.



Innovative fish production methods and techniques are being used to improve the performance and effective use of fish for public fishing programs. New approaches have been implemented to increase the size of many species being stocked (coho salmon, steelhead trout, largemouth bass, muskellunge, walleye and channel catfish). Improved spawning techniques for steelhead trout and mukellunge have increased early survival in hatcheries. These improved practices and more are helping fish management biologist implement more effective fish stocking programs for anglers in Indiana.

Photo 1: Inside tagging trailer

Photo 2: Tag showing data used to identify each fish

Photo 3: Size of the CWT implanted in fish

Public Access Program

The Public Access Program started in 1953 and strives to provide free access to Indiana waters for anglers and boaters. It is funded through the sale of fishing and hunting licenses and from federal aid the Wildlife & Sportfish Restoration Fund.

The program has acquired, developed and maintained 421 public access sites across Indiana and operates an additional 25 public fishing areas. Public access sites managed by the Division of Fish & Wildlife's do not require a lake-use permit.

The public access program launched five new fishing sites in 2016.

1. Lake Cicott, Cass County (pictured)
2. Bixler Lake, Noble County
3. Kruger Lake, Jefferson County
4. Eel River, near Mexcio, IN, Miami County
5. Deer Creek park on Salt Creek, Brown County

The largest project was the Lake Cicott site. This lake is thought to be southernmost glacial lake in Indiana. In 2015, the DNR acquired 20 acres along the south shore of the lake that was a former campground. Buildings and debris were removed that summer, and in 2016 the public access site began to take shape.



It includes a concrete ramp for loading and unloading boats, an accessible floating dock and parking pad that meet federal Americans with Disabilities Act standards, and a small parking lot. The remaining section of the property will be left to return to its natural state.

Three previously opened sites were improved in 2016 – Beaver Dam Lake (Kosciusko County), Brush Creek Reservoir (Jennings County), and on the East Fork White River at Medora (Jackson County).

Lake and River Enhancement (LARE) Program

In fiscal year 2016-2017, the Lake and River Enhancement (LARE) Program provided nearly \$2.5 million in 86 grants to sponsors in numerous Indiana counties. While many grants dealt with management and control of aquatic invasive vegetation, others served the dual purpose of addressing sediment and nutrient input into lakes or rivers as well as measures to improve aquatic habitat. LARE partnered with other local, county, state, and federal agencies to address these issues while leveraging funds from sources other than state tax revenue. Local citizens get involved as participants with project-sponsoring entities responsible for at least 20% of the cost in cash or in-kind support. Low-head dam removal became an important new addition to LARE-funded projects. The pictures below show a dam failure that occurred in January 2016 on the Little River in Huntington County and ultimately its removal in December 2016 through a LARE grant.

The removal allows for easier fish passage and improved safety for boaters, fishers, and paddlers who use the river. In other projects, improved aquatic habitat was enhanced through the use of incorporated geolifts, live-stake plantings, tree plantings, and the creation of J-hooks and riffle/pools in waterways. These



measures reduce sediment and nutrients from entering the water from eroding banks and improve habitat and fishing opportunities.



Photos: Removal of low-head dam work and river movement after removal.

