

Nonindigenous Aquatic Species Database

Metadata:

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Identification Information:

Citation:

Citation Information:

Originator: Fuller, P.

Originator: Benson, A.

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: 179.216

East Bounding Coordinate: -170.281219

North Bounding Coordinate: 68.63

South Bounding Coordinate: -26.22639

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: 2016
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 WGS 1984

Ellipsoid Name: WGS 84

Semi-major Axis: 6378137.0

Denominator of Flattening Ratio: 298.257223563

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Entity and Attribute Information:

Detailed Description:

Entity Type:

Entity Type Label: NAS Database

Entity Type Definition:

Relational database comprised of many smaller data tables that contain occurrence information related to nonnative aquatic organisms

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: date_entered

Attribute Definition:

date record is first entered

Attribute Definition Source:

NASD

Attribute Domain Values:

Unrepresentable Domain:

Date/Time

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: 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

Enumerated Domain:

Enumerated Domain Value: NAS sighting report

Enumerated Domain Value Definition:

Source is report entered through NAS sighting report form or through NAS mobile application

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: 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 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 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: 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: 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://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, jnct = 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: 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: 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: 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: 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: country of origin

Attribute Definition:

country of species origin

Attribute Definition Source:

NASD

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: 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: 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: 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: 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: 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

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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: 10/24/2016

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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