American Samoa ESI: HYDRO (Hydrography Lines and Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: HYDRO (Hydrography Lines and Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for American Samoa. The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: GEOG or geographic features, SOC or socioeconomic features, and HYDRO or water features. This data set comprises a portion of the ESI for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of

1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
>   *Time_Period_Information:*
>>   *Range_of_Dates/Times:*
>>>   *Beginning_Date:* 2002
>>>   *Ending_Date:* 2004
>   *Currentness_Reference:*
>>   These data were compiled during 2002-2003. The currentness dates for these data range from 2001 to 2002 and are documented in the Source_Information section.

Status:
>   *Progress:* Complete
>   *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
>   *Bounding_Coordinates:*
>>   *West_Bounding_Coordinate:* -171.266
>>   *East_Bounding_Coordinate:* -167.964
>>   *North_Bounding_Coordinate:* -10.873
>>   *South_Bounding_Coordinate:* -14.723

Keywords:
>   *Theme:*
>>   *Theme_Keyword_Thesaurus:* None
>>   *Theme_Keyword:* ESI
>>   *Theme_Keyword:* Sensitivity maps
>>   *Theme_Keyword:* Hydrography
>>   *Theme_Keyword:* Coastal resources
>>   *Theme_Keyword:* Oil spill planning
>>   *Theme_Keyword:* Coastal Zone Management
>>   *Theme_Keyword:* Wildlife
>>   *Theme_Keyword:* Hydrography
>   *Place:*
>>   *Place_Keyword_Thesaurus:* None
>>   *Place_Keyword:* American Samoa

Access_Constraints: None

Use_Constraints:
>   DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
>   *Browse_Graphic_File_Name:* datafig.jpg
>   *Browse_Graphic_File_Description:*
>>   Relationships between spatial data layers and attribute data tables for American Samoa ESI data.
>   *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
>   This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
>   The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
    Logical_Consistency_Report:
        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
    Completeness_Report:
        These data represent linear and polygonal hydrography for American Samoa.
    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:
                The HYDRO data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 U.S. Geological Survey (USGS) topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.
    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator:
                        American Samoa Government (ASG) Dept. of Commerce and U.S. Geological Survey (USGS)
                    Publication_Date: 2001
                    Title: Hydrography map of Tutuila Island
                    Geospatial_Data_Presentation_Form: Digital vector data
                    Publication_Information:
                      Publication_Place: Unknown
                      Publisher: Unpublished
            Source_Scale_Denominator: 24000
            Type_of_Source_Media: CD
            Source_Time_Period_of_Content:
                Time_Period_Information:
                    Single_Date/Time:
                      Calendar_Date: 2001
                Source_Currentness_Reference: Date of publication
            Source_Citation_Abbreviation: None

Source_Contribution: Shorelines
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: ASG Dept. of Commerce
            Publication_Date: 2002
            Title: Wetland and hydrography data
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: CD
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Shorelines
Process_Step:
    Process_Description:
        The American Samoa shoreline was derived primarily from a digital vector shoreline manually digitized by the National Ocean Service (NOS) in 2002 from one-meter panchromatic IKONOS imagery. Those areas of the coastline that were obscured by cloud cover were derived from U.S. Geological Survey (USGS) Digital Raster Graphics (DRGs). In some cases, gross shoreline changes or additional hydrography polygons were sketched during overflights conducted during August of 2002. Overflight changes were digitized from the scanned and registered hardcopy field maps. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:24,000 scale for verification of polygonal and linear attributes.
    Process_Date: 200311
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 271
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 271

SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Complete chain
        Point_and_Vector_Object_Count: 1019
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Link
        Point_and_Vector_Object_Count: 32315
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Label Point
        Point_and_Vector_Object_Count: 58
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Node, planar graph
        Point_and_Vector_Object_Count: 1019

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: HYDRO.AAT
            Entity_Type_Definition:
                The HYDRO.AAT table contains attribute information for the vector lines comprising the shoreline polygons in the HYDRO data layer.
            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: LINE
            Attribute_Definition: Type of geographic feature.
            Attribute_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: B
                    Enumerated_Domain_Value_Definition: Breakwater
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                    Enumerated_Domain_Value: H
                    Enumerated_Domain_Value_Definition: Hydrography
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                    Enumerated_Domain_Value: I
                    Enumerated_Domain_Value_Definition: Index
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                    Enumerated_Domain_Value: S
                    Enumerated_Domain_Value_Definition: Shoreline
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: SOURCE_ID

Attribute_Definition: Data source of the ESI lines
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: 1
        Enumerated_Domain_Value_Definition: Original digital data (USGS DLG)
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: 2
        Enumerated_Domain_Value_Definition: Overflights by Research Planning, Inc.
        Enumerated_Domain_Value_Definition_Source: Research Planning,
    Enumerated_Domain:
        Enumerated_Domain_Value: 3
        Enumerated_Domain_Value_Definition: Aerial Photography
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: 5
        Enumerated_Domain_Value_Definition: Digitized from 1:24,000-USGS Digital Raster Graphics
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: 7
        Enumerated_Domain_Value_Definition: Digital USGS Index
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: HYDRO.PAT
        Entity_Type_Definition:
        The HYDRO.PAT table contains attribute information for the vector polygons representing polygonal hydrography features in the HYDRO data layer.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: WATER_CODE
        Attribute_Definition: Specifies a polygon as either water or land
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: L
                Enumerated_Domain_Value_Definition: Land
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: W
                Enumerated_Domain_Value_Definition: Water
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: ANNO.GEOG
        Entity_Type_Definition:
        The spatial data layer HYDRO contains label points representing annotation for geographic features.
        Entity_Type_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: ANNO.HYDRO
        Entity_Type_Definition:
        The spatial data layer HYDRO contains label points representing annotation for water features.
        Entity_Type_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: ANNO.SOC
        Entity_Type_Definition:
            The spatial data layer HYDRO contains label points representing annotation for socioeconomic features.
        Entity_Type_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:
        Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
    Custom_Order_Process:
        Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
    Metadata_Date: 200402
    Metadata_Review_Date: 200402
    Metadata_Contact:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: Jill Petersen
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Position: GIS Manager
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 18:31:15 2004

American Samoa ESI: ESI (Environmental Sensitivity Index Shoreline Types - Polygons and Lines)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title:
                American Samoa ESI: ESI (Environmental Sensitivity Index Shoreline Types - Polygons and Lines)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:

            This data set contains vector lines and polygons representing the shoreline and coastal habitats of American Samoa classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
> *Time_Period_Information:*
>> *Range_of_Dates/Times:*
>>> *Beginning_Date:* 2002
>>> *Ending_Date:* 2004
> *Currentness_Reference:*
>> These data were compiled during 2002-2003. The currentness date for this data is 2003 and is documented in the Source_Information section.

Status:
> *Progress:* Complete
> *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
> *Bounding_Coordinates:*
>> *West_Bounding_Coordinate:* -171.266
>> *East_Bounding_Coordinate:* -167.964
>> *North_Bounding_Coordinate:* -10.873
>> *South_Bounding_Coordinate:* -14.723

Keywords:
> *Theme:*
>> *Theme_Keyword_Thesaurus:* None
>> *Theme_Keyword:* ESI
>> *Theme_Keyword:* Sensitivity maps
>> *Theme_Keyword:* Coastal resources
>> *Theme_Keyword:* Oil spill planning
>> *Theme_Keyword:* Coastal Zone Management
>> *Theme_Keyword:* Wildlife
> *Place:*
>> *Place_Keyword_Thesaurus:* None
>> *Place_Keyword:* American Samoa

Access_Constraints: None

Use_Constraints:
> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
> *Browse_Graphic_File_Name:* datafig.jpg
> *Browse_Graphic_File_Description:*
>> Relationships between spatial data layers and attribute data tables for American Samoa ESI data.
> *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

> The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00,

socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
    Logical_Consistency_Report:
        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
    Completeness_Report:
        These data represent coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system.
    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:
                The ESI data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 U.S. Geological Survey (USGS) topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters when mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.
    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator: AS Department of Commerce
                    Publication_Date: 2002
                    Title: Wetland and hydro data
                    Geospatial_Data_Presentation_Form: Digital vector data
                    Publication_Information:
                        Publication_Place: Unknown
                        Publisher: Unpublished
            Source_Scale_Denominator: Unknown
            Type_of_Source_Media: CD
            Source_Time_Period_of_Content:
                Time_Period_Information:
                  Single_Date/Time:
                    Calendar_Date: 2002
                Source_Currentness_Reference: Date of publication
            Source_Citation_Abbreviation: None

Source_Contribution: Digital Shoreline
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Colin Plank
            Publication_Date: Unpublished material
            Title: ESI Overflight
            Geospatial_Data_Presentation_Form: Hardcopy Map
    Source_Scale_Denominator: 24000
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of overflight
    Source_Citation_Abbreviation: None
    Source_Contribution: Digital Shoreline
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: The American Samoa Community College Land Grant
            Program (ASCC)
            Publication_Date: 2003
            Title: Tutuila and Aunu'u Mangrove Forests
            Geospatial_Data_Presentation_Form: Vector digital data
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: Online
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Range_of_Dates/Times:
                Beginning_Date: 2002
                Ending_Date: 2003
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Digital Shoreline
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: NOAA Coastal Services Center
            Publication_Date: 20020410
            Title: Pacific Islands, Tutuila, American Samoa, IKONOS data, 2002
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Charleston, SC
                Publisher: NOAA Coastal Services Center
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: CD
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Digital Shoreline
Process_Step:
    Process_Description:
        The intertidal shoreline habitats of the islands of Tutuila, Aunu'u, Ofu, Olosega, and
        Ta'u were mapped during overflights and ground surveys conducted by an
        experienced coastal geologist in August 2002. The overflights of the island chain
        were conducted using privately operated fixed-wing aircraft, flying at elevations of

400-600 feet and slow air speed. During this work, the ESI ranking of observed intertidal shoreline habitats was denoted directly onto the shoreline depicted on 1:24,000-scale U.S. Geological Survey (USGS) topographic maps. Where appropriate, revisions to the existing shoreline were made and where necessary, multiple habitats were described for each shoreline segment. In addition to the ESI shoreline habitats, wetland data for Tutuila, Aunu'u, and the Manu'a islands are also depicted on the maps. The American Samoa Community College Land Grant Program (ASCC) delineated mangroves on the islands of Tutuila and Aunu'u in 2002-2003, and the data were provided as digital coverages for use in this atlas. The American Samoa Department of Commerce (DOC) provided digital coverages of additional wetland data that had been collected by various sources in the early 1990s.

Process_Date: 200311
Process_Contact:
    Contact_Information:
        Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Person: Jill Petersen
        Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
        Contact_Voice_Telephone: (206) 526-6944
        Contact_Facsimile_Telephone: (206) 526-6329
        Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 252
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 252
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 1041
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 36021
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 1001

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: ESI.AAT
      Entity_Type_Definition:
        The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.
      Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
      Attribute_Label: ESI
      Attribute_Definition:
        The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described.

        The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 1) Shoreline type (substrate, grain size, tidal elevation, origin); 2) Exposure to wave and tidal energy; 3) Biological productivity and sensitivity; 4) Ease of cleanup. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: 1A
          Enumerated_Domain_Value_Definition: Exposed Rocky Cliffs
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: 1B
          Enumerated_Domain_Value_Definition: Exposed, Solid Man-made Structures
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: 2A
          Enumerated_Domain_Value_Definition: Exposed, Wave-cut Platforms in Bedrock
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: 3A
          Enumerated_Domain_Value_Definition: Fine- to Medium-grained Sand Beaches
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:

Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: Coarse-Grained Sand Beaches
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 5
Enumerated_Domain_Value_Definition: Mixed Sand and Gravel Beaches
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 6A
Enumerated_Domain_Value_Definition: Gravel Beaches
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 6B
Enumerated_Domain_Value_Definition: Riprap
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 7
Enumerated_Domain_Value_Definition: Exposed Tidal Flats
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 8A
Enumerated_Domain_Value_Definition: Sheltered Rocky Shores
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 8B
Enumerated_Domain_Value_Definition: Sheltered, Solid Man-made
Structures
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 8C
Enumerated_Domain_Value_Definition: Sheltered Riprap
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9A
Enumerated_Domain_Value_Definition: Sheltered Tidal Flats
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9B
Enumerated_Domain_Value_Definition: Sheltered, Vegetated Low Banks
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10B
Enumerated_Domain_Value_Definition: Freshwater Marshes
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10C
Enumerated_Domain_Value_Definition: Freshwater Swamps
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10D
Enumerated_Domain_Value_Definition: Mangroves
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: Unranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: LINE
Attribute_Definition: Type of geographic feature
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: B
        Enumerated_Domain_Value_Definition: Breakwater
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: F
        Enumerated_Domain_Value_Definition: Flat
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: H
        Enumerated_Domain_Value_Definition: Hydrography
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: M
        Enumerated_Domain_Value_Definition: Marsh
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: S
        Enumerated_Domain_Value_Definition: Shoreline
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
        Data source of the ESI lines. See the Lineage and Process_Description sections for
        more information on the original source data and how these data were integrated or
        manipulated to create the final data set.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: 1
            Enumerated_Domain_Value_Definition:
                NOAA Coastal Service Center Shoreline developed from Ikonos
                Imagery
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: 2
            Enumerated_Domain_Value_Definition: Overflights by Research
            Planning, Inc.
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: 3
            Enumerated_Domain_Value_Definition: Aerial Photography
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: 5
            Enumerated_Domain_Value_Definition: Digitized from 1:24,000-USGS
            Topographic Maps
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ENVIR
    Attribute_Definition: Type of regional environment
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Estuarine
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: U

        Enumerated_Domain_Value_Definition: Unranked
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: ESI.PAT
        Entity_Type_Definition:
            The ESI.PAT table contains attribute information for the vector polygons
            representing polygonal features with ESI classification.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ESI
        Attribute_Definition:
            The item ESI contains values representing the ESI polygon type. The ESI rankings
            progress from low to high susceptibility to oil spills. The ESI rankings of polygons
            are similar to the ESI rankings of shorelines (see the ESI attribute in the ESI.AAT
            section).
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: 7
                Enumerated_Domain_Value_Definition: Exposed Tidal Flats
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: 9A
                Enumerated_Domain_Value_Definition: Sheltered Tidal Flats
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: 10B
                Enumerated_Domain_Value_Definition: Freshwater Marshes
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: 10C
                Enumerated_Domain_Value_Definition: Freshwater Swamps
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: 10D
                Enumerated_Domain_Value_Definition: Mangroves
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: U
                Enumerated_Domain_Value_Definition: Unranked
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: WATER_CODE
        Attribute_Definition: Specifies a polygon as either water or land
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: L
                Enumerated_Domain_Value_Definition: Land
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: W
                Enumerated_Domain_Value_Definition: Water
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ENVIR
        Attribute_Definition: Type of regional environment
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: E
    Enumerated_Domain_Value_Definition: Estuarine
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: U
    Enumerated_Domain_Value_Definition: Unranked
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:
        Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
    Custom_Order_Process:
        Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
    Metadata_Date: 200402
    Metadata_Review_Date: 200402
    Metadata_Contact:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: Jill Petersen
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Position: GIS Manager
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

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American Samoa ESI: INDEX (Index Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
 Citation:
  Citation_Information:
   Originator:
    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
   Publication_Date: 200402
   Title: American Samoa ESI: INDEX (Index Polygons)
   Edition: First
   Geospatial_Data_Presentation_Form: Vector digital data
   Series_Information:
    Series_Name: None
    Issue_Identification: American Samoa
   Publication_Information:
    Publication_Place: Seattle, Washington
    Publisher:
     National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
   Other_Citation_Details:
    Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
 Description:
  Abstract:
   This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for American Samoa, as well as digital data extents. This data set comprises a portion of the ESI for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
  Purpose:
   The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.
 Time_Period_of_Content:
  Time_Period_Information:
   Range_of_Dates/Times:
    Beginning_Date: 2002

Ending_Date: 2004
Currentness_Reference:
The data were compiled during 2002-2003. The currentness dates for these data range from 1999 to 2002 and are documented in the Source_Information section.
Status:
Progress: Complete
Maintenance_and_Update_Frequency: None Scheduled
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -171.266
East_Bounding_Coordinate: -167.964
North_Bounding_Coordinate: -10.873
South_Bounding_Coordinate: -14.723
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: ESI
Theme_Keyword: Sensitivity maps
Theme_Keyword: Coastal resources
Theme_Keyword: Oil spill planning
Theme_Keyword: Coastal Zone Management
Theme_Keyword: Wildlife
Theme_Keyword: Index
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: American Samoa
Access_Constraints: None
Use_Constraints:
DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.
Browse_Graphic:
Browse_Graphic_File_Name: datafig.jpg
Browse_Graphic_File_Description:
Relationships between spatial data layers and attribute data tables for American Samoa ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
        Logical_Consistency_Report:
            A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
        Completeness_Report:
            These data represent the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for American Samoa, as well as digital data extents. Primarily, 1:24,000 U.S. Geological Survey (USGS) topographic maps and two National Ocean Service Nautical Charts, 1:40,000 and 1:80,000, were used to provide boundaries for cartographic products. In most cases, the polygons represent USGS topographic maps or nautical charts that were re-tiled, moved, or extended to provide better cartographic coverage of the study area.
        Positional_Accuracy:
            Horizontal_Positional_Accuracy:
                Horizontal_Positional_Accuracy_Report:
                    The index polygons in this data layer were mainly generated in ArcInfo from the coordinates of the USGS 1:24,000 topographic map or the 1:40,000 and 1:80,000 nautical chart corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.
    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator: U.S. Geological Survey (USGS)
                    Publication_Date: Unknown
                    Title: Topographic Quadrangles
                    Geospatial_Data_Presentation_Form: vector digital data
                    Publication_Information:
                        Publication_Place: Denver, CO or Reston, VA
                      Publisher: U.S. Geological Survey
            Source_Scale_Denominator: 24,000
            Type_of_Source_Media: Online
            Source_Time_Period_of_Content:
                Time_Period_Information:
                  Single_Date/Time:
                    Calendar_Date: Varies
                Source_Currentness_Reference: Date of publication
            Source_Citation_Abbreviation: None
            Source_Contribution: Map index information
        Source_Information:

Source_Citation:
    Citation_Information:
        Originator:
            National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS)
        Publication_Date: Varies
        Title: Navigational Charts
        Geospatial_Data_Presentation_Form: Map
        Publication_Information:
            Publication_Place: Seattle, WA
            Publisher:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS)
    Source_Scale_Denominator: Varies
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: Varies
    Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Map index information
Process_Step:
    Process_Description:
        The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS map corners, or appropriate coordinates.
    Process_Date: 200311
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 12
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 12
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 40
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 1083

SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Node, planar graph
    Point_and_Vector_Object_Count: 37

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983 (HARN)
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137
      Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: INDEX.PAT
      Entity_Type_Definition:
        The INDEX.PAT table contains attribute information for the vector polygons
        representing the map boundaries and digital data boundaries used in the creation of
        the Environmental Sensitivity Index (ESI) for American Samoa.
      Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
      Attribute_Label: TILE-NAME
      Attribute_Definition:
        The TILE-NAME contains the map number according to the specified layout of the
        atlas. The values for each polygon are unique and range from 1 through 8.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Range_Domain:
          Range_Domain_Minimum: 1
          Range_Domain_Maximum: 8
    Attribute:
      Attribute_Label: TOPO-NAME
      Attribute_Definition: Map Names
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: Tutuila Island, American Samoa
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: Ofu & Olosega Islands, American Samoa
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: Tau Island, American Samoa
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:

Enumerated_Domain_Value: Rose Atoll, American Samoa
Enumerated_Domain_Value_Definition: National Ocean Service Nautical Chart 83484 (1:80,000)
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: Swains Island, American Samoa
Enumerated_Domain_Value_Definition: National Ocean Service Nautical Chart 83484 (1:40,000)
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: blank
Enumerated_Domain_Value_Definition: International waters boundary (12 nautical mile extent)
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SCALE
Attribute_Definition:
SCALE contains the value of the denominator of the scale at which the map is plotted in the final map product.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 56,000
Enumerated_Domain_Value_Definition: Scale = 1:56,000
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: MAPANGLE
Attribute_Definition:
MAPANGLE contains a value to rotate the final map product so that it is situated straight up and down
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: -0.017
Range_Domain_Maximum: 0.714
Attribute_Units_of_Measure: Degree
Attribute:
Attribute_Label: PAGESIZE
Attribute_Definition:
PAGESIZE contains the value of the width and height of the map in the final map product
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 11,17
Enumerated_Domain_Value_Definition: Page size = 11" by 17"
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: John Kaperick
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Address:
Address_Type: Physical Address
Address: 7600 Sand Point Way, N.E.
City: Seattle

State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6400
Contact_Facsimile_Telephone: (206) 526-6329
Resource_Description: ESI Atlas for American Samoa
Distribution_Liability:
Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200402
Metadata_Review_Date: 200402
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Jill Petersen
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Position: GIS Manager
Contact_Address:
Address_Type: Physical Address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 18:58:27 2004

American Samoa ESI: BENTHIC (Benthic Marine Habitat Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: BENTHIC (Benthic Marine Habitat Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for benthic habitats in American Samoa. Vector polygons in this data set represent the distribution of macroalgae, coral reef and colonized hardbottom, uncolonized hardbottom, and encrusting/coralline algae habitats. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the CASSPT (Coral Areas of Special Significance - Points) data layer, part of the larger American Samoa ESI database, for additional coral information.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of

1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

    Time_Period_Information:

        Range_of_Dates/Times:

            Beginning_Date: 2002

            Ending_Date: 2004

    Currentness_Reference:

        The biological data were compiled during 2002 to 2003. The currentness date for these data is 2003 and is documented in the Source_Information section.

Status:

    Progress: Complete

    Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

    Bounding_Coordinates:

        West_Bounding_Coordinate: -171.266

        East_Bounding_Coordinate: -167.964

        North_Bounding_Coordinate: -10.873

        South_Bounding_Coordinate: -14.723

Keywords:

    Theme:

        Theme_Keyword_Thesaurus: None

        Theme_Keyword: ESI

        Theme_Keyword: Sensitivity maps

        Theme_Keyword: Coastal resources

        Theme_Keyword: Oil spill planning

        Theme_Keyword: Coastal Zone Management

        Theme_Keyword: Wildlife

        Theme_Keyword: Benthic

        Theme_Keyword: Algae

        Theme_Keyword: Coral

        Theme_Keyword: Hardbottom

        Theme_Keyword: Macroalgae

    Place:

        Place_Keyword_Thesaurus: None

        Place_Keyword: American Samoa

Access_Constraints: None

Use_Constraints:

    DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:

    Browse_Graphic_File_Name: datafig.jpg

    Browse_Graphic_File_Description:

        Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.

    Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

    This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:

    The software packages used to develop the atlas are Environmental Systems Research Institute's

ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
        Logical_Consistency_Report:
            A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.). A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
        Completeness_Report:
            The source data used for this data set were provided in digital format by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Center for Coastal Ocean Science, Center for Coastal Monitoring and Assessment, Biogeography Program. See also the CASSPT (Coral Areas of Special Significance - Points) data layer, part of the larger American Samoa ESI database, for additional coral information. The following benthic groups are included in this data set: macroalgae, coral reef and colonized hardbottom, uncolonized hardbottom, and encrusting/coralline algae habitats.
        Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:
                Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:24,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.
    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator:
                        National Oceanic and Atmospheric Administration (NOAA), National Ocean Services (NOS), National Center for Coastal

Ocean Science, Center for Coastal Monitoring and Assessment, Biogeography Program
Publication_Date: 2003
Title: Digitized Benthic Habitats for American Samoa
Geospatial_Data_Presentation_Form: Shapefiles
Publication_Information:
    Publication_Place: Unknown
    Publisher: Unpublished
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 2002
            Ending_Date: 2003
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Benthic habitat information
Process_Step:
    Process_Description:
        The main source used to depict habitat distribution for this data layer was a 2003 vector polygon benthic habitat data set provided by the NOAA NOS Biogeography Program. The data were posted on an ftp site as shapefiles and contained a three-tiered hierarchical classification structure, therefore making it possible to display the benthic habitat types as general or as detailed as deemed appropriate. In order to keep the hardcopy ESI maps readable and to maintain a level of detail commensurate with oil spill response and planning, we chose to display the "second tier" of the classification structure that included the following benthic habitat categories: macroalgae, coral reef and colonized hardbottom, uncolonized hardbottom, and encrusting and coralline algae. No seasonality or concentration information was used. These data were not yet publicly available when they were provided for this project. Please see the following website: <http://biogeo.nos.noaa.gov/projects/mapping/pacific/territories/as/> or contact Tim Battista (Phone: 301/713-3028 x 171; Email: Tim.Battista@noaa.gov) for more information.
    Process_Date: 200311
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

---

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 592
        SDTS_Terms_Description:

        SDTS_Point_and_Vector_Object_Type: Area point
        Point_and_Vector_Object_Count: 592
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Complete chain
        Point_and_Vector_Object_Count: 1348
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Link
        Point_and_Vector_Object_Count: 76091
SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Node, planar graph
        Point_and_Vector_Object_Count: 973

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: BENTHIC.PAT
            Entity_Type_Definition:
                The BENTHIC.PAT table contains attribute information for the vector polygons representing macroalgae, coral reef and colonized hardbottom, uncolonized hardbottom, and encrusting and coralline algae concentration areas. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure
            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: TYPE
            Attribute_Definition: Type of benthic habitat
            Attribute_Definition_Source: NOAA
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: Macroalgae
                    Enumerated_Domain_Value_Definition: Macroalgae
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: Coral Reef and Colonized Hardbottom
                    Enumerated_Domain_Value_Definition: Coral Reef and Colonized Hardbottom
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: Uncolonized Hardbottom
                    Enumerated_Domain_Value_Definition: Uncolonized Hardbottom
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: Encrusting and Coralline Algae
    Enumerated_Domain_Value_Definition: Encrusting and Coralline Algae
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: John Kaperick
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6400
      Contact_Facsimile_Telephone: (206) 526-6329
  Resource_Description: ESI Atlas for American Samoa
  Distribution_Liability:
    Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
  Custom_Order_Process:
    Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
  Metadata_Date: 200402
  Metadata_Review_Date: 200402
  Metadata_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Jill Petersen
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Position: GIS Manager
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
  Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998

Generated by <u>mp</u> version 2.8.2 on Wed Feb 25 19:01:48 2004

American Samoa ESI: CASSPT (Coral Areas of Special Significance - Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
  Citation:
    Citation_Information:
      Originator:
        National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
      Publication_Date: 200402
      Title:
        American Samoa ESI: CASSPT (Coral Areas of Special Significance - Points)
      Edition: First
      Geospatial_Data_Presentation_Form: Vector digital data
      Series_Information:
        Series_Name: None
        Issue_Identification: American Samoa
      Publication_Information:
        Publication_Place: Seattle, Washington
        Publisher:
          National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
      Other_Citation_Details:
        Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
  Description:
    Abstract:
      This data set contains sensitive biological resource data for "Coral Areas of Special Significance" in American Samoa. Coral Areas of Special Significance were designated by resource experts as those areas that should be highly prioritized for protection following spills, due to various reasons (e.g., species diversity, rare coral, endangered/threatened marine animal species, high fish/invertebrate concentrations, sensitive habitat, etc.). In this data set, they are represented by vector points. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BENTHIC (Benthic Marine Habitat Polygons) data layer, part of the larger American Samoa ESI database, for additional coral information.

Purpose:

> The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2002

Ending_Date: 2004

Currentness_Reference:

> These data were compiled during 2002-2003. The currentness dates for these data range from 1996 to 2003 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -171.266

East_Bounding_Coordinate: -167.964

North_Bounding_Coordinate: -10.873

South_Bounding_Coordinate: -14.723

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: ESI

Theme_Keyword: Sensitivity maps

Theme_Keyword: Coastal resources

Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Coral

Theme_Keyword: Wildlife

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: American Samoa

Access_Constraints: None

Use_Constraints:

> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:

Browse_Graphic_File_Name: datafig.jpg

Browse_Graphic_File_Description:

> Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:

> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's

with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

    Logical_Consistency_Report:
        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.). A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

    Completeness_Report:
        "Coral Areas of Special Significance" were designated by resource experts as those areas that should be highly prioritized for protection following spills, due to various reasons (e.g. species diversity, unique habitat, endangered/threatened marine animal species, high fish/invertebrate concentrations, subsistence use, etc.). See also the BENTHIC (Benthic Marine Habitat Polygons) data layer, part of the larger American Samoa ESI database, for additional coral information. Also refer to other biology layers for additional information on associated species. These data do not necessarily represent all Coral Areas of Special Significance in American Samoa.

    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:
                These data were developed by regional experts who manually delineated areas of special significance. It is difficult to estimate the positional accuracy of such data, except to state that they were compiled on 1:24,000 U.S. Geological Survey (USGS) topographic maps. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator: Alison Green (AS DMWR)
                    Publication_Date: 1996
                    Title: The Status of the Coral Reefs of the Samoan Archipelago
                    Geospatial_Data_Presentation_Form: Hardcopy text
                    Publication_Information:
                      Publication_Place: Unknown
                    Publisher: AS Department of Marine and Wildlife Resources (DMWR)
            Type_of_Source_Media: Paper

Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1996
  Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Coral Areas of Special Significance information
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Coral Reef Advisory Group
      Publication_Date: 2003
      Title: Special Management Areas on Tutuila
      Geospatial_Data_Presentation_Form: Hardcopy text
      Publication_Information:
        Publication_Place: Unknown
        Publisher: Unpublished
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: Paper
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2003
    Source_Currentness_Reference: Date of publication
  Source_Citation_Abbreviation: None
  Source_Contribution: Coral Areas of Special Significance information
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: National Park Service
      Publication_Date: 2003
      Title:
        Distribution of Reef and Pelagic Fish, Sea Turtles, and
        Invertebrates
      Geospatial_Data_Presentation_Form: Expert Knowledge
      Publication_Information:
        Publication_Place: Unknown
        Publisher: Unpublished
  Type_of_Source_Media: Personal communication
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2003
    Source_Currentness_Reference: Date of communication
  Source_Citation_Abbreviation: None
  Source_Contribution: Coral Areas of Special Significance information
Process_Step:
  Process_Description:
    The main source of data used to depict Coral Areas of Special Significance was
    personal interviews with resource experts from the National Park of American
    Samoa (NPS). Resource experts designated these areas for high priority protection
    following spills.
  Process_Date: 200311
  Process_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA, Office of Response and
        Restoration
        Contact_Person: Jill Petersen
      Contact_Address:

Address_Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Entity Point
   Point_and_Vector_Object_Count: 1

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
  Geographic:
   Latitude_Resolution: 0.00005
   Longitude_Resolution: 0.00005
   Geographic_Coordinate_Units: Decimal degrees
  Geodetic_Model:
   Horizontal_Datum_Name: North American Datum of 1983 (HARN)
   Ellipsoid_Name: Geodetic Reference System 80
   Semi-major_Axis: 6378137
   Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
 Detailed_Description:
  Entity_Type:
   Entity_Type_Label: CASSPT.PAT
   Entity_Type_Definition:
    The data layer CASSPT contains vector points representing Coral Areas of Special
    Significance.
   Entity_Type_Definition_Source: Research Planning, Inc.

Distribution_Information:
 Distributor:
  Contact_Information:
   Contact_Person_Primary:
    Contact_Person: John Kaperick
    Contact_Organization: NOAA, Office of Response and Restoration
   Contact_Address:
    Address_Type: Physical Address
    Address: 7600 Sand Point Way, N.E.
    City: Seattle
    State_or_Province: Washington
    Postal_Code: 98115-6349
   Contact_Voice_Telephone: (206) 526-6400
   Contact_Facsimile_Telephone: (206) 526-6329
 Resource_Description: ESI Atlas for American Samoa

Distribution_Liability:

  Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

  Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
  Metadata_Date: 200402
  Metadata_Review_Date: 200402
  Metadata_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Jill Petersen
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Position: GIS Manager
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
  Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 18:26:10 2004

American Samoa ESI: BIRDS (Bird Polygons)

Metadata also available as - [[Parseable text]] - [[SGML]]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
> *Citation:*
>> *Citation_Information:*
>>> *Originator:*
>>>> National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
>>> *Publication_Date:* 200402
>>> *Title:* American Samoa ESI: BIRDS (Bird Polygons)
>>> *Edition:* First
>>> *Geospatial_Data_Presentation_Form:* Vector digital data
>>> *Series_Information:*
>>>> *Series_Name:* None
>>>> *Issue_Identification:* American Samoa
>>> *Publication_Information:*
>>>> *Publication_Place:* Seattle, Washington
>>>> *Publisher:*
>>>>> National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
>>> *Other_Citation_Details:*
>>>> Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
> *Description:*
>> *Abstract:*
>>> This data set contains sensitive biological resource data for seabirds, wading birds, shorebirds, waterfowl, and gulls and terns in American Samoa. Vector polygons in this data set represent locations of bird nesting, migratory staging, and feeding sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.
>>>
>>> This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the NESTS (Nest Points) data layer, part of the larger American Samoa ESI database, for additional bird information.
>> *Purpose:*
>>> The ESI data were collected, mapped, and digitized to provide environmental data for oil spill

planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
- *Time_Period_Information:*
  - *Range_of_Dates/Times:*
    - *Beginning_Date:* 2002
    - *Ending_Date:* 2004
  - *Currentness_Reference:*
    - The biological data were compiled during 2002-2003. The currentness dates for these data range from 1982 to 2003 and are documented in the Source_Information section.

Status:
- *Progress:* Complete
- *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
- *Bounding_Coordinates:*
  - *West_Bounding_Coordinate:* -171.266
  - *East_Bounding_Coordinate:* -167.964
  - *North_Bounding_Coordinate:* -10.873
  - *South_Bounding_Coordinate:* -14.723

Keywords:
- *Theme:*
  - *Theme_Keyword_Thesaurus:* None
  - *Theme_Keyword:* ESI
  - *Theme_Keyword:* Sensitivity maps
  - *Theme_Keyword:* Coastal resources
  - *Theme_Keyword:* Oil spill planning
  - *Theme_Keyword:* Coastal Zone Management
  - *Theme_Keyword:* Wildlife
  - *Theme_Keyword:* Bird
- *Place:*
  - *Place_Keyword_Thesaurus:* None
  - *Place_Keyword:* American Samoa

Access_Constraints: None

Use_Constraints:
- DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
- *Browse_Graphic_File_Name:* datafig.jpg
- *Browse_Graphic_File_Description:*
  - Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
- *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
- This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
- The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

    Logical_Consistency_Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

    Completeness_Report:

These data represent a synthesis of expert knowledge and available hardcopy reports on bird nesting, migratory staging, and feeding concentration areas. See also the NESTS (Nest Points) data layer, part of the larger American Samoa ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in American Samoa. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 57, Wandering tattler, Heteroscelus incanus; 67, Sanderling, Calidris alba; 73, Ruddy turnstone, Arenaria interpres; 126, Brown noddy, Anous stolidus; 127, Sooty tern, Sterna fuscata; 128, Masked (blue-faced) booby, Sula dactylatra; 249, Black noddy, Anous minutus; 250, Red-tailed tropicbird, Phaethon rubricauda; 251, Great frigatebird, Fregata minor; 260, Red-footed booby, Sula sula; 261, Brown booby, Sula leucogaster; 262, Gray-backed tern, Sterna lunata; 263, Blue-gray noddy, Procelsterna cerulea; 264, White tern, Gygis alba; 283, Bridled tern, Sterna anaethetus; 287, Audubon's shearwater, Puffinus lherminieri; 413, Bristle-thighed curlew, Numenius tahitiensis; 543, Pacific golden-plover, Pluvialis fulva; 557, Western reef heron, Egretta gularis; 725, Australian gray duck, Anas superciliosa; 729, Lesser frigatebird, Fregata ariel; 1022, Seabirds; 1030, Frigatebirds, Fregata spp.

    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy

base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: U.S. Fish and Wildlife Service
                Publication_Date: 1982
                Title: Wildlife and Wildlife Habitat of American Samoa II
                Geospatial_Data_Presentation_Form: Hardcopy text
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher: U.S. DOI, Fish and Wildlife Service, Washington, DC.
        Type_of_Source_Media: Paper
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 1982
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator:
                    National Park of American Samoa (NPS); American Samoa Department of Marine and Wildlife Resources (DMWR)
                Publication_Date: 2002
                Title: Natural History Guide to American Samoa
                Geospatial_Data_Presentation_Form: Hardcopy text
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher: National Park of American Samoa; DMWR.
        Type_of_Source_Media: Paper
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2002
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Beth Flint, U.S. Fish & Wildlife Service (USFWS) Honolulu
                Publication_Date: 2003
                Title:
                    Seabird Populations at Rose Island - Number of active nests (egg or chick)
                Geospatial_Data_Presentation_Form: Hardcopy text
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher: Unpublished
        Type_of_Source_Media: Paper

Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1998
    Source_Currentness_Reference: Date of surveys
Source_Citation_Abbreviation: None
Source_Contribution: Bird information

Source_Information:
    Source_Citation:
        Citation_Information:
            Originator:
                Department of Marine and Wildlife Resources (DMWR); R. UTZURRUM, J. SEAMON
            Publication_Date: 2003
            Title:
                Marine mammal concentration areas, bat surveys, and pelagic bird distribution
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Range_of_Dates/Times:
                Beginning_Date: 2002
                Ending_Date: 2003
        Source_Currentness_Reference: Dates of surveys
    Source_Citation_Abbreviation: None
    Source_Contribution: Bird information

Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: O'Connor, P.J. and M.J. Rauzon
            Publication_Date: 2003
            Title:
                Inventory and Monitoring of Seabirds in National Park American Samoa
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Unknown
                Publisher:
                    Draft final report. Technical Report 132. U. of Hawaii at Manoa, NPS Contract No. 8036-2-9004, Cont. No. 132 PCSU/UH
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Bird information

Process_Step:
    Process_Description:
        Two main sources of data were used to depict bird distribution and seasonality for this data layer: (1) personal interviews with resource experts from American Samoa Department of Marine and Wildlife Resources (DMWR) and National Park of American Samoa (NPS), and (2) reports and survey data provided by NPS and

DMWR, the U.S. Fish and Wildlife Service (USFWS), and the University of
Hawaii. Concentration and seasonality information was provided by resource
experts or was extracted from published and unpublished reports and survey data.
Process_Date: 200311
Process_Contact:
    Contact_Information:
        Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and
Restoration
            Contact_Person: Jill Petersen
        Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
        Contact_Voice_Telephone: (206) 526-6944
        Contact_Facsimile_Telephone: (206) 526-6329
        Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

---

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 542
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 542
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 972
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 71236
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 672

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIRDS.PAT
        Entity_Type_Definition:
            The BIRDS.PAT table contains attribute information for the vector polygons representing bird nesting, migratory staging, and feeding site concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:

Range_Domain_Minimum: 760100002
Range_Domain_Maximum: 760100566

Attribute:
  Attribute_Label: RARNUM
  Attribute_Definition:
   An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in polygons and do not contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 76000001
    Range_Domain_Maximum: 76000058

Detailed_Description:
 Entity_Type:
  Entity_Type_Label: BIO_LUT
  Entity_Type_Definition:
   The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: RARNUM
  Attribute_Definition:
   An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 76000001
    Range_Domain_Maximum: 76000134
 Attribute:
  Attribute_Label: ID
  Attribute_Definition:
   An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 760100001
    Range_Domain_Maximum: 763900060

Detailed_Description:
 Entity_Type:
  Entity_Type_Label: BIORES
  Entity_Type_Definition:
   The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: RARNUM
  Attribute_Definition:
   An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
 Range_Domain:
  Range_Domain_Minimum: 076000001
  Range_Domain_Maximum: 076000134
Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: CONC
 Attribute_Definition:
  The field CONC refers to "concentration," abundance, or density values. In this data layer, concentration is usually represented as the number of individuals (XX BIRDS). In cases where no concentration information was available from any source, the CONC field contains "-". Counts were derived primarily from 1990, 1998, and 2000 survey data.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Any character
   Enumerated_Domain_Value_Definition: Free text
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SEASON_ID
 Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: G_SOURCE
 Attribute_Definition:
  Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: S_SOURCE
 Attribute_Definition:
  Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:

Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links records in the
    BIORES data table to records in the SPECIES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#####
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT and the next five
            characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
            SPECIES_ID = 1; EL_SPE = 'B00001').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE_SEA
Attribute_Definition:
    Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
    records in the BIORES data table to records in the SEASONAL and BREED data
    tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: E#######
    Enumerated_Domain_Value_Definition:
        Where E is the first character of ELEMENT, the next five
        characters are SPECIES_ID, and the last two characters are
        SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
        SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: SPECIES
    Entity_Type_Definition:
      The data table SPECIES identifies all species in the ESI data set. See the
      Browse_Graphic section for a link to the entity-relationship diagram, which
      describes the way this table relates to other attribute tables in the ESI data structure.
      Refer to the Completeness_Report for a list of layer-specific species.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
      Numeric identifier for each species that is unique within each element and refers to a
      nationwide master ESI species list maintained at NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
  Attribute:
    Attribute_Label: NAME
    Attribute_Definition: Species common name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: Species common name for the entire ESI
        data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: GEN_SPEC
    Attribute_Definition: Species scientific name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: Species scientific name for the entire ESI
        data set.
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: HABITAT
  Enumerated_Domain_Value_Definition: Habitats and Plants
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: INVERT
  Enumerated_Domain_Value_Definition: Invertebrates
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: M_MAMMAL
  Enumerated_Domain_Value_Definition: Marine Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: REPTILE
  Enumerated_Domain_Value_Definition: Reptiles and Amphibians
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: T_MAMMAL
  Enumerated_Domain_Value_Definition: Terrestrial Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: dolphin
  Enumerated_Domain_Value_Definition: Dolphin
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: echinoderm
        Enumerated_Domain_Value_Definition: Echinoderm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gastropod
        Enumerated_Domain_Value_Definition: Gastropod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: lobster
        Enumerated_Domain_Value_Definition: Lobster
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: turtle
        Enumerated_Domain_Value_Definition: Turtle
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: wading
        Enumerated_Domain_Value_Definition: Wading bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: waterfowl
        Enumerated_Domain_Value_Definition: Waterfowl
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: whale
        Enumerated_Domain_Value_Definition: Whale
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: worm
              Enumerated_Domain_Value_Definition: Worm
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NHP
    Attribute_Definition: Natural Heritage Program global ranking
    Attribute_Definition_Source: Network of Natural Heritage Program
    Attribute_Domain_Values:
        Codeset_Domain:
           Codeset_Name: NHP Global Conservation Status Rank
           Codeset_Source: Natural Heritage Program
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition: Date of NHP listing
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: 0
           Enumerated_Domain_Value_Definition: Not ranked
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: Numeric
           Enumerated_Domain_Value_Definition: mmyyyy
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the
        SPECIES data table to records in the BIORES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: E#####
           Enumerated_Domain_Value_Definition:
              Where E is the first character of ELEMENT and the next five
              characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
              SPECIES_ID = 1; EL_SPE = 'B00001').
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SEASONAL
        Entity_Type_Definition:
           The data table SEASONAL contains information on the seasonal presence of each
           species associated with each spatial vector object. See the Browse_Graphic section
           for a link to the entity-relationship diagram, which describes the way this table
           relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ELEMENT
        Attribute_Definition: Major categories of biological data
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
               Enumerated_Domain_Value: BIRD
              Enumerated_Domain_Value_Definition: Birds
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: FISH
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: HABITAT
    Enumerated_Domain_Value_Definition: Habitats and Plants
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: INVERT
    Enumerated_Domain_Value_Definition: Invertebrates
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: M_MAMMAL
    Enumerated_Domain_Value_Definition: Marine Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: T_MAMMAL
    Enumerated_Domain_Value_Definition: Terrestrial Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: SPECIES_ID
  Attribute_Definition:
    Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N
Attribute:
  Attribute_Label: SEASON_ID
  Attribute_Definition:
    Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N
Attribute:
  Attribute_Label: JAN
  Attribute_Definition: January
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Definition: Present in January
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: FEB

Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in February
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: MAR
Attribute_Definition: March
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in March
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: APR
Attribute_Definition: April
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in April
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: MAY
Attribute_Definition: May
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in May
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: JUN
Attribute_Definition: June
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in June
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: JUL
Attribute_Definition: July
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in July
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: AUG
Attribute_Definition: August
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in August

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

 Attribute_Label: SEP

 Attribute_Definition: September

 Attribute_Definition_Source: Research Planning, Inc.

 Attribute_Domain_Values:

  Enumerated_Domain:

   Enumerated_Domain_Value: X

   Enumerated_Domain_Value_Definition: Present in September

   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

 Attribute_Label: OCT

 Attribute_Definition: October

 Attribute_Definition_Source: Research Planning, Inc.

 Attribute_Domain_Values:

  Enumerated_Domain:

   Enumerated_Domain_Value: X

   Enumerated_Domain_Value_Definition: Present in October

   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

 Attribute_Label: NOV

 Attribute_Definition: November

 Attribute_Definition_Source: Research Planning, Inc.

 Attribute_Domain_Values:

  Enumerated_Domain:

   Enumerated_Domain_Value: X

   Enumerated_Domain_Value_Definition: Present in November

   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

 Attribute_Label: DEC

 Attribute_Definition: December

 Attribute_Definition_Source: Research Planning, Inc.

 Attribute_Domain_Values:

  Enumerated_Domain:

   Enumerated_Domain_Value: X

   Enumerated_Domain_Value_Definition: Present in December

   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

 Attribute_Label: EL_SPE_SEA

 Attribute_Definition:

  Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

 Attribute_Definition_Source: Research Planning, Inc.

 Attribute_Domain_Values:

  Enumerated_Domain:

   Enumerated_Domain_Value: E#######

   Enumerated_Domain_Value_Definition:

    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

 Entity_Type:

  Entity_Type_Label: BREED

  Entity_Type_Definition:

   The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

  Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:
　　Attribute_Label: EL_SPE_SEA
　　Attribute_Definition:
　　　　Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
　　　　records in the BREED data table to records in the BIORES and SEASONAL data
　　　　tables.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: E#######
　　　　　　Enumerated_Domain_Value_Definition:
　　　　　　　　Where E is the first character of ELEMENT, the next five
　　　　　　　　characters are SPECIES_ID, and the last two characters are
　　　　　　　　SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
　　　　　　　　SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
　　Attribute_Label: MONTH
　　Attribute_Definition:
　　　　Two-digit calendar month. Each life history stage or activity type for a particular
　　　　species can have up to 12 records to account for each month of the year.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Range_Domain:
　　　　　　Range_Domain_Minimum: 1
　　　　　　Range_Domain_Maximum: 12
Attribute:
　　Attribute_Label: BREED1
　　Attribute_Definition:
　　　　Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 =
　　　　nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is
　　　　"INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1
　　　　= nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute
　　　　is not used for HABITAT or T_MAMMAL elements.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: Y
　　　　　　Enumerated_Domain_Value_Definition: Life-history stage or activity
　　　　　　present
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: N
　　　　　　Enumerated_Domain_Value_Definition: Life-history stage or activity not
　　　　　　present
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: -
　　　　　　Enumerated_Domain_Value_Definition:
　　　　　　　　Breed category not used or not appropriate for record(s) in
　　　　　　　　question
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
　　Attribute_Label: BREED2
　　Attribute_Definition:
　　　　Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 =
　　　　migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is
　　　　"INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 =

hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

    Enumerated_Domain:

        Enumerated_Domain_Value: Y

        Enumerated_Domain_Value_Definition: Life-history stage or activity present

        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

    Enumerated_Domain:

        Enumerated_Domain_Value: N

        Enumerated_Domain_Value_Definition: Life-history stage or activity not present

        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

    Enumerated_Domain:

        Enumerated_Domain_Value: -

        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in question

        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: BREED3

    Attribute_Definition:

        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Y

            Enumerated_Domain_Value_Definition: Life-history stage or activity present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: N

            Enumerated_Domain_Value_Definition: Life-history stage or activity not present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: -

            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: BREED4

    Attribute_Definition:

        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

Enumerated_Domain:
 Enumerated_Domain_Value: Y
 Enumerated_Domain_Value_Definition: Life-history stage or activity present
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: -
  Enumerated_Domain_Value_Definition:
   Breed category not used or not appropriate for record(s) in question
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: BREED5
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
 Entity_Type:
  Entity_Type_Label: SOURCES
  Entity_Type_Definition:
   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: SOURCE_ID
  Attribute_Definition:
   Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
Attribute:
    Attribute_Label: ORIGINATOR
    Attribute_Definition: Author or developer of source material or data set
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Date of source material, publication, or date of personal communication with expert
        source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer

        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

  Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
      Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: yyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: STATUS
    Entity_Type_Definition:
      The data table STATUS identifies the species that are listed as either threatened or
      endangered by a state or federal authority. See the Browse_Graphic section for a
      link to the entity-relationship diagram, which describes the way this table relates to
      other attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:

Attribute_Label: SPECIES_ID
Attribute_Definition:
    Numeric identifier for each species that is unique within each element and refers to a
    nationwide master ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
Attribute:
    Attribute_Label: STATE
    Attribute_Definition: Two-letter state abbreviation
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Two-letter state abbreviation
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: S_F
    Attribute_Definition: State and Federal status
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal
            list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife
            Service
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife
            Service
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Publication date of source material used to assign state and federal status values for
        each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data
        table to the BIORES and SPECIES data tables.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#####
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT and the next five
            characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
            SPECIES_ID = 1; EL_SPE = 'B00001').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:
        Although these data have been processed successfully on a computer system at the National Oceanic
        and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the
        utility of the data on any other system, nor shall the act of distribution constitute any such warranty.
        NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement
        copy of the product when the product is determined unreadable by computer-input peripherals, or
        when the physical medium is delivered in damaged condition.
    Custom_Order_Process:
        Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple
        formats to make them useful to a wider community of GIS/mapping users. Distribution formats
        include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project
        and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data.
        The database files are distributed both in the NOAA standard relational database format (see NOAA
        Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata
        document includes information on both of these database formats.

Metadata_Reference_Information:
    Metadata_Date: 200402
    Metadata_Review_Date: 200402
    Metadata_Contact:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: Jill Petersen
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Position: GIS Manager
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 16:34:59 2004

American Samoa ESI: NESTS (Nest Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: NESTS (Nest Points)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for nesting birds in American Samoa. Vector points in this data set represent locations of nesting seabirds. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BIRDS (Bird Polygons) data layer, part of the larger American Samoa ESI database, for additional bird information.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of

1990, requires response plans for immediate and effective protection of sensitive resources.
Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 2002
            Ending_Date: 2004
    Currentness_Reference:
        The biological data were compiled during 2002-2003. The currentness dates for these data range from 1982 to 2003 and are documented in the Source_Information section.
Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
Spatial_Domain:
    Bounding_Coordinates:
        West_Bounding_Coordinate: -171.266
        East_Bounding_Coordinate: -167.964
        North_Bounding_Coordinate: -10.873
        South_Bounding_Coordinate: -14.723
Keywords:
    Theme:
        Theme_Keyword_Thesaurus: None
        Theme_Keyword: ESI
        Theme_Keyword: Sensitivity maps
        Theme_Keyword: Coastal resources
        Theme_Keyword: Oil spill planning
        Theme_Keyword: Coastal Zone Management
        Theme_Keyword: Wildlife
        Theme_Keyword: Nest
        Theme_Keyword: Bird
    Place:
        Place_Keyword_Thesaurus: None
        Place_Keyword: American Samoa
Access_Constraints: None
Use_Constraints:
    DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.
Browse_Graphic:
    Browse_Graphic_File_Name: datafig.jpg
    Browse_Graphic_File_Description:
        Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
    Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
    This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
Native_Data_Set_Environment:
    The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
>   *Attribute_Accuracy:*
>>   *Attribute_Accuracy_Report:*
>>>   A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
>   *Logical_Consistency_Report:*
>>   A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

>>   After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
>   *Completeness_Report:*
>>   These data represent a synthesis of hardcopy reports and maps on seabird nesting locations. These data do not necessarily represent all nesting sites present in American Samoa. See also the BIRDS (Bird Polygons) data layer, part of the larger American Samoa ESI database, for additional bird information. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 126, Brown noddy, Anous stolidus; 249, Black noddy, Anous minutus; 251, Great frigatebird, Fregata minor; 261, Brown booby, Sula leucogaster; 263, Blue-gray noddy, Procelsterna cerulea; 557, Western reef heron, Egretta gularis; 731, Tahiti petrel, Pterodroma rostrata.
>   *Positional_Accuracy:*
>>   *Horizontal_Positional_Accuracy:*
>>>   *Horizontal_Positional_Accuracy_Report:*
>>>>   Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood

when considering the positional accuracy of vector digital objects representing these resources.

Lineage:
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: U.S. Fish and Wildlife Service
                Publication_Date: 1982
                Title: Wildlife and Wildlife Habitat of American Samoa II
                Geospatial_Data_Presentation_Form: Hardcopy text
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher: U.S. DOI, Fish and Wildlife Service, Washington, DC.
        Type_of_Source_Media: Paper
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 1982
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Nest information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: O'Connor, P.J. and M.J. Rauzon
                Publication_Date: 2003
                Title:
                    Inventory and Monitoring of Seabirds in National Park American Samoa
                Geospatial_Data_Presentation_Form: Hardcopy map
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher:
                      Draft final report. Technical Report 132. U. of Hawaii at Manoa, NPS Contract No. 8036-2-9004, Cont. No. 132 PCSU/UH
        Type_of_Source_Media: Paper
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2002
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Nest information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: National Park of American Samoa
                Publication_Date: 2000
                Title: Preliminary Seabird Survey Tutuila, American Samoa
                Geospatial_Data_Presentation_Form: Hardcopy map
                Publication_Information:
                    Publication_Place: Unknown
                    Publisher: National Park Service GIS Department
        Type_of_Source_Media: Paper
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2000
            Source_Currentness_Reference: Date of publication

Source_Citation_Abbreviation: None
Source_Contribution: Nest information
Process_Step:
    Process_Description:
        The primary data source used to depict bird nesting locations for this data layer was maps and reports provided by the U.S. Fish and Wildlife Service (USFWS), the University of Hawaii, and the National Park of American Samoa (NPS). Concentration and seasonality information was extracted from published and unpublished reports.
    Process_Date: 200311
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Entity Point
            Point_and_Vector_Object_Count: 61

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa

atlas number is 76), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
Entity_Type:
Entity_Type_Label: NESTS.PAT
Entity_Type_Definition:
The NESTS.PAT table contains attribute information for the vector points representing locations of nesting seabirds. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: ID
Attribute_Definition:
An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (5), and record number.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 760500001
Range_Domain_Maximum: 760500061
Attribute:
Attribute_Label: RARNUM
Attribute_Definition:
An identifier that links directly to the BIORES table or the flat format BIOFILE table.

Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 76000001
        Range_Domain_Maximum: 76000040

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIO_LUT
        Entity_Type_Definition:
            The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 76000001
                Range_Domain_Maximum: 76000134
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 760100001
                Range_Domain_Maximum: 763900060

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIORES
        Entity_Type_Definition:
            The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 076000001
                Range_Domain_Maximum: 076000134
    Attribute:
        Attribute_Label: SPECIES_ID

Attribute_Definition:
>> Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Range_Domain:*
>> *Range_Domain_Minimum:* 1
>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* CONC
> *Attribute_Definition:*
>> The field CONC refers to "concentration," abundance, or density value of a species at a particular location. In this data layer, the field may contain counts of individuals (XX BIRDS) or nests (XX NESTS). In cases where no quantitative count data was available, the field contains "-". Counts were derived primarily from 2000 survey data.

> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Any character
>>> *Enumerated_Domain_Value_Definition:* Free text
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* SEASON_ID
> *Attribute_Definition:*
>> Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* G_SOURCE
> *Attribute_Definition:*
>> Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* S_SOURCE
> *Attribute_Definition:*
>> Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* ELEMENT
> *Attribute_Definition:* Major categories of biological data
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* BIRD
>>> *Enumerated_Domain_Value_Definition:* Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the
        BIORES data table to records in the SPECIES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five
                characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
                SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the BIORES data table to records in the SEASONAL and BREED data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five
                characters are SPECIES_ID, and the last two characters are
                SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SPECIES

Entity_Type_Definition:

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set.

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

                    Enumerated_Domain:
                            Enumerated_Domain_Value: INVERT
                            Enumerated_Domain_Value_Definition: Invertebrates
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: M_MAMMAL
                            Enumerated_Domain_Value_Definition: Marine Mammals
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: REPTILE
                            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: T_MAMMAL
                            Enumerated_Domain_Value_Definition: Terrestrial Mammals
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
            Attribute_Label: SUBELEMENT
            Attribute_Definition: Element subgroup delineating a logical grouping of species
            Attribute_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: bat
                            Enumerated_Domain_Value_Definition: Bat
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: bivalve
                            Enumerated_Domain_Value_Definition: Bivalve
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: cephalopod
                            Enumerated_Domain_Value_Definition: Cephalopod
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: crab
                            Enumerated_Domain_Value_Definition: Crab
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: dolphin
                            Enumerated_Domain_Value_Definition: Dolphin
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: e_nursery
                            Enumerated_Domain_Value_Definition: Estuarine nursery fish
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:
                            Enumerated_Domain_Value: echinoderm
                            Enumerated_Domain_Value_Definition: Echinoderm
                            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                    Enumerated_Domain:

        Enumerated_Domain_Value: gastropod
        Enumerated_Domain_Value_Definition: Gastropod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: lobster
        Enumerated_Domain_Value_Definition: Lobster
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: turtle
        Enumerated_Domain_Value_Definition: Turtle
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: wading
        Enumerated_Domain_Value_Definition: Wading bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: waterfowl
        Enumerated_Domain_Value_Definition: Waterfowl
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: whale
        Enumerated_Domain_Value_Definition: Whale
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: worm
        Enumerated_Domain_Value_Definition: Worm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NHP

Attribute_Definition: Natural Heritage Program global ranking
Attribute_Definition_Source: Network of Natural Heritage Program
Attribute_Domain_Values:
  Codeset_Domain:
    Codeset_Name: NHP Global Conservation Status Rank
    Codeset_Source: Natural Heritage Program
Attribute:
  Attribute_Label: DATE_PUB
  Attribute_Definition: Date of NHP listing
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 0
      Enumerated_Domain_Value_Definition: Not ranked
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: mmyyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: EL_SPE
  Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links records in the
    SPECIES data table to records in the BIORES and STATUS data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E#####
      Enumerated_Domain_Value_Definition:
        Where E is the first character of ELEMENT and the next five
        characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
        SPECIES_ID = 1; EL_SPE = 'B00001').
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: SEASONAL
    Entity_Type_Definition:
      The data table SEASONAL contains information on the seasonal presence of each
      species associated with each spatial vector object. See the Browse_Graphic section
      for a link to the entity-relationship diagram, which describes the way this table
      relates to other attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SPECIES_ID
Attribute_Definition:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: SEASON_ID
Attribute_Definition:
Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: JAN
Attribute_Definition: January
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in January
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: FEB
Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in February
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: MAR
 Attribute_Definition: March
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in March
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: APR
 Attribute_Definition: April
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in April
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MAY
 Attribute_Definition: May
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in May
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: JUN
 Attribute_Definition: June
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in June
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: JUL
 Attribute_Definition: July
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in July
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: AUG
 Attribute_Definition: August
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in August
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SEP
 Attribute_Definition: September
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:

     Enumerated_Domain_Value: X
     Enumerated_Domain_Value_Definition: Present in September
     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: OCT
 Attribute_Definition: October
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in October
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: NOV
 Attribute_Definition: November
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in November
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: DEC
 Attribute_Definition: December
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in December
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: EL_SPE_SEA
 Attribute_Definition:
  Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
  records in the SEASONAL data table to records in the BIORES and BREED data
  tables.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: E#######
   Enumerated_Domain_Value_Definition:
    Where E is the first character of ELEMENT, the next five
    characters are SPECIES_ID, and the last two characters are
    SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
    SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: BREED
  Entity_Type_Definition:
   The data table BREED identifies the monthly presence of certain life-history stages
   or activities for each species at a given location.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: EL_SPE_SEA
  Attribute_Definition:
   Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
   records in the BREED data table to records in the BIORES and SEASONAL data
   tables.
  Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* E#######
>> *Enumerated_Domain_Value_Definition:*
>>> Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* MONTH
> *Attribute_Definition:*
>> Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* 12

Attribute:
> *Attribute_Label:* BREED1
> *Attribute_Definition:*
>> Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Y
>>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity present
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* N
>>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity not present
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* -
>>> *Enumerated_Domain_Value_Definition:*
>>>> Breed category not used or not appropriate for record(s) in question
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* BREED2
> *Attribute_Definition:*
>> Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Y
>>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity

present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

           Enumerated_Domain_Value: N
           Enumerated_Domain_Value_Definition: Life-history stage or activity not present
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: -
           Enumerated_Domain_Value_Definition:
               Breed category not used or not appropriate for record(s) in question
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: Y
           Enumerated_Domain_Value_Definition: Life-history stage or activity present
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: N
           Enumerated_Domain_Value_Definition: Life-history stage or activity not present
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: -
           Enumerated_Domain_Value_Definition:
               Breed category not used or not appropriate for record(s) in question
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOURCES
        Entity_Type_Definition:
           The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
        Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
           Range_Domain_Minimum: 1
           Range_Domain_Maximum: N
Attribute:
    Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Date of source material, publication, or date of personal communication with expert
        source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
        Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:

        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: yyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: STATUS
        Entity_Type_Definition:
            The data table STATUS identifies the species that are listed as either threatened or
            endangered by a state or federal authority. See the Browse_Graphic section for a
            link to the entity-relationship diagram, which describes the way this table relates to
            other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ELEMENT
        Attribute_Definition: Major categories of biological data
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: BIRD
                Enumerated_Domain_Value_Definition: Birds
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: FISH
                Enumerated_Domain_Value_Definition: Fish
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: HABITAT
                Enumerated_Domain_Value_Definition: Habitats and Plants
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: INVERT
                Enumerated_Domain_Value_Definition: Invertebrates
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: M_MAMMAL
                Enumerated_Domain_Value_Definition: Marine Mammals
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: REPTILE
                Enumerated_Domain_Value_Definition: Reptiles and Amphibians
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: T_MAMMAL
                Enumerated_Domain_Value_Definition: Terrestrial Mammals
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
            Numeric identifier for each species that is unique within each element and refers to a
            nationwide master ESI species list maintained at NOAA
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
    Attribute_Label: STATE
    Attribute_Definition: Two-letter state abbreviation
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Two-letter state abbreviation
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: S_F
    Attribute_Definition: State and Federal status
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Publication date of source material used to assign state and federal status values for each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and

SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:
        Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
    Custom_Order_Process:
        Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
    Metadata_Date: 200402
    Metadata_Review_Date: 200402
    Metadata_Contact:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: Jill Petersen
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Position: GIS Manager
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
    Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
    Metadata_Standard_Version: FGDC-STD-001-1998

Generated by [mp](#) version 2.8.2 on Wed Feb 25 17:05:21 2004

American Samoa ESI: FISH (Fish Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)]

Metadata:

- [Identification_Information](#)
- [Data_Quality_Information](#)
- [Spatial_Data_Organization_Information](#)
- [Spatial_Reference_Information](#)
- [Entity_and_Attribute_Information](#)
- [Distribution_Information](#)
- [Metadata_Reference_Information](#)

Identification_Information:
>*Citation:*
>>*Citation_Information:*
>>>*Originator:*
>>>>National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
>>>*Publication_Date:* 200402
>>>*Title:* American Samoa ESI: FISH (Fish Polygons)
>>>*Edition:* First
>>>*Geospatial_Data_Presentation_Form:* Vector digital data
>>>*Series_Information:*
>>>>*Series_Name:* None
>>>>*Issue_Identification:* American Samoa
>>>*Publication_Information:*
>>>>*Publication_Place:* Seattle, Washington
>>>>*Publisher:*
>>>>>National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
>>>*Other_Citation_Details:*
>>>>Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
>*Description:*
>>*Abstract:*
>>>This data set contains sensitive biological resource data for reef, pelagic, benthic, and estuarine fish species in American Samoa. Vector polygons in this data set represent fish distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

>>>This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
>>*Purpose:*
>>>The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 2002
            Ending_Date: 2004
    Currentness_Reference:
        The biological data were compiled during 2002-2003. The currentness dates for these data range from 1991 to 2003 and are documented in the Source_Information section.
Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
Spatial_Domain:
    Bounding_Coordinates:
        West_Bounding_Coordinate: -171.266
        East_Bounding_Coordinate: -167.964
        North_Bounding_Coordinate: -10.873
        South_Bounding_Coordinate: -14.723
Keywords:
    Theme:
        Theme_Keyword_Thesaurus: None
        Theme_Keyword: ESI
        Theme_Keyword: Sensitivity maps
        Theme_Keyword: Coastal resources
        Theme_Keyword: Oil spill planning
        Theme_Keyword: Coastal Zone Management
        Theme_Keyword: Wildlife
        Theme_Keyword: Fish
    Place:
        Place_Keyword_Thesaurus: None
        Place_Keyword: American Samoa
Access_Constraints: None
Use_Constraints:
    DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.
Browse_Graphic:
    Browse_Graphic_File_Name: datafig.jpg
    Browse_Graphic_File_Description:
        Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
    Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
    This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
Native_Data_Set_Environment:
    The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

    The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00,

fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
    Logical_Consistency_Report:
        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

        After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
    Completeness_Report:
        These data represent a synthesis of expert knowledge and available hardcopy reports on fish distribution. These data do not represent all fish occurrences in American Samoa. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 132, Groupers; 331, Sharks; 561, Angelfish; 562, Barracudas; 566, Tunas; 631, Bigeye scad, Selar crumenopthalmus; 635, Threadfin, Polydactylus sexfilis; 957, Rabbitfishes, Siganus spp.; 958, Unicornfishes, Naso spp.; 1007, Parrotfish; 1008, Jacks; 1010, Wrasses; 1019, Snappers; 1025, Butterflyfish; 1027, Filefish; 1028, Goatfish; 1033, Squirrelfish; 1034, Surgeonfish, 1035, Triggerfish; 1047, Marlins; 1058, Emperors; 1065, Mullets. 2.4.1.1 Horizontal Positional Accuracy Report Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1: 24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.
    Lineage:
        Source_Information:
            Source_Citation:
                Citation_Information:
                    Originator:

National Park of American Samoa (NPS); American Samoa
Department of Marine and Wildlife Resources (DMWR)
Publication_Date: 2002
Title: Natural History Guide to American Samoa
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Unknown
Publisher: National Park of American Samoa; DMWR.
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2002
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Alison Green (AS DMWR)
Publication_Date: 1996
Title: The Status of the Coral Reefs of the Samoan Archipelago
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Unknown
Publisher: AS Department of Marine and Wildlife Resources
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1996
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Ponwith, B.J.
Publication_Date: 1991
Title: The Shoreline Fishery of American Samoa: A 12-Year Comparison
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Unknown
Publisher: DMWR Biological Report Series, No. 23
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1991
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Saucerman, S.
Publication_Date: 1995
Title: The Inshore Fishery of American Samoa, 1991-1994
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:

Publication_Place: Unknown
Publisher: DMWR Biological Report Series, No. 77
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1995
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Craig, Ponwith, Aitaoto, Hamm
Publication_Date: 1993
Title:
The Commercial, Subsistence, and Recreational Fisheries of American Samoa
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Unknown
Publisher: Marine Fisheries Review 55(2):109-116
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1993
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Beeching, T.
Publication_Date: 2002
Title: Fish, invertebrate, and socioeconomic resource distribution
Geospatial_Data_Presentation_Form: Expert knowledge
Publication_Information:
Publication_Place: Unknown
Publisher: Unpublished
Type_of_Source_Media: Personal communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2002
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Western Pac. Fish. Mgt. Council
Publication_Date: 2001
Title: 2001 Pelagic Annual Report
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Internet
Publisher: <http://www.wpcouncil.org/pelagic.htm>
Type_of_Source_Media: Online
Source_Time_Period_of_Content:

Time_Period_Information:
    Single_Date/Time:
        Calendar_Date: 2001
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: National Park Service
            Publication_Date: 2003
            Title:
                Distribution of Reef and Pelagic Fish, Sea Turtles, and Invertebrates
            Geospatial_Data_Presentation_Form: Expert Knowledge
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Personal communication
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
    Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Process_Step:
    Process_Description:
        Two main sources of data were used to depict fish distribution and seasonality for this data layer: (1) personal interviews with resource experts from American Samoa Department of Marine and Wildlife Resources (DMWR) and National Park of American Samoa (NPS), and (2) reports and survey data provided by DMWR, NPS, and the Western Pacific Fishery Management Council. Concentration and seasonality information was provided by resource experts or was extracted from published reports.
    Process_Date: 200311
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 326

SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Area point
    Point_and_Vector_Object_Count: 326
SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Complete chain
    Point_and_Vector_Object_Count: 568
SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Link
    Point_and_Vector_Object_Count: 102357
SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Node, planar graph
    Point_and_Vector_Object_Count: 533

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

            Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly

to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
  Entity_Type:
    Entity_Type_Label: FISH.PAT
    Entity_Type_Definition:
      The FISH.PAT table contains attribute information for the vector polygons representing fish distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: ID
    Attribute_Definition:
      An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 760200002
        Range_Domain_Maximum: 760200330
  Attribute:
    Attribute_Label: RARNUM
    Attribute_Definition:
      An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 76000059
        Range_Domain_Maximum: 76000067
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: BIO_LUT
    Entity_Type_Definition:
      The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: RARNUM
    Attribute_Definition:
      An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in

the polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
> *Range_Domain:*
>> *Range_Domain_Minimum:* 76000001
>> *Range_Domain_Maximum:* 76000134

Attribute:
> *Attribute_Label:* ID
> *Attribute_Definition:*
>> An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.
> *Attribute_Definition_Source:* NOAA
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 760100001
>>> *Range_Domain_Maximum:* 763900060

Detailed_Description:
> *Entity_Type:*
>> *Entity_Type_Label:* BIORES
>> *Entity_Type_Definition:*
>>> The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
>> *Entity_Type_Definition_Source:* Research Planning, Inc.

> *Attribute:*
>> *Attribute_Label:* RARNUM
>> *Attribute_Definition:*
>>> An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.
>> *Attribute_Definition_Source:* NOAA
>> *Attribute_Domain_Values:*
>>> *Range_Domain:*
>>>> *Range_Domain_Minimum:* 076000001
>>>> *Range_Domain_Maximum:* 076000134

> *Attribute:*
>> *Attribute_Label:* SPECIES_ID
>> *Attribute_Definition:*
>>> Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
>> *Attribute_Definition_Source:* Research Planning, Inc.
>> *Attribute_Domain_Values:*
>>> *Range_Domain:*
>>>> *Range_Domain_Minimum:* 1
>>>> *Range_Domain_Maximum:* N

> *Attribute:*
>> *Attribute_Label:* CONC
>> *Attribute_Definition:*
>>> The field CONC refers to "concentration," abundance, or density value of a species at a particular location. No quantitative concentration information was available for fish, so descriptive terms such as "HIGH" were used or, where no concentration information was available, this field contains "-".
>> *Attribute_Definition_Source:* Research Planning, Inc.
>> *Attribute_Domain_Values:*
>>> *Enumerated_Domain:*
>>>> *Enumerated_Domain_Value:* Any character
>>>> *Enumerated_Domain_Value_Definition:* Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: SEASON_ID

    Attribute_Definition:

        Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Range_Domain:

            Range_Domain_Minimum: 1

            Range_Domain_Maximum: N

Attribute:

    Attribute_Label: G_SOURCE

    Attribute_Definition:

        Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Range_Domain:

            Range_Domain_Minimum: 1

            Range_Domain_Maximum: N

Attribute:

    Attribute_Label: S_SOURCE

    Attribute_Definition:

        Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Range_Domain:

            Range_Domain_Minimum: 1

            Range_Domain_Maximum: N

Attribute:

    Attribute_Label: ELEMENT

    Attribute_Definition: Major categories of biological data

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: BIRD

            Enumerated_Domain_Value_Definition: Birds

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: FISH

            Enumerated_Domain_Value_Definition: Fish

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: HABITAT

            Enumerated_Domain_Value_Definition: Habitats and Plants

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: INVERT

            Enumerated_Domain_Value_Definition: Invertebrates

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: M_MAMMAL

            Enumerated_Domain_Value_Definition: Marine Mammals

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the
        BIORES data table to records in the SPECIES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five
                characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
                SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the BIORES data table to records in the SEASONAL and BREED data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five
                characters are SPECIES_ID, and the last two characters are
                SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SPECIES
        Entity_Type_Definition:
            The data table SPECIES identifies all species in the ESI data set. See the
            Browse_Graphic section for a link to the entity-relationship diagram, which
            describes the way this table relates to other attribute tables in the ESI data structure.
            Refer to the Completeness_Report for a list of layer-specific species.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
            Numeric identifier for each species that is unique within each element and refers to a
            nationwide master ESI species list maintained at NOAA.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 1
                Range_Domain_Maximum: N
    Attribute:

Attribute_Label: NAME
Attribute_Definition: Species common name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species common name for the entire ESI data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: GEN_SPEC
Attribute_Definition: Species scientific name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species scientific name for the entire ESI data set.
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: dolphin
  Enumerated_Domain_Value_Definition: Dolphin
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: echinoderm
  Enumerated_Domain_Value_Definition: Echinoderm
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: gastropod
  Enumerated_Domain_Value_Definition: Gastropod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: gull_tern
  Enumerated_Domain_Value_Definition: Gull or tern
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: lobster
  Enumerated_Domain_Value_Definition: Lobster
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: m_benthic
  Enumerated_Domain_Value_Definition: Marine benthic fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: m_pelagic

Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: pelagic
Enumerated_Domain_Value_Definition: Pelagic bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: turtle
Enumerated_Domain_Value_Definition: Turtle
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: waterfowl
Enumerated_Domain_Value_Definition: Waterfowl
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: whale
Enumerated_Domain_Value_Definition: Whale
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: worm
Enumerated_Domain_Value_Definition: Worm
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: NHP
Attribute_Definition: Natural Heritage Program global ranking
Attribute_Definition_Source: Network of Natural Heritage Program
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: NHP Global Conservation Status Rank
Codeset_Source: Natural Heritage Program
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of NHP listing
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
> Concatenation of ELEMENT and SPECIES_ID. This item links records in the
> SPECIES data table to records in the BIORES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* E#####
> > *Enumerated_Domain_Value_Definition:*
> > > Where E is the first character of ELEMENT and the next five
> > > characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
> > > SPECIES_ID = 1; EL_SPE = 'B00001').
> > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Detailed_Description:
> *Entity_Type:*
> > *Entity_Type_Label:* SEASONAL
> > *Entity_Type_Definition:*
> > > The data table SEASONAL contains information on the seasonal presence of each
> > > species associated with each spatial vector object. See the Browse_Graphic section
> > > for a link to the entity-relationship diagram, which describes the way this table
> > > relates to other attribute tables in the ESI data structure.
> > *Entity_Type_Definition_Source:* Research Planning, Inc.
> *Attribute:*
> > *Attribute_Label:* ELEMENT
> > *Attribute_Definition:* Major categories of biological data
> > *Attribute_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* BIRD
> > > > *Enumerated_Domain_Value_Definition:* Birds
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* FISH
> > > > *Enumerated_Domain_Value_Definition:* Fish
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* HABITAT
> > > > *Enumerated_Domain_Value_Definition:* Habitats and Plants
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* INVERT
> > > > *Enumerated_Domain_Value_Definition:* Invertebrates
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* M_MAMMAL
> > > > *Enumerated_Domain_Value_Definition:* Marine Mammals
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* REPTILE
> > > > *Enumerated_Domain_Value_Definition:* Reptiles and Amphibians
> > > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Attribute_Domain_Values:*
> > > *Enumerated_Domain:*
> > > > *Enumerated_Domain_Value:* T_MAMMAL
> > > > *Enumerated_Domain_Value_Definition:* Terrestrial Mammals

     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a
  nationwide ESI species list maintained at NOAA.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: SEASON_ID
 Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history characteristics of
  each species at a given location.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: JAN
 Attribute_Definition: January
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in January
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: FEB
 Attribute_Definition: February
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in February
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MAR
 Attribute_Definition: March
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in March
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: APR
 Attribute_Definition: April
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in April
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MAY
 Attribute_Definition: May

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in May
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: JUN
 Attribute_Definition: June
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in June
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: JUL
 Attribute_Definition: July
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in July
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: AUG
 Attribute_Definition: August
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in August
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SEP
 Attribute_Definition: September
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in September
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: OCT
 Attribute_Definition: October
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in October
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: NOV
 Attribute_Definition: November
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in November
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: DEC
    Attribute_Definition: December
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in December
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the SEASONAL data table to records in the BIORES and BREED data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five
                characters are SPECIES_ID, and the last two characters are
                SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BREED
        Entity_Type_Definition:
            The data table BREED identifies the monthly presence of certain life-history stages
            or activities for each species at a given location.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: EL_SPE_SEA
        Attribute_Definition:
            Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
            records in the BREED data table to records in the BIORES and SEASONAL data
            tables.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: E#######
                Enumerated_Domain_Value_Definition:
                    Where E is the first character of ELEMENT, the next five
                    characters are SPECIES_ID, and the last two characters are
                    SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                    SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: MONTH
        Attribute_Definition:
            Two-digit calendar month. Each life history stage or activity type for a particular
            species can have up to 12 records to account for each month of the year.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 1
                Range_Domain_Maximum: 12
    Attribute:
        Attribute_Label: BREED1

Attribute_Definition:
>   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
>   *Enumerated_Domain:*
>>   *Enumerated_Domain_Value:* Y
>>   *Enumerated_Domain_Value_Definition:* Life-history stage or activity present
>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
>   *Enumerated_Domain:*
>>   *Enumerated_Domain_Value:* N
>>   *Enumerated_Domain_Value_Definition:* Life-history stage or activity not present
>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
>   *Enumerated_Domain:*
>>   *Enumerated_Domain_Value:* -
>>   *Enumerated_Domain_Value_Definition:*
>>>   Breed category not used or not appropriate for record(s) in question
>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
>   *Attribute_Label:* BREED2
>   *Attribute_Definition:*
>>   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

>   *Attribute_Definition_Source:* Research Planning, Inc.
>   *Attribute_Domain_Values:*
>>   *Enumerated_Domain:*
>>>   *Enumerated_Domain_Value:* Y
>>>   *Enumerated_Domain_Value_Definition:* Life-history stage or activity present
>>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

>   *Attribute_Domain_Values:*
>>   *Enumerated_Domain:*
>>>   *Enumerated_Domain_Value:* N
>>>   *Enumerated_Domain_Value_Definition:* Life-history stage or activity not present
>>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

>   *Attribute_Domain_Values:*
>>   *Enumerated_Domain:*
>>>   *Enumerated_Domain_Value:* -
>>>   *Enumerated_Domain_Value_Definition:*
>>>>   Breed category not used or not appropriate for record(s) in question
>>>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
>   *Attribute_Label:* BREED3
>   *Attribute_Definition:*
>>   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 =

internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:

      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity
     present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not
     present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: -
      Enumerated_Domain_Value_Definition:
       Breed category not used or not appropriate for record(s) in
       question
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: SOURCES
    Entity_Type_Definition:
     The data table SOURCES contains the primary sources used to create the ESI data
     set. See the Browse_Graphic section for a link to the entity-relationship diagram,
     which describes the way this table relates to other attribute tables in the ESI data
     structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
     Source identifier that links records in the SOURCES data table to the items
     G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and
     S_SOURCE in the BIORES table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N
  Attribute:
    Attribute_Label: ORIGINATOR
    Attribute_Definition: Author or developer of source material or data set
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
     Date of source material, publication, or date of personal communication with expert
     source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: mmyyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data

> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Any character
>>> *Enumerated_Domain_Value_Definition:* Free text
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* DATA_FORMAT
> *Attribute_Definition:* The format of the source material
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Any character
>>> *Enumerated_Domain_Value_Definition:* Free text
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* PUBLICATION
> *Attribute_Definition:* Additional citation information
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Any character
>>> *Enumerated_Domain_Value_Definition:* Free text
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* SCALE
> *Attribute_Definition:* Scale denominator of the source
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* integer
>>> *Enumerated_Domain_Value_Definition:* Any integer
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* TIME_PERIOD
> *Attribute_Definition:*
>> Date(s) of data collection that the source material is based upon.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Numeric
>>> *Enumerated_Domain_Value_Definition:* yyyy
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Detailed_Description:
> *Entity_Type:*
>> *Entity_Type_Label:* STATUS
>> *Entity_Type_Definition:*
>>> The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
>> *Entity_Type_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* ELEMENT
> *Attribute_Definition:* Major categories of biological data
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* BIRD
>>> *Enumerated_Domain_Value_Definition:* Birds

                      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: FISH
              Enumerated_Domain_Value_Definition: Fish
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: HABITAT
              Enumerated_Domain_Value_Definition: Habitats and Plants
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: INVERT
              Enumerated_Domain_Value_Definition: Invertebrates
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: M_MAMMAL
              Enumerated_Domain_Value_Definition: Marine Mammals
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: REPTILE
              Enumerated_Domain_Value_Definition: Reptiles and Amphibians
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: T_MAMMAL
              Enumerated_Domain_Value_Definition: Terrestrial Mammals
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
           Numeric identifier for each species that is unique within each element and refers to a
           nationwide master ESI species list maintained at NOAA.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Range_Domain:
              Range_Domain_Minimum: 1
              Range_Domain_Maximum: N
Attribute:
        Attribute_Label: STATE
        Attribute_Definition: Two-letter state abbreviation
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: Any character
              Enumerated_Domain_Value_Definition: Two-letter state abbreviation
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
        Attribute_Label: S_F
        Attribute_Definition: State and Federal status
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
           Enumerated_Domain:
              Enumerated_Domain_Value: F
              Enumerated_Domain_Value_Definition: Federally listed
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E
        Enumerated_Domain_Value_Definition: Endangered on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T
        Enumerated_Domain_Value_Definition: Threatened on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
    Publication date of source material used to assign state and federal status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: mmyyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#####
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
    Metadata_Date: 200402
    Metadata_Review_Date: 200402
    Metadata_Contact:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: Jill Petersen
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Position: GIS Manager
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
    Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
    Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 17:07:48 2004

American Samoa ESI: INVERT (Invertebrate Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: INVERT (Invertebrate Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for estuarine, reef-associated, and terrestrial invertebrate species in American Samoa. Vector polygons in this data set represent invertebrate distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill

planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
> *Time_Period_Information:*
>> *Range_of_Dates/Times:*
>>> *Beginning_Date:* 2002
>>> *Ending_Date:* 2004
> *Currentness_Reference:*
>> The biological data were compiled during 2002-2003. The currentness dates for these data range from 1991 to 2002 and are documented in the Source_Information section.

Status:
> *Progress:* Complete
> *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
> *Bounding_Coordinates:*
>> *West_Bounding_Coordinate:* -171.266
>> *East_Bounding_Coordinate:* -167.964
>> *North_Bounding_Coordinate:* -10.873
>> *South_Bounding_Coordinate:* -14.723

Keywords:
> *Theme:*
>> *Theme_Keyword_Thesaurus:* None
>> *Theme_Keyword:* ESI
>> *Theme_Keyword:* Sensitivity maps
>> *Theme_Keyword:* Coastal resources
>> *Theme_Keyword:* Oil spill planning
>> *Theme_Keyword:* Coastal Zone Management
>> *Theme_Keyword:* Wildlife
>> *Theme_Keyword:* Invertebrate
> *Place:*
>> *Place_Keyword_Thesaurus:* None
>> *Place_Keyword:* American Samoa

Access_Constraints: None
Use_Constraints:
> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
> *Browse_Graphic_File_Name:* datafig.jpg
> *Browse_Graphic_File_Description:*
>> Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
> *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL Server (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:

            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

    Logical_Consistency_Report:

        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

        After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

    Completeness_Report:

        These data represent a synthesis of expert knowledge and available hardcopy reports on invertebrate distribution. These data do not represent all invertebrate occurrences in American Samoa. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 403, Pronghorn spiny lobster, Panulirus penicillatus; 498, Giant clam, Tridacna maxima; 500, Palolo worm, Eunice viridis; 502, Coconut crab, Birgus latro; 1009, Sea urchins; 1030, Octopus; 1037, Sea snails.

    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:

                Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:24,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:
　Source_Information:
　　Source_Citation:
　　　Citation_Information:
　　　　Originator: Ponwith, B.J.
　　　　Publication_Date: 1991
　　　　Title: The Shoreline Fishery of American Samoa: A 12-Year Comparison
　　　　Geospatial_Data_Presentation_Form: Hardcopy text
　　　　Publication_Information:
　　　　　Publication_Place: Unknown
　　　　　Publisher:
　　　　　　Department of Marine and Wildlife Resources (DMWR)
　　　　　　Biological Report Series, No. 23
　　Type_of_Source_Media: Paper
　　Source_Time_Period_of_Content:
　　　Time_Period_Information:
　　　　Single_Date/Time:
　　　　　Calendar_Date: 1991
　　　Source_Currentness_Reference: Date of publication
　　Source_Citation_Abbreviation: None
　　Source_Contribution: Invertebrate information
　Source_Information:
　　Source_Citation:
　　　Citation_Information:
　　　　Originator: Department of Marine and Wildlife Resources (DMWR)
　　　　Publication_Date: 2002
　　　　Title: Lobster distribution
　　　　Geospatial_Data_Presentation_Form: Hardcopy text
　　　　Publication_Information:
　　　　　Publication_Place: Unknown
　　　　　Publisher: Unpublished
　　Type_of_Source_Media: Paper
　　Source_Time_Period_of_Content:
　　　Time_Period_Information:
　　　　Single_Date/Time:
　　　　　Calendar_Date: 2002
　　　Source_Currentness_Reference: Date of publication
　　Source_Citation_Abbreviation: None
　　Source_Contribution: Invertebrate information
　Source_Information:
　　Source_Citation:
　　　Citation_Information:
　　　　Originator: Craig, Ponwith, Aitaoto, Hamm
　　　　Publication_Date: 1993
　　　　Title:
　　　　　The Commercial, Subsistence, and Recreational Fisheries of
　　　　　American Samoa
　　　　Geospatial_Data_Presentation_Form: Hardcopy text
　　　　Publication_Information:
　　　　　Publication_Place: Unknown
　　　　　Publisher: Marine Fisheries Review 55(2): 109-116
　　Type_of_Source_Media: Paper
　　Source_Time_Period_of_Content:
　　　Time_Period_Information:
　　　　Single_Date/Time:
　　　　　Calendar_Date: 1993
　　　Source_Currentness_Reference: Date of publication
　　Source_Citation_Abbreviation: None
　　Source_Contribution: Invertebrate information
　Source_Information:

Source_Citation:
> *Citation_Information:*
>> *Originator:* Beeching, T.
>> *Publication_Date:* 2002
>> *Title:* Fish, invertebrate, and socioeconomic resource distribution
>> *Geospatial_Data_Presentation_Form:* Expert knowledge
>> *Publication_Information:*
>>> *Publication_Place:* Unknown
>>> *Publisher:* Unpublished

> *Type_of_Source_Media:* Personal communication
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 2002
>> *Source_Currentness_Reference:* Dates of communication

> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Invertebrate information

Source_Information:
> *Source_Citation:*
>> *Citation_Information:*
>>> *Originator:* Green, A. and P. Craig
>>> *Publication_Date:* 1999
>>> *Title:* Population size and structure of giant clams at Rose Atoll
>>> *Geospatial_Data_Presentation_Form:* Hardcopy text
>>> *Publication_Information:*
>>>> *Publication_Place:* Unknown
>>>> *Publisher:* Coral Reefs 18:205-211

> *Type_of_Source_Media:* Paper
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 1999
>> *Source_Currentness_Reference:* Date of publication

> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Invertebrate information

Source_Information:
> *Source_Citation:*
>> *Citation_Information:*
>>> *Originator:* National Park Service
>>> *Publication_Date:* 2003
>>> *Title:*
>>>> Distribution of Reefs and Pelagic Fish, Sea Turtles, and Invertebrates
>>> *Geospatial_Data_Presentation_Form:* Expert knowledge
>>> *Publication_Information:*
>>>> *Publication_Place:* Unknown
>>>> *Publisher:* Unpublished

> *Type_of_Source_Media:* Personal communication
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 2003
>> *Source_Currentness_Reference:* Date of communication

> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Invertebrate information

Process_Step:
> *Process_Description:*
>> Two main sources of data were used to depict invertebrate distribution and seasonality for this data layer: (1) personal interviews with resource experts from American Samoa Department of Marine and Wildlife Resources (DMWR) and

National Park of American Samoa (NPS), and (2) reports and published documents provided by DMWR and NPS. Concentration and seasonality information was provided by resource experts or was extracted from published reports.

Process_Date: 200311

Process_Contact:

> *Contact_Information:*
>> *Contact_Organization_Primary:*
>>> *Contact_Organization:* NOAA, Office of Response and Restoration
>>> *Contact_Person:* Jill Petersen
>> *Contact_Address:*
>>> *Address_Type:* Physical address
>>> *Address:* 7600 Sand Point Way, N.E.
>>> *City:* Seattle
>>> *State_or_Province:* Washington
>>> *Postal_Code:* 98115-6349
>> *Contact_Voice_Telephone:* (206) 526-6944
>> *Contact_Facsimile_Telephone:* (206) 526-6329
>> *Contact_Electronic_Mail_Address:* Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:

> *Direct_Spatial_Reference_Method:* Vector
> *Point_and_Vector_Object_Information:*
>> *SDTS_Terms_Description:*
>>> *SDTS_Point_and_Vector_Object_Type:* GT-polygon composed of rings
>>> *Point_and_Vector_Object_Count:* 379
>> *SDTS_Terms_Description:*
>>> *SDTS_Point_and_Vector_Object_Type:* Area point
>>> *Point_and_Vector_Object_Count:* 379
>> *SDTS_Terms_Description:*
>>> *SDTS_Point_and_Vector_Object_Type:* Complete chain
>>> *Point_and_Vector_Object_Count:* 628
>> *SDTS_Terms_Description:*
>>> *SDTS_Point_and_Vector_Object_Type:* Link
>>> *Point_and_Vector_Object_Count:* 71507
>> *SDTS_Terms_Description:*
>>> *SDTS_Point_and_Vector_Object_Type:* Node, planar graph
>>> *Point_and_Vector_Object_Count:* 537

Spatial_Reference_Information:

> *Horizontal_Coordinate_System_Definition:*
>> *Geographic:*
>>> *Latitude_Resolution:* 0.00005
>>> *Longitude_Resolution:* 0.00005
>>> *Geographic_Coordinate_Units:* Decimal degrees
>> *Geodetic_Model:*
>>> *Horizontal_Datum_Name:* North American Datum of 1983 (HARN)
>>> *Ellipsoid_Name:* Geodetic Reference System 80
>>> *Semi-major_Axis:* 6378137
>>> *Denominator_of_Flattening_Ratio:* 298.257222

Entity_and_Attribute_Information:

> *Overview_Description:*
>> *Entity_and_Attribute_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: INVERT.PAT
        Entity_Type_Definition:
            The INVERT.PAT table contains attribute information for the vector polygons representing invertebrate distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:

Range_Domain_Minimum: 760700002
Range_Domain_Maximum: 760700386
Attribute:
    Attribute_Label: RARNUM
    Attribute_Definition:
        An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 76000068
            Range_Domain_Maximum: 76000081
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIO_LUT
        Entity_Type_Definition:
            The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 76000001
                Range_Domain_Maximum: 76000134
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 760100001
                Range_Domain_Maximum: 763900060
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIORES
        Entity_Type_Definition:
            The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 076000001
        Range_Domain_Maximum: 076000134

Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
        Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: CONC
    Attribute_Definition:
        The field CONC refers to "concentration," abundance, or density value of a species at a particular location. The field may contain counts of individuals per hectare (XX CLAMS/HA). In cases where no quantitative count data was available, a descriptive term such as "HIGH" may be used. In cases where no concentration information was available from any source, the CONC field contains "-". Giant clam densities were derived from 1995 survey data published in a 1999 journal article.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: SEASON_ID
    Attribute_Definition:
        Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: G_SOURCE
    Attribute_Definition:
        Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: S_SOURCE
    Attribute_Definition:
        Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: HABITAT
            Enumerated_Domain_Value_Definition: Habitats and Plants
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: M_MAMMAL
            Enumerated_Domain_Value_Definition: Marine Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: REPTILE
            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T_MAMMAL
            Enumerated_Domain_Value_Definition: Terrestrial Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the
        BIORES data table to records in the SPECIES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five
                characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
                SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the BIORES data table to records in the SEASONAL and BREED data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#######
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT, the next five
            characters are SPECIES_ID, and the last two characters are
            SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
            SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SPECIES
        Entity_Type_Definition:
            The data table SPECIES identifies all species in the ESI data set. See the
            Browse_Graphic section for a link to the entity-relationship diagram, which
            describes the way this table relates to other attribute tables in the ESI data structure.
            Refer to the Completeness_Report for a list of layer-specific species.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
            Numeric identifier for each species that is unique within each element and refers to a
            nationwide master ESI species list maintained at NOAA.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 1
                Range_Domain_Maximum: N
    Attribute:
        Attribute_Label: NAME
        Attribute_Definition: Species common name
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: Species common name for the entire ESI
                data set
                Enumerated_Domain_Value_Definition: Free text
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: GEN_SPEC
        Attribute_Definition: Species scientific name
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: Species scientific name for the entire ESI
                data set.
                Enumerated_Domain_Value_Definition: Free text
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ELEMENT
        Attribute_Definition: Major categories of biological data
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: BIRD
                Enumerated_Domain_Value_Definition: Birds
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: bat
Enumerated_Domain_Value_Definition: Bat
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: bivalve
Enumerated_Domain_Value_Definition: Bivalve
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: cephalopod
Enumerated_Domain_Value_Definition: Cephalopod
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: crab
Enumerated_Domain_Value_Definition: Crab
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: dolphin
Enumerated_Domain_Value_Definition: Dolphin
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: e_nursery
Enumerated_Domain_Value_Definition: Estuarine nursery fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: echinoderm
        Enumerated_Domain_Value_Definition: Echinoderm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gastropod
        Enumerated_Domain_Value_Definition: Gastropod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: lobster
        Enumerated_Domain_Value_Definition: Lobster
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: turtle
        Enumerated_Domain_Value_Definition: Turtle
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: wading
        Enumerated_Domain_Value_Definition: Wading bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: waterfowl
        Enumerated_Domain_Value_Definition: Waterfowl
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: whale
        Enumerated_Domain_Value_Definition: Whale

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: worm
Enumerated_Domain_Value_Definition: Worm
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: NHP
Attribute_Definition: Natural Heritage Program global ranking
Attribute_Definition_Source: Network of Natural Heritage Program
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: NHP Global Conservation Status Rank
Codeset_Source: Natural Heritage Program
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of NHP listing
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links records in the
SPECIES data table to records in the BIORES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five
characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
Entity_Type:
Entity_Type_Label: SEASONAL
Entity_Type_Definition:
The data table SEASONAL contains information on the seasonal presence of each
species associated with each spatial vector object. See the Browse_Graphic section
for a link to the entity-relationship diagram, which describes the way this table
relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: FISH
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: HABITAT
  Enumerated_Domain_Value_Definition: Habitats and Plants
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: INVERT
  Enumerated_Domain_Value_Definition: Invertebrates
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: M_MAMMAL
  Enumerated_Domain_Value_Definition: Marine Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: REPTILE
  Enumerated_Domain_Value_Definition: Reptiles and Amphibians
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: T_MAMMAL
  Enumerated_Domain_Value_Definition: Terrestrial Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a
  nationwide ESI species list maintained at NOAA.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: SEASON_ID
 Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history characteristics of
  each species at a given location.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: JAN
 Attribute_Definition: January
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in January
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: FEB
Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: X
        Enumerated_Domain_Value_Definition: Present in February
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: MAR
    Attribute_Definition: March
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in March
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: APR
    Attribute_Definition: April
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in April
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: MAY
    Attribute_Definition: May
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in May
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUN
    Attribute_Definition: June
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in June
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUL
    Attribute_Definition: July
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in July
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: AUG
    Attribute_Definition: August
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X

Enumerated_Domain_Value_Definition: Present in August
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SEP
    Attribute_Definition: September
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in September
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: OCT
    Attribute_Definition: October
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in October
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NOV
    Attribute_Definition: November
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in November
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DEC
    Attribute_Definition: December
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in December
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the SEASONAL data table to records in the BIORES and BREED data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five
                characters are SPECIES_ID, and the last two characters are
                SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BREED
        Entity_Type_Definition:
            The data table BREED identifies the monthly presence of certain life-history stages
            or activities for each species at a given location.

Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
        records in the BREED data table to records in the BIORES and SEASONAL data
        tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five
                characters are SPECIES_ID, and the last two characters are
                SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: MONTH
    Attribute_Definition:
        Two-digit calendar month. Each life history stage or activity type for a particular
        species can have up to 12 records to account for each month of the year.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: 12
Attribute:
    Attribute_Label: BREED1
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 =
        nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is
        "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1
        = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute
        is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in
                question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED2
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 =
        migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is

"INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED3
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in
            question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 =
        adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is
        "REPTILE" then BREED5 = adults. This attribute is not used for BIRD,
        M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in
                question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOURCES
        Entity_Type_Definition:
            The data table SOURCES contains the primary sources used to create the ESI data
            set. See the Browse_Graphic section for a link to the entity-relationship diagram,
            which describes the way this table relates to other attribute tables in the ESI data
            structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SOURCE_ID
        Attribute_Definition:
            Source identifier that links records in the SOURCES data table to the items
            G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and

S_SOURCE in the BIORES table.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: ORIGINATOR
Attribute_Definition: Author or developer of source material or data set
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
　　Attribute_Label: TIME_PERIOD
　　Attribute_Definition:
　　　　Date(s) of data collection that the source material is based upon.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: Numeric
　　　　　　Enumerated_Domain_Value_Definition: yyyy
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
　Entity_Type:
　　Entity_Type_Label: STATUS
　　Entity_Type_Definition:
　　　　The data table STATUS identifies the species that are listed as either threatened or
　　　　endangered by a state or federal authority. See the Browse_Graphic section for a
　　　　link to the entity-relationship diagram, which describes the way this table relates to
　　　　other attribute tables in the ESI data structure.
　　Entity_Type_Definition_Source: Research Planning, Inc.
　Attribute:
　　Attribute_Label: ELEMENT
　　Attribute_Definition: Major categories of biological data
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: BIRD
　　　　　　Enumerated_Domain_Value_Definition: Birds
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: FISH
　　　　　　Enumerated_Domain_Value_Definition: Fish
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: HABITAT
　　　　　　Enumerated_Domain_Value_Definition: Habitats and Plants
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: INVERT
　　　　　　Enumerated_Domain_Value_Definition: Invertebrates
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: M_MAMMAL
　　　　　　Enumerated_Domain_Value_Definition: Marine Mammals
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: REPTILE
　　　　　　Enumerated_Domain_Value_Definition: Reptiles and Amphibians
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: T_MAMMAL
　　　　　　Enumerated_Domain_Value_Definition: Terrestrial Mammals
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: STATE
 Attribute_Definition: Two-letter state abbreviation
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Any character
   Enumerated_Domain_Value_Definition: Two-letter state abbreviation
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: S_F
 Attribute_Definition: State and Federal status
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: F
   Enumerated_Domain_Value_Definition: Federally listed
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: T_E
 Attribute_Definition: Threatened and endangered status.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: E
   Enumerated_Domain_Value_Definition: Endangered on state or federal list
   Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: T
   Enumerated_Domain_Value_Definition: Threatened on state or federal list
   Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute:
 Attribute_Label: DATE_PUB
 Attribute_Definition:
  Publication date of source material used to assign state and federal status values for each species, if used.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Numeric
   Enumerated_Domain_Value_Definition: mmyyyy
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: EL_SPE
 Attribute_Definition:
  Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data

table to the BIORES and SPECIES data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five
characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: John Kaperick
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Address:
Address_Type: Physical Address
Address: 7600 Sand Point Way N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6400
Contact_Facsimile_Telephone: (206) 526-6329
Resource_Description: ESI Atlas for American Samoa
Distribution_Liability:
Although these data have been processed successfully on a computer system at the National Oceanic
and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the
utility of the data on any other system, nor shall the act of distribution constitute any such warranty.
NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement
copy of the product when the product is determined unreadable by computer-input peripherals, or
when the physical medium is delivered in damaged condition.
Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple
formats to make them useful to a wider community of GIS/mapping users. Distribution formats
include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project
and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data.
The database files are distributed both in the NOAA standard relational database format (see NOAA
Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata
document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200402
Metadata_Review_Date: 200402
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Jill Petersen
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Position: GIS Manager
Contact_Address:
Address_Type: Physical Address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington

Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 17:10:01 2004

American Samoa ESI: M_MAMMAL (Marine Mammal Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: M_MAMMAL (Marine Mammal Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for whales and dolphins in American Samoa. Vector polygons in this data set represent marine mammal distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill

planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
- *Time_Period_Information:*
  - *Range_of_Dates/Times:*
    - *Beginning_Date:* 2002
    - *Ending_Date:* 2004
  - *Currentness_Reference:*
    - The biological data were compiled during 2002-2003. The currentness dates for these data range from 1994 to 2003 and are documented in the Source_Information section.

Status:
- *Progress:* Complete
- *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
- *Bounding_Coordinates:*
  - *West_Bounding_Coordinate:* -171.266
  - *East_Bounding_Coordinate:* -167.964
  - *North_Bounding_Coordinate:* -10.873
  - *South_Bounding_Coordinate:* -14.723

Keywords:
- *Theme:*
  - *Theme_Keyword_Thesaurus:* None
  - *Theme_Keyword:* ESI
  - *Theme_Keyword:* Sensitivity maps
  - *Theme_Keyword:* Coastal resources
  - *Theme_Keyword:* Oil spill planning
  - *Theme_Keyword:* Coastal Zone Management
  - *Theme_Keyword:* Wildlife
  - *Theme_Keyword:* Marine Mammal
- *Place:*
  - *Place_Keyword_Thesaurus:* None
  - *Place_Keyword:* American Samoa

Access_Constraints: None

Use_Constraints:
DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
- *Browse_Graphic_File_Name:* datafig.jpg
- *Browse_Graphic_File_Description:*
  - Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
- *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

    Logical_Consistency_Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

    Completeness_Report:

These data represent a synthesis of expert knowledge and published documents on marine mammal distribution. These data do not necessarily represent all marine mammal occurrences in American Samoa. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 5, Melon-headed whale, Peponocephala electra; 13, Humpback whale, Megaptera novaeangliae; 17, Bottlenose dolphin, Tursiops truncates; 19, Shortfin pilot whale, Globicephala macrorhynchus; 48, Sperm whale, Physeter macrocephalus; 49, Spotted dolphin, Stenella attenuata; 50, Spinner dolphin, Stenella longirostris; 87, Rough-toothed dolphin, Steno bredanensis; 102, False killer whale, Pseudorca crassidens; 105, Pygmy killer whale, Feresa attenuata.

    Positional_Accuracy:
        Horizontal_Positional_Accuracy:
            Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

    Lineage:
        Source_Information:
            Source_Citation:

Citation_Information:
    Originator:
        Department of Marine and Wildlife Resources (DMWR); R. UTZURRUM, J. SEAMON
    Publication_Date: 2003
    Title:
        Marine mammal concentration areas, bat surveys, and pelagic bird distribution
    Geospatial_Data_Presentation_Form: Hardcopy text
    Publication_Information:
        Publication_Place: Unknown
        Publisher: Unpublished
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 2002
            Ending_Date: 2003
    Source_Currentness_Reference: Dates of surveys
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: U.S. Coast Guard
            Publication_Date: 1994
            Title:
                Federal On-Scene Coordinator American Samoa Contingency Plan Annex
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unknown
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1994
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Fagatele Bay National Marine Sanctuary (NMS)
            Publication_Date: 1994
            Title: Watching Samoa's Humpback Whales
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Unknown
                Publisher: NOAA-Sanctuaries and Reserves Division
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1994
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:

Source_Citation:
    Citation_Information:
        Originator: Reeves, Stewart, Clapham, & Powell
        Publication_Date: 2002
        Title: Guide to Marine Mammals of the World
        Geospatial_Data_Presentation_Form: Hardcopy text
        Publication_Information:
            Publication_Place: Unknown
            Publisher: Alfred A. Knopf, Inc., New York, NY, 528 pp.
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2002
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: National Park Service
            Publication_Date: 2003
            Title: Distribution of Reef and Pelagic Fish, Sea Turtles, and Inverts
            Geospatial_Data_Presentation_Form: Expert Knowledge
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Personal communication
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Daschbach, N.
            Publication_Date: 2003
            Title: Fagatele Bay Species Distributions
            Geospatial_Data_Presentation_Form: Expert Knowledge
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Personal communication
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Process_Step:
    Process_Description:
        Two main sources of data were used to depict distributions of marine mammals for this data layer: (1) personal interviews with resource experts from the American Samoa Department of Marine and Wildlife Resources (DMWR), the National Park of American Samoa (NPS), and the National Oceanic and Atmospheric Administration (NOAA) Fagatele Bay National Marine Sanctuary; and (2)

published documents provided by the National Marine Sanctuary, U.S. Coast Guard, the National Audubon Society. Concentration and seasonality information was provided by resource experts or was extracted from published sources.

Process_Date: 200311
Process_Contact:
   Contact_Information:
      Contact_Organization_Primary:
         Contact_Organization: NOAA, Office of Response and Restoration
         Contact_Person: Jill Petersen
      Contact_Address:
         Address_Type: Physical address
         Address: 7600 Sand Point Way, N.E.
         City: Seattle
         State_or_Province: Washington
         Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

---

Spatial_Data_Organization_Information:
   Direct_Spatial_Reference_Method: Vector
   Point_and_Vector_Object_Information:
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
         Point_and_Vector_Object_Count: 298
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Area point
         Point_and_Vector_Object_Count: 298
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Complete chain
         Point_and_Vector_Object_Count: 516
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Link
         Point_and_Vector_Object_Count: 94503
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Node, planar graph
         Point_and_Vector_Object_Count: 491

Spatial_Reference_Information:
   Horizontal_Coordinate_System_Definition:
      Geographic:
         Latitude_Resolution: 0.00005
         Longitude_Resolution: 0.00005
         Geographic_Coordinate_Units: Decimal degrees
      Geodetic_Model:
         Horizontal_Datum_Name: North American Datum of 1983 (HARN)
         Ellipsoid_Name: Geodetic Reference System 80
         Semi-major_Axis: 6378137
         Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
   Overview_Description:
      Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
  Entity_Type:
    Entity_Type_Label: M_MAMMAL.PAT
    Entity_Type_Definition:
      The M_MAMMAL.PAT table contains attribute information for the vector polygons representing marine mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: ID
    Attribute_Definition:
      An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
      Range_Domain:

Range_Domain_Minimum: 760400002
Range_Domain_Maximum: 760400305
Attribute:
Attribute_Label: RARNUM
Attribute_Definition:
An identifier that links directly to the BIORES table or the flat format BIOFILE
table. RARNUM values of 0 are holes in polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 76000002
Range_Domain_Maximum: 76000088
Detailed_Description:
Entity_Type:
Entity_Type_Label: BIO_LUT
Entity_Type_Definition:
The data table BIO_LUT is a lookup table that contains items necessary for linking
vector objects in the biological data layers with the BIORES data table. Note that all
attribute information is stored in a series of relational files, described below. See the
Browse_Graphic section for a link to the entity-relationship diagram, which
describes the way this table relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: RARNUM
Attribute_Definition:
An identifier that links records in the BIO_LUT data table to records in the BIORES
data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in
polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 76000001
Range_Domain_Maximum: 76000134
Attribute:
Attribute_Label: ID
Attribute_Definition:
An identifier that links vector objects in the biology data layers to records in the
BIO_LUT data table. ID is a concatenation of atlas number (76), element number
(4), and record number. ID values of 9999 are holes in polygons and do not contain
information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 760100001
Range_Domain_Maximum: 763900060
Detailed_Description:
Entity_Type:
Entity_Type_Label: BIORES
Entity_Type_Definition:
The data table BIORES contains both biological attribute data and items necessary
for linking vector objects in the biological data layers via the BIO_LUT data table to
other associated data tables. See the Browse_Graphic section for a link to the
entity-relationship diagram, which describes the way this table relates to other
attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: RARNUM
Attribute_Definition:
An identifier that links records in the BIORES data table to records in the BIO_LUT
data table or the flat format BIOFILE data table.

Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 076000001
        Range_Domain_Maximum: 076000134
Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
        Numeric identifier for each species that is unique within each element and refers to a
        nationwide master ESI species list maintained at NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: CONC
    Attribute_Definition:
        The field CONC refers to "concentration," abundance, or density value of a species
        at a particular location. No quantitative concentration information was available for
        marine mammals, so descriptive terms such as "MODERATE" or "COMMON"
        were used. In cases where no concentration information was available from any
        source, the CONC field contains "-".
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SEASON_ID
    Attribute_Definition:
        Numeric identifier for the unique monthly presence and life history characteristics of
        each species at a given location.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: G_SOURCE
    Attribute_Definition:
        Geographic source identifier that links records in the BIORES data table to records
        in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: S_SOURCE
    Attribute_Definition:
        Seasonality source identifier that links records in the BIORES data table to records
        in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:

Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links records in the
    BIORES data table to records in the SPECIES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#####
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT and the next five
            characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
            SPECIES_ID = 1; EL_SPE = 'B00001').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE_SEA
Attribute_Definition:
    Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
    records in the BIORES data table to records in the SEASONAL and BREED data
    tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

       Enumerated_Domain:
           Enumerated_Domain_Value: E#######
           Enumerated_Domain_Value_Definition:
               Where E is the first character of ELEMENT, the next five
               characters are SPECIES_ID, and the last two characters are
               SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
       Entity_Type_Label: SPECIES
       Entity_Type_Definition:
          The data table SPECIES identifies all species in the ESI data set. See the
          Browse_Graphic section for a link to the entity-relationship diagram, which
          describes the way this table relates to other attribute tables in the ESI data structure.
          Refer to the Completeness_Report for a list of layer-specific species.
       Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
       Attribute_Label: SPECIES_ID
       Attribute_Definition:
          Numeric identifier for each species that is unique within each element and refers to a
          nationwide master ESI species list maintained at NOAA.
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Range_Domain:
             Range_Domain_Minimum: 1
             Range_Domain_Maximum: N
    Attribute:
       Attribute_Label: NAME
       Attribute_Definition: Species common name
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
            Enumerated_Domain_Value: Species common name for the entire ESI
               data set
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
       Attribute_Label: GEN_SPEC
       Attribute_Definition: Species scientific name
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
            Enumerated_Domain_Value: Species scientific name for the entire ESI
               data set.
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
       Attribute_Label: ELEMENT
       Attribute_Definition: Major categories of biological data
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: HABITAT
  Enumerated_Domain_Value_Definition: Habitats and Plants
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: INVERT
  Enumerated_Domain_Value_Definition: Invertebrates
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: M_MAMMAL
  Enumerated_Domain_Value_Definition: Marine Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: REPTILE
  Enumerated_Domain_Value_Definition: Reptiles and Amphibians
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: T_MAMMAL
  Enumerated_Domain_Value_Definition: Terrestrial Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: dolphin
  Enumerated_Domain_Value_Definition: Dolphin
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* echinoderm
>> *Enumerated_Domain_Value_Definition:* Echinoderm
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* gastropod
>> *Enumerated_Domain_Value_Definition:* Gastropod
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* gull_tern
>> *Enumerated_Domain_Value_Definition:* Gull or tern
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* lobster
>> *Enumerated_Domain_Value_Definition:* Lobster
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* m_benthic
>> *Enumerated_Domain_Value_Definition:* Marine benthic fish
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* m_pelagic
>> *Enumerated_Domain_Value_Definition:* Marine pelagic fish
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* pelagic
>> *Enumerated_Domain_Value_Definition:* Pelagic bird
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* shorebird
>> *Enumerated_Domain_Value_Definition:* Shorebird
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* turtle
>> *Enumerated_Domain_Value_Definition:* Turtle
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* wading
>> *Enumerated_Domain_Value_Definition:* Wading bird
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* waterfowl
>> *Enumerated_Domain_Value_Definition:* Waterfowl
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* whale
>> *Enumerated_Domain_Value_Definition:* Whale
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: worm
        Enumerated_Domain_Value_Definition: Worm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NHP
    Attribute_Definition: Natural Heritage Program global ranking
    Attribute_Definition_Source: Network of Natural Heritage Program
    Attribute_Domain_Values:
        Codeset_Domain:
            Codeset_Name: NHP Global Conservation Status Rank
            Codeset_Source: Natural Heritage Program
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition: Date of NHP listing
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: 0
            Enumerated_Domain_Value_Definition: Not ranked
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the
        SPECIES data table to records in the BIORES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five
                characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
                SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SEASONAL
        Entity_Type_Definition:
            The data table SEASONAL contains information on the seasonal presence of each
            species associated with each spatial vector object. See the Browse_Graphic section
            for a link to the entity-relationship diagram, which describes the way this table
            relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ELEMENT
        Attribute_Definition: Major categories of biological data
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: BIRD
                Enumerated_Domain_Value_Definition: Birds
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: FISH
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
        Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: SEASON_ID
    Attribute_Definition:
        Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N

Attribute:
    Attribute_Label: JAN
    Attribute_Definition: January
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in January
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: FEB

Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: X
        Enumerated_Domain_Value_Definition: Present in February
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: MAR
    Attribute_Definition: March
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in March
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: APR
    Attribute_Definition: April
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in April
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: MAY
    Attribute_Definition: May
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in May
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUN
    Attribute_Definition: June
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in June
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUL
    Attribute_Definition: July
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in July
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: AUG
    Attribute_Definition: August
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in August

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SEP
    Attribute_Definition: September
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in September
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: OCT
    Attribute_Definition: October
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in October
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NOV
    Attribute_Definition: November
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in November
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DEC
    Attribute_Definition: December
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in December
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
        Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BREED
        Entity_Type_Definition:
            The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.
        Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: EL_SPE_SEA
 Attribute_Definition:
  Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: E#######
   Enumerated_Domain_Value_Definition:
    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MONTH
 Attribute_Definition:
  Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: 12
Attribute:
 Attribute_Label: BREED1
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED2
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 =

hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute
is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in
            question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED3
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 =
        molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is
        "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 =
        internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
        attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not
            present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in
                question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 =
        juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is
        "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then
        BREED4 = molting. This attribute is not used for BIRD, HABITAT, or
        T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:

    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity
      present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
          Breed category not used or not appropriate for record(s) in
          question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
      Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 =
      adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is
      "REPTILE" then BREED5 = adults. This attribute is not used for BIRD,
      M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not
        present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
          Breed category not used or not appropriate for record(s) in
          question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: SOURCES
    Entity_Type_Definition:
      The data table SOURCES contains the primary sources used to create the ESI data
      set. See the Browse_Graphic section for a link to the entity-relationship diagram,
      which describes the way this table relates to other attribute tables in the ESI data
      structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
      Source identifier that links records in the SOURCES data table to the items
      G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and
      S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
Attribute:
    Attribute_Label: ORIGINATOR
    Attribute_Definition: Author or developer of source material or data set
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Date of source material, publication, or date of personal communication with expert source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
        Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: yyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: STATUS
        Entity_Type_Definition:
            The data table STATUS identifies the species that are listed as either threatened or
            endangered by a state or federal authority. See the Browse_Graphic section for a
            link to the entity-relationship diagram, which describes the way this table relates to
            other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ELEMENT
        Attribute_Definition: Major categories of biological data
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: BIRD
                Enumerated_Domain_Value_Definition: Birds
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: FISH
                Enumerated_Domain_Value_Definition: Fish
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: HABITAT
                Enumerated_Domain_Value_Definition: Habitats and Plants
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: INVERT
                Enumerated_Domain_Value_Definition: Invertebrates
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: M_MAMMAL
                Enumerated_Domain_Value_Definition: Marine Mammals
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: REPTILE
                Enumerated_Domain_Value_Definition: Reptiles and Amphibians
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: T_MAMMAL
                Enumerated_Domain_Value_Definition: Terrestrial Mammals
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:

Attribute_Label: SPECIES_ID
Attribute_Definition:
> Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Range_Domain:*
> > *Range_Domain_Minimum:* 1
> > *Range_Domain_Maximum:* N

Attribute:
Attribute_Label: STATE
Attribute_Definition: Two-letter state abbreviation
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* Any character
> > *Enumerated_Domain_Value_Definition:* Two-letter state abbreviation
> > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
Attribute_Label: S_F
Attribute_Definition: State and Federal status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* F
> > *Enumerated_Domain_Value_Definition:* Federally listed
> > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* E
> > *Enumerated_Domain_Value_Definition:* Endangered on state or federal list
> > *Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service

Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* T
> > *Enumerated_Domain_Value_Definition:* Threatened on state or federal list
> > *Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
> Publication date of source material used to assign state and federal status values for each species, if used.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
> > *Enumerated_Domain_Value:* Numeric
> > *Enumerated_Domain_Value_Definition:* mmyyyy
> > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
> Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
　　Enumerated_Domain:
　　　　Enumerated_Domain_Value: E#####
　　　　Enumerated_Domain_Value_Definition:
　　　　　　Where E is the first character of ELEMENT and the next five
　　　　　　characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
　　　　　　SPECIES_ID = 1; EL_SPE = 'B00001').
　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
　　Distributor:
　　　　Contact_Information:
　　　　　　Contact_Person_Primary:
　　　　　　　　Contact_Person: John Kaperick
　　　　　　　　Contact_Organization: NOAA, Office of Response and Restoration
　　　　　　Contact_Address:
　　　　　　　　Address_Type: Physical Address
　　　　　　　　Address: 7600 Sand Point Way, N.E.
　　　　　　　　City: Seattle
　　　　　　　　State_or_Province: Washington
　　　　　　　　Postal_Code: 98115-6349
　　　　　　Contact_Voice_Telephone: (206) 526-6400
　　　　　　Contact_Facsimile_Telephone: (206) 526-6329
　　Resource_Description: ESI Atlas for American Samoa
　　Distribution_Liability:
　　　　Although these data have been processed successfully on a computer system at the National Oceanic
　　　　and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the
　　　　utility of the data on any other system, nor shall the act of distribution constitute any such warranty.
　　　　NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement
　　　　copy of the product when the product is determined unreadable by computer-input peripherals, or
　　　　when the physical medium is delivered in damaged condition.
　　Custom_Order_Process:
　　　　Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple
　　　　formats to make them useful to a wider community of GIS/mapping users. Distribution formats
　　　　include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project
　　　　and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data.
　　　　The database files are distributed both in the NOAA standard relational database format (see NOAA
　　　　Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata
　　　　document includes information on both of these database formats.

Metadata_Reference_Information:
　　Metadata_Date: 200402
　　Metadata_Review_Date: 200402
　　Metadata_Contact:
　　　　Contact_Information:
　　　　　　Contact_Person_Primary:
　　　　　　　　Contact_Person: Jill Petersen
　　　　　　　　Contact_Organization: NOAA, Office of Response and Restoration
　　　　　　Contact_Position: GIS Manager
　　　　　　Contact_Address:
　　　　　　　　Address_Type: Physical Address
　　　　　　　　Address: 7600 Sand Point Way, N.E.
　　　　　　　　City: Seattle
　　　　　　　　State_or_Province: Washington
　　　　　　　　Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 17:12:39 2004

American Samoa ESI: T_MAMPT (Terrestrial Mammal Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: T_MAMPT (Terrestrial Mammal Points)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:

This data set contains sensitive biological resource data for bats in American Samoa. Vector points in this data set represent bat roosts and caves. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

        Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of

1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
> *Time_Period_Information:*
>> *Range_of_Dates/Times:*
>>> *Beginning_Date:* 2002
>>> *Ending_Date:* 2004
> *Currentness_Reference:*
>> The biological data were compiled during 2002-2003. The currentness date for these data is 2003 and is documented in the Source_Information section.

Status:
> *Progress:* Complete
> *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
> *Bounding_Coordinates:*
>> *West_Bounding_Coordinate:* -171.266
>> *East_Bounding_Coordinate:* -167.964
>> *North_Bounding_Coordinate:* -10.873
>> *South_Bounding_Coordinate:* -14.723

Keywords:
> *Theme:*
>> *Theme_Keyword_Thesaurus:* None
>> *Theme_Keyword:* ESI
>> *Theme_Keyword:* Sensitivity maps
>> *Theme_Keyword:* Coastal resources
>> *Theme_Keyword:* Oil spill planning
>> *Theme_Keyword:* Coastal Zone Management
>> *Theme_Keyword:* Wildlife
>> *Theme_Keyword:* Terrestrial Mammal
> *Place:*
>> *Place_Keyword_Thesaurus:* None
>> *Place_Keyword:* American Samoa

Access_Constraints: None
Use_Constraints:
> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
> *Browse_Graphic_File_Name:* datafig.jpg
> *Browse_Graphic_File_Description:*
>> Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
> *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export

format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:

    Attribute_Accuracy:

        Attribute_Accuracy_Report:

            A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

    Logical_Consistency_Report:

        A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

        After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

    Completeness_Report:

        These data represent a synthesis of information from hardcopy maps and survey data on bat roosts and caves. These data do not necessarily represent all bat roosts in American Samoa. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 202, Insular flying fox, Pteropus tonganus; 231, Mariana sheath-tailed bat, Emballonura semicaudata.

    Positional_Accuracy:

        Horizontal_Positional_Accuracy:

            Horizontal_Positional_Accuracy_Report:

                Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

    Lineage:

        Source_Information:

            Source_Citation:

Citation_Information:
>> *Originator:*
>>> Department of Marine and Wildlife Resources (DMWR); R. UTZURRUM, J. SEAMON
>> *Publication_Date:* 2003
>> *Title:*
>>> Marine mammal concentration areas, bat surveys, and pelagic bird distribution
>> *Geospatial_Data_Presentation_Form:* Hardcopy text
>> *Publication_Information:*
>>> *Publication_Place:* Unknown
>>> *Publisher:* Unpublished
> *Type_of_Source_Media:* Paper
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Range_of_Dates/Times:*
>>>> *Beginning_Date:* 2002
>>>> *Ending_Date:* 2003
> *Source_Currentness_Reference:* Dates of surveys
> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Terrestrial mammal information

Source_Information:
> *Source_Citation:*
>> *Citation_Information:*
>>> *Originator:* Department of Marine and Wildlife Resources (DMWR)
>>> *Publication_Date:* 2003
>>> *Title:* List of cave locations for sheath-tailed bat
>>> *Geospatial_Data_Presentation_Form:* Hardcopy text
>>> *Publication_Information:*
>>>> *Publication_Place:* Unknown
>>>> *Publisher:* Unpublished.
> *Type_of_Source_Media:* Paper
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 2003
> *Source_Currentness_Reference:* Date of survey
> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Terrestrial mammal information

Process_Step:
> *Process_Description:*
>> Two main sources of data were used to depict bat roosts for this data layer: (1) hardcopy maps provided by the Department of Marine and Wildlife Resources (DMWR), and (2) survey data provided by DMWR. Concentration and seasonality information was extracted from the survey data.
> *Process_Date:* 200311
> *Process_Contact:*
>> *Contact_Information:*
>>> *Contact_Organization_Primary:*
>>>> *Contact_Organization:* NOAA, Office of Response and Restoration
>>>> *Contact_Person:* Jill Petersen
>>> *Contact_Address:*
>>>> *Address_Type:* Physical address
>>>> *Address:* 7600 Sand Point Way, N.E.
>>>> *City:* Seattle
>>>> *State_or_Province:* Washington
>>>> *Postal_Code:* 98115-6349
>>> *Contact_Voice_Telephone:* (206) 526-6944
>>> *Contact_Facsimile_Telephone:* (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Entity Point
   Point_and_Vector_Object_Count: 60

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
  Geographic:
   Latitude_Resolution: 0.00005
   Longitude_Resolution: 0.00005
   Geographic_Coordinate_Units: Decimal degrees
  Geodetic_Model:
   Horizontal_Datum_Name: North American Datum of 1983 (HARN)
   Ellipsoid_Name: Geodetic Reference System 80
   Semi-major_Axis: 6378137
   Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
 Overview_Description:
  Entity_and_Attribute_Overview:
   In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T_MAMPT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

   Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user

to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: T_MAMPT.PAT
        Entity_Type_Definition:
            The T_MAMPT.PAT table contains attribute information for the vector points representing bat roosts and caves. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (39; 30 because it is a point feature, plus 9, the element value for T_MAMMAL), and record number.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 763900001
                Range_Domain_Maximum: 763900060
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links directly to the BIORES table or the flat format BIOFILE table.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 76000103
                Range_Domain_Maximum: 76000134

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIO_LUT
        Entity_Type_Definition:
            The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:

Range_Domain:
        Range_Domain_Minimum: 76000001
        Range_Domain_Maximum: 76000134

Attribute:
  Attribute_Label: ID
  Attribute_Definition:
    An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (39; 30 because it is a point feature, plus 9, the element value for T_MAMMAL), and record number. ID values of 9999 are holes in polygons and do not contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 760100001
        Range_Domain_Maximum: 763900060

Detailed_Description:
  Entity_Type:
    Entity_Type_Label: BIORES
    Entity_Type_Definition:
      The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: RARNUM
    Attribute_Definition:
      An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 076000001
        Range_Domain_Maximum: 076000134

Attribute:
  Attribute_Label: SPECIES_ID
  Attribute_Definition:
    Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N

Attribute:
  Attribute_Label: CONC
  Attribute_Definition:
    The field CONC refers to "concentration," abundance, or density value of a species at a particular location. In this data layer, the field may contain average counts of individuals (XX BATS) or descriptive terms, such as "RARE" or "EPHEMERAL". In cases where no quantitative or qualitative count data were available, the field contains "-". Bat roost counts were derived from 1997-2001 unpublished survey data.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
> *Attribute_Label:* SEASON_ID
> *Attribute_Definition:*
>> Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* G_SOURCE
> *Attribute_Definition:*
>> Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* S_SOURCE
> *Attribute_Definition:*
>> Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Range_Domain:*
>>> *Range_Domain_Minimum:* 1
>>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* ELEMENT
> *Attribute_Definition:* Major categories of biological data
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* BIRD
>>> *Enumerated_Domain_Value_Definition:* Birds
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* FISH
>>> *Enumerated_Domain_Value_Definition:* Fish
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* HABITAT
>>> *Enumerated_Domain_Value_Definition:* Habitats and Plants
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* INVERT
>>> *Enumerated_Domain_Value_Definition:* Invertebrates
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* M_MAMMAL
>>> *Enumerated_Domain_Value_Definition:* Marine Mammals
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: REPTILE
      Enumerated_Domain_Value_Definition: Reptiles and Amphibians
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: T_MAMMAL
      Enumerated_Domain_Value_Definition: Terrestrial Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
     Concatenation of ELEMENT and SPECIES_ID. This item links records in the
     BIORES data table to records in the SPECIES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: E#####
      Enumerated_Domain_Value_Definition:
       Where E is the first character of ELEMENT and the next five
       characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
       SPECIES_ID = 1; EL_SPE = 'B00001').
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: EL_SPE_SEA
    Attribute_Definition:
     Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
     records in the BIORES data table to records in the SEASONAL and BREED data
     tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: E#######
      Enumerated_Domain_Value_Definition:
       Where E is the first character of ELEMENT, the next five
       characters are SPECIES_ID, and the last two characters are
       SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
       SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
 Entity_Type:
   Entity_Type_Label: SPECIES
   Entity_Type_Definition:
    The data table SPECIES identifies all species in the ESI data set. See the
    Browse_Graphic section for a link to the entity-relationship diagram, which
    describes the way this table relates to other attribute tables in the ESI data structure.
    Refer to the Completeness_Report for a list of layer-specific species.
   Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
     Numeric identifier for each species that is unique within each element and refers to a
     nationwide master ESI species list maintained at NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N
  Attribute:

Attribute_Label: NAME
Attribute_Definition: Species common name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species common name for the entire ESI data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: GEN_SPEC
Attribute_Definition: Species scientific name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species scientific name for the entire ESI data set.
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: bat
        Enumerated_Domain_Value_Definition: Bat
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: bivalve
        Enumerated_Domain_Value_Definition: Bivalve
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: cephalopod
        Enumerated_Domain_Value_Definition: Cephalopod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: crab
        Enumerated_Domain_Value_Definition: Crab
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: dolphin
        Enumerated_Domain_Value_Definition: Dolphin
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: e_nursery
        Enumerated_Domain_Value_Definition: Estuarine nursery fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: echinoderm
        Enumerated_Domain_Value_Definition: Echinoderm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gastropod
        Enumerated_Domain_Value_Definition: Gastropod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: lobster
        Enumerated_Domain_Value_Definition: Lobster
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic

Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: pelagic
Enumerated_Domain_Value_Definition: Pelagic bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: turtle
Enumerated_Domain_Value_Definition: Turtle
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: waterfowl
Enumerated_Domain_Value_Definition: Waterfowl
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: whale
Enumerated_Domain_Value_Definition: Whale
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: worm
Enumerated_Domain_Value_Definition: Worm
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: NHP
Attribute_Definition: Natural Heritage Program global ranking
Attribute_Definition_Source: Network of Natural Heritage Program
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: NHP Global Conservation Status Rank
Codeset_Source: Natural Heritage Program
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of NHP listing
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links records in the
SPECIES data table to records in the BIORES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five
characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
Entity_Type:
Entity_Type_Label: SEASONAL
Entity_Type_Definition:
The data table SEASONAL contains information on the seasonal presence of each
species associated with each spatial vector object. See the Browse_Graphic section
for a link to the entity-relationship diagram, which describes the way this table
relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: FISH
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a
  nationwide ESI species list maintained at NOAA.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: SEASON_ID
 Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history characteristics of
  each species at a given location.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: JAN
 Attribute_Definition: January
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in January
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: FEB
 Attribute_Definition: February
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in February
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MAR
 Attribute_Definition: March
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in March
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: APR
 Attribute_Definition: April
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in April
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: MAY
 Attribute_Definition: May

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: X
        Enumerated_Domain_Value_Definition: Present in May
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUN
    Attribute_Definition: June
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in June
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: JUL
    Attribute_Definition: July
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in July
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: AUG
    Attribute_Definition: August
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in August
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SEP
    Attribute_Definition: September
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in September
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: OCT
    Attribute_Definition: October
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in October
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NOV
    Attribute_Definition: November
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in November
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
      Attribute_Label: DEC
      Attribute_Definition: December
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
          Enumerated_Domain:
              Enumerated_Domain_Value: X
              Enumerated_Domain_Value_Definition: Present in December
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute_Label: EL_SPE_SEA
      Attribute_Definition:
          Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
          records in the SEASONAL data table to records in the BIORES and BREED data
          tables.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
          Enumerated_Domain:
              Enumerated_Domain_Value: E#######
              Enumerated_Domain_Value_Definition:
                 Where E is the first character of ELEMENT, the next five
                 characters are SPECIES_ID, and the last two characters are
                 SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                 SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
      Entity_Type:
          Entity_Type_Label: BREED
          Entity_Type_Definition:
              The data table BREED identifies the monthly presence of certain life-history stages
              or activities for each species at a given location.
          Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute_Label: EL_SPE_SEA
      Attribute_Definition:
          Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
          records in the BREED data table to records in the BIORES and SEASONAL data
          tables.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
          Enumerated_Domain:
               Enumerated_Domain_Value: E#######
              Enumerated_Domain_Value_Definition:
                 Where E is the first character of ELEMENT, the next five
                 characters are SPECIES_ID, and the last two characters are
                 SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
                 SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute_Label: MONTH
      Attribute_Definition:
          Two-digit calendar month. Each life history stage or activity type for a particular
          species can have up to 12 records to account for each month of the year.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
          Range_Domain:
               Range_Domain_Minimum: 1
              Range_Domain_Maximum: 12
Attribute:
      Attribute_Label: BREED1

Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 =
  nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is
  "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1
  = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute
  is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity
    present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not
    present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: -
    Enumerated_Domain_Value_Definition:
      Breed category not used or not appropriate for record(s) in
      question
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: BREED2
  Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 =
    migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is
    "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 =
    hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute
    is not used for HABITAT or T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity
      present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not
      present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: -
      Enumerated_Domain_Value_Definition:
        Breed category not used or not appropriate for record(s) in
        question
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: BREED3
  Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 =
    molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is
    "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 =

internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:

       Enumerated_Domain_Value: Y
       Enumerated_Domain_Value_Definition: Life-history stage or activity present
       Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
     Attribute_Domain_Values:
      Enumerated_Domain:
       Enumerated_Domain_Value: N
       Enumerated_Domain_Value_Definition: Life-history stage or activity not present
       Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
     Attribute_Domain_Values:
      Enumerated_Domain:
       Enumerated_Domain_Value: -
       Enumerated_Domain_Value_Definition:
        Breed category not used or not appropriate for record(s) in question
       Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
  Entity_Type:
    Entity_Type_Label: SOURCES
    Entity_Type_Definition:
     The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
     Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N
  Attribute:
    Attribute_Label: ORIGINATOR
    Attribute_Definition: Author or developer of source material or data set
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
     Date of source material, publication, or date of personal communication with expert source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
     Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: mmyyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
        Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: yyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: STATUS
        Entity_Type_Definition:
            The data table STATUS identifies the species that are listed as either threatened or
            endangered by a state or federal authority. See the Browse_Graphic section for a
            link to the entity-relationship diagram, which describes the way this table relates to
            other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
        Numeric identifier for each species that is unique within each element and refers to a
        nationwide master ESI species list maintained at NOAA
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: STATE
    Attribute_Definition: Two-letter state abbreviation
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Two-letter state abbreviation
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: S_F
    Attribute_Definition: State and Federal status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E
        Enumerated_Domain_Value_Definition: Endangered on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T
        Enumerated_Domain_Value_Definition: Threatened on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
    Publication date of source material used to assign state and federal status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: mmyyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: EL_SPE
Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E#####
        Enumerated_Domain_Value_Definition:
            Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400
            Contact_Facsimile_Telephone: (206) 526-6329
    Resource_Description: ESI Atlas for American Samoa
    Distribution_Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
 Metadata_Date: 200402
 Metadata_Review_Date: 200402
 Metadata_Contact:
  Contact_Information:
   Contact_Person_Primary:
    Contact_Person: Jill Petersen
    Contact_Organization: NOAA, Office of Response and Restoration
   Contact_Position: GIS Manager
   Contact_Address:
    Address_Type: Physical Address
    Address: 7600 Sand Point Way, N.E.
    City: Seattle
    State_or_Province: Washington
    Postal_Code: 98115-6349
   Contact_Voice_Telephone: (206) 526-6944
   Contact_Facsimile_Telephone: (206) 526-6329
   Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
 Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
 Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 17:32:27 2004

American Samoa ESI: REPTILES (Reptile and Amphibian Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: REPTILES (Reptile and Amphibian Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for sea turtles in American Samoa. Vector polygons in this data set represent sea turtle nesting and nearshore distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.
        Purpose:
            The ESI data were collected, mapped, and digitized to provide environmental data for oil spill

planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
> *Time_Period_Information:*
>> *Range_of_Dates/Times:*
>>> *Beginning_Date:* 2002
>>> *Ending_Date:* 2004
>
> *Currentness_Reference:*
>> The biological data were compiled during 2001-2003. The currentness dates for these data range from 1992 to 2003 and are documented in the Source_Information section.

Status:
> *Progress:* Complete
> *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
> *Bounding_Coordinates:*
>> *West_Bounding_Coordinate:* -171.266
>> *East_Bounding_Coordinate:* -167.964
>> *North_Bounding_Coordinate:* -10.873
>> *South_Bounding_Coordinate:* -14.723

Keywords:
> *Theme:*
>> *Theme_Keyword_Thesaurus:* None
>> *Theme_Keyword:* ESI
>> *Theme_Keyword:* Sensitivity maps
>> *Theme_Keyword:* Coastal resources
>> *Theme_Keyword:* Oil spill planning
>> *Theme_Keyword:* Coastal Zone Management
>> *Theme_Keyword:* Wildlife
>> *Theme_Keyword:* Reptile
>> *Theme_Keyword:* Amphibian
>
> *Place:*
>> *Place_Keyword_Thesaurus:* None
>> *Place_Keyword:* American Samoa

Access_Constraints: None
Use_Constraints:
> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
> *Browse_Graphic_File_Name:* datafig.jpg
> *Browse_Graphic_File_Description:*
>> Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
>
> *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
　　Attribute_Accuracy:
　　　　Attribute_Accuracy_Report:
　　　　　　A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
　　Logical_Consistency_Report:
　　　　A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

　　　　After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
　　Completeness_Report:
　　　　These data represent a synthesis of expert knowledge and published reports and maps on sea turtle distribution. These data do not necessarily represent all sea turtle occurrences in American Samoa. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 2, Green sea turtle, Chelonia mydas; 9, Hawksbill sea turtle, Eretmochelys imbricata. 2.4.1.1 Horizontal Positional Accuracy Report Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Most of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.
　　Lineage:
　　　　Source_Information:
　　　　　　Source_Citation:
　　　　　　　　Citation_Information:
　　　　　　　　　　Originator: Volk, Knudsen, Kluge, and Herdich
　　　　　　　　　　Publication_Date: 1992

Title: Towards a Territorial Conservation Strategy
Geospatial_Data_Presentation_Form: Hardcopy map
Publication_Information:
    Publication_Place: Unknown
    Publisher:
        Le Vaomatua, Inc., MacArthur Foundation, East-West Center, Honolulu, HI
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1992
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Source_Information:
Source_Citation:
    Citation_Information:
        Originator:
            National Marine Fisheries Service (NMFS) & U.S. Fish & Wildlife Service (USFWS)
        Publication_Date: 1998
        Title:
            Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle
        Geospatial_Data_Presentation_Form: Hardcopy text
        Publication_Information:
            Publication_Place: Unknown
            Publisher: National Marine Fisheries Service, Silver Spring, MD
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1998
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Source_Information:
Source_Citation:
    Citation_Information:
        Originator: Utzurrum, R.
        Publication_Date: 2002
        Title: Sea turtle conservation in American Samoa
        Geospatial_Data_Presentation_Form: Hardcopy text
        Publication_Information:
            Publication_Place: Unknown
            Publisher:
                In: Kinan, I. (ed.), Proc. Western Pacific Sea Turtle Coop. Research & Mgt. Workshop. WRRFMC, Honolulu, HI
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2002
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Source_Information:
Source_Citation:
    Citation_Information:
        Originator: National Park of American Samoa

Publication_Date: 2002
Title: National Park Resource Maps
Geospatial_Data_Presentation_Form: Hardcopy map
Publication_Information:
    Publication_Place: Unknown
    Publisher: National Park of American Samoa GIS Division
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2002
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Source_Information:
Source_Citation:
    Citation_Information:
        Originator:
            National Marine Fisheries Service (NMFS) & U.S. Fish & Wildlife Service (USFWS)
        Publication_Date: 1998
        Title:
            Recovery Plan for U.S. Pacific Populations of the Green Turtle (Chelonia mydas)
        Geospatial_Data_Presentation_Form: Hardcopy text
        Publication_Information:
            Publication_Place: Unknown
            Publisher: NMFS, Silver Spring, MD
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1998
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Source_Information:
Source_Citation:
    Citation_Information:
        Originator: Dashbach, N.
        Publication_Date: 2003
        Title: Fagatele Bay Species Distribution
        Geospatial_Data_Presentation_Form: Expert knowledge
        Publication_Information:
            Publication_Place: Unknown
            Publisher: Unpublished
Type_of_Source_Media: Personal communication
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2003
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Reptile information
Process_Step:
Process_Description:
    Two main sources of data were used to depict distributions of sea turtles for this data layer: (1) personal interviews with resource experts from the American Samoa Department of Marine and Wildlife Resources (DMWR), the National Park of American Samoa (NPS), and the National Oceanic and Atmospheric Administration

(NOAA) Fagatele Bay National Marine Sanctuary; and (2) published documents
provided by NOAA National Marine Fisheries Service (NMFS), U.S. Fish and
Wildlife Service (USFWS), DMWR, and Le Vaomatua, Inc. Concentration and
seasonality information was provided by resource experts or was extracted from
published sources.

Process_Date: 200311
Process_Contact:
    Contact_Information:
        Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and
Restoration
            Contact_Person: Jill Petersen
        Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
        Contact_Voice_Telephone: (206) 526-6944
        Contact_Facsimile_Telephone: (206) 526-6329
        Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 437
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 437
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 716
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 78513
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 554

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:
    Entity_and_Attribute_Overview:
        In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, REPTILES) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (the American Samoa atlas number is 76) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

        Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

        A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, which describes relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: REPTILES.PAT
        Entity_Type_Definition:
            The REPTILES.PAT table contains attribute information for the vector polygons representing sea turtle nesting and nearshore distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: ID
        Attribute_Definition:
            An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (76), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.
        Attribute_Definition_Source: NOAA

Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 760600002
        Range_Domain_Maximum: 760600441
Attribute:
    Attribute_Label: RARNUM
    Attribute_Definition:
        An identifier that links directly to the BIORES table or the flat format BIOFILE
        table. RARNUM values of 0 are holes in polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 76000089
            Range_Domain_Maximum: 76000102
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIO_LUT
        Entity_Type_Definition:
            The data table BIO_LUT is a lookup table that contains items necessary for linking
            vector objects in the biological data layers with the BIORES data table. Note that all
            attribute information is stored in a series of relational files, described below. See the
            Browse_Graphic section for a link to the entity-relationship diagram, which
            describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:
            An identifier that links records in the BIO_LUT data table to records in the BIORES
            data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in
            polygons and do not contain information.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 76000001
                Range_Domain_Maximum: 76000134
Attribute:
    Attribute_Label: ID
    Attribute_Definition:
        An identifier that links vector objects in the biology data layers to records in the
        BIO_LUT data table. ID is a concatenation of atlas number (76), element number
        (6), and record number. ID values of 9999 are holes in polygons and do not contain
        information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 760100001
            Range_Domain_Maximum: 763900060
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: BIORES
        Entity_Type_Definition:
            The data table BIORES contains both biological attribute data and items necessary
            for linking vector objects in the biological data layers via the BIO_LUT data table to
            other associated data tables. See the Browse_Graphic section for a link to the
            entity-relationship diagram, which describes the way this table relates to other
            attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: RARNUM
        Attribute_Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT
data table or the flat format BIOFILE data table.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 076000001
        Range_Domain_Maximum: 076000134

Attribute:
  Attribute_Label: SPECIES_ID
  Attribute_Definition:
    Numeric identifier for each species that is unique within each element and refers to a
    nationwide master ESI species list maintained at NOAA.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N

Attribute:
  Attribute_Label: CONC
  Attribute_Definition:
    The field CONC refers to "concentration," abundance, or density value of a species
    at a particular location. Quantitative concentration information was available for Rose
    Atoll, so the field may contain counts indicating a range of nesting females (XX-XX
    FEMALES). When quantitative information was not available, descriptive terms
    such as "POTENTIAL", "LOW", "MODERATE", or "CONFIRMED" were used.
    In cases where no concentration information was available from any source, the
    CONC field contains "-".
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: SEASON_ID
  Attribute_Definition:
    Numeric identifier for the unique monthly presence and life history characteristics of
    each species at a given location.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N

Attribute:
  Attribute_Label: G_SOURCE
  Attribute_Definition:
    Geographic source identifier that links records in the BIORES data table to records
    in the SOURCES data table.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N

Attribute:
  Attribute_Label: S_SOURCE
  Attribute_Definition:
    Seasonality source identifier that links records in the BIORES data table to records
    in the SOURCES data table.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:

Range_Domain:
>> *Range_Domain_Minimum:* 1
>> *Range_Domain_Maximum:* N

Attribute:
> *Attribute_Label:* ELEMENT
> *Attribute_Definition:* Major categories of biological data
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* BIRD
>>> *Enumerated_Domain_Value_Definition:* Birds
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* FISH
>>> *Enumerated_Domain_Value_Definition:* Fish
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* HABITAT
>>> *Enumerated_Domain_Value_Definition:* Habitats and Plants
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* INVERT
>>> *Enumerated_Domain_Value_Definition:* Invertebrates
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* M_MAMMAL
>>> *Enumerated_Domain_Value_Definition:* Marine Mammals
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* REPTILE
>>> *Enumerated_Domain_Value_Definition:* Reptiles and Amphibians
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* T_MAMMAL
>>> *Enumerated_Domain_Value_Definition:* Terrestrial Mammals
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* EL_SPE
> *Attribute_Definition:*
>> Concatenation of ELEMENT and SPECIES_ID. This item links records in the
>> BIORES data table to records in the SPECIES and STATUS data tables.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* E#####
>>> *Enumerated_Domain_Value_Definition:*
>>>> Where E is the first character of ELEMENT and the next five
>>>> characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and
>>>> SPECIES_ID = 1; EL_SPE = 'B00001').
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* EL_SPE_SEA
> *Attribute_Definition:*
>> Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links

records in the BIORES data table to records in the SEASONAL and BREED data tables.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E########
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:
Entity_Type:
Entity_Type_Label: SPECIES
Entity_Type_Definition:
The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SPECIES_ID
Attribute_Definition:
Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: NAME
Attribute_Definition: Species common name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Species common name for the entire ESI data set
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: GEN_SPEC
Attribute_Definition: Species scientific name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Species scientific name for the entire ESI data set.
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: FISH
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: HABITAT
  Enumerated_Domain_Value_Definition: Habitats and Plants
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: INVERT
  Enumerated_Domain_Value_Definition: Invertebrates
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: M_MAMMAL
  Enumerated_Domain_Value_Definition: Marine Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: REPTILE
  Enumerated_Domain_Value_Definition: Reptiles and Amphibians
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: T_MAMMAL
  Enumerated_Domain_Value_Definition: Terrestrial Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: dolphin
  Enumerated_Domain_Value_Definition: Dolphin
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: e_nursery
    Enumerated_Domain_Value_Definition: Estuarine nursery fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: echinoderm
        Enumerated_Domain_Value_Definition: Echinoderm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gastropod
        Enumerated_Domain_Value_Definition: Gastropod
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: lobster
        Enumerated_Domain_Value_Definition: Lobster
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: turtle
        Enumerated_Domain_Value_Definition: Turtle
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: wading
        Enumerated_Domain_Value_Definition: Wading bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: waterfowl
        Enumerated_Domain_Value_Definition: Waterfowl
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: whale
    Enumerated_Domain_Value_Definition: Whale
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: worm
        Enumerated_Domain_Value_Definition: Worm
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NHP
    Attribute_Definition: Natural Heritage Program global ranking
    Attribute_Definition_Source: Network of Natural Heritage Program
    Attribute_Domain_Values:
        Codeset_Domain:
            Codeset_Name: NHP Global Conservation Status Rank
            Codeset_Source: Natural Heritage Program
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition: Date of NHP listing
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: 0
            Enumerated_Domain_Value_Definition: Not ranked
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SEASONAL
        Entity_Type_Definition:
            The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:

Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: FISH
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SPECIES_ID
Attribute_Definition:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: SEASON_ID
Attribute_Definition:
Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N
Attribute:
Attribute_Label: JAN
Attribute_Definition: January
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X

Enumerated_Domain_Value_Definition: Present in January
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: FEB
Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in February
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: MAR
Attribute_Definition: March
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in March
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: APR
Attribute_Definition: April
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in April
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: MAY
Attribute_Definition: May
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in May
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: JUN
Attribute_Definition: June
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in June
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: JUL
Attribute_Definition: July
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in July
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: AUG
Attribute_Definition: August
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in August
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SEP
 Attribute_Definition: September
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in September
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: OCT
 Attribute_Definition: October
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in October
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: NOV
 Attribute_Definition: November
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in November
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: DEC
 Attribute_Definition: December
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: X
   Enumerated_Domain_Value_Definition: Present in December
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: EL_SPE_SEA
 Attribute_Definition:
  Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links
  records in the SEASONAL data table to records in the BIORES and BREED data
  tables.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: E#######
   Enumerated_Domain_Value_Definition:
    Where E is the first character of ELEMENT, the next five
    characters are SPECIES_ID, and the last two characters are
    SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and
    SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: BREED

Entity_Type_Definition:
> The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: EL_SPE_SEA
Attribute_Definition:
> Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* E#######
>> *Enumerated_Domain_Value_Definition:*
>>> Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g., ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
Attribute_Label: MONTH
Attribute_Definition:
> Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Range_Domain:*
>> *Range_Domain_Minimum:* 1
>> *Range_Domain_Maximum:* 12

Attribute:
Attribute_Label: BREED1
Attribute_Definition:
> Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* Y
>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity present
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* N
>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity not present
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* -
>> *Enumerated_Domain_Value_Definition:*
>>> Breed category not used or not appropriate for record(s) in question
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
Attribute_Label: BREED2

Attribute_Definition:
> Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 =
> migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is
> "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 =
> hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute
> is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* Y
>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity
>> present
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* N
>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity not
>> present
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
> *Enumerated_Domain:*
>> *Enumerated_Domain_Value:* -
>> *Enumerated_Domain_Value_Definition:*
>>> Breed category not used or not appropriate for record(s) in
>>> question
>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* BREED3
> *Attribute_Definition:*
>> Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 =
>> molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is
>> "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 =
>> internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
>> attribute is not used for HABITAT or T_MAMMAL elements.
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* Y
>>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity
>>> present
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* N
>>> *Enumerated_Domain_Value_Definition:* Life-history stage or activity not
>>> present
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
>> *Enumerated_Domain:*
>>> *Enumerated_Domain_Value:* -
>>> *Enumerated_Domain_Value_Definition:*
>>>> Breed category not used or not appropriate for record(s) in
>>>> question
>>> *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute:
> *Attribute_Label:* BREED4
> *Attribute_Definition:*
>> Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 =
>> juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is
>> "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then

BREED4 = molting. This attribute is not used for BIRD, HABITAT, or
T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity
present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not
present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in
question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED5
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 =
adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is
"REPTILE" then BREED5 = adults. This attribute is not used for BIRD,
M_MAMMAL, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity
present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not
present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in
question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
Entity_Type:
Entity_Type_Label: SOURCES
Entity_Type_Definition:
The data table SOURCES contains the primary sources used to create the ESI data
set. See the Browse_Graphic section for a link to the entity-relationship diagram,
which describes the way this table relates to other attribute tables in the ESI data
structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: SOURCE_ID

Attribute_Definition:
  Source identifier that links records in the SOURCES data table to the items
  G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and
  S_SOURCE in the BIORES table.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 1
    Range_Domain_Maximum: N
Attribute:
  Attribute_Label: ORIGINATOR
  Attribute_Definition: Author or developer of source material or data set
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: DATE_PUB
  Attribute_Definition:
    Date of source material, publication, or date of personal communication with expert
    source
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: mmyyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: TITLE
  Attribute_Definition: Title of source material or data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: DATA_FORMAT
  Attribute_Definition: The format of the source material
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: PUBLICATION
  Attribute_Definition: Additional citation information
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: SCALE
  Attribute_Definition: Scale denominator of the source
  Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: integer
  Enumerated_Domain_Value_Definition: Any integer
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: TIME_PERIOD
 Attribute_Definition:
  Date(s) of data collection that the source material is based upon.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Numeric
   Enumerated_Domain_Value_Definition: yyyy
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: STATUS
  Entity_Type_Definition:
   The data table STATUS identifies the species that are listed as either threatened or
   endangered by a state or federal authority. See the Browse_Graphic section for a
   link to the entity-relationship diagram, which describes the way this table relates to
   other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: FISH
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: HABITAT
    Enumerated_Domain_Value_Definition: Habitats and Plants
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: INVERT
    Enumerated_Domain_Value_Definition: Invertebrates
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: M_MAMMAL
    Enumerated_Domain_Value_Definition: Marine Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SPECIES_ID
Attribute_Definition:
Numeric identifier for each species that is unique within each element and refers to a
nationwide master ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
Attribute_Label: STATE
Attribute_Definition: Two-letter state abbreviation
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Two-letter state abbreviation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: S_F
Attribute_Definition: State and Federal status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: F
Enumerated_Domain_Value_Definition: Federally listed
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E
Enumerated_Domain_Value_Definition: Endangered on state or federal
list
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife
Service
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on state or federal list
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife
Service

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
Publication date of source material used to assign state and federal status values for
each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g., ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: John Kaperick
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Address:
Address_Type: Physical Address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6400
Contact_Facsimile_Telephone: (206) 526-6329
Resource_Description: ESI Atlas for American Samoa
Distribution_Liability:
Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200402
Metadata_Review_Date: 200402
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Jill Petersen
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Position: GIS Manager
Contact_Address:
Address_Type: Physical Address

Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.8.2 on Wed Feb 25 17:27:37 2004

American Samoa ESI: MGT (Management Area Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: MGT (Management Area Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains management area data for special management areas, marine parks, marine sanctuaries, national parks, and wildlife refuges in American Samoa. Vector polygons in this data set represent management areas. Location-specific type and source information is stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the SOCECON (Socioeconomic Resource Points) data layer, part of the larger American Samoa ESI database, for additional human-use information.

Purpose:
>> The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
> *Time_Period_Information:*
>> *Range_of_Dates/Times:*
>>> *Beginning_Date:* 2002
>>> *Ending_Date:* 2004
> *Currentness_Reference:*
>> These data were compiled during 2002-2003. The currentness dates for the data range from 2001 to 2003 and are documented in the Source_Information section.

Status:
> *Progress:* Complete
> *Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
> *Bounding_Coordinates:*
>> *West_Bounding_Coordinate:* -171.266
>> *East_Bounding_Coordinate:* -167.964
>> *North_Bounding_Coordinate:* -10.873
>> *South_Bounding_Coordinate:* -14.723

Keywords:
> *Theme:*
>> *Theme_Keyword_Thesaurus:* None
>> *Theme_Keyword:* ESI
>> *Theme_Keyword:* Sensitivity maps
>> *Theme_Keyword:* Coastal resources
>> *Theme_Keyword:* Oil spill planning
>> *Theme_Keyword:* Coastal Zone Management
>> *Theme_Keyword:* Wildlife
>> *Theme_Keyword:* Management area
> *Place:*
>> *Place_Keyword_Thesaurus:* None
>> *Place_Keyword:* American Samoa

Access_Constraints: None
Use_Constraints:
> DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
> *Browse_Graphic_File_Name:* datafig.jpg
> *Browse_Graphic_File_Description:*
>> Relationships between spatial data layers and attribute data tables for the American Samoa ESI data.
> *Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
> This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
> The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's

with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
  Attribute_Accuracy:
    Attribute_Accuracy_Report:
      A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
  Logical_Consistency_Report:
    A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
  Completeness_Report:
    These data represent a synthesis of digital data sets that included management area boundaries. See also the SOCECON (Socioeconomic Resource Points) data layer, part of the larger American Samoa ESI database, for additional human-use information. These data do not necessarily represent all management areas in American Samoa.
  Positional_Accuracy:
    Horizontal_Positional_Accuracy:
      Horizontal_Positional_Accuracy_Report:
        The MGT data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.
  Lineage:
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: National Park of American Samoa
          Publication_Date: 2003
          Title: National Park of American Samoa: Tutuila Unit
          Geospatial_Data_Presentation_Form: Digital vector data
          Publication_Information:
            Publication_Place: Unknown
            Publisher: Unpublished
      Source_Scale_Denominator: Unknown
      Type_of_Source_Media: E-mail
      Source_Time_Period_of_Content:
        Time_Period_Information:
          Single_Date/Time:
            Calendar_Date: 2003
        Source_Currentness_Reference: Date of publication

        Source_Citation_Abbreviation: None
        Source_Contribution: Management information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: National Park of American Samoa
            Publication_Date: 2003
            Title: National Park of American Samoa: Ta'u Unit
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: E-mail
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Management information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: National Park of American Samoa
            Publication_Date: 2003
            Title: National Park of American Samoa: Ofu and Olosega Island Unit
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: E-mail
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Management information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: National Park of American Samoa
            Publication_Date: 2001
            Title: Marine Protected Areas (MPAs) within the EEZ of American Samoa
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Unknown
                Publisher: United States Code of Federal Regulations
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Dates of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Management information
Source_Information:

Source_Citation:
    Citation_Information:
        Originator: AS Department of Marine and Wildlife Resources (DMWR)
        Publication_Date: 2003
        Title: DMWR Community-Based Fisheries Management Program
        Geospatial_Data_Presentation_Form: Digital vector data
        Publication_Information:
            Publication_Place: Unknown
            Publisher: Unpublished
Source_Scale_Denominator: Unknown
Type_of_Source_Media: E-mail
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2003
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Management information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: American Samoa Department of Commerce
            Publication_Date: 2002
            Title: American Samoa Sea Turtle and Marine Mammal Sanctuary
            Geospatial_Data_Presentation_Form: Digital vector data
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: E-mail
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Management information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Coral Reef Advisory Group
            Publication_Date: 2003
            Title: Special Management Areas on Tutuila
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Source_Scale_Denominator: 24,000
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Management information
Process_Step:
    Process_Description:
        The main sources of data used to depict management areas for this data layer were
        digital coverages of management area boundaries provided by the National Park of

American Samoa (NPSA), American Samoa Department of Commerce (DOC), American Samoa Department of Marine and Wildlife Resources (DMWR), and the Coral Reef Advisory Group (CRAG).

Process_Date: 200311
Process_Contact:
    Contact_Information:
        Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Person: Jill Petersen
        Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
        Contact_Voice_Telephone: (206) 526-6944
        Contact_Facsimile_Telephone: (206) 526-6329
        Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

---

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 317
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 317
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 449
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 38974
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 394

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for the American Samoa atlas, the number is 76). ID is a unique combination of the atlas number (76), an element specific number (MGT = 11) and a unique record number. SOC_DAT and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Detailed_Description:

 Entity_Type:

  Entity_Type_Label: MGT.PAT

  Entity_Type_Definition:

   The MGT.PAT table contains attribute information for the vector polygons representing management areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

  Entity_Type_Definition_Source: Research Planning, Inc.

 Attribute:

  Attribute_Label: TYPE

  Attribute_Definition:

   The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

  Attribute_Definition_Source: Research Planning, Inc.

  Attribute_Domain_Values:

   Enumerated_Domain:

    Enumerated_Domain_Value: MA

    Enumerated_Domain_Value_Definition: Management Areas

    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

   Enumerated_Domain:

    Enumerated_Domain_Value: MS

    Enumerated_Domain_Value_Definition: Marine Sanctuary

    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

   Enumerated_Domain:

    Enumerated_Domain_Value: NP

    Enumerated_Domain_Value_Definition: National Park

    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

   Enumerated_Domain:

    Enumerated_Domain_Value: WR

    Enumerated_Domain_Value_Definition: Wildlife Refuge

    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

 Attribute:

  Attribute_Label: ID

  Attribute_Definition:

   An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (76), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

  Attribute_Definition_Source: NOAA

  Attribute_Domain_Values:

   Range_Domain:

    Range_Domain_Minimum: 761100002

    Range_Domain_Maximum: 761100318

 Attribute:

  Attribute_Label: HUNUM

  Attribute_Definition:

   An identifier that links directly to the SOC_DAT table. HUNUM values of 0 are

holes in polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 76000039
Range_Domain_Maximum: 76000083
Detailed_Description:
Entity_Type:
Entity_Type_Label: SOC_LUT
Entity_Type_Definition:
The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: HUNUM
Attribute_Definition:
An identifier that links records in the SOC_LUT data table to records in the SOC_DAT data table. HUNUM values of 0 are holes in polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 76000001
Range_Domain_Maximum: 76000083
Attribute:
Attribute_Label: ID
Attribute_Definition:
An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (76), element number (SOCECON=10; MGT=11), and record number. ID values of 9999 are holes in polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 761000001
Range_Domain_Maximum: 761100318
Detailed_Description:
Entity_Type:
Entity_Type_Label: SOC_DAT
Entity_Type_Definition:
The data table SOC_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: HUNUM
Attribute_Definition:
An identifier that links records in the SOC_DAT data table to records in the SOC_LUT data table.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 76000001
Range_Domain_Maximum: 76000083
Attribute:
Attribute_Label: TYPE
Attribute_Definition: Identifies the feature type

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: AIRPORT
        Enumerated_Domain_Value_Definition: Airport
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: AQUACULTURE
        Enumerated_Domain_Value_Definition: Aquaculture Site
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: ARCHAEOLOGICAL SITE
        Enumerated_Domain_Value_Definition: Archaeological Site
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: BEACH
        Enumerated_Domain_Value_Definition: Beach
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: HISTORICAL SITE
        Enumerated_Domain_Value_Definition: Historical Site
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: MANAGEMENT AREA
        Enumerated_Domain_Value_Definition: Managment Area
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: MARINE SANCTUARY
        Enumerated_Domain_Value_Definition: Marine Sanctuary
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: NATIONAL LANDMARK
        Enumerated_Domain_Value_Definition: National Landmark
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: NATIONAL PARK
        Enumerated_Domain_Value_Definition: National Park
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: PARK
        Enumerated_Domain_Value_Definition: Park
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: SUBSISTENCE
        Enumerated_Domain_Value_Definition: Subsistence Collection Area
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: WILDLIFE REFUGE
        Enumerated_Domain_Value_Definition: Wildlife Refuge
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NAME
    Attribute_Definition: The feature name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

       Attribute_Label: CONTACT
       Attribute_Definition: Contact person or entity
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
             Enumerated_Domain_Value: Any character
             Enumerated_Domain_Value_Definition: Free text
             Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
       Attribute_Label: PHONE
       Attribute_Definition: Contact telephone number
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Enumerated_Domain:
             Enumerated_Domain_Value: Any character
             Enumerated_Domain_Value_Definition: Free text
             Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
       Attribute_Label: G_SOURCE
       Attribute_Definition:
          Geographic source integer identifier that links records in the SOC_DAT data table
          to records in the SOURCES data table.
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Range_Domain:
             Range_Domain_Minimum: 1
             Range_Domain_Maximum: N
Attribute:
       Attribute_Label: A_SOURCE
       Attribute_Definition:
          Attribute source integer identifier that links records in the SOC_DAT data table to
          records in the SOURCES data table.
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Range_Domain:
             Range_Domain_Minimum: 1
             Range_Domain_Maximum: N
Detailed_Description:
   Entity_Type:
       Entity_Type_Label: SOURCES
       Entity_Type_Definition:
          The data table SOURCES contains the primary sources used to create the ESI data
          set. See the Browse_Graphic section for a link to the entity-relationship diagram,
          which describes the way this table relates to other attribute tables in the ESI data
          structure.
       Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
       Attribute_Label: SOURCE_ID
       Attribute_Definition:
          Source identifier that links records in the SOURCES data table to the items
          G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and
          S_SOURCE in the BIORES table.
       Attribute_Definition_Source: Research Planning, Inc.
       Attribute_Domain_Values:
          Range_Domain:
             Range_Domain_Minimum: 1
             Range_Domain_Maximum: N
Attribute:
       Attribute_Label: ORIGINATOR
       Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Date of source material, publication, or date of personal communication with expert
        source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
        Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:

Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: yyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: John Kaperick
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6400
      Contact_Facsimile_Telephone: (206) 526-6329
  Resource_Description: ESI Atlas for American Samoa
  Distribution_Liability:
    Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
  Custom_Order_Process:
    Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
  Metadata_Date: 200402
  Metadata_Review_Date: 200402
  Metadata_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Jill Petersen
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Position: GIS Manager
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
  Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998

Generated by [mp](#) version 2.8.2 on Wed Feb 25 17:53:01 2004

American Samoa ESI: SOCECON (Socioeconomic Resource Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
            Publication_Date: 200402
            Title: American Samoa ESI: SOCECON (Socioeconomic Resource Points)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: American Samoa
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.
    Description:
        Abstract:
            This data set contains human-use resource data for airports, aquaculture sites, archaeological and historic sites, National Landmarks, National Parks, recreational beaches, and subsistence collection areas in American Samoa. Vector points in this data set represent human-use site locations. Location-specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for American Samoa. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the MGT (Management Area Polygons) data layer, part of the larger American Samoa ESI database, for additional human-use information.

Purpose:
>The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act, with amendments by the Oil Pollution Act of 1990, requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:
>*Time_Period_Information:*
>>*Range_of_Dates/Times:*
>>>*Beginning_Date:* 2002
>>>*Ending_Date:* 2004
>*Currentness_Reference:*
>>These data were compiled during 2002-2003. The currentness dates for the data range from 1989 to 2002 and are documented in the Source_Information section.

Status:
>*Progress:* Complete
>*Maintenance_and_Update_Frequency:* None Scheduled

Spatial_Domain:
>*Bounding_Coordinates:*
>>*West_Bounding_Coordinate:* -171.266
>>*East_Bounding_Coordinate:* -167.964
>>*North_Bounding_Coordinate:* -10.873
>>*South_Bounding_Coordinate:* -14.723

Keywords:
>*Theme:*
>>*Theme_Keyword_Thesaurus:* None
>>*Theme_Keyword:* ESI
>>*Theme_Keyword:* Sensitivity maps
>>*Theme_Keyword:* Coastal resources
>>*Theme_Keyword:* Oil spill planning
>>*Theme_Keyword:* Coastal Zone Management
>>*Theme_Keyword:* Wildlife
>>*Theme_Keyword:* Socioeconomic resource
>>*Theme_Keyword:* Human-use resource
>*Place:*
>>*Place_Keyword_Thesaurus:* None
>>*Place_Keyword:* American Samoa

Access_Constraints: None

Use_Constraints:
>DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse_Graphic:
>*Browse_Graphic_File_Name:* datafig.jpg
>*Browse_Graphic_File_Description:*
>>Relationships between spatial data layers and attribute data tables for American Samoa ESI data.
>*Browse_Graphic_File_Type:* JPEG

Data_Set_Credit:
>This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, and NOAA's Coral Reef Conservation Program.

Native_Data_Set_Environment:
>The software packages used to develop the atlas are Environmental Systems Research Institute's

ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: benthic.e00, birds.e00, casspt.e00, esi.e00, fish.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mampt.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

Data_Quality_Information:
  Attribute_Accuracy:
    Attribute_Accuracy_Report:
      A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
  Logical_Consistency_Report:
      A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.
  Completeness_Report:
      These data represent a synthesis of expert knowledge, hardcopy maps, and reports depicting socioeconomic resources in American Samoa. Refer to the MGT (Management Area Polygons) data layer, part of the larger American Samoa ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in American Samoa.
  Positional_Accuracy:
    Horizontal_Positional_Accuracy:
      Horizontal_Positional_Accuracy_Report:
        The spatial components of the SOCECON data set are developed from pre-existing digital and hardcopy sources and the knowledge of regional experts. It is difficult to estimate the positional accuracy of such data, except to state that hardcopy data were compiled on base maps with a scale of 1:24,000. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.
  Lineage:
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: Volk, Knudsen, Kluge, and Herdich
          Publication_Date: 1992
          Title: Towards a Territorial Conservation Strategy
          Geospatial_Data_Presentation_Form: Hardcopy map
          Publication_Information:
            Publication_Place: Unknown
            Publisher:
              Le Vaomatua, Inc., MacArthur Foundation, East-West Center, Honolulu, HI
      Type_of_Source_Media: Paper
      Source_Time_Period_of_Content:

Time_Period_Information:
    Single_Date/Time:
        Calendar_Date: 1992
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Beeching, T.
            Publication_Date: 2002
            Title: Fish, invertebrate, and socioeconomic resource distribution
            Geospatial_Data_Presentation_Form: Expert knowledge
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Personal communication
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: AS Historic Preservation Office
            Publication_Date: 2002
            Title: Archaeological/Historical Site Locations
            Geospatial_Data_Presentation_Form: Expert knowledge
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Unpublished
    Type_of_Source_Media: Personal communication
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2003
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: U.S. Geological Survey
            Publication_Date: 1989
            Title: 7.5" Togographic Quadrangles
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Unknown
                Publisher: Denver, CO
    Type_of_Source_Media: Paper
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1989
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information

Source_Information:
>*Source_Citation:*
>>*Citation_Information:*
>>>*Originator:* National Park Service
>>>*Publication_Date:* 1999
>>>*Title:* American Samoa: Official Map and Guide
>>>*Geospatial_Data_Presentation_Form:* Hardcopy map
>>>*Publication_Information:*
>>>>*Publication_Place:* Unknown
>>>>*Publisher:* GPO:1999-454-767/60471
>*Type_of_Source_Media:* Paper
>*Source_Time_Period_of_Content:*
>>*Time_Period_Information:*
>>>*Single_Date/Time:*
>>>>*Calendar_Date:* 1999
>>*Source_Currentness_Reference:* Date of publication
>*Source_Citation_Abbreviation:* None
>*Source_Contribution:* Socioeconomic information

Source_Information:
>*Source_Citation:*
>>*Citation_Information:*
>>>*Originator:* Bier, J.A.
>>>*Publication_Date:* 1990
>>>*Title:* Islands of Samoa
>>>*Geospatial_Data_Presentation_Form:* Hardcopy map
>>>*Publication_Information:*
>>>>*Publication_Place:* Unknown
>>>>*Publisher:* University of Hawaii Press
>*Type_of_Source_Media:* Paper
>*Source_Time_Period_of_Content:*
>>*Time_Period_Information:*
>>>*Single_Date/Time:*
>>>>*Calendar_Date:* 1990
>>*Source_Currentness_Reference:* Date of publication
>*Source_Citation_Abbreviation:* None
>*Source_Contribution:* Socioeconomic information

Process_Step:
>*Process_Description:*
>>Two main sources of data were used to depict human-use resources for this data layer: (1) personal interviews with resource experts from the American Samoa Historic Preservation Office (AS HPO) and American Samoa Department of Marine and Wildlife Resources (DMWR), and (2) published maps and reports suggested for use by the National Park of American Samoa (NPS) and AS HPO.
>*Process_Date:* 200311
>*Process_Contact:*
>>*Contact_Information:*
>>>*Contact_Organization_Primary:*
>>>>*Contact_Organization:* NOAA, Office of Response and Restoration
>>>>*Contact_Person:* Jill Petersen
>>>*Contact_Address:*
>>>>*Address_Type:* Physical address
>>>>*Address:* 7600 Sand Point Way, N.E.
>>>>*City:* Seattle
>>>>*State_or_Province:* Washington
>>>>*Postal_Code:* 98115-6349
>>>*Contact_Voice_Telephone:* (206) 526-6944
>>>*Contact_Facsimile_Telephone:* (206) 526-6329
>>>*Contact_Electronic_Mail_Address:* Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Entity Point
            Point_and_Vector_Object_Count: 304

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983 (HARN)
            Ellipsoid_Name: Geodetic Reference System 80
            Semi-major_Axis: 6378137
            Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT
            and SOURCES, are used to store the complex socioeconomic data in the ESI data structure.
            The geographic data layer containing socioeconomic resource information (in this case,
            SOCECON) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique
            ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is
            a unique reference number concatenated with the atlas number (the atlas number for
            American Samoa is 76). ID is a unique combination of the atlas number (76), an element
            specific number (SOCECON = 10) and a unique record number. SOC_DAT and the other
            relational data tables are described below in detail. See the Browse_Graphic section for a link
            to the entity-relationship diagram, which describes the way these tables relate to the
            geographic data layers and other attribute tables in the ESI data structure.
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: SOCECON.PAT
            Entity_Type_Definition:
                The SOCECON.PAT table contains attribute information for the vector points
                representing human-use site locations. Note that all attribute information is stored in
                a series of relational files, described below. See the Browse_Graphic section for a
                link to the entity-relationship diagram, which describes the relationships between
                attribute tables in the ESI data structure
            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: TYPE
            Attribute_Definition:
                The human-use features depicted on the maps are those that could be impacted by an
                oil spill or could provide access for response operations.
            Attribute_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: A
                    Enumerated_Domain_Value_Definition: Airport
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: AQ
    Enumerated_Domain_Value_Definition: Aquaculture Site
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: AS
    Enumerated_Domain_Value_Definition: Archaeological Site
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: B
    Enumerated_Domain_Value_Definition: Beach
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: HS
    Enumerated_Domain_Value_Definition: Historical Site
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: NL
    Enumerated_Domain_Value_Definition: National Landmark
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: NP
    Enumerated_Domain_Value_Definition: National Park
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: S
    Enumerated_Domain_Value_Definition: Subsistence Collection Area
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Attribute:
    Attribute_Label: ID
    Attribute_Definition:
        An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (76), element number (10), and record number.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 761000001
            Range_Domain_Maximum: 761000304

Attribute:
    Attribute_Label: HUNUM
    Attribute_Definition: An identifier that links directly to the SOC_DAT table.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 76000001
            Range_Domain_Maximum: 76000066

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOC_LUT
        Entity_Type_Definition:
            The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: HUNUM
        Attribute_Definition:
            An identifier that links records in the SOC_LUT data table to records in the

SOC_DAT data table. HUNUM values of 0 are holes in polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 76000001
        Range_Domain_Maximum: 76000083
Attribute:
    Attribute_Label: ID
    Attribute_Definition:
        An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (76), element number (SOCECON=10; MGT=11), and record number. ID values of 9999 are holes in polygons and do not contain information.
    Attribute_Definition_Source: NOAA
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 761000001
            Range_Domain_Maximum: 761100318
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOC_DAT
        Entity_Type_Definition:
            The data table SOC_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: HUNUM
        Attribute_Definition:
            An identifier that links records in the SOC_DAT data table to records in the SOC_LUT data table.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 76000001
                Range_Domain_Maximum: 76000083
    Attribute:
        Attribute_Label: TYPE
        Attribute_Definition: Identifies the feature type
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: AIRPORT
                Enumerated_Domain_Value_Definition: Airport
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: AQUACULTURE
                Enumerated_Domain_Value_Definition: Aquaculture Site
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: ARCHAEOLOGICAL SITE
                Enumerated_Domain_Value_Definition: Archaeological Site
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: BEACH
                Enumerated_Domain_Value_Definition: Beach
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:

Enumerated_Domain_Value: HISTORICAL SITE
Enumerated_Domain_Value_Definition: Historical Site
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: MANAGEMENT AREA
Enumerated_Domain_Value_Definition: Managment Area
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: MARINE SANCTUARY
Enumerated_Domain_Value_Definition: Marine Sanctuary
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: NATIONAL LANDMARK
Enumerated_Domain_Value_Definition: National Landmark
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: NATIONAL PARK
Enumerated_Domain_Value_Definition: National Park
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: PARK
Enumerated_Domain_Value_Definition: Park
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: SUBSISTENCE
Enumerated_Domain_Value_Definition: Subsistence Collection Area
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc
Enumerated_Domain:
Enumerated_Domain_Value: WILDLIFE REFUGE
Enumerated_Domain_Value_Definition: Wildlife Refuge
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: NAME
Attribute_Definition: The feature name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: CONTACT
Attribute_Definition: Contact person or entity
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: PHONE
Attribute_Definition: Contact telephone number
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: G_SOURCE

Attribute_Definition:
　　Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
　　Range_Domain:
　　　　Range_Domain_Minimum: 1
　　　　Range_Domain_Maximum: N

Attribute:
　　Attribute_Label: A_SOURCE
　　Attribute_Definition:
　　　　Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Range_Domain:
　　　　　　Range_Domain_Minimum: 1
　　　　　　Range_Domain_Maximum: N

Detailed_Description:
　　Entity_Type:
　　　　Entity_Type_Label: SOURCES
　　　　Entity_Type_Definition:
　　　　　　The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
　　　　Entity_Type_Definition_Source: Research Planning, Inc.
　　Attribute:
　　　　Attribute_Label: SOURCE_ID
　　　　Attribute_Definition:
　　　　　　Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
　　　　Attribute_Definition_Source: Research Planning, Inc.
　　　　Attribute_Domain_Values:
　　　　　　Range_Domain:
　　　　　　　　Range_Domain_Minimum: 1
　　　　　　　　Range_Domain_Maximum: N
　　Attribute:
　　　　Attribute_Label: ORIGINATOR
　　　　Attribute_Definition: Author or developer of source material or data set
　　　　Attribute_Definition_Source: Research Planning, Inc.
　　　　Attribute_Domain_Values:
　　　　　　Enumerated_Domain:
　　　　　　　　Enumerated_Domain_Value: Any character
　　　　　　　　Enumerated_Domain_Value_Definition: Free text
　　　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute:
　　　　Attribute_Label: DATE_PUB
　　　　Attribute_Definition:
　　　　　　Date of source material, publication, or date of personal communication with expert source
　　　　Attribute_Definition_Source: Research Planning, Inc.
　　　　Attribute_Domain_Values:
　　　　　　Enumerated_Domain:
　　　　　　　　Enumerated_Domain_Value: Numeric
　　　　　　　　Enumerated_Domain_Value_Definition: mmyyyy
　　　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
　　Attribute:
　　　　Attribute_Label: TITLE

          Attribute_Definition: Title of source material or data
          Attribute_Definition_Source: Research Planning, Inc.
          Attribute_Domain_Values:
              Enumerated_Domain:
                  Enumerated_Domain_Value: Any character
                  Enumerated_Domain_Value_Definition: Free text
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
          Attribute_Label: DATA_FORMAT
          Attribute_Definition: The format of the source material
          Attribute_Definition_Source: Research Planning, Inc.
          Attribute_Domain_Values:
              Enumerated_Domain:
                  Enumerated_Domain_Value: Any character
                  Enumerated_Domain_Value_Definition: Free text
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
          Attribute_Label: PUBLICATION
          Attribute_Definition: Additional citation information
          Attribute_Definition_Source: Research Planning, Inc.
          Attribute_Domain_Values:
              Enumerated_Domain:
                  Enumerated_Domain_Value: Any character
                  Enumerated_Domain_Value_Definition: Free text
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
          Attribute_Label: SCALE
          Attribute_Definition: Scale denominator of the source
          Attribute_Definition_Source: Research Planning, Inc.
          Attribute_Domain_Values:
              Enumerated_Domain:
                  Enumerated_Domain_Value: integer
                  Enumerated_Domain_Value_Definition: Any integer
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
          Attribute_Label: TIME_PERIOD
          Attribute_Definition:
              Date(s) of data collection that the source material is based upon.
          Attribute_Definition_Source: Research Planning, Inc.
          Attribute_Domain_Values:
              Enumerated_Domain:
                  Enumerated_Domain_Value: Numeric
                  Enumerated_Domain_Value_Definition: yyyy
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
    Distributor:
        Contact_Information:
            Contact_Person_Primary:
                Contact_Person: John Kaperick
                Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Address:
                Address_Type: Physical Address
                Address: 7600 Sand Point Way N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6400

Contact_Facsimile_Telephone: (206) 526-6329
Resource_Description: ESI Atlas for American Samoa
Distribution_Liability:
>Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:
>Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
>*Metadata_Date:* 200402
>*Metadata_Review_Date:* 200402
>*Metadata_Contact:*
>>*Contact_Information:*
>>>*Contact_Person_Primary:*
>>>>*Contact_Person:* Jill Petersen
>>>>*Contact_Organization:* NOAA, Office of Response and Restoration
>>>*Contact_Position:* GIS Manager
>>>*Contact_Address:*
>>>>*Address_Type:* Physical Address
>>>>*Address:* 7600 Sand Point Way, N.E.
>>>>*City:* Seattle
>>>>*State_or_Province:* Washington
>>>>*Postal_Code:* 98115-6349
>>>*Contact_Voice_Telephone:* (206) 526-6944
>>>*Contact_Facsimile_Telephone:* (206) 526-6329
>>>*Contact_Electronic_Mail_Address:* Jill.Petersen@noaa.gov
>*Metadata_Standard_Name:* Content Standards for Digital Geospatial Metadata
>*Metadata_Standard_Version:* FGDC-STD-001-1998

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American Samoa ESI Entity Relationship Diagram

Relationships between spatial data layers and attribute data tables

Geographic Themes

ESI (LINES)
   ESI (10, 10, C)
   LINE (1, 1, C)
   SOURCE_ID (6, 6, I)
   ENVIR (1, 1, C)
ESI (POLYS)
   ESI (10, 10, C)
   WATER_CODE (1, 1, C)
   ENVIR (1, 1, C)
HYDRO (LINES)
   LINE (1, 1, C)
   SOURCE_ID (6, 6, I)
HYDRO (POLYS)
   WATER_CODE (1, 1, C)
INDEX (POLYS)
   TILE-NAME (32, 32, C)
   TOPO-NAME (255, 255, C)
   SCALE (7, 7, I)
   MAPANGLE (4, 8, F, 3)
   PAGESIZE (11, 11, C)
BENTHIC (POLYS)
   TYPE (254, 254, C)
CASSPT (POINTS)

MGT (POLYS)
   TYPE (2, 2, C)
   ID (10, 10, I)
   HUNUM (9, 9, I)
SOCECON (POINTS)
   TYPE (2, 2, C)
   ID (10,10,I)
   HUNUM (9, 9, I)

BIRDS (POLYS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
FISH (POLYS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
INVERT (POLYS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
M_MAMMAL (POLYS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
NESTS (POINTS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
REPTILES (POLYS)
   ID (10, 10, I)
   RARNUM (9, 9, I)
T_MAMPT (POINTS)
   ID (10, 10, I)
   RARNUM (9, 9, I)

Lookup Tables

SOC_LUT
   HUNUM (9, 9, I)
   ID (10, 10, I)

(The SOC_LUT table can be bypassed by linking the human-use tables to SOC_DAT using HUNUM.)

BIO_LUT
   RARNUM (9, 9, I)
   ID (10, 10, I)

(The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

Data Tables

SOC_DAT
   HUNUM (9, 9, I)
   TYPE (20, 20, C)
   NAME (40, 40, C)
   CONTACT (80, 80, C)
   PHONE (20, 20, C)
   G_SOURCE (6, 6, I)
   A_SOURCE (6, 6, I)

BIORES
   RARNUM (9, 9, I)
   SPECIES_ID (5, 5, I)
   CONC (20, 20, C)
   SEASON_ID (2, 2, I)
   G_SOURCE (6, 6, I)
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BREED
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