Grand Calumet River AOC Boundary, U.S. EPA Great Lakes National Program Office

Shapefile

Thumbnail Not Available
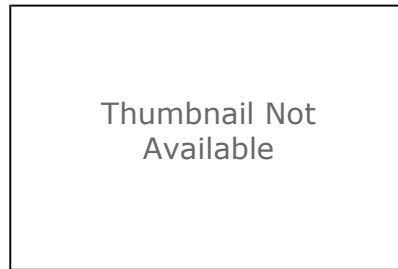
Tags

Indiana, Environment, Remediation, 020:057, Great Lakes, Area of Concern

Summary

The main use of the delineated AOC boundaries is for EPA and State governments to locate those sites listed on the U.S. Area of Concerns list in the Great Lakes Water Quality Agreement, or other sites that are in close proximity or may have contributed to the pollution within each AOC. These analyses are completed on a relatively small scale of the areas in and around each AOC. Attributes only include the AOC name and the predominant state in which the AOC is located. The locations of features and boundaries shown on this map are approximate and are intended for planning and visualization purposes only. This is not intended for survey, statistical, engineering, or legal purposes.

Description

Note: This version of the shapefile is an update to Approved_2009_IN_AOC_Boundary.shp. Updates are to the metadata and attribute table only, not the boundary itself.

This shapefile provides a polygon boundary for the Grand Calumet River AOC in northwestern Indiana. The boundary was developed in 2009 by IDEM's Remedial Action Plan Program Coordinator, Danielle Barnett, in consultation with the Citizens Advisory for the Remediation of the Environment (CARE), the AOC public advisory committee. IDEM and the CARE committee had determined that the 2005 boundary (AOC_IN_GRANDCALUMET.shp) was submitted to U.S. EPA in error and did not reflect the long-term understanding of CARE members – hence the need for the 2009 correction.

In general, the following steps were taken in setting the 2009 AOC boundaries documented in this shapefile: The western boundary was fixed at the Illinois-Indiana state line and the northern boundary extended 1.5 miles into Lake Michigan, in keeping with the long-term understanding of the CARE Committee. The eastern boundary was set to encompass the Eastern Marquette Lagoon in Gary, which served as the approximate mouth of the Grand Calumet River until it was cut off by sand deposits sometime in the 1860s. Montgomery Street in Gary, which divided Marquette Park from a residential neighborhood to the east, was selected as the easternmost part of the AOC boundary. The boundary then ran along Marquette Drive to Grand Boulevard where it continued to the Tolleston beach ridge line, which marks a historical shoreline of Lake Michigan and was set as the revised southern boundary of the AOC.

According to a 1993 report from the USGS, the Tolleston ridge line marks the approximate groundwater divide between the Grand Calumet and Little Calumet River drainage basins. Thus, this southern boundary was a refinement and northward shift from the previous I 80/94 boundary utilized in the RAP Stage 2.5 document, circa 1998, and was designed to reflect an ecosystem approach – including all the groundwater flowing to the Grand Calumet River, Indiana Harbor Ship Canal, or Lake Michigan.

Narrative: Michael Spinar, IDEM, 10/15/2021. "The AOC area, which is 94 square miles in total,

encompasses portions of the cities of Gary, East Chicago, Hammond, and Whiting, Ind., and is defined by:
- The Indiana/Illinois state line to the west
- Grand Avenue around Marquette Park lagoons in Gary to the east
- The southern boundary extending to the Tolleston Beach Ridge
- The northern boundary on Lake Michigan which includes a 1.5-mile buffer out into the lake"

Representatives of both U.S. EPA and IDEM approved the revised boundary in September 2009.

Credits

The USGS study documenting the groundwater divide on which the revised southern AOC boundary was based: Fenelon, Joseph M., Watson, Lee R. "Geohydrology and Water Quality of the Calumet Aquifer, in the Vicinity of the Grand Calumet River/Indiana Harbor Canal, Northwestern Indiana." U.S. GEOLOGICAL SURVEY Water-Resources Investigation Report 92-4115 (1993). Available online at: https://pubs.er.usgs.gov/publication/wri924115.

Michael Spinar (IDEM) provided the rationale for the 2009 boundary update that is provided under Description (Abstract).

The EPA AOC webpage: https://www.epa.gov/great-lakes-aocs/grand-calumet-river-aoc

The State of Indiana AOC webpage: https://in.gov/idem/lakemichigan/rap

Use limitations

Any hardcopies utilizing EPA data sets shall clearly indicate their source. The licensee specifically agrees not to misrepresent EPA data sets, nor to imply that changes they made were approved by EPA.

Extent
West -87.525452 **East** -87.251458
North 41.731740 **South** 41.579211

Scale Range
Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:50,000

ArcGIS Metadata ▶

Topics and Keywords ▶

THEMES OR CATEGORIES OF THE RESOURCE   inlandWaters, environment

* CONTENT TYPE   Downloadable Data
EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION   No

PLACE KEYWORDS   Indiana

THESAURUS'S LANGUAGE   English (UNITED STATES)
THESAURUS ▶
TITLE   EPA Place Names
PUBLICATION DATE   2015-01-31   00:00:00

RESOURCE LOCATION ONLINE
LOCATION
https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/taxonomies/search.do?
search=&searchString=&taxonomyName=WBT%20-%20Geographic%20Locations

NAME Web Taxonomy - Geographic Locations
FUNCTION PERFORMED information

Hide Thesaurus ▲

THEME KEYWORDS Environment, Remediation

THESAURUS ▶
TITLE EPA GIS Keyword Thesaurus
PUBLICATION DATE 2007-11-02 00:00:00

RESOURCE LOCATION ONLINE
LOCATION https://www.epa.gov/geospatial/epa-metadata-technical-specification
NAME EPA Metadata Technical Specification
FUNCTION PERFORMED information

Hide Thesaurus ▲

THEME KEYWORDS 020:057

THESAURUS ▶
TITLE Federal Program Inventory
PUBLICATION DATE 2013-09-16 00:00:00

RESOURCE LOCATION ONLINE
LOCATION https://www.performance.gov/federalprograminventory
NAME Federal Program Inventory
FUNCTION PERFORMED information

Hide Thesaurus ▲

THEME KEYWORDS Great Lakes, Area of Concern

THESAURUS ▶
TITLE User
PUBLICATION DATE 2020-06-29 00:00:00

Hide Thesaurus ▲

Hide Topics and Keywords ▲

Citation ▶

TITLE Grand Calumet River AOC Boundary, U.S. EPA Great Lakes National Program Office
PUBLICATION DATE 2021-11-04

PRESENTATION FORMATS digital map

Hide Citation ▲

Resource Details ▶

DATASET LANGUAGES English (UNITED STATES)
DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE vector

* PROCESSING ENVIRONMENT   Version 6.2 (Build 9200) ; Esri ArcGIS 10.7.0.10450

CREDITS
The USGS study documenting the groundwater divide on which the revised southern AOC boundary was based: Fenelon, Joseph M., Watson, Lee R. "Geohydrology and Water Quality of the Calumet Aquifer, in the Vicinity of the Grand Calumet River/Indiana Harbor Canal, Northwestern Indiana." U.S. GEOLOGICAL SURVEY Water-Resources Investigation Report 92-4115 (1993). Available online at: https://pubs.er.usgs.gov/publication/wri924115.

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The EPA AOC webpage: https://www.epa.gov/great-lakes-aocs/grand-calumet-river-aoc

The State of Indiana AOC webpage: https://in.gov/idem/lakemichigan/rap

ArcGIS ITEM PROPERTIES
* NAME   AOC_IN_GrandCalumet_2021
* SIZE   0.008
* LOCATION   file://\\F5160-78SW8C3-L\C$\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary work\Grand Cal\Edits\Finalized\AOC_IN_GrandCalumet_2021.shp
   * ACCESS PROTOCOL   Local Area Network

Hide Resource Details ▲

Extents ►

EXTENT
   DESCRIPTION
      The Grand Calumet River AOC was designated an AOC in 1987.

   TEMPORAL EXTENT
      BEGINNING DATE   1987-01-01   00:00:00
      ENDING DATE
         INDETERMINATE DATE   unknown

EXTENT
   GEOGRAPHIC EXTENT
      BOUNDING RECTANGLE
         EXTENT TYPE   Extent used for searching
         * WEST LONGITUDE   -87.525452
         * EAST LONGITUDE   -87.251458
         * NORTH LATITUDE   41.731740
         * SOUTH LATITUDE   41.579211
         * EXTENT CONTAINS THE RESOURCE   Yes

   EXTENT IN THE ITEM'S COORDINATE SYSTEM
      * WEST LONGITUDE   -87.525452
      * EAST LONGITUDE   -87.251458
      * SOUTH LATITUDE   41.579211
      * NORTH LATITUDE   41.731740
      * EXTENT CONTAINS THE RESOURCE   Yes

Hide Extents ▲

Resource Points of Contact ►

POINT OF CONTACT
   INDIVIDUAL'S NAME   Mark Loomis
   ORGANIZATION'S NAME   U.S. Environmental Protection Agency Great Lakes National Program Office

CONTACT'S POSITION   Federal AOC Taskforce Lead
CONTACT'S ROLE   publisher

    CONTACT INFORMATION   ▶
      ADDRESS
        TYPE
        DELIVERY POINT   77 W. Jackson Blvd G-17J
        CITY   Chicago
        ADMINISTRATIVE AREA   IL
        POSTAL CODE   60604
        COUNTRY   US
        E-MAIL ADDRESS   Loomis.Mark@Epa.gov

    Hide Contact information ▲

POINT OF CONTACT
    INDIVIDUAL'S NAME   Michael Spinar
    ORGANIZATION'S NAME   Indiana Department of Environmental Management
    CONTACT'S POSITION   Remedial Action Plan Program Coordinator
    CONTACT'S ROLE   point of contact

    CONTACT INFORMATION   ▶
      ADDRESS
        TYPE
        DELIVERY POINT   330 W. US Highway 30, Ste. F
        CITY   Valparaiso
        ADMINISTRATIVE AREA   IN
        POSTAL CODE   46385
        COUNTRY   US
        E-MAIL ADDRESS   mspinar@idem.in.gov

    Hide Contact information ▲

Hide Resource Points of Contact ▲

Resource Maintenance ▶

RESOURCE MAINTENANCE
    UPDATE FREQUENCY   as needed

Hide Resource Maintenance ▲

Resource Constraints ▶

CONSTRAINTS
    LIMITATIONS OF USE
    Any hardcopies utilizing EPA data sets shall clearly indicate their source. The licensee specifically agrees not to misrepresent EPA data sets, nor to imply that changes they made were approved by EPA.

Hide Resource Constraints ▲

Spatial Reference ▶

ARCGIS COORDINATE SYSTEM
    * TYPE   Geographic
    * GEOGRAPHIC COORDINATE REFERENCE   GCS_North_American_1983
    * COORDINATE REFERENCE DETAILS

GEOGRAPHIC COORDINATE SYSTEM
  WELL-KNOWN IDENTIFIER   4269
  X ORIGIN   -400
  Y ORIGIN   -400
  XY SCALE   11258999068426.238
  Z ORIGIN   -100000
  Z SCALE   10000
  M ORIGIN   -100000
  M SCALE   10000
  XY TOLERANCE   8.9831528411952133e-09
  Z TOLERANCE   0.001
  M TOLERANCE   0.001
  HIGH PRECISION   true
  LEFT LONGITUDE   -180
  LATEST WELL-KNOWN IDENTIFIER   4269
  WELL-KNOWN TEXT   GEOGCS["GCS_North_American_1983",DATUM
  ["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM
  ["Greenwich",0.0],UNIT["Degree",0.0174532925199433],AUTHORITY["EPSG",4269]]

REFERENCE SYSTEM IDENTIFIER
  DIMENSION   horizontal
  VALUE   4269
  * CODESPACE   EPSG
  * VERSION   6.12(3.0.1)

Hide Spatial Reference ▲

Spatial Data Properties ►

VECTOR   ►
  * LEVEL OF TOPOLOGY FOR THIS DATASET   geometry only

  GEOMETRIC OBJECTS
    FEATURE CLASS NAME   AOC_IN_GrandCalumet_2021
    * OBJECT TYPE   composite
    * OBJECT COUNT   1

  Hide Vector ▲

ARCGIS FEATURE CLASS PROPERTIES   ►
  FEATURE CLASS NAME   AOC_IN_GrandCalumet_2021
    * FEATURE TYPE   Simple
    * GEOMETRY TYPE   Polygon
    * HAS TOPOLOGY   FALSE
    * FEATURE COUNT   1
    * SPATIAL INDEX   TRUE
    * LINEAR REFERENCING   FALSE

  Hide ArcGIS Feature Class Properties ▲

Hide Spatial Data Properties ▲

Data Quality ►

SCOPE OF QUALITY INFORMATION   ►
  RESOURCE LEVEL   dataset

  Hide Scope of quality information ▲

Hide Data Quality ▲

Lineage ►

LINEAGE STATEMENT

This shapefile supersedes the previous version, Approved_2009_IN_AOC_Boundary.shp (2009), which superceeded, AOC_IN_GRANDCALUMET.shp (2005).

Hide Lineage ▲

Geoprocessing history ►

PROCESS

PROCESS NAME

DATE   2009-04-16   13:02:28

TOOL LOCATION   C:\Program Files\ArcGIS\ArcToolbox\Toolboxes\Data Management Tools.tbx\Dissolve

COMMAND ISSUED

```
Dissolve "C:\DEE\GIS\Draft\AOC\New File Geodatabase.gdb\AOC_bdry"
"C:\DEE\GIS\Draft\AOC\New File Geodatabase.gdb\AOC_bdry_Dissolve" Item # SINGLE_PART
DISSOLVE_LINES
```

INCLUDE IN LINEAGE WHEN EXPORTING METADATA   No

PROCESS

PROCESS NAME

DATE   2021-10-13   12:08:09

TOOL LOCATION   c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\AddField

COMMAND ISSUED

```
AddField "C:\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary
work\Grand Cal\Edits\Round 1\Approved_2009_IN_AOC_Boundary_1_jt.shp" Name TEXT # #
50 # NULLABLE NON_REQUIRED #
```

INCLUDE IN LINEAGE WHEN EXPORTING METADATA   No

PROCESS

PROCESS NAME

DATE   2021-10-13   12:08:47

TOOL LOCATION   c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\DeleteField

COMMAND ISSUED

```
DeleteField "C:\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary
work\Grand Cal\Edits\Round 1\Approved_2009_IN_AOC_Boundary_1_jt.shp"
OBJECTID;Item;SHAPE_Leng;SHAPE_Area
```

INCLUDE IN LINEAGE WHEN EXPORTING METADATA   No

PROCESS

DATE   2021-11-09   11:08:46

TOOL LOCATION   c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\Project

COMMAND ISSUED

```
Project "C:\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary
work\Grand Cal\Edits\Round 1\Approved_2009_IN_AOC_Boundary_1_jt.shp"
"C:\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary work\Grand
Cal\Edits\Round 1\AOC_IN_GrandCalumet_2021.shp" GEOGCS
['GCS_North_American_1983',DATUM['D_North_American_1983',SPHEROID
['GRS_1980',6378137.0,298.257222101]],PRIMEM['Greenwich',0.0],UNIT
['Degree',0.0174532925199433]] # PROJCS['NAD_1983_UTM_Zone_16N',GEOGCS
['GCS_North_American_1983',DATUM['D_North_American_1983',SPHEROID
['GRS_1980',6378137.0,298.257222101]],PRIMEM['Greenwich',0.0],UNIT
['Degree',0.0174532925199433]],PROJECTION['Transverse_Mercator'],PARAMETER
['False_Easting',500000.0],PARAMETER['False_Northing',0.0],PARAMETER
['Central_Meridian',-87.0],PARAMETER['Scale_Factor',0.9996],PARAMETER
```

```
['Latitude_Of_Origin',0.0],UNIT['Meter',1.0]] NO_PRESERVE_SHAPE # NO_VERTICAL
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INCLUDE IN LINEAGE WHEN EXPORTING METADATA   No

Hide Geoprocessing history ▲

Distribution ►

DISTRIBUTION FORMAT
  NAME Shapefile
  VERSION 2021

TRANSFER OPTIONS
  TRANSFER SIZE 0.012

Hide Distribution ▲

Fields ►

DETAILS FOR OBJECT AOC_IN_GrandCalumet_2021 ►
  TYPE Feature Class
  ROW COUNT 1
  DEFINITION
    The AOC extent and other possible applicable areas

  DEFINITION SOURCE
    U.S. EPA Great Lakes National Program Office

  FIELD FID ►
    ALIAS FID
    DATA TYPE OID
    WIDTH 4
    PRECISION 0
    SCALE 0
    FIELD DESCRIPTION
      Internal feature number.

    DESCRIPTION SOURCE
      Esri

    DESCRIPTION OF VALUES
      Sequential unique whole numbers that are automatically generated.

    Hide Field FID ▲

  FIELD SHAPE ►
    ALIAS Shape
    DATA TYPE Geometry
    WIDTH 0
    PRECISION 0
    SCALE 0
    FIELD DESCRIPTION
      Feature geometry.

    DESCRIPTION SOURCE
      ESRI

* DESCRIPTION OF VALUES
Coordinates defining the features.

Hide Field SHAPE ▲

FIELD Name ▶
* ALIAS Name
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Feature name

DESCRIPTION SOURCE
U.S. EPA Great Lakes National Program Office

LIST OF VALUES
VALUE AOC Name
DESCRIPTION The AOC name is the official name given by the U.S. EPA Great Lakes National Program Office
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. EPA Great Lakes National Program Office

Hide Field Name ▲

FIELD State ▶
* ALIAS State
* DATA TYPE String
* WIDTH 2
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Location of feature as 2-character state code

DESCRIPTION SOURCE
U.S. EPA Great Lakes National Program Office

LIST OF VALUES
VALUE 2-character state code
DESCRIPTION State postal code
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. EPA Great Lakes National Program Office

Hide Field State ▲

Hide Details for object AOC_IN_GrandCalumet_2021 ▲

Hide Fields ▲

Metadata Details ▶

METADATA LANGUAGE English (UNITED STATES)
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER E684F785-3782-4FA4-A450-74A262230F6D

SCOPE OF THE DATA DESCRIBED BY THE METADATA   dataset
SCOPE NAME   * dataset

LAST UPDATE   2021-11-09

ARCGIS METADATA PROPERTIES
   METADATA FORMAT   ArcGIS 1.0
   METADATA STYLE   EPA Metadata Specification NAP ISO19115 2003
   STANDARD OR PROFILE USED TO EDIT METADATA   NAP

   CREATED IN ARCGIS FOR THE ITEM   2021-11-09   11:08:30
   LAST MODIFIED IN ARCGIS FOR THE ITEM   2021-11-09   12:44:39

   AUTOMATIC UPDATES
      HAVE BEEN PERFORMED   Yes
      LAST UPDATE   2021-11-09   12:44:39

   ITEM LOCATION HISTORY
      ITEM COPIED OR MOVED   2021-11-09   11:14:05
         FROM   C:\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary work\Grand Cal\Edits\Round 1\AOC_IN_GrandCalumet_2021
         TO   \\F5160-78SW8C3-L\C$\Users\justin.telech\OneDrive - GDIT\Documents\Legacy\aoc boundary work\Grand Cal\Edits\Finalized\AOC_IN_GrandCalumet_2021

Hide Metadata Details ▲

Metadata Contacts ►

METADATA CONTACT
   INDIVIDUAL'S NAME   Justin Telech
   ORGANIZATION'S NAME   GDIT
   CONTACT'S POSITION   Environmental Scientist
   CONTACT'S ROLE   author

      CONTACT INFORMATION   ►
        ADDRESS
           TYPE
           DELIVERY POINT   79 TW Alexander Drive
           CITY   Research Triangle Park
           ADMINISTRATIVE AREA   NC
           POSTAL CODE   27709
           COUNTRY   US
           E-MAIL ADDRESS   justin.telech@gdit.com

      Hide Contact information ▲

Hide Metadata Contacts ▲

Metadata Maintenance ►

MAINTENANCE
   UPDATE FREQUENCY   as needed

Hide Metadata Maintenance ▲

FGDC Metadata (read-only) ▼