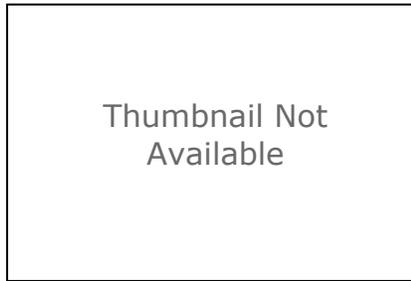


## Historical\_Habitats

### File Geodatabase Feature Class



#### Tags

Historical ecology, San Diego, San Diego Lagoons, San Diego County, Lagoon, Estuary, Buena Vista, Agua Hedionda, Batiquitos, San Elijo, San Dieguito, Los Peñasquitos, Los Penasquitos, Encinitas, Carlsbad, Oceanside, Del Mar, Cardiff, Leucadia, Escondido, Solana Beach, San Marcos, Buena Vista Creek, Agua Hedionda Creek, Escondido Creek, La Orilla Creek, San Dieguito River, Carroll Creek, Carmel Creek, California Southern Railroad, St. Malo, Frazier's Station, Pacific Coast Highway, Encina Power Station, La Costa, California Salt Company, San Marcos Dam, Lake Hodges, Lake Wohlford, Lake Dixon, Del Mar Fairgrounds, Torrey Pines, Mission San Diego, Mission San Luis Rey, Maxton Brown, Augustus Rodgers, Harrington, Edith Purer, Crespi, Portola, Coastal Conservancy, salt marsh, salt flat, salina, alkali, wetland, freshwater, brackish, habitat, creek, channel, slough, tidal, intermittent, inlet, riparian, marsh, historical condition, ecology, landscape ecology, tidal prism, hydrology, tidewater goby, California least tern, Western snowy plover, pre-Euro-American, late-1700s, 1800s

#### Summary

This dataset includes reconstructed habitat types and ecological characteristics of six northern San Diego County lagoons, representing average dry-season conditions, prior to substantial Euro-American modification (~late 1700s-late 1800s). The six lagoons examined in this study include Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, and Los Peñasquitos Lagoon. Documentation of historical ecological conditions is intended to serve as a tool to help support and guide restoration design, planning, and management of coastal wetland systems in northern San Diego County.

#### Description Overview

This geodatabase contains several feature classes representing a reconstruction of the historical ecological conditions of six northern San Diego County lagoons (Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, and Los Peñasquitos Lagoon) prior to Euro-American modification. This dataset integrates many sources of data describing the historical features of the estuaries.

Extensive supporting information, including bibliographic references, analyses, and research methods, can be found in the accompanying report:

Beller EE, Baumgarten SA, Grossinger RM, Longcore TR, Stein ED, Dark SJ, Dusterhoff SR. 2014. Northern San Diego County Lagoons Historical Ecology Investigation: Regional Patterns, Local Diversity, and Landscape Trajectories. Prepared for the State Coastal Conservancy. SFEI Publication #722, San Francisco Estuary Institute, Richmond, CA.

The report and GIS data area available at the project website:  
[http://www.sfei.org/HE\\_San\\_Diego\\_Lagoons](http://www.sfei.org/HE_San_Diego_Lagoons).

A geographic information system was used to collect, catalog, and analyze the spatial components of the study area. Historical maps and aerial photography were georeferenced, allowing us to

compare historical layers to each other and to contemporary aerial photography and maps. Additionally, the georeferenced maps were used as a means to geographically locate information gathered from surveyor notes, early explorers' journals, travelers' accounts, and newspaper articles.

Using the various georeferenced maps and photographs combined with narrative sources we constructed a series of synthesis layers representing historical ecological conditions for the six estuaries. The polygon and line layers making up the historical habitat map include Historical\_Habitats, Historical\_Creeks, and Historical\_Distributaries.

Habitat types used in the Historical\_Habitats layer include Salt Marsh, Salt Flat (Seasonally Flooded), Open Water / Mud Flat, Freshwater / Brackish Wetland, Beach, and Dune. See the Northern San Diego County Lagoons Historical Ecology Investigation for a detailed description of the historical habitat types and the methods that were used to map them.

Historical creeks and their distributaries were mapped as polyline features in two distinct layers. Distributary channels mark the endpoints of historically discontinuous channels.

--

### **Historical\_Habitats Attribute Table Fields:**

Habitat\_Type: The historical habitat type classification.

Interp\_Cert: coded H (high): feature definitely present before Euro-American modification; M (medium): feature probably present before Euro-American modification; or L (low): feature possibly present before Euro-American modification.

Shape\_Cert: coded H (high): mapped feature expected to be 90%-110% of actual feature size; M (medium): expected to be 50%-200% of actual size; L (low): expected to be 25%-400% of actual size.

Loc\_Cert: coded H (high): expected maximum horizontal displacement less than 50 m; M (medium): less than 150 m; L (low): less than 500 m.

Notes: Additional documentation about the feature.

S\_Digitize: Source data used to digitize a feature.

S\_Interp1: Interpretation Source 1 - Primary data used to interpret a mapped feature if other than the digitizing source – often the earliest historical documentation/evidence found.

S\_Interp2: Interpretation Source 2 - Data used to support mapping of a feature – additional documentation/evidence other than Interpretation Source 1.

Name: The name of the lagoon/wetland complex.

Source\_Quotes: Excerpt(s) from historical textual data sources used to support mapping of a feature.

Source\_Quotes2: Excerpt(s) from historical textual data sources used to support mapping of a feature.

Notes2: Additional documentation about the feature.

Shape.area: Area of the feature in square meters.

Shape.len: Length of the feature in meters.

--

### **Historical\_Creeks Attribute Table Fields:**

Interp\_Cert: coded H (high): feature definitely present before Euro-American modification; M (medium): feature probably present before Euro-American modification; or L (low): feature possibly present before Euro-American modification.

Shape\_Cert: coded H (high): mapped feature expected to be 90%-110% of actual feature size; M (medium): expected to be 50%-200% of actual size; L (low): expected to be 25%-400% of actual size.

Loc\_Cert: coded H (high): expected maximum horizontal displacement less than 50 m; M (medium): less than 150 m; L (low): less than 500 m.

Notes: Additional documentation about the feature.

S\_Digitize: Source data used to digitize a feature.

S\_Interp1: Interpretation Source 1 - Primary data used to interpret a mapped feature if other than the digitizing source – often the earliest historical documentation/evidence found.

S\_Interp2: Interpretation Source 2 - Data used to support mapping of a feature – additional documentation/evidence other than Interpretation Source 1.

Marsh\_Comp: Lagoon/marsh complex into which the channel drains.

SHAPE.len: Length of the channel feature in meters.

Flow: Channel type (Perennial, Intermittent, Unknown).

--

(Attribute table information not provided for Historical\_Distributary layer)

--

### **Additional Bibliographic Information:**

For a full list of works cited in this study, please consult the References section of the Northern San Diego County Lagoons Historical Ecology Investigation. Additional information about sources cited in the GIS layers is provided below:

USGS Digital Raster Graphics (DRG) for the study area were created/revised between 1975 and 1983, and are cited as USGS 1975-1983.

Historical aerial photographs are cited as San Diego County 1928. In some cases, the citation is followed by a number in parentheses specifying the particular image consulted.

Abbreviated source institution names and accession numbers are provided for additional photographs cited in the GIS layers. Source institutions include:

Carlsbad Pub Library = Carlsbad City Library Carlsbad History Room  
Scripps = Scripps Institution of Oceanography Archives, UC San Diego

SDHC = San Diego History Center

Spence Air Photos = Benjamin and Gladys Thomas Air Photo Archives, UCLA Department of Geography

Additional sources not cited in the report include:

Alexander WE. n.d. Plat book of San Diego County, California. Township 13 S., R. 3 W. Township 13 S., R. 4 W. Los Angeles, CA: Pacific Plat Book Company. Courtesy of The Bancroft Library, UC Berkeley.

### Credits

San Francisco Estuary Institute 2014

### Use limitations

As with any map or GIS layer, confidence or certainty varies geographically due to differences in source data or methods. This geodatabase provides direct information about the certainty level of different areas and features to allow the user to intelligently assess the applicability of the data for the chosen technical question. The Interp Cert, Shape Cert, and Loc Cert fields provide information about the certainty of classification type (feature existence), size/shape, and location, rated as high, medium, or low. For more detail about methods refer to: -- Grossinger, RM, Striplen CJ, Askevold R, Brewster E, Beller EE. 2007. Historical landscape ecology of an urbanized California valley: wetlands and woodlands in the Santa Clara Valley. *Landscape Ecology*.:103-120. -- Technical users are strongly encouraged to read the full study report (Beller et al. 2014 – available at [http://www.sfei.org/HE\\_San\\_Diego\\_Lagoons](http://www.sfei.org/HE_San_Diego_Lagoons)) to gain a stronger understanding of the strengths and limitations of the dataset. -- In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use (or the inability to use it). These data are not legal documents or of survey quality and are not intended to be used as such. Although extensive effort has been made to produce error-free and complete data, all geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. Users should consult available data documentation (metadata) for these particular data to determine limitations and the precision to which the data depict distance, direction, location or other geographic characteristics. Data may be subject to change without prior notification. If this data is modified, changes should be documented in a metadata record that should accompany all redistributed data. If data is transmitted or provided in any form to another user, the data must be accompanied by a copy of this disclaimer and all documentation provided with the original data set, including the full metadata record. SFEI requests that the use of these data in any map, publication, or report should cite the data source(s) used and give proper attribution and credit to the originators of the data.

### Extent

**West** -117.361506    **East** -117.215712

**North** 33.190419    **South** 32.912012

### Scale Range

**Maximum (zoomed in)** 1:5,000

**Minimum (zoomed out)** 1:150,000,000

## ArcGIS Metadata ►

### Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE    biota, environment, geoscientificInformation, inlandWaters, planningCadastre, society, utilitiesCommunication

\* CONTENT TYPE Downloadable Data

DISCIPLINE KEYWORDS historical ecology, history, ecology, hydrology, geomorphology, botany

PLACE KEYWORDS San Diego, San Diego Lagoons, San Diego County, Buena Vista, Agua Hedionda, Batiquitos, San Elijo, San Dieguito, Los Peñasquitos, Los Penasquitos, Encinitas, Carlsbad, Oceanside, Del Mar, Cardiff, Leucadia, Escondido, Solana Beach, San Marcos, Buena Vista Creek, Agua Hedionda Creek, Escondido Creek, La Orilla Creek, San Dieguito River, Carroll Creek, Carmel Creek, California Southern Railroad, St. Malo, Frazier's Station, Pacific Coast Highway, Encina Power Station, La Costa, California Salt Company, San Marcos Dam, Lake Hodges, Lake Wohlford, Lake Dixon, Del Mar Fairgrounds, Torrey Pines, Mission San Diego, Mission San Luis Rey, Coastal Conservancy

TEMPORAL KEYWORDS pre-Euro-American, late 1700s, 1800s

THEME KEYWORDS Historical ecology, lagoon, estuary, salt marsh, salt flat, salina, alkali, wetland, freshwater, brackish, habitat, creek, channel, slough, tidal, intermittent, inlet, riparian, marsh, historical condition, ecology, landscape ecology, tidal prism, hydrology, tidewater goby, California least tern, Western snowy plover, Maxton Brown, Augustus Rodgers, Harrington, Edith Purer, Crespi, Portola

[Hide Topics and Keywords ▲](#)

## Citation ►

\* TITLE Historical\_Habitats

PUBLICATION DATE 2014-09-30 00:00:00

PRESENTATION FORMATS digital map

COLLECTION TITLE Northern San Diego County Lagoons Historical Ecology GIS Data

[Hide Citation ▲](#)

## Citation Contacts ►

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CONTACT'S POSITION GIS Specialist

CONTACT'S ROLE point of contact

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 ORGANIZATION'S NAME San Francisco Estuary Institute  
 CONTACT'S POSITION Associate Environmental Scientist  
 CONTACT'S ROLE originator

*Hide Citation Contacts ▲*

**Resource Details** ►

DATASET LANGUAGES English ()  
 DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE vector

\* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.0.3035

## CREDITS

San Francisco Estuary Institute 2014

## ARCGIS ITEM PROPERTIES

\* NAME Historical\_Habitats  
 \* LOCATION file:///\\geodata1\q\Historical Ecology\GIS\San Diego\Deliverables\090514  
 \SanDiegoLagoons\_HistoricalEcologyGIS\_2014.gdb  
 \* ACCESS PROTOCOL Local Area Network

*Hide Resource Details ▲*

**Extents** ►

## EXTENT

## DESCRIPTION

ground condition

## GEOGRAPHIC EXTENT

## BOUNDING RECTANGLE

WEST LONGITUDE -117.39395

EAST LONGITUDE -117.21571  
 SOUTH LATITUDE 32.91234  
 NORTH LATITUDE 33.18997  
 EXTENT CONTAINS THE RESOURCE No

TEMPORAL EXTENT

DATE AND TIME 1955-12-01 00:00:00

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching  
 \* WEST LONGITUDE -117.361506  
 \* EAST LONGITUDE -117.215712  
 \* NORTH LATITUDE 33.190419  
 \* SOUTH LATITUDE 32.912012  
 \* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

\* WEST LONGITUDE 466302.112500  
 \* EAST LONGITUDE 479829.119000  
 \* SOUTH LATITUDE 3641590.198600  
 \* NORTH LATITUDE 3672417.934700  
 \* EXTENT CONTAINS THE RESOURCE Yes

*Hide Extents ▲*

## Resource Points of Contact ►

POINT OF CONTACT

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 ORGANIZATION'S NAME San Francisco Estuary Institute  
 CONTACT'S POSITION Senior Scientist  
 CONTACT'S ROLE point of contact

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 POSTAL CODE 94804  
 COUNTRY US

*Hide Contact information ▲*

*Hide Resource Points of Contact ▲*

## Resource Maintenance ►

RESOURCE MAINTENANCE

UPDATE FREQUENCY not planned

*Hide Resource Maintenance ▲*

## Resource Constraints ►

### LEGAL CONSTRAINTS

ACCESS CONSTRAINTS other restrictions

### OTHER CONSTRAINTS

Access constraints: none

### CONSTRAINTS

#### LIMITATIONS OF USE

As with any map or GIS layer, confidence or certainty varies geographically due to differences in source data or methods. This geodatabase provides direct information about the certainty level of different areas and features to allow the user to intelligently assess the applicability of the data for the chosen technical question. The Interp Cert, Shape Cert, and Loc Cert fields provide information about the certainty of classification type (feature existence), size/shape, and location, rated as high, medium, or low. For more detail about methods refer to: -- Grossinger, RM, Striplen CJ, Askevold R, Brewster E, Beller EE. 2007. Historical landscape ecology of an urbanized California valley: wetlands and woodlands in the Santa Clara Valley. *Landscape Ecology*.:103-120. -- Technical users are strongly encouraged to read the full study report (Beller et al. 2014 – available at [http://www.sfei.org/HE\\_San\\_Diego\\_Lagoons](http://www.sfei.org/HE_San_Diego_Lagoons)) to gain a stronger understanding of the strengths and limitations of the dataset. -- In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use (or the inability to use it). These data are not legal documents or of survey quality and are not intended to be used as such. Although extensive effort has been made to produce error-free and complete data, all geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. Users should consult available data documentation (metadata) for these particular data to determine limitations and the precision to which the data depict distance, direction, location or other geographic characteristics. Data may be subject to change without prior notification. If this data is modified, changes should be documented in a metadata record that should accompany all redistributed data. If data is transmitted or provided in any form to another user, the data must be accompanied by a copy of this disclaimer and all documentation provided with the original data set, including the full metadata record. SFEI requests that the use of these data in any map, publication, or report should cite the data source(s) used and give proper attribution and credit to the originators of the data.

### LEGAL CONSTRAINTS

USE CONSTRAINTS other restrictions

### OTHER CONSTRAINTS

Use constraints: Users are encouraged to read complete metadata, especially data quality, before use.

*Hide Resource Constraints ▲*

## Spatial Reference ►

### ARCGIS COORDINATE SYSTEM

- \* TYPE Projected
- \* GEOGRAPHIC COORDINATE REFERENCE GCS\_North\_American\_1983
- \* PROJECTION NAD\_1983\_UTM\_Zone\_11N
- \* COORDINATE REFERENCE DETAILS

#### PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 26911  
 X ORIGIN -5120900  
 Y ORIGIN -9998100

XY SCALE 10000  
 Z ORIGIN 0  
 Z SCALE 1  
 M ORIGIN 0  
 M SCALE 1  
 XY TOLERANCE 0.001  
 Z TOLERANCE 2  
 M TOLERANCE 2  
 HIGH PRECISION true  
 LATESTWKID 26911  
 VCSWKID 115702  
 LATESTVCSWKID 115702  
 WELL-KNOWN TEXT PROJCS["NAD\_1983\_UTM\_Zone\_11N",GEOGCS  
 ["GCS\_North\_American\_1983",DATUM["D\_North\_American\_1983",SPHEROID  
 ["GRS\_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT  
 ["Degree",0.0174532925199433]],PROJECTION["Transverse\_Mercator"],PARAMETER  
 ["False\_Easting",500000.0],PARAMETER["False\_Northing",0.0],PARAMETER  
 ["Central\_Meridian",-117.0],PARAMETER["Scale\_Factor",0.9996],PARAMETER  
 ["Latitude\_Of\_Origin",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",26911]],VERTCS  
 ["NAD\_1983",DATUM["D\_North\_American\_1983",SPHEROID  
 ["GRS\_1980",6378137.0,298.257222101]],PARAMETER["Vertical\_Shift",0.0],PARAMETER  
 ["Direction",1.0],UNIT["Meter",1.0],AUTHORITY["ESRI",115702]]

#### REFERENCE SYSTEM IDENTIFIER

VALUE 26910  
 \* CODESPACE EPSG  
 \* VERSION 7.9.4

[Hide Spatial Reference ▲](#)

## Spatial Data Properties ►

#### VECTOR ►

\* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

#### GEOMETRIC OBJECTS

FEATURE CLASS NAME Historical\_Habitats  
 \* OBJECT TYPE composite  
 \* OBJECT COUNT 172

[Hide Vector ▲](#)

#### ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME Historical\_Habitats  
 \* FEATURE TYPE Simple  
 \* GEOMETRY TYPE Polygon  
 \* HAS TOPOLOGY FALSE  
 \* FEATURE COUNT 172  
 \* SPATIAL INDEX TRUE  
 \* LINEAR REFERENCING FALSE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

## Geoprocessing history ►

[Hide Geoprocessing history ▲](#)

## Distribution ►

DISTRIBUTION FORMAT

- \* NAME File Geodatabase Feature Class

[Hide Distribution ▲](#)

## Fields ►

DETAILS FOR OBJECT [Historical\\_Habitats ►](#)

- \* TYPE Feature Class
- \* ROW COUNT 172

FIELD [OBJECTID ►](#)

- \* ALIAS OBJECTID
- \* DATA TYPE OID
- \* WIDTH 4
- \* PRECISION 0
- \* SCALE 0
- \* FIELD DESCRIPTION  
Internal feature number.
- \* DESCRIPTION SOURCE  
Esri
- \* DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

[Hide Field OBJECTID ▲](#)

FIELD [Habitat\\_Type ►](#)

- \* ALIAS Habitat\_Type
- \* DATA TYPE String
- \* WIDTH 100
- \* PRECISION 0
- \* SCALE 0

[Hide Field Habitat\\_Type ▲](#)

FIELD [Interp\\_Cert ►](#)

- \* ALIAS Interp\_Cert
- \* DATA TYPE String
- \* WIDTH 3
- \* PRECISION 0
- \* SCALE 0

[Hide Field Interp\\_Cert ▲](#)

FIELD [Shape\\_Cert ►](#)

- \* ALIAS Shape\_Cert
- \* DATA TYPE String
- \* WIDTH 3
- \* PRECISION 0
- \* SCALE 0

[Hide Field Shape\\_Cert ▲](#)

FIELD Loc\_Cert ▶

- \* ALIAS Loc\_Cert
- \* DATA TYPE String
- \* WIDTH 3
- \* PRECISION 0
- \* SCALE 0

[Hide Field Loc\\_Cert ▲](#)

FIELD Notes ▶

- \* ALIAS Notes
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

[Hide Field Notes ▲](#)

FIELD S\_Digitize ▶

- \* ALIAS S\_Digitize
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

[Hide Field S\\_Digitize ▲](#)

FIELD S\_Interp1 ▶

- \* ALIAS S\_Interp1
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

[Hide Field S\\_Interp1 ▲](#)

FIELD S\_Interp2 ▶

- \* ALIAS S\_Interp2
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

[Hide Field S\\_Interp2 ▲](#)

FIELD Name ▶

- \* ALIAS Name
- \* DATA TYPE String
- \* WIDTH 50
- \* PRECISION 0

\* SCALE 0

*Hide Field Name ▲*

FIELD Source\_Quotes ►

\* ALIAS Source\_Quotes  
\* DATA TYPE String  
\* WIDTH 254  
\* PRECISION 0  
\* SCALE 0

*Hide Field Source\_Quotes ▲*

FIELD Source\_Quotes2 ►

\* ALIAS Source\_Quotes2  
\* DATA TYPE String  
\* WIDTH 254  
\* PRECISION 0  
\* SCALE 0

*Hide Field Source\_Quotes2 ▲*

FIELD Notes2 ►

\* ALIAS Notes2  
\* DATA TYPE String  
\* WIDTH 254  
\* PRECISION 0  
\* SCALE 0

*Hide Field Notes2 ▲*

FIELD Shape ►

\* ALIAS Shape  
\* DATA TYPE Geometry  
\* WIDTH 0  
\* PRECISION 0  
\* SCALE 0  
\* FIELD DESCRIPTION  
Feature geometry.  
  
\* DESCRIPTION SOURCE  
ESRI  
  
\* DESCRIPTION OF VALUES Coordinates defining the features.

*Hide Field Shape ▲*

FIELD Shape\_Length ►

\* ALIAS Shape\_Length  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0  
\* FIELD DESCRIPTION

Length of feature in internal units.

\* DESCRIPTION SOURCE  
Esri

\* DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

[Hide Field Shape\\_Length ▲](#)

#### FIELD Shape\_Area ►

\* ALIAS Shape\_Area  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0  
\* FIELD DESCRIPTION

Area of feature in internal units squared.

\* DESCRIPTION SOURCE  
Esri

\* DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

[Hide Field Shape\\_Area ▲](#)

[Hide Details for object Historical\\_Habitats ▲](#)

[Hide Fields ▲](#)

## Metadata Details ►

METADATA LANGUAGE English (UNITED STATES)  
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset  
SCOPE NAME \* dataset

\* LAST UPDATE 2014-09-05

#### ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0  
METADATA STYLE FGDC CSDGM Metadata  
STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2014-09-05 11:09:00  
LAST MODIFIED IN ARCGIS FOR THE ITEM 2014-03-05 142NnS2100

#### AUTOMATIC UPDATES

HAVE BEEN PERFORMED No  
LAST UPDATE 2014-09-05 12:36:30

[Hide Metadata Details ▲](#)

## Metadata Contacts ►

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CONTACT'S ROLE point of contact

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E-MAIL ADDRESS [micha@sfei.org](mailto:micha@sfei.org)

*Hide Contact information ▲*

*Hide Metadata Contacts ▲*

**Metadata Maintenance ►**

MAINTENANCE

UPDATE FREQUENCY not planned

*Hide Metadata Maintenance ▲*

**FGDC Metadata (read-only) ▼**