DNR Indiana Department of Natural Resources

Eric J. Holcomb, Governor
Cameron F. Clark, Director
Division of Water
402 W. Washington Street
Room W264
Indianapolis, IN 46204
Phone (317) 232-4160
Toll-free (877) 928-3755
Fax (317) 233-4579
www.in.gov/dnr/water/

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Instructions on How to Use Water's Online Research Center (DoWORC)

https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=6619094e25a64c6b865aacb625d7aba1

The Indiana Department of Natural Resources, Division of Water, is pleased to announce a new web-based mapping service that provides the general public the use of a geographical map to locate and view data from records associated with programs administered by the Division of Water along with various other dataset layers including flood hazard maps, local floodplain administrator's contact information, Hoggatt Drainage Area Maps, and Stream Gage data.

With the use of ESRIs ArcGIS-On-Line software, DoWORC has been developed by DNR to allow the general public to view layers of datasets to easily view, locate, and mine for information from the Division of Water records including permit applications, floodplain information requests (FARA), Early Coordination records, Dam records, Violation and Compliance records, and other regulatory correspondence. DoWORC interfaces with the Division of Water's database by the use of Universal Transverse Mercator (UTM) coordinates to display a data point on the map that references the location of the record and with a click of the mouse on a data point, DoWORC will retrieve and display a collection of helpful information from that record such as file number, waterbody, project or request description, base flood elevation, discharge value, Action, mailed date, etc.

Instructions

Upon opening this webpage, a Disclaimer will appear on the right side of the screen. You can click the "X" at the upper right hand corner of the Disclaimer to close the Disclaimer pop-up window.

General

As you move your mouse around the screen, it is active and acts as your selection tool. When you click your left mouse button it selects the location your mouse is at. For each layer you have active (Checked 'ON' in the Layer List) you will receive the information in a pop up box for those layers. If you select a point symbol, you will get a pop up explaining the point, along with any other layers information that is active. You will have to click through the pop ups (explained below). The order of these are stacked in order of Active layers from the bottom of the layers list going up.

To utilize the features on the Tool Bar and use the Search feature to manipulate the map and search for specific data, refer to the following:

Upper right hand corner of the Tool Bar:

Seven Control buttons to display the Legends, select the Layers, enables Print command, select a Basemap, display Disclaimer information, display this help document, and display a Description page of the Layers.

Legend: Shows symbols for those layers that are visible at the scale you are at. You can see the scale you must be at to see information from the layer, or turn the layers information on and off depending on what you want to research. You can print using the print option.

Layers listing: This is the list of all layers that make up this map. You can manipulate your map by turning layers on and off. Some layers, due to website restrictions, are set up to turn on only when you are within a scale that limits the amount of information being displayed. These layers, when you are not within the scale, will appear faint in the list or what is termed as "grayed out".

Print: Gives you an option to print your map.

Base Map: Allows you to change the maps base map behind all of the data; this map tool is set up with a 'best available imagery' layer and a Digital Elevation Model. You will need to turn these layers off in order to see any changes to the base map you have made.

Information: This will display a record's information; also allows the user to view the Disclaimer.

Help: This is a pop up of an abbreviated version of this document that displays on the right side of map.

Layer Description: List of layers on map and a description of the data represented.

Upper left hand corner of the map:
A zoom feature (+ or –) can be used to zoom in or zoom out.

In addition, a field with a down-arrow can be used as a search tool that allows you to search by a specific identifier such as file number, county, or address. Select the drop down arrow to choose a specific search. Type in the specific search criteria, then select the magnifying glass to the right of the search field to jump to the result. If you select "Indiana Composite Locator" from the drop down list, type in an address (e.g., 101 Main St. Danville, IN).
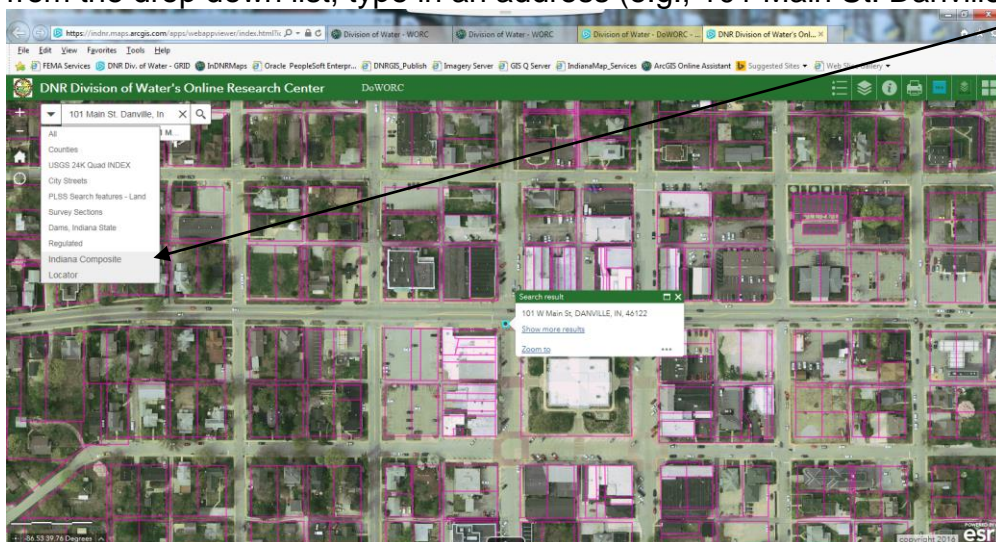
Search Notes: Try not to use "All" (default criteria) for searches. Use the drop down to select a more specific search criteria. This will speed up the search as it is looking through less data. Some searches, especially partial addresses may return multiple choices for you to select from under the search bar. Select the one that best matches.

Search Criteria: Type parameters like examples for the following search criteria
ATS, REC, CTS, VTS Records NAD 27/83 – type the folder ID number: e.g., FW-22346 (if you have an extension use it as well: FW-22346-0)

Counties – County name only: e.g., Daviess

County Parcels_IDHS 2014/15 – type ID parcel: e.g., 49-11-02-251-041.000-101 (this search does take longer than others)

USGS 24k Quad Index – Type quad Name as on map: e.g., Clermont

PLSS Search features – Type township, range and section: e.g., T12N R12E 21

Dams, Indiana State Regulated – Type State ID number: e.g., 14-2

Indiana Composite Locator – type as much of the address as possible: e.g., 402 W Washington St Indianapolis In 46204

Additional tools, listed below, allow the user to measure, attach the map to an email, swipe to compare between two base maps, draw, and bookmark a map.

Measure tool: Measure distance or area, or get coordinates (of the cursor or a clicked point on the map). Select the measure type and units, click on the map to draw a point, line, or area. For lines and areas, click a point for each vertex, and double-click to finish. Results can be copied to clipboard.
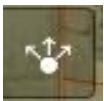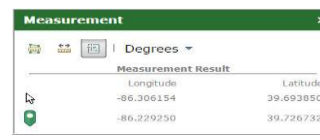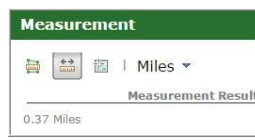
Share Map: This tool allows you to email the URL of your map. Note: Anything you add to the map will not be transferred. This will open to the same extents you are showing on your map.

Swipe Tool: Allows you to set up the imagery so that you can move the top layer of imagery back and forth and see the imagery layer below. Used to compare two different years of imagery.

Draw Tool: Add graphics to the map that can be part of the map print/export. The draw

tool has select a shape or add text   . Select a shape, choose the color and other options, then draw the graphic on the map. Measurements can be added for line and area graphics (be sure to set the measurement units). Check the "Show Measurements" box prior to placing the graphic on the map. For adding text, click the text tool ("A") and add the text in the box, then click on the map. Once graphics are drawn, they will become an operational layer named Draw Results in the layer list.

Bookmark: Allows you to save your map as a bookmark to quickly locate the map at a later time.

To view data from a point
Click on the record point (color coded points displayed on map) to view data from the Division of Water's database record.   Click on arrow to scroll through various layers of data for that record.
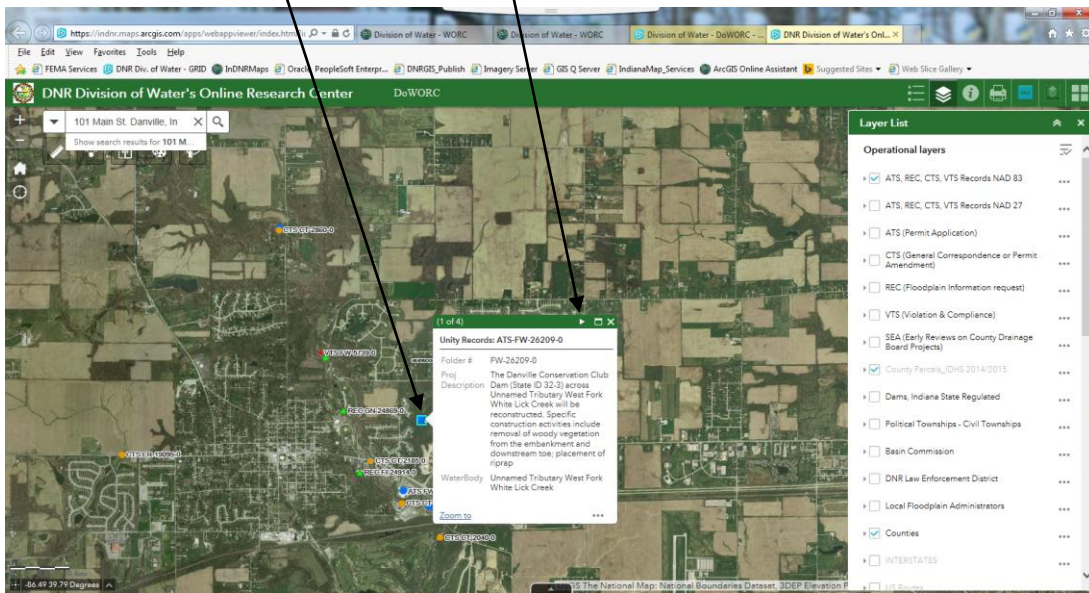
Click on ▪ ▪ ▪ symbol in the call out label to view data of records in an attribute table.
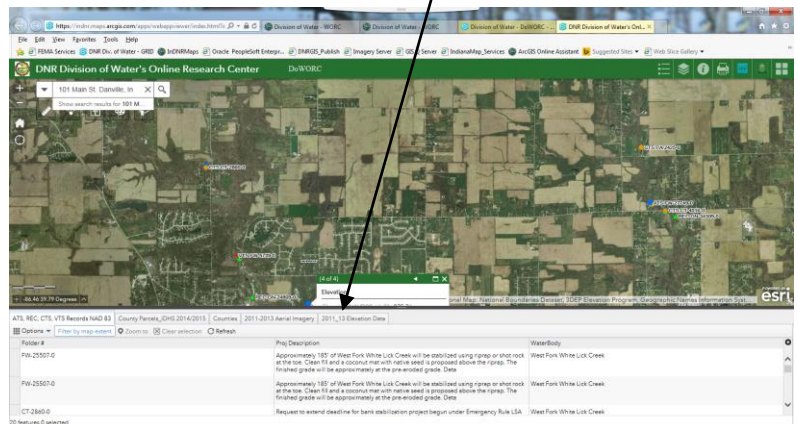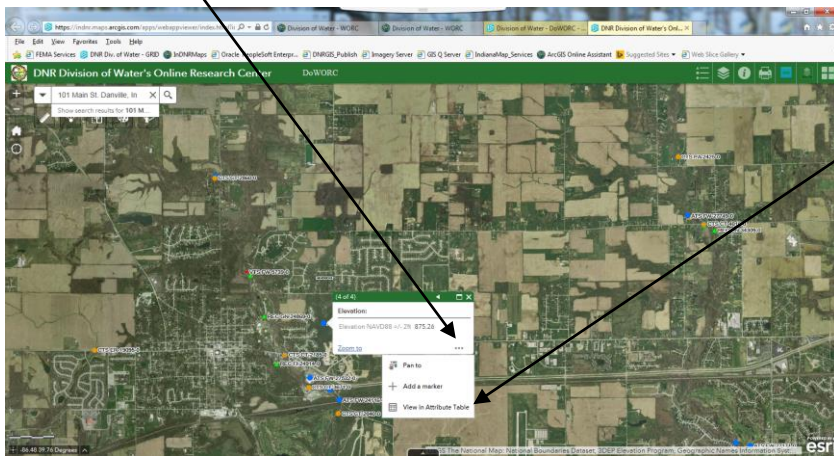
If you select the "ATS, REC, CTS, VTS Records, NAD 83" or the "ATS, REC, CTS, VTS Records, NAD 27", information retrieval from the database will be limited to record number, waterbody name, project description, and received date. To retrieve more detailed information on records, turn on the individual subsystem layers e.g. "ATS", "CTS", "REC", "VTS", and "SEA".

List of Data Layers

<u>ATS, REC, CTS, VTS Records, NAD 83</u>
<u>ATS, REC, CTS, VTS Records, NAD 27</u>
<u>ATS</u> (Permit Application Records)
<u>CTS</u> (General Correspondence & Permit Amendments)
<u>REC</u> (Floodplain Information Records)
<u>VTS</u> (Violations & Compliance Records)
<u>SEA</u> (County Drainage Board Project Early Coordination Reviews)

NAD 83 = location point based on NAD 83 coordinates (more recent records, > 2005/2006)
NAD 27 = location point based on NAD 27 coordinates (older records, < 2005/2006)

<u>Dams</u> - Indiana State Regulated
<u>Political Townships</u> - Civil Townships: depicts the polygon shapes of the civil townships
<u>Basin Commissions</u>: River Basin Commissions
<u>DNR Law Enforcement District</u>: DNR Division of Law Enforcement districts
<u>Local Floodplain Administrators</u> - Local Floodplain Administrator contact information
<u>Counties</u>: displays county boundaries
<u>Interstates</u>: displays interstates
<u>US Routes</u>: displays U.S. roads
<u>County Roads</u>: displays county roads
<u>City Streets</u>: displays city streets
<u>Various layers depicting roads</u>: Dependent on scale of map, road network with labeling for reference.
<u>USGS 24K Quad Index</u>: wireframe polygon index for Quadrangles
<u>PLSS Search Feature</u> – Land Survey Sections: Section-Township-Range
<u>Published Flood Hazard</u>: Digital Flood Insurance Rate Map (DFIRM) from the FEMA National Flood Hazard Layer (NFHL). The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP).
<u>Preliminary Flood Hazard</u>: Digital Flood Insurance Rate Maps (DFIRM) from studies submitted but not yet authored by FEMA in National Flood Hazard Layer (NFHL)
<u>Best Available Flood Hazard</u>: Best available flood hazard data for Indiana includes effective mapping with additional updates based on the Zone A mapping project data, DNR model reviews, and other floodplain data that is not FEMA approved but is considered "best available" by the Indiana Department of Natural Resources.
<u>NOAA AHPS Streamgage Data</u>: Point file with symbols signifying what flood stage a stream gage is reading. This view is 'Live' and only shows when the gage is near or at a flood stage.

HUC 10 Watershed: Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

HUC 8 Watershed: Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

Various state wide aerial images by year, refer to http://gis.iu.edu/ for additional description:
    2011-2013 Orthrophotography Imagery Service
    2016_NAIP
    2007_NAIP
    2005_Color
    1998_DOQQ
    Statewide_DEM_11_13: Digital Elevation Models (DEM) bare earth contour lines
Hoggatt Drainage Area Maps: In 1965, the USGS and the IDNR entered into a cooperative agreement to determine the drainage areas of all streams in Indiana having a drainage area of at least five square miles, as well as the drainage area at many intermediate points. This work was compiled into the publication "Drainage Areas of Indiana Streams", by Richard E. Hoggatt.
Indiana Hillshade: colorized DEM, hillshade, and slope data; refer to
http://maps.indiana.edu/arcgis/rest/services/Reference/LiDAR_Color_Hillshade/MapServer
for additional description

Ctrl key + F5 key to reset the map.

Error Message: You may receive error messages that say that layers did not load. If this occurs, it may be dependent on your connectivity and the host service for certain layers being available. Any questions on the use of this map can be sent to water_inquiry@dnr.in.gov.

Disclaimer
This service, including its underlying data, is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability of a particular purpose or use. The data are graphical representations and are for reference purposes only. They are not to be construed as a legal document or survey instrument. The Indiana Department of Natural Resources assumes no liability. A detailed on-the-ground survey and historical analysis of individual features may differ from this data.

The Special Flood Hazard Area was derived from the digital representation of FEMA Flood Insurance Rate Maps (FIRM). While this map is provided for information, the FIRMs as published by FEMA are the authoritative documents for the National Flood Insurance Program. Copies of those maps can be found at http://msc.fema.gov

The database record data is a 'Near Real Time' point representation of DNR-Division of Water's database. Records within the database represents records dating back to 1993. Some pre-1993 records may be found but data within these records are very limited. Pre-1993 records are maintained on microfiche at the DNR, Division of Water in Indianapolis.

The database information is used on a daily basis by staff and management in the Division of Water and frequently other agencies in State Government and Federal Agencies. Point data is based on x,y coordinates entered into the location data fields for each record that corresponds

to the location taken from a map projected in either NAD83 or NAD27 UTM coordinates. Precision of these points are subject to human error. Correcting inaccurate UTM coordinates is an on-going procedure by the staff Division of Water. Corrected UTM coordinates are updated to NAD 83.