

Conceptual Wetland Mitigation Plan

**U.S. 31 Improvement Project
Plymouth to South Bend
In Marshall and St. Joseph Counties, Indiana**

May 13, 2005

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Appendix A - Possible Mitigation Sites

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U.S. 31 Improvement Project Plymouth to South Bend Wetland Mitigation and Enhancement Plan

The following mitigation plan is offered for potential impacts to “Waters of the United States” by the construction of the proposed US 31 from Plymouth to South Bend, Indiana. This mitigation plan is conceptual and compensatory for probable wetland losses by the preferred alternative (Alternative G-Es). A more detailed mitigation and monitoring report will be developed as the project proceeds.

I. Introduction

The Memorandum Of Agreement Between The Department of the Army and The Environmental Protection Agency pertaining to The Determination of Mitigation Under the Clean Water Act Section 404 Guidelines updated on December 31, 2002 states that appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been undertaken. Compensatory actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands) should be undertaken when practicable, in areas adjacent or continuous to the discharge site (on-site compensatory mitigation). If on-site compensatory mitigation is not practicable, off-site compensatory mitigation should be undertaken in the same geographic area if practicable (i.e., in close proximity and, to the extent possible, the same watershed). In determining compensatory mitigation, the functional values lost by the resource to be impacted must be considered. Generally, in-kind compensatory mitigation is preferable to out-of-kind. There is continued uncertainty regarding the success of wetland creation or other habitat development. Therefore, in determining the nature and extent of habitat development of this type, careful consideration should be given to its likelihood of success.

Wetland Impacts

Potential wetland impacts for the US 31 Plymouth to South Bend project have been identified from the use of USGS Maps, NWI Maps, NRCS soil surveys, 2002 aerial photographs, and field review of the Preferred Alternative G-Es. US Army Corps of Engineers (USCOE) verified wetland delineations have been completed for the footprint of the Preferred Alternative. The footprint is 300 feet wide in most areas and 20.5 miles long. It includes proposed interchange and overpass locations. Representatives from the USCOE and the Indiana Department of Environmental Management (IDEM) reviewed the impact locations during a field review on October 4 – 6, 2004. A “Waters of the US” Verification Report dated May 2, 2005 details the wetlands and streams potentially impacted by this project. The May 2, 2005 report is the revised version of the original report dated September 28, 2004 and revised on November 30, 2004. Wetland mitigation will follow the Detroit District USCOE Mitigation Guidelines and Requirements dated June 2004.

This project is anticipated to impact approximately 29.93 acres of wetlands, of which 13.21 acres are forested wetlands, 1.45 acres are scrub/shrub wetlands, and 15.27 acres are emergent wetlands.

In a jurisdictional determination letter dated February 24, 2005 (Appendix B) the USCOE identifies which impact sites are considered “waters of the United States,” thus falling under federal jurisdiction. Of the total wetland acreage impacted, 25.51 acres fall under federal jurisdiction. This includes 12.18 acres of emergent wetlands, 0.58 acres of scrub/shrub wetlands, and 12.75 acres of forested wetlands. Replacement ratios for federal jurisdictional impacts for forested wetlands are 4:1, scrub/shrub wetlands are 3:1, and emergent wetlands are 2:1. Federal jurisdictional wetland mitigation will require approximately 77.10 acres.

The remaining 4.42 acres do not fall under federal jurisdiction. This includes 3.09 acres of emergent wetlands, 0.87 acres of scrub/shrub wetlands, and 0.46 acres of forested wetlands. These sites will likely fall under state jurisdiction under the IDEM Isolated Wetlands Regulatory Program. As part of this program, isolated wetlands are grouped into one of three Classes based upon wetland quality. Class III isolated wetlands are generally of higher quality and Class I wetlands of lower quality, while Class II wetlands fall somewhere in the middle. Different wetland classes require different mitigation requirements. Prior to permitting each isolated wetland will be appropriately classified. For the purposes of this report, all isolated wetlands were assumed to be Class III and assigned a “worst-case scenario” (the highest possible) mitigation ratio, 2.5 to 1 for non-forested wetlands and 3 to 1 for forested wetlands. Approximately 11.29 acres of mitigation are estimated to be necessary to compensate for isolated wetland impacts. Under the Isolated Wetlands Regulatory Program isolated wetland impacts must be replaced with isolated wetland mitigation.

In addition, a total of 22.10 acres (25% of required wetland acreage) will be needed for buffers around wetland mitigation sites. Additional acres will be required for access easements (ingress and egress) to the mitigation sites for construction and monitoring.

Wetland impacts are within two 8-digit watersheds, the Kankakee (07120001) and the St. Joseph (04050001). Approximately 24.75 acres of wetland impacts are within the Kankakee watershed and 5.18 acres are within the St. Joseph watershed. Table 1 shows the different wetland types impacted and required mitigation in each watershed for federal jurisdictional wetlands. Table 2 shows the different wetland types impacted and required mitigation (based on “worst-case” scenario) for isolated wetlands.

Stream Impacts

The USCOE will take jurisdiction over any stream or ditch with an Ordinary High Water Mark (OHWM). An OHWM is defined as the line on the shore of a waterway established by the fluctuations of water and indicated by physical characteristics. Examples of these physical characteristics include the following:

- (A) A clear and natural line impressed on the bank.
- (B) Shelving.
- (C) Changes in the character of the soil.
- (D) The destruction of terrestrial vegetation.

(E) The presence of litter or debris.

Approximately of 7,668 feet of streams and ditches at 18 separate impact locations are within the Preferred Alternative G-Es US 31 footprint. Approximately 4,867 feet are within the Kankakee watershed and 2,801 feet are within the St. Joseph watershed. The USCOE identified all stream impacts as falling under federal jurisdiction. The majority of these streams have been previously altered by farming practices, pass through agricultural fields, and have little to no tree cover. Twelve (12) of these 18 are considered regulated drains in Marshall and St. Joseph Counties, while the remaining are ephemeral (very small) and 1 perennial (small) streams. The County Surveyor and County Drainage Boards are the technical authority on the construction, reconstruction, and maintenance of all regulated drains or proposed regulated drains in the county.

Impacts to streams as part of this project typically include bridge or culvert construction. Stream impacts will be mitigated such that the functions and values of the stream impacted are replaced. Possible mitigation measures include but are not limited to riparian plantings, bank stabilization, and in-stream habitat improvements. Stream mitigation will be completed following the requirements of all appropriate review agencies.

Open Water Impacts

A total of 0.69 acres of open water at 6 separate impact locations are within the Preferred Alternative G-Es US 31 footprint. The open water areas were generally small, excavated ponds with a narrow wetland fringe. Most open water impacts were within the Kankakee watershed.

No proposed mitigation is offered for open water impacts. Replacement of this resource will come with construction of borrow pits for fill in constructing this roadway. From INDOT's experience in construction of roadways similar to the proposed 4-lane US 31, borrow pit construction is expected to equal or provide greater than 0.69 acres of open water. Even though INDOT may not be able now to predict the location or extent of open water for such borrow pits, it is reasonably foreseeable that open water will be created and mimic or exceed the present environmental benefits of the open water being impacted by this project.

II. Goals and Objectives

The goal of wetland mitigation is to restore or create wetland functions and values that will be lost through the construction of the proposed project. Wetland restoration rather than creation of wetlands from uplands will be preferred because there is a greater likelihood of success. The goals are also to not only mitigate the environmental impacts caused by the project, but to enhance the environment. Mitigation sites should accomplish this goal and emphasize natural wetland communities that use native trees and herbaceous vegetation. It is anticipated that target functions and values for the mitigation sites may be achieved within a 3 to 5 year time frame, including flood storage and wildlife use; however, woody species will require a longer time frame to achieve their functions. Complete habitat replacement may take 20 – 30 or more years for woody species to mature. Education and research opportunities may be available through the life of the project.

The mitigation sites will replace, with a net gain, flood retention, ecological functions, and wildlife habitat values of the impacted wetland areas. Converting agricultural fields connected to existing wetland complexes will provide an opportunity for: (1) a higher “carrying capacity” for wildlife, (2) potential habitat for State and Federal listed animal and plant species such as the eastern massasauga, Blanding’s turtle, and possibly others; (4) habitat for gamebirds and passerines; and (5) habitat for many other reptiles, amphibians, and mammals. When mitigation sites mature, which may take more than 5 years, environmental benefits will be significant.

Wetland Types

Tables 1 and 2 show the different wetland types impacted and required mitigation in each watershed for federal jurisdictional and isolated wetlands.

Upland buffer strips will be located around all wetland mitigation sites to act as “filter traps”. Upland buffers may be in the form of upland forest or prairie plantings. Hydrology for wetland mitigation sites will be defined on a case-by-case basis for each site, but earth moving and maintenance requirements will be minimized to the greatest degree possible.

Table 1. Habitat types, Impacts, Mitigation Ratios, and Mitigation Required for Federal Jurisdictional Wetland Impacts for the US 31 Plymouth to South Bend Preferred Alternative G-Es.			
Habitat Type	Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
Kankakee Watershed (07120001)			
Forested Wetlands	12.32	4:1	49.28
Scrub/Shrub Wetlands	0.56	3:1	1.68
Emergent Wetlands	7.79	2:1	15.58
Wetland Buffers	-----	---	16.64
Watershed Total	20.67	---	83.18
St. Joseph Watershed (07120001)			
Forested Wetlands	0.43	4:1	1.72
Scrub/Shrub Wetlands	0.02	3:1	0.06
Emergent Wetlands	4.39	2:1	8.78
Wetland Buffers	-----	---	2.64
Watershed Total	4.84	---	13.20
TOTAL	25.51	---	96.38

Table 2. Habitat types, Impacts, Mitigation Ratios, and Mitigation Required for Isolated Wetland Impacts for the US 31 Plymouth to South Bend Preferred Alternative G-Es.			
Habitat Type	Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
Kankakee Watershed (07120001)			
Forested Wetlands	0.46	3:1	1.38
Scrub/Shrub Wetlands	0.75	2.5:1	1.88
Emergent Wetlands	2.87	2.5:1	7.18
Wetland Buffers	-----	---	2.61
Watershed Total	4.08	---	13.05
St. Joseph Watershed (07120001)			
Forested Wetlands	0	3:1	0
Scrub/Shrub Wetlands	0.12	2.5:1	0.30
Emergent Wetlands	0.22	2.5:1	0.55
Wetland Buffers	-----	---	0.21
Watershed Total	0.34	---	1.06
TOTAL	4.42	---	14.11

Note: For the purposes of this report, all isolated wetlands were assumed to be Class III and assigned a “worst-case scenario” (the highest possible) mitigation ratio, 2.5 to 1 for non-forested wetlands and 3 to 1 for forested wetlands.

Wetland Functions and Values

Wetland functions are the hydrological and biological processes and characteristics that take place within a wetland. Wetland functions may include: 1) habitat for fish, migratory birds and other wildlife, 2) protection and improvement of water quality, 3) flood storage, 4) ground water recharge, 5) protection and enhancement of open space and aesthetic quality, 6) protection of flora and fauna, 7) sediment retention, and 8) nutrient retention and/or export. Not all wetlands perform all functions, nor do they perform functions equally well. Wetland functions are often dependent on the location, size, level of disturbance, water inflow and outflow.

Wetland values are the benefits that it provides to the environment or people. Wetland values are subjective and often not easily measured. They include such things as recreational use and aesthetic quality.

The goal of the conceptual mitigation sites is to replace those functions and values lost due to the project construction. The sites will target primarily agricultural fields for wetland restoration. Wetland restoration is preferred over wetland creation because there is a greater likelihood of success. Some of these areas are connected with existing wetlands and/or upland woods.

III. Potential Mitigation Areas

Rational for Expected Success of Mitigation Areas

Reasons for expected success of the wetland mitigation sites include the occurrence of unique and high quality habitats in the areas near these mitigation sites. Mitigation sites are to extend outward from such environmentally productive sites. These sites will also involve the restoration of areas that were historically wetland, rather than the creation of wetlands from upland areas. The likelihood of success in these areas is greater because proper hydrology is more likely to be achieved and a seed bank of wetland species may also be present.

We anticipate that the proposed mitigation sites will be attractive sites for many federal and state listed TES species. The addition of these mitigation sites to existing wetland areas will accentuate the diversity of habitats within north central Indiana, and provide food, cover, and nesting sites.

The following areas are targeted for mitigation. These areas are shown in Figure 1, and a conceptual overview of each site can be found in Appendix A.

Kankakee Watershed Sites (07120001)

Potato Creek State Park
Flat Lake Watershed Area
Lake of the Woods Watershed Area
Lakeville Lakes Area
Catfish/Wharton Lakes Area
Place Trail Marsh Area

St. Joseph Watershed Sites (04050001)

Catfish/Wharton Lakes Area
Marker & Grimes Ditches Area
St. Patrick's County Park Area

IV. Mitigation Work Plan

Timing of Mitigation

Mitigation site construction will likely occur prior to or concurrent with the authorized impacts for the project. If this is not practicable, this will be explained and other measures will be described to compensate for the consequences of the temporal losses in the more detailed mitigation and monitoring report.

Site Preparation

Detailed plans for any required grading will be included in the more detailed mitigation and monitoring report. These plans will include the existing and proposed elevations (including base topographic maps showing planned site preparation), a description of plans for establishing the appropriate microtopography, and representative cross-sections of the mitigation sites.

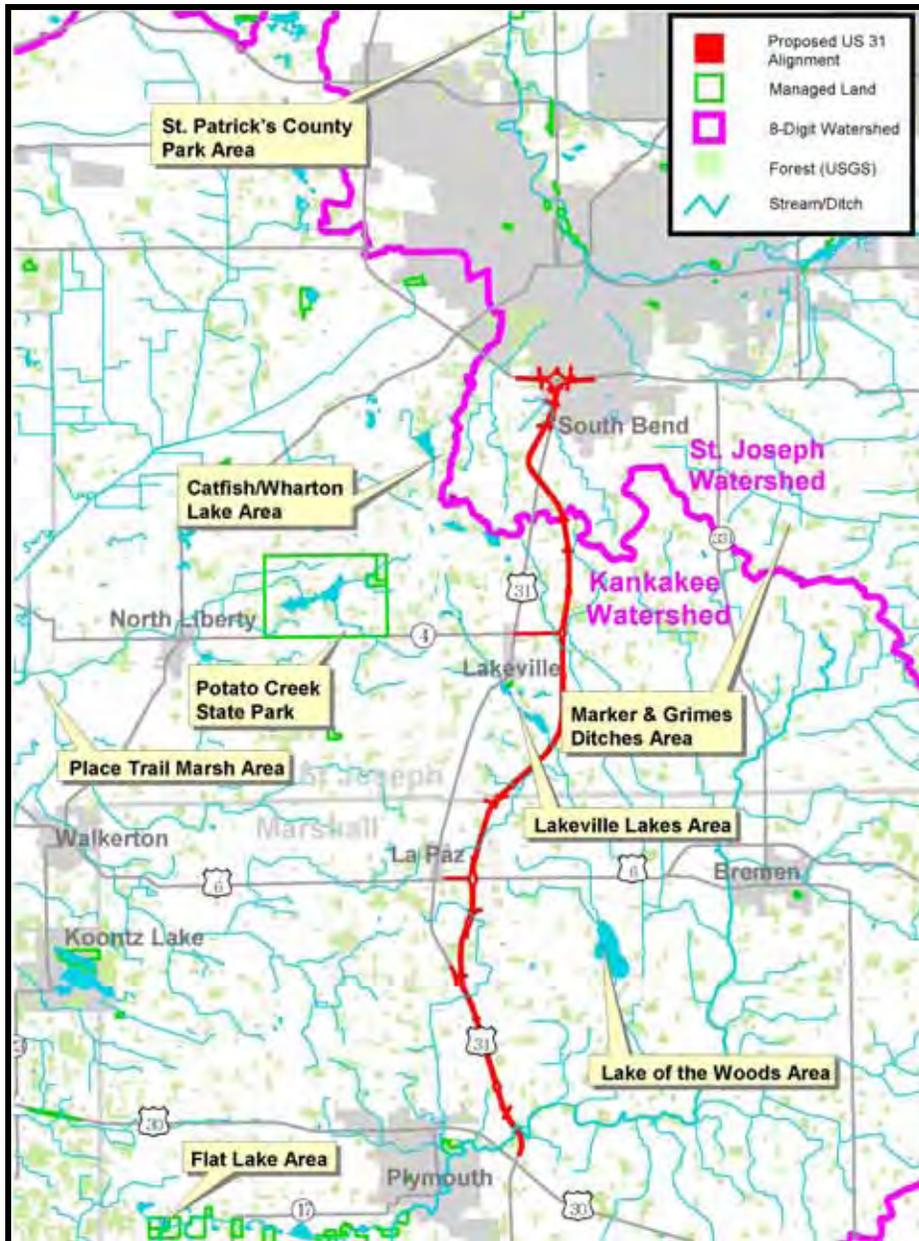


Figure 1. General Location of Conceptual Mitigation Sites

Information on the existing and proposed soil series and profiles will also be included in this plan, including the hue, value, and chroma for each horizon. The original source of any soil being transported to the mitigation site (existing soil, imported impact site hydric soil), as well as which horizon ("A," "B," or "C") will be identified in the report. Target soil characteristics as well as any soil amendments (organic material or top soil) will also be included.

Information on the current and proposed hydrological conditions will be included in the plan. The size of the watershed (including a map), the source of water, any connections to existing waters, discharge points, any existing monitoring data, and potential interaction with groundwater will be included. A storm hydrograph, direction of flow, existing and planned hydroperiod (seasonal depth, duration, and timing of inundation and saturation), percent open water, and water velocity will also be included. The report

will include the location, details, and justification of water control structures. Hydrological tables illustrating the current and projected water levels for the mitigation site will also be included. Irrigation plans will be included if applicable.

A vegetation planting plan will be included in the detailed report. A table of species to be planted, including numbers, spacing, types of propagules, plant age(s), pot sizes, scientific and common names, and the appropriate USFWS indicator status for Region 3 will be included. Also included will be the source-locale (Township and Range) of seeds, plants, or plugs, etc (only native vegetation will be used). The report will include planting locations on a base topographic map. The map will include elevations and proposed water levels. The plant spatial structure, quantities/densities, percent cover, and community structure (canopy stratification) will be included in the report. The report will also provide the location from which any transplanted plants would be obtained and describe any storage methods and duration. Any expected volunteer vegetation will be described, as well as any temporary grass seed mix (species composition) to be used as a cover crop.

The detailed report will include any other planned features to be a part of the mitigation site. These could include habitat improvement features, planned buffers, permanent signage, interpretive signs, trails, fences, etc. Habitat improvement structures will be constructed within the mitigation sites on a case-by-case basis. Examples could be bluebird boxes, wood duck boxes, bat roosting structures, raptor nesting platforms, and others.

A description of the construction equipment to be used as well as site access, and other damage control will also be included in the detailed report.

Schedule

Site preparation of wetland mitigation sites will occur in a timely manner to allow planting to immediately follow in the spring of the year. Annual monitoring for the site will begin once a full growing season has elapsed from installation of the last planted material.

As-Built Conditions

A report will be submitted to the USCOE within six (6) weeks of completion of the site preparation and planting. The report will include complete construction documents and will describe the as-built status of the mitigation project. Any derivations from the approved plan and justification for those derivations will be included in the report. Topographic maps showing as-built contours of the mitigation site as well as the location of plantings and any other installations or structures will also be included. Separate reports for grading and planting will be submitted if the work is not completed within six weeks of one another. These reports will not be considered annual monitoring reports.

V. Performance Standards

The Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency pertaining to The Determination of Mitigation Under the Clean Water Act Section 404 Guidelines updated on December 31, 2002 states that monitoring is an important aspect of mitigation, especially in areas of scientific uncertainty. Monitoring should be directed toward determining whether permit conditions are complied with and whether the purpose intended to be served by the conditions are actually achieved. Any time it is determined that a permittee is in non-

compliance with the mitigation requirements of the permit, the USCOE will take action in accordance with 33 CFR Part 326. Monitoring should not be required for purposes other than these, although information for other uses may accrue from the monitoring requirements. For projects to be permitted involving mitigation, long term monitoring, reporting, and potential remedial action should be required. Performance standards for wetland mitigation and monitoring have been proposed by the Detroit District Army Corps of Engineers in a document titled Detroit District U.S. Army Corps of Engineers Mitigation Guidelines and Requirements dated June 2004.

Factors for final success criteria are listed below:

1. Percent vegetation cover and/or density
 - a. The mitigation site must be vegetated at least 70% (areal cover for all stratum) by hydrophytic, native, non-invasive species and no more than 10% of the site may be open water, bare ground or a combination of the two.
2. Plant species diversity
 - a. The diversity of the plant community within the mitigation site must be measured. Species evenness (relative abundance of individuals among all species present) and species richness (total number of species observed) shall be determined for each monitoring period.
 - b. The diversity of the site will be calculated by a known, accepted diversity index. The diversity index used will be clearly defined and justified in the monitoring report. The calculated index score should fall within the accepted range for the diversity index. In addition, the diversity index cannot be lower than that of the impact site for the mitigation site to be deemed successful, presuming the site is in-kind mitigation. Diversity index scores are to be stable or increasing in the two years before final acceptance of the mitigation.
 - c. A Floristic Quality Assessment (FQA) may be used to evaluate the plant community structure. This would include two types of measurements for a site. The first is for the entire site, yielding species richness, average conservatism of species and a Floristic Quality Index (FQI). The second set of measures are completed at a specific plots along transects and provide relative frequency, relative dominance, and importance values for species along the transect. The FQI success criteria should include species richness, mean conservatism, and FQI values equal to or exceeding those at the impact site. Scores should be stable or increasing in the two years prior to final acceptance of the mitigation site.
3. Soils must support targeted vegetation
4. Hydrology
 - a. All sites must demonstrate sufficient evidence of wetland hydrology to meet the hydrology criteria of the Corps of Engineers Wetlands Delineation Manual for the delineation of wetlands. Wetland hydrology is to be demonstrated in “more years than not.”

5. Exotic and undesirable species

- a. Certain exotic and/or undesirable species must not be present in the mitigation site. These species include, but are not limited to: garlic mustard (*Alliaria petiolata*), panicled aster (*Aster simplex*), barnyard grass (*Echinochloa crusgalli*), purple loosestrife (*Lythrum salicaria*), eurasian water milfoil (*Myriophyllum spicatum*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and glossy buckthorn (*Rhamnus frangula*). If an undesirable species is found within the mitigation site, it must be removed and a management plan must be created to prevent the re-introduction of the undesirable species.

6. Wetland Delineation

- a. A wetland delineation, including a certified land survey of the boundary, must be submitted for Corps approval, and verified by the Corps prior to release of the mitigation site. The acreage must be equal to or greater than the required acreage.

Contingency Plan For Wetland Mitigation

Should performance standards stated above not be met, the Indiana Department of Transportation will submit an analysis of factors contributing to the discrepancy. This analysis will be included in the monitoring reports, and corrective measures will be proposed for approval by the USCOE, Indiana Department of Natural Resources (IDNR), US Fish and Wildlife Service (USFWS), and IDEM. For instance, if hydrologic conditions necessary for wetland formation are not present, this situation will be corrected by the most practical method to obtain proper wetland hydrology. If other factors result in demise of wetland plants, corrective steps will be taken to remedy the situation. This may include selective herbicide use, sediment removal, erosion control measures, animal depredation deterrents, or others. Replanting shall be performed to meet above stated performance standards. Any portions of the mitigation sites replanted shall be monitored to assure compliance with performance standards.

VI. Site Protection and Maintenance

INDOT will purchase the mitigation sites or purchase conservation easements from “willing sellers” with a restriction clause on its special use as a wetland mitigation site. Properties will have signs indicating “No Spraying or Mowing” and will be monitored for the appropriate period of time.

Maintenance activities for mitigation sites may include irrigation, plant replacement, weeding, invasive species identification and eradication, water control structure inspection, fertilization, erosion control, herbivore protection, controlled burns, and/or other activities.

VII. Monitoring

Monitoring is a basic requirement for all mitigation plans accepted by the USCOE. The monitoring plan is used to determine if and when a compensatory mitigation site has achieved the proposed yearly and final success criteria. In addition, monitoring enables the assessment of the mitigation and identifies the need to implement corrective

measures. Monitoring may be completed by INDOT or a contracted environmental consultant.

Construction and post-construction monitoring is proposed for all mitigation sites to ensure that the mitigation sites are constructed and developed as designed.

The mitigation cover types will determine the minimum monitoring period. Emergent or aquatic systems will require monitoring for three to five years. Cover types that include a scrub/shrub component require monitoring for no less than five years. Mitigation sites that include a forested component will require ten years of monitoring. Specifically, the ten years of monitoring require seven years with field visits during years one through four, six, eight, and ten. The entire mitigation site must be monitoring at each field visit.

For mitigation plantings, final success criteria will not be considered complete until a minimum of two (2) consecutive years after all human support has ceased and the mitigation site has successfully reached the mitigation goals for each of these years. Examples of human support include irrigation, replanting, rodent control, invasive species control, and fertilization.

Construction Monitoring

1. Wetland scientists and construction engineers will be available to meet with the CONTRACTOR prior to beginning wetland work to review plans and answer questions. The wetland scientist and construction engineers will review the sites again when the CONTRACTOR has completed work to ensure design goals are met. Additional site visits will be made as necessary.
2. Planting of wetland mitigation sites should be performed by someone experienced in installing wetland plants to ensure they are installed within suitable microhabitats. Species planted will require bill of lading forms indicating species, source, and number planted on that day. Sites will again be inspected by qualified wetland scientists and construction engineers following planting to ensure or guarantee that installation was completed according to planting schedule and plans.
3. Within 6 weeks of completing plant installation, INDOT will submit a report to the USCOE, IDNR, IDEM, and USFWS indicating that mitigation sites are complete. This report will describe the methodology and as-built conditions including as-built contours. Deviations from the submitted plan will be detailed and justified in this report.

Annual Monitoring

Wetland mitigation site will be monitored by the Indiana Department of Transportation until receiving approval from the USCOE. INDOT will complete an annual monitoring report detailing the results of field inspections. Monitoring reports shall assess both the attainment of yearly target criteria and progress toward final success criteria. This report will be forwarded to the USCOE, IDNR, IDEM and USFWS on a yearly basis by December 31 of each year. The report will include:

1. A list of all persons, titles, and companies who prepared the content of the annual report and participated in monitoring activities for that year;
2. Mitigation project description;
3. Reprint of the approved monitoring plan;
4. A copy of the Corps permit, Special Conditions, and any subsequent letters of modification, as an appendix;

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5. Results of all quantitative and/or qualitative monitoring concerning site characteristics, functions, and values;
 6. Graphs and/or tables depicting plant community, soil data and water level illustrating the progress of the mitigation relative to the approved success criteria;
 7. Progress in meeting yearly and final success criteria, including proposed actions to remedy any deficiencies;
 8. Digital quality prints or original photographs of all included monitoring photographs;
 9. Maps identifying monitoring sites, transects, planting zones, photo location and directions, etc., as appropriate;
 10. Suggested changes to original monitoring and maintenance, if any, including detailed rationale for the change;
 11. Any vegetation data submitted will include scientific name, common name, and USFWS wetland indicator status;
 12. Hydrophytic vegetation development data.

Monitoring Methods

The following monitoring methods are required by the Corps Detroit District:

1. Description of proposed monitoring methods, including monitoring schedule, sample sizes, justification for sampling regimes, and data analyses to be performed;
2. Permanent sampling transects, plotted on mitigation project drawings, and identified at the mitigation site(s). Transects must represent all plant communities within the mitigation sites;
3. The methods will include sampling regimes for vegetation, soil and hydrology within the mitigation sites. In addition, exotic species surveys and planted species survival rates are required;
4. Vegetation monitoring must begin at the established sampling points in the next growing season following the initial planting. At least one inspection must occur per monitoring year for the life of the required monitoring period to document hydrology, vegetation, and soils. In addition, for two of the monitoring years, but not during Year 1, hydrology must be documented two times, at least 60 days apart. Only one report per monitoring year is required regardless of the number of inspections;
5. Provide samples of all proposed data sheets;
6. Photos shall be taken during each monitoring period from the same vantage point and in the same direction every year. The photos shall reflect material discussed in the monitoring report. Photographs should be taken of sampling quadrants when percent cover estimates are made of herbaceous vegetation. A panoramic overview incorporating the entire site will be included.
7. Continuity of monitoring methodology will be maintained in order to ensure comparable assessments.

The following are considered optional monitoring methods:

1. Growth rates for herbaceous vegetation, trees and/or shrubs;
2. Wildlife surveys;
3. Amphibian surveys;
4. Macroinvertebrate sampling, and
5. Water quality sampling.

VIII. Adaptive Management Plan

An Adaptive Management Plan will be included in the detailed mitigation and monitoring plan. INDOT will be responsible for the long-term management and protection of the site(s). Once the site(s) have been monitored for the appropriate length of time and deemed successful by the appropriate review agencies, they may be given to another interested state agency or organization. Sites will retain easements such that they remain as wetlands in perpetuity.

The Adaptive Management Plan will also identify potential challenges to the mitigation plan. Such challenges may include flooding, drought, invasive species, seriously degraded conditions, adjacent property problems, animal/waterfowl degradation to planted species, etc. The plan will include potential remedial measures to these challenges in the event the mitigation does not meet performance standards. Methods to prevent the introduction and establishment of invasive species (listed under #5 of V. Performance Standards) as well as methods to eradicate and control such species will be included in the plan.

IX. Financial Assurances

INDOT will be the party responsible for managing financial matters pertaining to the mitigation site(s).

X. Summary

This Conceptual Wetland Mitigation Plan proposes to restore approximately 88.39 acres of wetlands for impacts to approximately 29.93 acres of wetlands due to the construction of the US 31 Improvement Project (Plymouth to South Bend). In addition, approximately 22.10 acres of wetland buffers will be created.

Of the total wetland acreage impacted, 25.51 acres fall under federal jurisdiction. This includes 12.18 acres of emergent wetlands, 0.58 acres of scrub/shrub wetlands, and 12.75 acres of forested wetlands. Replacement ratios for federal jurisdictional impacts for forested wetlands are 4:1, scrub/shrub wetlands are 3:1, and emergent wetlands are 2:1. Federal jurisdictional wetland mitigation will require approximately 77.10 acres.

The remaining 4.42 acres do not fall under federal jurisdiction, and are considered isolated. This includes 3.09 acres of emergent wetlands, 0.87 acres of scrub/shrub wetlands, and 0.46 acres of forested wetlands. For the purposes of this report, all isolated wetlands were assumed to be Class III and assigned a "worst-case scenario" (the highest possible) mitigation ratio, 2.5 to 1 for non-forested wetlands and 3 to 1 for forested wetlands. Approximately 11.29 acres of mitigation are estimated to be necessary to compensate for isolated wetland impacts. Under the Isolated Wetlands Regulatory Program isolated wetland impacts must be replaced with isolated wetland mitigation.

To offset unavoidable wetland impacts caused by this project, compensatory mitigation is being offered to replace lost wetlands within the same watershed. Two 8-digit watersheds will be crossed by the Preferred Alternative G-Es, the Kankakee (07120001) and the St. Joseph (07120001). Approximately 76.99 acres of wetlands and 19.25 acres of wetland buffer will be required for mitigation in the Kankakee watershed.

Approximately 11.40 acres of wetlands and 2.85 acres of wetland buffer will be required for mitigation in the St. Joseph watershed.

Replacement of wetlands at the proposed mitigation sites will be designed to replace the functions and values lost at the impact locations. Areas adjacent to existing high quality habitat and areas where there is community interest will be targeted for mitigation. Mitigation sites will be restricted from other uses to ensure they remain in a natural condition in perpetuity.

Approximately of 7,668 feet of streams and ditches at 18 separate impact locations are within the proposed US 31 footprint. Approximately 4,867 feet are within the Kankakee watershed and 2,801 feet are within the St. Joseph watershed. The USCOE identified all stream impacts as falling under federal jurisdiction. The majority of these streams have been previously altered by farming practices, pass through agricultural fields, and have little to no tree cover. Stream impacts will be mitigated such that the functions and values of the stream impacted are replaced. Possible mitigation measures include but are not limited to riparian plantings, bank stabilization, and in-stream habitat improvements. Stream mitigation will be completed following the requirements of all appropriate review agencies.

Appendix A

Possible Mitigation Sites

Potato Creek State Park

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED Kankakee (07120001)

APPROXIMATE MITIGATION

Emergent Wetlands	=	25 acres
Scrub/Shrub Wetlands	=	5 acres
25% Buffer (Upland Prairie)	=	8 acres
Size of Mitigation Site (Proposed)	=	38 acres

DESCRIPTION

This mitigation site is located within the Potato Creek State Park. The park was established in 1977 and includes a 327-acre Worster Lake. It contains a variety of habitats including hardwood forests, prairie, sedge meadows, marshes, and ponds. Because of the variety of high quality natural communities, the park is home to numerous types of wildlife including songbirds, raccoon, fox, coyote, and turkey. Wetland restoration in targeted areas in the park would add to the existing attractive habitat.

SPECIES

This mitigation site is targeted for the following:

American bittern	Black tern	Sharp-shinned hawk
Broad-winged hawk	Virginia rail	Sandhill crane
Sedge wren	Henslow's sparrow	Northern harrier
Spotted Turtle	Blanding's turtle	Kirtland's snake
Eastern massasauga	Butler's garter snake	

POTENTIAL PARTNERSHIPS

Potato Creek State Park (Indiana Department of Natural Resources)

CONCEPTUAL PLAN

This site would include primarily wet prairie, wet meadow and marsh with scrub/shrub wetland along the edge. The upland buffer would consist of upland prairie grasses. The design would be consistent with the park's management plan for wet and dry prairie for the targeted areas. Hydrology would be restored by breaking existing underground tiles. Of special consideration in the park are horse riding trails in the park. Efforts will need to be made in order to prevent these trails from flooding.

Stream mitigation may also be possible at Potato Creek State Park. Potato Creek has historically been dredged and straightened. The Park would like to restore the creek to an original meander in order to increase habitat value.

Flat Lake Watershed

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED Kankakee (07120001)

APPROXIMATE MITIGATION

Emergent Wetlands (Wet Prairie)	=	10 acres
Forested Wetlands	=	15 acres
25% Buffer (Upland Woods)	=	7 acres
Size of Mitigation Site (Proposed)	=	32 acres

DESCRIPTION

This mitigation site is located within the Flat Lake watershed, in western Marshall County. The Flat Lake Watershed is a sub-watershed within the larger Kankakee watershed. The Flat Lake Watershed Group has completed a watershed management plan and is actively working to improve water quality and increase quality wildlife habitat in their watershed. In this area, water flows from the east through a series of interconnected wetlands into Flat Lake, and eventually drains into the Yellow River. Portions of the Menominee Wetland Conservation Area, managed by the Indiana Department of Natural Resources, are also located in this watershed. Ancilla College is located in this area and any wetland restoration could provide potential educational and research opportunities.

SPECIES

This mitigation site is targeted for the following:

Sharp-shinned hawk	Broad-winged hawk	Blanchard's cricket frog
Blanding's turtle	Kirtland's snake	Eastern massasauga
Butler's garter snake	Spotted turtle	Blue-spotted salamander

POTENTIAL PARTNERSHIPS

Ancilla Domini Sisters (Poor Handmaids of Jesus Christ)
Ancilla College
Flat Lake Watershed Group

CONCEPTUAL PLAN

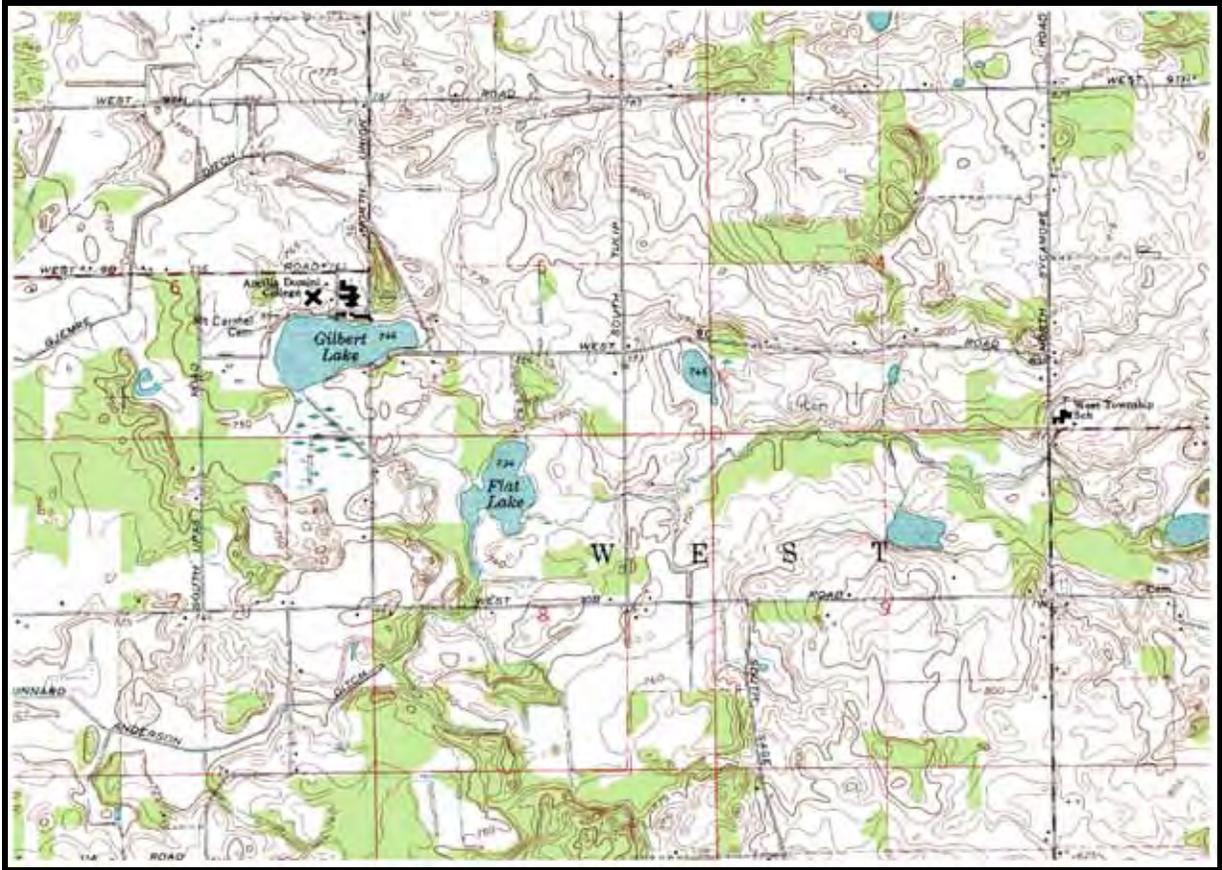
The goal of this site is to replace the functions and values of wetlands impacted by the US 31 project and improve water quality in the Flat Lake watershed. The conceptual design for this site would include primarily wet prairie and forested wetlands. Native grasses and forbs will be planted in the prairie portion, and native wetland oaks and hickories will be the primary species planted in the forested portion. The buffer would consist of upland forest species. In addition to water quality improvements, wildlife in the area will benefit from increased habitat.

It may also be possible to incorporate stream mitigation measures along agricultural ditches within the watershed in order to further improve and protect water quality in this area and downstream.

Flat Lake Watershed

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



Lake of the Woods

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED Kankakee (07120001)

APPROXIMATE MITIGATION

Emergent Wetlands	=	5 acres
Forested Wetlands	=	15 acres
25% Buffer (Upland Woods)	=	5 acres
Size of Mitigation Site (Proposed)	=	25 acres

DESCRIPTION

This mitigation site is located within the Lake of the Woods watershed. Lake of the Woods is 416 acres and the second largest lake in Marshall County. Land use surrounding the lake is residential along the edge and agricultural immediately following. The lake has seven (7) agricultural ditches entering the lake. One ditch provides outflow for the lake and it eventually drains into the Yellow River. The Kankakee River Basin Commission and the Lake of the Woods Property Owner's Association are working together on developing a watershed management plan for the lake. These two organizations applied for and received an Indiana Department of Natural Resources Lake and River Enhancement (LARE) program grant to develop the watershed plan. A wetland mitigation site at the Lake of the Woods would help protect and improve water quality for the lake as well as the portion of the watershed downstream, and be consistent with the watershed plan for the area.

SPECIES

This mitigation site is targeted for the following:

Sharp-shinned hawk	Broad-winged hawk	Blanchard's cricket frog
Blanding's turtle	Kirtland's snake	Eastern massasauga
Butler's garter snake	Spotted turtle	Blue-spotted salamander

POTENTIAL PARTNERSHIPS

Kankakee River Basin Commission
Lake of the Woods Property Owner's Association

CONCEPTUAL PLAN

The goal of this site is to replace the functions and values of wetlands impacted by the US 31 project and improve water quality in the Lake of the Woods watershed. The mitigation site would be located along the northwest portion of the lake where three (3) agricultural ditches (Walt Kimble Ditch, Martin Ditch, and an unnamed ditch) enter the lake. The wetlands would intercept water from these ditches before it entered the lake, and add on to a small existing wetland. The areas targeted for this restoration are currently in agricultural land use.

The conceptual design for this site would include primarily forested wetlands with wetter holes of emergent vegetation also included. Native wetland oaks and hickories will be the primary tree species planted. The buffer would consist of upland forest species. In addition to water quality improvements, wildlife in the area will benefit from increased habitat.

It may also be possible to incorporate stream mitigation measures along the agricultural ditches as part of the overall site design.

Lake of the Woods

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



Lakeville Lakes Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED Kankakee (07120001)

APPROXIMATE MITIGATION

Emergent Wetlands	=	15 acres
Scrub/Shrub Wetlands	=	5 acres
25% Buffer (Upland Prairie)	=	5 acres
Size of Mitigation Site (Proposed)	=	25 acres

DESCRIPTION

This mitigation site is located within the watershed that includes four lakes south and southwest of Lakeville in St. Joseph County. The four lakes are Pleasant Lake, Fites Lake, Dipper Lake and Riddles Lake. Citizens in the area are very concerned about water quality and have recently received an Indiana Department of Natural Resources Lake and River Enhancement (LARE) program grant to conduct a diagnostic study of the watershed. A wetland mitigation site in this watershed would help protect and improve water quality for the lakes as well as the portion of the watershed downstream.

SPECIES

American bittern	Sharp-shinned hawk	Kirtland's snake
Broad-winged hawk	Sedge wren	Eastern massasauga
Northern harrier	Butler's garter snake	

POTENTIAL PARTNERSHIPS

Citizens of Lakeville and Surrounding Area

CONCEPTUAL PLAN

The goal of this site is to replace the functions and values of wetlands impacted by the US 31 project and improve water quality in the Lakeville lakes watershed. The areas targeted for this restoration are currently in agricultural land use.

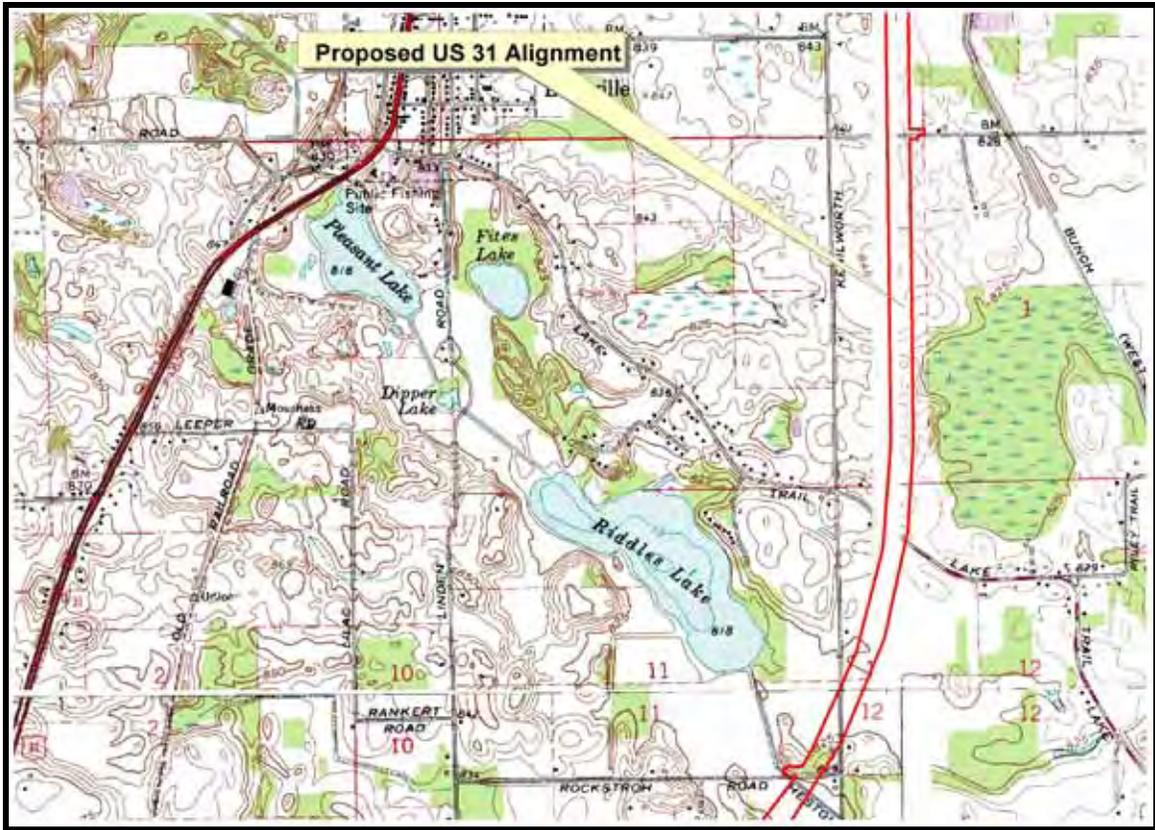
The conceptual design for this site would include primarily emergent marsh with some scrub/shrub vegetation along the edges. The buffer would consist of upland prairie grasses and forbs. In addition to water quality improvements, wildlife in the area will benefit from increased habitat.

It may also be possible to incorporate stream mitigation measures along the agricultural ditches as part of the overall site design.

Lakeville Lakes Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



Catfish / Wharton Lakes Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED St. Joseph (04050001)/ Kankakee (07120001)

APPROXIMATE MITIGATION

Forested Wetlands	=	25 acres
Scrub/Shrub Wetlands	=	5 acres
25% Buffer (Upland Woods)	=	8 acres
Size of Mitigation Site (Proposed)	=	38 acres

DESCRIPTION

This mitigation site is located near the Catfish and Wharton Lakes Area in central St. Joseph County. This is an existing high quality habitat area with portions in both the Kankakee and St. Joseph watershed. Existing habitat includes both open water and wetlands. This area is considered a notable wildlife habitat area by the Indiana Department of Natural Resources. Because of the variety of high quality natural communities, prior to Potato Creek State Park, this area was also under consideration to be the state park. A number of privately managed wildlife habitat areas such as Classified Forests, Classified Wildlife areas, and Partners for Fish and Wildlife areas are located in this area. In addition, several threatened, endangered, and special concern species records come from this area.

SPECIES

This mitigation site is targeted for the following:

Brown Creeper	Sharp-shinned hawk	Blanchard's cricket frog
Broad-winged hawk	Spotted Turtle	Blue-spotted salamander
Blanding's turtle	Kirtland's snake	Eastern massasauga
Butler's garter snake		

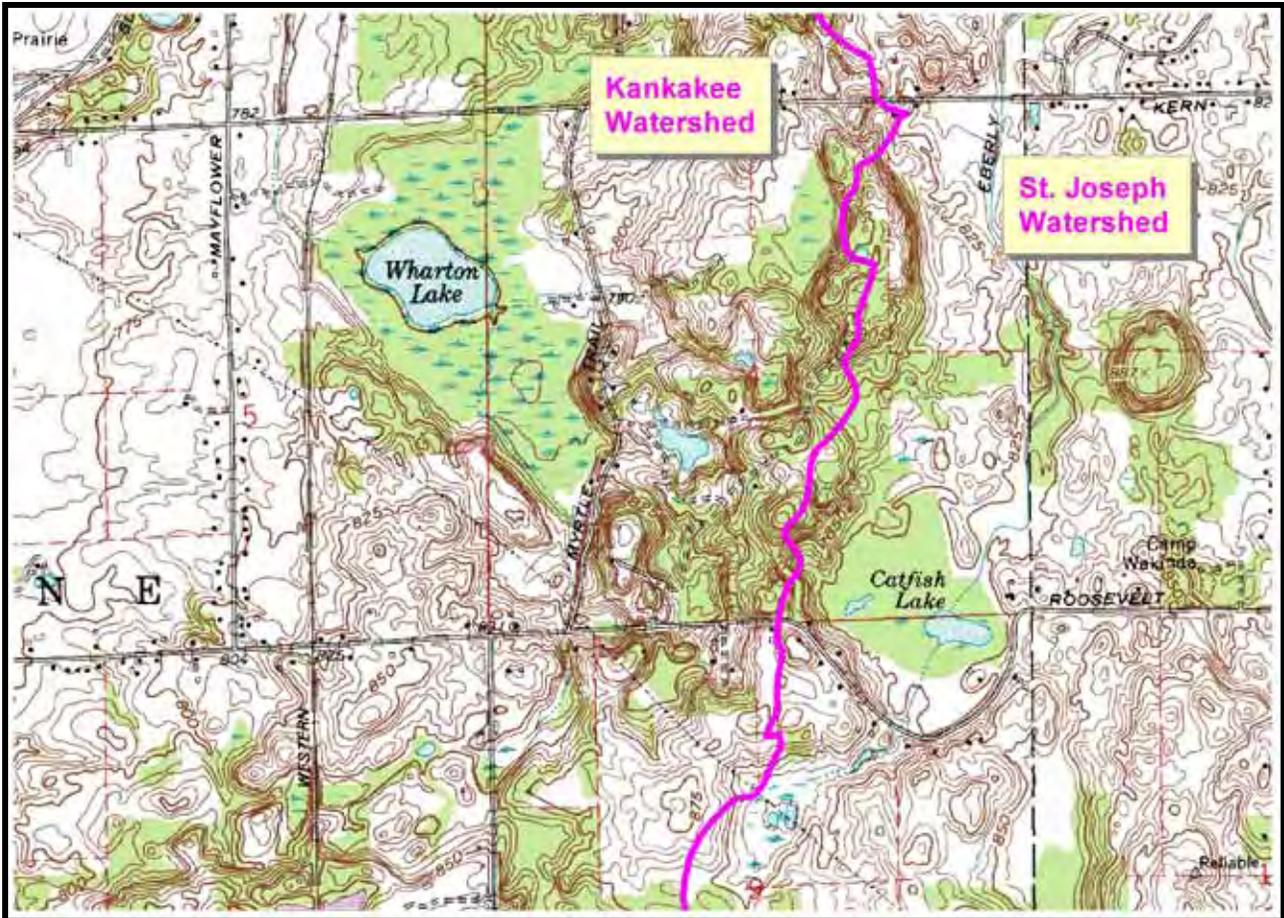
CONCEPTUAL PLAN

This site would include primarily forested wetland with some scrub/shrub wetland along the edge. The upland buffer would consist of upland woods. By adding on to the upland and wetland forest in the area, there is a potential at this site to increase core forest. Native oaks and hickories will be planted in the forested portion as well as buttonbush and dogwoods in the scrub/shrub wetland. An inventory of the neighboring high quality wetlands could also be a seed source and provide insight to what species would grow well in the area.

Catfish / Wharton Lakes Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



Place Trail Marsh

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED Kankakee (07120001)

APPROXIMATE MITIGATION

Forested Wetlands	=	15 acres
Emergent Wetlands	=	10 acres
25% Buffer (Upland Prairie)	=	7 acres
Size of Mitigation Site (Proposed)	=	32 acres

DESCRIPTION

Place Trail Marsh Natural Area is an approximately 372-acre wetland restoration site owned by the St. Joseph County Parks. This area is located adjacent to Pine Creek and includes restored wet prairie, permanent ponds, and upland prairie. It was once part of the former Grand Kankakee Marsh. Recreational opportunities include bird watching, canoeing, hiking, and nature study. Wetland mitigation at this site would add to the existing attractive habitat.

SPECIES

This mitigation site is targeted for the following:

American bittern	Black tern	Sharp-shinned hawk
Broad-winged hawk	Virginia rail	Sandhill crane
Sedge wren	Henslow's sparrow	Northern harrier
Spotted Turtle	Blanding's turtle	Kirtland's snake
Eastern massasauga	Butler's garter snake	

POTENTIAL PARTNERSHIPS

St. Joseph County Parks

CONCEPTUAL PLAN

This site would add on to a previously restored wet prairie and open water wetland mosaic. The conceptual vision would include a wetland woods with emergent pockets interspersed. Native wetland oaks and hickories will be the primary tree species planted, with broad-leaf emergents and sedges planted in the emergent portions. The upland buffer would consist of upland prairie grasses. This site could potentially include hiking trails to provide recreational opportunities. The design would be consistent with the St. Joseph County Parks management plan.

Place Trail Marsh

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Pictures of Place Trail Marsh Natural Area



Marker & Grimes Ditches Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED St. Joseph (04050001)

APPROXIMATE MITIGATION

Forested Wetlands	=	10 acres
Emergent Wetlands	=	5 acres
25% Buffer (Upland Woods)	=	4 acres
Size of Mitigation Site (Proposed)	=	19 acres

DESCRIPTION

This mitigation site is located near the Marker and Grimes Ditches Area in southeastern St. Joseph County. It is located near two large blocks of forest that are enrolled in the Indiana Department of Natural Resource's Classified Forest Program. Much of the land surrounding the forest blocks is in agricultural use, and much of the surrounding soils are mapped as hydric soils.

SPECIES

This mitigation site is targeted for the following:

Brown Creeper	Sharp-shinned hawk	Blanchard's cricket frog
Broad-winged hawk	Spotted Turtle	Blue-spotted salamander
Blanding's turtle	Kirtland's snake	Eastern massasauga
Butler's garter snake		

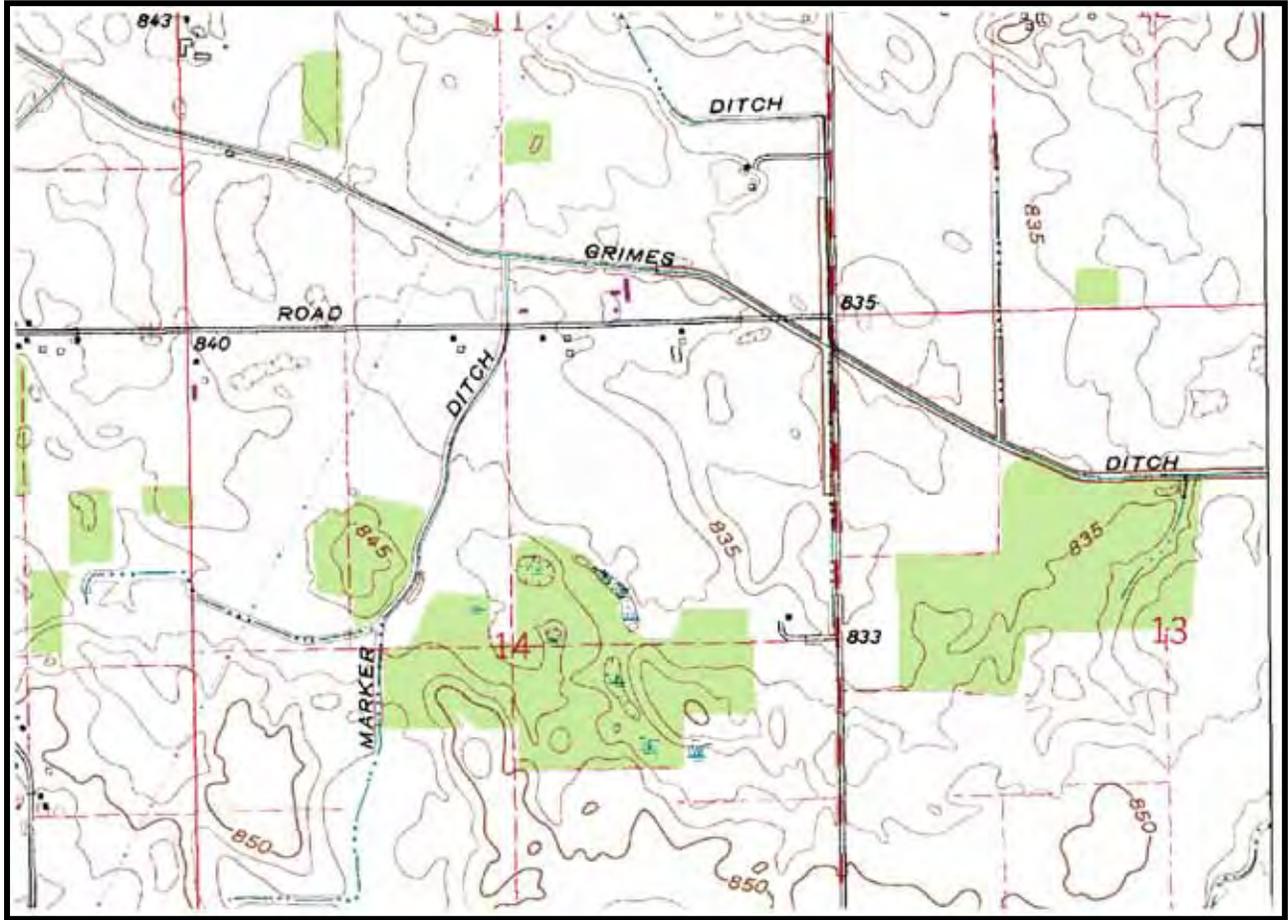
CONCEPTUAL PLAN

This site would include primarily forested wetland with some broad-leaved emergent pockets interspersed throughout. The upland buffer would consist of upland woods. By adding on to the upland and wetland forest in the area, there is a potential at this site to increase core forest. Native oaks and hickories will be planted in the forested portion and broad-leaved emergent species in the emergent pockets. An inventory of the neighboring high quality wetlands woods could also be a seed source and provide insight to what species would grow well in the area.

Marker & Grimes Ditches Area

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



St. Patrick's County Park

Conceptual Wetland Mitigation Site

US 31 Plymouth to South Bend

8-DIGIT WATERSHED St. Joseph (04050001)

APPROXIMATE MITIGATION

Forested Wetlands	=	5 acres
Scrub/Shrub Wetlands	=	5 acres
Emergent Wetlands	=	10 acres
25% Buffer (Upland Woods)	=	5 acres
Size of Mitigation Site (Proposed)	=	25 acres

DESCRIPTION

This proposed mitigation site is located near the existing St. Patrick's County Park in South Bend. This park is located adjacent to the St. Joseph River, and is owned by the St. Joseph County Parks. The existing park is 293 acres, and includes wooded trails and ponds. The proposed mitigation site would add on to the existing park.

SPECIES

This mitigation site is targeted for the following:

Blanchard's cricket frog	Spotted Turtle	Blanding's turtle
Blue-spotted salamander	Kirtland's snake	Butler's garter snake

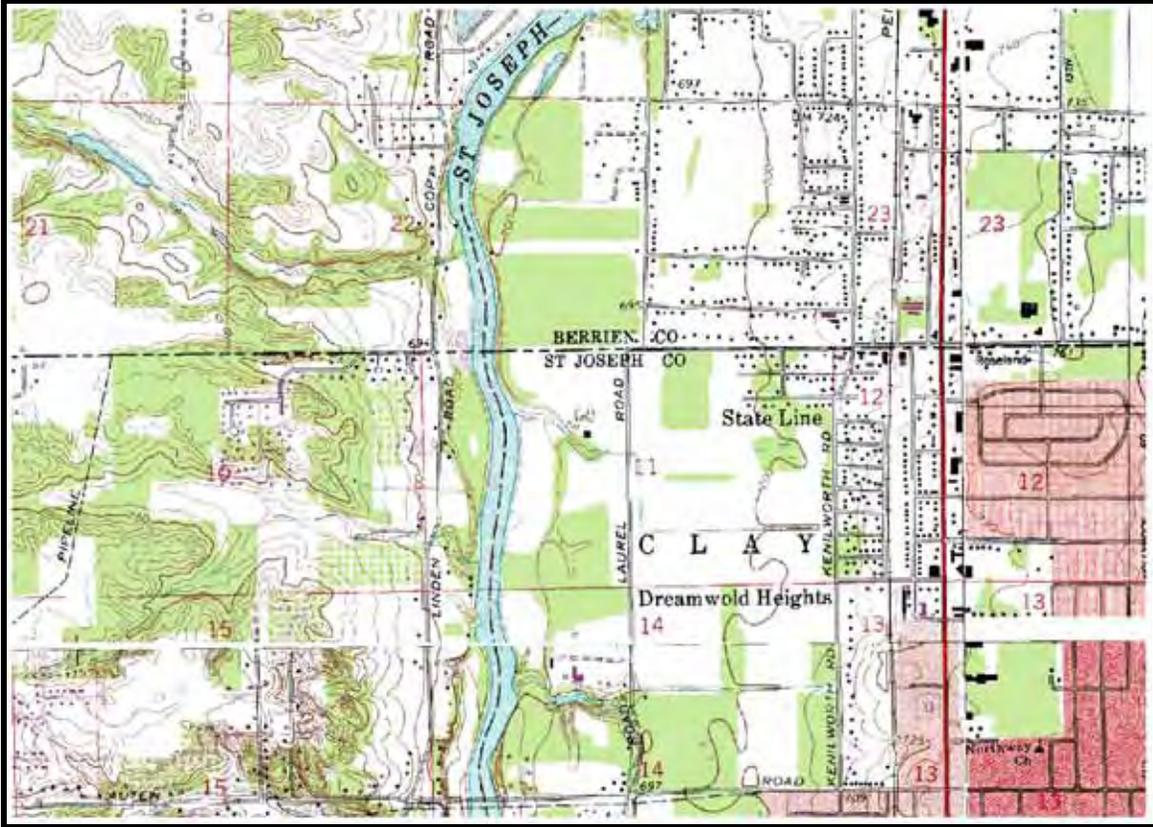
POTENTIAL PARTNERSHIPS

St. Joseph County Parks

CONCEPTUAL PLAN

This site would involve the restoration of agricultural land to wet prairie with some more permanent wet depressions, as well as some areas of wet woods and scrub/shrub. Native upland tree species would be planted as a buffer. This site would provide an excellent opportunity to enhance a public park and preserve land from development in the city of South Bend. Hiking trails with boardwalks over wet areas could be incorporated into the design to provide recreational opportunities. This site could also be used for school educational programs.

St. Patrick's County Park Conceptual Wetland Mitigation Site US 31 Plymouth to South Bend



Examples of Conceptual Mitigation Site Vision



Appendix B

Coordination



DEPARTMENT OF THE ARMY

DETROIT DISTRICT, CORPS OF ENGINEERS

BOX 1027

DETROIT, MICHIGAN 48231-1027

February 24, 2005

IN REPLY REFER TO

Engineering & Technical Services
Regulatory Office
File No. 96-150-019-0

Carl Camacho
Bernardin-Lochmueller & Associates, Inc.
7830 Rockville Road
Suite C
Indianapolis, Indiana 46214

Dear Mr. Camacho:

This is in response to a request for a jurisdictional determination and concurrence of a wetland delineation report submitted to this office on behalf of the Indiana Department of Transportation for the US 31 Improvement Project located between Plymouth and South Bend, Marshall and St. Joseph Counties, Indiana (Sections 35 and 36, Township 37N, Range 2E; Sections 2, 11, 12, 13, 24, 25 and 36, Township 36N, Range 2E; Sections 1, 12, 14, 15, 22, 27, 28, and 33, Township 35N, Range 2E; Sections 4, 9, 16, 21, 22, 27, 34 and 35, Township 34N; Range 2E).

In the St. Joseph River and Kankakee River, their tributaries, and adjacent wetlands, as in all waters of the United States, any discharge of dredged spoil and/or fill material must be authorized by the Department of the Army. The authority of the Corps of Engineers to regulate the discharge of dredged and/or fill material is contained in Section 404 of the Clean Water Act and regulations promulgated pursuant to that Act. Filling and grading work, mechanized landclearing, the sidecasting of excavated material, and some forms of piling installation constitute or otherwise involve discharges of dredged and/or fill material under the Corps' regulatory authority.

We concur with the location of the waterways as indicated in the delineation report submitted to this office titled *Waters of the U.S. Verification Report: U.S. 31 Improvement Project Plymouth to South Bend In Marshall and St. Joseph Counties, Indiana* and dated November 30, 2004 with supplemental data submitted on January 27, 2005 and February 15, 2005. The waterways identified on the attached plan labeled Sections 1, 2, 7, 8, 9, 10, 11a, 11b, 13, 14, 17, 19, 20b, 20c, 21, 22, 24, 25, 26a, 26b, 27, 28, 32, 34, 35, 36, 37, 39, 40, 41a, 41b, 44, 45a, 45b, 46, 48, 49 and 50 (see attached table) are waters of the United States. As such, please be advised that the property in question does contain wetlands within the jurisdiction of the Corps of Engineers. Any discharges of dredged and/or fill material into the jurisdictional waterways within this corridor will require a Federal permit. This jurisdiction determination is valid for a period of five (5) years from the date of this letter unless new information warrants revision of

the delineation before the expiration date.

The waterways labeled Sections 3, 4, 5, 6, 12, 15, 16, 18, 20a, 23, 29, 30, 31, 33, 38a, 38b, 42, 43, 47 and 51 (see attached table) on the enclosed figures fall into a category of isolated waterways that, per a recent Supreme Court ruling, are no longer under the regulatory jurisdiction of the Corps of Engineers. Please note, the Supreme Court ruling only affected our jurisdiction over *certain* isolated waters and wetlands--we still exercise regulatory authority over the discharge of dredged and/or fill material into *all* other waters of the United States, including isolated waters and wetlands not affected by the ruling. We will continue to make jurisdiction determinations on all waters of the United States, including wetlands, on a case-by-case basis. Although a Department of the Army permit may not be required in this instance, *this determination does not relieve you of the responsibility to comply with applicable state law. We urge you to contact the Indiana Department of Environmental Management (IDEM) to determine the applicability of state law to your project. The IDEM contact is Andrew Pelloso, (317) 233-2482.* A copy of this letter is being forwarded on to IDEM for its files.

If you anticipate work in areas identified above as waters of the United States please complete a permit application including a plan view and cross-sectional view drawings, in 8 1/2" x 11" format. Drawings and the application should include a description of all quantities, dimensions, and nature of material to be placed and soil to be moved within waterway.

Our assertion of jurisdiction over areas labeled waters of the United States above is based on the following criteria: (1) our documentation that the areas identified as wetlands meet our technical definition of wetlands per the criteria in the 1987 *Corps of Engineers Wetlands Delineation Manual*, (2) our documentation that areas identified as nonwetlands do not meet the same criteria, (3) our documentation that the waterways in question are adjacent (bordering, contiguous, or neighboring) to tributaries or are tributaries of a navigable water of the United States.

This delineation/determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are United States Department of Agriculture (USDA) program participants or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work in the site in question.

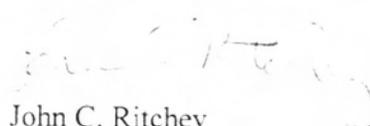
Per our regulations found at 33 CFR, Part 331 (as amended in the Federal Register on March 28, 2000), you may appeal this approved jurisdiction determination over the waters/wetlands on the property in question. Our appeal process is briefly described in the enclosed *Notification of Administrative Appeal Options and Process and Request for Appeal* document and flowchart. Appeals of jurisdiction determinations are initially handled at our Division level and any *Request for Appeal* should be sent to the Division Engineer at:

Division Engineer
U.S. Army Corps of Engineers
Lakes & Ohio River Division
P.O. Box 1159
Cincinnati, Ohio 45210-1159

Your appeal must be received by the Division Engineer within 60 days of the date of this letter.

Thank you for giving us the opportunity to review this proposed activity. Should you have any questions, please contact me at the above address or telephone number (574) 232-1952. Please refer to File Number: 96-150-019-0.

Sincerely,



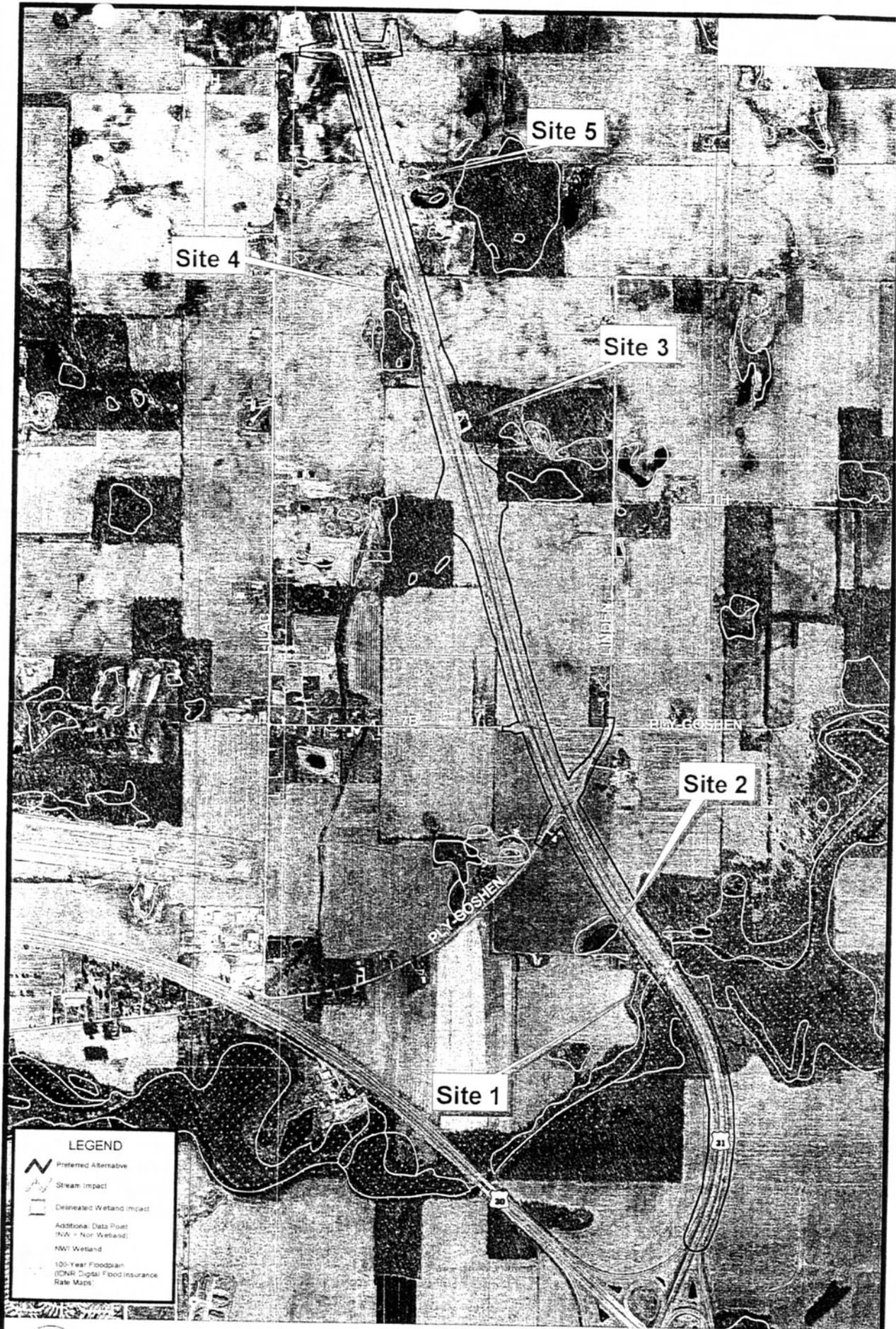
John C. Ritchey
Project Manager
South Bend Field Office

Enclosures

Site Map
Flowchart
NAP Document

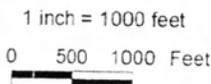
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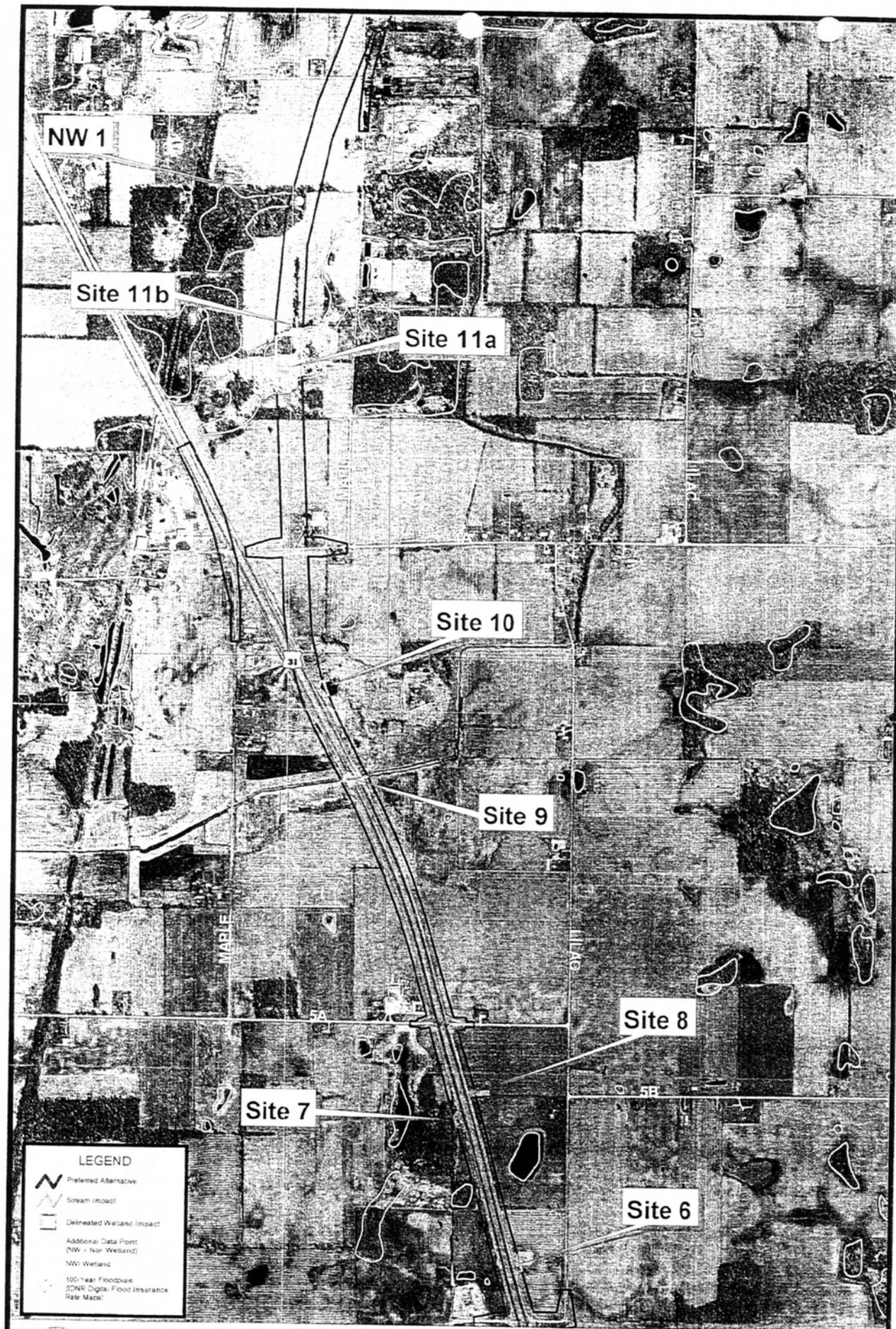
Bernardin Lochmueller & Associates/Gillette
Bernardin Lochmueller & Associates/Yeager
INDOT/Baynes
INDOT/Sadler
FHWA/Fuller
IDEM/Elverson
Detroit District Office/Simon



LEGEND

- Preferred Alternative
- Stream Impact
- Delineated Wetland Impact
- Additional Data Point
(NW = Non-Wetland)
- NW Wetland
- 100-Year Floodplain
(ICNR Digital Flood Insurance Rate Maps)





NW 1

Site 11b

Site 11a

Site 10

Site 9

Site 8

Site 7

Site 6

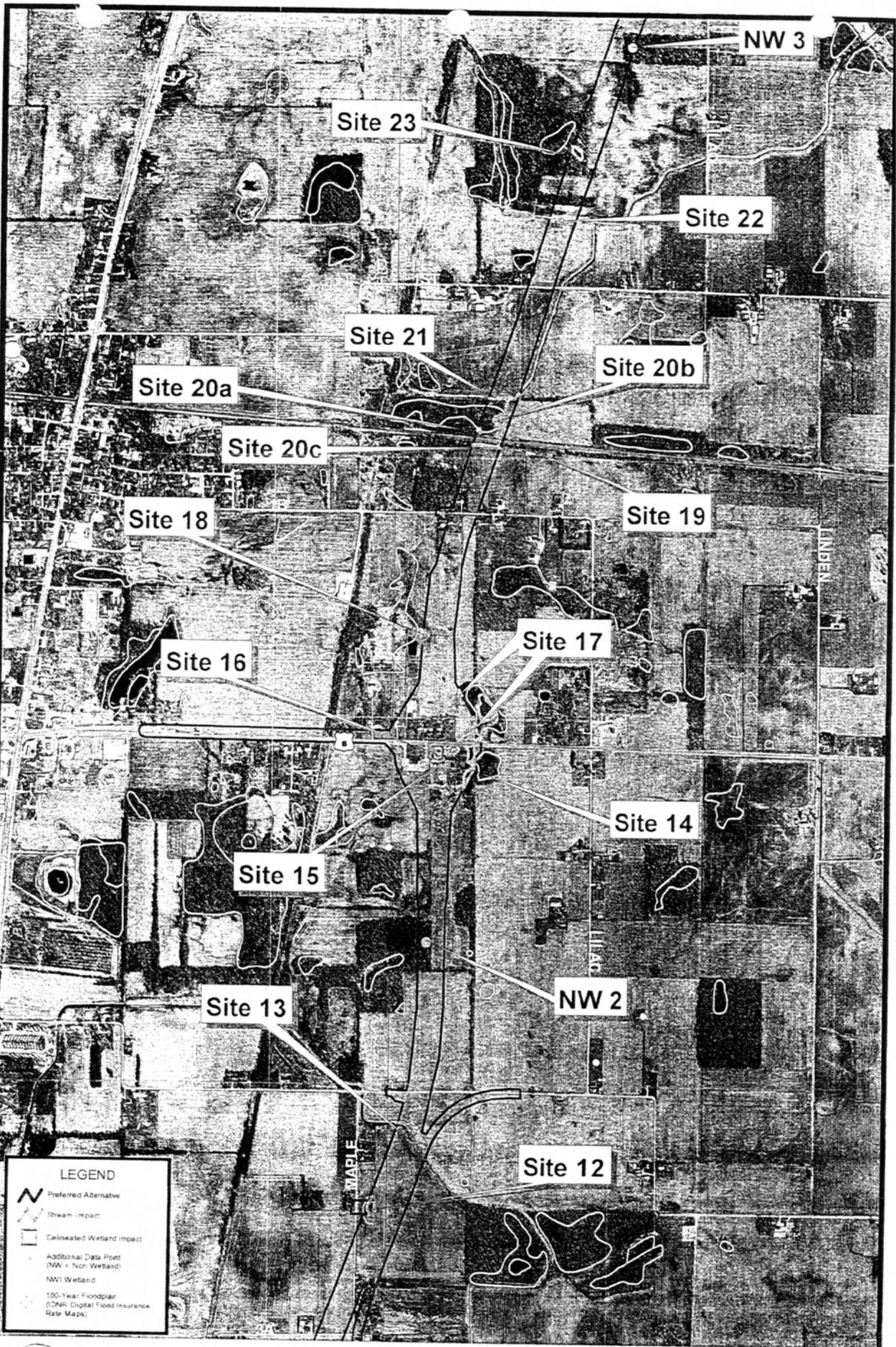
LEGEND

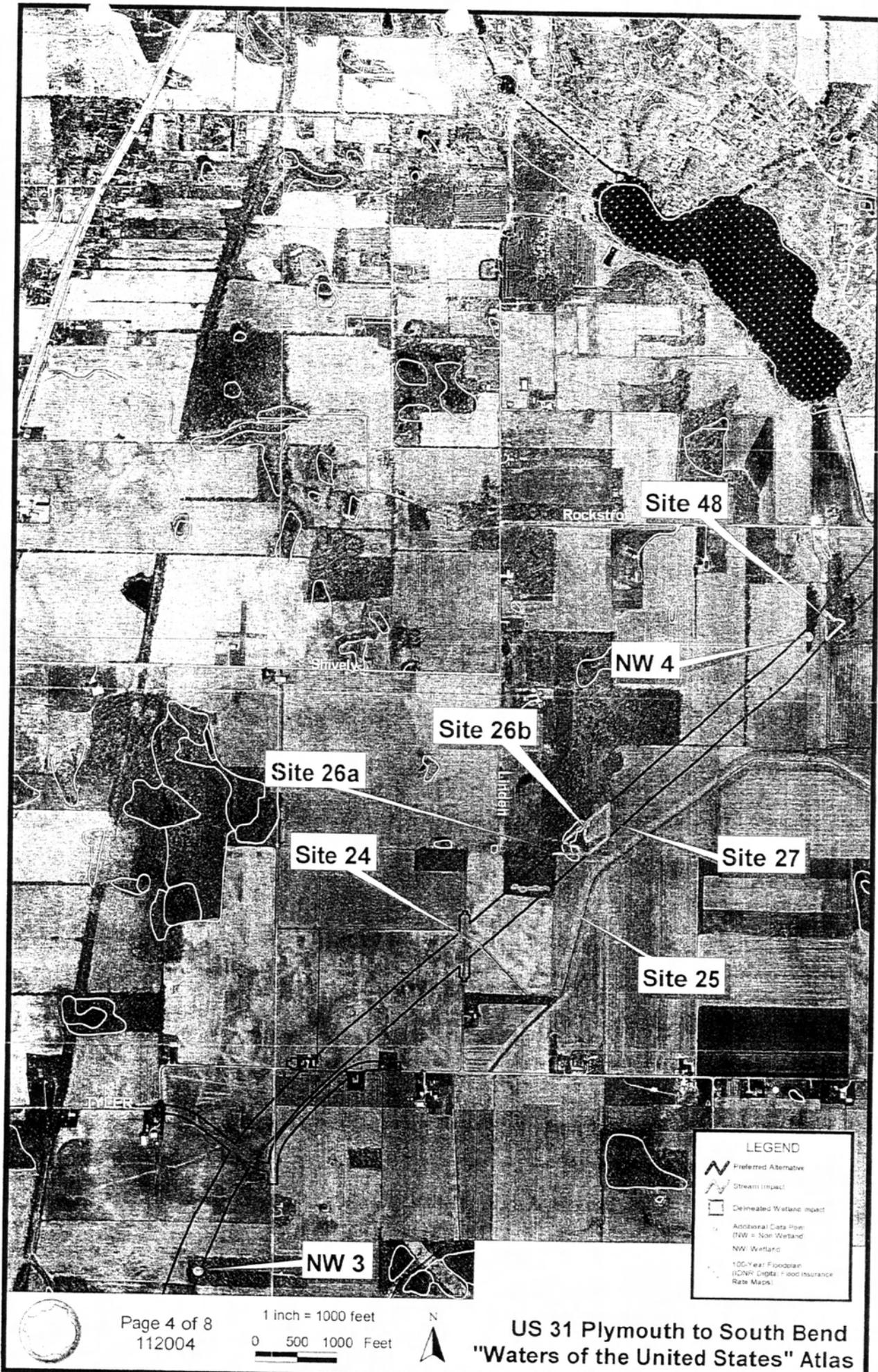
-  Preferred Alternative
-  Stream Impact
-  Delineated Wetland Impact
-  Additional Data Point (NW = Non-Wetland)
-  NW Wetland
-  100-Year Floodplains (DNR Digital Flood Insurance Rate Maps)



1 inch = 1000 feet
0 500 1000 Feet



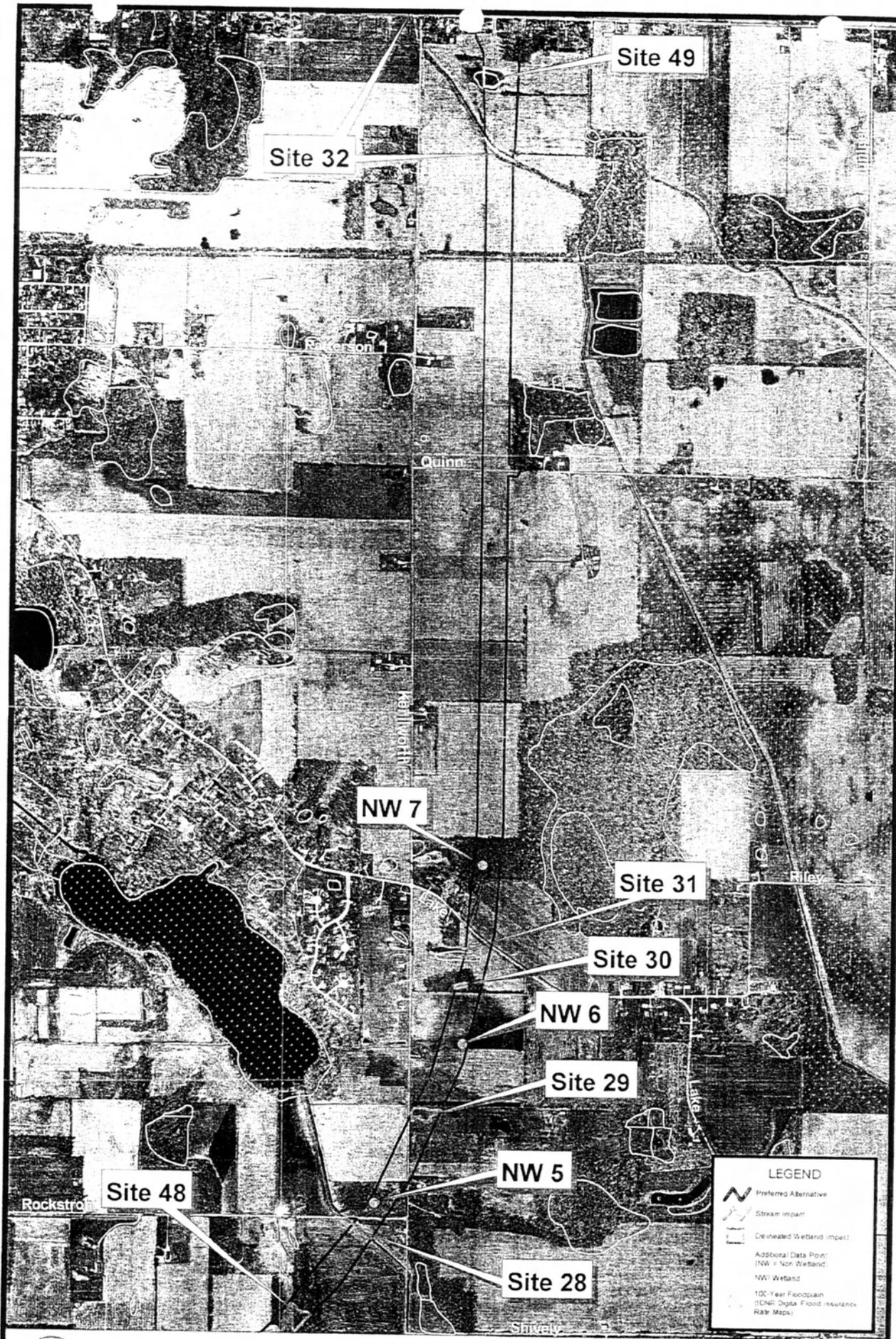




LEGEND

- Preferred Alternative
- Stream Impact
- Delineated Wetland Impact
- Additional Cuts Point
- NW = Non Wetland
- W = Wetland
- 100-Year Floodplain (ICNR Digits = Flood Insurance Rate Maps)

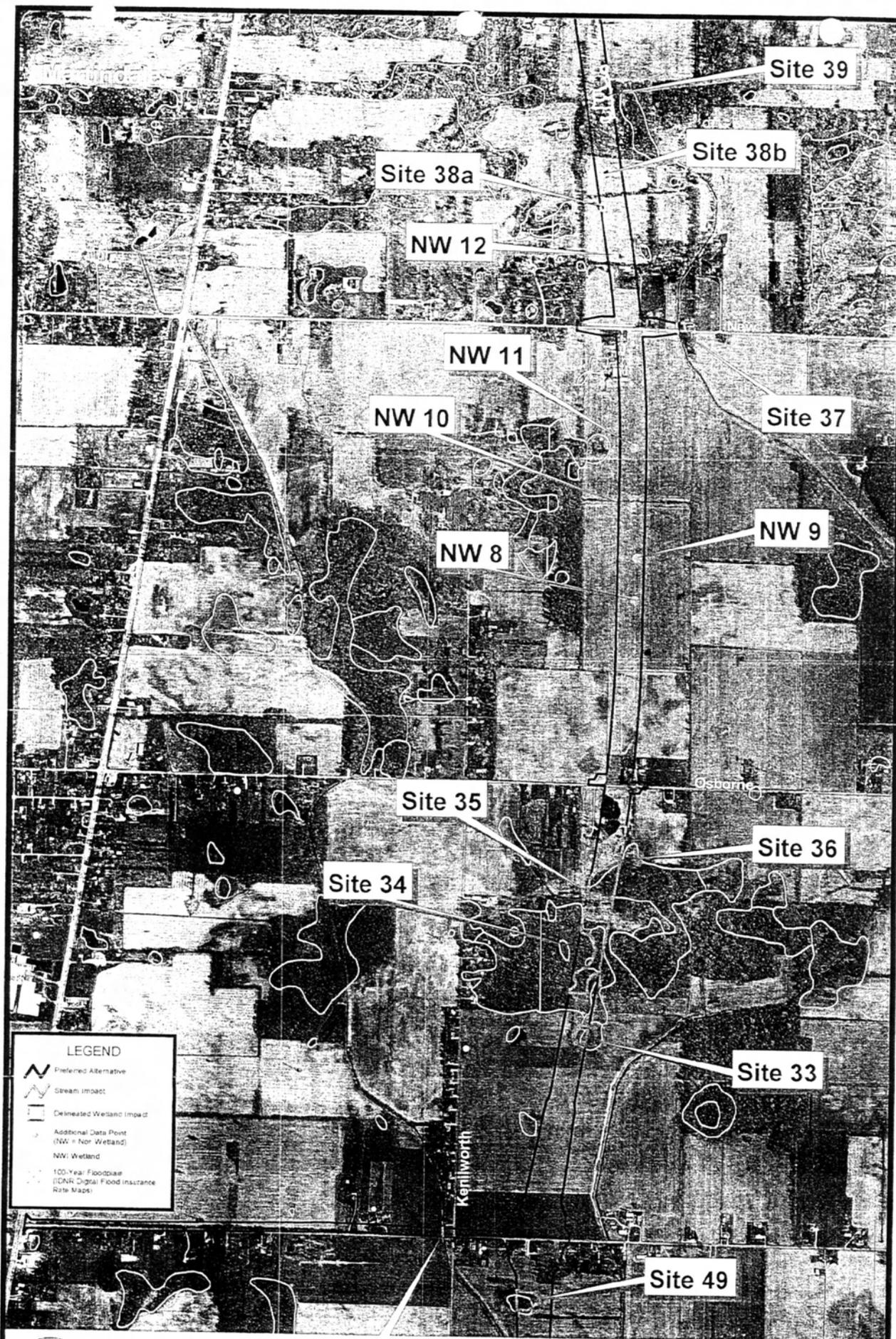




LEGEND

- Preferred Alternative
- Stream Impact
- Delineated Wetland Impact
- Additional Data Point
- (NW = Non Wetland)
- NW Wetland
- 100-Year Floodplain (DNR Digital Flood Insurance Rate Maps)

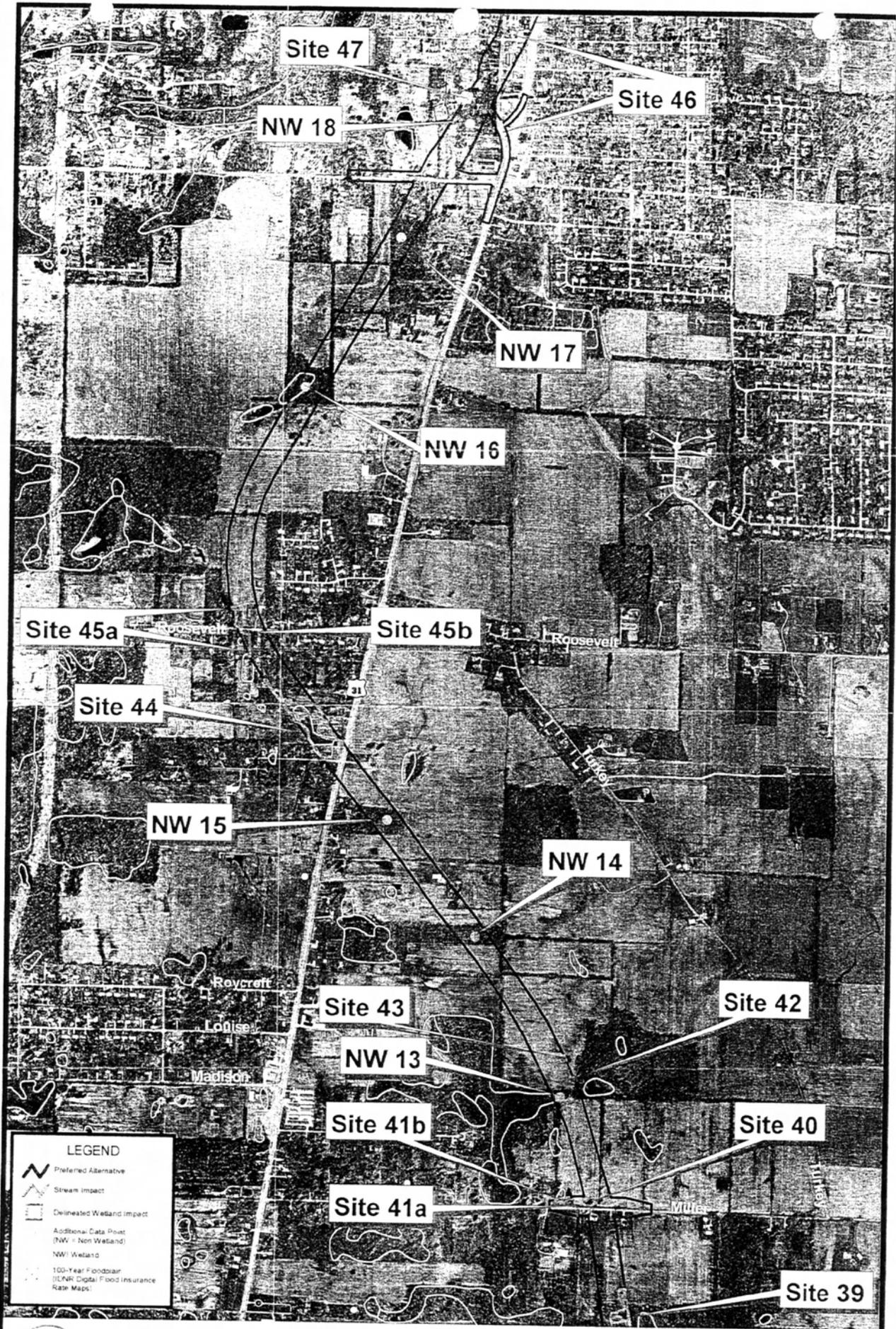


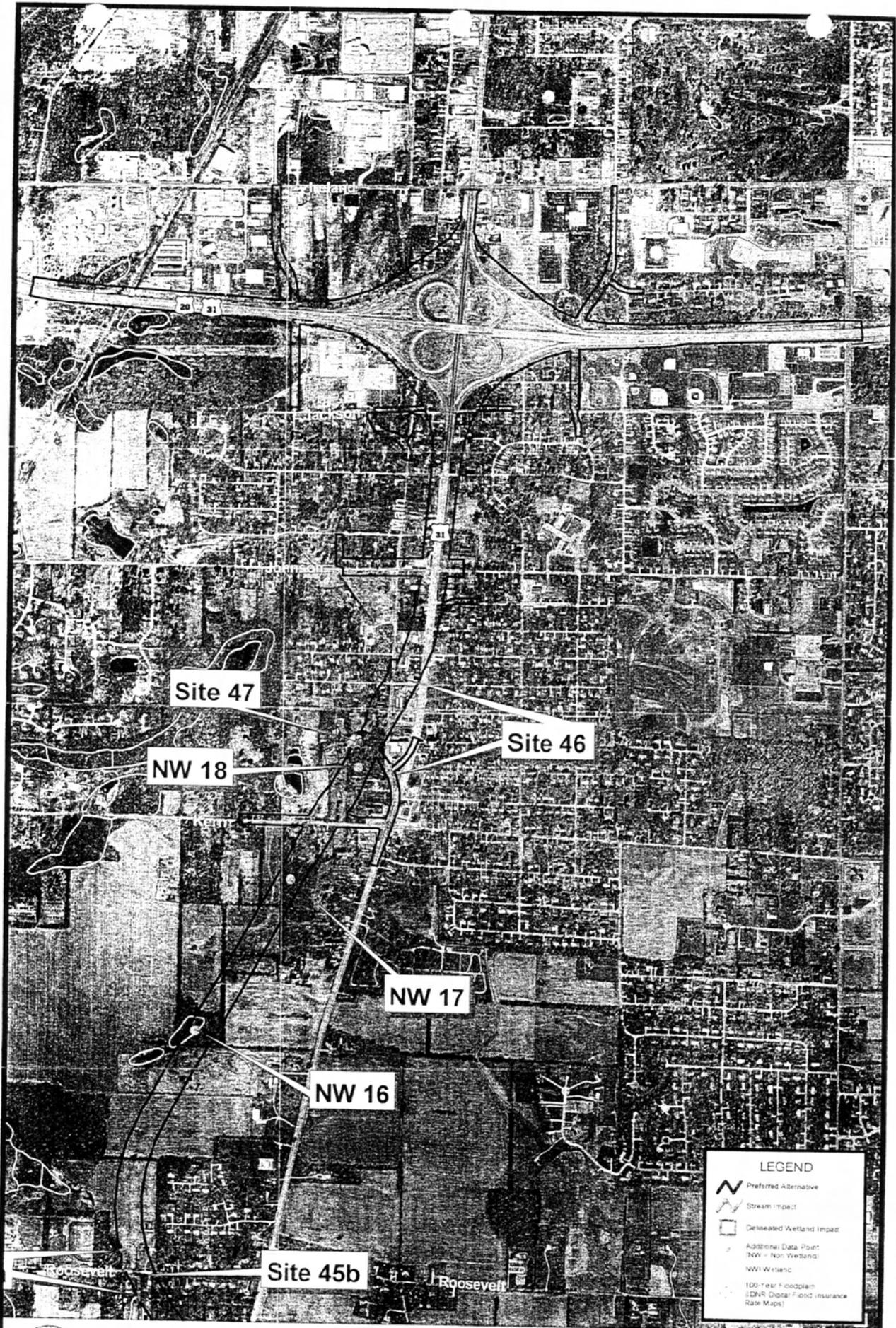


LEGEND

- Preferred Alternative
- Stream Impact
- Delineated Wetland Impact
- Additional Data Point (NW = Non Wetland)
- NW: Wetland
- 100-Year Floodplain (IDNR Digital Flood Insurance Rate Maps)







LEGEND

- Preferred Alternative
- Stream Impact
- Delineated Wetland Impact
- Additional Data Point
- Non-Wetland
- NW Wetland
- 100-foot Floodplain
- DNR Digital Flood Insurance Rate Maps



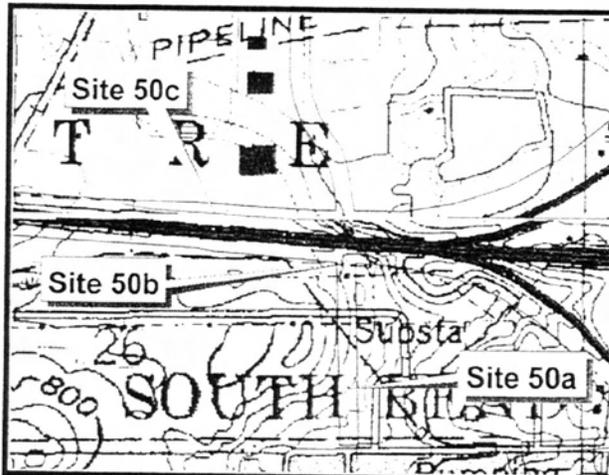
Page 8 of 8
112004

1 inch = 1000 feet
0 500 1000 Feet

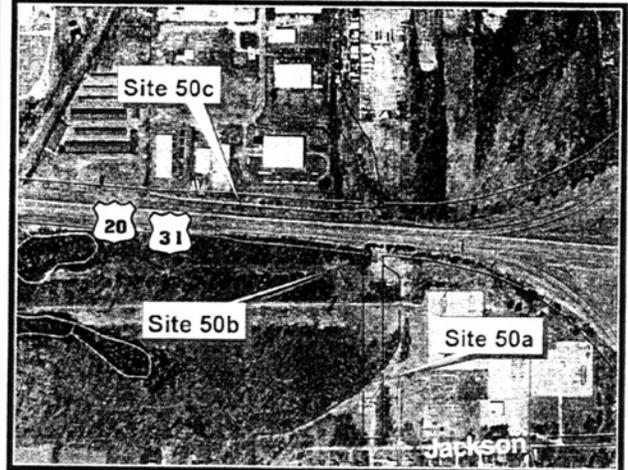


US 31 Plymouth to South Bend
"Waters of the United States" Atlas

Site 50 – Stream – Philips Ditch #2



Site Location on USGS Quadrangle



Site Location on 2002 Aerial Photograph

Aquatic Resource: Stream (Regulated Drain)
 Name: Philips Ditch #2
 Quarter: SE
 Range: 2E
 Watershed: St. Joseph

USGS Quadrangle: Lakeville & South Bend W
 Section: 26
 Township: 37N
 IDEM 2002 303(d) List: NO

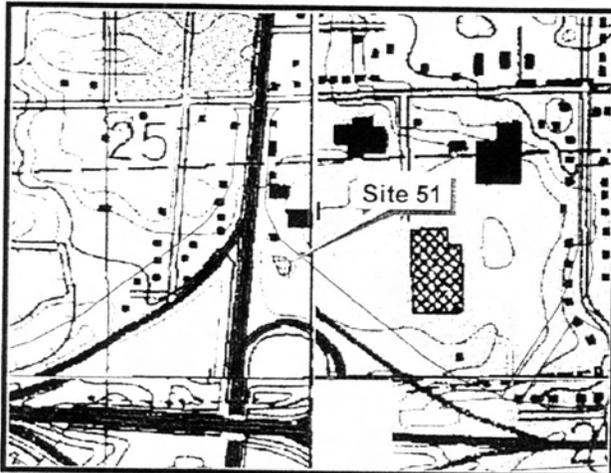
SITE 50 IMPACTS				
SITE	NAME	LENGTH of IMPACT*	WIDTH at OHWM	AREA of IMPACT**
50a	Philips Ditch #2 (P)	144 feet	12 feet	1,728 sq feet
50b	Philips Ditch #2 (P)	104 feet	13 feet	1,352 sq feet
50c	Philips Ditch #2 (P)	1,272 feet	10 feet	12,720 sq feet
50	TOTAL	1,520 feet	-	15,800 sq feet

* Includes total length within proposed footprint

** = Length of Impact * Width at OHWM

Description of Potential Impact: Approximately 1,520 feet of Philips Ditch at three locations will be impacted by the proposed project. Approximately 144 feet (50a) and 104 feet (50b) will be impacted due to construction of Scott Street over the existing US 20. The Scott Street extension will provide local access north and south of US 20. Philips Ditch will likely be bridged at both of these impact sites. Approximately 1,272 feet of Philips Ditch may be impacted by adding lanes to US 20, which is a part of the overall US 31 Improvement Project. Impacts in this area would likely involve regrading and moving the ditch to the north. A total of approximately 1,520 feet of Philips Ditch may be impacted in this area. Philips Ditch is a regulated drain in St. Joseph County.

Site 51 – Open Water



Site Location on USGS Quadrangle



Site Location on 2002 Aerial Photograph

Aquatic Resource: Open Water
Type: Open Water
Quarter: SW
Range: 2E
Watershed: St. Joseph

USGS Quadrangle: South Bend West
Section: 25
Township: 37N
IDEM 303(d) List: N/A

SITE 51 IMPACTS				
SITE	TYPE of WETLAND	AREA of IMPACT	MITIGATION RATIO*	REQUIRED MITIGATION**
51	Open Water	0.12 acres	-	-

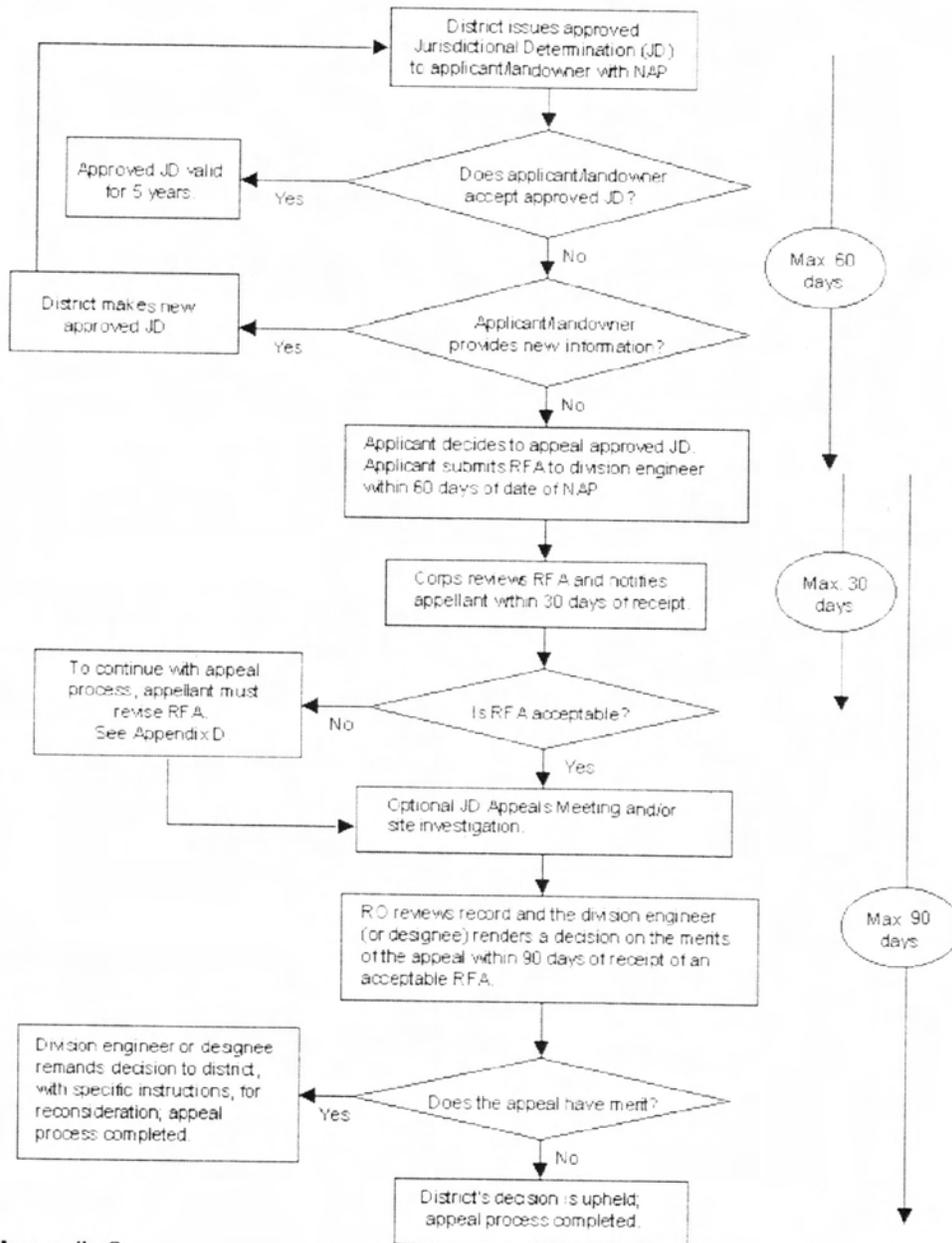
* Based On Wetland Memorandum of Understanding dated January 28th, 1991

** Assumes federal jurisdiction

Description of Potential Impact: Approximately 0.12 acres of open water of an excavated pond is on site within the proposed US 31 footprint. The pond appears to serve as a detention basin for a commercial area parking lot. There is a culvert which empties into it from the east, and a pipe that flows from the pond into a road side ditch on the west.

US 31 Wetlands					
Section #	On-Site Acreage	Water's of US acreage	linear feet	Ave Width	cover type
1	to be spanned			60	Yellow Creek
2	0.03	0.03			SS
3	0.55				SS/EM
4	0.07				FO
5	0.28				EM
6	0.27				EM
7	0.26	0.26			SS/EM
8	0.06	0.06			EM
9	0.16	0.16	318	22	Elmer Seltenright Drain
10	0.21	0.21			Open Water/EM fringe
11a	4.20	4.20			FO/SS/EM
11b	0.03	0.03	360	4	unnamed drain
12	0.44				EM
13	0.26	0.26	587	20	Elmer Seltenright Drain
14	0.59	0.59			EM
15	0.14				pond
16	0.10				pond
17	0.54	0.54			SS/EM
18	0.13				SS/EM
19	0.06	0.06	459	6	unnamed tributary of Lehman Ditch
20a	0.04				FO
20b	0.21	0.21			EM
20c	0.09	0.09			FO
21	0.12	0.12	362	14	Lehman Ditch
22	0.06	0.06	309	9	Mangun Arm of Lehman Ditch
23	0.23				FO
24	0.06	0.06	319	8	unnamed tributary of Lehman Ditch
25	0.24	0.24			FO
26a	0.03	0.03	425	3	unnamed tributary of Lehman Ditch
26b	3.54	3.54			FO/EM
27	0.04	0.04	405	4	unnamed tributary of Lehman Ditch
28	0.13	0.13	366	16	Heston Ditch
29	0.74				EM
30	0.12				FO
31	0.16				EM
32	0.16	0.16	531	13	Shilder-Hoffman Ditch
33	0.77				SS
34	4.79	4.79			FO/EM
35	0.11	0.11	308	15	unnamed tributary of Bunch Ditch
36	3.00	3.00			FO/EM/pond
37	0.04	0.04	118	15	Bunch Ditch
38a	0.10				EM
38b	0.13				EM
39	1.43	1.43			FO/EM/pond
40	0.22	0.22			EM
41a	0.05	0.05	393	6	unnamed tributary of Happ Drain
41b	0.17	0.17			FO/EM
42	0.05				EM
43	0.17				EM
44	4.42	4.42			FO/SS/EM
45a	0.03	0.03			EM
45b	0.05	0.05	533	4	unnamed ditch
46	0.18	0.18	1281	13	Phillips Ditch
47	0.12				SS
48	0.76	0.76			FO
49	1.07	1.07			FO
50a	0.04	0.04	144	12	Phillips Ditch
50b	0.03	0.03	104	13	Phillips Ditch
50c	0.29	0.29	1272	10	Phillips Ditch
51	0.12				detention pond
Totals	32.49	27.76	7074		

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Indiana Department of Transportation	File Number: 96-150-019-0	Date: February 2, 2005
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Charles M. Simon
Chief, Processing Branch A
Regulatory Office
(313) 226-2221

If you only have questions regarding the appeal process you may also contact:

Mike Montone, Appeal Review Officer
Great Lakes and Ohio River Division
P. O. Box 1159 (550 Main Street)
Cincinnati, Ohio 45201-1159

Tel. (513) 684-6212 Fax. (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Date:

Telephone number:

Signature of appellant or agent.