

The graphic features the word "INDIANA" in large, dark blue, bold, sans-serif capital letters. Below it, the words "Wetland Program Plan" are written in a smaller, blue, sans-serif font. The "W" in "Wetland" is white with a blue outline. The text is overlaid on a blue-tinted image of a wetland landscape with water ripples and a map outline of Indiana.

TABLE OF SUPPORTING MATERIALS

1.1	<i>Review of Other State Plans.....</i>	<i>1</i>
1.2	<i>Complete Wetland Program Plan Survey Results.....</i>	<i>2</i>
1.3	<i>Stakeholder Meetings / Public Comments.....</i>	<i>61</i>



Supporting Materials

1.1 Review of Other State Plans

Several states and tribes have already completed Wetland Program Plans. IDEM and its partners reviewed all available plans at the time of project initiation and selected a few plans that were based upon a similar environmental or regulatory landscape as Indiana. These plans and their approaches were evaluated more intensely and interviews were conducted with agency staff in those states. A summary of other state's WPP highlights, approaches, and other advancements are presented below.

Wisconsin

Voluntary Restoration Outreach; Utilizes "two-pronged" approach to reach landowners

- Direct outreach to key landowners
 - Handbook development and distribution
 - Incorporate wetland info into existing outreach
 - Connect wetland landowners to development community
- Direct outreach to nat. resource managers
 - Facilitate programs to reach natural resource managers
 - Improve distribution of wetland info to managers
 - Develop key material list to distribute to managers

Kentucky

WPP in progress

- Have dedicated staff person to coordinate and implement plan
- Kentucky DFWR and Northern Kentucky University run an in-lieu fee program to restore wetlands for 401/404 mitigation.
- Developing a rapid wetland assessment method in collaboration with Eastern Kentucky University. Also developing vegetation, amphibian, macroinvertebrate, and avian indices of biotic integrity.
- Supplied funding to Eastern Kentucky University (EKU) to develop a model for determining wetland location and type using remote sensing and GIS.

North Carolina

Monitoring and Assessment

- NC monitoring rapid assessment, WQ, bio surveys (veg, macros, amphibians, etc.), GIS landuse
- Using data to show correlation and non-correlations and refine what data's being collected
- Coastal Explorers education tool – interactive, kid-friendly, GIS data

Michigan

Wetland Function - Landscape Level Wetland Functional Assessment (LLWFA)

- Developed under Wetland Program Development Grant in 2008; covers part of NE IN
- Based on USFWS Northeast Region methodology
- Refined and updated to reflect the regional differences in wetland ecosystems
- Utilizes NWI platform base of Cowardin system
- Additional characteristics that influence wetland functions to be added (Based on Hydrogeomorphic classification system – HGM)
 - Better characterization of wetlands and waterbodies
 - Predicting wetland functions at landscape level
 - Identifying potential wetland restoration/protection sites

Minnesota

Coordination and Training

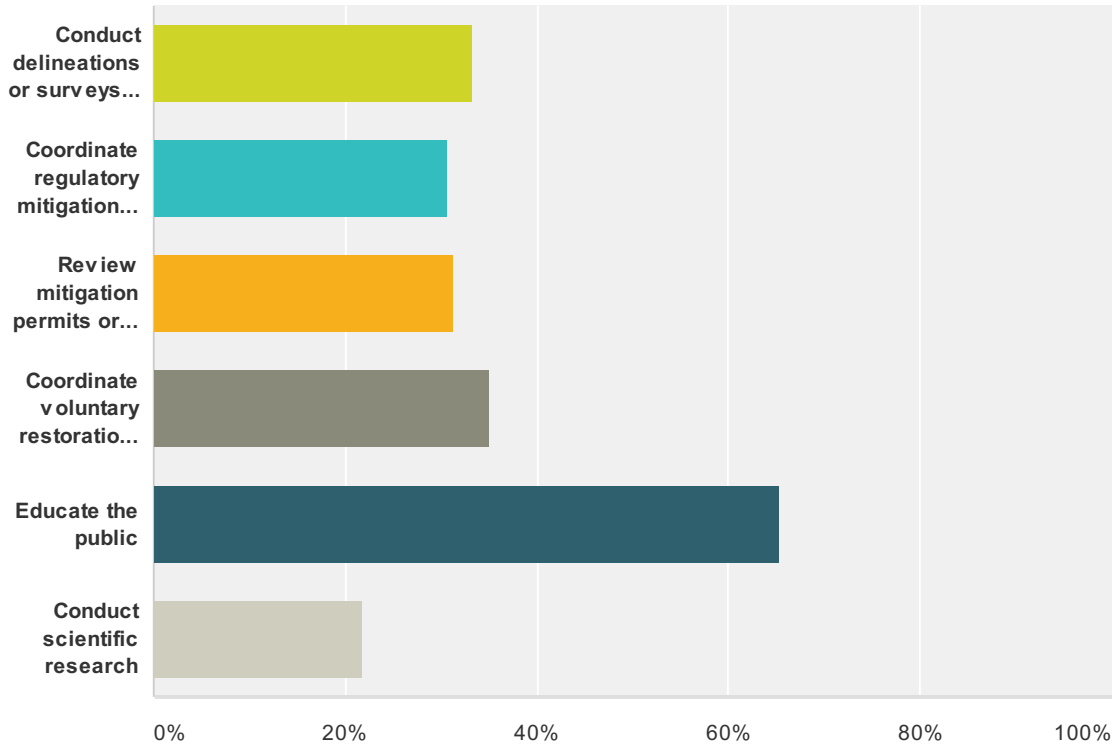
- Minnesota has an Interagency Wetland Group (IWG) which meets monthly to address wetlands. The IWG has a rotating chair, vice-chair, and secretary, and maintains large distribution list of all partners involved in wetland regulation. IWG brings continual attention to existing incentive programs/ recognition.
- Wetland management responsibilities are federal, state, and locally administered so there are a lot of people involved.
- State provides wetland delineation training, certification program, 2-3 day annual training for all permit administrators for updates on regulations, methodologies, monitoring, functions.
- Currently working on NWI update, adding functional descriptors.

1.2 Complete Wetland Program Plan Survey Results (as submitted)

A comprehensive survey was conducted early in the plan development process to garner information about the public's knowledge and opinions regarding wetlands. The survey also helped identify potential stakeholder data sources for future wetland related initiatives. The following pages contain the survey questions and responses including some graphical representation of the answers. Stakeholder responses are included as submitted.

Q4 What task(s) best describes your role/relationship to wetlands? (Select all that apply)

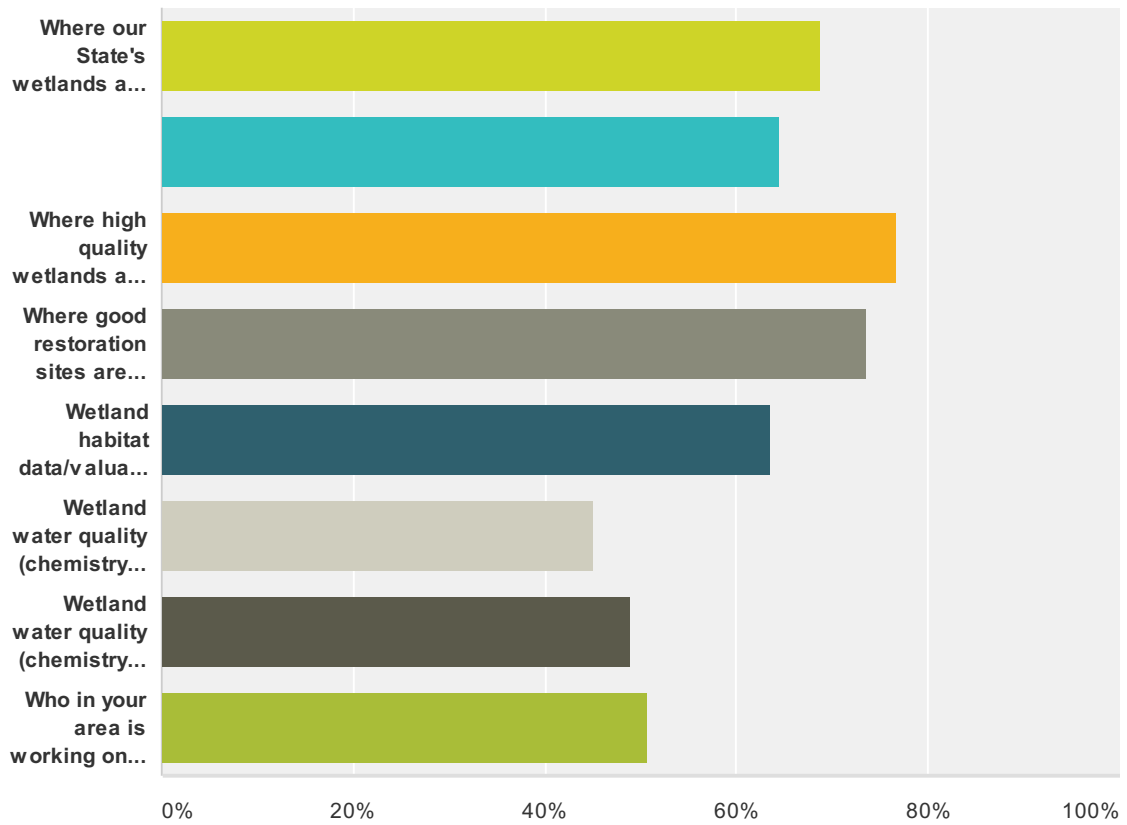
Answered: 202 Skipped: 34



Answer Choices	Responses
Conduct delineations or surveys on a project basis	33.17% 67
Coordinate regulatory mitigation projects	30.69% 62
Review mitigation permits or proposed projects	31.19% 63
Coordinate voluntary restoration projects	35.15% 71
Educate the public	65.35% 132
Conduct scientific research	21.78% 44
Total Respondents: 202	

Q5 What type of information about wetlands would help you in your efforts/job? (select all that apply)

Answered: 211 Skipped: 25



Answer Choices	Responses
Where our State's wetlands are located	68.72% 145
What type of wetlands and how much of each type remain	64.45% 136
Where high quality wetlands are located	76.78% 162
Where good restoration sites are located	73.46% 155
Wetland habitat data/valuation assessments for specific locations	63.51% 134
Wetland water quality (chemistry) data for specific locations	45.02% 95
Wetland water quality (chemistry) data to establish benchmarks or reference conditions	48.82% 103
Who in your area is working on wetlands	50.71% 107
Total Respondents: 211	

Q5. What type of information about wetlands would help you in your efforts/job? (other)

Specific regulations for construction near or within a wetland including using a wetland for detention.

The function and benefit (natural and anthro-centric) of the different types of wetlands.

Groundwater watersheds for a very few, significant spring fed wetlands

Wetland management best practices.

All of the information listed above could be helpful.

Various funding sources for projects - pollution control etc.

Funding sources available to land trusts for conservation, mitigation and education initiatives.

The more State specific data and readily available the better.

Land Trusts River Basin Commissions Stormwater entities NGOs Parks (National, state, local)

I think that the water quality condition must be comprehensive including the biological, chemical, and physical condition of remaining wetland types. There are multiple indicators already developed that could be used based on fish, amphibians, and flora.

Regulatory changes

I could have check many as being helpful to my job but I already have most of the this information and only checked items I think I am deficient on.

effectiveness of wetlands to mitigate flooding

My concern is that 'restored' wetlands are not replacing the same functions as 'natural' wetlands, with respect to hydrology or water quality. Intense hydrologic investigations comparing the two have interest to me.

Soils data (geological materials, characteristics), soil moisture data, soil thermal data, remotely sensed imagery, time-series (change over time) data

We at some point need to work on a possible strategy for incorporating wetlands into the TMDL process.

HOW TO PROTECT?

Who is qualified to determine wetland designation

certified delineators, conservation planners, and engineers located throughout Indiana;

We would find this information invaluable for the Little River Watershed. This information in the Upper Wabash would be helpful.

for the most part, I know where to get the information I need

Species data for wetlands, or wetland suitability for species of conservation concern (20 acre minimum emergent marsh for king rail breeding success)

Clear Lake Township Land Conservancy. Inc Town of Clear Lake

None of the offered would really help me in my work

Where mitigation can take place within my watershed

Functional value

To know scientific needs of other stakeholders

We would appreciate being kept informed about any government agency working on our wetlands, we can help them, but at the very least would appreciate being kept abreast.

Standardized mitigation success criteria based on number of stems at the end of a specific monitoring period and not based on the survival of what is installed. Allow for a broader range of native species including early successional species (as those typically found in the wetlands that are impacted). More education for public on isolated wetlands, more available information on the importance of State Isolated Wetlands as it relates to headwater streams, habitat for amphibians, etc. Wading birds, etc, attenuation of storm water, carbon sink, chemical sink, etc.

Q6. When you think about outstanding wetland resources in your area, what specific places comes to mind?

lake and its edges riparian settings swamps drained farmland

oxbow marsh at Oxbow County Park, Goshen Pipewort Bog Nature Preserve, Bristol mouth of Turkey Creek on Elkhart River, Goshen

forested floodplains along larger creeks/ivers, isolated pockets of mature forest

Eagle Marsh, Little River Wetlands Project

Area is relative. In NE IN I think of Eagle Marsh, Camp Scott, Limberlost and Loblolly and the Fawn/Pigeon River Fens. I also enjoy the Kankakee.

Area along Christiana Creek in Elkhart County

Flatrock Fen in Decatur County Mounds Fen in Madison County Browning Marsh in Boone County The Ice Block Ponds of Morgan County The Sand Pond in Parke County Every remaining floodplain forest

Nature Preserves in NE IN Private holdings by LRWP and others

Patoka River NWR, Lost Hill Wetland Conservation Area, Twin Swamps Nature Preserve, Cypress Slough

Remnant dune and swale wetlands in NW IN since that is where I've spent most of my time working on NRD restoration projects.

Sycamore Land Trust Beanblossom Bottoms

The backwater of Eagle Creek Reservoir. The Celery Bog in West Lafayette.

wetlands as they relate to the Lake Maxinkuckee watershed and the Tippecanoe River in Fulton County

Goose Pond

Muscatatuck wildlife area

Kentucky Lake, Barkley Lake, Murphy's Pond, Clarks River

Laketon Bog

Shawnee Karst Preserve

Aqua Gardens / Shadyside Park

Salmonid Waters, Bogs, Fens, Dune/Swale Wetlands, Old Growth Forest Wetlands, Undeveloped Natural Freshwater Lakes

Flanking Eagle Creek

Muscatatuck River corridor

Parts of the Mud Creek watershed located in NE Marion County and SE Hamilton County

Pinkook Bog, Galien

MerryLea Environmental Center

Exposure concerns related to contamination (runoff) - protecting migratory or rare animals, sensitive or rare plants

Not many - it seems that most ephemeral and wooded are completely overlooked and unless someone notices and calls attention to an agency they are lost

Ritchie Woods, Holiday Park, Eagle Creek Park, Southwestway Park

Filtration systems - flood control - Bean Blossom Bottoms

National Wetland Inventory Map Local University Extension Research (bulletins/papers etc...) Draw upon national resources within our organization.

Indiana Dunes, Dune and Swale, Great Marsh, Kankakee, Cedar Lake, Valparaiso area Chain of Lakes, LaPorte Lakes

Pisgah Marsh Ball Wetlands

Natural areas that have been identified and are being preserved or designated for protection

Pinhook Bog Cowles Bog Pannes at West Beach near Ogden Dunes

The wetlands along the Pigeon River.

Little River Wetlands Project properties; Dunes Restoration area, Numerous state properties

Cowles Bog, Great Marsh, Little Calumet River, Ambler Flatwoods, Dune and Swale Preserves in northern Lake County, pannes in IDNL's Miller/Gary area

Carmel Central Park

everywhere, Steuben county literally have them everywhere.

Wabash River floodplain; Grand Marsh; Great Marsh; Tippecanoe River; Ohio River flooded river mouths; many natural lakes in Northern Indiana (list can be provided); Miller Woods wetlands in INDU; Pigeon River headwaters; and isolated wetlands in Muscatatuck NWR; Patoka River bottoms; and Muscatatuck River floodplain at junction with White River.

Ritchey Woods

forested wetlands adjacent to Sugar Creek and Blue river

The relic bog and fen wetlands, and Ohio River bottom slough wetlands.

Nothing specific. There are several privately-owned wetlands that I know of that aren't necessarily on any map.

Fox Island Merry Lea (near Goshen)

kankakee river

there are several fens at Prophetstown state park that have several state ETR species

Cowles Bog

Large, high-quality wetlands with diverse fauna and flora. Especially those that are critical for threatened and endangered species.

Tolleston strand plain; interdunal wetlands, fens, bog

fen outside of greensboro, seep in memorial park, other private unprotected fens

Lime Lake Nature Preserve Nasby Fen Sawmill Fen

Celery Bog Nature Preserve, West Lafayette

Goose Pond

Wabashiki Fish and Wildlife Area

Interesting question. When the Wetland Science Advisory Group was meeting, many of the "non-field" advisers indicated the only "real" wetlands were Class 3, most of which were protected or Nature Preserves. With regard to the most common wetlands, which are degraded, one Director of a DNR Division flatly stated "we don't care about those". That view was echoed by several of the academics who clearly didn't believe many of the low quality wetlands were actually wetland. I offer this for context, when many think of wetlands they think of nature preserves and not the degraded areas that make up the majority of wetlands. When I think about outstanding wetland resources I think about large, diverse (cover-type) contiguous blocks such as Eagle Marsh, Fox Island, Openings. Eagle Marsh is very low quality botanically but size and diversity provide the public, wildlife and water quality benefit...

any riparian area along the Elkhart River, Cobus Creek County Park, Elkhart Conservation Club

Dune and swale, fen, bog, large wetland/upland complexes.

Richey Woods, fen at Flat Rock YMCA camp

Indianapolis, East side by I 70

NRCS, GIS library

Bean Blossom Bottoms

pisgah marsh, mud lake bog

We have an area (former peat bog) that is excellent wetland, plants, soils, habitat, and is big enough to make a difference.

My area is Statewide. The treatment plant is at Poneto

Dune/Swale: Ivanhoe Clark and Pine Preserve Miller Woods/National Lakeshore

fens, restored floodplains and restored prairie habitats, pin oak flatwoods

Cool Creek Park, Westfield. West Park, Carmel

Marshes around lakes and rivers

Areas north of- and including the Kankakee River; the area dubbed the historic Everglades of Indiana.

Kankakee Goose Pond Limberlost

A private property in Jeffersonville, Indiana owned by Noah's ark, a foster children's village, has a 13-20 acre wetland on its property. It has a boardwalk through portions of it that volunteers built. I have conducted nature walks there with school groups before.

Wet Prairies, Swamps

Patoka River National Wildlife Refuge, Twin Swamps Nature Preserve, and Bean Blossom Bottoms.

Goose Pond Fish and Wildlife Area Muscatatuck River corridor

natural lakes area in NE IN; southern IN swamps; all streams and rivers and their riparian zones.

Goose Pond (Greene County),

Indiana Dunes National Lakeshore and State Park; boreal flatwoods in northern LaPorte County; wetlands associated with natural lakes and rivers

Currently it is difficult to find everything in one location but the best place that we utilize is through IDEM wetlands and utilize federal resources as well.

Hovey Lake, Eagle Slu, Patoka River

NRCS, GIS Coordinator in County, Friends of the St. Joe organization

Bean Blossom Bottoms managed by sycamore land trust Moffat Wetland Hoosier National Forest / Orange County Many of the wetlands/prairies in Lake County Mounds State Park fen

Menominee Wetlands

IDNR, US Army Corp, Fish & Wildlife Areas, N. Indiana Lakes

Wabash River Corridor and Wildcat Creek areas

floodplains and wooded riparian areas

Cowles Bog

Celery Bog, Indiana Dunes, Ambler Flatwoods, Marion College EcoLab wetlands, some privately owned existing wetland areas

Muscatatuk NWR John C. Williams state park Wetland area in Clarksville along Ohio River

Holliday Park - White River Ritchey Woods

Prairie Creek Reservoir...has some great fens

Lake Lemon Reservoir and subsequent wetlands

ACRES Land Trust, Little Rivers Wetland Project/Eagle Marsh and Heartland Restoration/Earth Source.

Lower Wabash River area/Southwest Indiana Northeast Indiana

contiguous, located in historical wetland sites

SWCD Conservation organizations

Wildlife habitat, clean water, and long-term management
flat wooded areas

Eagle Marsh

floodways and backwaters of the Wabash, White, and Patoka

NPS Lake Michigan Coastal Program staff

Pigeon River wetlands, Elkhart Bog, NE Indiana Lakes region, ... ,

Northwest corner of Indiana and the Michigan state line

I mostly think of nature preserves and land trust areas.

Areas in Northwest Indiana in and around the Dunes and National Lake Shore

fens and bogs

Primarily designated areas such as federal or state or Nature Conservancy preserves.

Goose Pond, strip mine lake areas, Kelley Bayou

In Allen County: Cedar Creek watershed wetlands, the Little River Valley/Fox Island.

Goose Pond, WRP sites, Eagle Marsh

Marion Co. SWCD, NRCS

Eagle Marsh

The areas around our lakes and rivers

Parts of Muscatatuck River bottoms.

Big Blue River floodplain wetlands

Pegion River

dune and swale in NW Indiana and Kankakee marsh remnants near the Kankakee river

Along our streams and rivers and shallow water areas of many of lakes. Of course, I think we have also built some great mitigation wetlands over

most are degraded but good ones include: Mounds State Park and adjacent upriver floodplain Cabin Creek Bog, Randolph County Henry County east of Prairie Creek Reservoir at CR S700E and E500S

Goose Pond, the potential of the Kankakee area, bogs/fens/etc of the dunes region

We have little wetlands associated with the Brandywine River and a little public park in Hancock County, but no real large public areas come to mind. Muscatatuck NWR, wetlands at Summit Lake State Park and Wilbur Wright FWA are some places where there are wetlands sort of close by.

bogs, fens, wet prairies

1100 W 600 N Tipton County

USDA, IDNR, Corp of Engineers

Pigeon River Fish and Wildlife Area, Eagle Marsh, riparian wetlands (lakes and streams), pothole wetlands in northeastern Indiana

National Lakeshore and Dunes State Park

IDEM WPP, Stakeholder Survey 2/12/14

Goose Pond in Sullivan County and Muscatatuck River Bottoms in Jackson, Scott, Washington Counties

Fen complexes along White River between Muncie and Anderson and in the Big Blue River/Buck Creek Watershed in Northern Henry County

LOW AREAS

Indiana Dunes

Laketon Bog

Loop Island Wetlands in New Albany, at the mouth of Silver Creek on the Ohio River

we work around northern public freshwater lakes; we strive for minimal impact.

Eagle Creek Kankakee

County Water & Soil Conservation District

Eagle Creek Park (Indianapolis, IN, outstanding potential but not yet achieved)

Dune & Swale, Riverine wetlands

Tippecanoe River

The Elkhart Bog

Sugar Ridge FWA/Patoka River National Wildlife Refuge/Glendale FWA/Buffulo Flats WCA/ Patoka Lake Reservoir/Goose Pond FWA

Wetland Banks

Clear Lake Watershed's wetlands

Salt Creek, Samuelson Fen

various nature preserves

IDNR EPA

Pinhook bog, Potato Creek State Park Swamp Rose nature Preserve, County Parks

Flatwoods wetlands

The swales at Clark and Pine Nature Preserve.

National Lakeshore

Loon Lake, Marsh Lake, Nature Conservancy Area between 100N and 200N, Acres Woodland Bog and several other Acres areas, Trine Recreational Area, Several areas adjacent to Snow Lake, Jimmerson Lake, Hamilton Lake, Clear Lake and the Pigeon Lake Chain

Redtail Conservancy property

IDEM, NRCS, ACOE

Indiana Dunes National Lakeshore, Indiana Dunes State Park, various dedicated Nature Preserves

diversified habitat, biological communities

Marian EcoLab

Cowles Bog, Pinhook Bog and the Great Marsh in the Indiana Dunes National Lakeshore.

Dunes Nature Preserve, Hoosier Prairie Nature Preserve, Pine Station Nature Preserve, Springfield Fen Nature Preserve.

Wilbur Wright State Forest, Limberlost

A variety of IDNR and other nature preserves

The Maxinkuckee Wetland (we call it the Kline Wetland here as it sits on Kline Ditch) and the Wilson (which sits on Academy land.

Great Marsh, Cowles Bog, Springfield Fen

None really. There are some here and there in the DNR preserves and a few mitigation sites, but although there are many wetlands, not a whole lot of "outstanding".

I don't know of any "outstanding" wetland resources in my area. A few come to mind as highly functional in terms of bird habitat: "The Burn" in NE Montgomery County; Goose Pond; Jasper-Pulaski

the restored areas of the Grand Kankakee Marsh

eagle marsh, pierceton wetland, duke energy

Certain easements in Wetland Reserve Program

dune/swale fen

Salamonie Reservoir

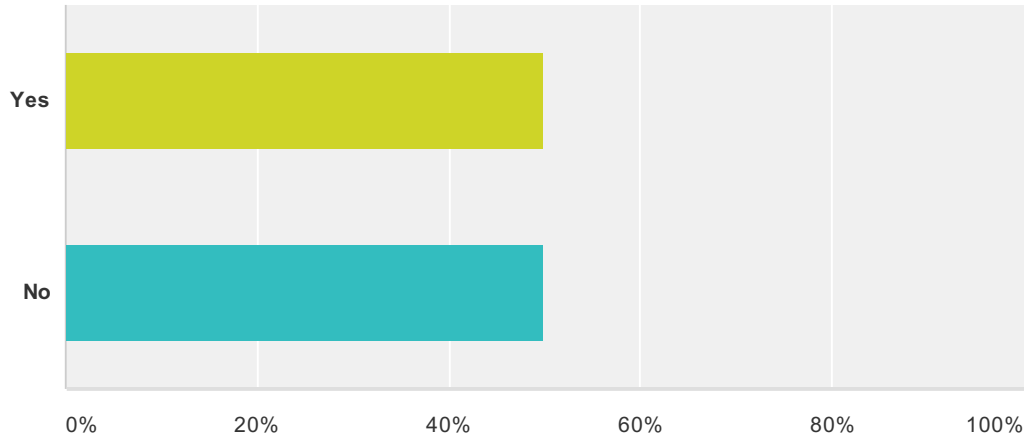
Certain parks and areas near trails.

near stream wetlands

Lake Maxinkuckee Environmental Council Soil & Water Conservation District

Q7 Does your organization seek out high quality wetlands for conservation?

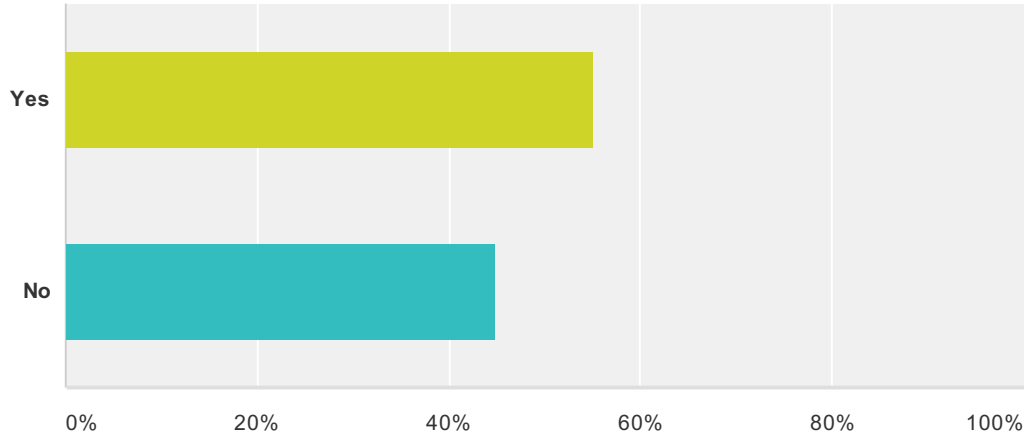
Answered: 210 Skipped: 26



Answer Choices	Responses
Yes	50% 105
No	50% 105
Total	210

Q8 Does your organization seek out historic wetlands for restoration (i.e. areas that were wetlands prior to development or agriculture)?

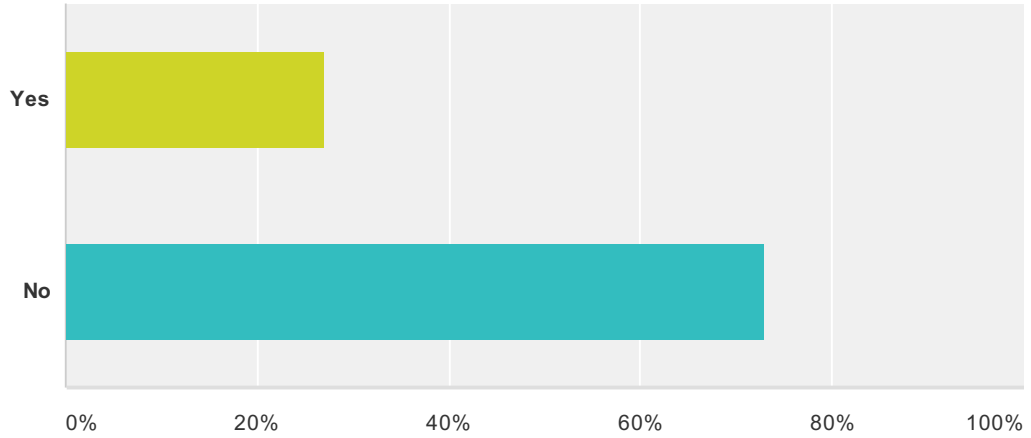
Answered: 212 Skipped: 24



Answer Choices	Responses
Yes	55.19% 117
No	44.81% 95
Total	212

Q9 Do you have a map of priority wetland conservation areas (either one you have for internal use or one you may have received from another organization)?

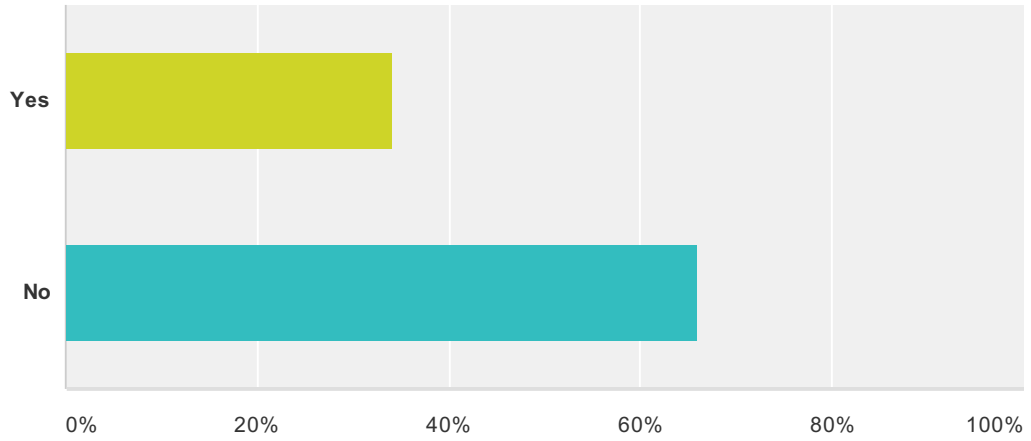
Answered: 211 Skipped: 25



Answer Choices	Responses
Yes	27.01% 57
No	72.99% 154
Total	211

Q10 Do you map tile drains as part of your work?

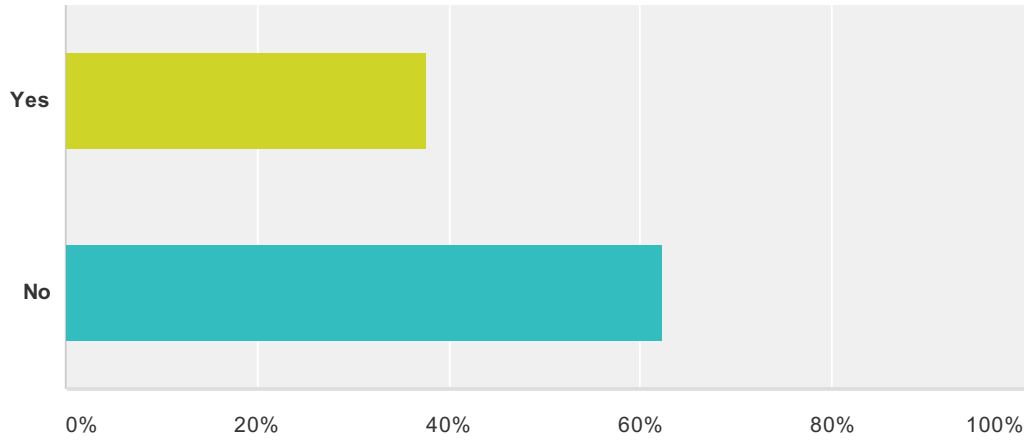
Answered: 209 Skipped: 27



Answer Choices	Responses	
Yes	33.97%	71
No	66.03%	138
Total		209

Q11 Do you map poorly drained areas as part of your work?

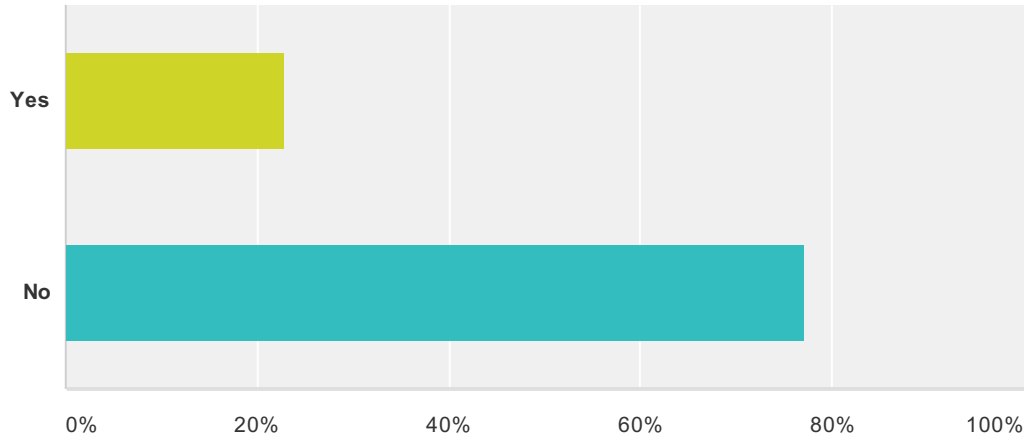
Answered: 207 Skipped: 29



Answer Choices	Responses	
Yes	37.68%	78
No	62.32%	129
Total		207

Q12 Do you map ground water seeps as part of your work?

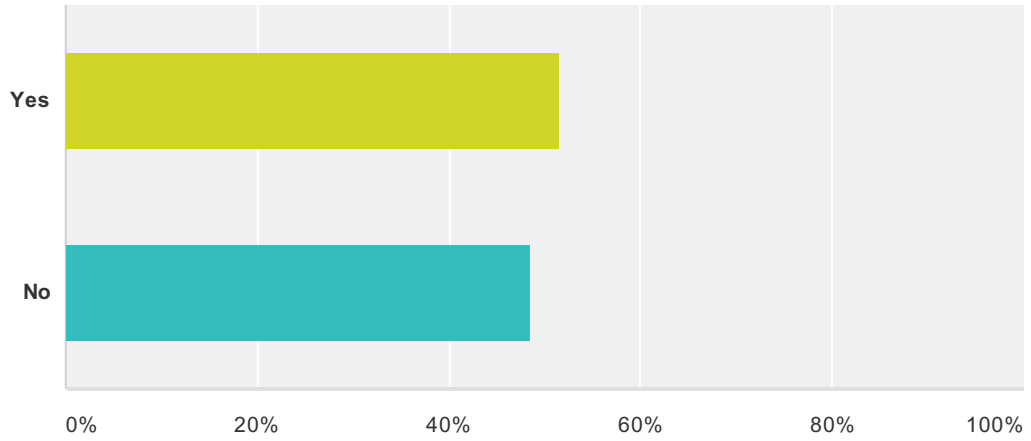
Answered: 206 Skipped: 30



Answer Choices	Responses
Yes	22.82% 47
No	77.18% 159
Total	206

Q13 Do you map wetlands as part of your work?

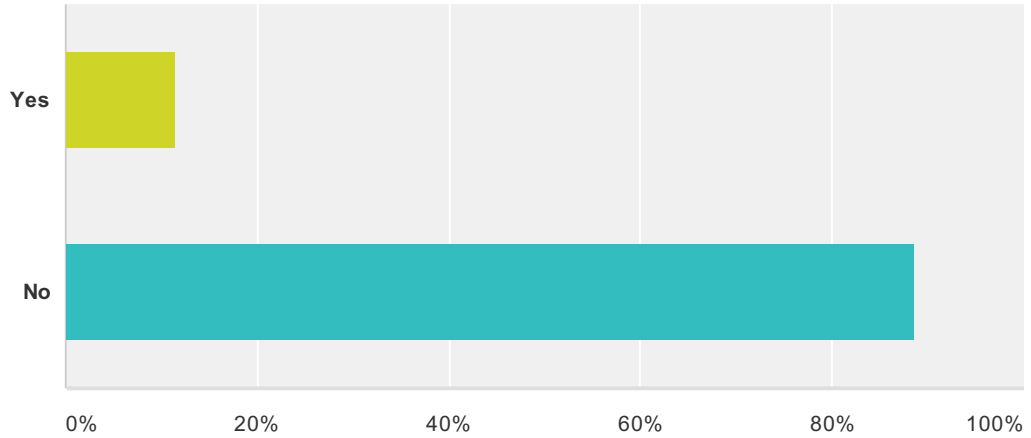
Answered: 208 Skipped: 28



Answer Choices	Responses	
Yes	51.44%	107
No	48.56%	101
Total		208

Q14 Does your local (municipal or county) government, or any other local governmental agency you may work with in Indiana, regulate wetlands (above and beyond State/Federal requirements)?

Answered: 192 Skipped: 44



Answer Choices	Responses
Yes	11.46% 22
No	88.54% 170
Total	192

Q15. Does your local (municipal or county) government, or any other local governmental agency you may work with in Indiana, regulate wetlands (above and beyond State/Federal requirements)?

Elkhart City Planning & Zoning Dept. through current zoning ordinance, which has a wetland protection section

Natural Resources Conservation Service (NRCS)

Allen County Surveyor's Office

With regard to the above there is a bill HB1143 that will make such regulation illegal

Porter County I believe has some overlay districts that include wetlands.

Storm Water Management, Muncie IN

I believe Lake County might.

Porter County

Lake County Parks

DNR and IDEM

Lake Lemon Conservancy District

NO - BUT tiles are NOT mapped in the Upper Maumee Watershed - Save Maumee will be assisting with this for our canoe trip 2014, which you are definitely invited to! <http://savemaumee.org>

county government regulates ditches/legal drains

I believe Marion County or the City of Indianapolis may regulate wetlands to some degree, but I am not familiar with their program.

Porter County Plan Commission

New Albany City Plan Commission and Board of Zoning Appeals

City of Valparaiso, City of Portage

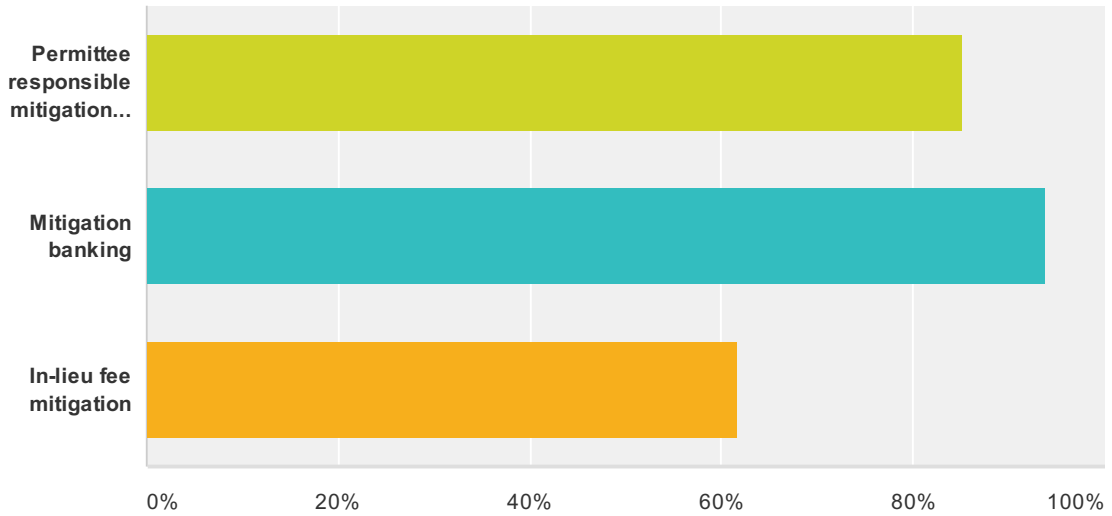
Steuben County Drainage Board

SWCD inspects and regulates wetland construction for erosion control

The KRBC works with 8 county drainage boards in coordinating with regulatory agencies

Q16 Are you familiar with the following wetland mitigation programs and alternatives? (select all that apply)

Answered: 162 Skipped: 74



Answer Choices	Responses	
Permittee responsible mitigation (creation/restoration/preservation)	85.19%	138
Mitigation banking	93.83%	152
In-lieu fee mitigation	61.73%	100
Total Respondents: 162		

Q17. Please list any pros or cons that come to mind about the above mitigation alternatives?

A. Permittee Responsible Mitigation

Pros	Cons
Responsibility of WQC conditions falls directly upon applicant	is problematic...time, keeps a project open for years. Very difficult to achieve botanical parameters
mitigation in place is best	are not typically being monitored or managed long term for permanent protection.
has created restoration and preservation opportunities for our organization	Not enough oversight
often helps to replace wetland function in areas where wetlands are impacted or lacking.	Lack of reporting by developers (they take a "catch me if you can" attitude).
allow for localized and specific approach	Quality of work varies along with monitoring and maintenance. There is no real consistency with construction methodology.
mitigation in close proximity to impact	How mitigated wetlands are used in the long term by property owners.
Places responsibility only on person/s who intending to grade or change wetland	Options that allow for off-site mitigation that reduce the natural conditions of land in the mitigated area.
can include replacement of habitat, lack of wetland area loss and increased botanical diversity.	Need a simple way to put those needing to mitigate and those with land they could offer together.
is favorable because if low quality wetland is being disturbed, the creation or restoration of higher quality wetland can take place within the watershed	Seems that violaters often have carte-blanc to destroy wetlands knowing that they have years to mitigate.
	quality wetland creation and long term maintenance and management are a concern
	sometimes permittee based mitigation doesn't seem to hit regional/landscape scale priorities.
	One mitigation opportunity we had due to a highway project never panned out. It seems that these options are heavily bureaucratic and take a long time.
	is harder to track in the long run (logistic issues)
	availability of suitable land for mitigation projects (i.e., willing sellers) and what that can ultimately cost taxpayers because of the way the current process goes.
	hard to obtain/ create successful sites, cost to taxpayers
	difficulty in finding a willing seller
	monitoring maintenance costs
	several small sites instead of one large site that you might get with a bank
	often conducted by unqualified persons and is generally unsuccessful and low quality. It often results in small, isolated projects that provide fewer functions than a larger consolidated mitigation site could provide.
	can be a long costly process and can have issues with accruing property for site
	doesn't always seem to be of equal quality Although there is significant failure, failure can be correct. There is a lack of enforcement and follow-up on mitigation sites because of a lack of resources and will by the state government and public.
	get destroyed easily by mowing
	generally has a lower success rate
	require monitoring for 5 years (or 10 for woodlands) and if they meet

	criteria at that time, they don't have to be monitored anymore - meaning many are then "abandoned" and can turn into cattail, reed canary grass, and phragmites instead of continuing as sedge meadows, forested wetlands, or whatever they were originally designed to be
	Often with poor attitude & funding from permittee
	often have enormous pressure from invasive plants due to large amount of edge compared to interior habitat.
	can often lead to "shoe-horning" of wetlands into existing right of way or sub-optimal restoration sites
	is a complete failure based on what I've seen. Plantings may start out ok, but after initial establishment and management, quickly decline into invasive species dominated mires
	landowner reluctance to convert to wetland
	may be difficult to track, maintain and protect in perpetuity. In addition, this type of mitigation may or may not replace functions lost at the impacted wetland. Mitigation is focused on the least common denominator of cover-type, not functional replacement. Often, small mitigation sites are placed in areas with high development pressure, high disturbance and low water quality. Often upland surroundings (available habitat) are not considered in relation to the wetland area.
	they often fail to become quality wetlands
	Understaffing makes it difficult to track mitigations and many mitigations are of poor quality
	historic failed mitigation efforts
	created wetlands generally do not replace all of the functions of destroyed wetlands, even when the mitigation ratios are high.
	often creates blocking small areas of mitigation with not much value to all wildlife
	the quality varies from permittee to permittee
	Responsibility falls on permittee and sub-par projects completed, lag time between impact and restoration
	long term viability of restored wetland
	Mitigation sites are often outside the watershed where the original wetlands was impacted.
	Construction of mitigation sites are not successful
	often small fragmented sites
	can be negative if the action of mitigation is taking place outside of the HUC 10 watershed
	There is no maintenance after mitigation.
	often results in small projects that fail in the long run
	Identification of willing landowners for mitigation development.
	Currently the only available option in most cases

B. Mitigation Banks:

Pros	Cons
provide defined cost and certainty for the permittee	Banking options are limited.
Permittee can simply pay for mitigation and maintenance responsibilities and walk away leaving the mitigation in the hands of experienced professionals.	program confines wetlands to certain areas instead of being spread across the region.
No net loss of wetlands	Bank development is lengthy,
ease of use for permittee	Too much consolidation

expediting permit schedules.	placement may not be very strategic
Mitigation banking could be paired well with a county parks system as well as provide a more organized approach to development.	The constructed wetlands tend to be of low quality and shaped unnaturally. In my experience, the majority of these sites that I have observed are riddled with invasives.
best option of the three because success rates are much higher and the financial burden is on the developer	Options that allow for off-site mitigation that reduce the natural conditions of land in the mitigated area.
consolidates wetland functions	Difficult to replace forested wetlands and unique/rare wetlands
mitigation is done correctly and it gets completed	Local land trusts seem to be reluctant to engage in Mitigation Banking due to perceived bureaucratic burden.
potentially reduced mitigation ratios	Lack of Mitigation Banks in watersheds of the scale watershed planning is targeting.
are less risky and often cheaper/quicker alternatives	Is there enough oversight on mitigation banking
has the ability to create/restore large acreage wetlands	I am concerned about the loss of numerous small upstream wetlands and mitigation with a single large downstream wetland
provides a much-needed contiguous habitat area opportunity while allowing land development to occur without restrictive hardships	capital intensive and risky for bankers, consequently, limited use and availability
allows for larger, contiguous blocks of restoration/creation/preservation.	Some mitigation bank land purchased is further away from the site and immediate water quality issues at the site area may not be met.
seems to be pro-active	amount of time and level of difficult required to create a bank
more opportunity to get successful restoration sites, easier to track, stronger partnerships, less burdensome financially to individual permittees	I believe it is a money-making effort that has high-quality wetlands as a secondary goal. Further, I think it makes it easier to permit wetland impacts for developers and makes it too easy for regulators to approve. In effect, it's taking the easy way out.
can result in larger and more functional wetlands and they are more convenient options for the entity that has to mitigate	allows destruction in another part of the watershed and sometimes the mitigation site is not of the same quality, long term care is substandard
require more stewardship, at least until the credit are fully sold	the current demand for mitigation is not enough to entice bankers to the state.
provide more successful, combined mitigation than permittee responsible. Not having either banks or in-lieu fee within a given service area is detrimental to the options available to the permittee.	Sometimes not the best record keeping with mitigation banks (how many credits have been used/are remaining)
can be situated in areas of focused conservation and result in increased biodiversity.	are the banks as high of quality as the original wetland that was destroyed
typically are decent quality wetlands,	good idea but too expensive
economies of scale; general benefits of larger pieces of habitat for most wildlife;	may occur in watersheds far away from where the disturbance that had to be mitigated for is located.
are generally more preferable, as detailed in the USEPA & USACE federal mitigation rule. They typically involve larger, more ecologically valuable parcels and more rigorous scientific and technical analysis.	may not restore wetland functions in the watershed where they were destroyed, may not restore the biological functions at the landscape level, especially as it relates to meeting needs of low mobility wildlife that need access to wetlands either seasonally or a portion of their life.
allows for creation of larger wetland areas with functions and values attributed to larger aquatic systems.	Some folk will say they can impact wetlands and compensate with banking or in lieu fee mitigation, so no harm done. I disagree, since the function of that affected wetland is gone or severely damaged after impact.

typically allow larger, more ecologically significant restoration	- don't know how much they are maintained after that, they may turn to junk too
simplify the process and can speed up permitting	doesn't always apply to the watershed where the impact/loss of function occurred
creates large areas for wildlife use	Regulatory environment not conducive.
can be acceptable if the bank is properly cared for	limited number of banks result in coverage of a small number of watershed areas.
gets you more habitat area in a given restoration and can be done by conservation-minded organizations who care about whether the restoration succeeds	are limited in their value to the overall ecosystem health unless they are located within the same geographic area and restore the same wetland functions and values as the original wetland.
Restoration takes place before impact, no lag time. Less chance of failure or sub-par project. Larger mitigation site usually more useful to species.	may not allow for the functions and values of the impacted wetland to be replaced within the local ecosystem of the development, but can result in concentration of functions at the bank and depletion of ecosystem functions within a high development area.
allow for development of larger, more viable wetland complexes ... better habitat.	rarely creates a wetland equal in quality to the lost area
is a great way to connect wetland restoration needs with organizations or agencies who are in need of doing mitigation because of their construction projects.	they require more planning and longer implementation timeframes than permittee responsible mitigation.
	they concentrate the wetland habitat in one location, which does not replace the function of the site that was impacted at that location
	Transferring the benefits of wetlands from the impact site to a different location
	at a larger drainage scale - local wetlands may be lost to a larger project
	not sure that in-lieu fees and banking do enough to restore wetlands areas in the state.
	May not be close to impact site or benefit impacted species adequately
	long term viability of restored wetland
	provide an "easy out" for destroying wetlands in high quality areas, knowing that there is already an alternative available.
	not enough banks established which should be the preferred alternative when offsite mitigation is necessary
	can be negative if the action of mitigation is taking place outside of the HUC 10 watershed
	have a hard time finding a long-term owner/manager
	limited mitigation bank availability

C. In-Lieu Fee Mitigation:

Pros	Cons
provide defined cost and certainty for the permittee	I think state government will eventually "borrow" money from this fee program in times of hardship (or whenever they feel like it) and mitigation sites will not get constructed.
Applicant simply writes check and then mitigation success is ensured by state contracted professionals with a vested interest.	Options that allow for off-site mitigation that reduce the natural conditions of land in the mitigated area.
expediting permit schedules.	Difficult to replace forested wetlands and unique/rare wetlands
With growth pressure the In-lieu fee	I am concerned about the loss of numerous small upstream

approach is probably the most practical today	wetlands and mitigation with a single large downstream wetland
are less risky and often cheaper/quicker alternatives	cost per unit?, requires govt to be responsible for implementation, therefore, risky, expensive, and oversight/responsibility questionable
has the potential to send money to conservation organizations to restore their own wetlands.	needs to have enough eyes on it to make sure monies allocated are spent on the right types of projects
ease of use	In-lieu fees don't directly help environment
allow for localized and specific approach	I believe it is a money-making effort that has high-quality wetlands as a secondary goal. Further, I think it makes it easier to permit wetland impacts for developers and makes it too easy for regulators to approve. In effect, it's taking the easy way out.
can result in larger and more functional wetlands and they are more convenient options for the entity that has to mitigate	is a great idea on paper and is the best solution for the resource but there are hazards of having money pile up with no viable projects to spend the money on.
could be a big plus for conservation	Failed projects can result in underfunded credits compared to the fees established.
require more stewardship, at least until the credit are fully sold	may occur in watersheds far away from where the disturbance that had to be mitigated for is located.
it could potentially bring money to State of Indiana to acquire and protect wetlands	Some folk will say they can impact wetlands and compensate with banking or in lieu fee mitigation, so no harm done. I disagree, since the function of that affected wetland is gone or severely damaged after impact.
would allow for larger wetlands to be restored, enhanced or created on public lands.	- don't know how much they are maintained after that, they may turn to junk too
provide more successful, combined mitigation than permittee responsible. Not having either banks or in-lieu fee within a given service area is detrimental to the options available to the permittee.	doesn't always apply to the watershed where the impact/loss of function occurred
in lieu fee mitigation provides the applicant with a more efficient and assured option for completing the permit process	Simple but expensive. Typically limited to small-scale permits.
It would allow the restoration of larger areas of wetlands instead of trying to identify several mitigation projects on small areas and would decrease compliance visits for agencies	Lack of existing program in Indiana does not allow permittee to absolve themselves of responsibility.
more opportunity to get successful restoration sites, easier to track, stronger partnerships, less burdensome financially to individual permittees	I fear that in-lieu fee programs in Indiana will turn into a duck pond funding mechanism.
funding source for preservation and restoration	may not account for multiply failure when deciding on initial cost.
especially for minor impacts to wetland of low quality can result in substantial gains for non-profits and on-going ecological projects that may provide overall more benefit than the impacted wetland.	can be difficult to track and monitor the effects of the mitigation
are generally more preferable, as detailed in the USEPA & USACE federal mitigation rule. They typically involve larger, more ecologically valuable parcels and more rigorous scientific and technical analysis.	they require more planning and longer implementation timeframes than permittee responsible mitigation.

typically allow larger, more ecologically significant restoration	does not replace wetland functions in those places that were specifically impacted.
has the potential to create great projects	Transferring the benefits of wetlands from the impact site to a different location
simplify the process and can speed up permitting	knowing whether you set the price right
it seems like a very good idea to keep habitats contiguous	is paid destroyed wetlands. It sends the message that if a permittee's pockets are deep enough, they can destroy what they like. In-lieu fee mitigation sets a dangerous precedent, in my opinion.
Restoration can be targeted to maximize benefit.	easy alternative pay the fee and fill the wetland
allow for development of larger, more viable wetland complexes ... better habitat.	not sure that in-lieu fees and banking do enough to restore wetlands areas in the state.
Regulatory support for this activity also exists.	May not be close to impact site or benefit impacted species adequately.
would be a far superior way to off set unavoidable wetland impacts and would provide the mechanism for non-profits to preserve and purchase high quality areas.	Potential diversion of funds collected by "In-lieu fee mitigation - will wetlands really be restored?
would expect it to ensure mitigation projects stay within the impacted watershed with few if any exceptions	need to be carefully monitored to make sure that the money is well spend
Several good partners exist.	In lieu not yet available
a more regional approach to wetlands protection that can better contribute to watershed health and protection. I favor mitigation and in-lieu programs that improve regional watershed health.	does nothing to help our lake. It permits those with money to do whatever they wish if they have deep pockets. If someone is allowed to damage our wetlands, or even take a risk that they might, that seriously impacts one of Indiana's largest lakes, and a public lake at that, such wonderful natural resources.
Restoration can happen prior to impact.	as documented from other states, the money received must go to the creation/restoration/preservation of wetland mitigation not get lost along the way and end up paying for some other government project that is low in funds.
Responsibility of success falls on consultant, not permittee resulting in better, more successful projects.	have the potential to "out compete" mitigation banks by offering a much lower cost per credit, which could lead to reduced banks in the local watershed.
	I would have some concern if the money wasn't used to replace the wetland within the same watershed.

General Comments on Mitigation:

Pros	Cons
as long as restoration or newly constructed wetlands are within the same drainage area	political
individuals/entities requiring mitigation for impacts have options available to them	financial challenges
More wetlands are created/restored.	Can contribute to habitat fragmentation (even though there's same or greater net area of wetland after mitigation, the harm caused by fragmentation is not mitigated)
if well done regulated mitigation is effective	Long-term maintenance.
All are good options.	Risk of abuse
	unequal mitigation
	little or no agency oversight or enforcement.

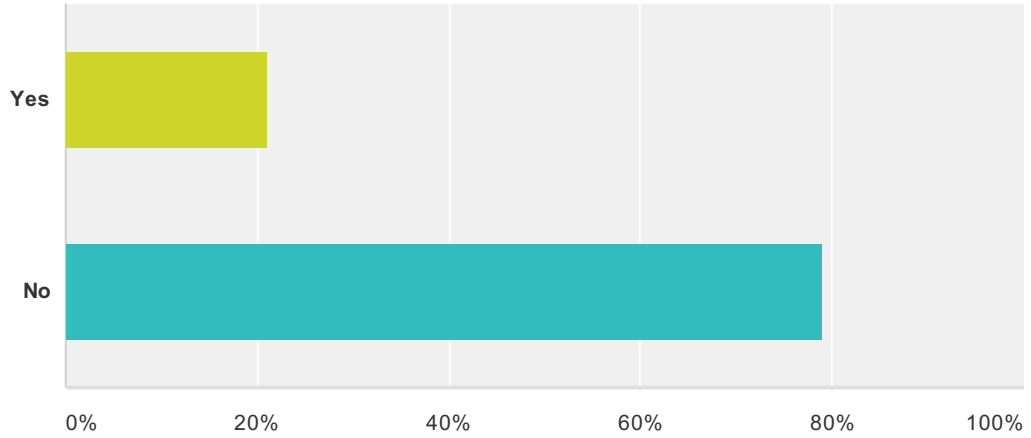
	"no net loss" rule results in low quality wetlands being created to replace destroyed wetlands. What is really needed is a way to use funding from destroyed wetlands to conserve high quality extant wetlands.
	Options that allow for off-site mitigation that reduce the natural conditions of land in the mitigated area.
	seems that many people do the bare minimum if they are strong-armed into it
	Would like to see use of functional data to select or permit better mitigation projects
	Need more PR and information about these programs to generate interest regarding preservation/restoration of existing wetlands. Also, need to promote restoration of previous wetlands areas.
	Mitigation tends not to be quality
	Natural wetlands should not be replaced with artificial or created wetlands. The loss of biological integrity is significant and the ecological function of the created system does not replace that of the original. Preservation and restoration of degraded systems restoring hydrological connections is always best, rather than attempting to create another without the biological richness and diversity of the original system.
	Success criteria that don't consider surrounding areas or what the land "wants" to be, e.g., trying to establish a climax community type that doesn't fit the landscape.
	Lack of a way to truly improve high priority areas (i.e. more ability to acquire sites that will really benefit water quality).
	the state and local agencies should be more helpful and proactive in assisting owners and developers in identifying areas on their properties that may be considered wetlands and would limit development. It seems that the agencies are quick to penalize those owners on violations but are not as quick to help them identify potential problem areas.
	The time-line/costs to provide ecosystem resilience in the process of developing a high quality wetland is not understood. A million for a mile of road is understood; a similar cost to develop a high quality wetland generates gasps and wheezes
	IDEM can be heavy handed when it comes to what a wetland is.
	Use of storm water basins with wetland features should not become regulated as wetlands since they were designed to be a control measure for storm water pollutant reduction
	The greatest negative to all is the collective bias and inexperience of those who control the alternatives.
	Long term management
	Mitigation may not occur based on connectivity or in locations that would best serve to create water quality improvement or stream protection
	government mandated programs have greatly helped us keep some sort of wetlands on the land that would otherwise not be done. Management of natural and restored wetlands does not get enough attention.
	inferences from my research indicate that restored wetlands do not replace the functions (esp. subsurface) of native wetlands.
	Complex natural groundwater and surface water relationships influenced by natural wetlands can't be duplicated by mitigation in my

	opinion.
	Creating a new wetland because the original wetland was destroyed isn't always ideal. Certain species won't move into a new wetland just because it is created. More work should be done to preserve the original wetland instead of relying on creation of new ones.
	Some wetlands are destroyed
	depending on the ratio, it can be very costly
	The options provide flexibility to achieve both development and wetlands conservation
	Fears there are business taking advantage of these.
	All mitigation activities don't equally offset damage, difficult to try new strategies in mitigation framework
	Depends on our clients' (private industries, partnerships, etc) budgets and timeframes
	Original wetlands should be preserved
	Long-term inspection, quality v.s. quantity, habitat value, cost, accountability
	mitigating through restoration is not as good protecting intact, existing wetlands
	Seems to have made existing wetlands more of a target for removal as it's assumed there will always be new areas where wetlands can be built. In the meantime, overall quality of the remaining wetlands deteriorates.
	Lack of information, Not easy to understand
	wetlands may have a beneficial impact on runoff of contaminants such as agricultural inputs (fertilizers and pesticides).
	I think the major issue with the structure of mitigated wetlands is that a lot of money is put in upfront to create/enhance wetlands to get the project "released" by regulatory entities. After the project is "released," there are no long-term maintenance requirements. Thus, all the money that was used to create biodiversity is lost to the onslaught of invasive plant species.
	funding and management for mitigation projects is badly lacking-- most restored wetlands need a LOT of funding and management to succeed, thus, most are a waste of time
	questionable tactics of for-profit companies when doing mitigation in any form;
	mitigated wetlands may not be in same watershed location, created wetlands may not have same function as original wetlands in the watershed, leans more toward mitigation than avoidance/preservation of wetlands
	Mitigated wetlands aren't ecologically equivalent to natural wetlands.
	mitigation may be geographically distant from impacted resource
	Very time consuming
	Cost and quality
	it is important to keep wetland mitigation as close to the project area and local waterway as possible.
	With any mitigation- does it function comparable to what it replaces. General oversight of mitigation.
	My experience has been that preservation and restoration have been more successful than creation or mitigation banking. There are still many wetlands that are worth preserving.
	Lack of cumulative impact considerations and out of basin mitigation. Functional assessment of wetland values impacted vs. values

	replaced.
	Wetland "creation" is extremely expensive, and a "created" wetland will rarely compare to an original/remnant system. All wetland management requires a long-term commitment/monitoring program and many creation/restoration projects are completed on short timelines.
	Can lead to losses in valuable areas

Q18 Does your organization (or another organization you know) incentivize wetland protection or conservation through local mechanisms?

Answered: 195 Skipped: 41



Answer Choices	Responses
Yes	21.03% 41
No	78.97% 154
Total	195

Q19. Does your organization (or another organization you know) incentivize wetland protection or conservation through local mechanisms?

NRCS through WHIP and LARE

Help identify homes constructed in wetlands for buyout.

We advise DNR and USDA on such matters when needed

MRBI cost share

Deed Restrictions and Conservation easements are required on wetland/stream mitigation sites for its protection in perpetuity.

Relief from local drainage code portions is offered when wetlands are preserved and mitigation needs not necessary.

Although not a strictly local program, we do let landowners know about opportunities such as WRP and CRP and EQIP.

Providing conservation easement alternatives to property owners.

NRCS

we recommend wetlands as a sensitive and high priority area for water quality, drainage, and aesthetics

We provide matching funds for property purchase and support property owners with volunteers to remove invasives and do oversight for mitigation.

Writing conservation easements, identifying and avoiding wetland areas.

USDA-Wetland Reserve Programs ACRES land trust

We look for ways to involve conservancy agencies for preservation. Have approached agencies like, NRCS to allow cooperation with programs like WRP to create more incentivized landowner programs and strengthen government programs.

319 grants

LARE will cost share on wetland restoration

Healthy Rivers Initiative promotes the Wetland Reserve Program and we purchase many properties for their residual value once they have been enrolled (within our focus areas which are Muscatatuck bottoms and Middle Wabash/Sugar Creek)

We work with the USFWS, DU, and PF in NE Indiana to restore wetland/grassland complexes on private lands with no cost to the landowner. We also assist landowners in restoring wetlands by offering cost-share assistance.

Wetland Reserve Program through FSA/NRCS

We offer cost-share through some (LARE and 319) of our grant programs to restore or create wetlands.

Farm Bill funding through the Wetlands Reserve Program, Conservation Reserve Program, Environmental Quality Incentives Program, Wildlife Habitat Incentives Program, and the Floodplain Easement Program

We work with numerous conservation organizations on conservation easements, long-term fee-title protection, project cost-share, and mitigation requirements

in 2014 we are hosting educational events that will cover topics such as storm water management as it pertains to wetlands. Additionally, we will work with adjacent property owners on wetland education.

buying preserves

If a landowner is interested, we can direct them to NRCS programs or possibly discuss cost-share options through the 319 grant (however, due to planning time for wetland construction and the short duration of the grant, funding from the 319 grant doesn't seem always seem feasible).

WRP, CRP, CREP, HRI, WREP

Yes, we host programs promoting wetlands as an important part of the landscape. We host programs that introduce landowners to the Wetland Reserve Program, IDNR programs, and ways to bring native vegetation to your own backyard.

NRCS programs, although they are rarely protected in perpetuity.

public education of potential impacts and often the cost of mitigation dissuade developers from impacting the wetland in the first place

This is a part of DNR I'm less familiar with.

Allows for creative design with developments. Depending on the situation allows for some relief with design and standards

We have conservation easements on some property.

grants

TNC restores wetland areas in floodplains as part of floodplain restoration and NRCS restores wetlands through CRP and WRP among other programs and initiatives.

NRCS and ISDA have programs for wetland conservation and construction
Porter County- overlay districts and green space requirements

We don't do this yet but plan to increase our work on this in the next 3-5 years depending on funding realities.

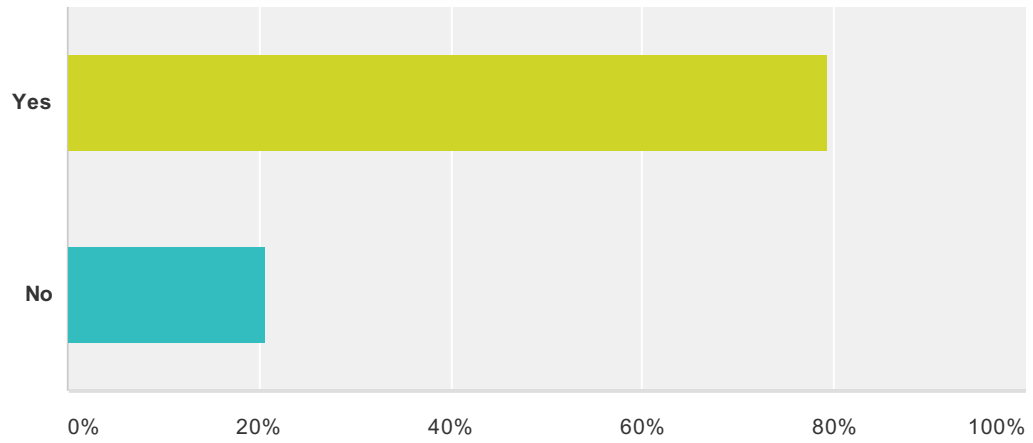
We tell those who use the lake or live around the lake that their incentive for keeping it clean, and protecting the wetlands that do most of this work, allows them (and generations to come) to play, swim, boat and fish in this clean, clear lake - how's that for incentivizing something? ;)

The KRBC is working with local units of government to protect the existing resources
Section 319 funds can help pay for wetland restoration, enhancement and creation.

Wetland preservation is encouraged through recognition and occasional cost sharing.

Q20 Does your organization educate the public about wetlands in any way?

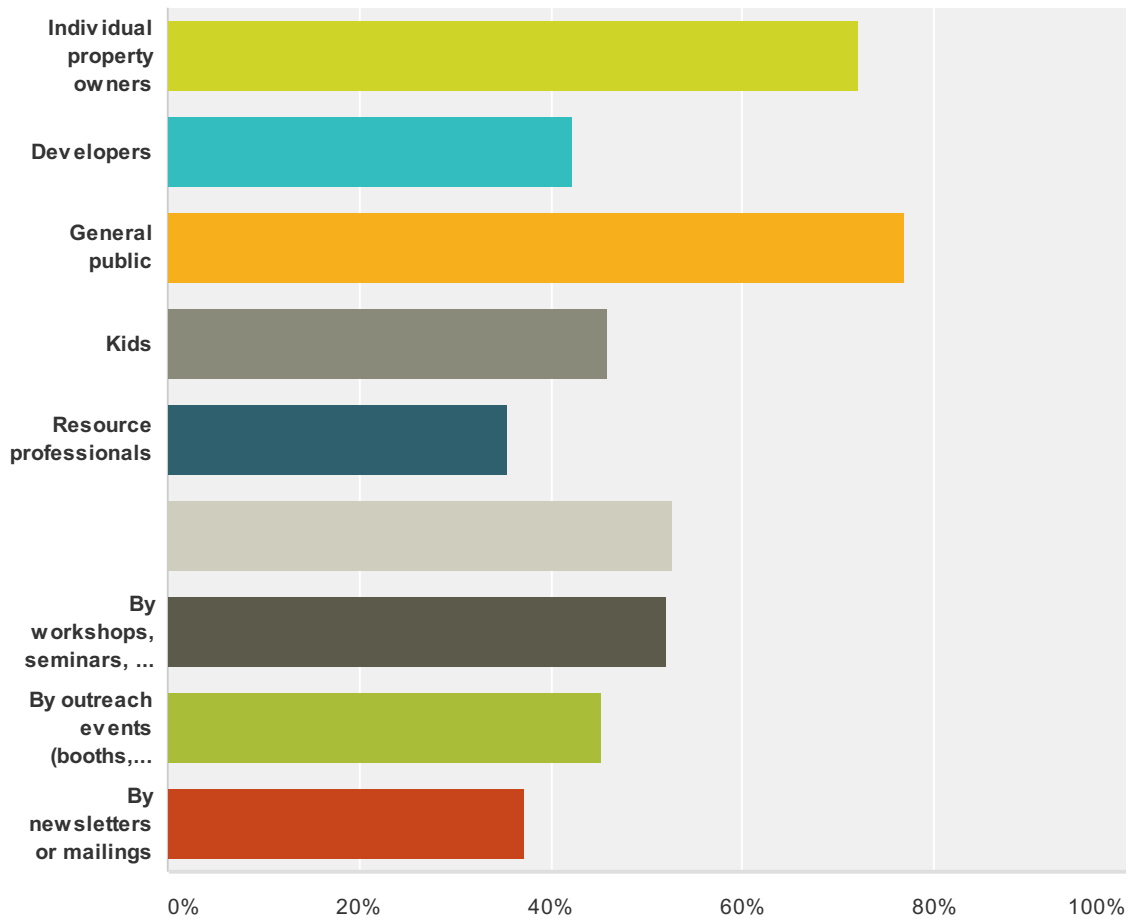
Answered: 204 Skipped: 32



Answer Choices	Responses	
Yes	79.41%	162
No	20.59%	42
Total		204

Q21 If yes, who is the target audience and how do you reach them? (select all that apply)

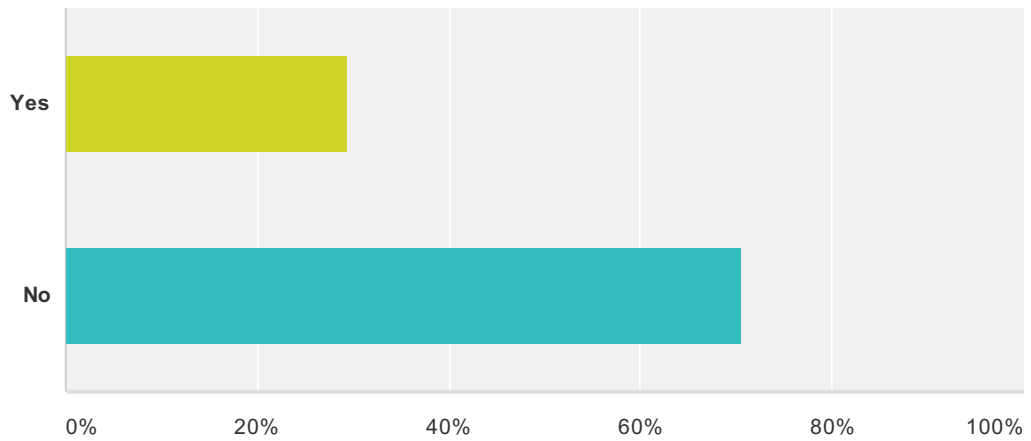
Answered: 161 Skipped: 75



Answer Choices	Responses
Individual property owners	72.05% 116
Developers	42.24% 68
General public	77.02% 124
Kids	45.96% 74
Resource professionals	35.40% 57
By one-on-one meetings or projects	52.80% 85
By workshops, seminars, or presentations	52.17% 84
By outreach events (booths, fairs, field days, etc.)	45.34% 73
By newsletters or mailings	37.27% 60
Total Respondents: 161	

Q22 Do you have your own wetlands educational materials (not produced by the IDEM or EPA)?

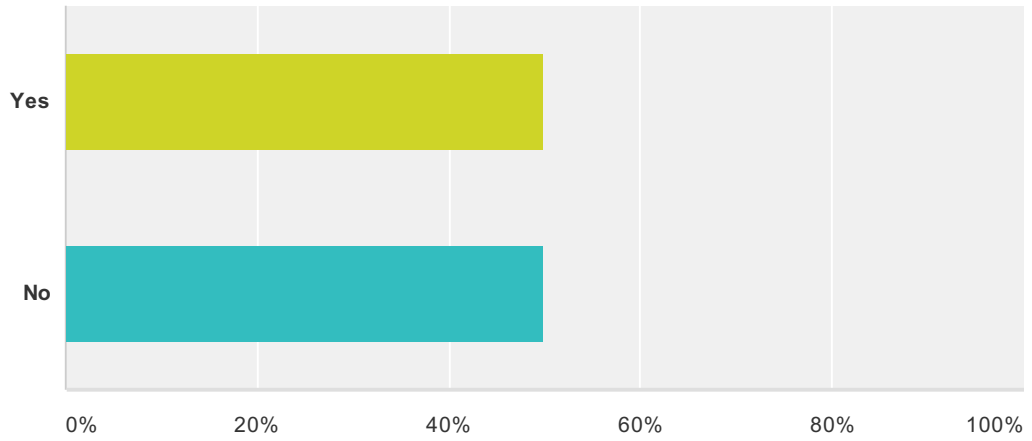
Answered: 203 Skipped: 33



Answer Choices	Responses
Yes	29.56% 60
No	70.44% 143
Total	203

Q23 Do you, or have you, collected data on wetlands (water quality, habitat, wildlife, etc.)

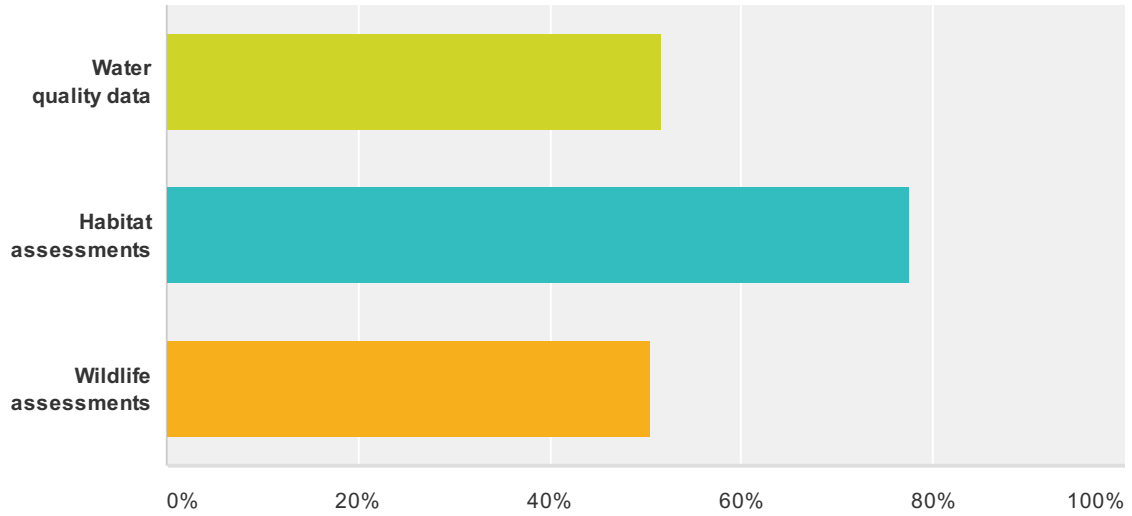
Answered: 190 Skipped: 46



Answer Choices	Responses
Yes	50% 95
No	50% 95
Total	190

Q24 If yes, please select what types of data you have?

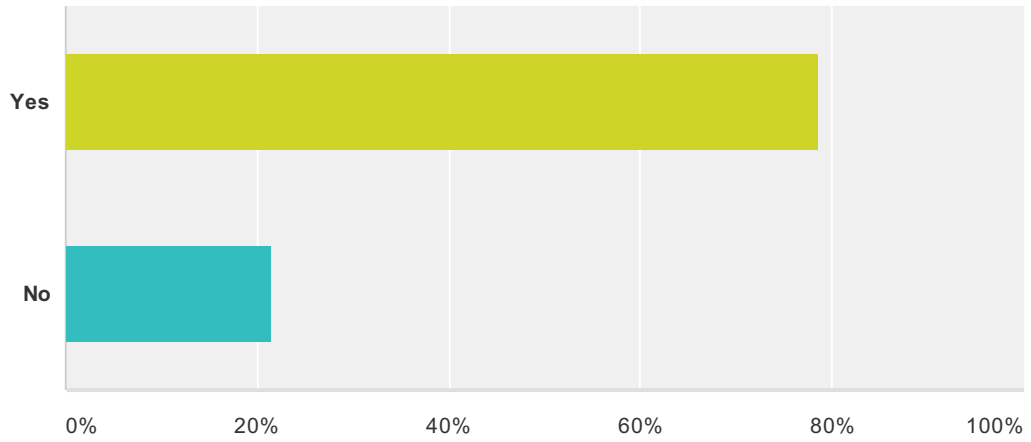
Answered: 89 Skipped: 147



Answer Choices	Responses	
Water quality data	51.69%	46
Habitat assessments	77.53%	69
Wildlife assessments	50.56%	45
Total Respondents: 89		

Q25 Are you willing to share this data?

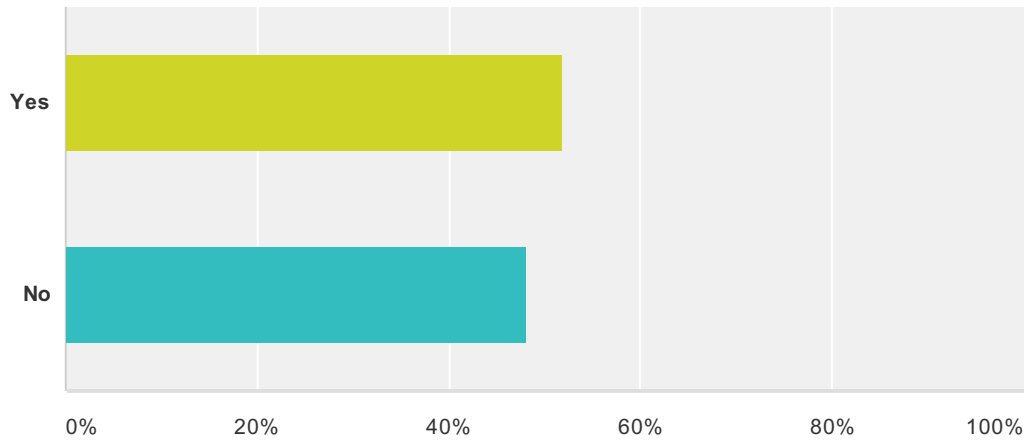
Answered: 117 Skipped: 119



Answer Choices	Responses	
Yes	78.63%	92
No	21.37%	25
Total		117

Q26 Do you have plans to collect any such data in the future?

Answered: 175 Skipped: 61



Answer Choices	Responses
Yes	52% 91
No	48% 84
Total	175

Q27. Ideally, what type(s) of data should be collected regarding wetlands?

Summary of Responses:

Size	Cowardin System	Flora	Fauna	Soil	Hydrology (duration/depth)	Hydrology (storage, drainage area)	location	LLWW (HGM)
25	34	44	40	18	10	21	47	15

Water Chemistry	Benefit	Function	quality	ownership	threats/land use
51	10	49	27	5	11

Full Answers:

size type

Our site has a constructed treatment wetland that outflows to the nearby Elkhart River. The wetland's water source is groundwater pumped from a nearby well, which also provides water for the EEC's ground-source heat pump that heats & cools the education facility. The facility & wetland were constructed on top of a capped former City dump, with an average trash depth of 15 feet. The groundwater is pumped from underneath the trash, so it contains contaminants. We'd like to establish a regular water testing routine & collect data that compares influent & effluent water quality. A concrete weir structure needs to be repaired and interpretive signage would enhance the educational value.

I think landscape context and connectivity is frequently overlooked.

Benefits of wetlands

Baseline and improvement in water quality. Connection to nearest aquifer or riverine environment. Species assessment.

Not sure

Other than research to locate populations of high quality wetland obligate plants and animals that may be very rare in Indiana, the other data that would be great to better collect/and/or understand is how much flood water is retained by wetlands and how wetlands serve communities for flood abatement.

hydrologic data, vegetation diversity, quantitative function & value data

The Illinois Natural History Survey recently updated its Natural Areas Inventory. It would be great if Indiana would do a similar inventory of natural areas in a coordinated effort.

An inventory of the types and quality of wetlands in the state.

The locations & extent. Soil types. Water quality data & ecological surveys.

native plant and wildlife populations along with understanding how the indicator species react to adversary

Those requested.

Nutrient loss

Effect of wetlands to reduce export of nutrients and sediment into streams

Diversity of plants/animals, Numerous quality parameters, Average tree dbh in forested wetlands

Beyond the standard, not sure

Degree of significance in their condition.

WACF is focused on water quality.

Water quality, biodiversity, property ownership

soil type and drainage to wetland area

locations and economic impact/ value

Location

Hydrographs FQI Wildlife Usage

soils, hydrology and vegetation.

GW recharge areas

Flow / concentration = flux of materials

Functional assessments.

seasonal functionality, effects of upstream infiltration/LID BMPs, how to enhance a wetland near a parking lot that can handle increased salinity

location, type, quality

Data collected should focus on criteria that will identify high quality wetlands and potential areas for mitigation in the state. A system should be developed that will allow the regulated community to target mitigation to these areas.

health, macro invertebrates, mercury deposition

Wetland Functional Data

Water quality, habitat, flora, fauna and

water quality, wetland type, hydroperiod, water storage

water quality, and impacts from surrounding developments.

Can a food source be cultivated

Biological, chemical, and physical information.

where are the remaining naturally functioning wetland ecosystems in Indiana? What is the effect of the continued loss of small upstream wetlands on Indiana streams? How is continued climate change impacting Indiana wetlands?

location, type, jeopardy or potential for loss, ownership (public vs private), regulatory jurisdiction

The types being impacted and success of replacement over the long run.

Vegetation types and cover Water quality indicators Wildlife species observed

location, type, quality assessment, nearby areas that would be amenable to restoration

a more extensive data base of wetland locations throughout the state.

Vegetation species diversity; wetland type (SS, F, E, etc); size;

Water quality, wildlife, plant communities

water quality, hydrology, habitats, species

I'd use the ORAM information that you can find in Ohio's program.

In regards to sharing data, the USGS and other researchers have published journal articles which are available to the public.

locations

many of the high quality fens or wetlands are not a government agency list in Henry county since it does not show up on GIS data, thus there is no protection possibilities unless a federal program is accessed and then this is too late in many cases or the assessor is not qualified to determine quality of wetland. taking the proper soil type as a start allows inspection possibility to see if wetland is there, then there is no statewide steps to protection or recognition.

hydrology data, floristic quality inventories, biotic indicies

What is being collected for current permit submission appears to be adequate

The effects of agricultural practices such as fertilization/nutrient loading and center-pivot irrigation wells on groundwater-driven wetlands.

Better graphics.

Quality, restoration and relocation

We mainly look at vegetation and if the area has the three main requirements (soil, vegetation, hydrology). It would be nice to look at wildlife utility/activity so we know that the wetlands we are creating will be used by wildlife

Accurate location and type / quality

Water quality, habitat, cost benefit.

Where it is located

water quality, habitat and wildlife assessments, stormwater runoff reduction data

Finding those wetlands that are higher quality with higher quality being defined as unique and rare fauna and flora.

Habitat assessments, ORAM, HHEI

Water quality and any habitats information that live in it.

locations

data that give holistic picture of wetland health, data that can be compared over time

location and size

Habitat studies as means to qualify condition of individual wetland.

I am largely speaking as a geochemist, so my answers are primarily about water quality

location, quality, ownership, function

we plan on beginning data collection on Wildcat Creek

Plant type, soil type, ground water location as it pertains to surface. Location, type of wetland. It would be nice to have one large data base that the local government staff could access.

water chemistry, macroinvertebrates, size, volume

We have demonstrated that groundwater and surface-water flow and chemistry (elemental and isotopic) data can provide improved understanding of the way that natural and restored wetlands function and how the two are different. More comparative data is needed, and then we can begin to assess how restored wetlands can be built to better mimic the natural wetlands that have been destroyed.

vegetative surveys

Hydrologic, water chemistry, plants, trees, soils

Hydrological, geological, soils and soil moisture, micrometeorology, water quality, vegetation, and imagery over time.

existing wetland quantity and type and what wetlands were lost historically, on a watershed basis

Species data, habitat type, water source, water fluctuations, soil type and depth, area of the wetlands, surrounding habitat and land use.

downstream water quality changes as a result of the wetland

wetland type, ownership, protection status (permanent easement, etc.) size, location, T&E species

everything in #24 above. (Water quality data, Habitat Assessments, Wildlife Assessments)

where they can be restored to best improve water quality and quantity concerns by 10-digit or 12-digit HUC

vegetation surveys; herp surveys; waterfowl or other bird surveys; general wildlife surveys; water quality studies

Types/habitats, locations, etc and added into programs such as GIS.

Water Quality & Volume. Quantify the vegetative community eg: Forest Early vs Climax, Invasives: phragmites, etc. Redox -eH. Use these 3 factors to derive a score.

Soil types, watertable levels, existing vegetation, other sources of hydrology, prior conversion history

How much filtration of nutrients the wetland provides, and how long until the wetland isn't viable for this benefit any longer.

More precise soil data to allow areas which were wetlands to be restored by altering hydrology.

Delineation

water quality, habitat health, wildlife

Spatial locations with greater accuracy than the NWI

Depends project to project

Quantifying the functional uses of individual wetland types and projecting the "ideal" way to replace or restore the functions for each type.

Boundaries, classification, connectivity, etc.

Habitat and quality

size, Cowardin type, position in watershed, type of buffers, habitat diversity value, hydrologic influences, human impacts

habitat, % remaining, quality

Soil type and chemistry, water chemistry, wildlife, aquatic and terrestrial vegetation

chemistry habitat and wetland influence overall in a watershed.

remaining protections enforced, should be broken down within Counties & City Code - no more removal, no more "trading", no more filling in of wetlands for building.

Water quality, drainage flow and storage, habitat and wildlife,

Water holding capacity, ie. how much can they minimize flood peak Amphibian surveys

habitat quality and wildlife response and water quality benefits

depends on the individual project and scope of work--each site is different

How (legally) to protect

Quality, loss/gain, species benefits, public benefits, water quality/contamination

areas identified as wetlands

water quality and macro invert richness

invertebrates chemical composition vegetation invasives

Ideally, it depends on what you are trying to achieve. Setting a standard set of assessments generally misses the point.

stream and water flow conditions

Quality of wetland, unique flora and fauna

Location, quality

Location, function, quality both in terms of water and ecological

Baseline pesticide of concern chemistry, so spill and miss-application incidents might be adequately evaluated.

Priority areas, areas with willing landowners

Detailed mapping, invasive species distribution and quantitative species composition.

location, type

A written statement about what makes each wetland unique. So, there is a record of what is lost beyond just species names.

Location of wetlands on GIS database would be the most beneficial.

Water levels or history of the wetland. Specific boundaries of wetlands

1) Location and ownership information 2) Current size and various quality assessments 3) Potential and relative importance for protection and/or restoration

water quality and volume, soil chemistry and species composition

everything including progress on mitigations and restorations

Why some are so good and some not so good.

Minimally a rapid assessment protocol such as ORAM (or INWRAP).

water and habitat quality assessments; potentially wildlife surveys but these are more difficult and time consuming

Wildlife and habitat assessments

polygon; dominant species; context

flood mitigation benefits

Location, type

Function, location, prioritization for preservation/restoration

water quality and habitat

Species using wetlands, water quality effects of wetlands, flood protection with wetlands

Type, floristic quality, context, and impacts

Amphibian surveys

water quality value (how much treatment does a wetland provide)

Habitat assessment.

LOCATION, INVENTORY, AND MAINTENANCE

vegetation, fish, wildlife, water quality data, geographic extent.

water quality and species

where they are

Location, water quality, habitat, economic impact

We tend to have a consultant perform wetland delineations.

type and quality of the wetlands

soils and development over time of hydric characteristics, obligate species utilizing the site, specifically herpetofaunal and avian species, vegetation development over time, hydrology using gauges and data loggers

Habitat changes - water quality improvement

Effectiveness in addressing watershed hydrology concerns.

Quality; Functionality; Size; Surrounding landuse

There are currently excellent documents regarding many of the questions you have asked in this questionnaire.

Mitigations results, soil conditions, species habitat

Baseline information

All data used in the permitting process

level of disturbance, botanical quality, ETR species, water quality

Soil types, water quality vegetation types

water table or surface water fluctuations, vegetative composition and density, soils.

Location of remaining wetland fragments in the state. Establish baseline nutrient benefits of existing wetlands.

Vegetation composition (including abundance data). Reptile, amphibian, and other faunal composition.

Information that determines the species diversity, nutrient filtering capability, and overall quality.

Water quality

water quality, physical habitat, organisms (plants and animals)

Vegetative cover for both habitat and soil preservation

Data that supports evaluation of wetland functional value(s) on landscape. <http://www.in.gov/idem/nps/3460.htm>

Biological

Distribution, size, type, percentage of land use Water quality Aquatic biology Efficacy of wetlands for water quality improvement and flood peak reductions

Size, type, quality, relative abundance of this type in state/region, water quality, habitat health, threats

Plant species present, percent cover of invasive plants, wildlife using the wetland

Depends on the wetland. If a wetland is of low quality, required data could be limited. If wetland are of higher quality, more data should be required ... bio-diversity, landscape morphology, water quality

Flora, Soil, Hydrology, Chemistry (grab sample if possible), hydroperiod, items on ORAM (Ohio) and InWRAP (Indiana), HGM, CRAM (California), WRAP (Florida), etc.

The biggest problems I have observed involved changes in hydrology on neighboring properties (changes in ditch infrastructure, tiling, etc.) and the proliferation of invasive plants, namely reed canary grass and phragmites.

opportunities for restoration

water storage capacity, endangered species, pollutant reductions, etc.

location, boundary, size, classification (type)

water chemistry, macroinvertebrate and plant assessments

geological (borings) data, soil data

Map with locations would be helpful

location and type

Wetlands locations, quality, and protection priority based upon their contribution to overall watershed health.

Q29. When you think about the state's wetland permitting program what are the biggest flaws or missed opportunities in your mind?

Archaic (literally, 19th century) drainage laws that can classify natural streams as designated drains. They are leftovers of the settlement era when 90% of existing natural wetlands in Indiana were drained for development & agriculture, before the value & essential ecological services provided by wetlands were realized. We know better now and the laws should change accordingly.

Lack of coordination with local reviewing agencies.

Too mutable and open to interpretation with little or no oversight or enforcement.

Uninformed

The ability to expand public lands through mitigation.

With the significant historical loss of wetlands, preservation should be a priority.

perhaps that farmers cannot destroy wetlands, but urban expansion can

None come to mind at the moment other than education.

Developers bypassing the process

Not sure.

permitting development that promotes groundwater degradation

Flaws-Certification program needed for wetland professionals providing delineation/permitting services.

It could be stronger, and apply to smaller wetlands

general public education of the importance of wetlands for proper drainage and stormwater control

I think it is very important to pick your battles.....some of these in in the middle of existing farm fields or due to lack of existing tile maintenance are extremely difficult to deal with.

coordination of wetland information between agencies.

many wetlands are lost just because there wasn't even a permit applied for and then all action occurs after the fact.

Permitting for indirect impacts not just fill should be evaluated

The whole permitting process, for all issues, is too long, frustrating and cumbersome.

Length of time for reviews is one the biggest hurdles.

To easy to get a permit to destroy a wetland.

Not clear

I do not know if the state permitting program looks at regional or watershed plans when identifying mitigation opportunities. I know they consult with individuals in different watersheds for input, but if they are using plans we are involved with, we don't often know about it.

not enough staff to ensure permits are obtained, followed

difficulty of people and process - even when doing good conservation work

The permitting program should place additional emphasis on several areas that are non-regulatory. For instance, consideration should be given to the promotion of wetland treatment systems (non mitigation sites) for storm water run-off. Within Indiana and other states there is a concern that if these systems are utilized they could be claimed jurisdictional at a later time.

They are understaffed.

We are not doing a good job of educating constituent groups on the importance of wetlands. We also lack the tools to enforce the rules and wetland loss continues to increase.

More emphasis on permanent preservation of existing wetlands as a mitigation tool.

That natural wetlands can be truly mitigated,

Do not focus on just the number of wetlands, but rather on the condition of those natural wetlands remaining on the landscape. Size does matter and the restoration of former wetlands is important.

Not ensuring mitigation success.

1. Regulation of minimal impact activities. This creates hardships with development/maintenance/repair activities (both in time and money) and cultivates a general resentment and animosity toward the regulatory program as a whole. Removing and/or drastically reducing permit & notification requirements for activities affecting minimal amounts of wetlands (perhaps 0.25 acre threshold...) would go a long way toward fostering a greater respect for the goals and functions of the regulatory program, in both the eyes of the development community and the general public. Public resources could then be better allocated toward a more proactive and effective regulation of larger and more functionally significant wetlands. 2. Establishment of a minimum flow (discharge capacity at OHWM) or contributing drainage area size to stream channels which are subject to regulation and/or mitigation requirements. As indicated above, the the same concepts apply to regulation of streams as wetlands.

The large project loads that are put on the State Wetland Managers inhibits their abilities to process permits, leading to variations and discrepancies.

There is not enough staff to adequately cover an area, so the most important issues (28 above) cannot always be addressed. There is heavy reliance on the Army Corps and local citizens to enforce these issues.

the smaller impacts that don't require mitigation add up over time, = lost resource, even those roadside ditches

through the review process the state and local agencies should assist owners and developers in identifying potential wetland areas on their properties. many times the review agencies do not take the time to identify those potential wetland areas to owners or developers but will be quick to turn around and fine or penalize them after the fact.

mitigation success criteria that don't necessarily reflect successional theory or how the site will continue to develop upon release from monitoring

More incentives for communities to create wetlands as part of their green infrastructure and amenities.
none

There's not enough people to check compliance with permits. Also, regulators tend to be inflexible regarding wetland mitigation plans.

The state does not support voluntary actions to restore a high quality wetland type. In this case one is not referring to flooding an area for duck hunting. The state lacks an understanding of value to blending an area of historic wetland into an adjacent area of existing wetland that was historically a contiguous wetland. Mitigation should not

be requested for this action. The state does not distinguish between ditches and streams. Voluntary actions to remove un-vegetated ditches to restore historic high quality wetland should not be punished. The state should encourage non-profits, county groups, and other agencies to conduct voluntary wetland restoration actions

Questionable determinations and the heavy handedness by IDEM.

it is all reactionary since there is no state listing of wetlands, i was able to find high quality wetlands that do not show up on any listing and found no one in the wetland program who was interested in adding to a state listing or protection possibilities.

lack of compliance/enforcement

Use of storm water basins with wetland features should not become regulated as wetlands/jurisdictional waters since they were designed to be a control measure for storm water pollutant reduction for compliance with ordinances or Rule 5.

I do not see much emphasis on native vegetative restoration (control of invasives and installing natives) as a means of mitigation.

Not providing more tax incentives to farmers to leave wetland areas out of production.

Quality, restoration and recolonation

Use of an in-lieu of fee system for small wetland areas that require mitigation.

Ouch. In my humble opinion, the greatest flaw in the program is management and experience. Project managers for the most part have an understanding of wetlands, but they often bring personal agendas, which may not coincide with regulations. The lack of experience, training and hands on management leads to decisions that are not inline with regulations and the tendency to deal in absolutes. Wetlands are not static or equal, but we tend to regulate them as if they were and we miss opportunities because of it.

Allowed and encouraged maximum drainage for crop production.

the protection can be a bit too far reaching

incentives to maintain and restore wetlands

Enforcement and follow-up.

Some aspects of regulation requires high level of attention from PMs, which can take away their attention from bigger picture items. Personnel resources are limited. Review the NWP program to allow for more projects within the NWP, which will free personnel to focus on projects, outreach, etc. The RGP has developed enough special conditions that fewer and fewer projects qualify, which then requires public notice and administrative time.

don't know where they are and there should be a minimum size

Typical government losses to timely protect environs.

The state needs more staff. The governor reduces staff for IDEM and IDNR and there are not enough people to do their job. The biggest flaw is lack of funding. The state has talented people who want to do a good job but they need more staff.

There are a lot of disagreements among qualified professionals about the fine line between wetlands and non-wetlands in marginal situations.

I think it requires IDEM, DNR and US Army Corps of Engineers for a permit, a lot of duplication of effort.

Recommendations to prevent take of endangered species are not enforced.

I would say the biggest flaw is preventing wetland destruction

Biggest flaw: The IDEM 13th floor decisions that override good biological/ecological decisions because of political considerations.

coordinating with local watershed groups/ IDEM Watershed Planning & Restoration section

permits are issued too easily without strongly requiring avoidance and minimization before going to mitigation; mitigation isn't appropriate for the site, good enough, or maintained beyond the monitoring period (unless the land is donated to an organization that has the money to maintain it); really bad projects need to be denied more often and the denial upheld (how many denials are overturned on appeal?); allowing concrete seawalls on natural lake shorelines is disgusting - replanting shoreline wetlands to protect against erosion needs to be promoted more

Lack of understanding of the process and where to go for what. Success rate for wetland restoration/mitigation projects??

Mineral rights, or the lack of control thereof, preventing the use of magnificent restoration sites for mitigation or banking. If an oil company wants to drill or pipe in a restored wetland then the ratio should be sufficient to either deter the action or offset the impact. Plus with directional boring there are alternatives... We've been forced to walk away from a lot of superb sites.

We do not have much history of working in Indiana, so I cannot provide an adequate answer. I do think agencies should be flexible in allowing creation of wetlands at a reduced mitigation ratio for some impacted wetlands that are of low quality or obviously result from human activities in unnatural settings.

Not explaining why the wetlands should be kept in place. Most people are just told no and they don't understand why they aren't allowed to build/farm the property.

Too many small and unsuccessful private mitigation sites. Often these sites are in agricultural areas surrounded by Reed Canary Grass, which will most likely take over many of these sites once monitoring and management are completed.

farmland which the law cannot touch.

Lack of outreach and promotion like this

Not well understood by the general public or local agencies

Honestly not familiar with Indiana's program

Combining resources with DNR biologists and other state resources (IDEM Land) to understand and regulate the watersheds in Indiana to improve the functional wellbeing of the watershed, not just an individual wetland on a project site.

lack of in-lieu fee program. Also it would be good if the IDEM and USACE permitting and mitigation requirements could be closer together

utilizing the data obtained from permits & mitigation monitoring in other ways

how long it takes to get through the permitting process

NO "TRADING" of wetland filled, for already protected "natural space" being then sold.

Consistent protection - If you are Ag then you have to make sure you do not disturb a wetland, but if you are development or putting cattle on the property, you can destroy it.

County governments are scared of the permitting process so flexibility and approachable process are important
inconsistencies in granting permits; focusing on the most-valuable wetlands

Identifying and protecting

The IDEM's permitting program is cumbersome and not equally delivered among different IDEM employees throughout the state. This is further complicated by multiple USACE districts and their regions of responsibility. Additionally, wetland restorations are often treated the same as wetland destruction, i.e. restoring an emergent wetland that has grown up in trees b/c it has a ditch and drain tile running through it should not be considered a destructing of forested wetlands that requires mitigation. Honestly, the IDEM permitting process is not administered equally state-wide.

a clearer path to handle wetland restoration permitting

outside of my level of expertise.

lack of enforceable long-term performance standards such that Hoosiers and the environment benefit from mitigation

not familiar

Stressing avoidance, making it more costly to develop, and having a heavier hand on those areas developed without permitting.

There is no mechanism for the state's wetlands program to proactively identify and attempt to protect through purchase or incentive programs that lead to deed restriction existing high quality wetlands.

all of the wetlands that are cleared without any notification

Information to let applicators know where protected or high value wetlands might be located.

Wetland permitting (along with floodway, etc.) can be very confusing and intimidating to landowners.

The states statutory framework does not allow for the consideration of high quality upland habitat as a component of water quality. Solely focusing on legally defined wetlands discounts the importance of the surrounding uplands to habitat composition, sediment and nutrient control and species diversity.

difficult process

There needs to be long-term maintenance objectives/requirements.

Funding is needed for educational resources. Such funding could come from an in-lieu fee program.

Citizens do not know what or where the limits of wetland are.

There is a lack of emphasis on wetland function and more of an emphasis on wetland size. This is missing the mark from an ecological perspective. Some sites perfect for restoration may not be quite big enough to meet the required ratio of replacement, but would provide better ecological or watershed function.

insufficient staffing and funding of regulating agencies and a lack of commitment by political appointees

No real glaring flaws, it just takes time to make the changes that are needed after several hundred years of wetland destruction. We are all still pioneering this work and learning as we go. Always remember, every generation has a chance to learn it all over again, be it good or bad is up to all of us here now.

Given the history of draining and wetland modification, many wetlands in Central Indiana are now isolated and small but they are poorly protected.

Actually, the biggest flaw is the fact that social and political issues can factor into what could be considered a scientific process. However, that's reality and will continue to be so.

The RGP. I wonder if there is any consideration of cumulative impacts of many permits on downstream flooding - there should be.

follow through with required maintenance on into the future

preserve flood mitigation areas

reactive versus proactive

Many high quality ground water fed wetlands have not been mapped or inventoried

Failure to monitor impacts and enforce mitigation requirements

The Rules/Laws contain to many loopholes. Lots of political push to get things moving. Staff numbers are limited, no ability to research. Limited abilities to provide education to public.

Lack of authority for 404 permitting.

LACK OF COMMUNICATION BETWEEN GOVERNMENT AGENCIES.

Insufficient resources for the permit program to develop

goes beyond the Fed requirements

Local government participation during the permitting process is lacking.

The initiatives proposed in the WPDP are mostly absent as options for meeting permit requirements thru 401 or 404; or they are so discounted compared to typical mitigation as to disincentivize them.

Not having an in-lieu-fee system to date (although one is around the corner). Having a plan similar to CILTI's "Greening the Crossroads" to direct restoration efforts statewide. No metrics regarding wildlife species utilization of restored wetlands.

Too difficult to understand and very intimidating

Lack of information from the general public. Sometimes, restoration efforts are stymied because of regulations.

Allowing impact to small wetlands, particularly ephemeral wetlands

Too many conflicts among the various state Divisions that may be involved in a Wetland mitigation or restoration.

Knowing how many mitigation sites are working and how many are failing

Grandfather clauses are too lax resulting in continuing degradation of compromised wetlands.

Most violations and permits could be solved with an in-lieu fee program. In-lieu fee would be an excellent way to get the funding into the hands of people who can protect, preserve and manage the resource

Not enough staff time spend on enforcement. Staff is booked on getting permits out the door.

An in lieu fee restoration program for wetlands and streams run by a volunteer Board of Directors from industry, government, universities, and private sector scientists that could match other grant programs and really promote natural resource restoration in the state.

Consistency

I would definitely be sure prioritization was given to projects that improve existing wetlands rather than creating wetlands.

Mitigating outside of the HUC 10 is my biggest concern. I'm also greatly concerned about the lack of involvement of watershed planners and conservationists who study water quality at the local level not being contacted for their expertise and suggestions as to where appropriate mitigation sites may be within the watershed. Lastly, I sometimes feel the end use in which people are making requests for are not being carefully considered. For example, I recently saw a permit to expand a cemetery into a wetland area. Although mitigation was to take place and the applicant was following the necessary requirements, in the end, would a cemetery really be appropriate for the soil type that lies there? Likely not. I would suspect the applicant would then clear the wetland, attempt to use the area as a cemetery, and realize quickly the area does not serve the purpose in which they hoped. Therefore, any wetland cleared at that location was lost for no reason. Another example I saw was the placement of a soccer field. again, the soil suitability for such a project seems inadequate. It would only be after the project's completion and clearing of the wetland that this would be found out.

Low mitigation ratios

Evaluating/monitoring mitigation effectiveness/success

In-field monitoring of projects impacting wetlands and monitoring of approved mitigation projects are not strong enough. More needs to be done to protect high quality wetlands and ensure mitigation occurs in the same watershed. A solid list of critical wetland areas that can be used for mitigation in each watershed is needed.

I would like to work with IDEM and protect and restore higher quality wetlands rather than mitigation banks or creating non-functioning wetlands.

coordination of efforts with other agency endeavors. work with the DNR and USFWS more. work with local agencies (i.e. parks depts) and private conservation groups. Make permitting and mitigation something that can benefit the larger need for better wetlands conservation by including more groups/people who are involved.

Occasional high costs associated with permit requirements for voluntary restoration work

Allowing people to pay for damages, and allowing them to do the damage in the first place.

not enough public education and outreach

lack of funds

it seems that the permitting program is just a mechanism to allow wetlands to be impacted by construction or other activity. There doesn't seem to be a focus on protecting or restoring wetlands.

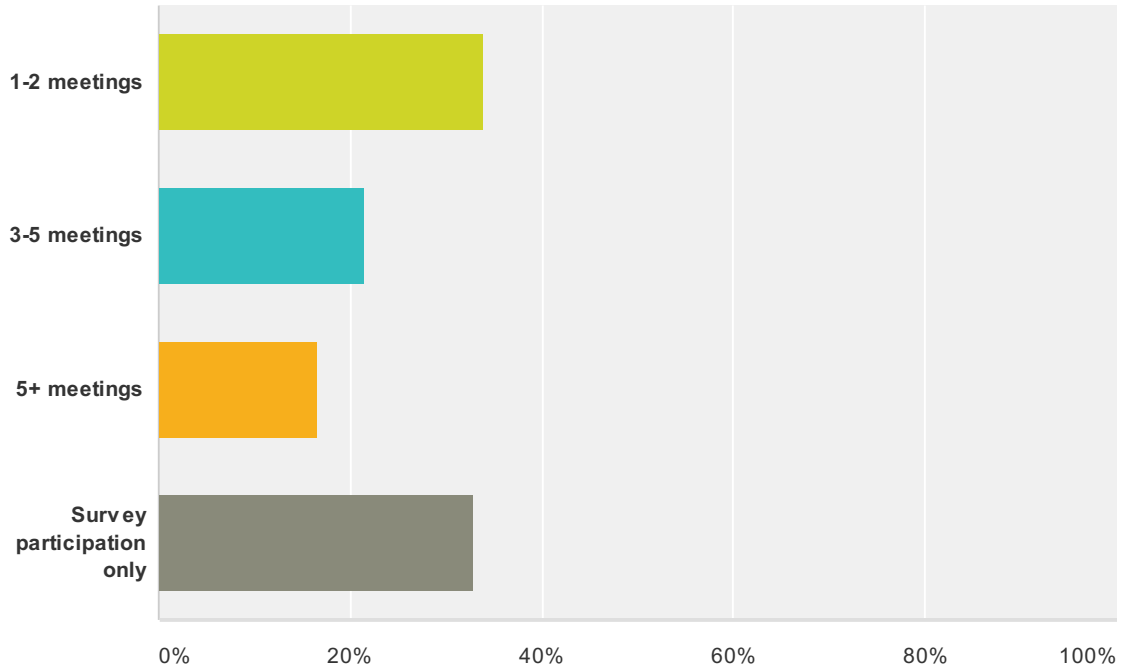
Awkward process requiring USACE to signoff before IDEM can process permit documents when they are submitted concurrently.

public interest just isnt there

The focus on on-mitigation, especially of low quality wetlands.

Q30 Are you willing to participate in planning meetings over the next six (6) months to help IDEM with its wetland program planning? If so, how often?

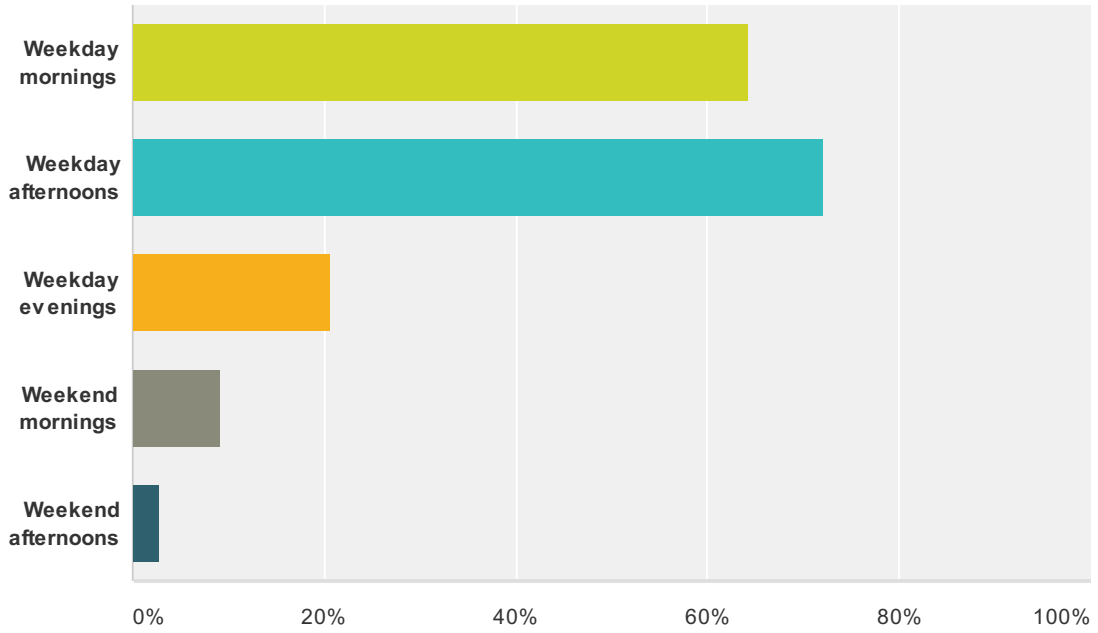
Answered: 186 Skipped: 50



Answer Choices	Responses	Count
1-2 meetings	33.87%	63
3-5 meetings	21.51%	40
5+ meetings	16.67%	31
Survey participation only	32.80%	61
Total Respondents: 186		

Q31 If so, which meeting times are best for you? (Select all that apply)

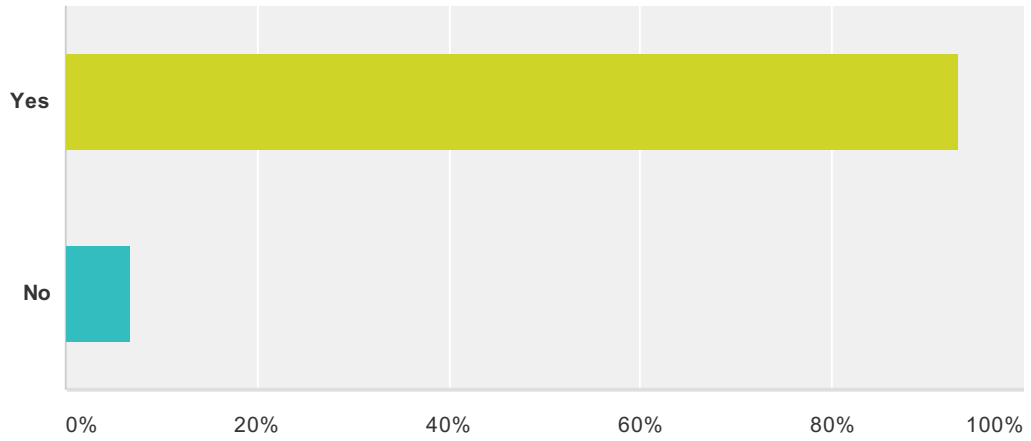
Answered: 140 Skipped: 96



Answer Choices	Responses
Weekday mornings	64.29% 90
Weekday afternoons	72.14% 101
Weekday evenings	20.71% 29
Weekend mornings	9.29% 13
Weekend afternoons	2.86% 4
Total Respondents: 140	

Q33 Are you interested in receiving updates on wetland program planning efforts via email?

Answered: 190 Skipped: 46



Answer Choices	Responses
Yes	93.16% 177
No	6.84% 13
Total	190

1.3 Stakeholder Meeting / Public Comments

Public Input on the Draft Plan

A draft version of the Plan was made available for public review and comment from October 9 to 23, 2014. The Draft Plan was posted on IDEM's website and notification was sent to the stakeholder listserv. In addition, two public input sessions were hosted on October 6 and 9, 2014 in northern and south/central Indiana, respectively. These sessions included an overview presentation of the Draft Plan and a lengthy participant work session in which specific goals and action items were reviewed in small groups and additional ideas and/or changes were gathered.

Stakeholder Meeting Comments

Mapping Input comments

- Teach people to identify & report (certified volunteers)
- Historical data that is NOT digital
 - Community composition
 - GLOffice
 - Surveyor notes
- Defining goals and objectives
 - [this could mean *changing* goals and objectives on a map-by-map basis]
- Parcel data & quantity of pixels
- Map by watershed, use WMPs to prioritize [watershed maps exist already]
- Using universities to input data, watershed volunteers
- Standardize reporting
- NRCS conservation areas
 - *privacy concerns
- Access to layers themselves
- Parcel layer
- Historical vegetation
- Rare species communities (DNR)
- Migratory bird usage – flyover data (TNC)
- Mapping oxbows
- RESOURCE: web soil survey
- Landowner info.
- Flooding
- Drainage boards
- Derestrictions on oil & gas (USGS)
- HGM – wetland types
- Dept. of ag – resource, on the ground
- Concern about sharing data – can it hurt me later?
 - Follow-up after release
- CILTI – greening...
- Land-use planning around urban areas
- Leaders – followers; state agencies
- Focus on securing sites – shovel ready; partners
- Universities data- rook, rothrock
- Benefits to sharing data – I'll scratch your back
- IGS – Lidar
- Does it address sources of hydrology?

- Risk of overexposure
- Seeps – how do we find these? (survey partners)

Mapping Output Comments

- Online download
- IndianaMap
- GIS
- Google earth
- ArcView and GIS platforms
- *make multiple formats available
- Online
- INMap/GIS
- Data download

Other thoughts:

- Incentives for conservation of existing wetlands
- How successful are other states strategies?
 - [task for Neil]
- DU – CARL program
- LID & Green Infrastructure + LTCP
 - How? Advantage?
- Working w/ municipalities
 - Identifying...
- Not for profit partners for mgmt.
- All regulatory reviews under one agency
- How much attention should mapping really get? Groundtruth
- Mitigation effectiveness and why
- Research efforts
- Impact of ag. On wetlands
- Working with industry & utilities
- Tap into the birding community
- Chesapeake bay vs. Virginia [interesting research for “other states”]
- Training – standardization of how to assess
- Consider funding needs of each as way to prioritize or make sustainable
- Farm Bureau town hall meetings – missing this stakeholder group
- Misinformation about Clean Water Act
- Banking issue
- Tying both conservation payments and wetland impacts to crop insurance [has had significant impact for on wetland conservation]
- Cooperative effort between NRCS & Corps [food security act v. 404]; resolve delineation differences
- INWRAP/ assessment training – what is keeping us from using it?
- Agencies have conflicting regs – one stop shop for info
- Quantify ecosystem services
- Water quality message – legislature; educate public
- Promote INWRAP
- How does statewide coordinator work? What agency?
- Business driving regs, not supported by wetland community
 - Advocacy & education

- Be sure to contact Chicago Field Museum or Alliance for the Great Lakes to receive green Infrastructure Vision 2.1 – these maps are being groundtruthed for Northwest IN & are some of the most up to date information available
- excellent information and am anxious to see the final product & to know that there is actually help for wetlands in this state. Also enjoyed the interactive data gathering process
- This was a very well-organized & useful meeting – looking forward to helping with future project efforts! (Willing to offer input/assistance w/ technical committee if needed)
- Darken typeface on slides; Jill, thanks for your important work. I really appreciate it!
- Excellent job packing a lot of content in 2 hours & getting it done on time! Great resources were shared.
- Great Presentation. The lighting in the facility was not good for the slides. Will you be providing the slideshow with or without survey results from today?
- Very exciting to see this effort! Great meeting
- Framing of the wetland mapping ids, maybe talking about value providing to habitat, neighbors, waters, instead of conservation target or preservation priority
 - possible incentive area? Some of our land trusts are getting soaked on local stormwater fees > possibly some way to exempt wetland restorations from these fees would be an incentive > although bad for MS4 budgets
 - can't emphasize enough coordinating this by watershed with local/regional partners. There is often distrust of Indianapolis centric prioritization and decisions
- how does this plan / will it tie into the in-lieu fee development?
- Statewide news article asking landowners to give information on their private wetlands maybe created into a data layer; extra incentives to landowners to restore wetlands with using CSP/NRCS Farm Bill
- difficult but it seems like few landowners are involved in survey
- need better guidelines for local plan reviewers (new construction) as to what you can do regarding wetlands. I see many plans where they build up contours around wetlands and cut flow to wetlands, drying them up over time. See some using them for detention basins. What BMPs are sufficient as pre-treatment to drain impervious flow to wetlands? IDEM says it's up to local agency to determine
- I vote Aaron & Jill for statewide coordinators
- Great format and opportunity for interaction. Look forward to chance to help. May be good to do a stakeholder meeting to involve economic development groups b/c they will likely be a funding source in time. Mapping: gauging stations, public/private lands
- maybe create a state coordinator. Help developers with a one-stop permitting process. There are too many agencies with conflicting regulations.
- good tools today – I worry that our elected officials will not support efforts. Good materials I am impressed with the efforts.
- Data: groundwater/aquifer data (USGS, IDEM), parcel info for targeting landowners (who owns significant wetlands)
- very worried that in-lieu fee program will turn into just an alternative funding source for DNR. Needs to be focused on high-quality mitigations & long-term management; would like to see the “mitigation site GIS Tool” include optimization tools –eg: if water quality is goal, where are the best sites? Same for conservation values. This would maximize the bang for the buck in mitigations

- I would like to see regional meetings for more local prioritization of known wetland complexes as this process moves forward
- I have concerns about an in-lieu fee program. My experience with other states is that they are prone to abuse (misappropriation of funds) and don't serve to replace functionality (sometimes agency doesn't have means (lack of sites, etc..) to appropriately spend the \$\$); Jill and company have done a nice job on this. I hope Indiana will implement their findings; I'm happy to help in any way I can

Ideas and Suggestions from the Public Input Sessions

Meeting Highlights:

1. Reviewed Input Process
2. Reviewed Potential Wetland Restoration Sites (PWRS) map and High Priority Wetland Conservation Sites (HPWCS) map strategies
3. Discussed WPP Priorities and Goals
4. Reviewed EPA's Core Elements and WPP draft document layout
5. Summarized WPP observations
6. Discussed Implementation Plan layout and specific action items
 - a. See *summary of comments* from interactive group activity
 - b. See *review and revise Implementation Plan action items* interactive group activity
7. Reviewed Interagency Wetlands Leadership Group implementation tasks
8. Lingering items and completion schedule

Summary of Comments from interactive group activity:

What ways can Indiana make these Priorities a reality?

Priority 1: Increase Wetland Education

- Utilize NPDES education component, MS4 outreach
- lesson plans for school-age children on Earth Day
- class on wetland ID
- review existing professional training programs, partner with universities
- billboards
- public service announcements (PSAs) for water storage capacity – flooding (societal functions)
- Work with RC&D Ed. committee in advancing wetland field tour seminars
- Onsite training through guided tours of existing preserved wetlands for public and local officials
- Provide wetland plant ID workshops for professionals (including scholarships for travel)
- State Universities wetland short courses (2-3 weekends or weeklong)
- Additional/revamped efforts to educate landowners by SWCD/NRCS
- Working with schools to encourage outdoor education labs (grants)
- Ed. & outreach tied to/paired with wetland restoration projects (school groups, public)
- Continue outreach similar to Regional Stakeholder meetings
- Have High School students do local projects; locate, ID, GIS map, share data
- Kayak tours
- Unifying language
- Convey benefits of new wetlands

- Repurpose IDEM & Sierra Club's *Adopt a Wetland* (citizen monitoring)
- Create a website with general wetland info with links to local groups
- Fund k-12 education
- Build an interpretive center
- Dedicate a week with wetland activities
- Convey why wetlands are important
- Wetland tours
- More wetland experiences leads to caring about wetlands
- Climate change – resiliency
- Cattail pancakes (wetland themed recipes)

Priority 2: Locate Wetland Resources

- Utilize Soil Surveys
- Show examples of wetland “signatures” on current and historic aerials
- Ground truth NWIs
- Make an app for mobile devices for locating wetlands
- Make wetland mapping products Google or Google Earth based
- Citizen Scientists (see Zooniverse) website designed to allow anyone/everyone to be a part of research online
- Make IndianaMap more public friendly
- Geo-caching – leave donation at site

Priority 3: Protect and Increase Wetland Resources

- NRCS Soil Scientists available
- Incentivize private land owner preservation
- Encourage nature hikes, bog walks, swamp slosh, kayak tours
- Tax incentives or credits
- Adopt a wetland program
- Promote CRP
- Quantify the economic value of wetland functions
- Identify and document the economic benefits
- Develop economic arguments for wetlands (what they are worth)
- Create carbon credits via wetland restoration (carbon trade)
- Coordinate with Industry landowners
- Coordinate with utility companies (electric, gas, water)
- Presentations to legislature and newly elected officials on economic benefits of wetlands
- Develop better incentives, particularly with farmers, to avoid wetlands and allow mitigation on their land
- Decrease property tax from 10 acres to 5 acres on wildland deductions
- Outstanding state resource listings for wetlands
- Economic incentives
- Stormwater infrastructure BMPs
- Sell as cost-share with municipalities

Priority 4: Understand Wetland Functions, Values, Quality

- Teach Floristic Quality Assessments – high quality wetland corresponds with water quality
- Wetland soil quality in addition to water quality
- Probabilistic monitoring – look into funding to add state monitoring strategy
- Coordinate with National Aquatic Resource Surveys (NARS) – USEPA monitoring and assessing wetlands every 5 years
- Statewide routine monitoring – coordinate WQ samples with functional assessment sample locations
- Amphibian and/or insect IBI
- Floristic Quality Index
- Bird IBI
- Work with Indiana Water Monitoring Council
- Request more monitoring via National Assessment
- Citizen Scientists
- Privacy via pollution prevention
- Understand benefits – outcomes (algae)
- Flood storage – land use impacts (education)
- USFWS (early 1990s) PSA Garfield author Jim Davis, 1-800-cattail

Priority 5: Develop Statewide leadership

- Monitor wetlands located on development projects that were minimized & avoided
- Legislation that would allow interest groups and agencies to share more information
- Remove political input on wetland/permitting decisions
- Coordination – fish habitat partnerships (USFWS)
- Coordination – State Wildlife Action Plan (IDNR)
- Statewide stakeholder working group (all interests)
- More robust interpretation of existing regulations
- Use wetland website as coordination clearinghouse. Include forum – “ask a professional”, etc.
- Agriculture Marginal Land program (stormwater credit program)
- Mitigation for impervious
- Educate policy makers and public officials
- Comprehensive plan coordination with land planners (unigov options)
- Conservation partnership leadership (NRCS, SWCD, Land Trusts, ...)

Review and revise Implementation Plan action items – interactive group activity

Goal 1: Education

- add “economic value”
- utilize economists
- curriculum (Civil War Soldier), children’s museum – interactive
- clearinghouse website – wetland.org
- 4th grade curriculum – H2O cycle & Indiana history
- How to convince developers that economics are better in keeping wetlands
- Public shaming – cheaper to pay fines than to get permits
- Make developer responsible for future flood damages
- Wetlands are poor development sites – planning commission roles
- Checklist – land inspected/certified by wetland specialists

- Academy – leaning functions
- Benefit vs obstacle
- Focus group – planners
- Classes at universities
- Van tours
- Models – pathways to water quality
- As part of education of wetlands – include worst case scenario “what if all wetlands were gone?” wetland apocalypse
- Pg15; As website is updated (item 1), promote new materials (marketing)
- Pg15 Typo in item #5 – INAFSM
- Pg15; last item - Photo database – add “publically accessible” website
- Add phases to implementation timeline to make sequencing of actions more apparent
- Pg16 item 3, inventory..., add “new 4H soil & water manuals to include wetland info”
- Pg17 item 2, “pilot these locally”
- Pg17 2nd to last item; Use “message” in place of PSAs
- Page18 item 1 – timeline should be sooner, can be simpler format early, and build out over time

Goal 4: Promote Wetland Conservation

- Pg 21; Revise first action item for clarification, longer timeline
- Pg21; Define high quality/high priority wetlands (function/size/etc) and what scale (HUC), potential partners – IN Land Protection alliance, IDNR acquisition
- Concern with #6 – litigation from landowners, who will verify wetland locations
- Cost for local tax abatements should be higher
- What coordination is occurring between WPP and ILF
- With item “generate top 20...” – create a non-profit wetland land trust for protection of donated small isolated wetlands
- Create “habitat” stamp for Indiana like migratory waterfowl stamp (funding for IDNR/IDEM wetland conservation programs)

Goal 5: Encourage Wetland Restoration

- Pg22 item 2; What constitutes a restoration priority? define criteria for defining top 50 list?
- Pg22 item 2; Use larger HUCs and have multiple sites per HUC
- Pg22 Third item – ID programs by region
- 4th item – list of seasoned contractors
- 5th item – broad guidelines possible, site specific guidance would be extensive
- Item #8; Clearinghouse of conservation plans
- Wetland friendly signage

These comments from the October 2014 stakeholder sessions were reviewed by IDEM and its partners for incorporation into the final Plan. Many items provided enhancement to action items or new action items for several of the Priorities. Some items should be revisited/refined as progress is made. Overall, the reaction to the Plan by most stakeholders involved in the process was positive. Many are interested and excited to help the State push initiatives forward.

WRITTEN COMMENTS RECEIVED

Written comments were received via the project email address during the draft plan comment period. These comments are summarized in the below table. Additionally, two official response letters were received during the comment period and have been included in this section. Comments and letters are presented as submitted

Table 5. Draft IWPP public comments

Name	Organization	Comments
Eric Fisher	Starr Associates	more effort to create wetland banks throughout Indiana that existing or new wetlands, marshes, etc. can be incorporated into BMPs
Kent Ward	Hamilton County Surveyor	need longer comment period
		I noted that on page 3 of the plan it lists the members of the Steering committee. All members of this committee are employees of the regulatory agencies. I would suggest that it should have also included members of the regulated community such as local government, farm organizations, engineering and surveying professionals and representatives of the building / development community, etc.
		Throughout the plans is mentioned various appendices, A through F. These are not included in the draft available for review. If one expects a thorough review the entire document should be presented. Is this standard practice for an agency to provide only a portion of the document for review during an open comment period?
		On page 5 under Water Quality Standards for Wetlands the document states "The EPA guidance on WQS for wetlands includes the following five key steps; 1) define wetlands as "state waters";". Has this already been done under either a rule or statute? Perhaps a section of the existing rules and statute governing wetlands in Indiana would be useful in the document.
		Page 10 under section 5.1, 2nd paragraph, 2nd line reads "...was developed to provide was developed in 2005...". May want to rewrite this sentence.
		Page 11, 3rd paragraph, 1st and 2nd lines reads"...DNR, TNC, and TNC." May want to rewrite this sentence.
		Page 13, 1st paragraph, line 10 reads "...wetlands, House Bill 1217 tasks ...". I would suggest that this should read "...wetlands the 2014 House Enrolled Act 1217 amended Indiana Code 14-8-2-199 and added Indiana Code 14-28-1-37 and 38. This Act tasks...".
		Page 14 should have listed those organizations listed on page 29. Also listed should be what the abbreviations R&P, Reg., M&A, and WQS stand for.
		I was disappointed that the table for Goal 4 did not include the amending of IC 6-1.1-6-5 to reduce the acreage for " Wildlands" from 10 acres to 5 acres for property tax credits.

Name	Organization	Comments
Kevin Tungesvick	Spence Restoration Nursery	The highest quality wetlands here in east central Indiana, as well as many other glaciated areas of the state are relatively small groundwater fed systems (fens and circumneutral seeps). They are often poorly represented on the inventory maps. Sometimes they are surrounded by agricultural land that was formerly wetland but easier to drain. These surrounding agricultural lands often have high restoration potential. Their location around a remnant wetland gives them added value since conservative organisms surviving in the remnant may be able to recolonize the restoration. I would like to see if some effort could be made to map wetlands that fit this description. I would be willing to help with this effort as I am aware of many instances of this situation in Madison, Delaware, and Henry counties.
Dorreen Carey	DNR Lake Michigan Coastal Program	For wetland planning and implementation in the Lake Michigan Coastal Area please include the Indiana Department of Natural Resources Lake Michigan Coastal Program, "Indiana Coastal Nonpoint Pollution Control Plan", Wetland Section and status updates for reference: https://secure.in.gov/dnr/lakemich/files/6217_Final.pdf and https://secure.in.gov/dnr/lakemich/files/lm-Status_of_Measures.pdf
Lyn Crighton	Tippecanoe Watershed Foundation	Found one typo Page 12, 3rd paragraph – "...TNC and, and TNC."
		The only input I have is that there is so much fantastic information here, when I think about implementation – I would like to see a short list of priorities – maybe 10-12 immediate steps? Who is tracking what gets accomplished and continues to update this document?
Jay Poe	Huntington County Surveyor	On the cover page, this proposed draft says it was "Prepared by the Indiana Department of Environmental Management's Wetlands, Lakes, and Streams Regulation Team..." Why was this done in a vacuum by IDEM, and their "Regulation Team?" Why wasn't Farm Bureau involved? Experts like J.F. New or Christopher B. Burke were not consulted. Why not? Association of Indiana Counties and the Cities and Towns group were not at the table, why not? Why were the County Surveyors and County Engineers not at the table for the writing of this proposed draft? Flood Plain managers? Consulting firms from around the State of Indiana – not invited to the drafting of this proposed Indiana Wetland Program Plan. Without the views of the many, what you have is a one-sided proposed draft that was written by regulators WITHOUT ANY INPUT FROM THE REGULATED COMMUNITY!
		Why such a short comment period? Are you afraid of having a more normal length of time for people to read and try to understand this proposed document?
		The Table of Appendices on page 2. You list Appendix A, B, C, D, E, and Appendix F. Why don't you let us see these? Why are we being given such a short comment period to talk about items you won't let us see? Where are they, A, B, C, D, E, and F?
		On page 5, the first bullet point says "Regulation". I know that IDEM is here to help us at the local level, but sometimes we just plain and simple can't afford their help. We have to get employers to come to Indiana and create jobs for Hoosiers. Sometimes I believe some IDEM employees lose site of the need to have Hoosiers work.
When I see items like "1) define wetlands as "state waters"" I get nervous. Shouldn't such a definition come from the Senators and Representatives of the state? Shouldn't this be signed into law or not signed into law by the Governor? This is just wrong to do this by rulemaking!		

Name	Organization	Comments
		<p>On several pages things are written poorly. Perhaps a person with an eye or ear for proper grammar should “proof” the whole document, then maybe send it to a lawyer. A good lawyer would not let a document out that refers to a “House Bill 1217”. I’m not an attorney, but I believe each year bills are numbered and perhaps a better way to reference this would be to say something like “2014 HEA 1217” or “House Enrolled Act 1217 of 2014”. Anything would be better than how it appears on page 13.</p> <p>This page, 13, also says the “composition of the INWLG would be similar to that of the Steering Committee”. Again, what about experts, County Surveyors, County Engineers, Farm Bureau, Cities & Towns, etc. etc. having a seat at the table?</p> <p>And perhaps a definitions page, or at least an acronyms page would be helpful. A lot of organizations and terms are thrown around and a page of definitions would help those who are about to be regulated at least understand what you are talking about.</p> <p>Page 14. “Seven Year Plan and Beyond.” This page talks about costs. “Low cost items are less than a few thousand dollars.” “Moderate costs range from a few thousand to approximately 10 thousand dollars.” “High cost represent a potential need for tens of thousands to hundreds of thousands of dollars.” Have all the Senators and Representatives been told about the individual items in your plan that they will have to give you hundreds of thousands of dollars for you to do?</p> <p>From page 15 to 29, I see 15 items that you believe could cost hundreds of thousands of dollars. Does the Governor know about this? How about the State Chamber of Commerce? Senators? Representatives? Where is this money coming from? I’ll bet I know! User fees! Cities and Towns, Counties, farmers, businesses, industries!</p> <p>There are way too many problems with this proposed draft Indiana Wetland Program Plan. Respectfully, I believe it should be discarded, and a more reasonable, affordable, and well composed plan be formulated by a more diverse cross-section of Hoosiers.</p>
Carol Newhouse	Hoosier Riverwatch - IDEM	<p>P 10 ¶ 2 sentence has two verbs</p> <p>¶ 3 explain WPD grant</p> <p>P 11 ¶ 3 need to consistently use DNR or IDNR throughout, they keep flipping</p> <p>¶ 3 TNC used twice in a sentence</p> <p>¶ 4 IDEM also funds/supports lake volunteer monitoring efforts via grant to IU/SPEA and the CLP</p> <p>¶ 5 If two words used to form an adjective, they are usually hyphenated; except when modified by a “y” or “ly” ending on the leading word. Therefore “we agreed upon something” is not hyphenated. But “the agreed-upon option” is hyphenated. These are lacking or used intermittently throughout the document.</p> <p>P 12 ¶ 1 at end of paragraph I think you want to use the word “through” instead of though</p> <p>¶ 3 IC or IAC citations as used here are usually within () for easier reading</p>

Name	Organization	Comments
		<p>¶ 4 use colon after word website to make the list following it easier to read (Semicolon would not be appropriate unless it followed word "documents", since what follows expands on the idea of the documents. Doesn't work with this sentence's word order, however.)</p> <p>¶ 5 use word "and" before "inconsistencies", since "to" was used already</p> <p>P 13 ¶ 1 regarding House Bill 1217: Is this a state or federal bill? What year is the bill from? Is it still a bill or has it become an enrolled act (i.e. law)?</p> <p>¶ 2 long sentence needs a breather, add a comma after "wetland protection" (i.e. before "as well as")</p> <p>P 14 Title Seven-Year Plan... again, it's now an adjective describing plan</p> <p>P 17, 27, 29 several places were DNR creeps in instead of IDNR</p> <p>P 17 Row4 IDNR has authority over State Park messages and displays</p> <p>Row5 who is entity behind 'teaching wetlands'? should it be referred to as a campaign?</p>
Susan Bodkin	Hancock County Surveyor	I am a little surprised you are asking for comments because it appears that this draft is not complete. The appendices are not even there to review. This might be a good starting point but not something you are wanting to get final approval. There is too much missing. I think you need to include more people such as professional firms that have experts in hydrology and wetlands like J F New, Williams Creek, Christopher Burke, etc. There is no one representing the agriculture sector like farm bureau or NRCS. The local government is not included – surveyors, commissioners, and highway. I agree we need to identify wetlands so we do not violate any rules but this document is not ready. I am oppose to rules and requirements that are vague and want approval as implied on page 5. The first bullet point is regulation. I am opposed to the draft plan being approved as it is.
Matt Buffington	IDNR - Fish & Wildlife	See attached pdf - DNR response wetland plan
Justin Schneider	Indiana Farm Bureau	See attached pdf - IFB state wetland plan comments final



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October 23, 2014

Jill Hoffmann
Wetland Program Planning Team
Empower Results LLC
1052 Woodlawn Avenue
Indianapolis, IN 46203

Re: DNR response to draft Wetland Program Plan

Dear Ms. Hoffmann:

The Indiana Department of Natural Resources has reviewed the plan referenced above. The Division of Fish and Wildlife offers the following response to the plan. Most of the comments relate to the various goals and actions listed in the implementation table but there are also broader comments regarding the plan.

A comprehensive Wetland Program Plan needs to address education, policy/regulations, and market incentives for wetland protection, avoidance, and restoration. The plan does include all of these aspects, though different people are likely to place the various strategic actions in different priority. A goal of the program should be a balance of these actions. The implementation plan table is extremely long and ambitious so a ranking of actions within each goal as well as for the plan as a whole would be beneficial to help guide the program. Some of the more challenging or costly options might otherwise be avoided even if they offer significant benefits as compared to easier and cheaper actions. In addition, some of the deliverables may already be available through other programs. While discussed briefly below, it would be beneficial to direct some resources to looking at what might be available from other states and federal agencies, particularly EPA.

Knowing where existing wetlands are is a laudable goal and would probably improve many of the regulatory activities. However, the process needs to be well thought out and detailed. For instance, wetland boundaries are normally somewhat fluid over time. Also, for regulatory purposes the US Army Corps makes the final decision on wetland boundaries but presumably would not be doing so for a statewide mapping effort. Issues relating to staff resources and expiration of delineations would be problematic. Along those lines, wetland delineations would presumably still be required as part of any 401/404 permit to fill wetlands, whether wetlands are mapped or not. Just as the current NWI maps are used as a tool, these new maps would also be a tool, albeit a much better tool than the current NWI, and not a solution to permitting.

Creating water quality standards for wetlands may cause unintended consequences unless there is considerable variation of standards among wetland types and situations. For example, an entity with a wetland or that is trying to restore a wetland might divert water away from a wetland if that incoming water quality would cause the wetland to not meet the standards. Also, some restoration efforts may not occur if it would have difficulty reaching the water quality standards. Any "green infrastructure" projects are probably not going to have the best of water quality in them but these are important areas to work. Often, the need for a wetland is exactly where it would receive high nutrients and sediment, which could prevent meeting water quality standards. In order to make real headway on stream water quality, wetland creation and restoration should be encouraged no matter what the water quality and not discouraged or penalized because sites do not meet a standard. All of these examples would be lost opportunities. Most times, any type of wetland in the landscape is better than none as it should provide some functions and values, though maybe not all that it is capable of reaching.

Different types of wetlands and different locations often require different monitoring requirements and success criteria. A treatment wetland should be viewed differently than a habitat restoration project; a fen will be different than forested wetland, and so on. In addition, there is some confusion about what constitutes meeting success. If a requirement is to monitor a wetland mitigation site for 5 to 10 years and success criteria needs to be met for 2 consecutive years, does this mean that if a site meets success criteria in years 2 and 3 then they can stop monitoring? It is critical that success be met late in the monitoring window as that should better reflect the long-term outcome.

It is not clear why there needs to be a review of some of the standardized habitat assessment tools, such as InWRAP and Indiana FQI. These tools certainly lack in adoption throughout the state but it is not clear there is a need for testing.

The wetland awareness goal discusses the importance of a consistent message to more effectively promote the importance of wetlands. As with other ideas in the plan, this is probably a worthy goal but perhaps a difficult one to attain. Because different entities have different missions with regard to wetlands, there is often a need to express different messages. For example, IDEM's 401 WQC program focuses on water quality and fill within the WOUS. Under DNR's Construction in a Floodway permit process, the environmental focus is avoiding unreasonably detrimental impacts upon fish, wildlife, and botanical resources within the floodway. While there is considerable overlap between these regulatory programs, the fundamental bases are different: fill and water quality (IDEM) versus protection of specific species and habitat (DNR). The differences expand as more interests are considered, thereby confounding the ability to create a consistent message that properly addresses all the interests.

Once a set of messages are established, the DNR, Division of Fish & Wildlife, can help with the expanding wetland awareness goal. Perhaps the most effective wetland curriculum currently available is the Wonders of Wetlands (WOW) program which is a separate activity guide and workshop offered through the Project WET program. Also, both Project WET and Project WILD (especially the aquatic guide) have excellent activities which teach about wetlands. The DNR already has a good network of volunteers who can offer statewide trainings in these programs.

Letter to Ms. Hoffmann (Wetland Program Plan)

October 23, 2014

Page 3

Coordination among DNR, other state agencies such as IDEM, and various other partners could result in an expansion of these training workshops.

The use of more and better incentives for wetland avoidance is probably overdue. However, there are extensive questions about the types of incentives: would they be one time or perpetual, is there a model program (CRP or something that uses conservation easements), would there be penalties for removing sites from a program, etc. Again, looking to other states and federal agencies may provide some insight into what might be good and bad ideas.

Preservation of high quality wetlands that are in danger of being destroyed is certainly an idea that should be considered, especially as part of an avoidance incentive program. Preservation of lower quality sites or those that are not in danger of being lost should not be considered suitable forms of mitigation in most cases. Preservation results in loss of wetland area, functions, and values. Preservation should be used in combination of other forms of mitigation so there is at least a 1:1 replacement of lost acreage. It is not clear if the first item under Goal 4, page 21 means that there should be a combination of preservation and a reduced mitigation ratio. Allowing this seems to run counter to the idea of preserving and restoring wetlands.

As with an incentive program, creating a training/certification program would likely be helpful but there are significant details that would have to be evaluated. Who will provide the certification, what exactly is being certified, what is needed to maintain a certification, would there be different levels of certification, would a list of certified/trained people be available to the public, etc.?

Under current funding and staff levels, the ability of DNR and probably other agencies to take on any additional activities is severely limited. With regard to education programs, these programs are typically underfunded, understaffed, and are often subject to budget cuts throughout the country. The DNR uses a network of trained volunteers to help cover the state, but even this has limitations. Education is clearly an important aspect of wetland protection but it cannot be relied upon as the main tool. Also, the education component needs to clearly define its scope as it can involve educating school children, landowners, farmers, legislators, private companies, and various state and federal agencies. It is critical to identify the best audiences for wetland education efforts and focusing on efforts directed specifically at those audiences.

There is extensive information about wetlands online, including efforts to provide a "clearinghouse" of information. In most cases, such clearinghouses are established because there is a concern of too much information spread out across the internet. The creation of multiple clearinghouses more-or-less defeats the purpose of creating a clearinghouse. It seems like much of the information under Goal 2, Phase 1 and 2, is currently available.

Letter to Ms. Hoffmann (Wetland Program Plan)

October 23, 2014

Page 4

The Society of Wetland Scientists is probably another organization to consider as a source of information and an opportunity to present at conferences.

If you have any questions regarding these comments, please contact me at (317) 233-4666 or mbuffington@dnr.in.gov.

Sincerely,



Matt Buffington
Environmental Supervisor
Division of Fish and Wildlife



October 23, 2014

On behalf of the members of Indiana Farm Bureau, I would like to thank you for this opportunity to comment upon the draft wetland program plan. Our organization has been involved in development of similar types of plans with other agencies and recognizes their importance for complying with federal mandates and meeting the requirements for obtaining federal program dollars. They also serve an important purpose in bringing parties together to develop a common-sense strategy to ensure that resources are not wasted. Thus, it is important that stakeholders have the opportunity to engage in plan development. It is even more critical that agencies understand the real world implications of their plans and actions.

Your effort to obtain public input is commendable. However, based upon concerns that have been expressed to us, it appears that many organizations representing stakeholders who have property with wetlands or those in local government were not aware of the opportunity to engage in this effort. We were able to participate through the on-line survey but had no other interaction in the process. If direct in-person discussions took place as indicated in the plan, it may have been beneficial to have cast a wider net to include more from the regulated community. It is possible that engagement with some of these other organizations and representatives from government occurred and that information is just not publicly known. If those did not occur, the credibility of the plan and its implementation will likely be more challenging.

A significant concern of our organization is the general lack of understanding of regulatory authority with respect to wetlands. Our staff regularly hears concerns from agencies about failure of our members to seek approval for activities and from our members about the confusing morass of regulations from multiple agencies. Over last fall and winter, we worked to develop information on the regulatory authority of IDEM, EPA, Army Corps of Engineers and NRCS. Just as we were completing what we believed to be the final drafts, the proposed "waters of the US" rule was issued and we held off issuing materials while that rule was being discussed. However, we urged agencies then as we do now to clarify what is a wetland and what that means for regulatory purposes as well as water quality, habitat, and the like. We are pleased that expanding wetland awareness is acknowledged as a priority. We also suggest that materials are developed which are not just stuck on a website with the hope that someone find it. Rather, efforts should be made at sharing that information with the regulated public.

A real challenge for agencies is that they may talk to each other or those who they consider significant stakeholders, but there is often a failure to actively engage with the regulated community. Under goal 1, the plan is to present wetland topics at certain professional conferences and to designated groups. I am familiar with most of the organizations listed and believe that the focus is largely on interacting with those who are already aware of wetland issues and regulations. I suggest that the focus be expanded to include groups such as Farm Bureau audiences as well as those of others who may be impacted such as builders and manufacturers. The outreach must include real, practical information that people can walk

away with. There may be opportunities to jointly publish articles in ag publications or use public service announcements. Farm Bureau is willing to coordinate with the agencies on this effort.

Related to outreach is the importance of coordinated strategies and efforts between agencies. This is highlighted under goal 9 in the recognition of House Enrolled Act 1217. This has been a concern of the regulated community and members of the General Assembly for many years. As the number and complexity of regulations increases, it is more vital than ever those agencies do all they can to streamline processes and create efficiencies. Economic growth and development depend on certainty and efficiency and current regulatory programs do not meet the high standards which must be achieved and which this plan can help provide if implemented appropriately.

We support the use of mapping tools to provide information but do have concerns with their use as enforcement mechanisms. On-the-ground verification is needed to ensure that models and other predictive tools are accurate. Numbers and pictures they produce are not exact, and sometimes wholly inaccurate. Unfortunately, with expanded responsibility and cuts to government budgets, the ability to accurately assess features and effects in the real world is limited. Publicly available information tools can be a great asset in ensuring compliance with the law. They can also provide a great opportunity for harassment of individuals. Experience has shown that presence of a feature on a map can lead to calls for enforcement from neighbors because they assume an entire area in which work is occurring is a wetland.

In goal 4, agricultural drainage practices are listed as a threat to Indiana's wetlands. Farmers who participate in NRCS programs are prohibited from converting wetlands to produce an agricultural commodity or planting crops on a converted wetland. To the extent the plan implies to the contrary, we believe that the threat has been overstated.

The draft plan notes that current wetland protection efforts mostly focus on protection of wild animal populations. A significant concern of our members has been that many projects are undertaken or land is acquired with a relatively narrowly defined goal. Financial resources are limited and wetlands can accomplish a variety of goals. It is important to prioritize the types of wetlands that will be protected and/or restored and work to include a broad range of concerns. The nutrient management/soil health strategy for Indiana agriculture developed by the ag organizations in conjunction with input from state and federal agencies and conservation organizations recognizes that green infrastructure such as wetlands could serve as one means of reducing nutrients and sediment which enter our waterways. Largely though, it appears that use for nutrient removal has not been a priority consideration for projects which have been announced or completed in recent years.

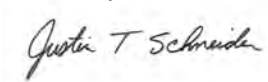
One regular concern we hear with respect to wetland mitigation is the cost of monitoring. There is no disagreement that mitigation efforts should be shown to be successful. But as proven time after time, functioning wetlands will develop given time. We are aware of situations in which high quality wetlands have developed in a few short years while government agencies and landowners disagree about what appropriate restoration of a converted wetland would be. We have worked with farmers who are more than willing to mitigate a wetland by creating additional wetlands but are concerned with the high cost of monitoring that they will face. Businesses that stand to make millions off of an acre of property and

who can pass the cost to customers do not face the same financial constraints as a farmer or other landowner who stands to make tens or hundreds of dollars off of a converted acre of wetland. If the conversion of small, isolated and low quality wetlands can lead to the development of larger wetlands which can provide additional benefits, there should be incentive for doing so which includes more flexibility in monitoring.

We also note that land acquisition and the use of tax incentives are priorities for protecting wetlands. Taking property from the tax role when it is acquired by the state and the use of incentives can create real financial challenges for local government. Additionally, the use of creative incentives is only effective to the extent that the responsible parties can complete all steps needed to ensure that the requirements are met. We suggest that any efforts on this part become part of the larger discussion regarding property taxes and that an appropriate fiscal analysis be completed by the Legislative Services Agency.

Once again, we thank you for your consideration of these comments and look forward to continued discussions and collaboration on these issues.

Sincerely,

A handwritten signature in cursive script that reads "Justin T. Schneider".

Justin T. Schneider
Sr. Policy Advisor and Counsel