Identification_Information:
  Description:
    Abstract: This vector data set contains the rock unit polygons for the surficial geology in the Delaware Coastal Plain covered by DGS Geologic Map No. 15 (Georgetown Quadrangle). The geologic history of the surficial geologic units of the Georgetown Quadrangle is primarily that of deposition of the Beaverdam Formation and its subsequent modification by erosion and deposition of younger stratigraphic units. The age of the Beaverdam Formation is uncertain due to the lack of age-definitive fossils within the unit but is thought to be between late Pliocene to early Pleistocene in age. Refer to Ramsey, 2010 (DGS Report of Investigations No. 76) for details regarding the stratigraphic units.
    Purpose: To facilitate the GIS community of Delaware and to release the geologic map of the Georgetown Quadrangle with all cartographic elements (including geologic symbology, text, etc.) in a form usable in a GIS, we have released this digital dataset of DGS Geological Map 15. The update of earlier work and mapping of new units is important not only to geologists, but also to hydrologists who wish to understand the distribution of water resources, to engineers who need bedrock information during construction of roads and buildings, to government officials and agencies who are planning for residential and commercial growth, and to citizens who are curious about the bedrock under their homes. Formal names are assigned to all rock units according to the guidelines of the 1983 North American Stratigraphic Code (NACSN, 1983).
    Supplemental_Information:
      The rock unit polygon contained herein is in ESRI coverage format. Included is a legend file that will attribute your coverage to the correct DGS selected geologic colors if you choose to use it.

      In the northeast portion of this map, swamp deposits overlie the contact between the Turtle Branch Formation and the Beaverdam Formation. The contact between the units is shown as a hidden contact.
  Citation:
    Citation_Information:
      Originator: Delaware Geological Survey, University of Delaware
      Publication_Date: 20100501
      Title: Digital Geology Layer for DGS Geologic Map No. 15 (Georgetown area)
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: Geologic Map
        Issue_Identification: No. 15
      Publication_Information:
        Publisher: Delaware Geological Survey, University of Delaware
        Publication_Place: Newark, Delaware
      Edition: 1.0
      Online_Linkage: http://www.dgs.udel.edu/data
  Time_Period_of_Content:
    Currentness_Reference: publication date
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20100501
  Status:
    Progress: Complete

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    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -75.500140
      East_Bounding_Coordinate: -75.374923
      North_Bounding_Coordinate: 38.750034
      South_Bounding_Coordinate: 38.624971
  Keywords:
    Place:
      Place_Keyword_Thesaurus: USGS GNIS
      Place_Keyword: Delaware
      Place_Keyword: Sussex County
      Place_Keyword: Georgetown
    Theme:
      Theme_Keyword_Thesaurus: none
      Theme_Keyword: geoscientificInformation
      Theme_Keyword: coastal plain
      Theme_Keyword: geology
      Theme_Keyword: geoscientificInformation
      Theme_Keyword: boundaries
      Theme_Keyword: environment
  Use_Constraints: The Delaware Geological Survey (DGS) is constantly
gathering data from multiple sources, interpreting the data, and
reflecting its interpretations on maps.  DGS's interpretations of
multiple data sources are reflected in this image of Geologic Map No. 15
available for download. Reasonable efforts have been made by DGS to
verify that this map and the digital data provided hereon accurately
interpret the source data used in its preparation; however, this map may
contain omissions and errors in scale, resolution, rectification,
positional accuracy, development methodology, interpretations of source
data and other circumstatnces. This map is also date specific and as
additional data become available and as verification of source data
continues, this map may be reinterpreted and updated by DGS without
notification.  This map was prepared for a scale of 1:24,000 and should
not be used at larger scales for denotation of rock unit boundaries. This
map 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 State of Delaware or
its 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
        Address: 257 Academy Street
      Contact_Voice_Telephone: 302-831-2833
      Contact_Facsimile_Telephone: 302-831-3579
      Contact_Electronic_Mail_Address: DelGeoSurvey@udel.edu
      Contact_Organization_Primary:
        Contact_Organization: Delaware Geological Survey
```

```
        Contact_Person: Digital Data Coordinator
      Contact_Position: Digital Data Coordinator
      Hours_of_Service: Mon - Fri; 8:00am to 4:30pm EST
  Access_Constraints: None-Please give proper credit to the Delaware
Geological Survey. Please reference as follows: Ramsey, K. W., 2010:
Geologic Map of the Georgetown Quadrangle, Delaware: Delaware Geological
Survey Geologic Map No. 15.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build
2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Metadata_Reference_Information:
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial
Metadata
  Metadata_Time_Convention: local time
  Metadata_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
        Address: University of Delaware
      Contact_Person_Primary:
      Contact_Voice_Telephone: 302-831-2833
      Contact_Position: Digital Data Coordinator
      Contact_Facsimile_Telephone: 302-831-3579
      Contact_Electronic_Mail_Address: DelGeoSurvey@udel.edu
      Contact_Organization_Primary:
        Contact_Organization: Delaware Geological Survey, University of
Delaware
        Contact_Person: Digital Data Coordinator
      Hours_of_Service: Mon - Fri; 8:00am to 4:30pm EST
  Metadata_Date: 20101215
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
Distribution_Information:
  Resource_Description: Downloadable Data
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.264
  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_Organization_Primary:
        Contact_Organization: Delaware Geological Survey, University of
Delaware
        Contact_Person: Digital Data Coordinator
      Contact_Voice_Telephone: 302-831-2833
      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
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: 172
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Label point
      Point_and_Vector_Object_Count: 540
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
      Point_and_Vector_Object_Count: 539
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Point
      Point_and_Vector_Object_Count: 4
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Planar_Distance_Units: meters
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
      Map_Projection:
        Map_Projection_Name: Transverse Mercator
        Transverse_Mercator:
          Scale_Factor_at_Central_Meridian: 0.999995
          Longitude_of_Central_Meridian: -75.416667
          Latitude_of_Projection_Origin: 38.000000
          False_Easting: 200000.000000
          False_Northing: 0.000000
    Geodetic_Model:
      Horizontal_Datum_Name: D_North_American_1983_HARN
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
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      Entity_Type_Label: geomap15
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
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      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are
automatically generated.
    Attribute:
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      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: geo_unit_s
      Attribute_Definition: Geologic Unit Symbol for Delaware geologic
units.  Symbols are documented in DGS Stratigraphy web page located at
http://dgs.udel.edu/delaware-geology/coastal-plain-rock-unit-
stratigraphy-and-descriptions (Source: DGS Special Publication 11)
    Attribute:
      Attribute_Label: geo_unit_n
      Attribute_Definition: Geologic Unit Name for Delaware geologic
units.  Geologic Unit Names are documented in DGS Stratigraphic web page
located at http://dgs.udel.edu/delaware-geology/coastal-plain-rock-unit-
stratigraphy-and-descriptions (Source: DGS Special Publication 11)
    Attribute:
      Attribute_Label: geo_unit_a
      Attribute_Definition: Geologic Unit Age. The ages have been
assigned to each geologic unit based on a variety of geologic
interpretations including: stratigraphic position and relationship; macro
and mircofossil content, and radiogenic analyses.
    Attribute:
      Attribute_Label: Shape_Leng
      Attribute_Definition:
    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.
Data_Quality_Information:
  Lineage:
  Positional_Accuracy:
    Vertical_Positional_Accuracy:
      Quantitative_Vertical_Positional_Accuracy_Assessment:
        Vertical_Positional_Accuracy_Value:  1 foot for contour lines
        Vertical_Positional_Accuracy_Explanation: The contour lines on
this map were derived from 2-meter post spaced LiDAR data that was flown
in 2005. The vertical accuracy of the LiDAR was confirmed by USGS to be
15 centimeters averaged over all terrain types.
    Horizontal_Positional_Accuracy:
      Quantitative_Horizontal_Positional_Accuracy_Assessment:
        Horizontal_Positional_Accuracy_Value:  40 feet
        Horizontal_Positional_Accuracy_Explanation: These geologic
polygons were mapped onto 1:24,000 scale topographic maps. The accuracy
of those maps is plus or minus 40 feet according to National Map Accuracy
Standards.
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