

Identification\_Information:

Citation:

Citation\_Information:

Originator: Delaware Geological Survey, University of Delaware

Publication\_Date: May 2007

Title: BayOpenWaterAndMarsh\_level\_3

Geospatial\_Data\_Presentation\_Form: vector digital data

Publication\_Information:

Publisher: Delaware Geological Survey, University of Delaware

Publication\_Place: Newark, Delaware

Online\_Linkage: <http://www.dgs.udel.edu/data>

Description:

Abstract:

Digital watershed and bay polygons for use in geographic information systems (GIS) were created for Rehoboth Bay, Indian River, and Indian River Bay in southeastern Delaware. The watersheds cover the entire Inland Bays watershed, are defined based on hydrologic boundary conditions at their downstream ends, incorporate a coastline coincident to coastlines on published topographic maps, and are appropriate for use at map scales as large as 1:24,000. Methodologies used to create the layers are described in McKenna, T.E., A.S. Andres, and K.P. Lepp, 2007, Digital Watershed and Bay Boundaries for Rehoboth Bay, Indian River Bay and Indian River: Delaware Geological Survey Open File Report 47, 8p.

This layer represents all contiguous open water and marsh of the bays with the distinction between marsh and bay preserved as separate features.

Purpose: The layers enable unambiguous calculations of watershed and bay surface areas.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 1984-1992 (range of dates of topographic base maps)

Currentness\_Reference: ground condition

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -75.291717

East\_Bounding\_Coordinate: -75.061381

North\_Bounding\_Coordinate: 38.717551

South\_Bounding\_Coordinate: 38.531839

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: none

Theme\_Keyword: inlandWaters

Theme\_Keyword: watershed

Theme\_Keyword: coastline

Theme\_Keyword: shoreline

Theme\_Keyword: bay

Theme\_Keyword: estuary

Theme\_Keyword: coastal

Place:

Place\_Keyword: United States  
Place\_Keyword: mid-Atlantic  
Place\_Keyword: Delaware  
Place\_Keyword: Inland Bays  
Place\_Keyword: Rehoboth Bay  
Place\_Keyword: Indian River  
Place\_Keyword: Indian River Bay  
Place\_Keyword\_Thesaurus: USGS GNIS

Access\_Constraints: None. Please give proper credit to T. E. McKenna. A.S. Andres, K.P. Lepp, May 2007, BayOpenWaterAndMarsh\_level\_3: Delaware Geological Survey.

Use\_Constraints: This digital polygon layer depicting watershed and/or bay boundaries in the area of Delaware's Inland Bays was constructed at a scale of 1:24,000. Using these layers at scales greater than 1:24,000 is a misuse of the information. Reasonable efforts have been made by DGS to verify that the layers provided herein accurately interpret the boundaries as determined by methodologies in McKenna, T.E., A.S. Andres, and K.P. Lepp, 2007, Digital Watershed and Bay Boundaries for Rehoboth Bay, Indian River Bay and Indian River: Delaware Geological Survey Open File Report 47, 8p. This digital polygon layer may also contain omissions and errors in scale, resolution, rectification, positional accuracy, development methodology, interpretations of source data, and other circumstances. This digital information is also date specific and as additional data become available and as verification of source data continues, this watershed information contained herein may be reinterpreted and updated by DGS without notification. These data should not be used for navigational, engineering, legal, or any other site-specific use. Nothing contained herein shall be deemed an expressed or implied waiver of the sovereign immunity of the University of Delaware and the State of Delaware or their duly authorized representatives, agents, or employees.

Point\_of\_Contact:

Contact\_Information:

Contact\_Address:

Address\_Type: mailing and physical address  
City: Newark  
State\_or\_Province: Delaware  
Postal\_Code: 19716-7501  
Country: USA

Address: Delaware Geological Survey, University of Delaware  
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Contact\_Organization\_Primary:

Contact\_Organization: Delaware Geological Survey  
Contact\_Person: Digital Data Coordinator  
Contact\_Position: Digital Data Coordinator  
Contact\_Facsimile\_Telephone: 302-831-3579  
Contact\_Electronic\_Mail\_Address: DelGeoSurvey@udel.edu  
Hours\_of\_Service: Mon - Fri; 8:00am to 4:30pm EST

Native\_Data\_Set\_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.1850

Data\_Quality\_Information:

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:  
  Quantitative\_Horizontal\_Positional\_Accuracy\_Assessment:  
    Horizontal\_Positional\_Accuracy\_Value: 60 meters  
    Horizontal\_Positional\_Accuracy\_Explanation: Sixty-meter accuracy reflects error the estimate for the process of digitizing watershed boundaries on 1:24,000 topographic maps published by the United States Geological Survey that meet national map accuracy standards. The delineations are consistent with the topographic contours except where authors had other knowledge of altered drainage patterns (mostly along roadways). Unique watershed delineations are difficult in flat areas such as the Inland Bays watershed and especially in the southern part of the watershed where ditching is ubiquitous. In areas where a clear watershed boundary definition was not possible (mostly ditches and low-lying areas south of Indian River), a generalized boundary was drawn as recommended by the NRCS (1997) guidelines.

Vertical\_Positional\_Accuracy:  
  Quantitative\_Vertical\_Positional\_Accuracy\_Assessment:  
    Vertical\_Positional\_Accuracy\_Value: not applicable

Lineage:  
  Process\_Step:  
    Process\_Description: Metadata imported.  
    Source\_Used\_Citation\_Abbreviation:  
C:\DOCUME~1\mckennat\LOCALS~1\Temp\xml9C.tmp  
  Process\_Step:  
    Process\_Description: Metadata imported.  
    Source\_Used\_Citation\_Abbreviation:  
C:\DOCUME~1\mckennat\LOCALS~1\Temp\xmlA1.tmp  
    Time\_of\_Day: 16142100

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: 2

Spatial\_Reference\_Information:  
  Horizontal\_Coordinate\_System\_Definition:  
    Planar:  
      Planar\_Coordinate\_Information:  
        Planar\_Coordinate\_Encoding\_Method: coordinate pair  
        Coordinate\_Representation:  
          Abscissa\_Resolution: 0.000000  
          Ordinate\_Resolution: 0.000000  
        Planar\_Distance\_Units: meters  
      Grid\_Coordinate\_System:  
        Grid\_Coordinate\_System\_Name: Universal Transverse Mercator  
        Universal\_Transverse\_Mercator:  
          UTM\_Zone\_Number: 18  
          Transverse\_Mercator:  
            Scale\_Factor\_at\_Central\_Meridian: 0.999600  
            Longitude\_of\_Central\_Meridian: -75.000000  
            Latitude\_of\_Projection\_Origin: 0.000000  
            False\_Easting: 500000.000000  
            False\_Northing: 0.000000

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  
 Vertical\_Coordinate\_System\_Definition:  
   Altitude\_System\_Definition:  
     Altitude\_Resolution: 0.000010  
     Altitude\_Encoding\_Method: Explicit elevation coordinate included  
 with horizontal coordinates  
 Entity\_and\_Attribute\_Information:  
   Detailed\_Description:  
     Entity\_Type:  
       Entity\_Type\_Label: BayOpenWaterAndMarsh\_level\_3  
     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:  
         Unrepresentable\_Domain: Coordinates defining the features.  
     Attribute:  
       Attribute\_Label: Shape\_Area  
       Attribute\_Definition: Area of feature in internal units squared.  
       Attribute\_Definition\_Source: ESRI  
       Attribute\_Domain\_Values:  
         Unrepresentable\_Domain: Positive real numbers that are  
 automatically generated.  
     Attribute:  
       Attribute\_Label: Shape\_Leng  
     Attribute:  
       Attribute\_Label: LEVEL\_3  
       Attribute\_Definition:  
         LEVEL\_3 facilitates polygon selection in the hierarchy for  
 dissolving of polygon boundaries. Dissolving boundaries between polygons  
 with equivalent LEVEL\_3 values results one feature with a single polygon  
 representing the open water of the bays and a second feature with  
 multiple polygons representing adjacent marsh.

Value	Feature
BAY	bay
MARSH	marsh

Distribution\_Information:  
   Distributor:  
     Contact\_Information:  
       Contact\_Address:  
         Address\_Type: mailing and physical address  
         City: Newark  
         State\_or\_Province: Delaware

Postal\_Code: 19716-7501  
Country: USA  
Address: Delaware Geological Survey, University of Delaware  
Address: University of Delaware  
Contact\_Voice\_Telephone: 302-831-2833  
Contact\_Organization\_Primary:  
Contact\_Organization: Delaware Geological Survey, University of  
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Contact\_Person: Digital Data Coordinator  
Contact\_Position: Digital Data Coordinator  
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Hours\_of\_Service: Mon - Fri; 8:00am to 4:30pm EST  
Resource\_Description: Downloadable Data  
Standard\_Order\_Process:  
Digital\_Form:  
Digital\_Transfer\_Information:  
Transfer\_Size: 0.843  
Metadata\_Reference\_Information:  
Metadata\_Date: 20090731  
Metadata\_Contact:  
Contact\_Information:  
Contact\_Organization\_Primary:  
Contact\_Organization: Delaware Geological Survey, University of  
Delaware  
Contact\_Person: Digital Data Coordinator  
Contact\_Address:  
Address\_Type: mailing and physical address  
City: Newark  
State\_or\_Province: Delaware  
Postal\_Code: 19716-7501  
Country: USA  
Address: Delaware Geological Survey, University of Delaware  
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Contact\_Electronic\_Mail\_Address: DelGeoSurvey@udel.edu  
Hours\_of\_Service: Mon - Fri; 8:00am to 4:30pm EST  
Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial  
Metadata  
Metadata\_Standard\_Version: FGDC-STD-001-1998  
Metadata\_Time\_Convention: local time  
Metadata\_Extensions:  
Online\_Linkage: <http://www.esri.com/metadata/esriprof80.html>  
Profile\_Name: ESRI Metadata Profile  
Metadata\_Extensions:  
Online\_Linkage: <http://www.esri.com/metadata/esriprof80.html>  
Profile\_Name: ESRI Metadata Profile  
Metadata\_Extensions:  
Online\_Linkage: <http://www.esri.com/metadata/esriprof80.html>  
Profile\_Name: ESRI Metadata Profile