

# The Passage Assessment Database(PAD) Overview and Status Update

September 4, 2013



Anne Elston, Pacific States Marine Fisheries Commission, PAD Administrator

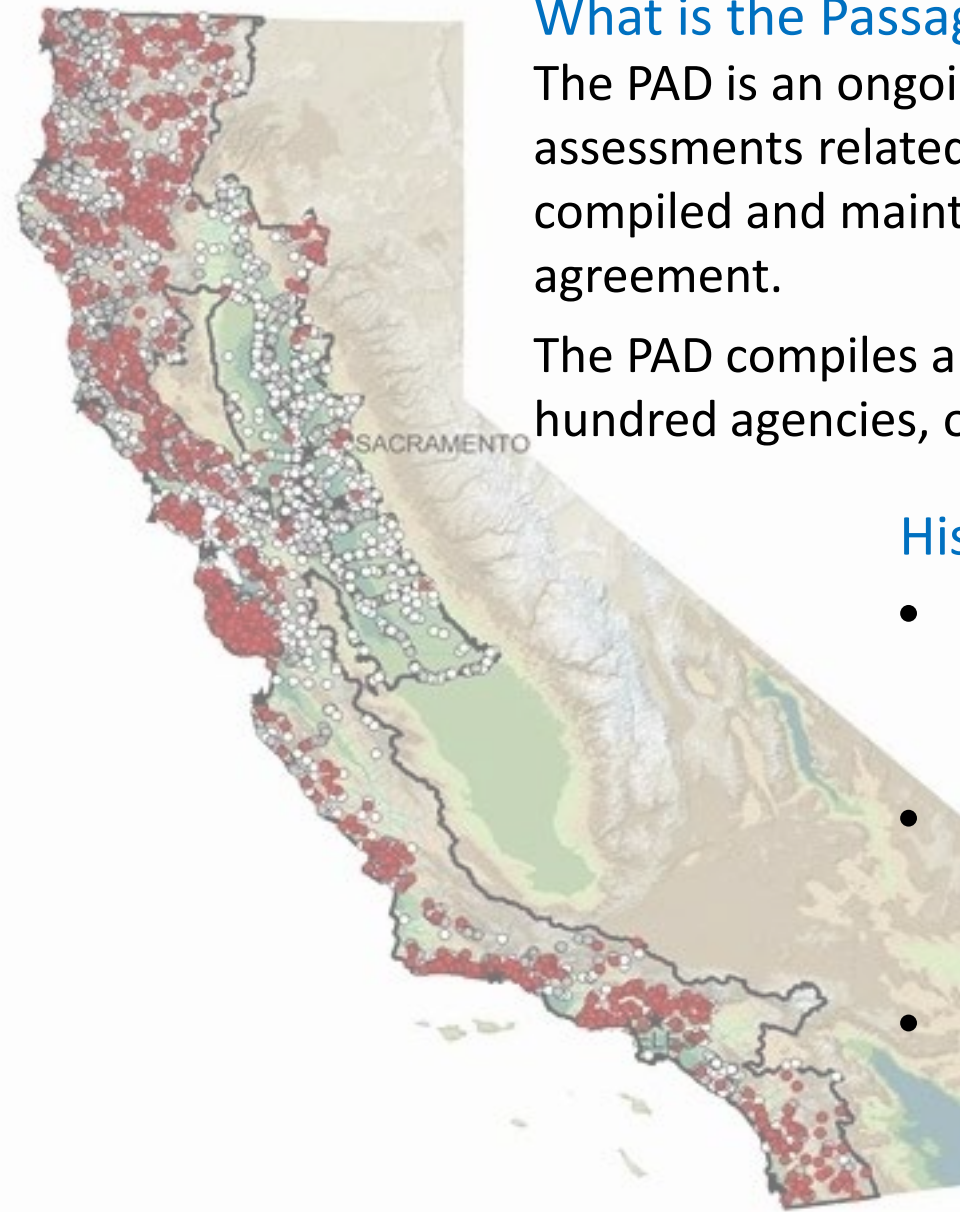
## What is the Passage Assessment Database (PAD)?

The PAD is an ongoing map-based inventory of fish passage assessments related to anadromous fish passage in California, compiled and maintained through a cooperative interagency agreement.

The PAD compiles and standardizes data from more than one hundred agencies, organizations, landowners and individuals.

### History of the PAD:

- Developed in 2002 with guidance from the California Fish Passage Forum (<http://www.cafishpassageforum.org/>).
- Developed in response to the need of a central database to house fish passage barrier data.
- Initially funded by the Coastal Conservancy and has since been funded by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service and NOAA Fisheries.



## What information is in the PAD?

- Sites assessed as man-made and natural barriers to fish passage
- Sites assessed as not barriers to fish passage
- Former barriers that have been remediated (i.e., fish ladder, etc.) or removed\*
- Diversions (screened, unscreened, and unknown screening)
- Sites that may or may not be potential barriers (sites with unknown passage status and unassessed sites)\*
- Some limits of anadromy but very limited\*
- Limited information on species and life stages\*
- ~2,000 photos

\*Need more information and updates

## Types of fish passage barriers:

- Road and Utility Crossings
- Dams, Debris Basins and Tidegates
- Flood Control Channels
- Unscreened Water Diversions
- Weirs and Grade Control Structures
- Log Jams
- Velocity Barriers
- Natural Barriers (waterfalls, grade, insufficient flow)
- Thermal Barriers

# Current Status of PAD

## Number of PAD records by barrier status

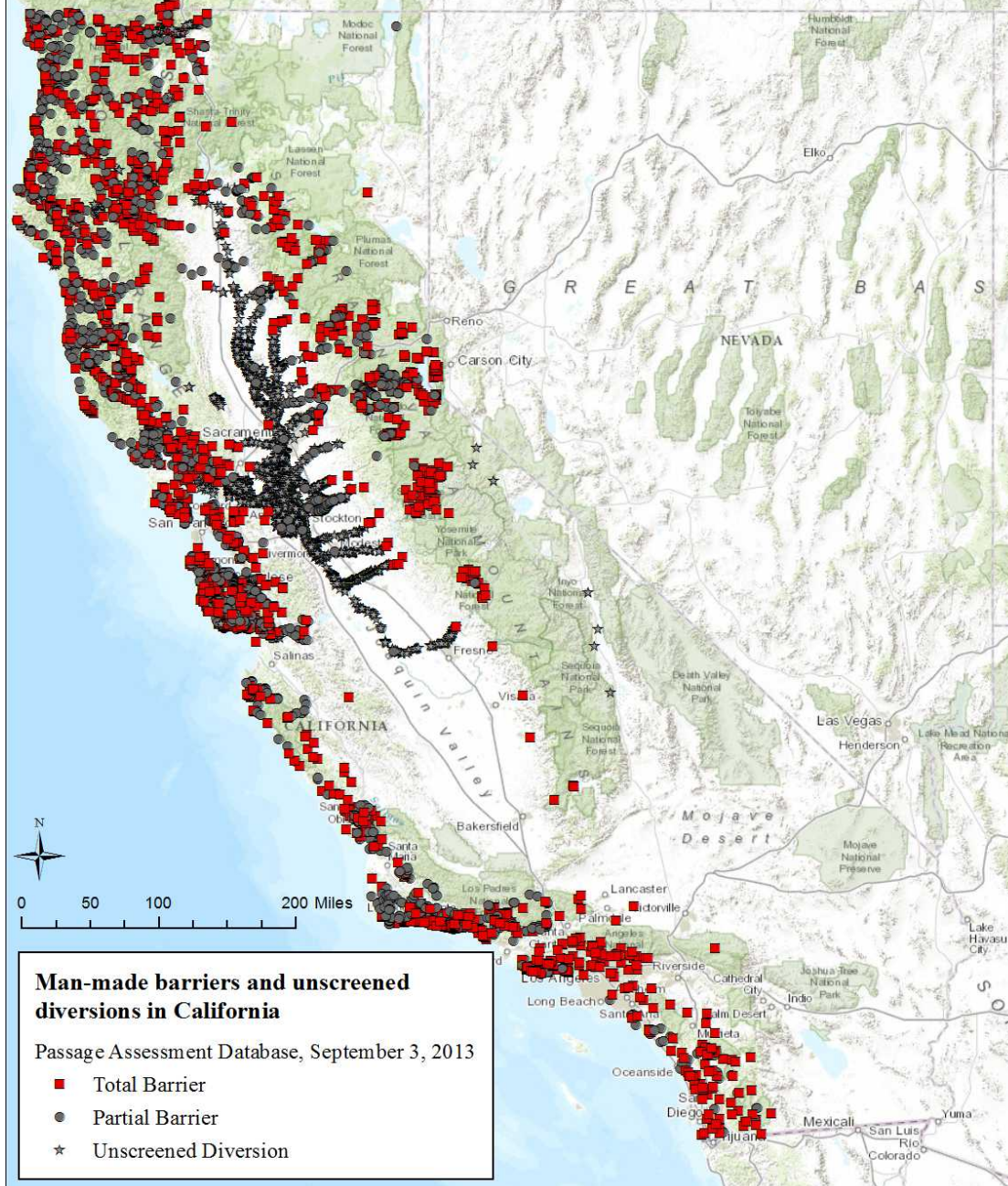
Fish Passage Status	Number of Records
Total Barrier	1,959
Partial Barrier	1,471
Temporal Barrier	1,089
Temporal and Partial Barrier	126
Temporal and Total Barrier	32
Unknown Passage Status	4,429
Unassessed	1,796
Unscreened Diversion	4,983
Screened Diversion	365
Natural Total Barrier	1,312
Natural Partial Barrier	235
Not a Barrier	1,382
Remediated, Fish Response Unconfirmed	412
<b>Total</b>	<b>19,591</b>

Number of records **added** to the PAD (2012-present): **329**

Number of records **updated** in the PAD (2012-present): **3,904**

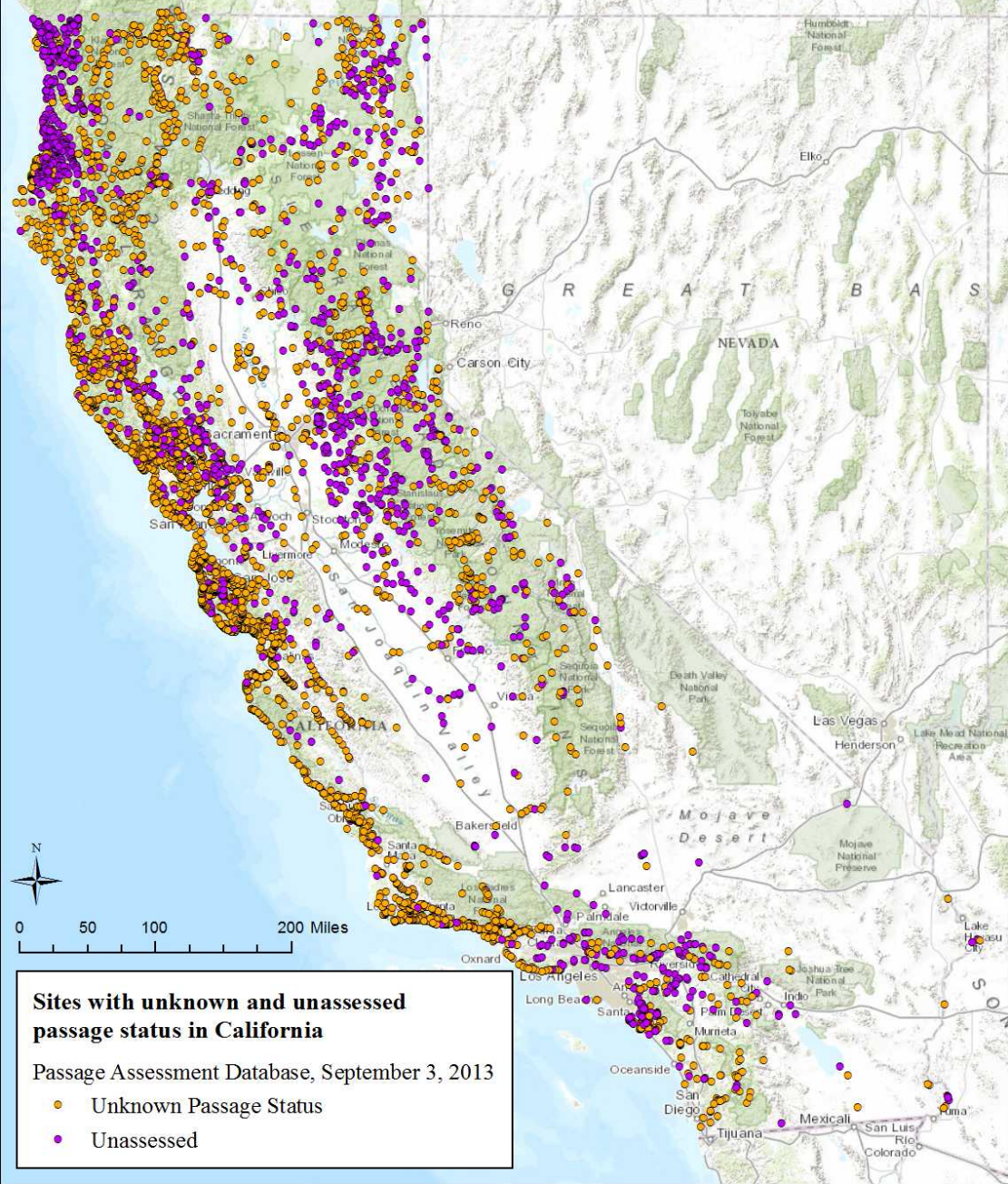


# Man-made barriers and unscreened diversions





## Sites with unknown and unassessed passage status



## **Contributors to the PAD (since 2012):**

CDFW, USFS, Trout Unlimited, CalTrans, NOAA, USFWS

## **Users of the PAD (since 2012):**

CDFW, USFS, CalTrans, Trout Unlimited, NOAA, PSMFC, TNC, DWR, USBR, UCD and Stillwater Sciences

## **What's New to PAD?**

- New PAD standards
- New form for providing updates
- New fields to track
  - Agency responsible for barrier removal/remediation
  - Species benefited from barrier removal
  - Whether a water diversion is mobile or operational
  - Person responsible for assessing fish passage

## **What PAD improvements/activities are planned or in the works?**

- Conduct PAD in-person and webinar trainings
- Re-create PAD Data Review & Mapping Application
- PAD clean-up including correcting locations, updating passage statuses, and determining and deleting duplicate records.

# New PAD Standards

Developed to improve the PAD. The new standards affect:

1. Removed barriers
2. New PAD records
3. Locations of barriers
4. Barrier status designations

We would like:

1. Fish presence evidence (i.e., photos, fish counts) after barrier removal.
2. Site visits of barriers to determine that they are still there prior to entering them into the database.
3. Description of location if latitude or longitude isn't accurate.
4. Barrier status from a fish passage professional.

Two new barrier statuses have been added to the PAD:

1. *Unassessed* - Structure identified but no evidence of a site visit or site survey.
2. *Remediated, fish presence unconfirmed.*



# Form for providing updates to the Passage Assessment Database (PAD), February 2013

Send to: Anne Elston, PAD Administrator, [Anne.Elston@wildlife.ca.gov](mailto:Anne.Elston@wildlife.ca.gov)

I. Contact Information					
Name:				Date:	
Title:				Phone:	
Agency:				Email:	
II. Type of Information					
<input type="checkbox"/> New barrier <input type="checkbox"/> Update					
III. Location					
Stream name:			Tributary to:		
Latitude:		Longitude:		Datum:	
Are the coordinates accurate (i.e., taken at the barrier)? <input type="checkbox"/> Yes <input type="checkbox"/> No		If the coordinates aren't accurate, please explain where the barrier is located (i.e., distance (in feet) downstream and side of the bank looking downstream):			
Road route/name:			Milepost:		
Photo(s) <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo Description (e.g., looking upstream or downstream, before and after removal, photo of fish species upstream after removal):			
Land owner:			Structure owner:		
IV. Structure					
PAD ID (if known) :		Date Constructed:		Structure Name:	
Structure type:		<input type="checkbox"/> Diversion <input type="checkbox"/> Dam <input type="checkbox"/> Ford <input type="checkbox"/> Utility crossing <input type="checkbox"/> Flood control channel <input type="checkbox"/> Screen present? _____ <input type="checkbox"/> Bridge <input type="checkbox"/> Log jam <input type="checkbox"/> Culvert <input type="checkbox"/> Weir <input type="checkbox"/> Tidegate <input type="checkbox"/> Natural <input type="checkbox"/> Fish trap <input type="checkbox"/> Gravel/borrow pits <input type="checkbox"/> Grade control <input type="checkbox"/> Other _____ What sort of natural feature?			
Passage status <sup>1</sup> :		<input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporal <input type="checkbox"/> Temporal and partial <input type="checkbox"/> Temporal and total <input type="checkbox"/> Unassessed <input type="checkbox"/> Unknown <input type="checkbox"/> Not a barrier			
Description:					
Is there a fish way present? <input type="checkbox"/> Yes <input type="checkbox"/> No		Status of fish way (e.g., functioning , needs work, etc.):			
V. Survey Information					
Was there a survey conducted for this site? <input type="checkbox"/> Yes <input type="checkbox"/> No		Survey date:		Protocol used:	
Fish observed downstream? <input type="checkbox"/> Yes <input type="checkbox"/> No		Species:		Assessed by:	
Fish observed upstream? <input type="checkbox"/> Yes <input type="checkbox"/> No		Species:		Life stage:	
Species blocked:		Lifestage:		Direction:	
Was permission granted by the landowner for site access? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Do you have a hard copy of landowner permission? (if yes, please provide as attachment) <input type="checkbox"/> Yes <input type="checkbox"/> No			
VI. Treatment Status and Recommendation					
Site treated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Treatment:		Monitoring completed <sup>2</sup> ? <input type="checkbox"/> Yes <input type="checkbox"/> No	
				Undergoing monitoring? <input type="checkbox"/> Yes <input type="checkbox"/> No	
				Needs Monitoring? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Passage status after treatment <sup>2</sup> :			Date treated:		Date removed:
Barrier removed by (name of organization):					
Needs treatment? <input type="checkbox"/> Yes <input type="checkbox"/> No		Treatment recommendation:			
Operations and maintance plan? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Title of operations and maintenance plan:		Date:	Operator:
VII. References and Attachments					
Reference Title:			Date:		Author:
Attachments:		<input type="checkbox"/> Photo(s) <input type="checkbox"/> Survey Note/Report <input type="checkbox"/> Restoration/Treatment Report <input type="checkbox"/> Operations & Maintenance Plan			

Online on

[www.calfish.org](http://www.calfish.org)

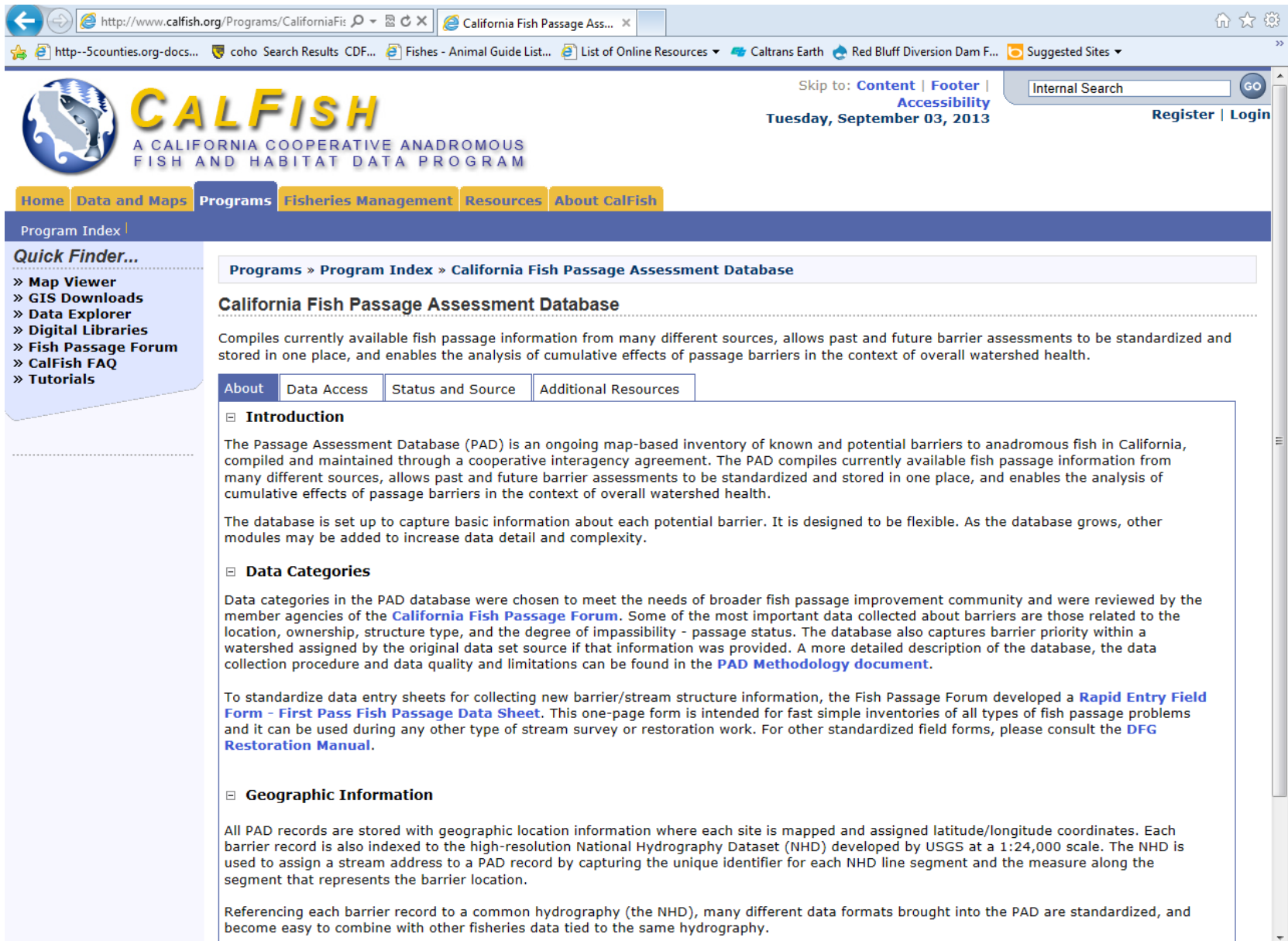
PAD Program Page >

About tab >

Feedback

# Accessibility

PAD can be accessed and viewed online via [www.calfish.org](http://www.calfish.org) > PAD Program Page.



[http://www.calfish.org/Programs/CaliforniaFishPassageAssessmentDatabase](#)

California Fish Passage Ass...

http--5counties.org-docs... coho Search Results CDF... Fishes - Animal Guide List... List of Online Resources Caltrans Earth Red Bluff Diversion Dam F... Suggested Sites

**CALFISH**  
A CALIFORNIA COOPERATIVE ANADROMOUS  
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## California Fish Passage Assessment Database

Compiles currently available fish passage information from many different sources, allows past and future barrier assessments to be standardized and stored in one place, and enables the analysis of cumulative effects of passage barriers in the context of overall watershed health.

[About](#) [Data Access](#) [Status and Source](#) [Additional Resources](#)

### Introduction

The Passage Assessment Database (PAD) is an ongoing map-based inventory of known and potential barriers to anadromous fish in California, compiled and maintained through a cooperative interagency agreement. The PAD compiles currently available fish passage information from many different sources, allows past and future barrier assessments to be standardized and stored in one place, and enables the analysis of cumulative effects of passage barriers in the context of overall watershed health.

The database is set up to capture basic information about each potential barrier. It is designed to be flexible. As the database grows, other modules may be added to increase data detail and complexity.

### Data Categories

Data categories in the PAD database were chosen to meet the needs of broader fish passage improvement community and were reviewed by the member agencies of the [California Fish Passage Forum](#). Some of the most important data collected about barriers are those related to the location, ownership, structure type, and the degree of impassibility - passage status. The database also captures barrier priority within a watershed assigned by the original data set source if that information was provided. A more detailed description of the database, the data collection procedure and data quality and limitations can be found in the [PAD Methodology document](#).

To standardize data entry sheets for collecting new barrier/stream structure information, the Fish Passage Forum developed a [Rapid Entry Field Form - First Pass Fish Passage Data Sheet](#). This one-page form is intended for fast simple inventories of all types of fish passage problems and it can be used during any other type of stream survey or restoration work. For other standardized field forms, please consult the [DFG Restoration Manual](#).

### Geographic Information

All PAD records are stored with geographic location information where each site is mapped and assigned latitude/longitude coordinates. Each barrier record is also indexed to the high-resolution National Hydrography Dataset (NHD) developed by USGS at a 1:24,000 scale. The NHD is used to assign a stream address to a PAD record by capturing the unique identifier for each NHD line segment and the measure along the segment that represents the barrier location.

Referencing each barrier record to a common hydrography (the NHD), many different data formats brought into the PAD are standardized, and become easy to combine with other fisheries data tied to the same hydrography.

# Various ways to review and retrieve PAD data



## California Fish Passage Assessment Database

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About Data Access Status and Source Additional Resources

### CalFish Map Viewer

*PAD Document Library* for accessing PAD reference documents:

<http://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=FishPassage>

Updated Daily\*

*PAD Data Portal* for PAD in tabular form (includes coordinates, links to reference documents and a map views of the barriers):

<http://nrm.dfg.ca.gov/PAD/view/query.aspx>

Updated Daily\*

*CalFish Tabular Data* for PAD in tabular form:

<http://www.calfish.org/DataandMaps/CalFishTabularData/tabid/92/Default.aspx>

Updated Quarterly

*PAD Maps:*

<http://imaps.dfg.ca.gov/viewers/calfish/app.asp?zoomtoBookmark=1643> (book marked

PAD layer in the CalFish Map Viewer)

Updated Quarterly

*PAD Dataset Download* in shapefile format:

<http://www.calfish.org/DataandMaps/CalFishDataDownloads/tabid/93/Default.aspx>

Updated Quarterly

*CalFish Data Review & Barrier Mapping Application:*

<http://eris.dfg.ca.gov/padreview/>

Updated Quarterly

\*This frequency is dependent on whether updates or new barrier information is received.