

Indiana Stream & Wetland Mitigation Program (IN SWMP)

Indiana's In-Lieu Fee Mitigation Program

Brad Baldwin

IN SWMP Mitigation Specialist

GLWQA DAP – WLEB

Advisory Committee Meeting

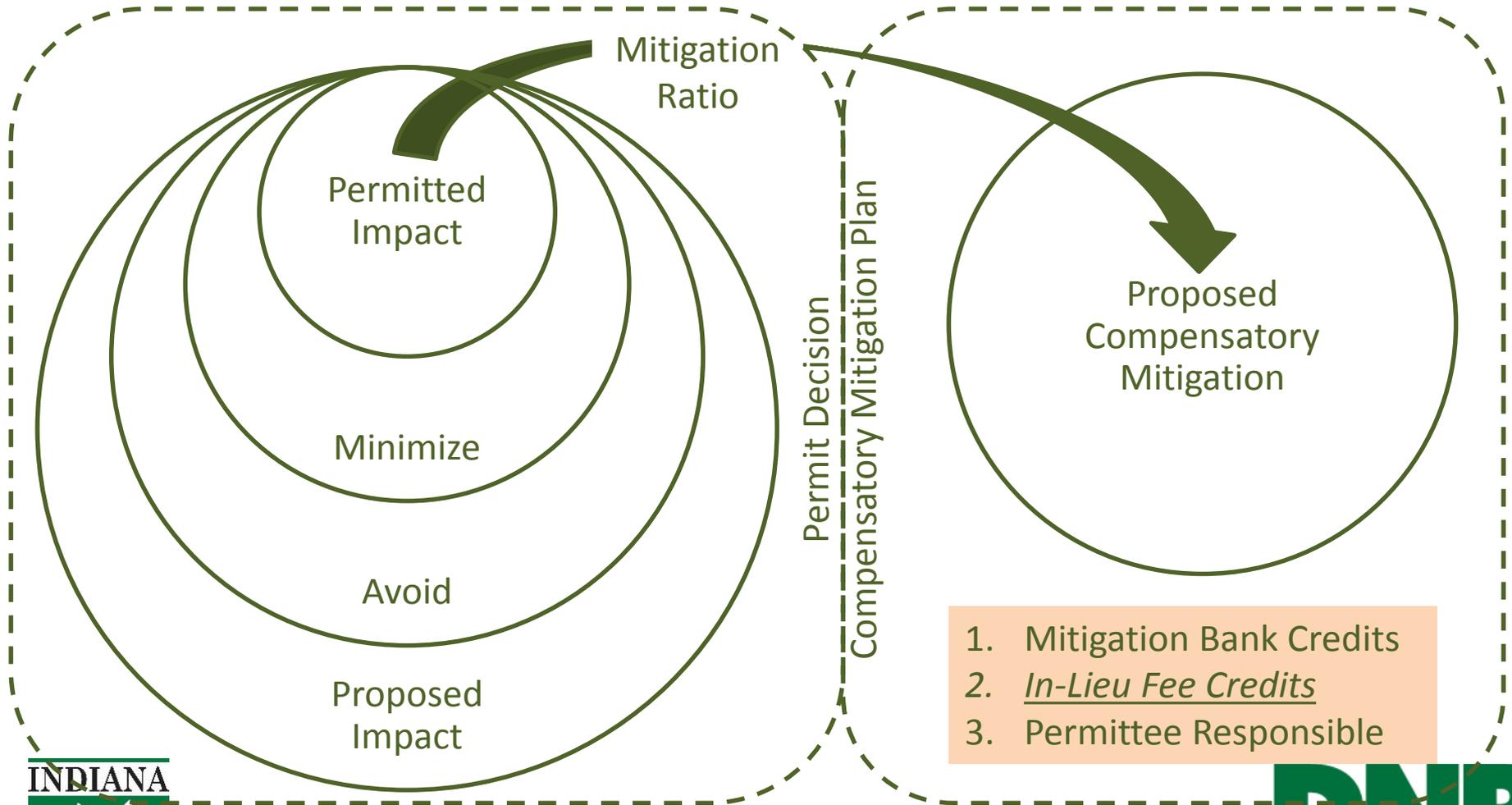
December 14, 2018



Permits for the Program

- **Army Corps of Engineers** – regulations under:
 - Section 10 Harbors Act
 - Section 404 of Clean Water Act (CWA)
- **Indiana Dept of Environmental Management** – regulations under:
 - Section 401 Water Quality Certifications (CWA)
 - Indiana Isolated Wetlands Law
- **Indiana DNR Division of Water:**
 - For construction in a floodway, public freshwater lake or navigable waterway

Mitigation Process

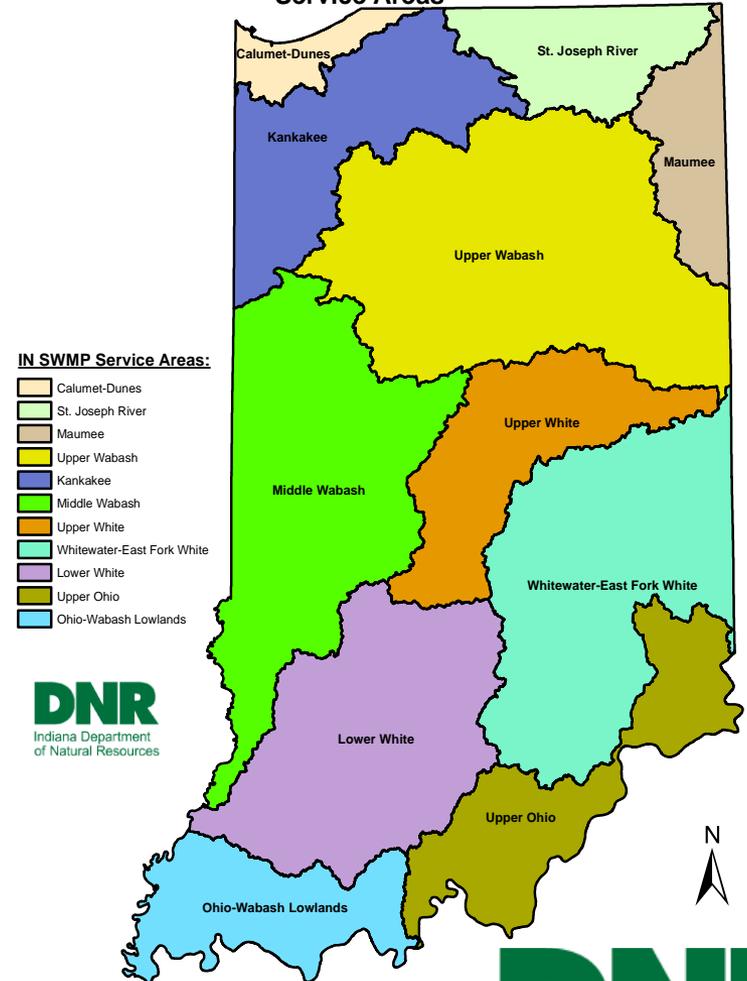


1. Mitigation Bank Credits
2. *In-Lieu Fee Credits*
3. Permittee Responsible

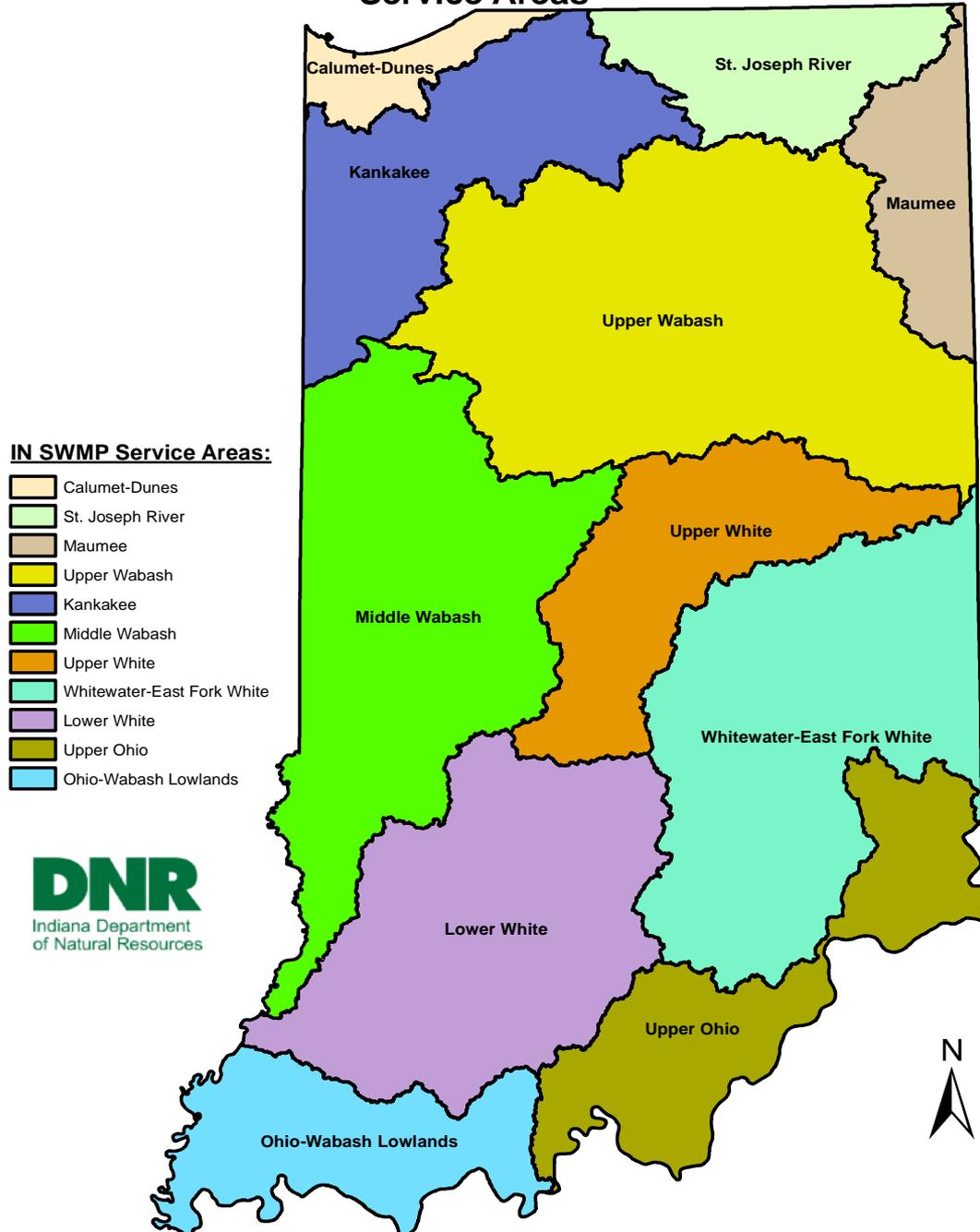
Indiana Stream and Wetland Mitigation Program

- Reduce Public's Regulatory Burden
- Shortens project timeframes
 - Finding suitable mitigation sites
- **11 Statewide, Watershed-Based Service Areas**
- Integrate into other Conservation Efforts
- Consolidate Mitigation
 - Gain Efficiencies
 - Consolidate w/other conservation
 - Increase Ecological Significance
 - Prioritization of potential projects using Compensation Planning Framework (CPF)

Indiana Stream and Wetland Mitigation Program
Service Areas



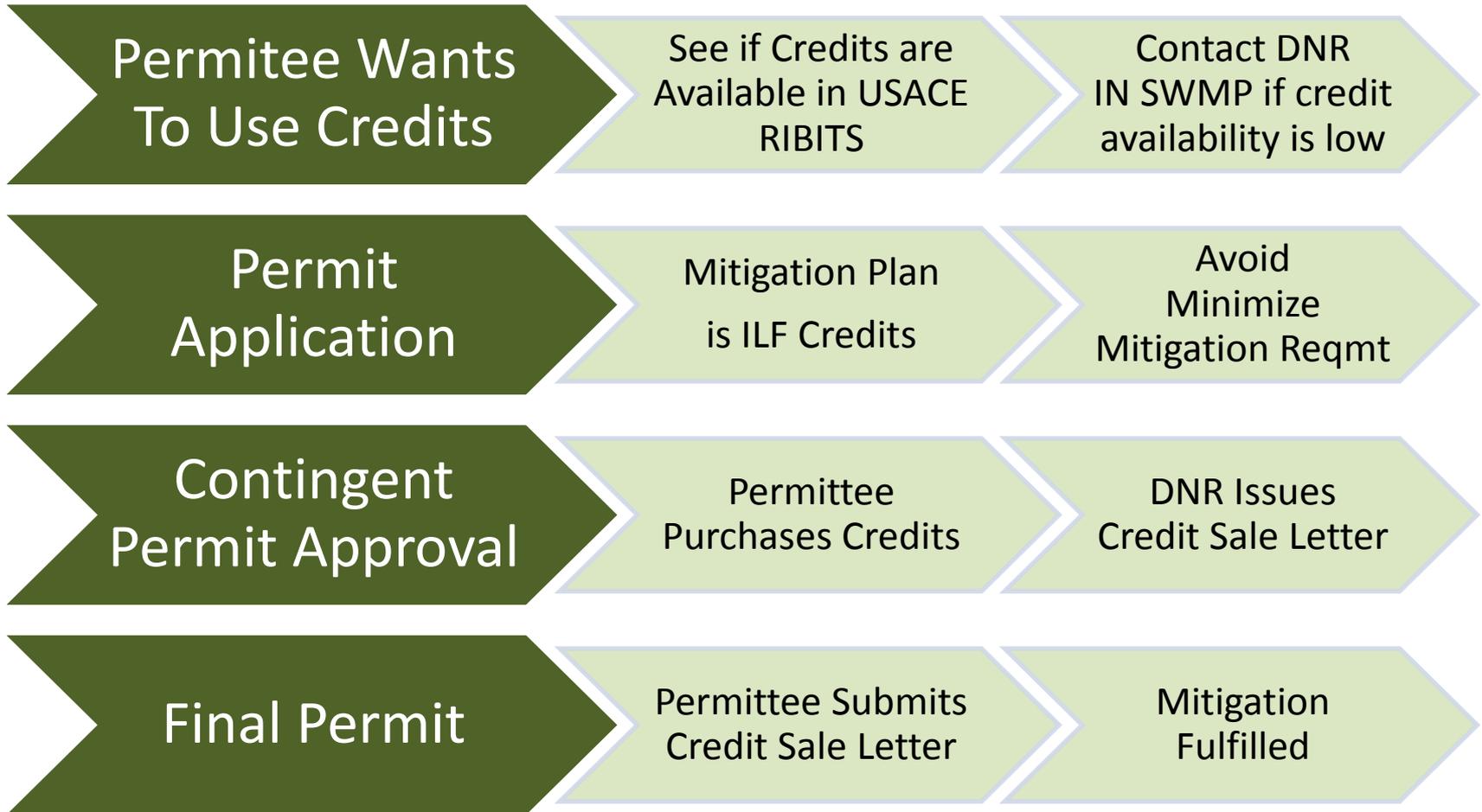
Indiana Stream and Wetland Mitigation Program Service Areas



HOW WILL DNR'S PROGRAM WORK?



Credit Sales



Advanced Credits Available

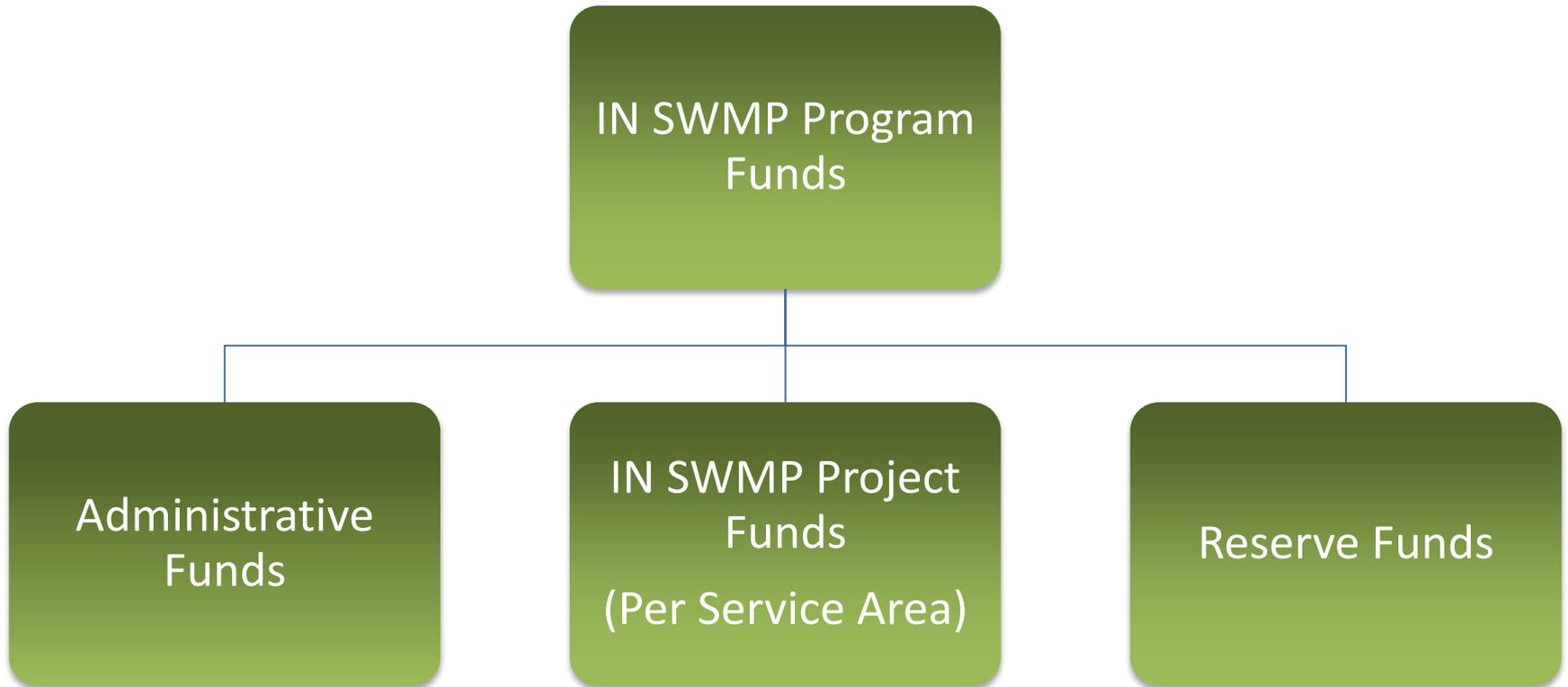
Service Area	Wetland Credits	Stream Credits
Calumet-Dunes	90	45,000
St. Joseph River (Lake MI)	90	45,000
Maumee	90	45,000
Kankakee	90	45,000
Upper Wabash	90	45,000
Middle Wabash*	90	45,000
Upper White	120	60,000
Whitewater-East Fork White	90	45,000
Lower White*	90	45,000
Upper Ohio	90	45,000
Ohio-Wabash Lowlands*	115	50,000

***Up to an additional 50% more credits in these 3 SAs;
35% additional possible in other 8 SAs**

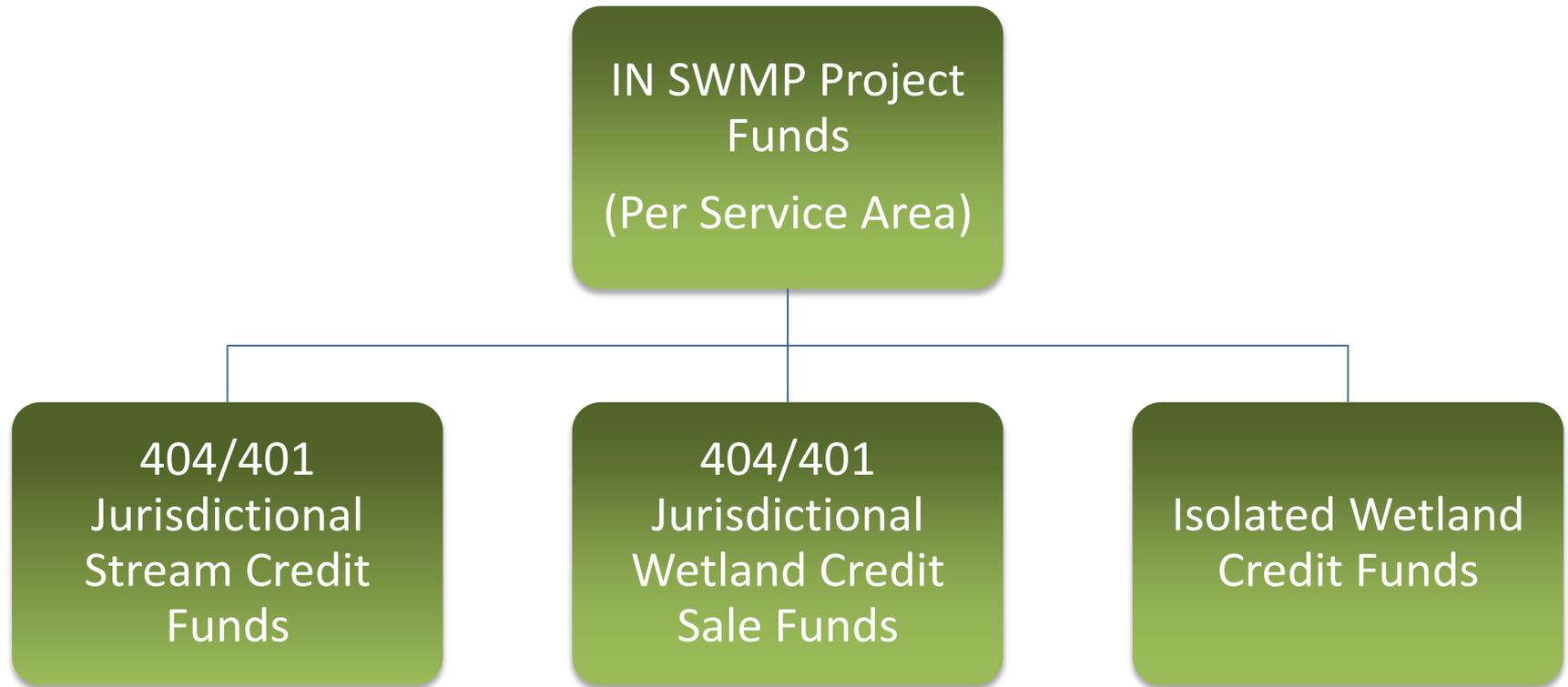
Credit Pricing

Service Area	Stream Credit Price	Wetland Credit Price
Calumet-Dunes	\$600	\$95,000
St. Joseph River (Lake MI)	\$600	\$120,000
Maumee	\$450	\$80,000
Kankakee	\$500	\$95,000
Upper Wabash	\$400	\$80,000
Middle Wabash	\$400	\$80,000
Upper White	\$450	\$80,000
Whitewater-East Fork White	\$400	\$80,000
Lower White	\$400	\$80,000
Upper Ohio	\$400	\$80,000
Ohio-Wabash Lowlands	\$400	\$80,000

IN SWMP Funds



IN SWMP Funds



Credit Price Components

<u>Project Component</u>	<u>% of Credit Cost</u>
Land Acquisition/Protection	up to 50%
Engineering Design/Plan Development/PM	up to 20%
Financial Assurances	up to 20%
Construction	up to 60%
Monitoring / Adaptive Management	up to 20%
Long Term Management	up to 20%
Contingencies	up to 15%
IN SWMP Administration Costs	up to 15%

***Credit pricing must include FULL COST ACCOUNTING for full delivery**

Planning Minimum Project Size

Service Area	Wetland Credits	Stream Credits
Calumet-Dunes	20	2,000
St. Joseph River (Lake MI)	6	1,500
Maumee	20	4,000
Kankakee	10	3,000
Upper Wabash	20	9,000
Middle Wabash	15	10,000
Upper White	35	14,000
Whitewater-East Fork White	25	7,000
Lower White	20	9,000
Upper Ohio	20	7,000
Ohio-Wabash Lowlands	35	11,000

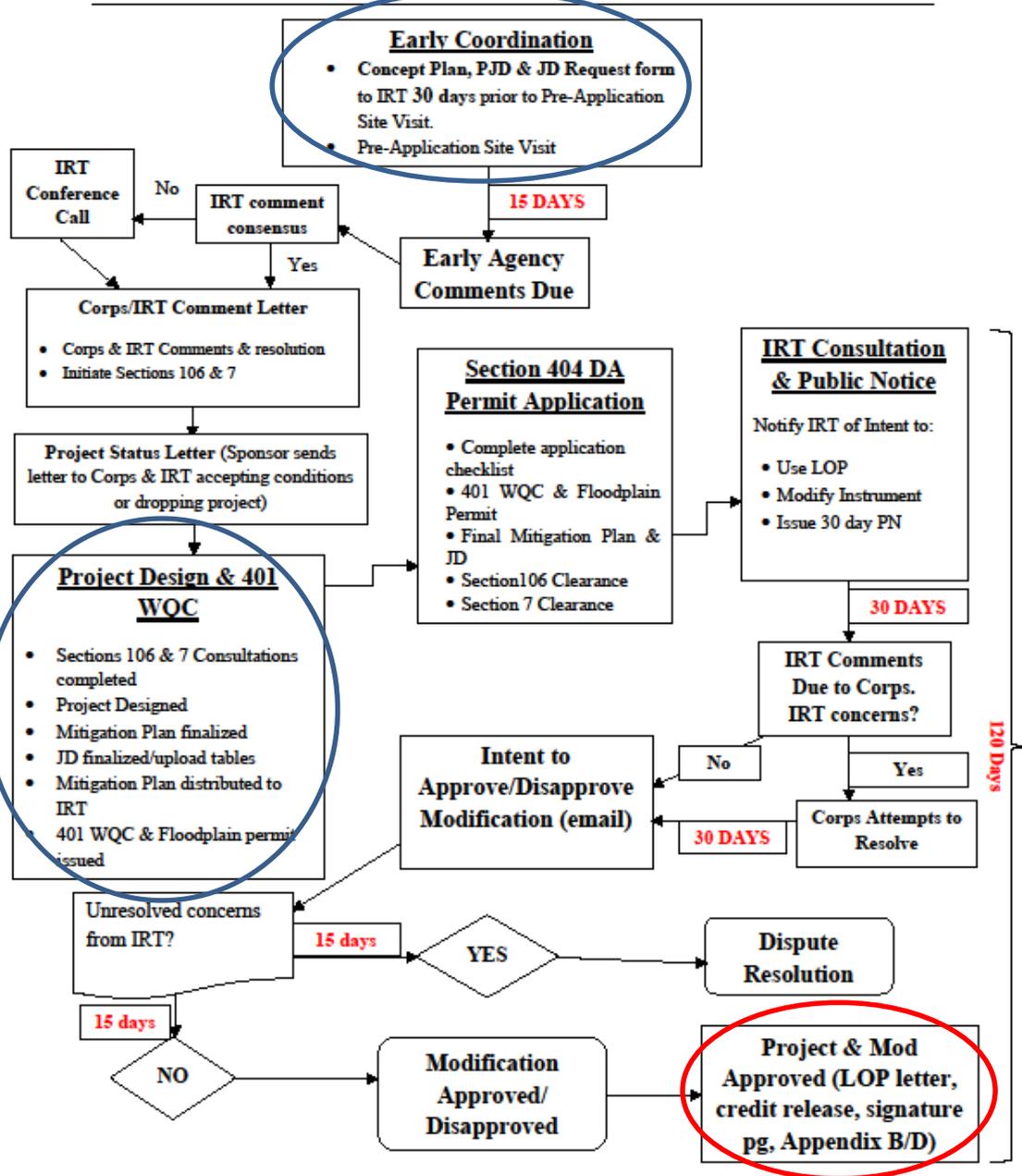


*This is based upon our business model and historical mitigation data from the Corps (2009-2015) → full restoration.



LOP Implementation Process

“Letter of Permission”



Contractors for IN SWMP

- IDOA Division of Public Works
 - Pre-certification required through IDOA PW for both Consultant/Designer and Contractors
 - Design Category: Wetland and Prairie Restoration
 - Currently the Consultant Selection Process
 - Construction Category: Wetland, Stream and Upland Restoration and Mitigation
 - Competitive Bid

IN SWMP Mitigation Projects

Sponsor/DNR will identify potential mitigation projects for advance credits sold (and yet to be sold)

1. Develop/submit a **Conceptual Project Plan** & JD
 - Early Coordination/Site Visit → Submit concept plan
 - Corps & IRT review & approval to move forward
 - Land acquisition/site protection
2. Develop/submit a **Mitigation Project Plan** / Design
 - Corps & IRT review & approval process; permitting
3. Construction of project
4. Monitoring & Maintenance (5-10+ yrs)

Credit Generation

- In general credits generated by IN SWMP mitigation projects will be calculated according to the following schedule:
 - ❑ Restoration (Re-establishment) – 1 to 1
 - ❑ Restoration (Rehabilitation) – 0.6 to 1 thru 1 to 1
 - ❑ Establishment – 1 to 1 (at the time all ecological performance standards are met)
 - ❑ Enhancement – 0.1 to 1 thru 0.6 to 1
 - ❑ Riparian Habitat Enhancement – 0.2 to 1 thru 0.5 to 1
 - ❑ Preservation – 0.1 to 1
- The Corps and/or IDEM in consultation with the IRT may approve variances from the above ratio for specific IN SWMP projects.

Credit Release Schedule

- **15% mitigation credit release** after site protection and approved Section 404 permit;
- **5% additional mitigation credit release** (20% cumulative) upon DE acceptance of “As Built” Report;
- **60% additional mitigation credit release** (80% cumulative), divided equally for each year monitoring performance standards are met, not including final year of monitoring.
- **20% additional mitigation credit release** (100 % cumulative) once the final performance standards have been met and when long term management plan and funding is in place and the DE has provided written release from monitoring to the Sponsor.

Compensation Planning Framework

- The CPF follows the eleven elements required under 33 CFR §332.8 (c).
- CPF provides a statewide approach with additional specificity within each of the 11 service areas

Federal Mitigation Rule: 11 Elements

- (i) The geographic **service area(s)**, including a watershed-based rationale for the delineation of each service area;
- (ii) A description of the **threats to aquatic resources** in the service area(s), including how the in-lieu fee program will help offset impacts resulting from those threats;
- (iii) An analysis of **historic aquatic resource loss** in the service area(s);
- (iv) An analysis of **current aquatic resource conditions** in the service area(s), supported by an appropriate level of field documentation;
- (v) A statement of **aquatic resource goals and objectives** for each service area, including a description of the general amounts, types and locations of aquatic resources the program will seek to provide;
- (vi) A **prioritization strategy** for selecting and implementing compensatory mitigation activities;

CPF Elements...

- (vii) An explanation of how any **preservation objectives** identified in paragraph (c)(2)(v) of this section and addressed in the prioritization strategy in paragraph (c)(2)(vi) satisfy the criteria for use of preservation in §332.3(h);
- (viii) A description of any **public and private stakeholder involvement** in plan development and implementation, including, where appropriate, coordination with federal, state, tribal and local aquatic resource management and regulatory authorities;
- (ix) A description of the **long-term protection and management strategies** for activities conducted by the in-lieu fee program sponsor;
- (x) A strategy for **periodic evaluation and reporting on the progress** of the program in achieving the goals and objectives in paragraph (c)(2)(v) of this section, including a process for revising the planning framework as necessary; and
- (xi) **Any other information** deemed necessary for effective compensation planning by the district engineer.

Mitigation Project Selection:

Compensation Planning Framework

- CPF includes a “Statewide Prioritization Strategy” for project selection
 - 1) Must Replace Lost Functions & Services
 - 2) Re-establishment / Rehabilitation / Establishment / Enhancement / Preservation
 - 3) Within or Adjacent to Other Priority Conservation Areas
 - 4) Address identified threats, current conditions and historic loss within the watershed/SA
- Each Service Area has more specific priorities

Targeted Stream Restoration Projects

- Poor functioning, impacted streams, channelized, eroded, etc.
- Disconnected from the floodway, little flood attainment/capacity
- Minimal riparian areas and poor connection/linkage
- Lack of quality fish and wildlife habitat
- water quality issues
- High ranking conservation opportunities, etc.



Targeted Wetland Restoration Projects

- Historically tiled, drained, and impacted wetlands
- Adequate hydrology, frequently flooded sites
- Hydric soils, Hydric Inclusions, etc.
- Meets the watershed/landscape approach
- EX: marginal agricultural land, altered sites due to anthropogenic impacts, etc.



Threats to Aquatic Resources

The predominant threats to aquatic resources and habitats throughout Indiana as a result of anthropogenic activities include, but are not limited to, the following:

- Habitat conversion
- Habitat alteration
- Habitat fragmentation
- Habitat degradation
- Aquatic resource loss
- Altered surface and groundwater hydrology
- Increased and accelerated erosion and sedimentation
- Stream channelization
- Stream instability
- Loss and/or impairment of aquatic system functions and services
- Point source pollution
- Non-point source pollution
- Invasive and non-native species

*NOTE: mitigation activities to help offset threats are identified in the statewide portion of the CPF

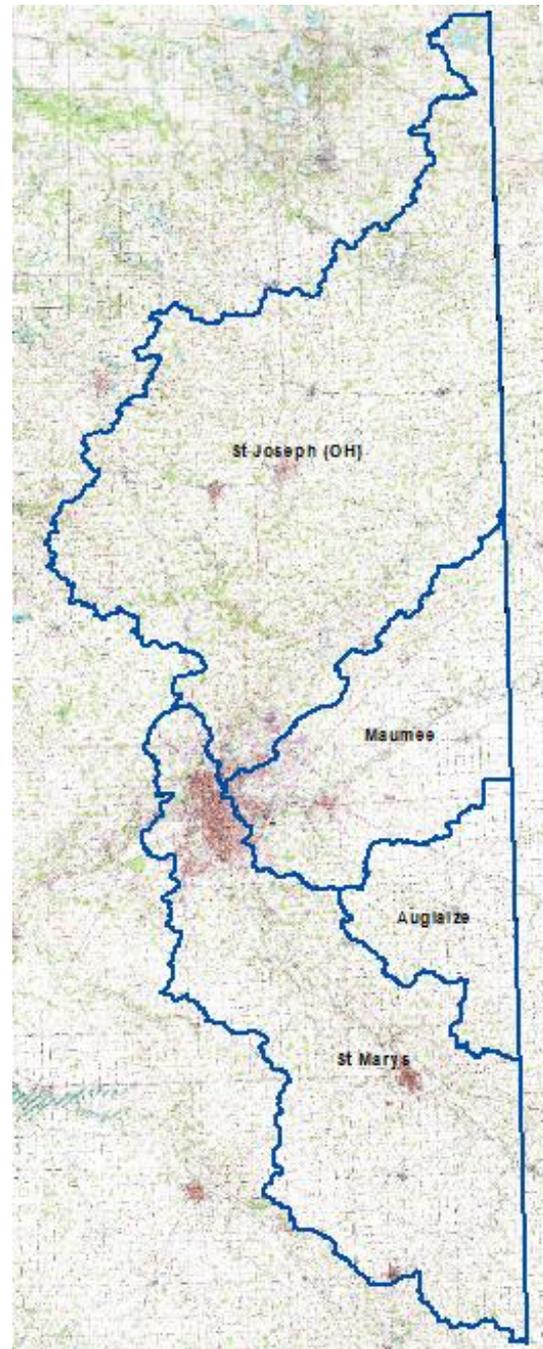
Threats to Aquatic Resources

The major anthropogenic categories of activities, both historic and ongoing, that have resulted in the above-listed threats to the chemical, physical and biological integrity of aquatic resources and habitats across Indiana include, but are not limited to the following:

- **Growth and Development:** Residential, commercial and industrial developments and land use, urban areas, suburban areas, towns, waste and drinking water treatment plants, airports, local utilities and easements, local roads, train yards, golf course, parks, campgrounds, landfills.
- **Agricultural Land Use:** Cultivated crops, livestock grazing, hay/pasture lands.
- **Dams, Levees and Non-Levee Embankments:** High head dams (instream dams impounding water such as reservoirs), low head (in-channel) dams, flood control levees and flood walls, non-levee embankments.
- **Energy Production and Mining:** Coal mining, mineral and gravel mining, and oil and gas production.
- **Transportation and Service Corridors:** Interstates, federal and state highways, railroads, bridges, culverts, oil and gas pipelines, electric transmission lines, shipping lanes and regional utility easements.

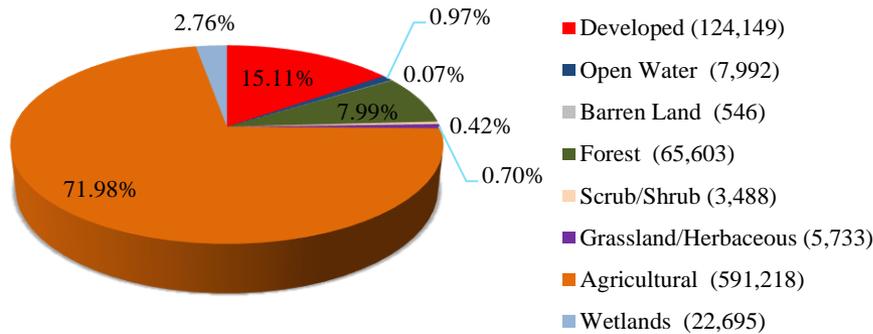
The Maumee Service Area is located is composed of the following 8-digit HUCs:

- 04100003 - St. Joseph
- 04100005 - Upper Maumee
- 04100007 - Auglaize
- 04100004 - St. Marys

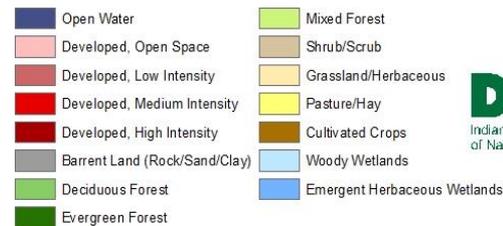
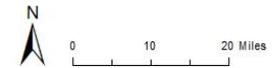
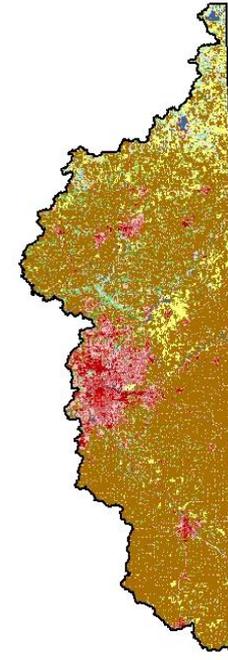


Maumee SA Land Cover			
Class	Value	Sum of Acres	Percent of Total Acres
Open Water	*	7,992	0.97%
Developed	Open Space	58,242	7.09%
Developed	Low Intensity	42,024	5.12%
Developed	Medium Intensity	15,990	1.95%
Developed	High Intensity	7,893	0.96%
Barren Land (Rock/Sand Clay)	*	546	0.07%
Forest	Deciduous	64,542	7.86%
Forest	Evergreen	997	0.12%
Forest	Mixed	64	0.01%
Shrub/Scrub	*	3,488	0.42%
Grassland/Herbaceous	*	5,733	0.70%
Pasture/Hay (Agriculture)	*	56,744	6.91%
Cultivated Crops (Agriculture)	*	534,474	65.07%
Wetlands	Woody	19,8234	2.41%
Wetlands	Emergent Herbaceous	2,872	0.35%
Grand Total		821,425	100%

Maumee Service Area Combined Land Use (Acres)

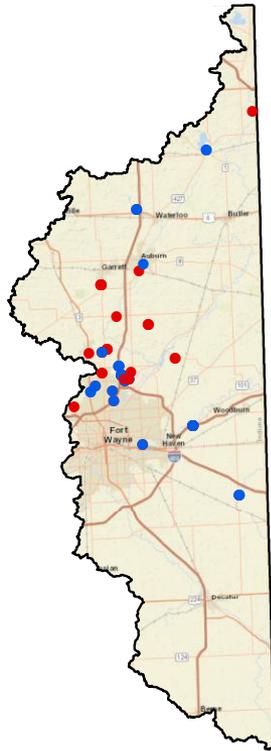


Maumee Service Area 2011 Land Cover



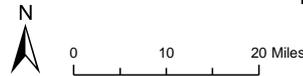
Maumee Service Area

404 Permitted Aquatic Resource Impacts Requiring Mitigation



Work Type	Authorized Stream Impacts – Linear Feet	Percent of Stream Impact per Category	Authorized Wetland Impacts - Acres	Percent of Wetland Impact per Category
Agriculture	0	0.00%	0	0.00%
Dam	0	0.00%	0.587	1.34%
Development	1,478	14.57%	8,283	18.92%
Energy Production	0	0.00%	0	0.00%
Transportation	8,663	85.43%	34,912	79.74%
Grand Total	10,141	100.00%	43,782	100.00%

Authorized 404 stream and wetland impacts requiring mitigation by work type category, 2009 – 2015.



- Wetland
- River/Stream

DNR
Indiana Department
of Natural Resources

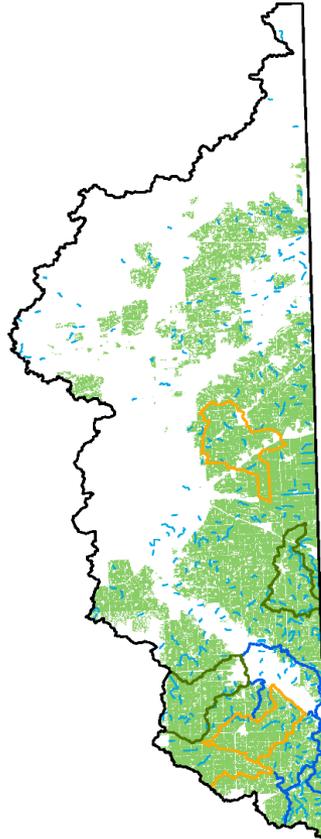


Maumee Service Area Goals and Objectives

1. Restoration, enhancement and preservation of aquatic resources **to help offset the dominant and anticipated threats** in the SA.
2. Implement stream and wetland restoration, enhancement and/or preservation **projects that contribute to improvements to watershed functions and services as well as Lake Erie water quality**; preserve and buffer high quality threatened habitats unique to the Great Lakes Region that are not yet protected such as remnants of the Black Swamp and those identified in the Great Lakes Restoration Initiative.
3. **Re-establishment of historic aquatic resources** that have experienced high concentrations of loss, fragmentation and/or impairment, such as the identified concentrations of potentially restorable streams and wetlands to include any channel restoration needs.
4. Implement **projects within and adjacent to current and future areas identified as conservation** priorities by federal, state and local government entities, and non-governmental organizations (stakeholder involvement/conservation partnerships).
5. **Preservation of rare and high quality aquatic resources**; critical habitat for rare and endangered species; priority habitat for species of greatest conservation concern; and/or other areas meeting the requirements of 33 CFR §332.3(h).
6. **Implement natural stream channel restorations** in order to help offset chemical, physical and biological impairments and degradation resulting from anthropogenic activities to include considerations such as in-stream habitat, physical integrity, riparian cover, and potential removal or modification of dams.
7. Target stream, riparian and wetland restoration, enhancement and/or preservation **projects in urbanized areas** acknowledging the challenges and constraints that will likely occur within intensely developed areas in this SA.
8. Support critical habitat restoration for federal and state listed **SGCN** within and adjacent to aquatic resources while applying the **SWAP identified conservation needs and actions in the Great Lakes Planning Region where feasible**.
9. Restoration of riparian and lacustrine wetlands to offset threats to, and improve functions and services of, aquatic resources that will **improve connectivity** of formerly extensive wetland and natural lake complexes throughout the SA that have been degraded by, and/or lost to, conversion.

Maumee Service Area

Concentrations of Potentially Restorable Streams and Wetlands

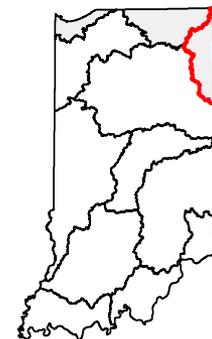
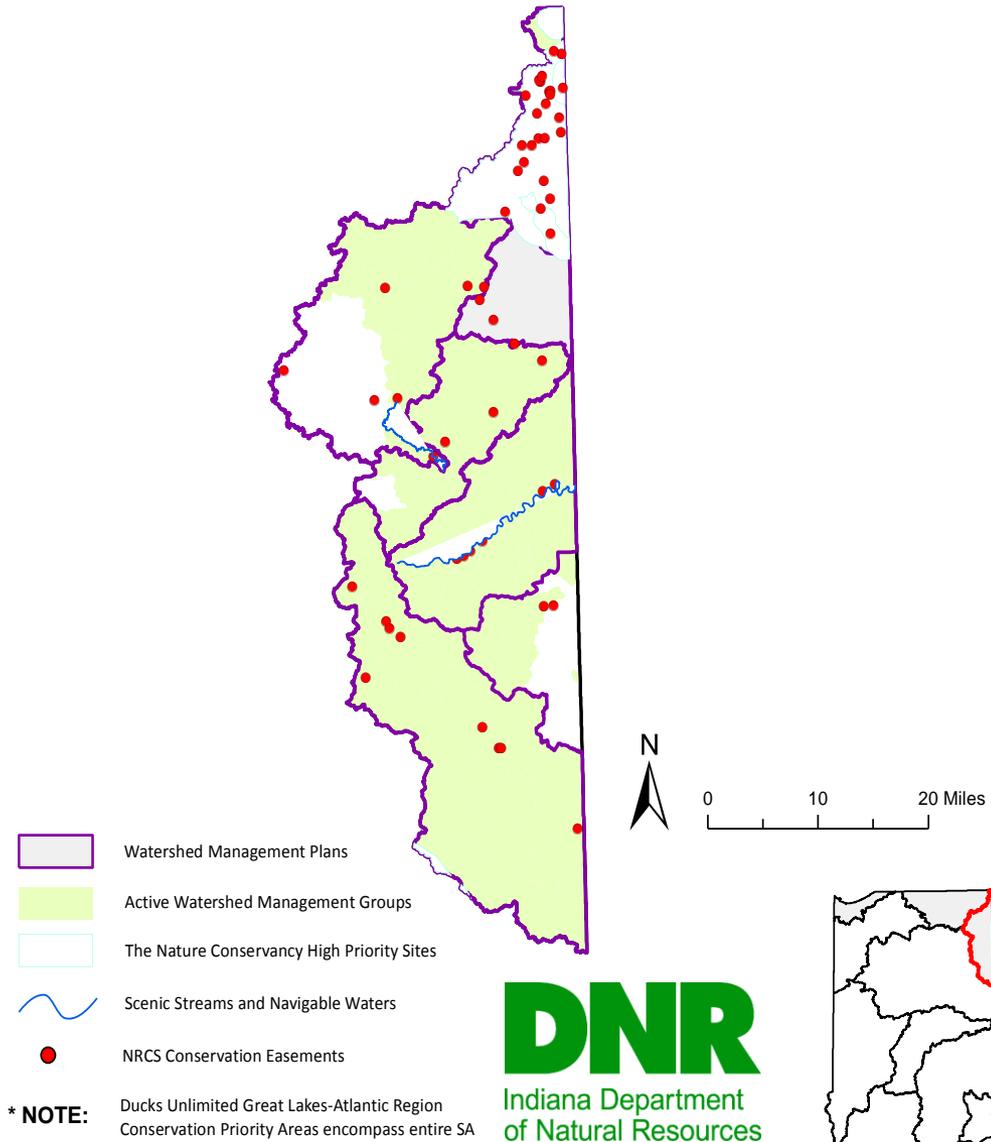


0 10 20 Miles

- Potentially Restorable Streams
- Potentially Restorable Wetlands
- Concentration Areas**
- Stream
- Stream and Wetland
- Wetland



Maumee Service Area High Priority Aquatic Resource Conservation Sites



IN State Wildlife Action Plan - SWAP

The Maumee SA is located entire within the Indiana SWAP Great Lakes Planning Region. The SWAP identifies the most significant threats to habitats and SGCN within the Great Lakes Region as:

- Habitat conversion and loss
- Natural systems modification
- Invasive species
- Dams
- Fish passage
- Point and non-point source pollution
- Water management and use
- Housing and urban areas
- Commercial and industrial areas
- Agriculture, aquaculture, livestock
- Roads and service corridors
- Changing frequency, duration, and intensity of drought and floods

IN SWMP Partnerships & Considerations

- Ideally, DNR wants to partner with other conservation orgs/programs/funding sources
- ILF Program/Project Restrictions
 - May not be likely on lands acquired with federal \$\$\$ - federal coordination will be required
 - Need to show ecological uplift; increase in resource/function
 - All projects will require real estate restrictions (CE)
 - **Legal Drains will be a challenge = vacation of drain**
- Ownership of IN SWMP projects
 - DNR, land trusts, local gov't parks dept., Feds, private
 - DNR will hold CEs on property we do not own in title
 - Long-term maintenance funding post-release

Conservation Partners...

- Provide input into restoration project plans and long-term management plans (ex: unique habitat)
- Limited resources and funding constraints on conservation efforts (i.e. acquisition of new land or current holdings, etc.)
- Input and coordination on restoration projects, might allow your funds to go towards more conservation efforts
- Receive long-term management funds, upon IN SWMP release from monitoring

Questions?

Carl Wodrich
Assistant Director, Division of Land
Acquisition
317-232-1291
cwodrich@dnr.IN.gov

IN SWMP Mitigation Specialists:

Brad Baldwin (North) – 317-234-9702
bbaldwin@dnr.IN.gov

David Carr (South) – 317-234-9703
dcarr@dnr.IN.gov

<https://on.in.gov/inswmp>



Indiana Department of
Natural Resources

Indiana Stream and Wetland Mitigation Program (IN SWMP)
Division of Land Acquisition

<http://www.in.gov/dnr/heritage/8340.htm>

IN SWMP Contacts

For Initial Inquiries to IN SWMP,
please email:

INSWMP-Inquiry@dnr.in.gov

Carl Wodrich
Director of Ecological Services
IN SWMP Program Director
317-232-1291
cwodrich@dnr.in.gov

Calumet-Dunes
Service Area



Brad Baldwin
Mitigation Specialist
317-234-9702
bbaldwin@dnr.in.gov

North



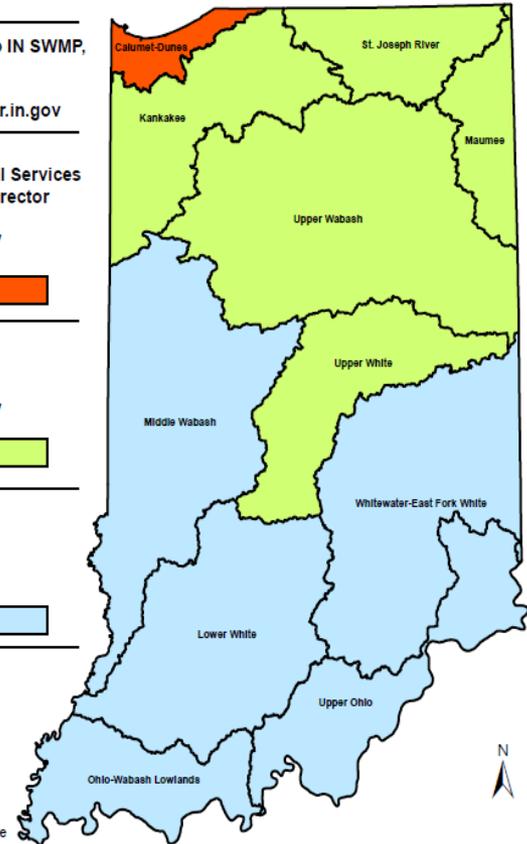
David Carr
Mitigation Specialist
317-234-9703
dcarr@dnr.in.gov

South



IN SWMP Service Areas:

Calumet-Dunes
St. Joseph River
Maumee
Kankakee
Upper Wabash
Middle Wabash
Upper White
Lower White
Whitewater East Fork White
Upper Ohio
Ohio Wabash Lowlands



IDNR Indiana Stream & Wetland Mitigation Program
June 2017