

# Nonindigenous Aquatic Species Database

## Metadata:

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## Identification Information:

### *Citation:*

#### *Citation Information:*

**Originator:** Fuller, P., and A. Benson

**Publication Date:** Unknown

**Title:** Nonindigenous Aquatic Species Database

**Geospatial Data Presentation Form:** database

**Online Linkage:** <http://nas.er.usgs.gov>

### *Description:*

#### *Abstract:*

The Nonindigenous Aquatic Species Database (NAS) information resource is an established central repository for spatially referenced biogeographic accounts of introduced aquatic species. The NAS website provides scientific reports, online/real-time queries, spatial data sets, distribution maps, fact sheets, and general information.

#### *Purpose:*

To provide national distribution information on introduced aquatic species.

### *Time Period of Content:*

#### *Time Period Information:*

##### *Range of Dates/Times:*

**Beginning Date:** 1850

**Ending Date:** Present

#### *Currentness Reference:*

ground condition

### *Status:*

#### *Progress:*

In work

**Maintenance and Update Frequency:** Continually

### *Spatial Domain:*

#### *Description of Geographic Extent:*

The United States and its Territories including Alaska, Hawaii, Puerto Rico, Virgin Islands and Guam

#### *Bounding Coordinates:*

**West Bounding Coordinate:** 144.910655

**East Bounding Coordinate:** -170.281219

**North Bounding Coordinate:** 70.510241

**South Bounding Coordinate:** 13.25164

**Keywords:****Theme:**

**Theme Keyword Thesaurus:** None  
**Theme Keyword:** introduced species  
**Theme Keyword:** nonnative species  
**Theme Keyword:** invasives  
**Theme Keyword:** nonindigenous  
**Theme Keyword:** inlandWaters  
**Theme Keyword:** biota  
**Theme Keyword:** environment  
**Theme Keyword:** GIS  
**Theme Keyword:** ANS  
**Theme Keyword:** AIS  
**Theme Keyword:** animals  
**Theme Keyword:** invertebrates  
**Theme Keyword:** vertebrates  
**Theme Keyword:** multiple species  
**Theme Keyword:** amphibians  
**Theme Keyword:** reptiles  
**Theme Keyword:** fishes  
**Theme Keyword:** mollusks  
**Theme Keyword:** crustaceans  
**Theme Keyword:** non-native  
**Theme Keyword:** non-indigenous

**Taxonomy:****Keywords/Taxon:**

**Taxonomic Keyword Thesaurus:**  
 None  
**Taxonomic Keywords:** multiple species  
**Taxonomic Keywords:** amphibians  
**Taxonomic Keywords:** animals  
**Taxonomic Keywords:** invertebrates  
**Taxonomic Keywords:** mammals  
**Taxonomic Keywords:** plants  
**Taxonomic Keywords:** reptiles  
**Taxonomic Keywords:** vertebrates  
**Taxonomic Keywords:** fish  
**Taxonomic Keywords:** turtles  
**Taxonomic Keywords:** salamanders  
**Taxonomic Keywords:** frogs  
**Taxonomic Keywords:** mollusks  
**Taxonomic Keywords:** crustaceans

**Taxonomic System:****Classification System/Authority:****Classification System Citation:****Citation Information:**

**Originator:** ITIS-North America

**Publication Date:** 2013

**Title:** Integrated Taxonomic Information System (ITIS)

**Geospatial Data Presentation Form:** Maps and Data

**Online Linkage:** <http://www.itis.gov>

**Classification System/Authority:**

**Classification System Citation:****Citation Information:**

**Originator:** Espinosa-Perez, H., L.T. Findley, C.R. Gilbert, R.N. Lea, N.E. Mandrak, R.L. Mayden, J.S. Nelson, and L.M. Page.

**Publication Date:** 2013

**Title:** Common and Scientific Names of Fishes from the United States, Canada, and Mexico.

**Edition:** 7

**Geospatial Data Presentation Form:** Publication

**Series Information:**

**Series Name:** American Fisheries Society Special Publication

**Issue Identification:** 34

**Publication Information:**

**Publication Place:** Bethesda, MD.

**Publisher:** American Fisheries Society

**Taxonomic Procedures:**

Integrated Taxonomic Information Service (ITIS) is the source used for taxonomy unless a more current one exists in the literature. Fish follow the American Fisheries Society Names of Fishes list (or more current literature). Most taxa identified to species; uncertainty is indicated such as "sp." Museum specimens were used as a source of record; records reported by others were also deposited in museums later.

**Taxonomic Classification:**

**Taxon Rank Name:** Kingdom

**Taxon Rank Value:** Animalia

**Taxonomic Classification:**

**Taxon Rank Name:** Phylum

**Taxon Rank Value:** Chordata

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Amphibia

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Reptilia

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Mammalia

**Taxonomic Classification:**

**Taxon Rank Name:** Subphylum

**Taxon Rank Value:** Tunicata

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Chondrichthyes

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Actinopterygii

**Taxonomic Classification:**

**Taxon Rank Name:** Class

**Taxon Rank Value:** Sarcopterygii

**Taxonomic Classification:**

**Taxon Rank Name:** Phylum

**Taxon Rank Value:** Bryozoa

***Taxonomic Classification:******Taxon Rank Name:*** Phylum***Taxon Rank Value:*** Cnidaria***Taxonomic Classification:******Taxon Rank Name:*** Phylum***Taxon Rank Value:*** Mollusca***Taxonomic Classification:******Taxon Rank Name:*** Phylum***Taxon Rank Value:*** Arthropoda***Taxonomic Classification:******Taxon Rank Name:*** Subphylum***Taxon Rank Value:*** Crustacea

***Access Constraints:*** All data we have are displayed on the public website except for personal contact information of members of the public who submit sighting reports. These are withheld due to the Privacy Act.

***Use Constraints:***

It is strongly suggested that potential users contact the database owners to discuss how they intend to use the data so proper use can be ensured. USGS/NAS should be cited and given credit for the data. When appropriate, please consider co-authorship with the owners of the database.

***Point of Contact:******Contact Information:******Contact Person Primary:******Contact Person:*** Pam Fuller***Contact Organization:*** U.S. Geological Survey***Contact Position:*** NAS Program Director***Contact Address:******Address Type:*** mailing and physical***Address:*** 7920 NW 71st Street***City:*** Gainesville***State or Province:*** Florida***Postal Code:*** 32653***Country:*** USA***Contact Voice Telephone:*** 352-378-3481***Data Set Credit:***

U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration

***Native Data Set Environment:***

Microsoft SQL Server 2008 database

***Cross Reference:******Citation Information:******Originator:*** Williams, J.D. and D.P. Jennings***Publication Date:*** 1991***Title:*** Computerized data base for exotic fishes: the western United States***Geospatial Data Presentation Form:*** Publication***Series Information:******Series Name:*** California Fish and Game***Issue Identification:*** 77(2):86-93***Cross Reference:******Citation Information:******Originator:*** Fuller, P.L., L.G. Nico, and J.D. Williams***Publication Date:*** 1999***Title:*** Nonindigenous Fishes Introduced into Inland Waters of the United States

***Geospatial Data Presentation Form:*** Publication

***Series Information:***

***Series Name:*** American Fisheries Society Special Publication

***Issue Identification:*** 27

***Cross Reference:***

***Citation Information:***

***Originator:*** Benson, A.J

***Publication Date:*** 2000

***Title:*** Documenting over a century of aquatic introductions in the United States

***Geospatial Data Presentation Form:*** Publication

***Other Citation Details:***

Pages 1-31 in Claudi, R. and J.H. Leach (Eds.) Nonindigenous Freshwater Organisms – Vectors, Biology, and Impacts , Lewis Publishers, Boca Raton, Florida, USA.

***Cross Reference:***

***Citation Information:***

***Originator:*** Fuller, P.L. and M. Cannister

***Publication Date:*** 2012

***Title:*** USGS Nonindigenous Aquatic Species Database with a focus on Introduced fishes of the lower Tennessee and Cumberland Drainages

***Geospatial Data Presentation Form:*** conference proceedings

***Series Information:***

***Series Name:*** Proceedings of the 14th Symposium on the Natural History of the Lower Tennessee and Cumberland River Valleys

***Issue Identification:*** 14

***Publication Information:***

***Publication Place:*** Clarksville, TN

***Publisher:*** Austin Peay State University

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## Data Quality Information:

***Attribute Accuracy:***

***Attribute Accuracy Report:***

Review process for NAS records The NAS reviews 4 different types of records: 1) Publications, 2) News, 3) Web 4) Personal Communication. Scientific Publications are accepted without review unless it is a very old publication or taxonomy has changed or the species has been re-identified. News is generally accepted for most species. However, some are followed up on with local biologists or by obtaining photos. These are generally the most difficult to identify species. Acceptance of web-based information depends on the website and author. Federal and state agency sites are generally taken as factual. Individual websites or fishing websites are followed up on, generally to obtain photos. For personal communications and reports submitted online, the reporter and the species are considered. Agency personnel or biologists are usually taken at their word – except for commonly misidentified species. People reporting common species known to be in the area reported are generally accepted. Anyone reporting a species significant to a new area is investigated. Our online reporting form allows for photo uploads, therefore, we ask for photos or specimens if they are available to verify the identification. ,After the data are entered, they are reviewed by a

second person in the NAS Program. After all data are entered, the documentation (eg. literature, e-mail exchanges, and photos) to substantiate it are attached in the form of a PDF. Users are constantly reviewing the data and alert the NAS database contact person if they find a problem.

#### ***Logical Consistency Report:***

Data entry forms have been programmed to maintain some relationships: hydrologic unit codes (huc) names and numbers are linked; country, state, and county names are linked via a FIPS dictionary; month must be 1-12; day 1-31; year must be the current year or less. Maps are periodically reviewed to look for “introduced” locations in “native” ranges. NatureServe provided the native range data for fish and mussels. When discrepancies are found, historic literature and museum collections are searched to determine if the introduced location falls in the native range or not.

#### ***Completeness Report:***

Data are entered based on reports sent to us or discovered in publications. Not all sites are sampled in all years, they are opportunistic reports. This data set should not be assumed to be complete. We are not aware of all introductions nationwide. Hence, these data should not be the sole source for analysis. The goal is to show national distribution; not to document abundance. These data are intended to give a national overview rather than detailed local information. The more fine-scaled the analysis, the more likely it is to be incorrect. Data are known to be incomplete for certain regions, time periods, and/or taxa. They are also known to be incomplete for nearly all marine species, except fishes. We partner with the Smithsonian Environmental Research Center on marine and estuarine species. Not all specimens/reports are included in the database; after a species is well-established in an area data are no longer entered. If a species is stocked every year, we only include a record every few years to indicate it is still there. Data are added and modified on a daily basis.

#### ***Positional Accuracy:***

##### ***Horizontal Positional Accuracy:***

##### ***Horizontal Positional Accuracy Report:***

Accuracy of the horizontal locations varies widely. Some data have accurate GPS coordinates, while other coordinates were determined by the location description. Some portion of the data is mapped as a centroid in either a county, or USGS 8-digit and 4-digit hydrologic unit codes. Accuracy of each point is indicated by “accurate”, “approximate”, or “centroid” in a separate field of each record. Data are intended to be used on a broad scale; accuracy decreases at small scales. Latitude and longitude are either reported to us by people who use GPS in the field or we derive them using the USGS Geographic Names Information System and its Google Maps feature. Number of digits does not reflect the precision of the point.

#### ***Lineage:***

##### ***Process Step:***

##### ***Process Description:***

Review process for NAS records

Types of records:

- 1) Publications
- 2) News
- 3) Websites
- 4) Personal Communications

Scientific Publications are accepted without review unless it is a very old publication or the taxonomy has changed or the species has been re-identified.

News – generally accepted for most species. However, some are followed up on with local biologists or by obtaining photos. These are generally species which are difficult to identify such as pacu that are often mistaken for piranhas and snakeheads that are misidentified as bowfin or vice versa.

Websites – depends on the website and author. Agency sites are generally taken as factual. Individual websites or fishing websites are generally contacted to obtain photos for proper species identification.

Personal Communications/NAS database website reporting form

The reporter and the species are considered. Agency personnel or biologists' data are usually accepted – except for commonly misidentified species. People reporting common species known to be in the area reported are generally accepted. Anyone reporting a species significant to a new area is investigated. We ask for photos or specimens to verify the identification if available. Photos can be uploaded on the NAS database website reporting form.

QA/QC:

After the data are entered, they are reviewed by a second NAS database person and the entire entry is checked for completeness and accuracy:

- All data are entered from the source document
- The record has documentation attached to substantiate it, a pdf of literature or of e-mail exchanges
- Photos are attached if there were any

Outside Review:

Our users are constantly reviewing the data and sometimes let us know if they find a problem.

When we are able to make an identification, we consult other colleagues who have a greater expertise.

*Process Date:* Unknown

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## Spatial Reference Information:

### *Horizontal Coordinate System Definition:*

#### *Geographic:*

*Latitude Resolution:* 0.00001

*Longitude Resolution:* 0.00001

*Geographic Coordinate Units:* Decimal degrees

#### *Geodetic Model:*

*Horizontal Datum Name:* D\_North\_American\_1983

*Ellipsoid Name:* GRS\_1980

*Semi-major Axis:* 6378137.0

*Denominator of Flattening Ratio:* 298.257222101

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## Entity and Attribute Information:

### *Detailed Description:*

#### *Entity Type:*

*Entity Type Label:* tbl\_specimens

#### *Entity Type Definition:*

Table containing specimen information

#### *Entity Type Definition Source:*

NASD

#### *Attribute:*

*Attribute Label:* specimen\_ID

#### *Attribute Definition:*

unique identifier for each specimen record (primary key)

#### *Attribute Definition Source:*

NASD

#### *Attribute Domain Values:*

#### *Unrepresentable Domain:*

AutoNumber

#### *Attribute:*

*Attribute Label:* item\_num

#### *Attribute Definition:*

item number from old system

#### *Attribute Definition Source:*

NASD

#### *Attribute Domain Values:*

#### *Unrepresentable Domain:*

Number

#### *Attribute:*

*Attribute Label:* species\_ID

#### *Attribute Definition:*

unique species number

#### *Attribute Definition Source:*

NASD

#### *Attribute Domain Values:*

#### *Unrepresentable Domain:*

Number

#### *Attribute:*

*Attribute Label:* Site\_ID

#### *Attribute Definition:*

unique site number

#### *Attribute Definition Source:*

NASD

#### *Attribute Domain Values:*

#### *Unrepresentable Domain:*

Number

#### *Attribute:*

*Attribute Label:* collection\_ID

#### *Attribute Definition:*

unique collection number



*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* date\_entered*Attribute Definition:*

date record is first entered

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* entered\_by*Attribute Definition:*

initials of user who entered record

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* date\_last\_change*Attribute Definition:*

timestamp of last change to record

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* last\_change\_by*Attribute Definition:*

intials of user who altered record

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* Record\_type*Attribute Definition:*

Type of record (based on source)

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Specimen*Enumerated Domain Value Definition:*

Source is a specimen within another collection/institution

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Literature*Enumerated Domain Value Definition:*

Source is published, peer reviewed information

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Personal Communication*Enumerated Domain Value Definition:*

Source is from reviewed, verified personal communication from scientists, colleagues, or members of the public

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:**Attribute Label:* Yr\_accuracy*Attribute Definition:*

Accuracy of year entered in collection

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Estimated*Enumerated Domain Value Definition:*

Year accuracy was estimated (such as 1985 for 1850s)

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Actual*Enumerated Domain Value Definition:*

Year accuracy is actual year

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Publication date*Enumerated Domain Value Definition:*

Publication date used for year

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:**Attribute Label:* no\_collected*Attribute Definition:*

number of specimens collected

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* No\_released*Attribute Definition:*

Number released

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_preserved

*Attribute Definition:*

number of specimens preserved

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_dead

*Attribute Definition:*

Number of specimens dead

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_juveniles

*Attribute Definition:*

Number of juvenile specimens collected

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_females

*Attribute Definition:*

Number of female specimens collected

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_breedfemales

*Attribute Definition:*

Number of breeding females collected

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* No\_breedmales

*Attribute Definition:*

Number of breeding male specimens collected

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* Museum\_Cat\_No

*Attribute Definition:*

Museum catalog number

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Verifier

*Attribute Definition:*

person who verified the identification

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* YearVerified

*Attribute Definition:*

Year the specimen was identified

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* XXXX

*Enumerated Domain Value Definition:*

Year

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:*

*Attribute Label:* year\_class

*Attribute Definition:*

Age class of specimen

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* Adult

*Enumerated Domain Value Definition:*

Specimen was an adult at time of collection

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:******Enumerated Domain Value:*** juvenile***Enumerated Domain Value Definition:***

Specimen was a juvenile at time of collection

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** fry***Enumerated Domain Value Definition:***

Specimen was a fry at time of collection

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:******Attribute Label:*** Size***Attribute Definition:***

Specimen size

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:******Attribute Label:*** Disposal***Attribute Definition:***

Fate of specimen after collection

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:******Attribute Label:*** no\_stocked***Attribute Definition:***

Number of individuals stocked or released

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Number

***Attribute:******Attribute Label:*** agency***Attribute Definition:***

Agency responsible for specimen introduction

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:******Attribute Label:*** stock\_source***Attribute Definition:***

place where species came from originally

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Pathway 1*Attribute Definition:*

Most likely method of introduction (ie. shipping); based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Accidental*Enumerated Domain Value Definition:*

Individual introduced unintentionally

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Canal*Enumerated Domain Value Definition:*

Individual introduced via canal system

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Escaped captivity*Enumerated Domain Value Definition:*

Individual introduced by escaping from an enclosure

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Hitchhiker*Enumerated Domain Value Definition:*

Individual introduced by being transported on or in another organism or structure

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Hybridized*Enumerated Domain Value Definition:*

Species introduced through hybrid cross between two species, at least one of which was not native to the area

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Released*Enumerated Domain Value Definition:*

Individual introduced through an intentional release event

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Shipping

***Enumerated Domain Value Definition:***

Species introduced via shipping vessels (hull fouling/ballast water)

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked

***Enumerated Domain Value Definition:***

Species intentionally stocked

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Unknown

***Enumerated Domain Value Definition:***

Species introduced via unknown pathway

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:***

***Attribute Label:*** Pathway 1sub

***Attribute Definition:***

More specific method of introduction. (ie. ballast or fouling); based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

***Attribute Definition Source:***

NASD

***Attribute Domain Values:***

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity aquaculture

***Enumerated Domain Value Definition:***

Escaped from an aquaculture facility into the surrounding natural water system

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity farm

***Enumerated Domain Value Definition:***

Escaped from commercial production facility into nearby natural areas

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity pet

***Enumerated Domain Value Definition:***

Escaped from from private enclosure into nearby natural areas

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity pond

***Enumerated Domain Value Definition:***



Escaped from private pond into nearby natural water system

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity research

***Enumerated Domain Value Definition:***

Research specimens that escaped research area (enclosure) and moved into nearby natural areas

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity zoo

***Enumerated Domain Value Definition:***

Zoo animals that escape their enclosures and enter nearby natural areas

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker fishing, boating

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on boat or fishing equipment

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker in aquaculture

***Enumerated Domain Value Definition:***

Species moved accidentally in the shipment of aquacultured organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker on plants

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in plants

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker on oil platforms

***Enumerated Domain Value Definition:***

Species introduced via the relocation of oil platforms into areas where attached species were not native

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with oysters

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in oysters

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with stocked fish

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in stocked fish

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with tunicates

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in tunicates

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released aquarium

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of an aquarium organism

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released bait

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of a bait organism

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released food fish

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of a fish normally intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released for food

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of an organism intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released lab animals

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of organisms used in teaching or research labs

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released packing material

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of biological packing material that contains nonnative organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

**Enumerated Domain Value:** Released pet

**Enumerated Domain Value Definition:**

Species introduced via unauthorized release of a (nonnative) pet into natural systems

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Shipping ballast water

**Enumerated Domain Value Definition:**

Species introduced via ballast water in vessels moving between water bodies and/or ports

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Shipping hull fouling

**Enumerated Domain Value Definition:**

Species introduced via hull fouling on vessels moving between water bodies and/or ports

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Shipping solid ballast

**Enumerated Domain Value Definition:**

Species introduced via solid ballast objects containing nonnative organisms

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Stocked aquaculture

**Enumerated Domain Value Definition:**

Species introduced via authorized stocking of aquacultured organisms

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Stocked for biocontrol

**Enumerated Domain Value Definition:**

Species introduced via authorized stocking to act as a biological control species

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Stocked for conservation

**Enumerated Domain Value Definition:**

Species introduced via authorized stocking for conservation (usually for geographically threatened species)

**Enumerated Domain Value Definition Source:**

NASD

**Enumerated Domain:**

**Enumerated Domain Value:** Stocked for food

**Enumerated Domain Value Definition:**

Species introduced via authorized stocking of organisms intended

for human consumption

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked for forage

*Enumerated Domain Value Definition:*

Species introduced via authorized stocking as forage food for other organisms

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked for research

*Enumerated Domain Value Definition:*

Species introduced via authorized stocking for research purposes

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked for sport

*Enumerated Domain Value Definition:*

Species introduced via authorized stocking of organisms valued as a hunting/fishing species

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked illegally

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release/stocking of organisms that do not fall into the "released" categories above

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked misidentified

*Enumerated Domain Value Definition:*

Species introduced as wrongly identified organism via authorized stocking

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:*

*Attribute Label:* Pathway 2

*Attribute Definition:*

Next most likely method of introduction; based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* Accidental

*Enumerated Domain Value Definition:*

Individual introduced unintentionally

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Canal

***Enumerated Domain Value Definition:***

Individual introduced via canal system

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Escaped captivity

***Enumerated Domain Value Definition:***

Individual introduced by escaping from an enclosure

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker

***Enumerated Domain Value Definition:***

Individual introduced by being transported on or in another organism or structure

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hybridized

***Enumerated Domain Value Definition:***

Species introduced through hybrid cross between two species, at least one of which was not native to the area

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released

***Enumerated Domain Value Definition:***

Individual introduced through an intentional release event

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Shipping

***Enumerated Domain Value Definition:***

Species introduced via shipping vessels (hull fouling/ballast water)

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked

***Enumerated Domain Value Definition:***

Species intentionally stocked

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Unknown

***Enumerated Domain Value Definition:***

Species introduced via unknown pathway

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:***

*Attribute Label:* Pathway 2sub

*Attribute Definition:*

More specific method of introduction; based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity aquaculture

*Enumerated Domain Value Definition:*

Escaped from an aquaculture facility into the surrounding natural water system

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity farm

*Enumerated Domain Value Definition:*

Escaped from commercial production facility into nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity pet

*Enumerated Domain Value Definition:*

Escaped from private enclosure into nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity pond

*Enumerated Domain Value Definition:*

Escaped from private pond into nearby natural water system

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity research

*Enumerated Domain Value Definition:*

Research specimens that escaped research area (enclosure) and moved into nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity zoo

*Enumerated Domain Value Definition:*

Zoo animals that escape their enclosures and enter nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker fishing, boating

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on boat or fishing equipment

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker in aquaculture

*Enumerated Domain Value Definition:*

Species moved accidentally in the shipment of aquacultured organisms

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker on plants

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on/in plants

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker on oil platforms

*Enumerated Domain Value Definition:*

Species introduced via the relocation of oil platforms into areas where attached species were not native

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker with oysters

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on/in oysters

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker with stocked fish

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on/in stocked fish

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker with tunicates

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on/in tunicates

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released aquarium

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of an aquarium organism

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released bait

*Enumerated Domain Value Definition:*



Species introduced via unauthorized release of a bait organism

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released food fish

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of a fish normally intended for human consumption

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released for food

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of an organism intended for human consumption

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released lab animals

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of organisms used in teaching or research labs

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released packing material

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of biological packing material that contains nonnative organisms

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Released pet

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release of a (nonnative) pet into natural systems

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Shipping ballast water

*Enumerated Domain Value Definition:*

Species introduced via ballast water in vessels moving between water bodies and/or ports

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Shipping hull fouling

*Enumerated Domain Value Definition:*

Species introduced via hull fouling on vessels moving between water bodies and/or ports

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Shipping solid ballast***Enumerated Domain Value Definition:***

Species introduced via solid ballast objects containing nonnative organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked aquaculture***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of aquacultured organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for biocontrol***Enumerated Domain Value Definition:***

Species introduced via authorized stocking to act as a biological control species

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for conservation***Enumerated Domain Value Definition:***

Species introduced via authorized stocking for conservation (usually for geographically threatened species)

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for food***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of organisms intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for forage***Enumerated Domain Value Definition:***

Species introduced via authorized stocking as forage food for other organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for research***Enumerated Domain Value Definition:***

Species introduced via authorized stocking for research purposes

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked for sport***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of organisms valued as a

hunting/fishing species

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked illegally

*Enumerated Domain Value Definition:*

Species introduced via unauthorized release/stocking of organisms that do not fall into the "released" categories above

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked misidentified

*Enumerated Domain Value Definition:*

Species introduced as wrongly identified organism via authorized stocking

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:*

*Attribute Label:* Pathway 3

*Attribute Definition:*

Next most likely method of introduction; based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* Accidental

*Enumerated Domain Value Definition:*

Individual introduced unintentionally

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Canal

*Enumerated Domain Value Definition:*

Individual introduced via canal system

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity

*Enumerated Domain Value Definition:*

Individual introduced by escaping from an enclosure

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker

*Enumerated Domain Value Definition:*

Individual introduced by being transported on or in another organism or structure

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Hybridized***Enumerated Domain Value Definition:***

Species introduced through hybrid cross between two species, at least one of which was not native to the area

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Released***Enumerated Domain Value Definition:***

Individual introduced through an intentional release event

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Shipping***Enumerated Domain Value Definition:***

Species introduced via shipping vessels (hull fouling/ballast water)

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Stocked***Enumerated Domain Value Definition:***

Species intentionally stocked

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Unknown***Enumerated Domain Value Definition:***

Species introduced via unknown pathway

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:******Attribute Label:*** Pathway 3sub***Attribute Definition:***

More specific method of introduction; based on organism, biology, location, and known history of transport of the species; the pathway may not apply to that exact location but may refer to how the species came to that general area and dispersed to this location from that mechanism

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Enumerated Domain:******Enumerated Domain Value:*** Escaped captivity aquaculture***Enumerated Domain Value Definition:***

Escaped from an aquaculture facility into the surrounding natural water system

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Escaped captivity farm***Enumerated Domain Value Definition:***

Escaped from commercial production facility into nearby natural

areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity pet

*Enumerated Domain Value Definition:*

Escaped from from private enclosure into nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity pond

*Enumerated Domain Value Definition:*

Escaped from private pond into nearby natural water system

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity research

*Enumerated Domain Value Definition:*

Research specimens that escaped research area (enclosure) and moved into nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Escaped captivity zoo

*Enumerated Domain Value Definition:*

Zoo animals that escape their enclosures and enter nearby natural areas

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker fishing, boating

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on boat or fishing equipment

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker in aquaculture

*Enumerated Domain Value Definition:*

Species moved accidentally in the shipment of aquacultured organisms

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker on plants

*Enumerated Domain Value Definition:*

Species introduced by accidental transport on/in plants

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Hitchhiker on oil platforms

*Enumerated Domain Value Definition:*

Species introduced via the relocation of oil platforms into areas where attached species were not native

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with oysters

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in oysters

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with stocked fish

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in stocked fish

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Hitchhiker with tunicates

***Enumerated Domain Value Definition:***

Species introduced by accidental transport on/in tunicates

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released aquarium

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of an aquarium organism

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released bait

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of a bait organism

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released food fish

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of a fish normally intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released for food

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of an organism intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released lab animals

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of organisms used in teaching or research labs

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released packing material

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of biological packing material that contains nonnative organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Released pet

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release of a (nonnative) pet into natural systems

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Shipping ballast water

***Enumerated Domain Value Definition:***

Species introduced via ballast water in vessels moving between water bodies and/or ports

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Shipping hull fouling

***Enumerated Domain Value Definition:***

Species introduced via hull fouling on vessels moving between water bodies and/or ports

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Shipping solid ballast

***Enumerated Domain Value Definition:***

Species introduced via solid ballast objects containing nonnative organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked aquaculture

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of aquacultured organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for biocontrol

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking to act as a biological control species

***Enumerated Domain Value Definition Source:***



NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for conservation

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking for conservation (usually for geographically threatened species)

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for food

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of organisms intended for human consumption

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for forage

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking as forage food for other organisms

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for research

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking for research purposes

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked for sport

***Enumerated Domain Value Definition:***

Species introduced via authorized stocking of organisms valued as a hunting/fishing species

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked illegally

***Enumerated Domain Value Definition:***

Species introduced via unauthorized release/stocking of organisms that do not fall into the "released" categories above

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Stocked misidentified

***Enumerated Domain Value Definition:***

Species introduced as wrongly identified organism via authorized stocking

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:***

***Attribute Label:*** Earliest\_record

***Attribute Definition:***

Indicates if this is known to be the first record in the Country or State or County or drainage; with the possible exception of very recently introduced species. It is not appropriate to map spread of a species through time.

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Status

*Attribute Definition:*

reproductive status of the population; Often inferred based on biology, ability to survive and reproduce in that location, number of individuals collected, age classes collected, status and distribution in surrounding area

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* Established

*Enumerated Domain Value Definition:*

Established-population is reproducing and overwintering

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Extirpated

*Enumerated Domain Value Definition:*

Extirpated-population died out on its own, without human interference, i.e., cold winter;

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Failed

*Enumerated Domain Value Definition:*

Failed-population was stocked but died out; failed to reproduce

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Eradicated

*Enumerated Domain Value Definition:*

Eradicated-population was eliminated by human activity, i.e., Rotenone

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Stocked

*Enumerated Domain Value Definition:*

Stocked-species was introduced, as opposed to being caught

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Unknown

*Enumerated Domain Value Definition:*

Unknown-used when status cannot be determined

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:***

***Attribute Label:*** Fresh\_marine\_intro

***Attribute Definition:***

Whether species was introduced into fresh or marine waters

***Attribute Definition Source:***

NASD

***Attribute Domain Values:***

***Enumerated Domain:***

***Enumerated Domain Value:*** Fresh

***Enumerated Domain Value Definition:***

Introduced into freshwater, marine, brackish, or in the other combined salinity categories

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Marine

***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Brackish

***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Freshwater-Marine

***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Freshwater-Brackish

***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Brackish-Freshwater

***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Brackish-Marine***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Marine-Freshwater***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Marine-Brackish***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Unknown***Enumerated Domain Value Definition:***

Salinity at point of introduction. Combined descriptions are where salinity changes (first term is predominate).

***Enumerated Domain Value Definition Source:***

NASD

***Attribute:******Attribute Label:*** Contact***Attribute Definition:***

Contact person for this record

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:******Attribute Label:*** ref\_1***Attribute Definition:***

Published reference that is the source for this record

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Number

***Attribute:******Attribute Label:*** ref\_2***Attribute Definition:***

Additional supporting published references, or references mentioned in ref\_1

***Attribute Definition Source:***

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* ref\_3*Attribute Definition:*

Additional supporting published references, or references mentioned in ref\_1 or ref\_2

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* ref\_4*Attribute Definition:*

Additional supporting published references, or references mentioned in ref\_1, ref\_2, or ref\_3

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* ref\_5*Attribute Definition:*

Additional supporting published references, or references mentioned in ref\_1, ref\_2, ref\_3, or ref\_4

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* ref\_6*Attribute Definition:*

Additional supporting published references, or references mentioned in ref\_1, ref\_2, ref\_3, ref\_4, or ref\_5

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Comments*Attribute Definition:*

Comments about this specimen

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

**Attribute:****Attribute Label:** Impact**Attribute Definition:**

Notes about impact in this location and time

**Attribute Definition Source:**

NASD

**Attribute Domain Values:****Unrepresentable Domain:**

Text

**Attribute:****Attribute Label:** bulk\_dataset\_id**Attribute Definition:**

unique uploaded bulk dataset number

**Attribute Definition Source:**

NASD

**Attribute Domain Values:****Unrepresentable Domain:**

Number

**Attribute:****Attribute Label:** bulk\_dataset\_record\_id**Attribute Definition:**

unique value for records within the same bulk\_dataset\_id

**Attribute Definition Source:**

NASD

**Attribute Domain Values:****Unrepresentable Domain:**

Number

**Detailed Description:****Entity Type:****Entity Type Label:** tbl\_sites**Entity Type Definition:**

Table containing site information

**Entity Type Definition Source:**

NASD

**Attribute:****Attribute Label:** site\_ID**Attribute Definition:**

Unique number to identify site

**Attribute Definition Source:**

NASD

**Attribute Domain Values:****Unrepresentable Domain:**

AutoNumber

**Attribute:****Attribute Label:** Orig\_site\_ID**Attribute Definition:**

Reference number for site in earlier version of NAS database before crossover to SQL

**Attribute Definition Source:**

NASD

**Attribute Domain Values:****Unrepresentable Domain:**

AutoNumber

**Attribute:**

**Attribute Label:** GISLatDD

**Attribute Definition:**

Decimal Degree Latitude in GIS System

**Attribute Definition Source:**

NASD

**Attribute Domain Values:**

**Unrepresentable Domain:**

Number

**Attribute:**

**Attribute Label:** GISLongDD

**Attribute Definition:**

Decimal Degree Longitude in GIS System

**Attribute Definition Source:**

NASD

**Attribute Domain Values:**

**Unrepresentable Domain:**

Number

**Attribute:**

**Attribute Label:** latitude

**Attribute Definition:**

Latitude in degrees minutes seconds

**Attribute Definition Source:**

NASD

**Attribute Domain Values:**

**Unrepresentable Domain:**

Number

**Attribute:**

**Attribute Label:** LatDegree

**Attribute Definition:**

record best position from actual collector GPS reading or map interpretation,

**Attribute Definition Source:**

NASD

**Attribute Domain Values:**

**Unrepresentable Domain:**

Number

**Attribute:**

**Attribute Label:** LatMinute

**Attribute Definition:**

record best position from actual collector GPS reading or map interpretation,

**Attribute Definition Source:**

NASD

**Attribute Domain Values:**

**Unrepresentable Domain:**

Number

**Attribute:**

**Attribute Label:** LatSecond

**Attribute Definition:**

record best position from actual collector GPS reading or map interpretation,

**Attribute Definition Source:**

NASD



*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* LatNS*Attribute Definition:*

Degrees north or south latitude

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* longitude*Attribute Definition:*

Longitude in degrees minutes seconds

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* LongDegree*Attribute Definition:*

record best position from actual collector GPS reading or map interpretation,

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* LongMinute*Attribute Definition:*

record best position from actual collector GPS reading or map interpretation,

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* LongSecond*Attribute Definition:*

record best position from actual collector GPS reading or map interpretation,

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* LongEW*Attribute Definition:*

Degrees east or west longitude

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* UTMeastng*Attribute Definition:*

Universal Transverse Mercator easting coordinate

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* UTMnorthing*Attribute Definition:*

Universal Transverse Mercator northing coordinate

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* UTMzone*Attribute Definition:*

Universal Transverse Mercator Zone

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Country*Attribute Definition:*

Country of occurrence

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Text*Enumerated Domain Value Definition:*

Country using ISO-3166-alpha-2 codes (standard encouraged by GBIF and GISIN)

*Enumerated Domain Value Definition Source:*[http://en.wikipedia.org/wiki/ISO\\_3166-1\\_alpha-2](http://en.wikipedia.org/wiki/ISO_3166-1_alpha-2)[http://www.iso.org/iso/english\\_country\\_names\\_and\\_code\\_elements](http://www.iso.org/iso/english_country_names_and_code_elements)*Attribute:**Attribute Label:* State*Attribute Definition:*

Two-letter abbreviation of state occurrence

*Attribute Definition Source:*

U.S. Postal Code

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* County

*Attribute Definition:*

County of occurrence; on borders, list each with a slash between names; query using wildcard designations such as \*name\* to include all borderline collections. No county is used for multiple county areas or locations for which we cannot determine the county (such as a large lake).

*Attribute Definition Source:*

FIPS - Federal Information Processing Standard 6-4.

<http://www.itl.nist.gov/fipspubs/fip6-4.htm>

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* FIPS

*Attribute Definition:*

Federal Information Processing Standard 6-4.

<http://www.itl.nist.gov/fipspubs/fip6-4.htm>. Unique 5 digit number for state and county; the 1 or 2 digit state code followed by 000 is used for occurrences not specific to a single county. Because this is a mandatory field, arbitrary codes were made up for foreign country records.

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* Locality

*Attribute Definition:*

verbal description of site, may include ca = about, SR = state route, mi = miles, jct = junction, mi = mile, RM = river mile, HWY = highway

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* HUC8\_name

*Attribute Definition:*

drainage as hydrologic unit code 8 digit name (standard - <http://water.usgs.gov/GIS/huc.html>)

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* HUC8\_number

***Attribute Definition:***

drainage as 7 or 8-digit hydrologic unit code number; a zero is added to the front of numbers less than 100000000 are 7 digits (we do not use leading 0); numbers are padded with 0's to make them 7-8 digits long (standard - <http://water.usgs.gov/GIS/huc.html>)

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Number

***Attribute:***

***Attribute Label:*** Township

***Attribute Definition:***

township number and bearing (i.e. 23 N)

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:***

***Attribute Label:*** Range

***Attribute Definition:***

range number and bearing (ie. 12 W)

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:***

***Attribute Label:*** Section

***Attribute Definition:***

Section number and quarter section (ie. 36 NE)

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:***

***Attribute Label:*** Protected\_area

***Attribute Definition:***

Combo box (Yes-Federal; Yes-Other; No-default)

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

***Attribute:***

***Attribute Label:*** lat\_long\_source

***Attribute Definition:***

Original source for coordinates entered for this site

***Attribute Definition Source:***

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* GNIS*Enumerated Domain Value Definition:*

Geographic Names Information System

*Enumerated Domain Value Definition Source:*

U.S. Geological Survey

*Enumerated Domain:**Enumerated Domain Value:* Map derived*Enumerated Domain Value Definition:*

point chosen by user based on written description of site

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* reported*Enumerated Domain Value Definition:*

coordinates reported from source

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* US Census Bureau*Enumerated Domain Value Definition:*

county centroids based on US Census Bureau data

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Calculated by GIS*Enumerated Domain Value Definition:*

HUC and state centroids calculated by GIS

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:**Attribute Label:* lat\_long\_accuracy*Attribute Definition:*

Relative accuracy of coordinates

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Accurate*Enumerated Domain Value Definition:*

Direct GPS coordinates or extremely well described locality

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Approximate*Enumerated Domain Value Definition:*

poor description of locality, or generalized description (i.e Spring Creek, MD)

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Centroid

*Enumerated Domain Value Definition:*

GIS calculated centroid of county or state

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:*

*Attribute Label:* GeomColCalculated

*Attribute Definition:*

Geometry field to describe bounding coordinates of a polygon feature

*Attribute Definition Source:*

Open Geospatial Consortium

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* bulk\_dataset\_id

*Attribute Definition:*

unique uploaded bulk dataset number

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Detailed Description:*

*Entity Type:*

*Entity Type Label:* tbl\_collections

*Entity Type Definition:*

Table containing collection information

*Entity Type Definition Source:*

NASD

*Attribute:*

*Attribute Label:* collection\_ID

*Attribute Definition:*

arbitrary unique number

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

AutoNumber

*Attribute:*

*Attribute Label:* Day

*Attribute Definition:*

Day of collection

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* Month

*Attribute Definition:*

Month of collection

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Year*Attribute Definition:*

Year of collection

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Collectors*Attribute Definition:*

Names of collectors making collection

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Gear*Attribute Definition:*

Gear used for collection: seine, electroshock, blocknet, angling, etc

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* bulk\_dataset\_id*Attribute Definition:*

unique uploaded bulk dataset number

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Detailed Description:**Entity Type:**Entity Type Label:* tbl\_species\_new*Entity Type Definition:*

Table containing species information

*Entity Type Definition Source:*

NASD

*Attribute:**Attribute Label:* species\_ID*Attribute Definition:*

arbitrary unique number



*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

AutoNumber

*Attribute:**Attribute Label:* ITIS Number*Attribute Definition:*

Taxonomic Serial Number

*Attribute Definition Source:*

ITIS

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Group*Attribute Definition:*

Species group

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Algae*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Amphibians-Frogs*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Amphibians-Salamanders*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Annelids-Oligochaetes*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Annelids-Polychaetes*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Arthropoda-Pycogonid

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Bacteria

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Bryozoans

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Coelenterates-Anthozoan

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Coelenterates-Hydrozoans

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Coelenterates-Scyphozoan

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Crustaceans-Amphipods

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Crustaceans-Barnacles

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Crustaceans-Cladocerans

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Copepods

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Crabs

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Crayfish

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Isopods

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Lobsters

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Mysids

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Ostracods

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Sea fleas

***Enumerated Domain Value Definition:***

Species group

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Crustaceans-Shrimp

***Enumerated Domain Value Definition:***

Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Crustaceans-Tanaids  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Entoprocts  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Fishes  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Insects  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Mammals  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Mollusks-Bivalves  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Mollusks-Cephalopods  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*  
*Enumerated Domain Value:* Mollusks-Gastropods  
*Enumerated Domain Value Definition:*  
 Species group  
*Enumerated Domain Value Definition Source:*  
 NASD  
*Enumerated Domain:*

*Enumerated Domain Value:* Mollusks-Nudibranchs

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Plants

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Platyhelminthes

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Polyplacophors

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Protozoans

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Reptiles-Crocodylians

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Reptiles-Lizards

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Reptiles-Snakes

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Reptiles-Turtles

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Sponges

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Tunicates

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Viruses

*Enumerated Domain Value Definition:*

Species group

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:*

*Attribute Label:* Order

*Attribute Definition:*

Taxonomic order

*Attribute Definition Source:*

ITIS

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Family

*Attribute Definition:*

Taxonomic family

*Attribute Definition Source:*

ITIS

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Genus

*Attribute Definition:*

Taxonomic genus

*Attribute Definition Source:*

ITIS

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Species

*Attribute Definition:*

Taxonomic species

*Attribute Definition Source:*

ITIS

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* Subspecies  
*Attribute Definition:*  
 Taxonomic subspecies  
*Attribute Definition Source:*  
 literature

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* variety  
*Attribute Definition:*  
 for plants only  
*Attribute Definition Source:*  
 literature

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* common\_name  
*Attribute Definition:*  
 Species common name  
*Attribute Definition Source:*  
 ITIS, or more recent literature

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* Synonyms  
*Attribute Definition:*  
 other scientific names used  
*Attribute Definition Source:*  
 ITIS, or more recent literature

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* fresh\_marine\_brackish  
*Attribute Definition:*  
 Native habitat salinity, whether the species normally occurs in fresh, marine, or brackish water  
*Attribute Definition Source:*  
 literature

*Attribute Domain Values:*  
*Unrepresentable Domain:*  
 Text

*Attribute:*

*Attribute Label:* continent\_of\_origin  
*Attribute Definition:*



continent/region of species origin (native range)

***Attribute Definition Source:***

ITIS, or literature

***Attribute Domain Values:***

***Enumerated Domain:***

***Enumerated Domain Value:*** North America

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Asia

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** South America

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Europe

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Africa

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** South Pacific

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Central America

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:***

***Enumerated Domain Value:*** Eurasia

***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** South and Central America***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Caribbean***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Australia***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Northwest Pacific***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Southwest Pacific***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Europe and Africa***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Indo-Pacific***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** Pacific Ocean***Enumerated Domain Value Definition:***

Continent of origin/region of origin

***Enumerated Domain Value Definition Source:***

NASD

***Enumerated Domain:******Enumerated Domain Value:*** North and Central America***Enumerated Domain Value Definition:***

Continent of origin/region of origin

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* Unknown*Enumerated Domain Value Definition:*

Continent of origin/region of origin

*Enumerated Domain Value Definition Source:*

NASD

*Attribute:**Attribute Label:* native\_exotic*Attribute Definition:*

Whether species is native or exotic/foreign or cryptogenic to the United States

*Attribute Definition Source:*

ITIS, or literature

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* native*Enumerated Domain Value Definition:*

Species is native to at least some portion of the United States

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* exotic*Enumerated Domain Value Definition:*

Species is not native to the United States

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* native hybrid*Enumerated Domain Value Definition:*

Species is a hybrid of two other species (both native to some portion of the United States)

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* exotic hybrid*Enumerated Domain Value Definition:*

Species is a hybrid between a native species and an introduced hybrid species

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* cryptogenic*Enumerated Domain Value Definition:*

Species is widely distributed but native range is unknown

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* unknown*Enumerated Domain Value Definition:*

Species has no existing data regarding native range

*Enumerated Domain Value Definition Source:*

## NASD

*Attribute:**Attribute Label:* Authority*Attribute Definition:*

Person who named the species

*Attribute Definition Source:*

ITIS, or more recent literature

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* country of origin*Attribute Definition:*

country of species origin

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* hide\_from\_NAS*Attribute Definition:*

determines whether species is hidden from public queries via website

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* 0*Enumerated Domain Value Definition:*

Do not hide from NAS searches

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:**Enumerated Domain Value:* 1*Enumerated Domain Value Definition:*

Hide from NAS searches

*Enumerated Domain Value Definition Source:*

NASD

*Detailed Description:**Entity Type:**Entity Type Label:* tbl\_references*Entity Type Definition:*

Table containing reference information

*Entity Type Definition Source:*

NASD

*Attribute:**Attribute Label:* Refnum*Attribute Definition:*

Unique number for reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

AutoNumber

*Attribute:**Attribute Label:* Author*Attribute Definition:*

Author(s) of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Date*Attribute Definition:*

Year of Publication

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Number

*Attribute:**Attribute Label:* Title*Attribute Definition:*

Title of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Journal*Attribute Definition:*

Journal in which reference is published

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Publisher*Attribute Definition:*

Publisher of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* Vol*Attribute Definition:*

Journal volume of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number

*Attribute:*

*Attribute Label:* Issue

*Attribute Definition:*

Journal Issue of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Number or Text

*Attribute:*

*Attribute Label:* Pages

*Attribute Definition:*

Page numbers for reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Location

*Attribute Definition:*

Where reference is located

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:* NAS

*Enumerated Domain Value Definition:*

Reference stored in NAS database or in NAS office(s)

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* on-line

*Enumerated Domain Value Definition:*

Reference available online at provided URL

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Center Library

*Enumerated Domain Value Definition:*

Reference available in science center library

*Enumerated Domain Value Definition Source:*

NASD

*Enumerated Domain:*

*Enumerated Domain Value:* Do not have

*Enumerated Domain Value Definition:*

Reference not available to NAS staff

*Enumerated Domain Value Definition Source:*

## NASD

*Attribute:**Attribute Label:* key\_words*Attribute Definition:*

Description of publication; words used to search for publication including scientific names, common names, places

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* entered*Attribute Definition:*

Records from publication entered into NAS as specimens?

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* URL*Attribute Definition:*

URL if available online

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Website URL

*Attribute:**Attribute Label:* Type*Attribute Definition:*

Type of reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* Journal Article*Enumerated Domain Value Definition:*

Reference is a published in a peer reviewed journal

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* Book*Enumerated Domain Value Definition:*

Reference is a published book

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* Book Chapter*Enumerated Domain Value Definition:*

Reference is the chapter in a book



***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** News

***Enumerated Domain Value Definition:***

Reference is an article written by a news agency

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Webpage

***Enumerated Domain Value Definition:***

Reference is an on-line webpage

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Report

***Enumerated Domain Value Definition:***

Reference is a published scientific report

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Database

***Enumerated Domain Value Definition:***

Reference is an informational database

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Conference Proceedings

***Enumerated Domain Value Definition:***

Reference is the published proceedings of a conference

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Thesis or Dissertation

***Enumerated Domain Value Definition:***

Reference is a Master's thesis or Doctoral dissertation

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** Other

***Enumerated Domain Value Definition:***

Reference is a type not covered by the other options in this category

***Enumerated Domain Value Definition Source:***

Producer defined

***Attribute:***

***Attribute Label:*** Comments

***Attribute Definition:***

Additional information about reference

***Attribute Definition Source:***

NASD

***Attribute Domain Values:******Unrepresentable Domain:***

Text

*Attribute:*

*Attribute Label:* AccessDate

*Attribute Definition:*

Date website was accessed

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Date/Time

*Attribute:*

*Attribute Label:* CreationDate

*Attribute Definition:*

Date website was created

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Date/Time

*Attribute:*

*Attribute Label:* PublisherLocation

*Attribute Definition:*

Location of publishing company of the reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* BookTitle

*Attribute Definition:*

Title of book for book chapter references

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Editor

*Attribute Definition:*

Editor of the publication/reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

*Attribute:*

*Attribute Label:* Edition

*Attribute Definition:*

Edition of publication (when applicable)

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Unrepresentable Domain:*

Text

*Attribute:**Attribute Label:* ThesisType*Attribute Definition:*

Type of thesis for reference

*Attribute Definition Source:*

NASD

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* M.A. thesis*Enumerated Domain Value Definition:*

Master of Arts Thesis document

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* M.S. thesis*Enumerated Domain Value Definition:*

Master of Science Thesis document

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* Ph.D. dissertation*Enumerated Domain Value Definition:*

Doctoral dissertation document

*Enumerated Domain Value Definition Source:*

Producer defined

*Attribute:**Attribute Label:* date\_entered*Attribute Definition:*

date reference is first entered

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* entered\_by*Attribute Definition:*

Initials of database user that entered record

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* date\_last\_change*Attribute Definition:*

date record was most recently edited

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* last\_change\_by*Attribute Definition:*

Initials of database user that most recently edited record

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Unrepresentable Domain:*

Date/Time

*Attribute:**Attribute Label:* uses\_NAS\_data*Attribute Definition:*

Reference makes heavy use of NAS data

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* 0*Enumerated Domain Value Definition:*

Reference does not use NAS data

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* 1*Enumerated Domain Value Definition:*

Reference uses NAS data

*Enumerated Domain Value Definition Source:*

Producer defined

*Attribute:**Attribute Label:* cites\_NAS\_Data*Attribute Definition:*

Reference makes heavy use of NAS data

*Attribute Definition Source:*

Producer defined

*Attribute Domain Values:**Enumerated Domain:**Enumerated Domain Value:* 0*Enumerated Domain Value Definition:*

Reference does not cite NAS data

*Enumerated Domain Value Definition Source:*

Producer defined

*Enumerated Domain:**Enumerated Domain Value:* 1*Enumerated Domain Value Definition:*

Reference cites NAS data

*Enumerated Domain Value Definition Source:*

Producer defined

*Attribute:**Attribute Label:* uses\_NAS\_maps

***Attribute Definition:***

Reference makes heavy use of NAS maps

***Attribute Definition Source:***

Producer defined

***Attribute Domain Values:******Enumerated Domain:***

***Enumerated Domain Value:*** 0

***Enumerated Domain Value Definition:***

Reference does not use NAS maps

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** 1

***Enumerated Domain Value Definition:***

Reference uses NAS maps

***Enumerated Domain Value Definition Source:***

Producer defined

***Attribute:***

***Attribute Label:*** uses\_NAS\_figures

***Attribute Definition:***

Reference makes heavy use of NAS figures

***Attribute Definition Source:***

Producer defined

***Attribute Domain Values:******Enumerated Domain:***

***Enumerated Domain Value:*** 0

***Enumerated Domain Value Definition:***

Reference does not use NAS figures

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** 1

***Enumerated Domain Value Definition:***

Reference uses NAS figures

***Enumerated Domain Value Definition Source:***

Producer defined

***Attribute:***

***Attribute Label:*** uses\_NAS\_factsheets

***Attribute Definition:***

Reference makes heavy use of NAS factsheets

***Attribute Definition Source:***

Producer defined

***Attribute Domain Values:******Enumerated Domain:***

***Enumerated Domain Value:*** 0

***Enumerated Domain Value Definition:***

Reference does not use NAS factsheets

***Enumerated Domain Value Definition Source:***

Producer defined

***Enumerated Domain:***

***Enumerated Domain Value:*** 1

***Enumerated Domain Value Definition:***

Reference uses NAS factsheets  
*Enumerated Domain Value Definition Source:*  
 Producer defined

*Attribute:*

*Attribute Label:* abstract

*Attribute Definition:*

abstract of the reference (when applicable)

*Attribute Definition Source:*

NASD

*Attribute Domain Values:*

*Unrepresentable Domain:*

Text

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## Distribution Information:

*Distributor:*

*Contact Information:*

*Contact Person Primary:*

*Contact Person:* Pam Fuller

*Contact Organization:* U.S. Geological Survey

*Contact Address:*

*Address Type:* mailing and physical

*Address:* 7920 NW 71st Street

*City:* Gainesville

*State or Province:* Florida

*Postal Code:* 32653

*Country:* USA

*Contact Voice Telephone:* 352-264-3481

*Distribution Liability:*

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USGS makes no commitment to update the information contained herein. Because the data in the central database is continually being updated, it is advisable to refresh data retrieved at least once a year after its receipt. These data are the result of efforts by many of government and non-government participants in the field, as well as, USGS and various researchers and managers. All publications based on these data should acknowledge all of these efforts. If a publication is based solely on the analysis of NAS data, we suggest that you involve the NAS Program biologists with the writing and/or review of the manuscript. We would also appreciate receiving a reprint or copy of any publications or reports that make use of the NAS data.

***Standard Order Process:***

***Digital Form:***

***Digital Transfer Information:***

***Format Name:*** Online database

***Digital Transfer Option:***

***Online Option:***

***Computer Contact Information:***

***Network Address:***

***Network Resource Name:*** <http://nas.er.usgs.gov>

***Fees:*** None

***Custom Order Process:***

Data is available online at <http://nas.er.usgs.gov> For custom queries email distribution contact with a description of intended use.

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**Metadata Reference Information:**

***Metadata Date:*** 09/16/2013

***Metadata Contact:***

***Contact Information:***

***Contact Person Primary:***

***Contact Person:*** Matt Cannister

***Contact Organization:*** U.S. Geological Survey

***Contact Address:***

***Address Type:*** mailing and physical

***Address:*** 7920 NW 71 ST

***City:*** Gainesville

***State or Province:*** FL

***Postal Code:*** 32653

***Contact Voice Telephone:*** 352-264-3572

***Metadata Standard Name:*** FGDC Biological Data Profile of the Content Standard for Digital Geospatial Metadata

***Metadata Standard Version:*** FGDC-STD-001.1-1999

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