# Geographic Information Systems Technical Documentation

Illiana Corridor



Prepared for

Illinois Department of Transportation Indiana Department of Transportation

November 2013

## THIS PAGE INTENTIONALLY LEFT BLANK



# Contents

1.0	0 Introduction1			
2.0	Project Background1			
3.0	Purpo	se		2
4.0	Datab	ase Con	npilation	4
	4.1	Analy	tical Capabilities	5
5.0	Altern	atives I	Development and Evaluation	6
	5.1	Locatio	onal Alternatives Screening	7
		5.1.1	Locational Alternatives Evaluation Process	8
	5.2	Affecte	ed Environment	9
	5.3	Enviro	nmental Consequences Evaluation	9
	5.4	Illiana	Corridor GIS Database Organization	14
		5.4.1	Alignments	14
		5.4.2	Basemap	15
		5.4.3	Cultural Historical and Archaeological	15
		5.4.4	Educational	15
		5.4.5	Environmental Layers	15
		5.4.6	Geotechnical	15
		5.4.7	Hazardous Materials	15
		5.4.8	Hydrology	15
		5.4.9	Land Use	15
		5.4.10	Natural Areas	15
		5.4.11	Parcels	15
		5.4.12	Socioeconomic	15
		5.4.13	Utilities	15

# Figures

Figure 1.	Study Area Map	1
Figure 2.	GIS Diagram	6
Figure 3.	GIS Output Showing Tier Two Alternatives	8
Figure 4.	GIS Corridor and Working Alignment Evaluation – Example 1	.4



# Tables

Table 1.	Methodology for Analysis of Waters of the US/Wetland Impacts9
Table 2.	Methodology for Analysis of Cultural Resource 10
Table 3.	Methodology for Analysis of Threatened and Endangered Species
	Impacts
Table 4.	Methodology for Analysis of Farmland and Agriculture Impacts
Table 5.	Methodology for Analysis of Land Use Impacts 10
Table 6.	Methodology for Analysis of Water Quality and Floodplain
	Impacts
Table 7.	Methodology for Analysis of Air Quality Impacts
Table 8.	Methodology for Analysis of Economic Impacts
Table 9.	Methodology for Analysis of Social Impacts
Table 10.	Methodology for Analysis of Cumulative Impacts
Table 11.	Methodology for Analysis of Noise Impacts
Table 12.	Methodology for Analysis of Visual Impacts
Table 13.	Methodology for Analysis of Traffic and Traffic Impacts
Table 14.	Methodology for Analysis of Forest Impacts
Table 15.	Methodology for Analysis of Cost and Constructability

# Appendix

Appendix A. GIS Database Log



# 1.0 Introduction

This document describes the Geographic Information System (GIS) methodology used for the Illiana Corridor. Provided below is a description of the approach used to develop the comprehensive GIS database for the Illiana Corridor Study Area and how the data is utilized in a Tier Two NEPA study to identify potential transportation improvements and the potential impacts associated with each improvement. A table of GIS data sources and the data purpose is included in Appendix A.

# 2.0 Project Background

The Illinois Department of Transportation (IDOT), the Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) have evaluated the transportation system in an area that traverses Will County and northern Kankakee County in Illinois and southern Lake County in Indiana. The Study Area for the Illiana Corridor is approximately 950 square miles in portions of Will and Kankakee counties and Lake County. The general location of the Study Area is between Interstate 55 (I-55) in Illinois to the west, I-65 in Indiana to the east, United States (US) 30 to the north, and the southernmost tip of Will County to the south, including the northern portion of Kankakee County (Figure 1).





Previous studies have indicated possible benefits from the development of an east-west transportation corridor extending from I-55 in Illinois to I-65 in Indiana. These include providing an alternate route for motorists traveling the I-90/I-94 corridor, relieving traffic on the I-80 Borman/Kingery Expressway and US 30, serving as a bypass for trucks

### ILLIANA CORRIDOR GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION



around the congested metropolitan highways, providing access to one of the largest "inland port" intermodal freight areas in the US and the proposed South Suburban Airport, supporting economic development in this area, and the potential for substantial job creation. Will County, Illinois, was one of the fastest growing counties in the US between 2000 and 2010, adding 175,000 residents and increasing demand for additional transportation options.

The National Environmental Policy Act (NEPA) process for the Illiana Corridor is being conducted in two steps, or "tiers," that build upon one another. At the inception of the study, a single transportation solution for the Study Area had not been identified with respect to mode (e.g., roadway or transit) and/or location for the Illiana Corridor, therefore, the project proceeded with a tiered EIS. A tiered EIS is used to resolve issues regarding the transportation mode, facility type, and general location, typically for projects involving a lengthy corridor or larger land area. A Tier One EIS analysis provides an evaluation of the transportation problems in the Study Area based on stakeholder input and engineering analysis that forms the basis for the project Purpose and Need and for identifying potential corridors. The Tier One EIS was completed at a sufficient level of engineering and environmental detail to allow for an informed decision on the issues under consideration in Tier One. For the Illiana Corridor, the Tier One EIS resolved the mode, facility type (e.g., type of roadway), and corridor location. The No-Action Alternative was also considered in the Tier One EIS.

Since the Tier One EIS resulted in a decision to select a working alignment within a corridor, FHWA, IDOT, and INDOT will proceed with Tier Two NEPA studies. During the Tier Two NEPA studies, work will focus on detailed environmental and preliminary engineering analyses, appropriate for a traditional (non-tiered) environmental document, for elements of the preferred transportation system corridor that was selected in the Tier One Record of Decision (ROD). Each Tier Two NEPA study would be prepared for a project that has independent utility. Potential sections with independent utility can be based on factors such as engineering analysis (i.e., projected travel demand), stakeholder input, funding considerations, and other considerations for the State of Illinois and the State of Indiana. For the Illiana Corridor Tier Two NEPA study, the project was not sectioned and the study is from the I-55 and I-65 termini in its entirety.

This document primarily outlines the detail used for the Tier Two NEPA process resource analyses, with reference to the increased level of detail anticipated for Tier Two NEPA studies.

# 3.0 Purpose

To efficiently and comparatively evaluate the potential social, economic, and environmental impacts of the Illiana Corridor, a comprehensive GIS database encompassing the entire Study Area has been developed. The GIS database serves as a single source for storing, retrieving, editing/updating, analyzing, and displaying project



related information. The database provided the ability to create comprehensive environmental resource maps used to identify potential impacts and to first avoid and then minimize impacts as part of the definition of initial alternatives, to the extent practical. It also simplifies the ability to prepare public display exhibits as an essential and valuable component of the stakeholder coordination process. The GIS data were used throughout the alternatives screening process described in the Alternatives Development and Evaluation Methodology document. The transportation improvements were comparatively analyzed to an increasing level of detail or with respect to specific sets of concerns or evaluation criteria as appropriate. The GIS Model Builder streamlines the capabilities, quality, and consistency with respect to preparing impact and performance reports in table format for comparative analysis.

The FHWA provides guidance on the consistency of using GIS as an analysis tool when following the NEPA process to examine potential alternatives on major projects in large Study Areas. Over the past several years this approach has been used in the development of major projects. Nationally, the Planning and Environment Office of NEPA Facilitation and the FHWA Chief Counsel have reviewed the GIS approach as it was used in the southeast Arkansas I-69 Connector Corridor Study and concluded that the approach was technically relevant and met legal requirements. In Illinois, a GIS database has been used throughout the IDOT Tier One and Tier Two NEPA processes for the Elgin O'Hare West Bypass project to aid in the comparative analysis of myriad alternatives and the overall project decision making process.

The GIS analysis of potential alternatives is useful for streamlining the NEPA process and in avoiding and minimizing impacts to environmental resources. Given the large Study Area of the Illiana Corridor and the number of project alternatives analyzed, the use of GIS as an analysis tool streamlined the evaluation process by helping to rapidly identify potential environmental concerns/impacts.

The GIS database served as the basis for efficient data management and data exchange between the travel demand model, traffic operation analysis, and the alternatives evaluation for seamless post processing and analysis efforts.

The GIS Database was used by the following teams:

- Environmental
- Planning
- Field verification
- Travel demand modeling
- Public involvement (exhibit preparation for the Corridor Planning Group, Technical Task Force, and public meetings)
- Engineering



# 4.0 Database Compilation

A GIS Geodatabase has been developed for compilation of the Study Area data. ESRI ArcMap, also known as ArcGIS Desktop version 10.1, software was used for the Illiana Corridor analysis and exhibits. The tier two database was developed using published and compiled data from public agencies, private vendor sources, and field survey data compiled during the project. The ArcGIS database served to tabulate environmental and physical effects of alternatives, requests from property owners, and create exhibits for stakeholder and public meetings.

Most data received were already in a format native to ArcGIS known as shapefiles (.shp). Other data formats were converted to an ArcGIS format and imported for use in the database including Microstation and Google Earth files. Attribute data (metadata) is attached to corresponding features to provide qualitative descriptions in addition to the location information of the feature and its publication date.

Data imported from the various sources into the ArcGIS Geodatabase were assigned the project coordinate system. The specified coordinate system for the Illiana Corridor is Illinois State Plane East North American Datum (NAD) 1983, units in feet. Any data received not in this coordinate system was re-projected appropriately using ArcGIS. Data layers were adjusted to conform to the ortho-digital aerial photography as needed using Georeferencing tools in ArcGIS.

Appendix A provides a summary of the GIS database, including a description of the data gathered, the data source, the file type, and the date of the data source for the initial database layers that were used. The database consists of data from federal, state, and local government agencies, the internet, or other sources. Some of the agencies/organizations that have provided GIS data for the Illiana Corridor include the following:

- IDOT
- INDOT
- Will County, Illinois GIS Department
- Kankakee County, Illinois GIS Department
- Lake County, Indiana Surveyor
- US Fish and Wildlife Service (USFWS)
- National Pipeline Mapping System (NPMS)
- Chicago Metropolitan Agency for Planning (CMAP)
- Northwestern Indiana Regional Planning Commission (NIRPC)
- Kankakee Area Transportation Study (KATS)
- Federal Emergency Management Agency (FEMA)



- Illinois Department of Agriculture (Illinois DOA)
- Illinois Department of Natural Resources (Illinois DNR)
- Indiana Department of Natural Resources (Indiana DNR)
- Indiana Department of Environmental Management (IDEM)
- Illinois State Geological Survey (ISGS)
- Illinois Environmental Protection Agency (IEPA)
- Illinois Historic Preservation Agency (IHPA)
- US Geological Survey (USGS)
- National Oceanic and Atmospheric Administration (NOAA)
- US Census Bureau
- Economic and Social Research Institute (ESRI)

# 4.1 Analytical Capabilities

The ArcGIS software and its associated tools provide analytical capabilities that were used extensively in the development and evaluation of alternatives. As shown in Figure 2, the data input in the database can be queried and information displayed in different formats (e.g., maps, charts, and tables). The Illiana Corridor GIS database was utilized for many tasks during the course of the project. The major tasks include:

- Alternatives impact evaluation for the Alternatives to be Carried Forward Technical Memorandum for the Tier Two NEPA study
- Tier two cost estimation
- Assisted in characterizing resources in the Study Area for Section 3.0 in the Tier One EIS.
- Assisted in alternatives development for multi-modal transportation improvements.
- Alternatives evaluation, both during the screening of potential project corridors and the assessment of detailed working alignments within the project corridors in the Tier One EIS.
- Map and graphics production.
- Sharing with the public using ArcGIS Online.



### GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION

Figure 2. GIS Diagram





# 5.0 Alternatives Development and Evaluation

For the Tier One EIS, project corridors typically 2,000 feet in width were established to frame the analysis of potential transportation improvements. Within the context of the larger Study Area, these corridors provided the focus for discussing the existing conditions for all social, economic, and environmental resources that may be affected by the project.

Within each project corridor, specific working alignments of a nominal 400' width and conceptual interchange footprints, but without additional accommodations for items such as grade separations, drainage, and frontage roads, were identified to represent the location of the potential transportation build alternatives. These working alignments generally follow the centerline of the corridors and provide a functional alignment to be used to determine potential impacts associated with a transportation improvement in



### GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION

each corridor. The working alignments within each corridor were used in the Tier One EIS to assess the potential impacts to the social, economic, and environmental resources.

After Corridor B3 was selected to be carried forward in Tier Two, more detailed alternatives (as described in Sections 5.1 and 5.1.1 below) were developed primarily within the selected corridor with GIS used to assess potential environmental impacts. In the Tier Two study, data gathered from public sources was replaced by field survey data as it became available.

The GIS database served as the basis for data management and data exchange between the travel demand model, traffic operation analysis, and the alternatives evaluation. Travel model development was conducted using EMME software, which has capabilities for exporting model results to a format that can be used for efficient data analysis and post processing efforts.

# 5.1 Locational Alternatives Screening

The purpose of performing the locational evaluation is to identify project alternatives (including mainline alignments, interchange locations, cross roads, frontage roads, drainage and Best Management Practices (BMP) accommodations, and their associated footprints) that best avoid or minimize potential environmental impacts. This information is combined with the travel performance evaluation results and financial considerations, to identify the alternative(s) for further analysis.

In Tier Two, alternatives were carried forward into the locational screening to assess the potential built and natural environment impacts of the potential improvement's location. The database served to tabulate environmental and physical impacts of alternatives. These include:

- Impacts on habitat, water resources, endangered/threatened species, and public lands.
- Impacts on cultural resources.
- Amount of farmland that will be impacted.
- Potential indirect and cumulative impacts on low income and minority populations defined by census tracts bordering proposed alternatives.
- Potential impacts to the transportation network, based on results from the travel model.
- Air, noise, and energy impacts based on the travel changes.

Each alternative was overlaid with the GIS dataset, an impact analysis was completed and the results were compiled into a matrix documenting the impact on critical geographical and environmental resources. Impact values were tabulated and summarized for direct comparison between corridor alternatives.

### ILLIANA CORRIDOR GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION



The alternatives were subjected to an iterative and detailed environmental, planning, and engineering review process based on the impact data to mitigate the impacts as much as possible for each alternative. From this review, the differences between alternatives were apparent, and the information, when added to the functional evaluation results, presented a more complete analysis of each alternative's potential benefits and impacts.

The outcome of the locational screening was the identification of alternatives which were evaluated in the Tier Two NEPA process.

## 5.1.1 Locational Alternatives Evaluation Process

In developing the alternatives, basic design criteria was established to assure that engineering principles relative to geometrics and safety were met. A footprint of varying width due to design principles was used for the new access controlled/managed alternatives,



Figure 3. GIS Output Showing Tier Two Alternatives

The first analysis of impacts was completed based on the initial design of the project alternatives. The environmental review focuses on direct and indirect impacts to agricultural land, natural resources, water resources, biological resources, special wastes, and cultural resources. The engineering review evaluates facility access, corridor level geometrics, property severances, and cost comparisons. The planning



review includes evaluation of socioeconomic impacts, environmental justice issues, land use and local planning issues, traffic service, functionality, and safety.

The results of the analysis were compiled into a spreadsheet and distributed to the environmental, engineering, and planning review team members. This process facilitated the review of all critical factors associated with each corridor alignment and allows subsequent refinement to avoid, minimize, and mitigate impacts.

# 5.2 Affected Environment

ArcGIS was used to summarize resources, habitat, land cover, public lands, hazardous sites, and land use in the Study Area. Socioeconomic features such as population, employment, racial composition, and political townships were also used to measure impacts.

## 5.3 Environmental Consequences Evaluation

The Tier One EIS provided the basis for deciding whether to proceed with a transportation improvement and, if so, to select a corridor(s) that would be advanced for detailed evaluation and refinement in the Tier Two NEPA studies. The Tier One did not replace the need to perform the field verification on alternatives in the Tier Two NEPA studies, nor does this replace the need to revisit corridors if substantial obstacles are identified in the future detailed assessments using field survey information completed in Tier Two. The Tier Two mapping has been generally confined to the area of the Corridor B3 selected in Tier One, and provided at a higher resolution.

Table 1 through Table 14 contrast methodologies of the major impact categories, including the following: waters of the US/wetlands, cultural resources, threatened and endangered species, farmland and agriculture, land use, water quality and floodplains, air quality, economic, social, cumulative, noise, visual, traffic, and forests. The GIS data is utilized for visual identification of impacts and provides quantifiable data to measure the size of the impact.

	-
Tier One	Tier Two
Identify waters/wetlands within project corridors	Obtain field delineated wetlands within the
using National Wetland Inventory (NWI) maps and	footprint of the Tier One preferred alternative.
other available GIS data.	
Estimate number or size of corridor elignment	Complete Indiana Wetland Routine Assessment
impacts on NIMI wetlands	Protocol analysis for wetlands impacted for the
impacts on NWI wetlands.	Tier One preferred alternative(s).
Identify high quality and sensitive waters/wetland	Obtain Army Corps of Engineers', Illinois DNR,
complexes and define buffer zones as appropriate.	and the IDEM's approval of wetland surveys.

### Table 1. Methodology for Analysis of Waters of the US/Wetland Impacts



### Table 2. Methodology for Analysis of Cultural Resource Tier One Tier Two Identify known sites within project corridors using Consult with state historic preservation offices and GIS data gathered from local, state, and federal data stakeholders, and complete field survey to identify additional unrecorded historic resources. sources. Complete determinations of National Register of Identify reported archaeological sites and high Historic Places eligibility for identified unrecorded probability areas. historic resources. Define Area of Potential Effects and identify Conduct full assessments of effects on individual resources within it. resources. Resolve adverse effects, as appropriate. Assess preliminary and potential effects to resources. Conduct archaeological field survey in areas Formal assessment of effects. potentially impacted.

# Table 3. Methodology for Analysis of Threatened and Endangered Species Impacts

Tier One	Tier Two
Identify threatened and endangered species within project corridors and identify possible areas of habitat impacts using state and federal data.	Conduct comprehensive field surveys as required, including sampling, trapping, and capturing.

Table 4. Methodology for Analysis of Farmland and Agriculture Impacts		
Tier One	Tier Two	
Identify farmland, including prime farmland, and Centennial farms within project corridors in GIS.	Map and delineate farmland and Centennial farms in and around corridor.	
	Determine total farmland, including prime, acres potentially impacted by corridor.	
GIS.	Coordinate with Natural Resources Conservation Service (NRCS) to develop a methodology using existing GIS data to assess farmland impacts for each alternative.	

Table 5. Methodology for Analysis of Land Use Impacts		
Tier One	Tier Two	
Identify major land uses or land cover within project corridors (GAP analysis, e.g., forests, croplands, wetlands, quarries, residential).	Field verify land uses depicted on aerial photographs.	
Identify areas with comprehensive land use plans and evaluate project consistency with plans.	Determine number of land uses that may need to be	
Estimate amount of converted acres.	converted due to proposed improvements.	



### Table 6. Methodology for Analysis of Water Quality and Floodplain Impacts

Tier One	Tier Two
Identify water bodies, impaired water bodies, general floodplains, and karsts <sup>1</sup> within project corridors.	Conduct field studies to evaluate biodiversity and water quality.
Review baseline water quality information and literature.	Conduct field studies to identify karsts features within transportation improvements.
Estimate acres of water bodies, physiographic karsts areas, and general floodplains impacted by working alignments.	Determine acres of water bodies, karsts features, and FEMA floodplains impacted by walking the alternatives.

Table 7. Methodology for Analysis of Air Quality Impacts		
Tier One	Tier Two	
Identify nonattainment and maintenance areas within Study Area.	Analyze air quality along alternatives.	
Coordinate with Metropolitan Planning	Coordinate with Metropolitan Planning Organizations to satisfy conformity requirements.	
Organizations to satisfy conformity requirements.	Determine air quality dispersion impacts on communities adjacent to alternatives.	

Table 8. Methodology for Analysis of Economic Impacts			
Tier One	Tier Two		
Identify impacts to population and employment, as well as direct business impacts for the working alignments.	Assess economic impacts on localized basis.		
Identify regional breakdown of economic impacts	Consult with local and county economic officials to determine economic development plans.		
within the Study Area.	Identify impacts to businesses due to changes in drive-by traffic.		

<sup>&</sup>lt;sup>1</sup> Distinctive landforms and hydrology created by dissolution of soluble rocks, principally limestone and dolomite. USGS groundwater information – <u>http://water.usgs.gov/ogw/karst/pages/whatiskarst</u>.



Table 9. Methodology for Analysis of Social Impacts		
Tier One	Tier Two	
Identify residences and communities, including minority and low-income communities, within project corridors using county assessor and US Census data.	Identify parcels to be impacted and number of land owners to be relocated.	
Estimate range of possible relocations.	Identify relocation issues.	
Adjust working alignment to minimize relocations where possible.	Provide more precise estimates of number of relocations.	

Table 10. Methodology for Analysis of Cumulative Impacts			
Tier One	Tier Two		
Identify effects of major planned projects upon existing land use development trends in the Study Area.	Refine assessment of other impacts based upon more current information about development trends (i.e.,		
Model effects of the corridor to estimate potential cumulative impacts over Study Area.	consultation with local and county officials).		
Identify potential mitigation measures.	Refine mitigation measures (e.g., support for local land use planning).		
Indirect and other impacts estimated for Year 2040.	Indirect and other impacts estimated for Year 2040.		

Table 11. Methodology for Analysis of Noise Impacts					
Tier One	Tier Two				
Identify existing activities, land use, and levels of truck and car traffic with project corridors.	Conduct field studies to determine actual noise levels along proposed alternatives.				
Estimate potential Noise Sensitive Areas for comparative analysis.	Determine noise levels resulting from improvements and projected traffic volumes and develop mitigation measures, if necessary (e.g., noise barriers).				

Table 12. Methodology for Analysis of Visual Impacts					
Tier One	Tier Two				
Identify type of setting crossed by the project corridors.	Refine assessment of visual impacts by walking the				
Estimate views of and from each working alignment to assess potential impacts.	corridors.				
Evaluate potential for context-sensitive design elements.	Identify specific elements of working alignment appropriate for context-sensitive design.				



	,				
Tier One	Tier Two				
Travel Demand Model (TDM) developed to forecast traffic. Base year for the TDMis 2010 and forecast year is 2040. Data from CMAP and NIRPC.	Traffic forecasts provided by more detailed corridor model, which uses as input forecasts provided by TDM. For both TDM and corridor model, base forecasts are for year 2010, and forecast year is 2040.				
Traffic forecasts based upon land use forecasts for Year 2040. Land use forecasts are extrapolated from a 2010 base year.	Traffic forecasts based upon land use forecasts for Year 2040. These forecasts are extrapolated from a 2010 base year, and incorporated with results of year 2000 and/or 2010 census data as available.				
Traffic model forecasts traffic flows on state highways and limited number of major local roads.	Traffic model forecasts traffic flows on local roads throughout the project corridor. Generally, traffic flows are forecasted for all roads of functional classification of major collector and higher.				
Traffic forecasts also suitable for evaluating capacity requirements and level-of-service on major state highways.	Traffic forecasts evaluating performance on local roads in several-counties. Traffic forecasts are suitable for evaluating access treatment alternatives, such as grade separations and access roads.				

### Table 13. Methodology for Analysis of Traffic and Traffic Impacts

Table 14. Methodology for Analysis of Forest Impacts					
Tier One	Tier Two				
Identify forest impacts using USGS Land Cover GIS data, which is a subset of the National Land Cover Database (NLCD).	Illinois Natural History Survey will provide survey data of Forested areas.				
Estimate the acreage of possible forest impacts within the working alignment.	Identify acreage of forest impacts, type of forest to be impacted (US Department of Agriculture (USDA) Forest Classifications), acreage of core forest impacts, and indirect forest impacts.				

## Table 15. Methodology for Analysis of Cost and Constructability

Tier One	Tier Two
Identify potential cost and constructability impacts of buildings, pipelines, stream crossings, wetlands, and other features using aerial photography, GIS information, and contour mapping.	Identify potential cost and constructability impacts of buildings, pipelines, stream crossings, wetlands, and other features using project-specific aerial and ground surveys supplemented by aerial photography, sub surface utility investigations, GIS information, and contour mapping.
Identify medium and high risk weak and compressible soils using county-level soils mapping and reports.	Identify specific locations and characteristics of medium and high risk weak and compressible soils using field and laboratory geotechnical analysis supplemented by county-level soils mapping and reports.



### Table 15. Methodology for Analysis of Cost and Constructability

Tier One	Tier Two
Estimate costs and differential costs for alternative corridors using corridor-level unit pricing estimates based on recent construction costs on larger projects in Illinois and Indiana.	Estimate costs and differential costs for alternative alignments within the preferred corridor using detailed unit pricing estimates based on recent construction costs on larger projects in Illinois and Indiana.

Figure 4 shows an example of how project corridors are visualized in GIS and impacts are identified. Using the selection tools in GIS, layers contained in the corridor or working alignment are extracted from the overall dataset. The data embedded in the GIS layers is then used to estimate the number or size of the impact(s).

 Possible stream and flood zone

 Impact

Figure 4. GIS Corridor and Working Alignment Evaluation – Example

# 5.4 Illiana Corridor GIS Database Organization

The Illiana Corridor database contains more than 130 data layers. To aid in the navigation of the database, the data layers were grouped into datasets, listed below. Appendix A contains lists of categories and shapefiles within, as well as metadata.

## 5.4.1 Alignments

Alternative alignments are stored in this location



## 5.4.2 Basemap

Base mapping layers are data that establish common land based features such as community boundaries and transportation infrastructure.

## 5.4.3 Cultural Historical and Archaeological

Data pertaining to historical data (county, state, and National Register of Historic Places) as well as archaeological data and burial sites.

### 5.4.4 Educational

All educational infrastructure data is saved to this feature dataset

### 5.4.5 Environmental Layers

The majority of the data in the Illiana Corridor GIS are in the environmental category. These layers are comprised mostly of environmental items such as threatened and endangered species and impaired lakes and streams.

### 5.4.6 Geotechnical

Geotechnical data for the Study Area includes soils, bedrock, and mines.

### 5.4.7 Hazardous Materials

Locations of existing and potential hazardous materials and sites including leaking underground storage tanks, superfund sites, and waste disposal sites (active and inactive).

## 5.4.8 Hydrology

All water data including streams, water bodies, flood zones, wetlands, and watersheds.

### 5.4.9 Land Use

Includes zoning and land use data as well as locations of civic, emergency, religious, commercial, recreational, and federal facilities in the Study Area.

### 5.4.10 Natural Areas

Protected lands such as natural areas, preserves, parks, conservation areas, and national parks.

### 5.4.11 Parcels

Points and parcels used to identify properties and property owners that may be impacted by an alternative. The data can be utilized to create exhibits for land owners of their parcels and to generate a list of parcels and owner for contact purposes.

### 5.4.12 Socioeconomic

Data pertaining to socioeconomic concerns including census block group data and population estimates.

### 5.4.13 Utilities

Pipelines, power transmission lines, power generation sites, and well locations.

**GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION** 



### THIS PAGE INTENTIONALLY LEFT BLANK



# Appendix A. GIS Database Log

**GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION** 



### THIS PAGE INTENTIONALLY LEFT BLANK



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
Basemap							
	Counties_20110719	ESRI/Tele Atlas North America	Cook, Will, Kankakee, Grundy, Kendall, Lake, Newton, & Jasper Counties.		10/01/06	07/19/11	
	County_Cook	ESRI/Tele Atlas North America	Cook County from Counties_20110719		10/01/06	07/19/11	
	County_Kankakee	ESRI/Tele Atlas North America	Kankakee County from Counties_20110720		10/01/06	07/19/11	
	County_Lake	ESRI/Tele Atlas North America	Lake County from Counties_20110721		10/01/06	07/19/11	
	County_Will	ESRI/Tele Atlas North America	Will County from Counties_20110722		10/01/06	07/19/11	
	StateBorder_20110719	ESRI	Illinois and Indiana State borders		10/01/06	07/19/11	
	Illinois	ESRI	Illinois state border only		10/01/06	07/19/11	
	Indiana	ESRI	Indiana state border only		10/01/06	07/19/11	
	K3_POI	Kankakee County GIS	Points of interest in Kankakee County. Cemeteries, Schools, Churches, Parks, Hospitals		?	11/20/12	
	Municipalities_CookCo		Cook County Municipalities				
	Municipalities_KankakeeCo_20121023	Kankakee County GIS	Kankakee County Municipalities	Use subject to Kankakee County GIS Data License Agreement	01/25/08	10/23/12	
	Municipalities_LakePorterJasperCountie s_20110603	NIRPC	Lake, Porter, Jasper, County IN Municipalities.			06/03/11	
	Municipalities_WillCo_20120823	Will County GIS	Will County Municipalities	х	02/22/06	08/23/12	
	Rail_IN_INDOT_20120720	Indiana DOT	Active Railroads in Indiana		08/08/06	07/20/12	
	Rail_K3_KankakeeCo_20110722		Active and Abandoned Railroads Kankakee County			07/22/11	
	Railroad_WillCo_20120823	Will County GIS	Active railroads in Will County	x	2003	08/23/12	
	Roads_IDOT				07/28/11		
	Roads_INDOT_20120723	INDOT	Roadway centerlines for Indiana roads including		06/01/12	07/23/12	
BMP Mitig	gation Sustainability						
	Mitigation Sites Poly Final 08 19 13 Alt 1	CBBEL	Shows potential treatments, bioswales, detention basins, etc.		8/12/2013	10/07/2013	
	Mitigation Sites Poly Final 08 19 13 Alt 2	CBBEL	Shows potential treatments, bioswales, detention basins, etc.		8/12/2013	10/07/2013	









Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Historic_NRHP_IL_IN_20120815	National Register of Historic Places				08/15/12	
	Historic_WillCo_ExistingSites_20111004	Will County GIS				10/04/11	
	Historic_LakeCo_JFNewNRHP_Sites_20 120301	JFNew				03/01/12	
	Indiana_HistoricProperties_Addendum	National Register of Historic Places					
	Mortuary_sites						
Education	al						
	Education_IN_MHMP_School_Facs_201 10525	FEMA	SCHOOL_FACILITIES_MHMP_IN.SHP is a point shapefile that shows school facilities in Indiana		01/06/11	05/25/11	
	Education_IN_SchoolsHighEd_20110525	Indiana Commission for Higher Education	SCHOOLS_HIGHER_EDUCATION_ICHE_IN is a point shapefile showing the locations of 76 colleges and universities (including 2- and 4-year public institutions and independent institutions) listed on a directory obtained from the Indiana Commission for Higher Education			5/25/2011	
	Education_KankakeeCo_Schools_201107 22	Kankakee County GIS				7/22/2011	
	Education_WillCo_HigherEd_20120823	Will County GIS	Subset of higher education parcels from the public properties GIS dataset for Will County.	х	07/31/12	8/23/2012	
	Education_WillCo_K_12_20120823	Will County GIS	Point shapefile of School locations in Will County K-12	x	08/25/11	8/23/2012	
	Education_WillCo_K_12_Poly_20120823	Will County GIS	K-12 School locations in polygon format.	х	07/31/12	8/23/2012	
Environm	ental		•				
	Botanical Orchid Points	Illinois Natural History Survey	Survey of wild Orchids in Illinois			9/25/2013	
	Botanically Important Areas INHS Survey	Illinois Natural History Survey	Botanically important areas in Illinois			8/28/2013	
	PB HH Illiana Covertype Indiana Forests	Huff and Huff	Land Cover in Indiana Survey			7/10/2013	
	INHS Aquatic Survey Shapefiles Add C (Herp Sightings)	Illinois Natural History Survey	Herp sighting locations			8/9/2013	
	Potential RECs 07-13-2013		Potential REC locations			7/13/2013	
	Aquatic Resource Survey (Herp Sightings)	Illinois Natural History Survey	Addendum C additional survey of Aquatic Resources by INHS.		7/17/2013	7/18/2013	
	Indiana Bat Survey JFNew 6-18-2013	JFNew	Indiana Bat survey sites and survey type/method.		6/18/2013	6/18/2013	







Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Mist Net Sites	Illinois Natural History Survey	Locations where mist nets were set up for bat surveys in the Illiana project area			5/3/2013	
	Potential Franklins Habitat	Illinois Natural History Survey	Locations suitable for Franklin's Ground Squirrel habitat			5/3/2013	
	Potential Ibat Habitat	Illinois Natural History Survey	Locations suitable for Indiana bat habitat			5/3/2013	
	ThreatEnd_LakeCo_INNH_20120628	Indiana Natural Heritage Data Center	The Indiana Natural Heritage Database is a digital, geospatial file containing information on Indiana's rare or otherwise significant natural features, including plant and animal species, natural communities, and animal aggregations. It lists locations and dates of occurrences or sightings, of both federal and state endangered species, including specific latitude and longitude for points of occurrence. The database was complied from numerous sources including museums, herbaria, publications, and the results of fieldwork by many individuals. All counties in the state are represented in the Heritage database.	x	06/08/12	6/26/2012	
	threatened_WillKankakeeCo_ILDNR_20 120418	Illinois Natural Heritage	This data set depicts the locations of endangered and threatened species, unique natural communities, and other significant natural resources in Illinois, as reported to the Illinois Department of Natural Resources' Natural Heritage Database (INHD) Program.	x	04/18/12	4/18/2012	
	Impared Streams USGS IL IN 20120814	USGS	Downloaded from USEPA Watershed Assessment, Tracking and Environmental Results website on 8/15/2012 (www.epa.gov/waters/data/downloads.html) To identify the spatial extent of waters listed under 303(d). These waters can be linked to the 303(d) information stored in EPAs Assessment and TMDL Tracking and Implementation System (ATTAINS) for query and display via EPAs WATERS Expert Query Tool. The source_feature_id field in the waterbody shapefile can be linked to the listed_water_id in EPA's Assessment and TMDL Tracking and Implementation System (ATTAINS).		04/25/11	8/14/2012	
Environm	ental Study Boundaries						
	Tier 2 Addendum D	Illiana Environmental Team	Amended Environmental Survey Request			9/4/2013	
	AESR_2_Limits	Illiana Environmental Team	Amended Environmental Survey Request Limits		02/21/13	02/21/13	5/17/2013



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	ESRLimits_B3_Indiana_Polygon_201210 08AESR_2_Limits	Illiana Environmental TeamIlliana Environmental Team	Original Environmental Survey Request Limits for IndianaAmended Environmental Survey Request Limits		10/08/12 02/21/13	10/08/12 02/21/13	5/17/2013
	ESRLimits_B3_Polygon_20120406ESRLi mits_B3_Indiana_Polygon_20121008	Illiana Environmental TeamIlliana Environmental Team	Original Environmental Survey Request Limits for Illinois.Original Environmental Survey Request Limits for Indiana		04/06/12 10/08/12	04/06/12 10/08/12	5/17/13
	Tier 2 Addendum A (ESR)ESRLimits_B3_Polygon_20120406	Illiana Environmental TeamIlliana Environmental Team	Original Environmental Survey Request Limits for Illinois.		04/06/12	05/17/13 04/06/12	5/17/13
	Tier 2 Addendum B (ESR)Tier 2 Addendum A (ESR)	Illiana Environmental TeamIlliana Environmental Team				05/17/13 05/17/13	
	Tier 2 Addendum C (ESR)Tier 2 Addendum B (ESR)	Illiana Environmental TeamIlliana Environmental Team				05/17/13 05/17/13	
	Tier 2 Addendum C (ESR)	Illiana Environmental Team				05/17/13	
Geotechni	ical						
	Geology_Soils_USDA_KankakeeCo_201 21204	USDA NRCS Soil Data Mart	This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey.		09/20/12	12/04/12	
	Geology_Soils_USDA_LakeCo_20121204 Geology_Soils_USDA_KankakeeCo_201 21204	USDA NRCS Soil Data MartUSDA NRCS Soil Data Mart	This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey.This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey.		02/14/12 09/20/12	12/04/12 12/04/12	
	Geology_Soils_USDA_WillCo_20121204 Geology_Soils_USDA_LakeCo_20121204	USDA NRCS Soil Data MartUSDA NRCS Soil Data Mart	This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey. This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey.		01/20/12 02/14/12	12/04/12 12/04/12	
	Geology_Soils_USDA_WillCo_20121204	USDA NRCS Soil Data Mart	This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey.		01/20/12	12/04/12	
Hazardou	s Materials				•		



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Special Hazardous Waste Survey	GSG - Bob Suda	Surveyed locations of special hazardous waste sites - Indiana			05/14/13	
	Hazardous_INGS_LUST_20121218Speci al Hazardous Waste Survey	Indiana Geological SurveyGSG - Bob Suda	Surveyed locations of special hazardous waste sites - Indiana			12/18/12 05/14/13	
	Hazardous_INGS_UST_20121218Hazard ous_INGS_LUST_20121218	Indiana Geological SurveyIndiana Geological Survey				12/18/12 12/18/12	
	Hazardous_LUST_ILEPA_IL_20121218 Hazardous_INGS_UST_20121218	Illinois EPAIndiana Geological Survey				12/18/12 12/18/12	
	Hazardous_USEPA_AFS_AirFacilitySyst em_AirPollutantSource_StudyArea_201 21213Hazardous_LUST_ILEPA_IL_2012 1218	USEPAIllinois EPA				12/13/12 12/18/12	
	Hazardous_USEPA_Brownfields_Study Area_20121213Hazardous_USEPA_AFS _AirFacilitySystem_AirPollutantSource_ StudyArea_20121213	USEPAUSEPA				12/13/12 12/13/12	
	Hazardous_USEPA_CERCLS_Superfun d_StudyArea_20121213Hazardous_USE PA_Brownfields_StudyArea_20121213	USEPAUSEPA				12/13/12 12/13/12	
	Hazardous_USEPA_NPDES_StudyArea _20121213Hazardous_USEPA_CERCLS_ Superfund_StudyArea_20121213	USEPAUSEPA				12/13/12 12/13/12	
	Hazardous_USEPA_PesticideProduction _USEPA_20120409Hazardous_USEPA_ NPDES_StudyArea_20121213	USEPAUSEPA				04/09/12 12/13/12	
	Hazardous_USEPA_TSD_StudyArea_20 121213Hazardous_USEPA_PesticidePro duction_USEPA_20120409	USEPAUSEPA				12/13/12 04/09/12	
	Hazardous_UST_ILSFM_IL_20121213Ha zardous_USEPA_TSD_StudyArea_20121 213	Illinois State Fire MarshallUSEPA				12/13/12 12/13/12	
	Waste_BeecherLandfill_ILHazardous_U ST_ILSFM_IL_20121213	Parcel data and AerialIllinois State Fire Marshall				05/25/11 12/13/12	
	Waste_ClosedLandfill_IL_20111221Wast e_BeecherLandfill_IL	Illinois EPAParcel data and Aerial	Closed Landfills within Illiana Study Area in Illinois.		Data from 12/2000. Shape created 11/20/2011.	12/21/11 05/25/11	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Waste_PrairieViewLandfill_ILWaste_Cl osedLandfill_IL_20111221	Parcel data and AerialIllinois EPA	Prairie View Landfill shapefile. South side of Midewin NTP.Closed Landfills within Illiana Study Area in Illinois.		01/30/13Data from 12/2000. Shape created 11/20/2011.	01/18/13 12/21/11	
	Waste_PrairieViewLandfill_IL	Parcel data and Aerial	Prairie View Landfill shapefile. South side of Midewin NTP.		01/30/13	01/18/13	
Hydrolog	y						
	INHS Stream Survey	Illinois Natural History Survey	Streams survey of Illinois ESR Addendums A-D			10/4/2013	
	INHS Pond Survey	Illinois Natural History Survey	Waters Survey of Illinois ESR Addendums A-D			10/4/2013	
	INHS Addendum D Wetlands	Illinois Natural History Survey	Wetland survey of Illinois ESR Addendums A-D			10/4/2013	
	Waters Surveyed CBBEL Indiana	CBBEL	Waterbodies in Indiana			9/30/2013	10/28/2013
	Wetlands Surveyed JFNew Indiana	JFNew	Wetlands in Indiana			9/25/2013	10/28/2013
	INHS Streams Survey 20130827	Illinois Natural History Survey	Streams in the ESR Addendum C in Illinois			8/27/2013	
	Waters Surveyed CBBEL INHS Streams Survey 20130827	CBBELIIlinois Natural History Survey	Waterbodies in Indiana SurveyStreams in the ESR Addendum C in Illinois			8/23/2013 8/27/2013	9/30/2013
	INHS Wetland Survey IllinoisWaters Surveyed CBBEL	Illinois Natural History SurveyCBBEL	Wetland survey with FQI numbers added into the attribute tableWaterbodies in Indiana Survey			8/27/2013 8/23/2013	10/4/2013
	INHS Pond Survey 20130827INHS Wetland Survey Illinois	Illinois Natural History SurveyIllinois Natural History Survey	Pond SurveyWetland survey with FQI numbers added into the attribute table			8/27/2013 8/27/2013	10/4/2013
	INHS Streams Survey 20130502INHS Pond Survey 20130827	Illinois Natural History SurveyIllinois Natural History Survey	Streams in study area. Part of INHS wetland survey.Pond Survey			5/2/2013 8/27/2013	
	INHS_Ponds_Survey_20130716INHS Streams Survey 20130502	Illinois Natural History SurveyIllinois Natural History Survey	Pond SurveyStreams in study area. Part of INHS wetland survey.			7/16/2013 5/2/2013	
	Wetland_Survey_INHS_IL_FQI_2013080 1INHS_Ponds_Survey_20130716	Illinois Natural History Survey (FQI Numbers JFNew)Illinois Natural History Survey	Wetland survey with FQI numbers added into the attribute tablePond Survey			8/1/2013 7/16/2013	8/27/2013
	Wetland_Survey_JFNew_IN_FQI_20130 801Wetland_Survey_INHS_IL_FQI_2013 0801	JFNewIllinois Natural History Survey (FQI Numbers JFNew)	Wetland survey with FQI numbers added into the attribute tableWetland survey with FQI numbers added into the attribute table			8/1/2013 8/1/2013	<b>9/25/2013</b> 8/27/2013
	Wetland Survey JFNew IN 20130617Wetland_Survey_JFNew_IN_F QI_20130801	JFNewJFNew	Wetland Survey for Indiana (subset of May 2013 data. Only wetlands found in the June footprint).Wetland survey with FQI numbers added into the attribute table			06/17/13 8/1/2013	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Wetland Survey INHS IL 20130716Wetland Survey JFNew IN 20130617	Illinois Natural History SurveyJFNew	Wetland Survey for IllinoisWetland Survey for Indiana (subset of May 2013 data. Only wetlands found in the June footprint).			07/16/13 06/17/13	
	Wetland Survey JFNew IN 20130515Wetland Survey INHS IL 20130716	JFNewIllinois Natural History Survey	Wetland Survey for Indiana (wetlands in planning boundary)Wetland Survey for Illinois			05/15/13 07/16/13	
	CBBEL Waterbodies (Polygon)Wetland Survey JFNew IN 20130515	CBBELJFNew	Waterbodies Survey - IndianaWetland Survey for Indiana (wetlands in planning boundary)			05/17/13 05/15/13	
	CBBEL Waters Line (Polyline)CBBEL Waterbodies (Polygon)	CBBELCBBEL	Water boundaries - IndianaWaterbodies Survey - Indiana			05/17/13 05/17/13	
	Non Wetland NRCS FSA SitesCBBEL Waters Line (Polyline)	Illinois Natural History SurveyCBBEL	Non Wetland NRCS FSA Sites - IllinoisWater boundaries - Indiana			05/02/13 05/17/13	
	Non Wetland NWI SitesNon Wetland NRCS FSA Sites	Illinois Natural History SurveyIllinois Natural History Survey	NWI Site wo Wetlands - IllinoisNon Wetland NRCS FSA Sites - Illinois			05/02/13 05/02/13	
	Project Boundary Add A (AESR)Non Wetland NWI Sites	Illinois Natural History SurveyIllinois Natural History Survey	AESRNWI Site wo Wetlands - Illinois			05/02/13 05/02/13	
	Project Boundary Add B (Revised AESR)Project Boundary Add A (AESR)	Illinois Natural History SurveyIllinois Natural History Survey	Revised AESRAESR			05/02/13 05/02/13	
	Sampling PointsProject Boundary Add B (Revised AESR)	Illinois Natural History SurveyIllinois Natural History Survey	Sampling Points - IllinoisRevised AESR			05/02/13 05/02/13	
	Sampling Points AnnotationSampling Points	Illinois Natural History SurveyIllinois Natural History Survey	Sampling Points Annotation - IllinoisSampling Points - Illinois			05/02/13 05/02/13	
	StreamsSampling Points Annotation	Illinois Natural History SurveyIllinois Natural History Survey	Streams Survey - IllinoisSampling Points Annotation - Illinois			05/02/13 05/02/13	
	Streams AnnoStreams	Illinois Natural History SurveyIllinois Natural History Survey	Streams Annotation - IllinoisStreams Survey - Illinois			05/02/13 05/02/13	
	Wetland SitesStreams Anno	Illinois Natural History SurveyIllinois Natural History Survey	Wetland Sites - IllinoisStreams Annotation - Illinois			05/02/13 05/02/13	07/16/13
	Wetland Sites LineWetland Sites	Illinois Natural History SurveyIllinois Natural History Survey	Wetland Linear Boundaries - IllinoisWetland Sites - Illinois			05/02/13 05/02/13	07/16/13



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Wetland SitesAnnoWetland Sites Line	Illinois Natural History SurveyIllinois Natural History Survey	Wetlands Annotation - IllinoisWetland Linear Boundaries - Illinois			05/02/13 05/02/13	
	Flood_FEMA_IL_20120606Wetland SitesAnno	Illinois Natural History Survey	FEMA Flood data for Illinois portion of Illiana study area. The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). This specific shapefile was created from FEMA DFIRM data for Grundy and Kankakee County that was merged with Will County data gathered in 2011. X and .2 categories were removed from the maps leaving A, AH, AE.Wetlands Annotation - Illinois			06/06/12 05/02/13	
	Flood_FEMA_LakeCo_20120605Flood_F EMA_IL_20120606		FEMA Flood data for Indiana portion of Illiana study area. The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). This specific shapefile was created from FEMA DFIRM data for Grundy and Kankakee County that was merged with Will County data gathered in 2011. X and .2 categories were removed from the maps leaving A, AH, AE.FEMA Flood data for Illinois portion of Illiana study area. The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). This specific shapefile was created from FEMA DFIRM data for Grundy and Kankakee County that was merged with Will County data gathered in 2011. X and .2 categories were removed from the maps leaving A, AH, AE.		01/18/12	06/05/12 06/06/12	
	Streams_WillCounty_KankakeeCounty_ MergedFlood_FEMA_LakeCo_20120605		Streams Will and Kankakee Counties Illinois.FEMA Flood data for Indiana portion of Illiana study area. The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). This specific shapefile was created from FEMA DFIRM data for Grundy and Kankakee County that was merged with Will County data gathered in 2011. X and .2 categories were removed from the maps leaving A, AH, AE.		07/21/11 01/18/12	06/05/12	
	WaterBody_HydroHResBodyD_NHD_I N_20110525Streams_WillCounty_Kanka keeCounty_Merged		Waterbodies Indiana portion of Illiana study area.Streams Will and Kankakee Counties Illinois.		07/21/11	05/25/11	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	WaterBody_WillCounty_KankakeeCoun ty_MergedWaterBody_HydroHResBody D_NHD_IN_20110525		Waterbodies Illinois portion of Illiana study area.Waterbodies Indiana portion of Illiana study area.		05/21/10	08/16/12 05/25/11	
	Wetlands_DU_NWI_IL_20120815Water Body_WillCounty_KankakeeCounty_Me rged		National Wetland Inventory Duck Unlimited Wetland data for Illinois portion of Illiana study area. This data set represents the extent, approximate location and type of wetlands and deepwater habitats in the conterminous United States. These data delineate the areal extent of wetlands and surface waters as defined by Cowardin et al. (1979).Waterbodies Illinois portion of Illiana study area.		07/01/07 05/21/10	08/15/12 08/16/12	
	Wetlands_Surveyed_JFNew_Indiana_20 130129Wetlands_DU_NWI_IL_20120815		Survey data from JFNew for Wetlands in Indiana portion of Illiana study area.National Wetland Inventory Duck Unlimited Wetland data for Illinois portion of Illiana study area. This data set represents the extent, approximate location and type of wetlands and deepwater habitats in the conterminous United States. These data delineate the areal extent of wetlands and surface waters as defined by Cowardin et al. (1979).		07/01/07	01/29/13 08/15/12	
	Wetlands_Surveyed_JFNew_Indiana_20 130129		Survey data from JFNew for Wetlands in Indiana portion of Illiana study area.			01/29/13	
Infrastruc	ture						
	Airport_Boundary_Will_20110525					05/25/11	
	Airport_Illinois_20111212Airport_Boun dary_Will_20110525					12/12/11 05/25/11	
	Airport_NTAD_LakeNewtonPorterJaspe rCo_20110525Airport_Illinois_20111212					05/25/11 12/12/11	
	Airport_WillCo_20120823Airport_NTA D_LakeNewtonPorterJasperCo_2011052 5					08/23/12 05/25/11	
	Emergency_IN_IDHS_FireStaHSIP_2011 0525Airport_WillCo_20120823					05/25/11 08/23/12	
	Emergency_IN_MHMP_Police_20110525 Emergency_IN_IDHS_FireStaHSIP_2011 0525					05/25/11 05/25/11	
	Emergency_WillCo_FireDepts_20120823 Emergency_IN_MHMP_Police_20110525					08/23/12 05/25/11	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Emergency_WillCo_Police_20120823Em ergency_WillCo_FireDepts_20120823					08/23/12 08/23/12	
	Illiana_CourthouseEmergency_WillCo_ Police_20120823					05/25/11 08/23/12	
	Illiana_PostOfficesIlliana_Courthouse					05/25/11 05/25/11	
	Other_PublicProperty_WillCo_Fair_Clin ics_20120823Illiana_PostOffices					08/23/12 05/25/11	
	Ports_SA_WILL_20110719Other_PublicP roperty_WillCo_Fair_Clinics_20120823					07/19/11 08/23/12	
	PostOffice_KankakeeCo_2011Ports_SA_ WILL_20110719					05/25/11 07/19/11	
	PublicLibrary_Indiana_2011PostOffice_ KankakeeCo_2011					05/25/11 05/25/11	
	PublicLibrary_WillCo_20120823PublicLi brary_Indiana_2011					08/23/12 05/25/11	
	PublicLibrary_WillCo_Point_20120823P ublicLibrary_WillCo_20120823					08/23/12 08/23/12	
	PublicLibrary_WillCo_Point_20120823					08/23/12	
Land Use							
	Aviation_SSA_FullBld_20110719					07/19/11	
	Aviation_SSA_Inag_20110719Aviation_S SA_FullBld_20110719					07/19/11 07/19/11	
	Aviation_SSAExist_2011_20110602Aviati on_SSA_Inag_20110719					06/02/11 07/19/11	
	BusinessParks_WillCo_20120823Aviatio n_SSAExist_2011_20110602					08/23/12 06/02/11	
	Calumet_Astronomy_Center_Expanded _BoundaryBusinessParks_WillCo_20120 823					08/23/12	
	Cemeteries_LakeCo_IN_AerialCalumet_ Astronomy_Center_Expanded_Boundar y						
	Cemeteries_LakeCo_JFNew_20120301Ce meteries_LakeCo_IN_Aerial					03/01/12	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Cemeteries_PublicProperty_WillCo_201 20823Cemeteries_LakeCo_JFNew_20120 301					08/23/12 03/01/12	
	Cemetery_IllinoisCemeteries_PublicPro perty_WillCo_20120823					08/23/12	
	Cemetery_KankakeeCoCemetery_Illinoi s						
	Cemetery_KankakeeCo_PointsCemetery _KankakeeCo						
	Crops_USDA_IL_20120530Cemetery_Ka nkakeeCo_Points					05/30/12	
	Crops_USDA_LakeCo_20120531Crops_ USDA_IL_20120530					05/31/12 05/30/12	
	Federal_PublicProperty_WillCo_JolietAr myAmmunition_20120823Crops_USDA _LakeCo_20120531					08/23/12 05/31/12	
	Federal_PublicProperty_WillCo_Lincoln NationalCemetery_20120823Federal_Pu blicProperty_WillCo_JolietArmyAmmu nition_20120823					08/23/12 08/23/12	
	Hospital_KankakeeCo_2011Federal_Pub licProperty_WillCo_LincolnNationalCe metery_20120823					08/23/12	
	Hospital_WillCo_20120823Hospital_Kan kakeeCo_2011					08/23/12	
	Intermodal_SA_REG_20110719Hospital_ WillCo_20120823					07/19/1108/2 3/12	
	MedCareFacs_MHMP_IN_20110525Inte rmodal_SA_REG_20110719					05/25/1107/1 9/11	
	Religious_PlacesOfWorship_20110803M edCareFacs_MHMP_IN_20110525					08/03/1105/2 5/11	
	Religious_USGS_Bla_IN_20110525Religi ous_PlacesOfWorship_20110803					05/25/11 08/03/11	
	Weigh_Station_East_of_LowellReligious _USGS_Bla_IN_20110525					05/25/11	
	Zoning_KankakeeCo_20121120Weigh_St ation_East_of_Lowell					11/20/12	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Zoning_LakeCo_20120411Zoning_Kank akeeCo_20121120					04/11/12 11/20/12	
	Zoning_WillCo_20120823Zoning_LakeC o_20120411					08/23/12 04/11/12	
	Zoning_WillCo_20120823					08/23/12	
Natural A	reas *All data has been compare	ed to other data in this category to	alleviate overlaps in the data. The original data can	be requested from	Ryan Pettit at Par	sons Brincker	hoff.
	CountyParks_INDNR_LakeCo_20120608 *All data has been compared to other data in this category to alleviate overlaps in the data. The original data can be requested from Ryan Pettit at Parsons Brinckerhoff.	Indiana Natural Heritage Data Center	This file was created as a statewide inventory of significant natural areas. Data selected from Managed Lands shapefile.	x	01/01/04	06/08/12	
	FishWildlife_IDNR_IL_20120217County Parks_INDNR_LakeCo_20120608	Illinois Department of Natural ResourcesIndiana Natural Heritage Data Center	Grundy, Kankakee, Kendall and Will Counties: State Parks, Resource Areas, Fish and Wildlife Conservation Areas and any other properties owned or maintained by IDNR, other thand those properties in the Illinois Natural Areas Inventory and the Illinois Nature Preserves CommissionsThis file was created as a statewide inventory of significant natural areas. Data selected from Managed Lands shapefile.	x	09/06/11 01/01/04	02/17/12 06/08/12	
	FishWildlife_INDNR_LakeNewtonCo_ NoHighQualityComm_20120608FishWil dlife_IDNR_IL_20120217	Indiana Department of Natural ResourcesIllinois Department of Natural Resources	This file was created as a statewide inventory of significant natural areas. Data selected from Managed Lands shapefile.Grundy, Kankakee, Kendall and Will Counties: State Parks, Resource Areas, Fish and Wildlife Conservation Areas and any other properties owned or maintained by IDNR, other thand those properties in the Illinois Natural Areas Inventory and the Illinois Nature Preserves Commissions	x	06/08/12 09/06/11	06/08/12 02/17/12	
	Forest_IllianaStudyArea_20Acres_12051 1FishWildlife_INDNR_LakeNewtonCo_ NoHighQualityComm_20120608	Huff & HuffIndiana Department of Natural Resources	Forested areas in study area of greater than 20 acres.This file was created as a statewide inventory of significant natural areas. Data selected from Managed Lands shapefile.	x	06/08/12	12/05/11 06/08/12	
	Forests_USDA_IL_20120531Forest_Illian aStudyArea_20Acres_120511	USDAHuff & Huff	Forested areas extracted from the USDA Cropland Data Layer.Forested areas in study area of greater than 20 acres.		12/31/11	05/31/12 12/05/11	
	Forests_USDA_IN_20120531Forests_US DA_IL_20120531	USDAUSDA	Forested areas extracted from the USDA Cropland Data Layer.Forested areas extracted from the USDA Cropland Data Layer.		12/31/11 12/31/11	05/31/12 05/31/12	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	HighQualityNaturalCommunities_IND NR_20110525Forests_USDA_IN_201205 31	Indiana Department of Natural ResourcesUSDA	High quality natural communitiesForested areas extracted from the USDA Cropland Data Layer.		12/31/11	05/25/11 05/31/12	
	MidewinNationalTallgrassPrairie_USNP S_20110719HighQualityNaturalCommu nities_INDNR_20110525	US National Atlas (National Park Service)Indiana Department of Natural Resources	Boundaries of the Midewin NTPHigh quality natural communities		10/01/06	07/19/11 05/25/11	
	NatureAreaPreserves_ILDNR_IL_20120 419MidewinNationalTallgrassPrairie_US NPS_20110719	Illinois Department of Natural Resources, Illinois Natural Area InventoryUS National Atlas (National Park Service)	Nature Area and Preserve Boundaries in the Illiana study area.Boundaries of the Midewin NTP		11/14/11 10/01/06	04/19/12 07/19/11	
	NaturePreserve_INDNR_LakeNewtonC o_20120608NatureAreaPreserves_ILDN R_IL_20120419	Indiana Natural Heritage Data CenterIllinois Department of Natural Resources, Illinois Natural Area Inventory	Nature Areas and Preserves in Lake and Newton County Indiana.Nature Area and Preserve Boundaries in the Illiana study area.		06/08/12 11/14/11	06/28/12 04/19/12	
	NaturePreserve_INDNR_PrivateEntity_ LakeNewtonCo_NoHighQualityComm_ 20120608NaturePreserve_INDNR_Lake NewtonCo_20120608	Indiana Natural Heritage Data CenterIndiana Natural Heritage Data Center	Private Nature Preserves extracted from the Indiana Managed Areas shapefile.Nature Areas and Preserves in Lake and Newton County Indiana.		06/08/12 06/08/12	06/28/12 06/28/12	
	Parks_INDNR_LocalParkBoards_LakeC o_20120608NaturePreserve_INDNR_Pri vateEntity_LakeNewtonCo_NoHighQua lityComm_20120608	Indiana Natural Heritage Data CenterIndiana Natural Heritage Data Center	Local Parks extracted from the Indiana Managed Areas shapefile.Private Nature Preserves extracted from the Indiana Managed Areas shapefile.		06/08/12 06/08/12	06/28/12 06/28/12	
	Parks_LocalParkBoards_StJohnsINParks _INDNR_LocalParkBoards_LakeCo_201 20608	Indiana Natural Heritage Data Center	Shapefile of Homestead Acres Park in St. Johns. Created for screening purposes of the A1 alternative.Local Parks extracted from the Indiana Managed Areas shapefile.		11/14/12 06/08/12	11/14/12 06/28/18	
	Parks_Other_INDNR_LakeNewtonCo_2 0120608Parks_LocalParkBoards_StJohns IN	Indiana Natural Heritage Data Center	Other Park categories extracted from the Indiana Managed Areas shapefileShapefile of Homestead Acres Park in St. Johns. Created for screening purposes of the A1 alternative.		06/08/12 11/14/12	06/28/12 11/14/12	
	Parks_State_ILDNR_20120605Parks_Oth er_INDNR_LakeNewtonCo_20120608	Illinois Department of TransportationIndiana Natural Heritage Data Center	Boundaries of recreation and conservation sites owned or managed by the Illinois Department of Natural Resources.Other Park categories extracted from the Indiana Managed Areas shapefile		06/05/12 06/08/12	06/05/12 06/28/12	
	Parks_WillCo_20120823Parks_State_ILD NR_20120605	Will County GISIIlinois Department of Transportation	State, County, Local Parks. This data has been compared against other Natural Area data to eliminate overlaps in data.Boundaries of recreation and conservation sites owned or managed by the Illinois Department of Natural Resources.		08/11/12 06/05/12	08/23/12 06/05/12	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Trails_INDNR_IN_20121119Parks_Will Co_20120823	Indiana Department of Natural ResourcesWill County GIS	Existing and Proposed Trails in Indiana.State, County, Local Parks. This data has been compared against other Natural Area data to eliminate overlaps in data.		08/11/12	11/19/12 08/23/12	
	Trails_KankakeeCo_20121119Trails_IND NR_IN_20121119	Will County GIS Indiana Department of Natural Resources	Extracted from the Will County Trails Data. Includes Existing and Proposed Trails in Kankakee County.Existing and Proposed Trails in Indiana.		04/02/12	08/23/12 11/19/12	
	Trails_WillCo_Merged_20121119Trails_ KankakeeCo_20121119	Will County GIS, CMAP, Forest Preserve District of Will CountyWill County GIS	Merged and cleaned file of Extracted and Proposed Trails in Will County.Extracted from the Will County Trails Data. Includes Existing and Proposed Trails in Kankakee County.		05/25/2011 08/18/2011 04/02/12	08/23/12 08/23/12	
	Trails_WillCo_Merged_20121119	Will County GIS, CMAP, Forest Preserve District of Will County	Merged and cleaned file of Extracted and Proposed Trails in Will County.		05/25/2011 08/18/2011	08/23/12	
Parcels							
	Parcels_AllCounties_Merged	Lake County Assessor, Will County Assessor GIS, Kankakee County Assessor	Merged file of Parcel data from Kankakee, Will, and Lake Counties	x	Merged 1/29/2013	01/29/13	
	Parcels_LakeCountyParcels_AllCounties _Merged	Christopher Burke, Lake County AssessorLake County Assessor, Will County Assessor GIS, Kankakee County Assessor	Parcel Data for Lake County, INMerged file of Parcel data from Kankakee, Will, and Lake Counties	xx	Merged 1/29/2013	02/27/12 01/29/13	
	Parcels_KankakeeCountyParcels_LakeC ounty	Kankakee County Assessor, Kankakee County GISChristopher Burke, Lake County Assessor	Parcel Data for Kanakakee County, ILParcel Data for Lake County, IN	xx	05/31/11	05/31/11 02/27/12	
	Parcels_WillCountyParcels_KankakeeCo unty	Will County Assessor, Will County GISKankakee County Assessor, Kankakee County GIS	Parcel data for Will County ILParcel Data for Kanakakee County, IL	xx	04/07/11 05/31/11	01/26/12 05/31/11	
	Parcels_WillCounty	Will County Assessor, Will County GIS	Parcel data for Will County IL	x	04/07/11	01/26/12	
Political B	Boundaries		-		-	_	
	MetropolitanPlanningOrgs_StudyArea_ 20110719				2010	07/19/11	
	PLSS_Townships_KankakeeCo_2012102 3MetropolitanPlanningOrgs_StudyArea _20110719	Kankakee County GIS	Public Land Survey Townships Kankakee Co		2010	10/23/12 07/19/11	
	PublicLandSurvey_LakeCoPLSS_Towns hips_KankakeeCo_20121023	Kankakee County GIS	Public Land Survey Townships Kankakee Co		04/21/09	10/23/12	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	PublicLandSurveyBounds_WillCo_2012 0823PublicLandSurvey_LakeCo			x	07/25/12 04/21/09	08/23/12	
	Townships_INPublicLandSurveyBounds _WillCo_20120823	Indiana Geological Survey	Township Boundaries Lake Co	х	1998 07/25/12	01/30/12 08/23/12	
	Townships_KankakeeCoTownships_IN	Kankakee County GISIndiana Geological Survey	Township Boundaries Kankakee CoTownship Boundaries Lake Co		04/24/08 1998	10/23/12 01/30/12	
	Townships_WillCo_20120823Townships _KankakeeCo	Will County GISKankakee County GIS	Township Boundaries Will CoTownship Boundaries Kankakee Co	х	03/07/11 04/24/08	08/23/12 10/23/12	
	Townships_WillCo_20120823	Will County GIS	Township Boundaries Will Co	х	03/07/11	08/23/12	
Transit		•					
	Amtrak Stations IL	Federal Railroad Administration (FRA)	The data set provides an updated version of the location and attribute information for all Amtrak stations in the United States and Canada.		03/2009	05/25/11	
	Amtrak Stations INAmtrak Stations IL	Federal Railroad Administration (FRA)Federal Railroad Administration (FRA)	The Amtrak Stations database is a geographic data set containing Amtrak intercity railroad passenger terminals.The data set provides an updated version of the location and attribute information for all Amtrak stations in the United States and Canada.		07/09/09 03/2009	05/25/11 05/25/11	
	Metra HC Midewin ExtAmtrak Stations IN	MetraFederal Railroad Administration (FRA)	Proposed rail route to Midewin on Union Pacific Railroad through WilmingtonThe Amtrak Stations database is a geographic data set containing Amtrak intercity railroad passenger terminals.	x	2009 07/09/09	12/22/11 05/25/11	
	Metra Midewin ExtMetra HC Midewin Ext	MetraMetra	Metra proposed service extension to northside of Midewin Tall Grass prairie. Follows NS to Manhattan and then follow abandoned track south to northeast side of Midewin property then west on abandoned track within Midewin property.Proposed rail route to Midewin on Union Pacific Railroad through Wilmington	xx	10/30/09 2009	12/22/11 12/22/11	
	Metra Minooka ExtMetra Midewin Ext	MetraMetra	Metra proposed service extension to MinookaMetra proposed service extension to northside of Midewin Tall Grass prairie. Follows NS to Manhattan and then follow abandoned track south to northeast side of Midewin property then west on abandoned track within Midewin property.	xx	2009 10/30/09	12/22/11 12/22/11	
	Metra Peotone ExtMetra Minooka Ext	MetraMetra	Potential Metra service extension to Peotone ILMetra proposed service extension to Minooka	xx	2009 2009	12/22/11 12/22/11	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Metra SES Line 2009Metra Peotone Ext	MetraMetra	Proposed Metra service to the Southeast SuburbsPotential Metra service extension to Peotone IL	хх	2009 2009	12/22/11 12/22/11	
	Metra SES Stations 2009Metra SES Line 2009	MetraMetra	Proposed Metra Station locations for proposed Southeast service.Proposed Metra service to the Southeast Suburbs	хх	2009 2009	12/22/11 12/22/11	
	MetraLines 20111221Metra SES Stations 2009	MetraMetra	Metra existing routes.Proposed Metra Station locations for proposed Southeast service.	x	2009 2009	12/21/11 12/22/11	
	Metra Stations 20111221MetraLines 20111221	MetraMetra	Metra existing stations.Metra existing routes.		2009 2009	12/21/11 12/21/11	
	Transit LakeCo Transit 20110815Metra Stations 20111221	Regional Bus Authority of Northwest Indiana and NIRPCMetra	Existing bus transit routes in Northwest Indiana as of May 2011. Though every intention was made to represent actual bus transit routes, accuracy cannot be guaranteed. Metra existing stations.		05/01/11 2009	08/15/11 12/21/11	
	Transit PaceBus 20110815Transit LakeCo Transit 20110815	Pace Suburban Bus Regional Bus Authority of Northwest Indiana and NIRPC	Transit Routes for Pace Suburban Transit Existing bus transit routes in Northwest Indiana as of May 2011. Though every intention was made to represent actual bus transit routes, accuracy cannot be guaranteed.		06/05/09 05/01/11	08/15/11 08/15/11	
	Transit RiverValleyMetro 20110815Transit PaceBus 20110815	River Valley Metro Transit website Pace Suburban Bus	Transit Routes for River Valley MetroTransit Routes for Pace Suburban Transit		08/15/11 06/05/09	08/15/11 08/15/11	
	Transit RiverValleyMetro 20110815	River Valley Metro Transit website	Transit Routes for River Valley Metro		08/15/11	08/15/11	
Utilities							
	BraidwoodNuclear_IL_20110722	Manually created using aerial photography.	Polygon shape of the Braidwood Nuclear plant boundaries.		07/22/11	07/22/11	
	Communication_TowersBraidwoodNucl ear_IL_20110722	Manually created using aerial photography and Topo maps as references. Manually created using aerial photography.	Locations of Cell and Radio towers.Polygon shape of the Braidwood Nuclear plant boundaries.		01/10/13 07/22/11	01/10/13 07/22/11	
	CretePowerPlant_IL_20110722Communi cation_Towers	Manually created using aerial photography. Manually created using aerial photography and Topo maps as references.	boundaries of the power plant southeast of Crete IL Locations of Cell and Radio towers.		02/06/13 01/10/13	02/06/13 01/10/13	
	Lowell Water Treatment FacCretePowerPlant_IL_20110722	Data exported from the Lake County Parcels dataset. Manually created using aerial photography.	Boundaries of the water treatment facility.boundaries of the power plant southeast of Crete IL		02/27/12 02/06/13	01/07/13 02/06/13	



Data Category	Data Layer	Source/Contact (per Metadata unless otherwise noted)	Description	Distribution Restricted	Date (Pub.)	Date Added to Illiana GDB	Data Superseded
	Peotone Water Treatment FacLowell Water Treatment Fac	Manually created using aerial photography and Topo maps as references.Data exported from the Lake County Parcels dataset.	Boundaries of the water treatment facility near Peotone.Boundaries of the water treatment facility.		01/10/13 02/27/12	01/10/13 01/07/13	
	Pipelines Not In Database ID from Topo MapPeotone Water Treatment Fac	Pipelines that were not included in the dataset from the National Pipeline inventory. Identified through Topo Maps and verified by field survey. Manually created using aerial photography and Topo maps as references.	Boundaries of the water treatment facility near Peotone.	x	01/10/13 01/10/13	01/10/13 01/10/13	
	PowerPlant_LincolnGenerationFacility_ 20130206Pipelines Not In Database ID from Topo Map	Location identified through Tenaska Energy website. Pipelines that were not included in the dataset from the National Pipeline inventory. Identified through Topo Maps and verified by field survey.	Boundaries of Lincoln Generation Facility near Manhattan, IL	x	02/06/13 01/10/13	02/06/13 01/10/13	
	PowerPlant_UniversityParkEnergy_2013 0206PowerPlant_LincolnGenerationFacil ity_20130206	Location identified through Tenaska Energy website. Location identified through Tenaska Energy website.	Boundaries of University Park Energy Facility near University Park, ILBoundaries of Lincoln Generation Facility near Manhattan, IL		02/06/13 02/06/13	02/06/13 02/06/13	
	PowerTrans_Illiana_20120213PowerPlan t_UniversityParkEnergy_20130206	Manually entered using aerial photos and information from the Illinois Institute for Rural Affairs. Location identified through Tenaska Energy website.	Power Transmission LinesBoundaries of University Park Energy Facility near University Park, IL		02/13/12 02/06/13	02/13/12 02/06/13	
	Wells_Lowell_IN_20110722PowerTrans_ Illiana_20120213	City of Lowell, IN Manually entered using aerial photos and information from the Illinois Institute for Rural Affairs.	Lowell IN municipal water well locationsPower Transmission Lines	x	07/22/11 02/13/12	07/22/11 02/13/12	
	Wilmington Water Treatment FacWells_Lowell_IN_20110722	Manually created using aerial photography and Topo maps as references. City of Lowell, IN	Boundaries of water treatment facility near Wilmington, ILLowell IN municipal water well locations	x	01/10/13 07/22/11	01/10/13 07/22/11	
	Wilmington Water Treatment Fac	Manually created using aerial photography and Topo maps as references.	Boundaries of water treatment facility near Wilmington, IL		01/10/13	01/10/13	

GEOGRAPHIC INFORMATION SYSTEMS TECHNICAL DOCUMENTATION

### THIS PAGE INTENTIONALLY LEFT BLANK

