National Wetland Inventory of Iowa, Polygon Features

Metadata also available as - [XML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Distribution Information
- Metadata Reference Information
- Lineage

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Originator:
Iowa Department of Natural Resources and the US Fish and Wildlife Service
Title: National Wetland Inventory of Iowa
Description:
Abstract:
NWI digital data files are records of wetlands location and classification as developed by the U.S. Fish & Wildlife Service. The classification system was adopted as a national classification standard in 1996 by the Federal Geographic Data Committee. The NWI maps do not show all wetlands since the maps are derived from aerial photointerpretation with varying limitations due to scale, photo quality, inventory techniques, and other
factors. Consequently, the maps tend to show wetlands that are readily photointerpreted given consideration of photo and map scale.

**Purpose:**
This digital, geographically referenced data set was developed by the Iowa Department of Natural Resources to carry out agency responsibilities related to management, protection, and development of Iowa’s natural resources.

The data provide consultants, planners, and resource managers with information on wetland location and type. The data were collected to meet U.S. Fish & Wildlife Service's mandate to map the wetland and deepwater habitats of the United States. The purpose of this survey was not to map all wetlands and deepwater habitats of the United States, but rather to use aerial photointerpretation techniques to produce thematic maps that show, in most cases, the larger ones and types that can be identified by such techniques. The objective was to provide better geospatial information on wetlands than found on the U.S. Geological Survey topographic maps. It was not the intent of the NWI to produce maps that show exact wetland boundaries comparable to boundaries derived from ground surveys. Boundaries are therefore generalized in most cases. Consequently, the quality of the wetland data is variable mainly due to source photography, ease or difficulty of interpreting specific wetland types, and survey methods (e.g., level of field effort and state-of-the-art of wetland delineation).

**Time_Period_of_Content:**
**Time_Period_Information:**
**Single_Date/Time:**
**Calendar_Date:** 2002
**Currentness_Reference:** ground condition
**Status:**
**Progress:** In work
**Maintenance_and_Update_Frequency:** Irregular

**Spatial_Domain:**
**Bounding_Coordinates:**
**West_Bounding_Coordinate:** -96.048486
**East_Bounding_Coordinate:** -90.043810
**North_Bounding_Coordinate:** 43.535702
**South_Bounding_Coordinate:** 40.541954
**Keywords:**
**Theme:**
**Theme_Keyword_Thesaurus:** ISO 19115 Topic Category
**Theme_Keyword:** inlandWaters
**Theme:**
**Theme_Keyword_Thesaurus:** None
**Theme_Keyword:** wetlands
**Theme_Keyword:** hydrology
**Theme_Keyword:** hydrography
**Place:**
**Place_Keyword_Thesaurus:** GNIS
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Security_Information:
Security_Classification_System: State of Iowa Enterprise Data Classification Standard
Security_Classification: Public

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
GeoSpatial Services (GSS) has developed some general guidelines and digital standards for updating Iowa National Wetland Inventory (NWI) data and associated classification. No national digital standards currently exist. The guidelines were established in cooperation with the Iowa DNR and the U.S. Fish and Wildlife Service Regional NWI Coordinator and are based on issues and needs within the state of Iowa. These may differ for other regions.

CLASSIFICATION UPDATING GUIDELINES.

1. SINGLE ATTRIBUTES

-CHANGE ATTRIBUTES ONLY If you can validate a change for an area after using supplementary information-see the decision trees for polygons and lines then: RE-ATTRIBUTE AS NECESSARY (ex: PFO1A to PSS1Ad). Leave as is if you can't tell.
Wetlands which appear to have changed vegetation (from PEM to PSS or to PFO) SHOULD include the same water regime as the original polygon. For example, a small or large PEMC which appears to have succeeded to PSS or to PFO would, at this time, retain the attribute of C. Exceptions: The original polygon was so small or narrow that the apparent 'change' in vegetation type is due merely to full leaf out conditions of the surrounding big trees;

- Forested wetlands of different water regimes (PFO1A and PFO1C) WILL NOT be merged and re-attributes as PFO1.

- If the wetland is located in an active farm field, apply the guidelines for the special modifier 'f' noted below in Attributes to Use for Farmed Areas.

2. DUAL ATTRIBUTES

- If more then 30% of the area is dominated by the first attribute THEN USE THE FIRST ATTRIBUTE (ex: PEM/FO1Ad to PEMAd).

- If more then 30% of the area appears dominated by the second attribute, USE THE SECOND ATTRIBUTE (ex: PEM/FO1Ad to PFO1Ad).

- If you can validate a change in attribute for an area then RE-ATTRIBUTE AS NECESSARY (ex: PEM/FO1Ad to PSS1Ad).

- If the wetland is located in an actively farmed area decide on the dominant attribute first, then apply the guidelines for the special modifier 'f' noted below in Attributes to Use for Farmed Areas.

OTHERWISE KEEP DUAL ATTRIBUTES (NWI has changed their policy regarding the use of Dual attributes).

3. WATER REGIME MODIFIERS: A variation in 1 water regime (A to C OR F to G to H) is an acceptable margin of error according to NWI.

- Remove the second water regime used in combination with K and keep the K water regime (ex: PUBKgx to PUBKx). - Add a water regime modifier to all new wetland delineated. For newly excavated or impounded wetlands, use a "G". - When a pond has dried up, if it is still classified as a wetland, the water regime is to reflect the current wetness conditions, not necessarily the original pond's water regime. Ponds succeeding to forests cannot have a water regime wetter than 'C'. - For all other successional changes in wetlands, retain the original water regime and modifier unless specific evidence exists to show that it has changed (e.g., an extensive draining system or new water inputs). - Extensive wetland changes in an area (e.g. new wetland complex) should be ground truth by IA DNR. - R4SB previously attributed with an 'F' will be changed to 'C'.
4. SPECIAL MODIFIERS - When two special modifiers are used, keep all modifiers or the most descriptive one for the situation. The second modifier is usually an 'x' (excavated). No more than two special modifiers can be added. - Add or replace special modifiers as needed to wetlands, up to two modifiers. - If a wetland is in an impounded river system, then the special modifier 'h' needs to be used in all affected wetlands. - If the area is located in an active farm area, apply the guidelines noted below in Classifying Wetlands in Farmed Areas. - Special modifiers 'x' and occasionally 'h' will be used to denote all areas in linear features (longer than 50 meters) that have been straightened by human activity to increase channelization.

5. CLASSIFYING AND ADDING WETLANDS IN FARMED AREAS

- The original classification is kept and the special modifier 'f' is used (ex: PEMA.d to PEMA.f). When the wetland is not usually farmed and possesses all visible vegetation and soil characteristics (usually a large unfarmed area bordered by crop). The farmers tilling pattern usually surrounds the wetland and does not cross through it. This usually indicates a water regime of 'C'.

- The original classification is changed to 'PEMJf' when the wetland is actively farmed and obvious wet depression exists (subjective darker shade of gray). Some wetland characteristics may exist and typically, tilling goes through the wetland or may be visible. The area should still be at least in poorly drained soils and possibly classified as Ponded based on the Flooding Frequency Code from the SSURGO database.

- The polygon or line is deleted when an actively farmed wetland has LOST all appearance of vegetative characteristics OR is dry soil without vegetation.

- A polygon is ADDED as a PEMJf/PEMAf if it is in an area of very poorly drained soils, it has an obvious wet depression (subjective darker shade of gray), and forms a shape that can be well defined.

6. CLASSIFYING ORIGINAL AND NEW LINEAR WETLANDS

Four principal classifications will be used for adding and re-attributing linear features: - R4SBC- when a water line is clearly visible and distinguishable from the side banks typically has intermittent stream symbology on DRG. - PEMC- when the water line is visible but is not clearly distinguishable from the stream banks doesn't always have DRG symbology, but if it doesn't, there must be strong DOQ evidence for creating the linear feature. - R2UB- when the water line is clearly visible and the DRG symbology is a solid blue line - PUB- for meander scars that start and finish away from any major waterway.

Streams marked as Intermittent on the DRG but showing no visible channel on the imagery WILL NOT be delineated.

Streams showing a visible channel will be mapped regardless of whether or not symbology is present on the DRG.
Completeness_Report:
The state has been completed. All wetlands are mapped that were evident in the 2002 CIR photography.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
GeoSpatial Services (GSS) has developed some general guidelines and digital standards for updating Iowa National Wetland Inventory (NWI) data and associated classification. No national digital standards currently exist. The guidelines were established in cooperation with the Iowa DNR and the U.S. Fish and Wildlife Service Regional NWI Coordinator and are based on issues and needs within the state of Iowa. These may differ for other regions.

GENERAL GUIDELINES

- Decisions to add new (or update current) wetland attributes or linework are conducted at a scale of 1:10,000. Use the decision trees in the accompanying document for this process. Actual line work or attribute changes, if necessary, are performed at a 1:3,500 scale. Farmed wetlands will be interpreted AND delineated at a scale of 1:10,000.

THERE IS SOME SPATIAL SHIFT IN ALL WETLANDS. THESE BECOME MORE APPARENT WHEN VIEWED CLOSE ENOUGH TO SEE DETAIL. HOWEVER, AT THE DECISION SCALE OF 1:10,000, IF THE SPATIAL SHIFT OR LINENWORK CORRECTION IS NOT SIGNIFICANT, NO CORRECTIONS ARE MADE. THEREFORE WHEN VIEWING THE LINENWORK AT 1:3,500, THERE MAY BE A FALSE IMPRESSION OF UPDATING INACCURACY THAT IS REALLY A DECISION NOT TO CHANGE A WETLAND BOUNDARY OR ATTRIBUTES AT THE DECISION SCALE OF 1:10,000.

- The original NWI classification is considered 'truth' for the purposes of this study. All decisions to keep attributes and/or linework are based on this base data layer being accurate and extensively field checked by the original photo interpreters.

- Minimum mapping unit will be 0.25 acre for isolated wetlands, and 0.1 acres for wetlands which are part of a wetland complex. Minimum length for a linear wetland is 50 meters.

- Tolerance will be +/- 7 meters for linear features to feature centerline as defined on DOQQ and +/- 7 meters for polygon boundary to DOQQ

- Riverine or Palustrine wetlands < 10 ± 1 meters wide, will be delineated as a line UNLESS there are significant portions that are wide enough to be a polygon then efforts will be made to maintain all the linework as a polygon.

- Riverine or Palustrine wetlands >10 ± 1 meters wide will be delineated as a polygon.
- A Lacustrine Wetland cannot be a line feature and should either be delineated as a polygon when it is > 10 ± 1 meters wide or re-attributed as a Riverine or Palustrine wetland when it is < 10 ± 1 meters wide.

- Points are digitized as either Polygons or lines only if vegetative and soil characteristics are distinguishable (even in agricultural land). The Point file is not edited and only use as a spatial reference.

- Wetlands (polygon or linear) are to be deleted only if human activities have removed all visible traces of the wetland and no collateral data support the persistence of the wetland.

- Extensive wetland changes in an area (e.g. new wetland complex) will be ground truth by IA DNR prior to Updating.

- For non-linear features, NEW Wetlands are added only if they are within Hydric soils according to the ISPAID database, AND/OR other collateral data can support there new development.

QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) PROCEDURES

Following are the standards used by GeoSpatial Services for quality assurance of the NWI updating process.

1. In each 24K USGS quadrangle updated, 25% of the line work is checked for line data and attribute accuracy. A minimum level of 80% of the updated features must meet spatial and attribute accuracy and/or linework precision for final approval. An area will not be re-worked by GSS if 80% of the NWI updating in a given 24K quadrangle is correct to the best of our knowledge. GSS will rework areas or address attribute issues where IA DNR can demonstrate they make more than 20% of the quadrangles features. This is EXCLUSIVE of adding farmed wetlands (PEMJf/PEMAf). We will add and re-attribute farmed wetlands as consistently as possible.

2. The QA/QC Tool (a verification tool developed by US FWS), is used to find and flag any errors such as: invalid attributes, adjacent polygons with the same attribute, large ponds, small lakes, sliver polygons, null attributed polygons, island polygons, and overlapping polygons. This tool is run as a final check before processing the final product.

3. Topology check is conducted on 100% of the areas. The errors are limited to the following: - adjacent lines and polygons with the same attributes (example: a stream attributed with PEMC with 3 branching streams attributed PEMC as well will be one feature, not 4) - overlapping lines - overlapping polygons (slivers)

GSS does not guarantee to clean all line and polygons overlaps as these are from different layers and do not constitute a topology error.
SPATIAL UPDATING GUIDELINES

There is some spatial shift in all wetlands. These become more apparent when viewed close enough to see detail. However, at the decision scale of 1:10,000, if the spatial shift or linework correction is not significant, no corrections are made. Therefore when viewing the linework at 1:3,500, there may be a false impression of updating inaccuracy that is really a decision not to change a wetland boundary or attributes at the decision scale of 1:10,000.

1. Preserve the line work 'as is' when: -There is significant changes in the location or size of the wetlands at 1:10,000, or -No determination can be made (even when using supplementary information-see the decision trees for polygons and lines). Wetland and Upland boundaries falling in tall-grass vegetation are sometimes indistinguishable. Similarly transition areas between wetland and upland in a forested area cannot be determined given the current updating procedures. DO NOT change wetland boundaries. The leaf-on imagery and on-screen updating procedures do not provide the detail necessary to see these boundaries.

2. Adjust and/or Shift the line work and/or attributes when: -Water boundaries have changed Spatial error is visible between the linework and the wetland on the DOQ at
1:10,000. These errors are most noticeable when wetlands are adjacent to open water (rivers, PUB's) and should be adjusted.

3. Split the line work when: -Dual attributes are used and more then 30% of the area represented by 1 attribute can be separated to identify each wetland type. -Human-intervention has affected the classification of a portion of the wetland (ex: area was partly cleared or land was enrolled in a federal / state program (CRP, WRP, etc)).

-A polygon or line defining a PALUSTRINE system crosses ANY road (even section roads). The portion of the road is clipped from the wetland leaving an empty space where the road crosses. Clipping is necessary to avoid polygons with the same attributes remerged together during Topology check if they are only split.

-A polygon or line defining a RIVERINE or LACUSTRINE system is not continuous from one side of the road to the other (e.g. no culvert under road or overpass). The portion of the road is clipped.

4. Delete the line work when: -A wetland in a human-impacted (e.g. farmed) area no longer has visible characteristics -A human-made structure was built which overpasses the wetland -An area was miss-interpreted as a wetland (VERY RARE). Delete only when all collateral data negate the possibility of a wetland.

CLARIFICATION FOR UPDATING LINEWORK IN FORESTED WETLANDS:

1. In forested areas in particular and in other areas in general; leave the polygon as it is when no determination can be made (even when using supplementary information). Do not change the linework except where the change or correction is OBVIOUS with imagery and supported by collateral data. Specifically, leave the boundaries of PFO1C polygons intact, even when the vegetation looks just like the surrounding PFO1A-unless ground truthing provides information to the contrary. Forested wetlands of different water regimes (PFO1A and PFO1C) WILL NOT be merged and re-attributes as PFO1. 2. Do not re-delineate forested wetland boundary by merging or adding upland area 'that look like wetlands' unless sufficient evidence exists to do so. 3. Digitize sandbars along rivers and attribute them as 'R2USA' if they are visible at 1:10,000 scale. 4. Visible open water scars at 1:10,000 in PFO1 (usually a 'C') should be delineated with a line (<10 m wide.) or a polygon (>10m wide) and attributed as PUBG. 5. In areas where leaf-on photography makes it impossible to determine the nature of the under story, it will be assumed that the original data is correct, and therefore no changes will be made.

Process Contact:
Contact Information:
Contact Organization Primary:
Contact Organization: St. Mary's University, GeoSpatial Services

Spatial Data Organization Information:
Direct Spatial Reference Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 0

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 15
Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.999600
Longitude_of_Central_Meridian: -93.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: NWI_polygons
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
**Entity and Attribute Overview:**

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following attributes: 1) at least periodically, the land supports predominantly hydrophytes; 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Wetland codes consist of an ordered series of letters and numbers that reflect certain characteristics of wetlands and deepwater habitats. In heirarchal order, the codes found in Iowa are listed here:

**SYSTEM:** A complex of wetlands and deepwater habitats that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors. This is the first letter in the NWI attribute code. The Three SYSTEM in Iowa are: L: Lacustrine P: Palustrine R: Riverine

**SUBSYSTEM:** Subdivided Systems into more specific categories. This applies to all systems except Palustrine. The Palustrine system does not have a SUBSYSTEM classification. SUBSYSTEM options vary for each SYSTEM. They are as follows:

- for the Lacustrine system: 1: Limnetic 2: Littoral

**CLASS:** The highest taxonomic unit below the SUBSYSTEM level. They vary between the different SYSTEMS, and for Lacustine, they vary between SUBSYSTEMS.

- for the Lacustrine system, Limnetic subsystem: RB: Rock Bottom UB: Unconsolidated Bottom AB: Aquatic Bed OW: Open Water for the Lacustrine system, Littoral


for the Riverine system, classes are the same for all subsystems: RB: Rock UB: Unconsolidated Bottom AB: Aquatic Bed SB: Streambed RS: Rocky Shore US: Unconsolidated Shore EM: Emergent OW: Open Water

SUBCLASS: This subdivides finer differences in life forms from CLASS levels. This number is unique to each CLASS, therefore there are a large number of these, and values aren't included here.

WATER REGIME: The wetland Water Regime Modifier code. Precise description of hydrologic characteristics requires detailed knowledge of the duration and timing of surface inundation, both yearly and long-term, as well as an understanding of groundwater fluctuations. Because such information is seldom available, the water regimes that, in part, determine characteristic wetland and deepwater plant and animal communities are described here in only general terms. A: Temporarily Flooded - Surface water present for brief periods during the growing season, but the water table usually lies well below the soil surface. Plants that grow both in uplands and wetlands are characteristic of this water regime. B: Saturated - The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present. C: Seasonally Flooded - Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is very variable, extending from saturated to a water table well below the ground surface. D: Seasonally Well-drained - Surface water is present for extended periods especially early in the growing season. The water table after flooding ceases falls well below the ground surface. (Not used on all maps.) E: Seasonally Saturated - Surface water is present for extended periods especially early in the growing season, and remains saturated near the surface for most of the growing season. (Not used on all maps.) F: Semipermanently Flooded - Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface. G: Intermittently Exposed - Surface water is present throughout the year except in years of extreme drought. H: Permanently Flooded - Water covers the land surface throughout the year in all years. J: Intermittently Flooded - The substrate is usually exposed, but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months or even years may intervene between periods of inundation. The dominant plant communities under this regime may change as soil moisture conditions change. K: Artificially Flooded - The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams. Water and waste-water treatment facilities are included in this modifier. U: Unknown - The water regime is not known. W: Intermittently Flooded/Temporary - Exhibits features of both Intermittently Flooded (J) and Temporary (A) water regimes. (Not used on all maps.) Y: Saturated/Semipermanent/Seasonals - Exhibits features of the Saturated (B), Semipermanent (F) and Seasonal (C, D and E) water regimes. (Not used on all maps. Z:
Intermittently Exposed/Permanent - Exhibits features of both Intermittently Exposed (G) and Permanent (H) water regimes. (Not used on all maps.)

CHEMISTRY: Water Chemistry modifiers-Coastal Salinity, Inland Salinity, pH of Fresh Water

SOIL: U.S. Soil modifier n: Mineral soil: The depth of each horizon is measured from the top of the first horizon of mineral material. g: Organic soil: The depth of each horizon is measured from the base of the aerial parts of the growing plants or, if there is no continuous plant cover from the surface of the layer of organic materials.

SPECIAL MODIFIER: Many wetlands and deepwater habitats are man-made, and natural ones have been modified to some degree by the activities of man or beavers. Since the nature of these modifications often greatly influences the character of such habitats special modifying terms have been included here to emphasize their importance. The following modifiers should be used or in combination wherever they apply to wetlands and deepwater habitats. x: Excavated: Lies within a basin or channel excavated by man. h: Diked/Impounded: Created or modified by a man-made barrier or dike designed to obstruct the inflow of water. Created or modified by a barrier or dam which purposefully or unintentionally obstructs the outflow of water. d: Partly Drained/Ditched: The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. Drained areas are not considered wetland if they can no longer support hydrophytes. f: Farmed: The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become reestablished if farming is discontinued. r: Artificial: Refers to substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore, and Unconsolidated Shore that were replaced by man, using either natural materials such as dredge spoil or synthetic materials such as discarded automobiles, tires, or concrete. b: Beaver: Created or modified by a beaver barrier to obstruct the inflow of water. s: Spoil:

Entity_and_Attribute_Detail_Citation:

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Iowa Geological and WaterSurvey, DNR
Contact_Position: GeoSpatial DBA / NRGIS Librarian
Contact_Address:
Address_Type: mailing and physical address
Address: 109 Trowbridge Hall
City: Iowa City
State_or_Province: IA
Postal_Code: 52242
Contact_Voice_Telephone: 319-335-1575  
Contact_Electronic_Mail_Address: gis_library@igsb.uiowa.edu  
Resource_Description: Downloadable Data  
Distribution_Liability:  
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Standard_Order_Process:  
Digital_Form:  
Digital_Transfer_Information:  
Format_Name: shapefile  
File_Decompression_Technique: zip  
Transfer_Size: 0.000  
Digital_Transfer_Option:  
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Computer_Contact_Information:  
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Network_Address:  
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Ordering_Instructions: Click on link provided.  
Turnaround: Immediate  
Available_Time_Period:  
Time_Period_Information:  
Single_Date/Time:  
Calendar_Date: 365 days/year  
Time_of_Day: 24 hours/day  

Distribution_Information:
Distributor:
Contact Information:
Contact Organization Primary:
Contact Organization: Iowa Geological and Water Survey, DNR
Contact Person: GeoSpatial DBA
Contact Voice Telephone: 319-335-1575
Contact Electronic Mail Address: gis_library@igsb.uiowa.edu
Resource Description: Live Data and Maps
Distribution Liability:
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Standard Order Process:
Digital Form:
Digital Transfer Information:
Format Name: SDE Feature Class
Transfer Size: 0.000
Digital Transfer Option:
Online Option:
Computer Contact Information:
Network Address:
Network Resource Name: <http://www.iowadnr.gov/Environment/MappingGIS.aspx>
Fees: None
Ordering Instructions: Click on link provided.
Turnaround: Immediate
Available Time Period:
Time Period Information:
Multiple Dates/Times:
Single Date/Time:
Calendar Date: 365 days / year
Time of Day: 24 hours / day

Metadata Reference Information:
Metadata Date: 20110929
Metadata Review Date: 20110929
Metadata Contact:
Contact Information:
Contact Organization Primary:
Contact Organization: Iowa Geological and Water Survey, DNR
Contact Person: NRGIS Librarian
Contact Address:
Address_Type: Mailing and Physical
Address: 109 Trowbridge Hall
City: Iowa City
State_or_Province: IA
Postal_Code: 52242-1319
Contact_Voice_Telephone: 319-335-1575
Contact_Electronic_Mail_Address: gis_library@igsb.uiowa.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

Lineage:

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