



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Mitchell E. Daniels, Jr., Governor
Michael B. Cline, Commissioner

Date: November 26, 2012

To: Hazardous Materials Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Kyle J. Boot
Bernardin, Lochmueller & Associates
3502 Woodview Trace; Suite 150
Indianapolis, Indiana 46269
kboot@blainc.com

Re: RED FLAG INVESTIGATION
Designation (DES) Number: 0500821
Grand Calumet River Trail Phase 2 Project
Hammond, Lake County, Indiana

NARRATIVE

The proposed project involves the construction of a paved multi-use trail from approximately 1,300 feet southeast of the intersection of 150th Street and I-90 to the intersection of US 41 (Calumet Avenue) and 142nd Street in the City of Hammond, Sections 24 and 25, Township 37 N, Range 10 W, and Section 30, Township 3 N, Range 9 W, North Township, Lake County, Indiana. Land use is transportation, residential, commercial, and industrial. The trail would be approximately 9,395 feet long. The proposed typical section would consist of a 10-foot wide asphalt paved multi-use trail with 3-foot wide shoulders. The south portion of the trail runs along the west side and parallel to I-90 and most of the north portion runs adjacent to existing roadways. Most of the trail would be new construction, but some portions would consist of rehabilitated sidewalks or existing roadway.

SUMMARY

Infrastructure			
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Religious Facilities	2	Recreational Facilities	6
Airports	N/A	Pipelines	14
Cemeteries	N/A	Railroads	3
Hospitals	N/A	Trails	N/A
Schools	5	Managed Lands	2

Explanation: No religious facilities were indicated within a half-mile of the project area by Geographic Information Systems (GIS) mapping. During a field visit on October 16, 2012, two religious facilities were identified within a half-mile of the project. This project is not anticipated to impact these two religious facilities.

Five schools are identified within a half-mile of the project. One school is mapped west of Calumet Road between 142nd Street and 143rd Street (however a field visit did not identify a school in this location). The Irving School is located approximately 1,000 feet southwest of the project. The Lincoln School is approximately 1,700 feet west of the project. The Schools Diocese of Gary and Hammond is located east of I-90 and approximately 500 feet east of the project. The St. Casimir School is located approximately 1,600 feet west of the project. This project is not anticipated to impact these schools.

Six recreational facilities are identified within a half-mile of the project. The Kosciusko Park and Roxanna playground are located east and south of the project in East Chicago. The Washington Irving and Abraham Lincoln Elementary Schools are located more than 1,000 feet west of the project. The Columbia Park is located south of the Grand Calumet River and approximately 2,400 feet southwest of the project. This project is not anticipated to impact these five recreational facilities. During a field visit on October 16, 2012, Irving Park was identified within the project area. This project is anticipated to impact Irving Park because approximately sixteen feet along its north edge will be used for the trail construction.

Fourteen pipelines are identified within a half-mile of the project. Six pipelines of the Amoco Pipeline, ARCO Pipe Line, and Wolverine Pipe Line Companies are run north and south near the south terminus of the project area. Two pipelines of the Enron liquids Pipeline and Northern Indiana Public Services Companies cross the project area near Hudson Avenue and Hickory Street. The Clark Refining Company pipeline crosses the project near Huehn Avenue and Pine Street. Five Pipelines associated with the Badger Pipe Line, Clark Refining, Explorer Pipeline, Marathon Pipe Line and Wolverine Pipe Line Companies are located northeast of the project area east of I-90. Coordination with the utility should be conducted in order determine if the project would impact the pipelines that cross the project area. However, because the nature of the project (trail construction) it is not anticipated to impact these pipelines.

Three railroads are identified within a half-mile of the project. The CSS railroad is also known as the South Shore Line and located between the proposed trail and I-90 through much of the project area. The EJE railroad tracks are located near the southern terminus of the project area and two abandoned spur lines near Calumet Avenue and Hoffman Street. The CSXT railroad consists of spur lines east of I-90 and main line track that crosses the project near Hudson Avenue and Ash Avenue. Trail construction will not take place over the main line tracks. At this location the on street bike path will be shared with the existing Ash Avenue roadway. Therefore, this project is not anticipated to impact the CSXT or other railroads.

Two managed lands are identified within a half-mile of the project. The Roxanna Marsh managed by the Department of Natural Resources and the Kosciusko Park Managed by the East Chicago Board are located south and east of the project. This project is not anticipated to impact these two managed lands.

Water Resources			
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
NWI - Points	N/A	NWI - Wetlands	28
Karst Springs	N/A	IDEM 303d Listed Lakes	N/A
Canal Structures – Historic	N/A	Lakes	2
NWI - Lines	2	Floodplain - DFIRM	N/A

IDEM 303d Listed Rivers and Streams (Impaired)	1	Cave Entrance Density	N/A
Rivers and Streams	1 river	Sinkhole Areas	N/A
Canal Routes - Historic	N/A	Sinking-Stream Basins	N/A

Explanation: Two National Wetlands Inventory (NWI) lines are identified within a half-mile of the project. One is associated with the Grand Calumet River and located approximately 2,000 feet west of the project. The other is located approximately 400 feet east of the north terminus of the project. This project is not anticipated to impact this NWI lines.

The Grand Calumet River is listed on the Indiana Department of Environmental Management’s (IDEM) List of Impaired Streams for ammonia, chloride, cyanide, Dissolved Oxygen (DO), E. coli, Impaired Biotic Communities (IBC), nutrients, and polychlorinated biphenyls (PCBs). As stated in the above paragraph, this project is not anticipated to impact this river.

One river is identified within a half-mile of the project. The Grand Calumet River is located approximately 1,000 feet south of the project. This project is not anticipated to impact this stream.

Twenty-eight NWI wetland polygons are identified within a half-mile of the project. These consist of four Palustrine Aquatic Bed (PAB), fourteen Palustrine Emergent (PEM), two Palustrine Forested (PFO), One Palustrine Open Water (POW), Six Palustrine Unconsolidated Bottom (PUB), and one Riverine Lower Perennial Unconsolidated Bottom (R2U) wetlands. The proposed trail crosses one PEM wetland mapped near the north terminus of the project. A field visit was conducted and documented a wetland near this area, outside of the project limits. This project is not anticipated to impact any wetlands.

Two lakes are identified within a half-mile of the project. Both are located approximately 2,000 feet northeast of the project and are not identified on the aerial photograph. This project is not anticipated to impact these lakes.

Mining/Mineral Exploration			
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Petroleum Wells	N/A	Petroleum Fields	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation: No Mining/Mineral Exploration resources are identified within a half-mile of the project.

Ecological Information

The Lake County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. This project is not anticipated to impact any state-listed species or high quality natural communities.

Lake County is within the range of the federally endangered Indiana bat (*Myotis sodalis*), American Burying Beetle (*Nicrophorus cyphus*), Karner Blue Butterfly (*Lycaeides melissa samuelis*), Hine’s Emerald (*Somatochlora hineana*),

Piping Plover (*Charadrius melodus*), Mead’s Milkweed (*Asclepias meadii*), Dune Thistle (*Cirsium pitcher*), and Prairie White-fringed Orchid (*Platanthera leucophaea*). This project is not anticipated to impact any federally-listed species.

Cultural Resources

The *National Register of Historic Places* (NRHP) and the *Indiana Register of Historic Sites and Structures* (State Register) were reviewed using the State Historical and Archaeological Database (SHAARD). No properties adjacent to the project are listed on either register. The *Lake County Interim Report* (1994) was also consulted; a “Contributing” Apartment Building (40065) is located near the project area. The *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* (February 2009) by Mead & Hunt was also checked. No bridges eligible for listing in the NRHP are included near the project area. A field visit was conducted to document any impacts to historic resources. If the project does not qualify for the Minor projects Programmatic Agreement (MPPA), coordination with the IDNR Division of Historic Preservation and Archaeology (DHPA) will be needed to address the Section 106 and Section 4(f) criteria.

Hazmat Concerns			
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Brownfield Sites	1	Restricted Waste Sites	N/A
Corrective Action Sites (RCRA)	N/A	Septage Waste Sites	N/A
Confined Feeding Operations	N/A	Solid Waste Landfills	N/A
Construction Demolition Waste	N/A	State Cleanup Sites	5
Industrial Waste Sites (RCRA Generators)	N/A	Tire Waste Sites	N/A
Infectious/Medical Waste Sites	N/A	Waste Transfer Stations	N/A
Lagoon/Surface Impoundments	N/A	RCRA Waste Treatment, Storage, and Disposal Sites (TSDs)	N/A
Leaking Underground Storage Tanks (LUSTs)	19	Underground Storage Tanks	33
Manufactured Gas Plant Sites	N/A	Voluntary Remediation Program	2
NPDES Facilities	N/A	Superfund	
NPDES Pipe Locations	N/A	Institutional Control Sites	
Open Dump Sites	N/A		

Explanation: One brownfield site is identified within a half-mile of the project. It is located approximately 2,300 feet northeast of the project. This project is not anticipated to impact this brownfield site.

Five state cleanup sites are identified within a half-mile of the project. The Clark Refinery and Blanka Yepz sites are located at least 1,700 feet east of the project. The Do All Cleaners site is located approximately 1,500 southwest of the project. The Walgreen Company and Hakam Bartesah sites are located on Calumet Avenue at least 650 feet southwest of the project. This project is not anticipated to impact these state cleanup sites.

Two voluntary remediation programs are identified within a half-mile of the project. The Hammond Enterprise Center and West Point Plaza are located east of I-90 and at least 650 feet east of the project. This project is not anticipated to impact these voluntary remediation programs.

Thirty-three underground storage tanks (USTs) are identified within a half-mile of the project. No USTs appear to be within the project limits and due to the nature of the project (trail construction); this project is not anticipated to impact these USTs.

Nineteen leaking underground storage tanks (LUSTs) are identified within a half-mile of the project. No LUSTs appear to be within the project limits and due to the nature of the project (trail construction); this project is not anticipated to impact these LUSTs.

RECOMMENDATIONS

INFRASTRUCTURE: Coordinate with pipeline utilities and railroad companies to determine impacts.

WATER RESOURCES: A field visit was conducted on October 16, 2012 to document any impacts to streams and wetlands.

MINING/MINERAL EXPLORATION: N/A

ECOLOGICAL INFORMATION: Coordination with the USFWS and the IDNR will be needed to determine if any listed species and/or habitats may be impacted by the proposed project.

CULTURAL RESOURCES: A field visit was conducted on October 16, 2012 to document any impacts to historic resources. If the project does not qualify for the MPPA, coordination with the IDNR DHPA will be needed to address the Section 106 and Section 4(f) criteria.

HAZMAT CONCERNS: N/A

INDOT Environmental Services concurrence: _____ (Signature)

Prepared by:



Kyle J. Boot
Historic Resources Specialist
Bernardin, Lochmueller & Associates, Inc.

Graphics:

A map for each report section with a ½ mile radius buffer around all project area(s) showing all items identified as possible items of concern is attached.

GENERAL SITE MAP SHOWING PROJECT AREA: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: YES

Supplemental Graphics are also attached.

UNITED STATES GEOLOGICAL SURVEY (USGS) TOPOGRAPHIC MAP

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MAPS

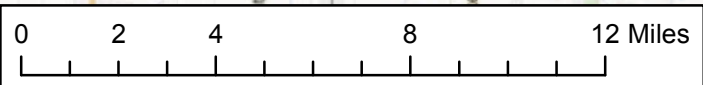
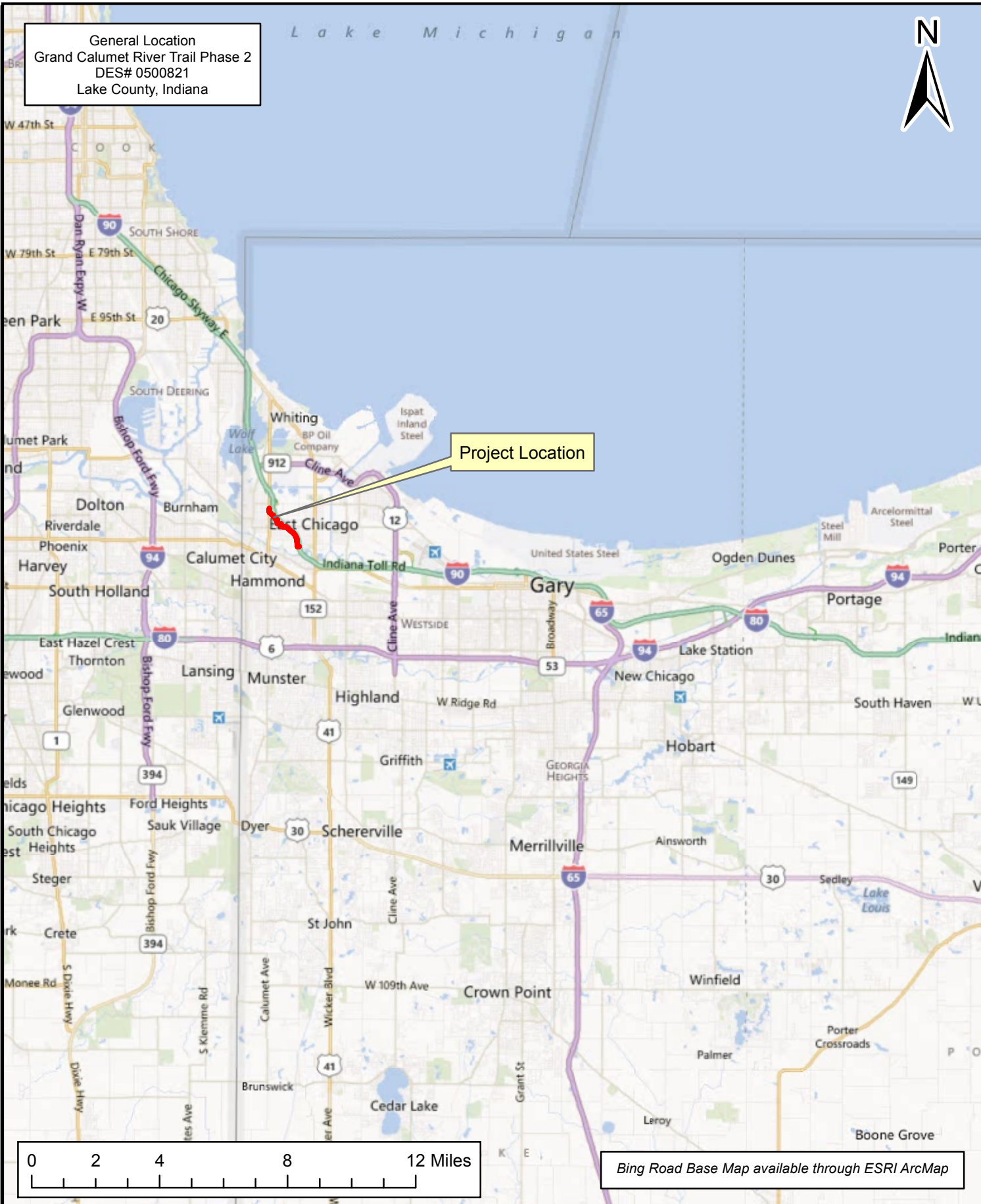
NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) SOILS MAP

NRCS SOILS DESCRIPTION

LAKE COUNTY LISTING OF THE INDIANA NATURAL HERITAGE DATA CENTER

General Location
Grand Calumet River Trail Phase 2
DES# 0500821
Lake County, Indiana

L a k e M i c h i g a n



Bing Road Base Map available through ESRI ArcMap



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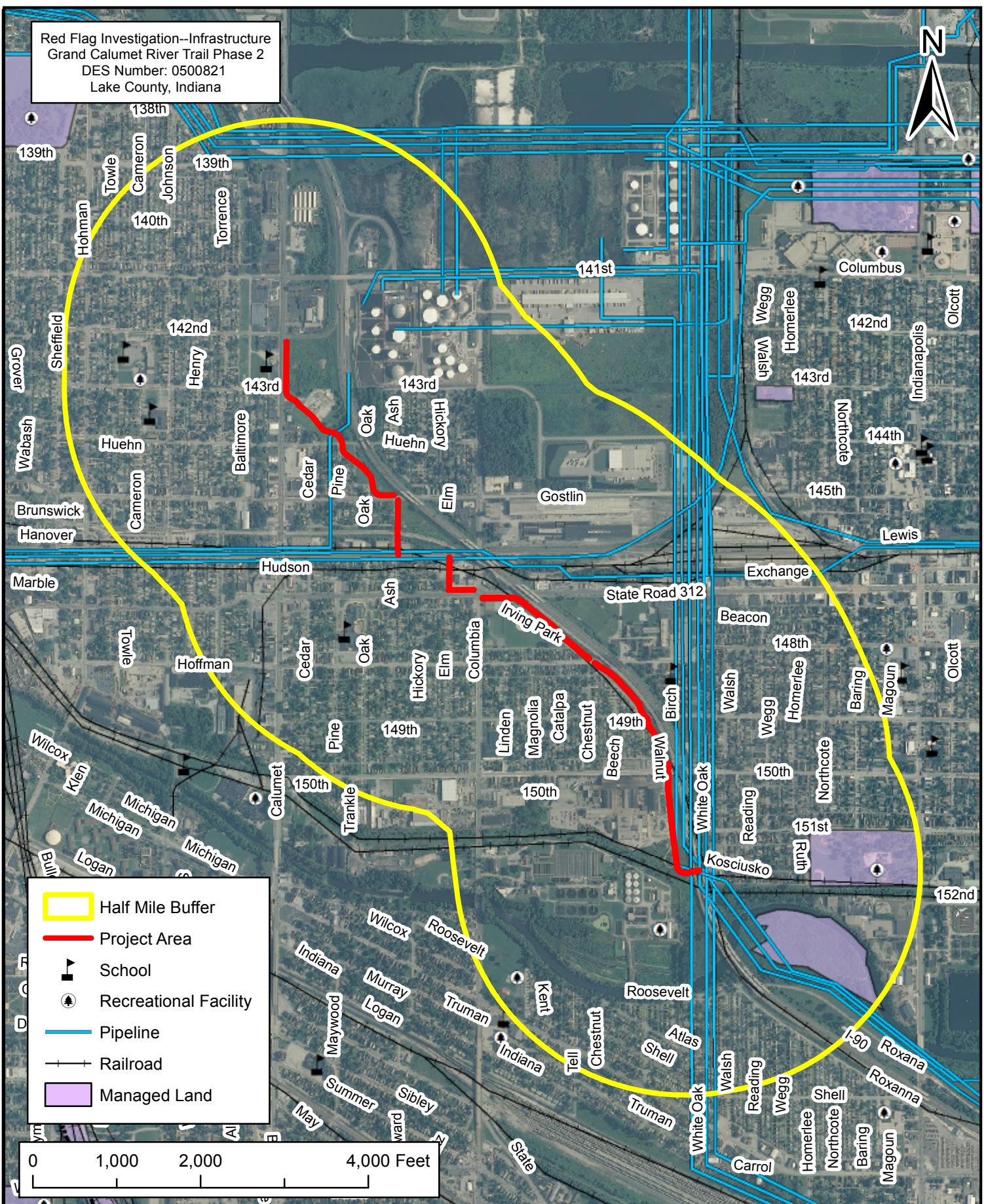
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881








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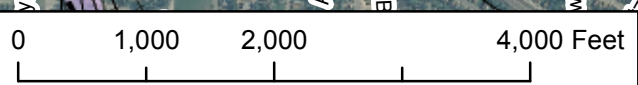
Map Datum: NAD83
Map Projection: UTM Zone 16 North

Date: 11/26/2012

Red Flag Investigation--Infrastructure
 Grand Calumet River Trail Phase 2
 DES Number: 0500821
 Lake County, Indiana



	Half Mile Buffer
	Project Area
	School
	Recreational Facility
	Pipeline
	Railroad
	Managed Land



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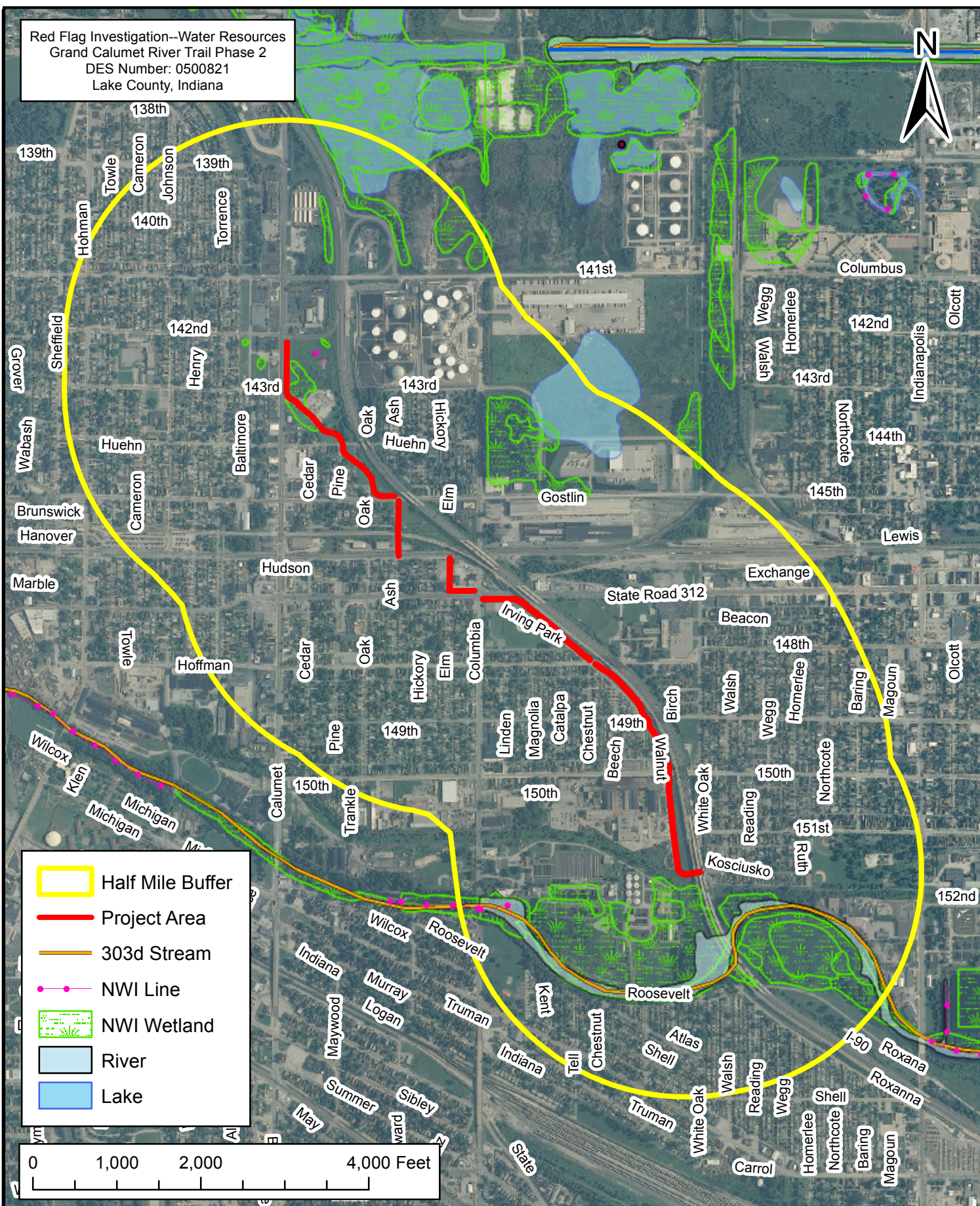
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Orthophotography obtained from Indiana Map Framework Data (Year 2010).

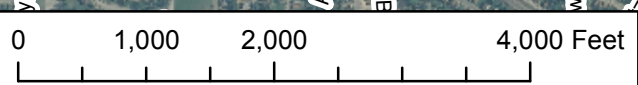
Map Datum: NAD83
 Map Projection: UTM Zone 16 North

Date: 11/26/2012

Red Flag Investigation--Water Resources
 Grand Calumet River Trail Phase 2
 DES Number: 0500821
 Lake County, Indiana



	Half Mile Buffer
	Project Area
	303d Stream
	NWI Line
	NWI Wetland
	River
	Lake



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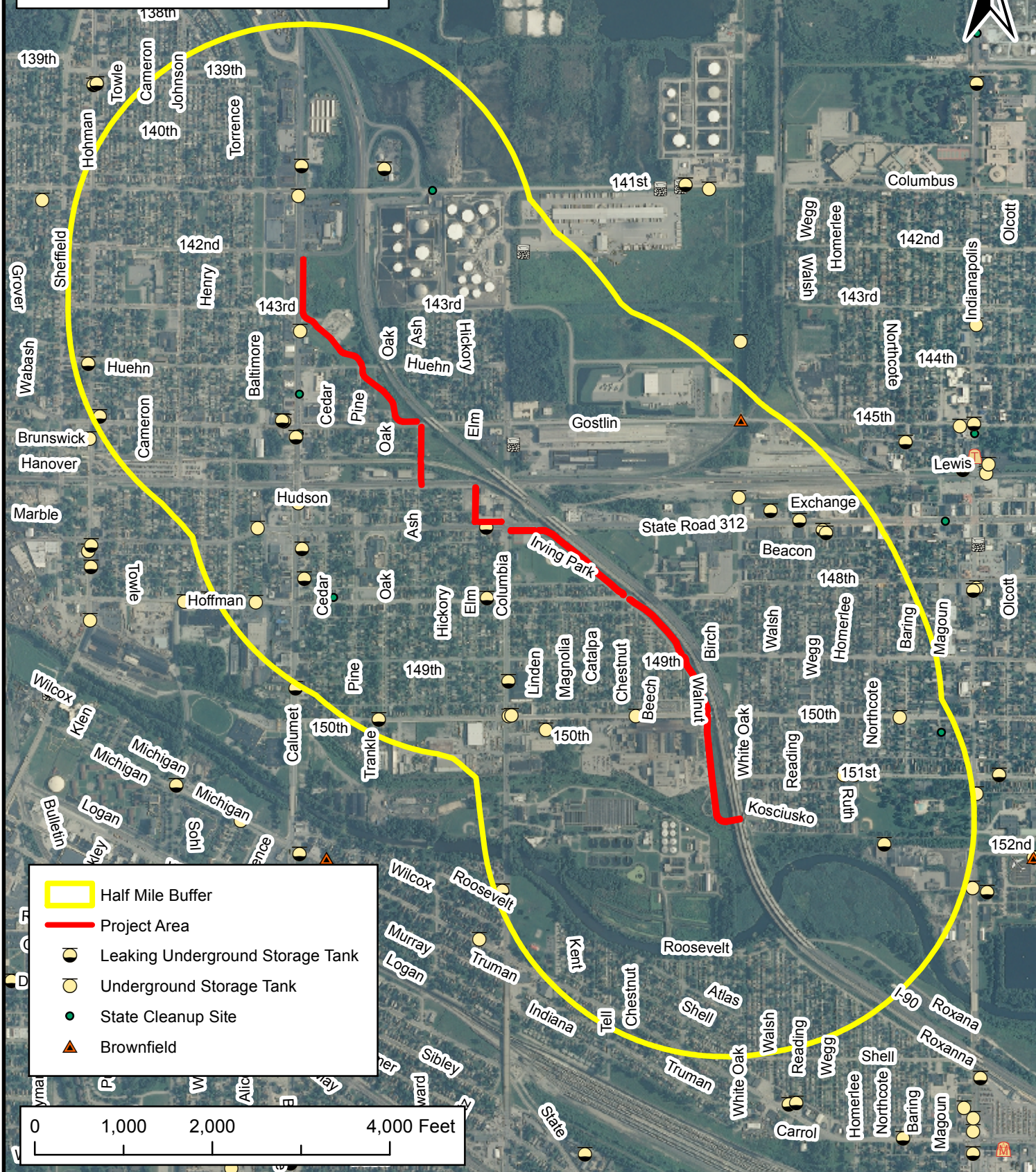
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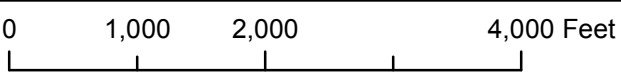
Map Datum: NAD83
 Map Projection: UTM Zone 16 North

Date: 11/26/2012

Red Flag Investigation--Hazardous Material Concerns
 Grand Calumet River Trail Phase 2
 DES Number: 0500821
 Lake County, Indiana



-  Half Mile Buffer
-  Project Area
-  Leaking Underground Storage Tank
-  Underground Storage Tank
-  State Cleanup Site
-  Brownfield



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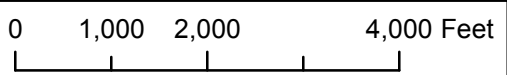
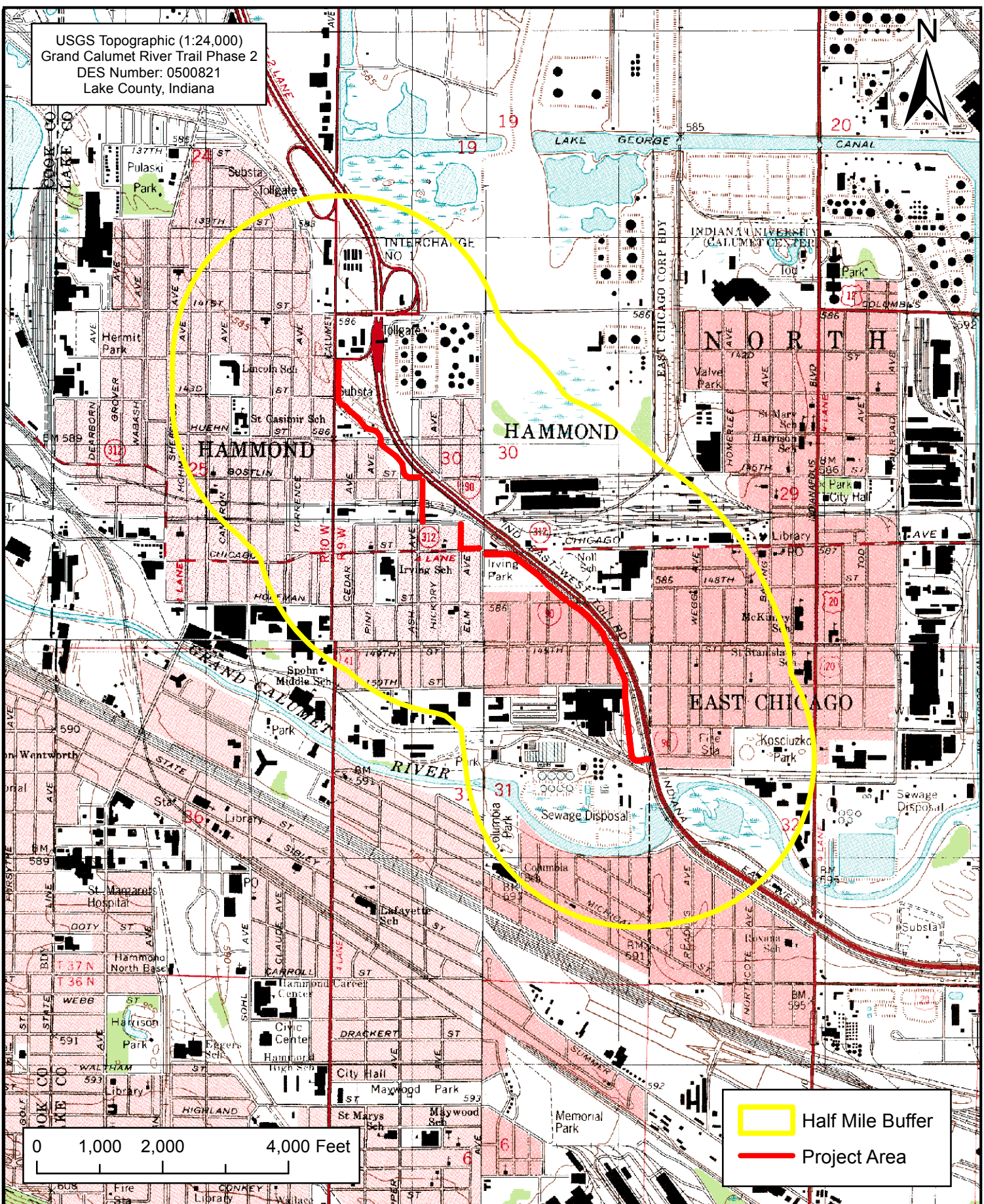
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Orthophotography obtained from Indiana Map Framework Data (Year 2010).

Map Datum: NAD83
 Map Projection: UTM Zone 16 North

Date: 11/26/2012

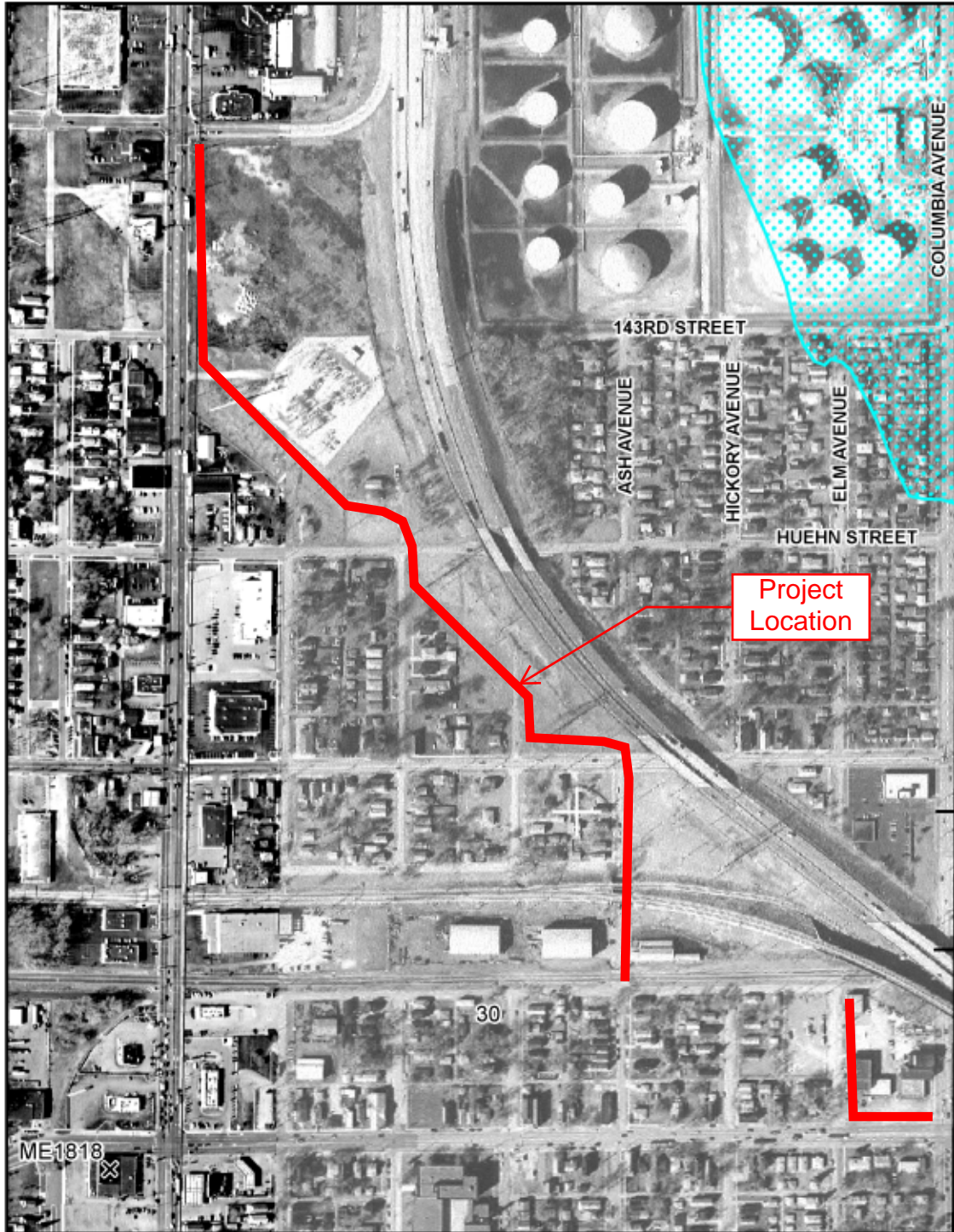
USGS Topographic (1:24,000)
 Grand Calumet River Trail Phase 2
 DES Number: 0500821
 Lake County, Indiana



 Half Mile Buffer
 Project Area

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 Topographic Quadrangles obtained from the USGS (Calumet City, Highland, Lake Calumet, Whiting Quadrangles).
 Map Datum: NAD83
 Map Projection: UTM Zone 16 North
 Date: 11/26/2012



JOINS P

COLUMBIA AVENUE

143RD STREET

ASH AVENUE

HICKORY AVENUE

ELM AVENUE

HUEHN STREET

Project Location

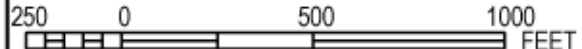
N 00°00' 00" W

30

ME1818



MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0019E

FIRM
FLOOD INSURANCE RATE MAP
LAKE COUNTY,
INDIANA
AND INCORPORATED AREAS

PANEL 19 OF 480
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL SUFFIX
HAMMOND, CITY OF	180134	0019 E

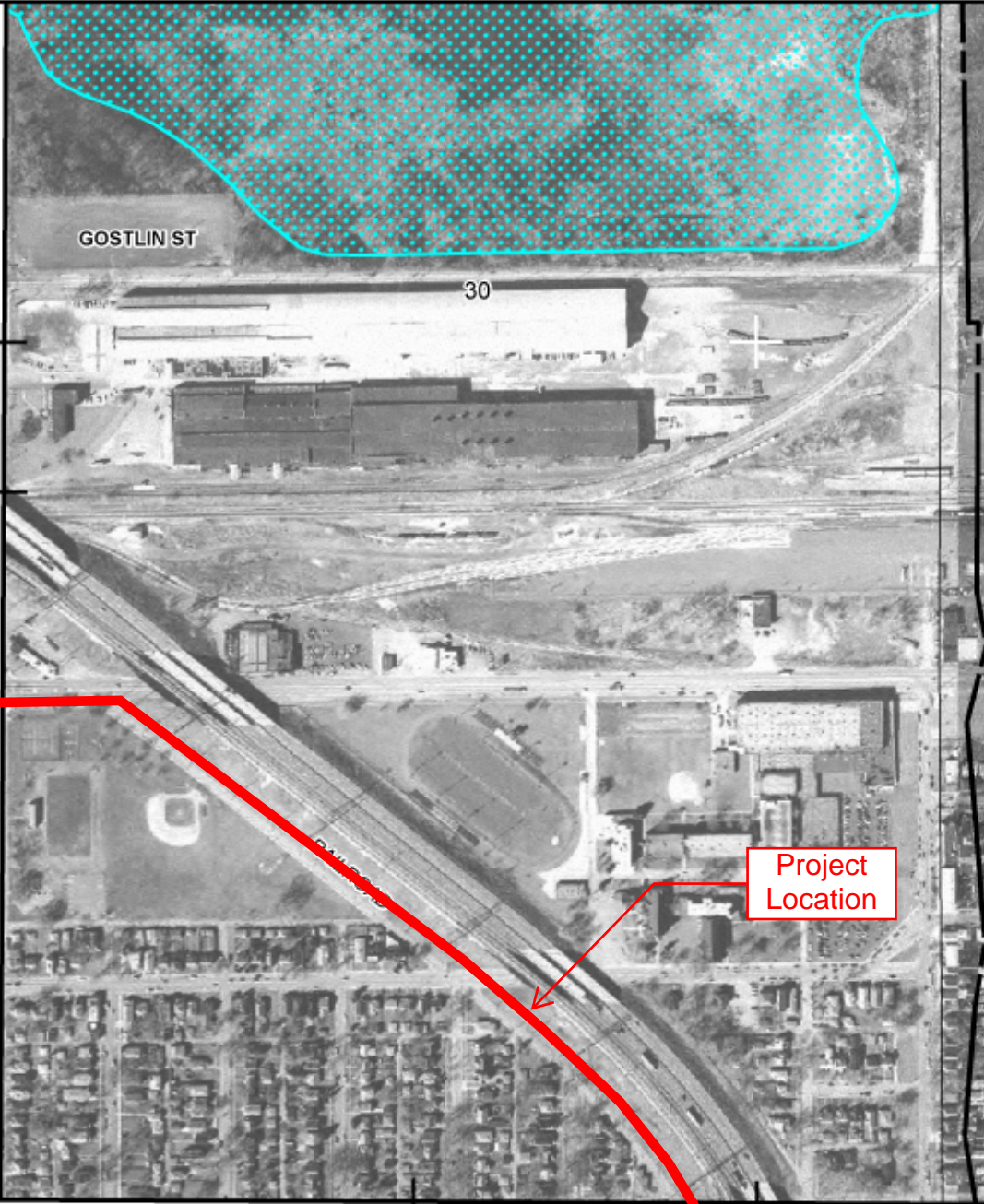
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
18089C0019E
EFFECTIVE DATE
JANUARY 18, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

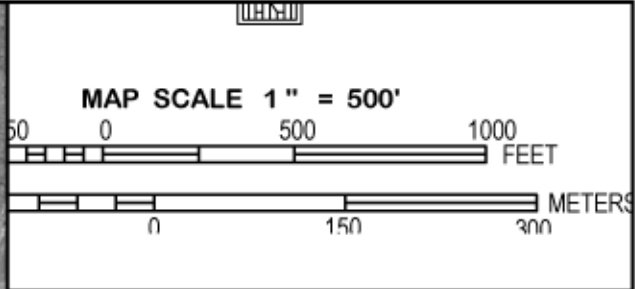


2325000 FT

41° 37' 30.0"

87° 30' 00.0"

459000 ME



NFP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0038E

FIRM
FLOOD INSURANCE RATE MAP
LAKE COUNTY,
INDIANA
AND INCORPORATED AREAS

PANEL 38 OF 480
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EAST CHICAGO, CITY OF	180130	0038	E
HAMMOND, CITY OF	180134	0038	E

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MAP NUMBER
18089C0038E
EFFECTIVE DATE
JANUARY 18, 2012

Federal Emergency Management Agency

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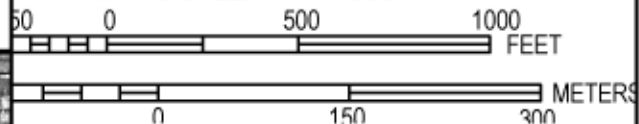
° 30' 00.0"

2840000 FT

0"

30

MAP SCALE 1" = 500'



Project Location

ZONE X

RAILROAD

ZONE X

ZONE X

KOSCIUS



584

31

ZONE X

PROFILE BASELINE



PANEL 0126E

FIRM
FLOOD INSURANCE RATE MAP
LAKE COUNTY,
INDIANA
AND INCORPORATED AREAS

PANEL 126 OF 480
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL SUFFIX
EAST CHICAGO, CITY OF	180130	0126 E
HAMMOND, CITY OF	180134	0126 E

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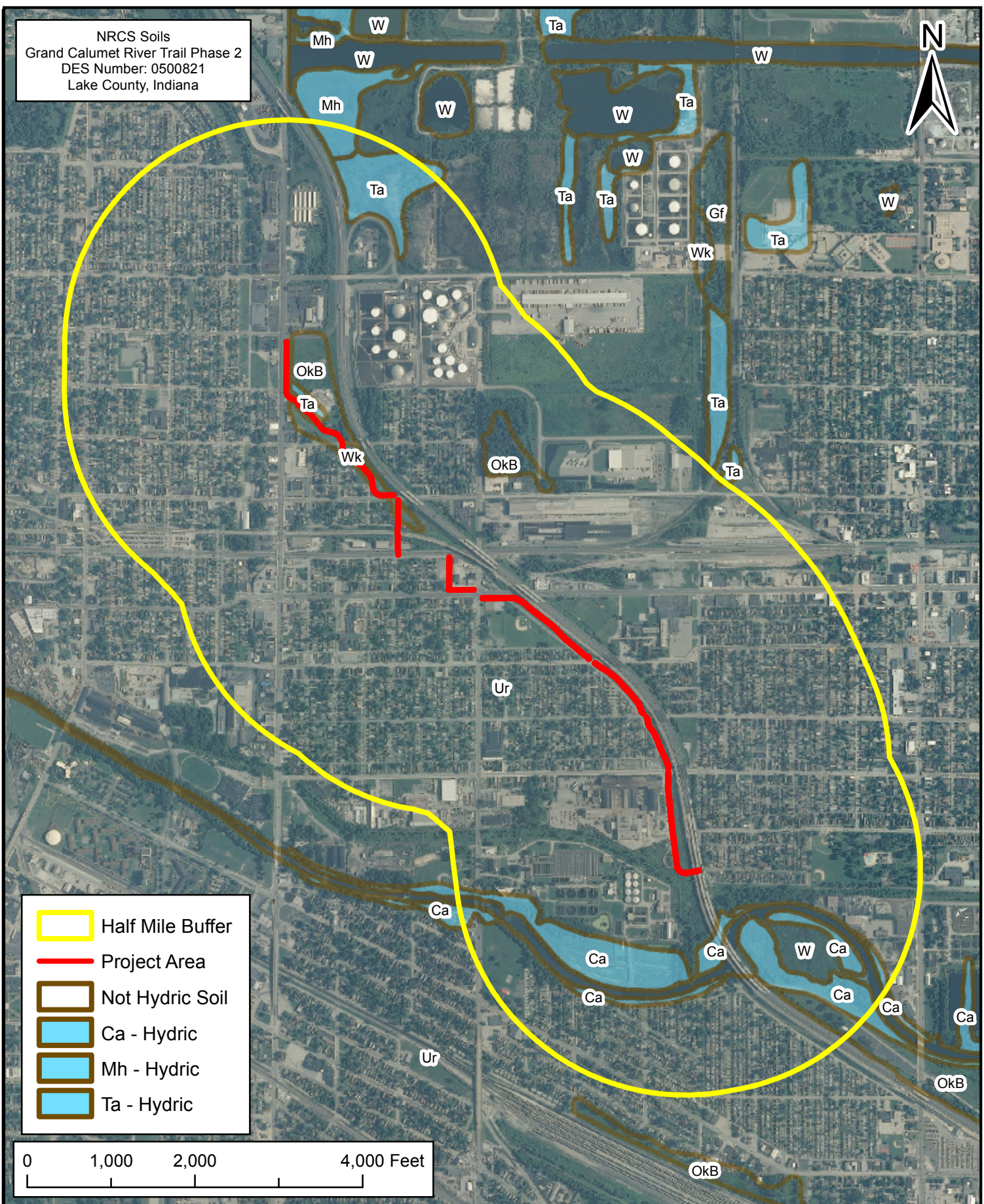








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EFFECTIVE DATE
JANUARY 18, 2012

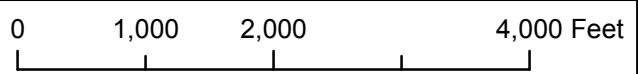
Federal Emergency Management Agency

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NRCS Soils
 Grand Calumet River Trail Phase 2
 DES Number: 0500821
 Lake County, Indiana



	Half Mile Buffer
	Project Area
	Not Hydric Soil
	Ca - Hydric
	Mh - Hydric
	Ta - Hydric



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Orthophotography obtained from Indiana Map Framework Data (Year 2010).

Map Datum: NAD83
 Map Projection: UTM Zone 16 North

Date: 11/26/2012

Map Unit Description (Brief, Generated)

Lake County, Indiana

[Minor map unit components are excluded from this report]

Map unit: Ca - Houghton muck, drained, 0 to 1 percent slopes

Component: Houghton, drained (75%)

The Houghton, drained component makes up 75 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on till plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during April, May, June. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Map unit: OKB - Oakville-Adrian complex, 0 to 6 percent slopes

Component: Oakville (60%)

The Oakville component makes up 60 percent of the map unit. Slopes are 0 to 6 percent. This component is on dunes. The parent material consists of eolian sands. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria.

Component: Adrian, drained (40%)

The Adrian, drained component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on lake plains. The parent material consists of herbaceous organic material over sandy outwash. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during April, May, June. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 20 percent.

Map unit: Ur - Urban land

Component: Urban land (100%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Map unit: W - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map unit: Wk - Watseka loamy fine sand

Component: Watseka (90%)

The Watseka component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on outwash plains. The parent material consists of sandy outwash. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria.

Indiana County Endangered, Threatened and Rare Species List

County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Crustacean: Malacostraca					
Procambarus gracilis	Prairie Crayfish		ST	G5	S1S2
Mollusk: Bivalvia (Mussels)					
Plethobasus cyphus	Sheepnose	C	SE	G3	S1
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G2G3	SH
Insect: Homoptera					
Bruchomorpha dorsata			SR	GNR	S2
Bruchomorpha extensa	The Long-nosed Elephant Hopper		SR	GNR	S2S3
Bruchomorpha oculata			SR	GNR	SNR
Chlorotettix fallax	A Leafhopper		SR	GNR	S2
Cicadula straminea			ST	GNR	SNR
Cosmotettix bilineatus	Two-lined cosmotettix		ST	GNR	S1S2
Dorydiella kansana			ST	GNR	S1
Flexamia pyrops	The Long-nose Three-awn Leafhopper		SR	GNR	S1S3
Flexamia reflexus	Indiangrass Flexamia		ST	GNR	S2S3
Graminella mohri			SR	GNR	SNR
Laevincephalus acus			SR	GNR	S2S3
Limotettix divaricatus			ST	GNR	SNR
Mesamia nigradorsum	A Leafhopper		SR	GNR	S2S3
Paraphilaenus parallelus	A Spittle Bug		ST	GNR	S1
Paraphlepsius lobatus			ST	GNR	S1S2
Paraphlepsius maculosus	Peppered Paraphlepsius Leafhopper		ST	GNR	S1
Philaenarcys killa	Great Lakes dune spittlebug		SR	GNR	S2S3
Polyamia caperata	Little Bluestem Polyamia		SR	GNR	SNR
Polyamia herbida	The Prairie Panic Grass Leafhopper		ST	GNR	S1S3
Prairiana kansana	The Kansas Prairie Leafhopper		SE	GNR	S1S2
Prosapia ignipectus	Red-legged Spittle Bug		SR	G4	S2
Insect: Lepidoptera (Butterflies & Moths)					
Acronicta dactylina			SR	G5	SNR
Acronicta funeralis	Funerary Dagger Moth		SR	G4G5	SNR
Aethes patricia			SE	G3G4	S1
Agrotis stigmosa			ST	G4	S1S2
Agrotis vetusta	A Moth		SR	G5	S2
Ancylis semiovana			SR	GNR	S2S3
Anepia capsularis	The Starry Campion Capsule Moth		SR	G5	S1S2

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Apamea burgessi	A Noctuid Moth		ST	G4	S1
Apamea indocilis	The spastic apamea			GNR	S1S3
Apamea nigrior	Black-dashed Apamea		SR	G5	S2S3
Archanara laeta			ST	G4	S1S2
Atrytonopsis hianna	Dusted Skipper		ST	G4G5	S1S2
Boloria selene myrina	Silver-bordered Fritillary		ST	G5T5	S2
Capis curvata	A Noctuid Moth		ST	G4	S2S3
Catocala antinympa	The Sweet Fern Underwing		SE	G5	S1
Catocala gracilis	Graceful Underwing		SR	G5	S2S3
Catocala praeclara	Praeclara Underwing		SR	G5	S2S3
Chortodes enervata	The Many-lined Cordgrass Moth		ST	G4	S1
Chortodes inquinata	Tufted Sedge Moth		ST	GNR	S1S2
Coenochroa illibella	Dune Panic Grass Moth		SR	GNR	S2S3
Crambus bidens			SR	GNR	SNR
Crambus murellus	Prairie Sedge Moth		ST	GNR	S1
Croesia semipurpurana			SR	GNR	SNR
Cyclophora penduliniaria	Sweetfern Geometer		SR	G5	SNR
Cyrcia inopinatus	The Unexpected Milkweed Moth		SR	G4	S2S3
Dichomeris aleatrix	Aleatrix dichomeris			GNR	S1S2
Erynnis martialis	Mottled Duskywing		ST	G3	S2S3
Erynnis persius persius	Persius Dusky Wing		SE	G5T1T3	S1S2
Euchloe olympia	Olympia Marble		ST	G4G5	S2
Eucrotopocnemis fimbriaris	A Noctuid Moth		ST	G4	S1
Eucosma bilineana			SR	GNR	S1S2
Eucosma bipunctella	A Moth		SR	GNR	S1S2
Eucosma fulminana			SR	GNR	S1S2
Eucosma giganteana			SR	GNR	S1S2
Euphydryas phaeton	Baltimore		SR	G4	S2
Euphyes bimacula	Two-spotted Skipper		ST	G4	S2
Euphyes dion	Sedge Skipper		SR	G4	S2S3
Fagitana littera	The Marsh Fern Moth		ST	G4	S1S2
Faronta rubripennis	The Pine Streak		ST	G3G4	S1
Gabara pulverosalis				G4	SNR
Gabara subnivosella	A Noctuid Moth		SR	G4	S1S2
Glaucopsyche lygdamus couperi	Silvery Blue		SE	G5T5	S1
Grammia figurata	The Figured Grammia		SR	G5	S2S3
Grammia phyllira	The Sand Barrens Grammia		SR	G4	S2S3
Grammia virguncula			SR	G5	S1S2
Hadena ectypa	The Starry Champion Moth		ST	G3G4	S1S3
Hemaris gracilis	The Blueberry Clearwing Sphinx		SR	G3G4	S1S2

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Hesperia leonardus	Leonard's Skipper	No Status	SR	G4	S2
Hesperia ottoe	Ottoe Skipper		SE	G3G4	S1
Hyphenodes caducus	Large Hyphenodes		SR	GNR	SNR
Hyperaeschra georgica	A Prominent Moth			G5	S2
Iodopepla u-album	A Noctuid Moth		SR	G5	S2
Lemmeria digitalis	A Noctuid Moth		SR	G4	S1S2
Lesmone detrahens	A Moth		SR	G5	S2
Leucania inermis	A Moth		SR	G4	S2S3
Leucania linita	Salt Marsh Wainscot		SR	GNR	S2
Leucania multilinea			SR	G5	S1S2
Loxagrotis acclivis	A Noctuid Moth		ST	G4G5	S2
Loxagrotis grotei	Grote's Black-tipped Quaker		ST	G4	S2
Lycaeides melissa samuelis	Karner Blue	LE	SE	G5T2	S1
Lycaena helloides	Purplish Copper		SR	G5	S2S4
Lycaena xanthoides	Great Copper		SE	G5	S1
Macrochilo absorptalis	A Moth		SR	G4G5	S2S3
Macrochilo hypocriticalis	A Noctuid Moth		SR	G4	S2
Macrochilo louisiana			ST	G4	S1S2
Melanomma auricinctaria	Huckleberry Eye-spot Moth		SR	G4	S2S3
Melipotis jucunda	A Noctuid Moth		SR	G5	S1S3
Meropleon ambifuscum	Newman's Brocade		ST	G3G4	S1S2
Meropleon diversicolor	A Noctuid Moth		SR	G4	S2S3
Metanema determinata	Dark Metanema		SR	GNR	SNR
Metanema inatomaria	Pale Metanema		SR	GNR	SNR
Metarranthis apiciaria	Barrens Metarranthis Moth		SE	G1G3	SH
Nola cilicoides			SR	G4	SNR
Notodonta scitipennis	A Notodontid Moth			G4	S1S2
Odontosia elegans	Elegant Prominent		SR	G5	S1S2
Oligia obtusa	A Noctuid Moth		SE	G4	S1
Oncocnemis riparia	The Dune Oncocnemis Moth		ST	G4	S1S2
Pangrapta decoralis	The Multicolored Huckleberry Moth		ST	G5	S2
Papaipema beeriana	Beer's Blazing Star Borer Moth		ST	G2G3	S1S3
Papaipema cerina	Golden Borer Moth		ST	G2G4	S1
Papaipema leucostigma	Columbine Borer		ST	G4	S1S2
Papaipema lysimachiae	The St. John'Swort Borer Moth		SR	G4	S1S3
Papaipema maritima	The Giant Sunflower Borer Moth		ST	G3	S2
Papaipema pterisii	Bracken Borer Moth		WL	G5	SNR
Papaipema rigida	A Borer Moth		SR	G5	S2S3
Papaipema sciata	The Culver's Root Borer		ST	G3G4	S1S2

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Papaipema silphii	Silphium Borer Moth		ST	G3G4	S2
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Parasa indetermina	A Moth		SR	G4	S1S2
Peoria gemmatella	Gemmed Cordgrass Borer		SR	GNR	S1
Peoria tetradella			SR	GNR	SNR
Phaneta ochroterminana			SR	GNR	SNR
Phaneta olivaceana			SR	GNR	S1S2
Phaneta raracana			SR	GNR	SNR
Phaneta striatana			SR	GNR	SNR
Phaneta umbrastriana			SR	GNR	SNR
Phytometra ernestinana	Ernestine's Moth		SE	G4	S1
Platyperigea meralis	The Rare Sand Quaker		ST	G4	S2
Poanes massasoit	Mulberry Wing Skipper		SR	G4	S3
Poanes viator viator	Big Broad-winged Skipper		ST	G5T4	S2
Polites mystic	Long Dash Skipper		SR	G5	S4
Polygonia progne	Gray Comma		SR	G4G5	S2
Problema byssus	Bunchgrass Skipper		ST	G3G4	S2
Protorthodes incincta	Saturn quaker		SR	GNR	S2
Pygarctia spraguei	Sprague's Pygartic		SR	G5	S1S2
Pyrausta laticlavata	The Southern Purple Mint Moth		SR	GNR	S1S2
Rhodoecia aurantiago	Aureolaria Seed Borer		ST	G3G4	S1S2
Satyrodes eurydice	Eyed Brown		SR	G4	S2S3
Schinia indiana	Phlox Moth		SE	G2G4	S1
Schinia sanguinea	Bleeding Flower Moth			G4	S2S3
Schinia septentrionalis	A Noctuid Moth		SR	G3G4	S2S3
Scirpophaga perstrialis			SR	GNR	SNR
Semiothisa eremiata	The Goat's Rue Looper		SR	G4	S2S3
Semiothisa mellistrigata	A Geometrid Moth		SR	G4G5	SNR
Semiothisa multilineata			SR	G4	SNR
Sitochroa dasconalis	Pearly Indigo Borer		ST	GNR	S1S2
Spartiniphaga includens	The Included Cordgrass Borer		ST	G4	S1
Spartiniphaga inops	Spartina Borer Moth		SR	G3G4	S2S3
Speyeria aphrodite	Aphrodite Fritillary		WL	G5	S3
Speyeria idalia	Regal Fritillary		SE	G3	S1
Sphinx luscitiosa	The Luscious Willow Sphinx		SR	G4	S1S2
Spilosoma latipennis	The Red-legged Tussock Moth		SR	G4	S2S3
Tarachidia binocula	Prairie tarachidia			GNR	S1S2
Thorybes pylades	Northern Cloudywing		SR	G5	S2S3
Tricholita notata	Marked Noctuid		ST	G5	S1S2
Trichosilia manifesta	The Record Keeper Moth		SR	G4	S3S4

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Zomaria interruptolinea			SR	GNR	SNR
Insect: Odonata (Dragonflies & Damselflies)					
Somatochlora hineana	Hine's Emerald	LE	SX	G2G3	SX
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
Insect: Orthoptera					
Chloealtis conspersa	Sprinkled Locust		SR	G5	S2S3
Conocephalus saltans	Prairie Meadow Katydid		SR	GNR	S1S2
Hesperotettix viridis pratensis	A Grasshopper		SR	G5T5	S1S2
Melanoplus fasciatus	Huckleberry Spur-throat Grasshopper		SR	G5	S2
Melanoplus keeleri luridus	Keeler's Spur-throated Grasshopper		SR	G5T5	S1S2
Neoconocephalus nebrascensis	A Katydid		SR	GNR	S1S2
Orphulella pelidna	Green Desert Grasshopper		SR	G5	S1S2
Pardalophora phoenicoptera	Orange-winged Grasshopper		SR	G5	S1S2
Paroxya atlantica	A Grasshopper		ST	GU	S1S2
Phoetaliotes nebrascensis	Large-headed Grasshopper		ST	G5	S1
Psinidia fenestralis	Sand Locust		SR	G5	S1S2
Trimerotropis maritima	The Dune Locust		ST	G5	S2
Fish					
Acipenser fulvescens	Lake Sturgeon		SE	G3G4	S1
Amphibian					
Acris crepitans blanchardi	Northern Cricket Frog		SSC	G5	S4
Ambystoma laterale	Blue-spotted Salamander		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Rana pipiens	Northern Leopard Frog		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle		SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle		SE	G4	S2
Liochlorophis vernalis	Smooth Green Snake		SE	G5	S2
Sistrurus catenatus catenatus	Eastern Massasauga	C	SE	G3G4T3T4Q	S2
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Thamnophis proximus proximus	Western Ribbon Snake		SSC	G5T5	S3
Bird					
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Ardea alba	Great Egret		SSC	G5	S1B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Botaurus lentiginosus	American Bittern		SE	G4	S2B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3

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Charadrius melodus	Piping Plover	LE	SE	G3	SXB
Chlidonias niger	Black Tern		SE	G4	S1B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Falco peregrinus	Peregrine Falcon	No Status	SE	G4	S2B
Gallinula chloropus	Common Moorhen	No Status	SE	G5	S3B
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike	No Status	SE	G4	S3B
Laterallus jamaicensis	Black Rail		SE	G4	SHB
Nyctanassa violacea	Yellow-crowned Night-heron		SE	G5	S2B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Phalaropus tricolor	Wilson's Phalarope		SSC	G5	SHB
Rallus elegans	King Rail		SE	G4	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Tyto alba	Barn Owl		SE	G5	S2
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		SE	G5	S1B
Mammal					
Lasiurus borealis	Eastern Red Bat		SSC	G5	S4
Lasiurus cinereus	Hoary Bat	No Status	SSC	G5	S4
Lutra canadensis	Northern River Otter		SSC	G5	S2
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Agalinis auriculata	Earleaf Foxglove		ST	G3	S1
Agalinis skinneriana	Pale False Foxglove		ST	G3G4	S1
Alnus rugosa	Speckled Alder		WL	G5T5	S3
Amelanchier humilis	Running Serviceberry		SE	G5	S1
Androsace occidentalis	Western Rockjasmine		ST	G5	S2
Aralia hispida	Bristly Sarsaparilla		SE	G5	S1
Arctostaphylos uva-ursi	Bearberry		SR	G5	S2
Arenaria stricta	Michaux's Stitchwort		SR	G5	S2
Arethusa bulbosa	Swamp-pink		SX	G4	SX
Aristida intermedia	Slim-spike Three-awn Grass		SR	GNR	S2
Aristida tuberculosa	Seabeach Needlegrass		SR	G5	S2
Armoracia aquatica	Lake Cress		SE	G4?	S1
Asclepias meadii	Mead's Milkweed	LT	SRE	G2	SX
Aster borealis	Rushlike Aster		SR	G5	S2
Aster furcatus	Forked Aster		SR	G3	S2
Aster sericeus	Western Silvery Aster		SR	G5	S2
Aureolaria grandiflora var. pulchra	Large-flower False-foxglove		SX	G4G5T4T5	SX

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Betula populifolia	Gray Birch		SE	G5	S1
Bidens beckii	Beck Water-marigold		ST	G4G5	S1
Botrychium matricariifolium	Chamomile Grape-fern		SR	G5	S2
Botrychium simplex	Least Grape-fern		SE	G5	S1
Buchnera americana	Bluehearts		SE	G5?	S1
Carex aurea	Golden-fruited Sedge		SR	G5	S2
Carex bebbii	Bebb's Sedge		ST	G5	S2
Carex brunnescens	Brownish Sedge		SE	G5	S1
Carex conoidea	Prairie Gray Sedge		ST	G5	S1
Carex crawei	Crawe Sedge		ST	G5	S2
Carex eburnea	Ebony Sedge		SR	G5	S2
Carex echinata	Little Prickly Sedge		SE	G5	S1
Carex garberi	Elk Sedge		ST	G5	S2
Carex limosa	Mud Sedge		SE	G5	S1
Carex richardsonii	Richardson Sedge		ST	G4	S1
Carex straminea	Straw Sedge		ST	G5	S2
Ceanothus herbaceus	Prairie Redroot		SE	G5	S1
Cirsium hillii	Hill's Thistle		SE	G3	S1
Cirsium pitcheri	Dune Thistle	LT	ST	G3	S2
Clintonia borealis	Clinton Lily		SE	G5	S1
Coeloglossum viride var. virescens	Long-bract Green Orchis		ST	G5T5	S2
Cornus amomum ssp. amomum	Silky Dogwood		SE	G5T5	S1
Cornus canadensis	Bunchberry		SE	G5	S1
Cornus rugosa	Roundleaf Dogwood		SR	G5	S2
Corydalis sempervirens	Pale Corydalis		ST	G4G5	S1
Cyperus dentatus	Toothed Sedge		SE	G4	S1
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper		SR	G5	S2
Cypripedium candidum	Small White Lady's-slipper		WL	G4	S2
Dichanthelium sabulorum var. thinium	Hemlock Panic-grass		SR	G5T5	S2
Diervilla lonicera	Northern Bush-honeysuckle		SR	G5	S2
Drosera intermedia	Spoon-leaved Sundew		SR	G5	S2
Eleocharis geniculata	Capitate Spike-rush		ST	G5	S2
Eleocharis melanocarpa	Black-fruited Spike-rush		ST	G4	S2
Eleocharis wolfii	Wolf Spikerush		SR	G3G4	S2
Epigaea repens	Trailing Arbutus		WL	G5	S3
Equisetum variegatum	Variegated Horsetail		SE	G5	S1
Eriophorum angustifolium	Narrow-leaved Cotton-grass		SR	G5	S2
Eriophorum gracile	Slender Cotton-grass		ST	G5	S2
Gentiana alba	Yellow Gentian		SR	G4	S2
Gentiana puberulenta	Downy Gentian		ST	G4G5	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

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Geranium bicknellii	Bicknell Northern Crane's-bill		SE	G5	S1
Glyceria borealis	Small Floating Manna-grass		SE	G5	S1
Hemicarpha drummondii	Drummond Hemicarpha		se	G4G5	S1
Hudsonia tomentosa	Sand-heather		ST	G5	S2
Hydrastis canadensis	Golden Seal		WL	G4	S3
Juglans cinerea	Butternut		WL	G4	S3
Juncus articulatus	Jointed Rush		SE	G5	S1
Juncus balticus var. littoralis	Baltic Rush		SR	G5T5	S2
Juncus pelocarpus	Brown-fruited Rush		SE	G5	S2
Juncus scirpoides	Scirpus-like Rush		ST	G5	S2
Juniperus communis	Ground Juniper		SR	G5	S2
Lathyrus maritimus var. glaber	Beach Peavine		SE	G5T4T5	S1
Lathyrus venosus	Smooth Veiny Pea		ST	G5	S2
Lechea stricta	Upright Pinweed		SX	G4?	SX
Liatris pycnostachya	Cattail Gay-feather		ST	G5	S2
Linnaea borealis	Twinflower		SX	G5	SX
Linum sulcatum	Grooved Yellow Flax		SR	G5	S2
Ludwigia sphaerocarpa	Globe-fruited False-loosestrife		SE	G5	S1
Lycopodiella inundata	Northern Bog Clubmoss		SE	G5	S1
Malaxis unifolia	Green Adder's-mouth		SE	G5	S1
Matteuccia struthiopteris	Ostrich Fern		SR	G5	S2
Melampyrum lineare	American Cow-wheat		SR	G5	S2
Mikania scandens	Climbing Hempweed		SE	G5	S1
Myosotis laxa	Smaller Forget-me-not		ST	G5	S1
Myriophyllum verticillatum	Whorled Water-milfoil		SR	G5	S2
Oenothera perennis	Small Sundrops		SR	G5	S2
Orobanche fasciculata	Clustered Broomrape		SE	G4	S1
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Panicum boreale	Northern Witchgrass		SR	G5	S2
Panicum leibergii	Leiberg's Witchgrass		ST	G5	S2
Perideridia americana	Eastern Eulophus		SE	G4	S1
Pinus banksiana	Jack Pine		SR	G5	S2
Pinus strobus	Eastern White Pine		SR	G5	S2
Plantago cordata	Heart-leaved Plantain		SE	G4	S1
Platanthera ciliaris	Yellow-fringe Orchis		SE	G5	S1
Platanthera flava var. herbiola	Pale Green Orchis		WL	G4?T4Q	S3
Platanthera hookeri	Hooker Orchis		SX	G4	SX
Platanthera hyperborea	Leafy Northern Green Orchis		ST	G5	S2
Platanthera lacera	Green-fringe Orchis		WL	G5	S3
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1

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Platanthera psycodes	Small Purple-fringe Orchis		SR	G5	S2
Polygonella articulata	Eastern Jointweed		SR	G5	S2
Polygonum careyi	Carey's Smartweed		ST	G4	S2
Polytaenia nuttallii	Prairie Parsley		SE	G5	S1
Populus balsamifera	Balsam Poplar		SX	G5	SX
Potamogeton pulcher	Spotted Pondweed		SE	G5	S1
Potamogeton pusillus	Slender Pondweed		WL	G5	S2
Potamogeton richardsonii	Redheadgrass		SR	G5	S2
Potamogeton robbinsii	Flatleaf Pondweed		SR	G5	S2
Potamogeton strictifolius	Straight-leaf Pondweed		ST	G5	S1
Potentilla anserina	Silverweed		ST	G5	S2
Prenanthes aspera	Rough Rattlesnake-root		SR	G4?	S2
Prunus pensylvanica	Fire Cherry		SR	G5	S2
Pyrola secunda	One-sided Wintergreen		SX	G5	SX
Rhus aromatica var. arenaria	Beach Sumac		SR	G5T3Q	S2
Rhynchospora macrostachya	Tall Beaked-rush		SR	G4	S2
Rhynchospora recognita	Globe Beaked-rush		SE	G5?	S1
Rubus enslenii	Southern Dewberry		SE	G4G5Q	S1
Rubus setosus	Small Bristleberry		SE	G5	S1
Salix cordata	Heartleaf Willow		ST	G4	S2
Satureja glabella var. angustifolia	Calamint		SE	G5	S1
Schoenoplectus hallii	Hall's Bulrush		SE	G2G3	S1
Scirpus smithii	Smith's Bulrush		SE	G5?	S1
Scirpus subterminalis	Water Bulrush		SR	G4G5	S2
Scleria reticularis	Reticulated Nutrush		ST	G4	S2
Selaginella apoda	Meadow Spike-moss		WL	G5	S1
Selaginella rupestris	Ledge Spike-moss		ST	G5	S2
Shepherdia canadensis	Canada Buffalo-berry		SX	G5	SX
Sisyrinchium montanum	Strict Blue-eyed-grass		SE	G5	S1
Solidago ptarmicoides	Prairie Goldenrod		SR	G5	S2
Solidago simplex var. gillmanii	Sticky Goldenrod		ST	G5T3?	S2
Spiranthes lucida	Shining Ladies'-tresses		SR	G5	S2
Spiranthes magnicamporum	Great Plains Ladies'-tresses		SE	G4	S1
Strophostyles leiosperma	Slick-seed Wild-bean		ST	G5	S2
Talinum rugospermum	Prairie Fame-flower		ST	G3G4	S2
Thuja occidentalis	Northern White Cedar		SE	G5	S1
Tofieldia glutinosa	False Asphodel		SR	G4G5	S2
Trichostema dichotomum	Forked Bluecurl		SR	G5	S2
Triglochin palustris	Marsh Arrow-grass		SR	G5	S2
Utricularia cornuta	Horned Bladderwort		ST	G5	S2

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Utricularia minor	Lesser Bladderwort		ST	G5	S1
Utricularia purpurea	Purple Bladderwort		SR	G5	S2
Utricularia resupinata	Northeastern Bladderwort		SE	G4	S1
Utricularia subulata	Zigzag Bladderwort		ST	G5	S2
Vaccinium myrtilloides	Velvetleaf Blueberry		SE	G5	S1
Viburnum opulus var. americanum	Highbush-cranberry		SE	G5T5	S1
Viola pedatifida	Prairie Violet		ST	G5	S2
Zannichellia palustris	Horned Pondweed		SR	G5	S2
High Quality Natural Community					
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland dry	Dry Upland Forest		SG	G4	S4
Forest - upland dry-mesic	Dry-mesic Upland Forest		SG	G4	S4
Forest - upland mesic	Mesic Upland Forest		SG	G3?	S3
Lake - pond	Pond		SG	GNR	SNR
Prairie - dry-mesic	Dry-mesic Prairie		SG	G3	S2
Prairie - mesic	Mesic Prairie		SG	G2	S2
Prairie - sand dry	Dry Sand Prairie		SG	G3	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Prairie - sand mesic	Mesic Sand Prairie		SG	GNR	SNR
Prairie - sand wet	Wet Sand Prairie		SG	G3	S3
Prairie - sand wet-mesic	Wet-mesic Sand Prairie		SG	G1?	S2
Primary - dune lake	Foredune		SG	G3	S1
Savanna - mesic	Mesic Savanna		SG	GNR	SNR
Savanna - sand dry	Dry Sand Savanna		SG	G2?	S2
Savanna - sand dry-mesic	Dry-mesic Sand Savanna		SG	G2?	S2S3
Savanna - sand mesic	Mesic Sand Savanna		SG	GNR	SNR
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4
Wetland - meadow sedge	Sedge Meadow		SG	G3?	S1
Wetland - panne	Panne		SG	G2	S1
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2
Other					
Migratory Bird Concentration Area	Migratory Bird Concentration Site		SG	G3	SNR

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