

IDNR - GIS

Mapping of the Indiana Lake Michigan Shoreline



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Data Status and Delivery Plans

Project Team

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- Matt Riggs – Polis Center

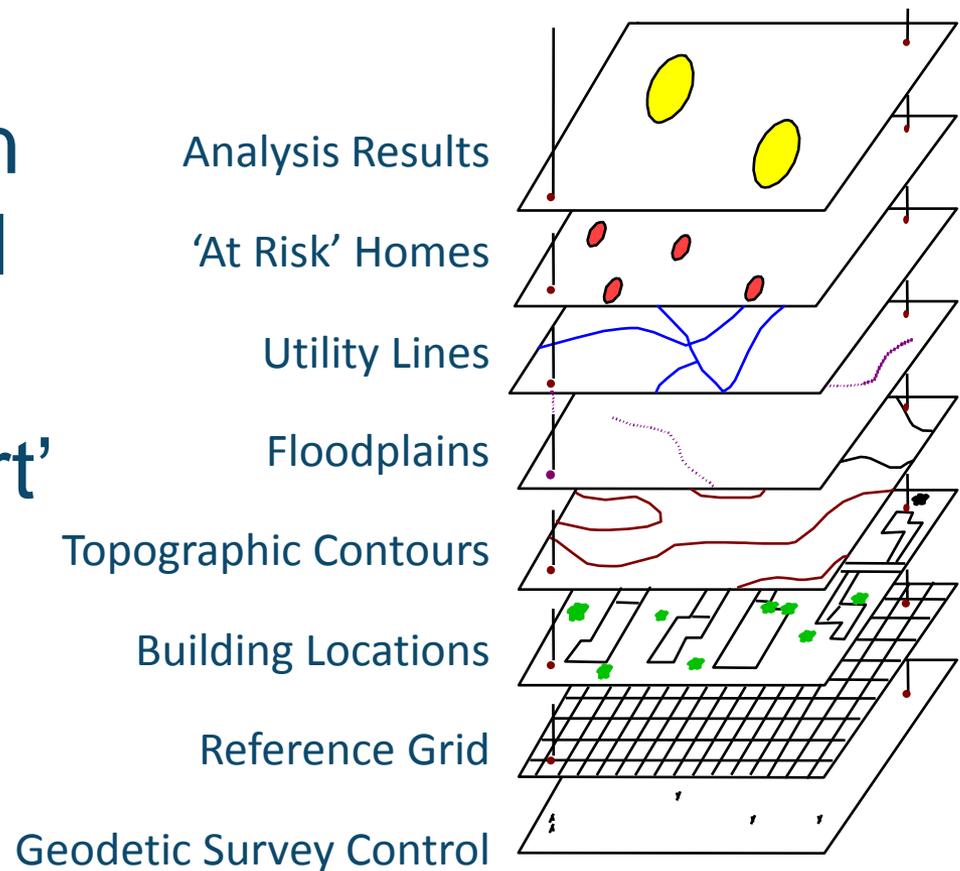
Project Overview

Statement of work: ...create a GIS database and electronic shoreline inventory of **structures**, **land use**, **shoreline dynamics** and **historic features** landward 1000 feet from where Lake Michigan waters meets the natural or man-made edge....

Project Overview

What is GIS?

- GIS organizes spatial information into 'layers' based on location
- GIS creates 'smart' maps by linking map features with their attributes.



Project Overview

- The data created for this project can be accessed using an existing GIS
- A virtual Catalog will be created that can be viewed using a “Stand Alone” product when a GIS is not available

Project Area

- The 2005 Statewide Aerial Imagery as our “Official” starting shoreline
- Expanded the project area to 1100 feet



Process Description

Process

Identify Data Needs and Resources



Data Conversion and Creation



Data QA/QC and Metadata creation

Process

Data Needs and Resources

Data Needs and Resources

- RFP/Contract identified 15 data categories
- The categories included 62 individual feature types
- The descriptions included a suggestion of feature type (point, line or polygon) and required attributes

Data Sources

- NIRPC
- Indiana Department of Natural Resources – Multiple Divisions
- IndianaMAP
- Lake County
- LaPorte County
- Porter County
- Indiana Department of Local Government and Finance (IDLGF)
- Indiana Geological Survey
- U.S. Fish and Wildlife Service
- Federal Emergency Management Agency (FEMA)
- U.S. Census
- Port of Indiana
- National Resources Conservation Service
- Multiple Shoreline Communities
- NOAA

Data Sources



Stephen E. Davis
Lake Michigan Specialist

DNR Division of Water
Natural Resources

Process

Data Conversion and Creation

Incoming Data Formats

- GIS data layers, PDFs, Printed Maps and Documents, Access Database, Spreadsheets, KML/KMZ files (Google Earth products), etc...
- Data was evaluated to determine the relevancy, accuracy, source and timeliness of information

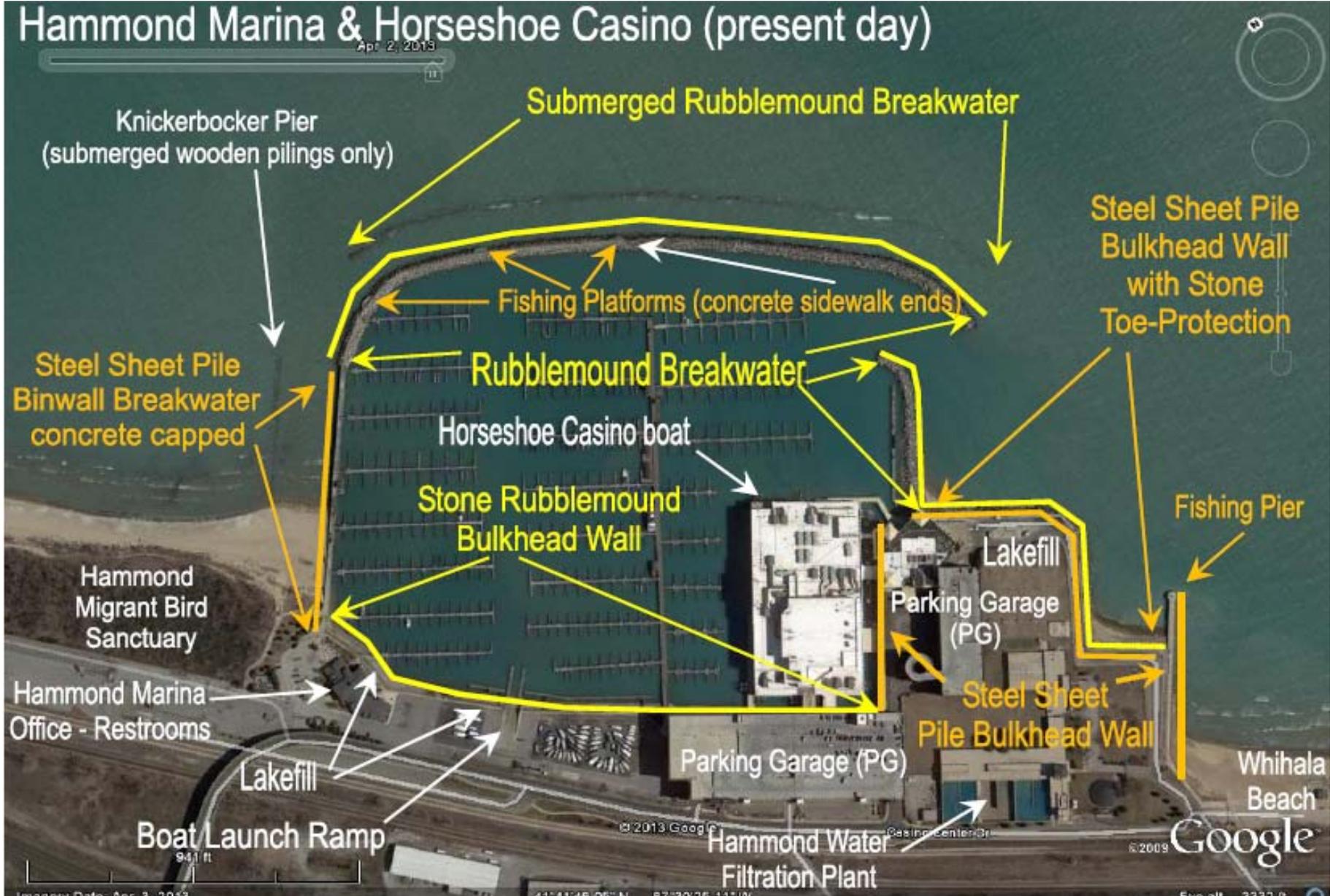
Data Processing

- KMZ/KML files were converted to the appropriate format and attributed
- PDF and Image files were Georeferenced to Aerial photography and features manually digitized and attributed
- Multiple features were manually digitized from aerial photography

Data Projections and Extent

- Projection Definition: The process of representing data from the surface of the earth onto a 2- dimensional surface
- Digital files were standardized to common projection
- Limited the extent of the data to the project study area

Shoreline Features

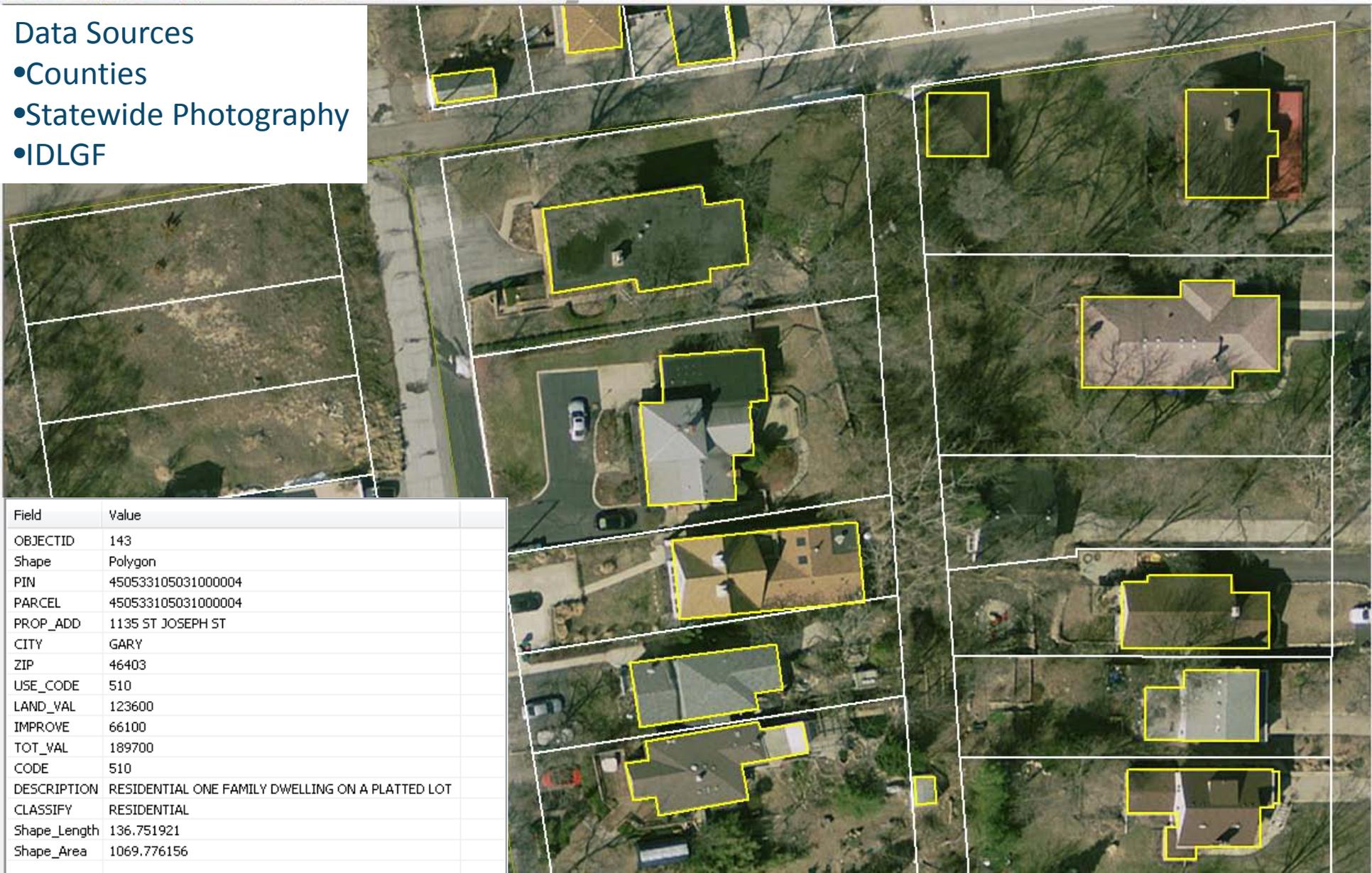


Shoreline Features



Parcels and Buildings

- Data Sources
- Counties
 - Statewide Photography
 - IDLGF



Field	Value
OBJECTID	143
Shape	Polygon
PIN	450533105031000004
PARCEL	450533105031000004
PROP_ADD	1135 ST JOSEPH ST
CITY	GARY
ZIP	46403
USE_CODE	510
LAND_VAL	123600
IMPROVE	66100
TOT_VAL	189700
CODE	510
DESCRIPTION	RESIDENTIAL ONE FAMILY DWELLING ON A PLATTED LOT
CLASSIFY	RESIDENTIAL
Shape_Length	136.751921
Shape_Area	1069.776156

Washington Park Marina 1987



Washington Park Marina 2013



Washington Park Marina 1987

Washington Park Marina 2013

- Beach_1987_LMCP
- Channels_LMCP
- Marina_1987_LMCP
- Boat_Ramps_LMCP
- Sheet_Pilings_LMCP
- Stone_Toe_LMCP
- Other_Feature_LMCP
- Parking_lots_LMCP

- Beach_2013_LMCP
- Channels_LMCP
- Marina_2013_LMCP
- Boat_Ramps_LMCP
- Sheet_Pilings_LMCP
- Stone_Toe_LMCP
- Other_Feature_LMCP
- Parking_lots_LMCP

Process

QA/QC and Metadata

Process – QA/QC

- Visual inspection of the data against source documents or Aerial Photography
- Verified the common data projection and attribute content
- Verified data geometry was correct

Process – Metadata

- “Data about the Data”
- Tells the user:
 - The data source
 - The date it was created
 - The attributes stored in the data
 - Description of what the data represents
 - How the data was processed
 - General spatial information about the data

Process – Metadata

- Updated existing Metadata
- Create new Metadata
- Processed metadata using a tool created by USGS to insure uniformity and completeness.

Data Status

Data Status

- Data Compilation is Complete
 - Required data compilation is complete
 - We were not able to acquire Utility ROW
 - At least 15 additional Data layers have been created

Project Status

- Electronic Inventory Catalogue
 - Testing potential delivery formats
 - Finalizing the visual presentation
 - Anticipate a January/February Completion

Questions

