BAARI v2

Tags

estuary, basemap, BAARI, CARI, SFEI, ASC, wetland, Bay, Bay Area, stream, river, creek, channel, Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma, pond, lagoon, playa, depressional, spring, seep, slope, aquatic, resources, water

Summary

BAARI (Bay Area Aquatic Resource Inventory) was established to meet regional needs for wetlands and stream monitoring. The objective of these data is to create standardized regional datasets and maps of surface aquatic resources for use by both environmental scientists and resource managers. The Bay Area Aquatic Resources Inventory (BAARI) is the product of this effort and supports a wide range of environmental management uses. BAARI consists of 3 feature classes: Baylands (tidal wetlands), Streams, and (non-tidal) Wetlands.

BAARI data can be downloaded from http://www.sfei.org/sites/default/files/data/BAARI_v2__SFEI_2015.zip. Detailed information about mapping methods and protocols can be found in "Bay Area Aquatic Resources Inventory (BAARI): Standards and Methodology for Stream Network, Wetland and Riparian Mapping" (BAARI Mapping Standards) which is included in the downloadable ZIP file, and also available at http://www.sfei.org/sites/default/files/general_content/SFEI_MAPPING_STANDARDS_0809201 1_v8_0.pdf.

This is the Version 2 release of the BAARI GIS dataset, published on June 30, 2015. It improves upon and replaces the original version of BAARI released in 2011. Details of the updates are described below.

Description

BAARI (Bay Area Aquatic Resource Inventory) was established to meet regional needs for wetlands and stream monitoring. One primary objective was to apply standardized monitoring tools to ensure data comparability and consistent, documented quality. These data help agencies and organizations assess the extent and condition of wetlands in local watersheds and identify and prioritize opportunities for ecological restoration and enhancement in a watershed context.

Background

BAARI data is part of the Wetland and Riparian Area Monitoring Plan (WRAMP), which consists of a 1-2-3 level monitoring framework. This allows assessment of wetlands at two scales: landscape and highly localized. BAARI is Level 1 of this framework, developed for landscape level analyses of wetland extent, distribution and abundance. Geographic information systems (GIS) and remote sensing are used to map and create inventories of existing wetlands (both modern and historical). These inventories quantify the extent of wetland habitats and projects, and are used for landscape profiles of wetlands at the state, regional, watershed, and local

scales.

Level 2 entails rapid field assessment of wetland health or ecological condition. In California the California Rapid Assessment Method (CRAM) is a diagnostic tool that two or more trained practitioners can use to assess the condition of a wetland or riparian site in one half day or less using visual indicators in the field.

Level 3 monitoring entails intensive sampling of ecological function or specific aspects of wetland condition. These assessments are intensive quantitative measurements of condition, stress, or cause-and-effect relationships. A Level 3 assessment is an in-depth study of a particular attribute of wetland health such as water quality, fish habitat, bird populations, vegetative cover and diversity, or physical processes. Level 3 monitoring can describe the performance of specific ecological functions at the site scale.

Information on the WRAMP is available at http://www.mywaterquality.ca.gov/eco_health/wetlands/condition/wramp_toolkit.shtml

More information on BAARI can be found online at: http://www.sfei.org/BAARI.

Description of Updates in Version 2

Local experts provided advice on and reviewed BAARI's stream, wetland and riparian GIS layers in specific locations to help update the data as conditions in the field changed and/or to increase its accuracy and detail. Improving the accuracy and detail of BAARI improves the base maps for all monitoring and assessment efforts to understand the distribution, amount and ecological condition of Bay Area aquatic resources. The following updates were made to BAARI under this project:

1. The Santa Clara Valley Water District (SCVWD) provided their GIS based stream data for the Guadalupe River Watershed. SFEI's GIS team incorporated parts of the SCVWD dataset into BAARI to improve the accuracy and detail of the BAARI stream layer with the Guadalupe River watershed. Updates included features such as underground connectors between the upper and lower watershed reaches, and enhanced details of portions of the upper watershed.

2. Watershed Sciences developed six hand-drawn maps showing field verified ditch locations circa 2006. Those data were used in developing the sediment TMDL for the watershed. Watershed sciences provided those maps to SFEI's GIS team and worked with them to compare the remotely sensed stream and ditch locations in the BAARI data set (based on 2009 NAIP imagery) to her maps and other data (including Google Earth using multiple image dates). Based on this careful comparative process, about 500 linear updates were made to the BAARI stream layer for the Sonoma Creek watershed with the data source attributed to Laurel Collins' maps.

3. SFEI staff added stream names for the whole BAARI dataset (Bay Area 9 counties, ocean shoreline, and Tomales Bay - 530 different names applied to more than 24000 stream segments).

4. Additional corrections to wetland and stream presence, extent, and classification were appended to the dataset by SFEI staff where inaccuracies were identified based on local expertise of wetlands in the Bay Area.

5. All BAARI updates were reviewed by a second GIS staff member to ensure that they were acceptable and followed BAARI mapping protocols.

Description of Attribute Fields in BAARI

Baylands

RestProj: restoration project associated with this wetland. This field has not been updated in version 2. Refer to http://www.EcoAtlas.org for current listings of ecological restoration projects.

Source_Dat: source(s) from which the wetland polygon was digitized, or otherwise incorporated into BAARI

WetlandTyp: Coded classification of the wetland type. Codes are defined on p5-6 of "BAARI Mapping Standards"

Organization: organization that digitized the wetland polygon

ClickCode: simplification of the 'WetlandTyp' attribute used for map database queries in web mapping applications such as http://www.EcoAtlas.org. Refers to the standardized wetland classification system employed by the California Aquatic Resources Inventory (CARI). More information about CARI is available at http://www.sfei.org/it/gis/cari

ClickLabel: verbal description of the ClickCode code

LegCode: further simplification of the 'WetlandTyp' attribute used in the legends of web mapping applications such as http://www.EcoAtlas.org

LegLabel: verbal description of the LegCode code

ORIG_FID: unused

OpenWater: Open Water (1) or a wetland (0)

TidRip: unused

GlobalID: Unique identifier, if one exists

Streams

WetlandTyp: Coded classification of the stream type. Codes are defined on p9-10 of "BAARI Mapping Standards"

Bayland: Identifies whether the feature falls within the historical extent of the Baylands (1) or not (0)

Strahler: Strahler stream order of the stream segment.

ClickCode: simplification of the 'WetlandTyp' attribute used for map database queries in web mapping applications such as http://www.EcoAtlas.org

ClickLabel: verbal description of the ClickCode code

LegCode: further simplification of the 'WetlandTyp' attribute used in the legends of web mapping applications such as http://www.EcoAtlas.org

LegLabel: verbal description of the LegCode code

GlobalID: Unique identifier, if one exists (e.g. ReachCode attribute in NHD)

IDNum: Numerical version of GlobalID

StreamName: the recognized Geographic Names Information System (GNIS) name of the

stream

Source_Dat: source(s) from which the segment was digitized, or otherwise incorporated into BAARI.

Name_Source: source from which 'StreamName' was identified

FNode: "From Node" used to determine stream flow direction

TNode: "To Node" used to determine stream flow direction

LegHeader: legend header used in the legends of web mapping applications such as http://www.EcoAtlas.org

TMDL_DATA: "Yes" value indicates TMDL data is available for this stream segment. Contact SFEI for information about integrating TMDL data with BAARI

Wetlands (Non-tidal)

WetlandTyp: Coded classification of the wetland type. Codes are defined on p6-9 of "BAARI Mapping Standards"

SourceData: source(s) from which the wetland polygon was digitized, or otherwise incorporated into BAARI

Organization: organization that digitized the wetland polygon

ClickCode: simplification of the 'WetlandTyp' attribute used for map database queries in web mapping applications such as http://www.EcoAtlas.org

ClickLabel: verbal description of the ClickCode code

LegCode: further simplification of the 'WetlandTyp' attribute used in the legends of web mapping applications such as http://www.EcoAtlas.org

LegLabel: verbal description of the LegCode code

GlobalID: Unique identifier, if one exists

Credits

San Francisco Estuary Institute and Aquatic Science Center 2015

Use limitations

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Extent
There is no extent for this item.

Scale Range
Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata ▶

Citation ▶

TITLE BAARI v2
PUBLICATION DATE 2015-06-30 00:00:00

Hide Citation ▲

Citation Contacts ▶

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Hide Contact information ▲

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Resource Details ▶

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS completed

CREDITS

San Francisco Estuary Institute and Aquatic Science Center 2015

Hide Resource Details ▲

Extents ►

EXTENT
  DESCRIPTION
   largely based on NAIP 2009 imagery with supporting ancillary data

  TEMPORAL EXTENT
    BEGINNING DATE   2009-09-01   00:00:00

Hide Extents ▲

Resource Maintenance ►

RESOURCE MAINTENANCE
  UPDATE FREQUENCY   irregular

Hide Resource Maintenance ▲

Resource Constraints ►

CONSTRAINTS
  LIMITATIONS OF USE
   This file is part of BAARI.

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Hide Resource Constraints ▲

Fields ►

DETAILS FOR OBJECT RL_CARI.SDEGIS.BAARI_V2_Baylands ►
  * TYPE   Feature Class
  * ROW COUNT   11162

  FIELD OBJECTID ►
    * ALIAS   OBJECTID

* DATA TYPE   OID
* WIDTH   4
* PRECISION   10
* SCALE   0
* FIELD DESCRIPTION
   Internal feature number.

* DESCRIPTION SOURCE
   ESRI

* DESCRIPTION OF VALUES
   Sequential unique whole numbers that are automatically generated.

Hide Field OBJECTID ▲

FIELD RestProj ►
* ALIAS   RestProj
* DATA TYPE   String
* WIDTH   20
* PRECISION   0
* SCALE   0

Hide Field RestProj ▲

FIELD Source_Dat ►
* ALIAS   Source_Dat
* DATA TYPE   String
* WIDTH   25
* PRECISION   0
* SCALE   0

Hide Field Source_Dat ▲

FIELD WetlandTyp ►
* ALIAS   WetlandTyp
* DATA TYPE   String
* WIDTH   10
* PRECISION   0
* SCALE   0

Hide Field WetlandTyp ▲

FIELD Organization ►
* ALIAS   Organization
* DATA TYPE   String
* WIDTH   75
* PRECISION   0
* SCALE   0

Hide Field Organization ▲

FIELD CLICKCODE ►

* ALIAS   CLICKCODE
* DATA TYPE   String
* WIDTH   12
* PRECISION   0
* SCALE   0

Hide Field CLICKCODE ▲

FIELD CLICKLABEL ►
* ALIAS   CLICKLABEL
* DATA TYPE   String
* WIDTH   42
* PRECISION   0
* SCALE   0

Hide Field CLICKLABEL ▲

FIELD LEGLABEL ►
* ALIAS   LEGLABEL
* DATA TYPE   String
* WIDTH   15
* PRECISION   0
* SCALE   0

Hide Field LEGLABEL ▲

FIELD LEGCODE ►
* ALIAS   LEGCODE
* DATA TYPE   String
* WIDTH   10
* PRECISION   0
* SCALE   0

Hide Field LEGCODE ▲

FIELD ORIG_FID ►
* ALIAS   ORIG_FID
* DATA TYPE   Integer
* WIDTH   4
* PRECISION   10
* SCALE   0

Hide Field ORIG_FID ▲

FIELD Shape ►
* ALIAS   Shape
* DATA TYPE   Geometry
* WIDTH   4
* PRECISION   0
* SCALE   0
* FIELD DESCRIPTION
   Feature geometry.

* DESCRIPTION SOURCE

ESRI

* DESCRIPTION OF VALUES
  Coordinates defining the features.

Hide Field Shape ▲

FIELD OpenWater ►
* ALIAS OpenWater
* DATA TYPE SmallInteger
* WIDTH 2
* PRECISION 5
* SCALE 0

Hide Field OpenWater ▲

FIELD TidRip ►
* ALIAS TidRip
* DATA TYPE String
* WIDTH 20
* PRECISION 0
* SCALE 0

Hide Field TidRip ▲

FIELD GlobalID ►
* ALIAS GlobalID
* DATA TYPE String
* WIDTH 255
* PRECISION 0
* SCALE 0

Hide Field GlobalID ▲

FIELD Shape.STArea() ►
* ALIAS Shape.STArea()
* DATA TYPE Double
* WIDTH 0
* PRECISION 0
* SCALE 0

Hide Field Shape.STArea() ▲

FIELD Shape.STLength() ►
* ALIAS Shape.STLength()
* DATA TYPE Double
* WIDTH 0
* PRECISION 0
* SCALE 0

Hide Field Shape.STLength() ▲

Hide Details for object RL_CARI.SDEGIS.BAARI_V2_Baylands ▲

Hide Fields ▲

Metadata Details ▶

SCOPE OF THE DATA DESCRIBED BY THE METADATA   dataset

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

   CREATED IN ARCGIS FOR THE ITEM   2015-07-01   15:44:21
   LAST MODIFIED IN ARCGIS FOR THE ITEM   2015-07-01   15:45:35

   AUTOMATIC UPDATES
      HAVE BEEN PERFORMED   No

Hide Metadata Details ▲

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Hide Metadata Contacts ▲

Thumbnail and Enclosures ▶

THUMBNAIL
   THUMBNAIL TYPE   JPG

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FGDC Metadata (read-only) ▼