

Passage Assessment Database (PAD) Training

May 6, 2014

Presenter: Anne Elston, PAD Administrator (Anne.Elston@wildlife.ca.gov)

Agenda:

- 1) Description of the PAD and information it contains, including PAD standards.
- 2) Description and demonstration of the various ways to submit information to the PAD.
- 3) Explanation of when and where you will see your updates and new barrier entries in the PAD.
- 4) Demonstration of various ways to review and retrieve PAD data.
- 5) Questions & comments
- 6) Break
- 7) PAD lessons
- 8) PAD Review using the review tool

Description of the PAD and information it contains

For detailed information about the PAD, please refer to the PAD Methodology Document:
<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=19037>

What is PAD?

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. It is an important tool for determining and tracking the outcomes of passage improvement projects.

The PAD relies on, compiles and standardizes data from several agencies, organizations, landowners and individuals.

Description of the PAD and information it contains (continued)

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 screening unknown)
- * Sites that may or may not be potential barriers (sites with unknown passage status and unassessed sites)*
- * Some limits of anadromy, but very limited*
- * ~2,000 pictures*
- * Limited information on species and life stages*

*Need more information and updates

Description of the PAD and information it contains (continued)

Examples of types of barriers in the PAD:

- * Road and Utility Crossings
- * Dams, Debris Basins and Tidegates
- * Flood Control Channels
- * Unscreened Water Diversions
- * Weirs and Grade Control Structures
- * Log Jams
- * Velocity Barriers
- * Waterfalls
- * Grade
- * Insufficient flow

Description of the PAD and information it contains (continued)

Description of the passage statuses:

- * **Total** - A complete barrier to fish passage for all anadromous species at all life stages at all flows.
- * **Partial** - Only a barrier to certain species or life stages.
- * **Temporal** - Only a barrier at certain flows.
- * **Temporal and total** - Total barrier only at certain flows.
- * **Temporal and partial** - Only a barrier to certain species or life stages and only at certain flows.
- * **Not a barrier** – Either not a barrier at time of assessment or has been remediated/removed with fish presence evidence documented in the PAD (these are identified as “completed” treatment status).
- * **Remediated, fish response unconfirmed** - The structure has been removed, however, there is no evidence of fish presence above the remediated site.
- * **Unknown** - Structure/site has been visited, however, dataset has no conclusive information about barrier status.
- * **Unassessed** - The structure/site hasn't been visited and/or surveyed for fish passage.

PAD Standards

Implemented in 2013 for new barrier entries. Full list of PAD Data Standards available online at:
<https://nrmsecure.dfg.ca.gov/FileHandler.ashx?DocumentID=78802>

Developed to ensure the robustness of PAD data. The standards affect:

1. Remediated 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.

Fish Passage Professional Experience Data Collection

Name:	Organization:	Email:	
Experience with anadromous fish passage (yes/no)?	Background in fish passage and examples of fish passage experience:		
Years of experience:			
Geographic experience (i.e., watersheds, counties):			
Trained in anadromous fish passage (yes/no)?	Year of training:	Organization that provided the training:	
Type of Engineer:	Engineer License #:		

Description and demonstration of the various ways to submit information to the PAD.

Tools for submitting information:

1. First-pass datasheet:
http://www.calfish.org/portals/o/Programs/Independent/FishPassageForum/docs/PAD_FirstPassForm_2012.pdf
2. PDF to provide updates to the PAD:
<http://www.calfish.org/portals/o/Programs/FishPassage/ProvideUpdatesToPad.pdf> and send via email.
3. PAD Mapping and Review Tool: <https://map.dfg.ca.gov/pad/>
4. Excel spreadsheet template

You can also 1) Send updates and new barrier information in an email to Anne.Elston@wildlife.ca.gov 2) Download current PAD records as an excel or shapefile and send updates via email or 3) Send a survey assessment report* or GIS file.

**If available, this is the preferred documentation.*

FISH PASSAGE INCIDENTAL REPORT (First Pass Data Sheet)

This form is intended to be used for rapid barrier inventorying and barrier data collection. It is not intended for barrier passage assessment and is not meant to replace any existing barrier assessment protocols.

** Please fill Section I and II even when no barriers found!*

Send to: DFG, 830 S Street, Sacramento, CA 95814, Email: mkoller@dfg.ca.gov

Created for fast and incidental fish barrier inventories and during first pass surveys.

Online on www.CalFish.org

PAD Program Page > About tab > Data Categories

Direct Link:

http://www.calfish.org/portals/o/Programs/Independent/FishPassageForum/docs/PAD_FirstPassForm_2012.pdf

I. GENERAL			
Surveyor:		Date: / /	Time: AM/PM
Agency:			
Weather:	Water	Flow	Bank
<input type="checkbox"/> Sunny	<input type="checkbox"/> Clear	<input type="checkbox"/> Continuous	<input type="checkbox"/> Channel erosion
<input type="checkbox"/> Overcast	Conditions: <input type="checkbox"/> Turbid	<input type="checkbox"/> Isolated pools	Conditions: <input type="checkbox"/> Scour
<input type="checkbox"/> Raining		<input type="checkbox"/> Dry	<input type="checkbox"/> Rip/rap
Water Temperature (°C):		Ambient Temperature (°C):	
II. LOCATION			
Latitude:	Longitude:	Quad Name:	
Stream Name:		Tributary To:	
Barrier(s) Found?: <input type="checkbox"/> Yes <input type="checkbox"/> No		Stream Segment Surveyed:	
Bank Location (looking downstream): <input type="checkbox"/> Left <input type="checkbox"/> Right <input type="checkbox"/> Both		Channel Type: <input type="checkbox"/> V <input type="checkbox"/> U	
Road Name:			Milepost:
Photos Taken: <input type="checkbox"/> Inlet <input type="checkbox"/> Outlet <input type="checkbox"/> Other			
Photo Description/Numbers:			
Land Owner:		Structure Owner:	
III. STRUCTURE			
Structure Type:	<input type="checkbox"/> Diversion <input type="checkbox"/> Dam <input type="checkbox"/> Arizona crossing (ford)	Description:	
<input type="checkbox"/> Culvert	<input type="checkbox"/> Bridge <input type="checkbox"/> Natural <input type="checkbox"/> Other _____		
Passage Status:			
IV. FISH			
Salmonids Observed Downstream? <input type="checkbox"/> Yes <input type="checkbox"/> No		Salmonids Observed Upstream? <input type="checkbox"/> Yes <input type="checkbox"/> No	
V. DIVERSION			
Diversion Type:	<input type="checkbox"/> Slant pump <input type="checkbox"/> Floodgate <input type="checkbox"/> Other _____	Pump Running? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vertical pump	<input type="checkbox"/> Centrifugal pump <input type="checkbox"/> Siphon	Pipe Size: <input type="checkbox"/> < 1 ft <input type="checkbox"/> 1 - 2 ft <input type="checkbox"/> > 2 ft	
<input type="checkbox"/> Submersible pump	<input type="checkbox"/> Pump other <input type="checkbox"/> Weir	Screened? <input type="checkbox"/> Yes <input type="checkbox"/> No	
VI. DAM			
Dam Type:	<input type="checkbox"/> Earth <input type="checkbox"/> Seasonal <input type="checkbox"/> Permanent		
<input type="checkbox"/> Rock/cement	Dam Height (ft):	Dam Width (ft):	
<input type="checkbox"/> Other _____	Passage Facility? <input type="checkbox"/> Yes <input type="checkbox"/> No		
VII. CULVERT			
Culvert Type:	Culvert Material:	Number of Barrels/Pipes:	
<input type="checkbox"/> Box	<input type="checkbox"/> Concrete	Culvert Diameter: <input type="checkbox"/> ≤ 2 ft <input type="checkbox"/> > 2 ft	
<input type="checkbox"/> Circular	<input type="checkbox"/> Metal	Culvert Height (ft):	
<input type="checkbox"/> Open-bottom arch	<input type="checkbox"/> Plastic	Culvert Width (ft):	
<input type="checkbox"/> Pipe arch	<input type="checkbox"/> Log/wood	Outlet Drop Height: <input type="checkbox"/> < 1 ft <input type="checkbox"/> 1 - 3 ft <input type="checkbox"/> > 3 ft	
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	Weirs/Baffles? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Abandoned/Unmaintained		Channel Width (ft):	
VIII. BRIDGE			
Bridge Type:	<input type="checkbox"/> Free span <input type="checkbox"/> Instream structure	<input type="checkbox"/> Active <input type="checkbox"/> Abandoned	Apron? <input type="checkbox"/> Yes <input type="checkbox"/> No
IX. NATURAL			
Natural Barrier Type: <input type="checkbox"/> Waterfall <input type="checkbox"/> Grade <input type="checkbox"/> Landslide <input type="checkbox"/> Log jam <input type="checkbox"/> Other _____			
Waterfall Drop: <input type="checkbox"/> ≤ 8 ft <input type="checkbox"/> > 8 ft			
X. ADDITIONAL NOTES			
Does this site need treatment? What are specific treatment recommendations? (Please use other side if needed for additional notes).			

Form for providing new barrier information and updates:

- was created make it clear about the information that is needed and wanted, and
- is online on CalFish under the PAD program page.

Information that is required to add a new record or update a record is highlighted in **orange**, and other information we're after to make the database more robust is highlighted in **yellow**.

If ownership of the land or structure is private (i.e., individual or trust) and the name of the owner is not known, please write "**private owner**".

Please be as descriptive as possible and include the following in your description of the barrier:

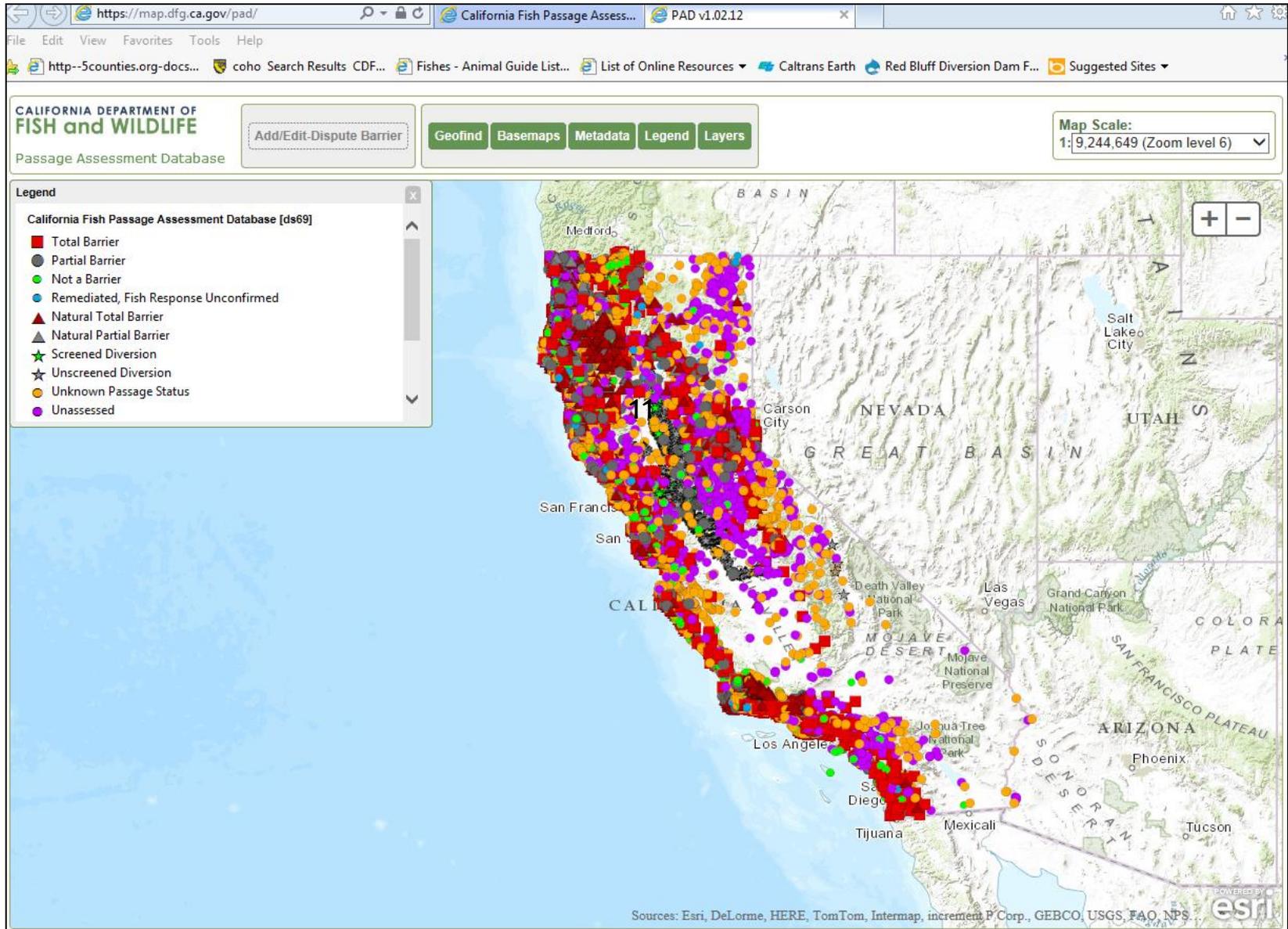
- ✓ dimensions (height, width and length, or height and slope);
- ✓ pool depth and/or residual depth;
- ✓ description of where measurements were taken;
- ✓ whether the habitat supports fish year round and what anadromous fish species it supports;
- ✓ anadromous or non-anadromous species seen in the pool below or attempting to pass the barrier unsuccessfully or successfully;
- ✓ the times of year flashboard dams are in, if applicable;

- ✓ a detailed description of the barrier remediation that occurred, if applicable;

- ✓ a photo scale (i.e., person, stadia rod, ruler, etc.) in photos of barriers;
- ✓ at least three photos looking at the barrier taken from upstream, downstream, and side of the bank; and
- ✓ before and after photos of the barrier remediation, if applicable.

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"/> Log jam <input type="checkbox"/> Culvert <input type="checkbox"/> Weir <input type="checkbox"/> Tidegate <input type="checkbox"/> Bridge <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 status¹:					
<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:
			Assessed by:		
Fish observed downstream? <input type="checkbox"/> Yes <input type="checkbox"/> No			Species:		Life stage:
Fish observed upstream? <input type="checkbox"/> Yes <input type="checkbox"/> No			Species:		Life stage:
Species blocked:		Lifestage:		Direction:	
				Passage status:	
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? <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?			Date treated:		Implementation Costs (\$)
Barrier removed by (Organization):			Estimated:		Actual:
Needs treatment? <input type="checkbox"/> Yes <input type="checkbox"/> No			Treatment recommendation:		
Operations and maintenance 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					

PAD Mapping and Review Tool accessed via <https://map.dfg.ca.gov/pad/> for adding new barriers and updating existing barriers one by one. The PAD Layer is updated quarterly (last updated in September 2013).



Updating a PAD record in the Mapping and Review Tool

1

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Passage Assessment Database

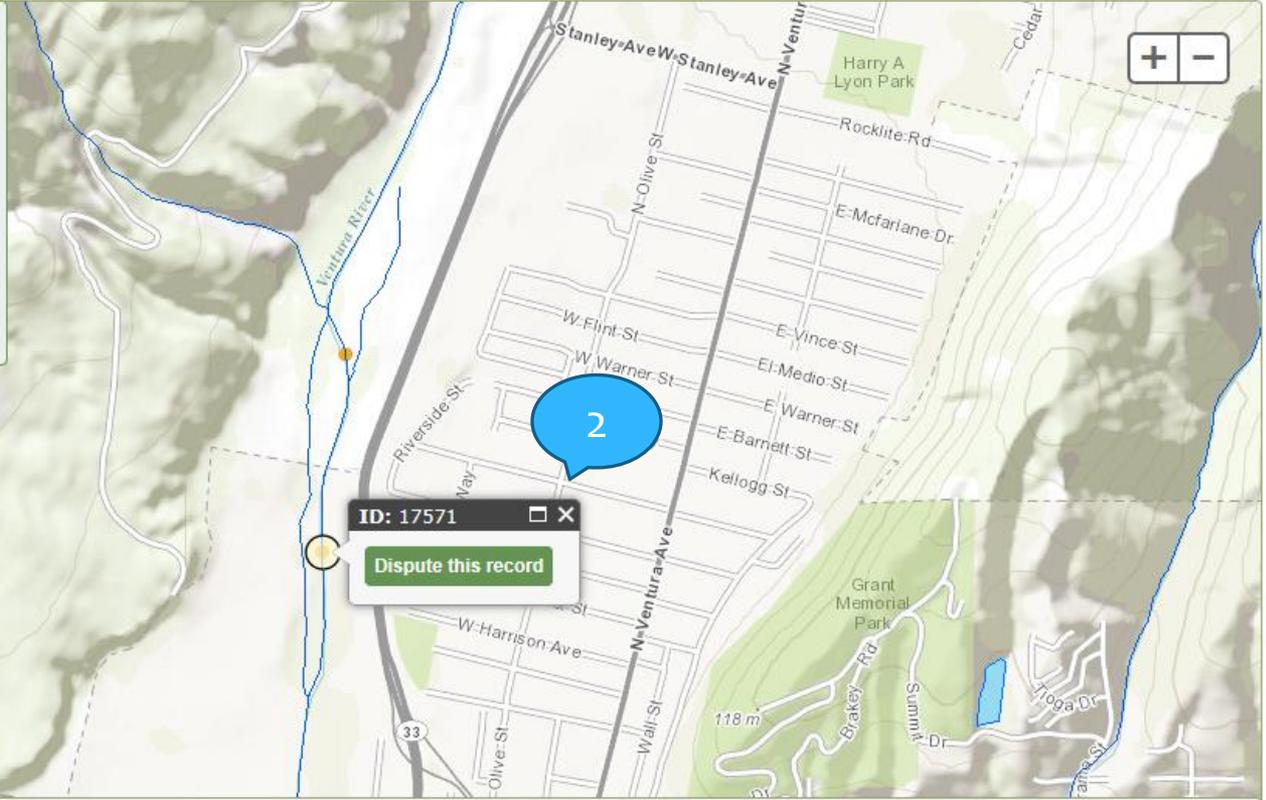
- Add/Edit-Dispute Barrier
- Geofind
- Basemaps
- Metadata
- Legend
- Layers

Map Scale:
1: 18,056 (Zoom level 15)

Legend

California Fish Passage Assessment Database [ds69]

- Total Barrier
- Partial Barrier
- Not a Barrier
- Remediated, Fish Response Unconfirmed
- ▲ Natural Total Barrier
- ▲ Natural Partial Barrier
- ★ Screened Diversion
- ★ Unscreened Diversion
- Unknown Passage Status
- Unassessed



California Fish Passage Assessment Records

PAD ID	Passage ID	Stream name	Tributary to	Structure/Site name	Structure type	Passage status	Protocol used	Party responsible for passage assessment	Approximate survey date:	Treatment status	Structure owner	Land owner	Site comments	Treatment recommendation	Watershed	County	CalWatHR
713889	17571	Ventura River	Pacific	Temporary Surface Diversion	Diversion	Unknown		Entrix, Incorporated	2003		Private landowner (s) (non-corporate)		See notes panel in the top left corner	See notes panel in the top left corner	VENTURA	Ventura	South Coast

Updating a PAD record in the Mapping and Review Tool (continued)¹³

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE
Passage Assessment Database

Add/Edit-Dispute Barrier Geofind Basemaps Metadata Legend Layers

Map Scale: 1: 18,056 (Zoom level 15)

Legend

- California Fish Passage Assessment Database [ds69]
- Total Barrier
- Partial Barrier
- Not a Barrier
- Remediated, Fish Response Unconfirmed
- Natural Total Barrier
- Natural Partial Barrier

Dispute California Fish Passage Assessment Record.

* = Required field

I. Coordinate Location

Proposed new X: Proposed new Y: Click map to suggest new coordinates

II. Contact Information

Recorder name (First Last):* Title:*

Agency:* Email:*

Recorder determined fish passage? (If not, complete observer information):*

Observer Name:

Organization: Entrix, Incorporated

Email:

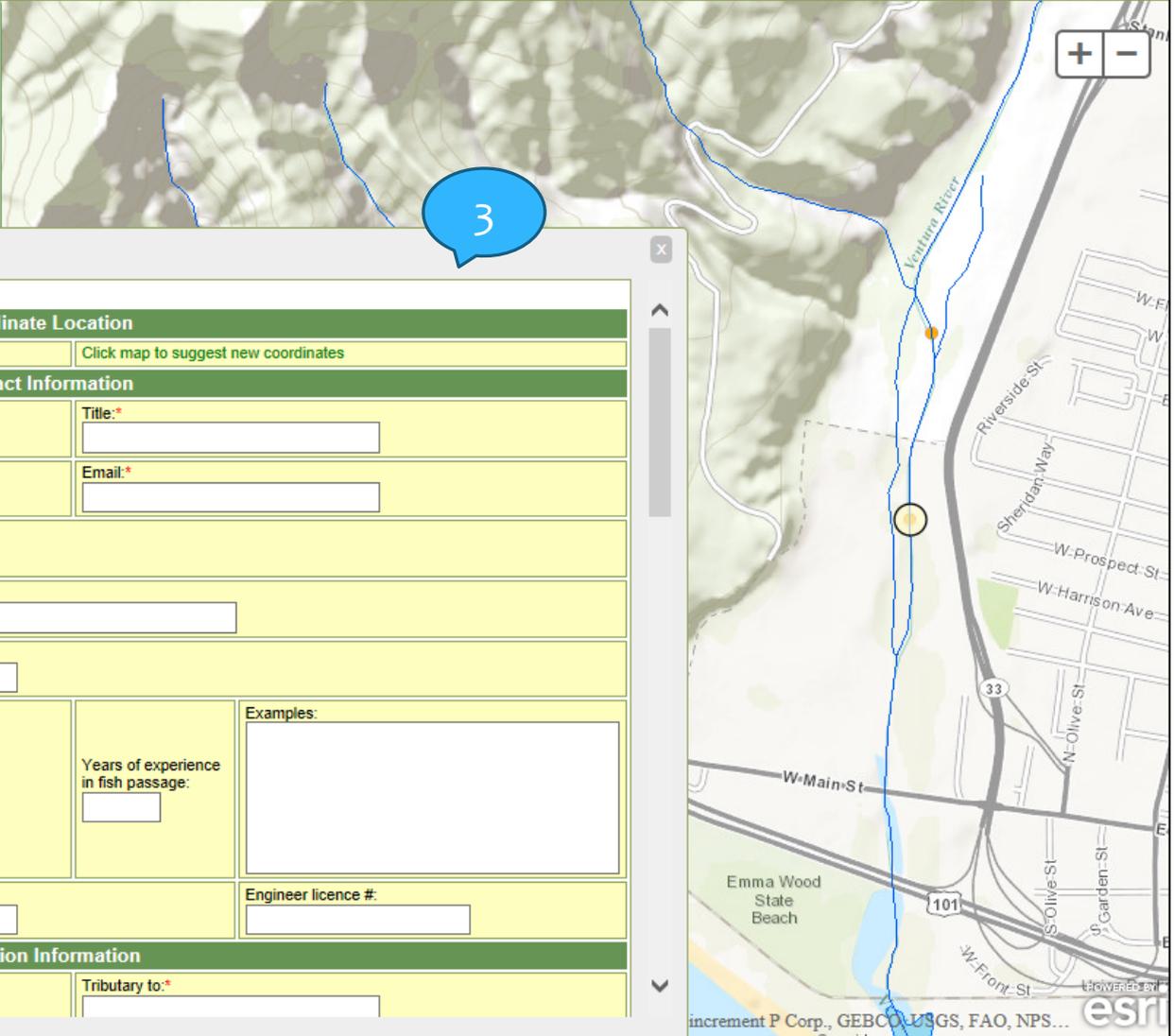
Fish passage expert? Years of experience in fish passage: Examples:

Information about experience only needs to be filled out if you haven't filled it out before.

Type of engineer: Engineer licence #:

III. Location Information

Stream name:* Tributary to:*



Increment P Corp., GEBCO, USGS, FAO, NPS... esri

Adding a barrier in the Mapping and Review Tool

1

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Passage Assessment Database

Add/Edit-Dispute Barrier

Geofind

Basemaps

Metadata

Legend

Layers

Map Scale:

1: 18,056 (Zoom level 15)

Legend

California Fish Passage Assessment Database [ds69]

- Total Barrier
- Partial Barrier
- Not a Barrier
- Remediated, Fish Response Unconfirmed
- Natural Total Barrier
- Natural Partial Barrier

Add new barrier California Fish Passage Assessment Record.

* = Required field

I. Coordinate Location

Proposed new X:
-119.30853

Proposed new Y:
34.27976

Change suggested coordinates

II. Contact Information

Recorder name (First Last):*

Title:*

Agency:*

Email:*

Recorder determined fish passage?
(If not, complete observer information):*

Observer Name:

Organization:

Email:

Information about experience only needs to be filled out if you haven't filled it out before.

Fish passage expert?

Years of experience in fish passage:

Examples:

Type of engineer:

Engineer licence #:

III. Location Information

2

3

Explanation of when and where you will see your updates and new barrier entries in the PAD.

What happens after updates or new barrier information are submitted to the PAD?

- 1) The updates will be reviewed for completeness (passage status, location, etc.) and vetted.
- 2) If there are any additional needs, the PAD Administrator will contact the submitter for more information.
- 3) Once the PAD Administrator is satisfied that it meets the PAD standards and that the information is complete, the Administrator will update the PAD and contact the submitter about the status of their update.

When and where will you see your updates and new barriers in the PAD?

The day after changes are made to the PAD, they can be seen through the PAD Data Portal (query tool) in tabular form. Less frequently (~ quarterly), the PAD shapefile is published on CalFish and can be either downloaded or accessed via the map viewer on CalFish.

If you've submitted updates to the PAD or requested an interest in receiving news of the PAD, you will receive an email when the latest PAD layer is available through the map viewer or ready for download. The last update of the PAD shapefile was on September 2013.

Accessibility

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

California Fish Passage Ass...

File Edit View Favorites Tools Help

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

Skip to: [Content](#) | [Footer](#) | [Accessibility](#)

Wednesday, April 23, 2014

Internal Search GO

Register | Login

CALFISH
A CALIFORNIA COOPERATIVE ANADROMOUS
FISH AND HABITAT DATA PROGRAM

Home Data and Maps Programs Fisheries Management Resources About CalFish

Program Index |

Quick Finder...

- » Map Viewer
- » Data Downloads
- » Data Explorer
- » Digital Libraries
- » Fish Passage Forum
- » CalFish FAQ
- » Tutorials

Programs » Program Index » California Fish Passage Assessment Database

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.

For the PAD to be useful as a restoration tool, the data within the PAD need to accurately depict the on-the-ground reality of fish passage constraints. This requires the PAD to retrieve new barrier data and updates to existing sites and to have verified and vetted the information it receives. In 2013, new **PAD data standards** were designed to standardize this process, and refine the data in PAD making the data more robust. The new standards have been implemented for all new records since 2013. In the future, the new standards will be implemented for all existing records.

Preferred dataset citation: California Department of Fish and Wildlife, Passage Assessment Database, September 2013 Version

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**.

CalFish Website Redesign (estimated completion date: June 1, 2014)



CalFish A California Cooperative Anadromous Fish and Habitat Data Program

Search...

Home | Data and Maps | Programs | Fisheries Management | Resources | About CalFish

» Programs » Habitat and Barriers » California Fish Passage Assessment Database

Quick Finder

- » [Map Viewer](#)
- » [Data Downloads](#)
- » [Data Explorer](#)
- » [Digital Libraries](#)
- » [Fish Passage Forum](#)
- » [CalFish FAQ](#)
- » [Tutorials](#)

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	Priority Barriers	Barrier Removals	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.

For the PAD to be useful as a restoration tool, the data within the PAD need to accurately depict the on-the ground reality of fish passage constraints. This requires the PAD to retrieve new barrier data and updates to existing sites and to have verified and vetted the information it receives. In 2013, new [PAD data standards](#) were designed to standardize this process, and refine the data in PAD making the data more robust. The new standards have been implemented for all new records since 2013. In the future, the new standards will be implemented for all existing records.

Preferred dataset citation: California Department of Fish and Wildlife, Passage Assessment Database, September 2013 Version

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.

Priority Barriers for Remediation

CalFish > Programs > Habitat and Barrie... +

dev.calfish.org/Programs/HabitatandBarriers/CaliforniaFishPassageAssessmentDatabase.aspx

Google



CalFish A California Cooperative Anadromous Fish and Habitat Data Program

Search...

Home | Data and Maps | Programs | Fisheries Management | Resources | About CalFish

>> Programs >> Habitat and Barriers >> California Fish Passage Assessment Database

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	Priority Barriers	Barrier Removals	Additional Resources
-------	-------------	-------------------	-------------------	------------------	----------------------

California Department of Fish and Wildlife (CDFW) Anadromous Fish Passage Barrier Priorities

Man-made barriers to salmonid migration include road/stream crossings, irrigation diversions and dams. Road/stream crossings are extremely numerous and often cross multiple road ownerships within a watershed. Passage impediments and delays in migration affect both adult and juvenile fish. Given the magnitude and severity of the problem, reconnecting isolated stream habitat has become an important priority for the restoration of impaired anadromous salmon and steelhead stocks. A comprehensive CDFW fish passage program is vital towards identifying, prioritizing, and treating migration barriers so that unimpeded migration of California's salmonid populations is achieved. By coordinating resources with CDFW fisheries engineers, the Fisheries Restoration Grant Program and in conjunction with the Fish Passage Forum, a comprehensive program will aid in the recovery and de-listing of salmon and steelhead, in California.

In 2008, the California departments of Fish and Game (now CDFW) and Transportation (Caltrans) met with staff from the Assembly committees on Natural Resources and Transportation to discuss joint agency collaboration on prioritizing and remediating fish barriers to salmon and steelhead migration. This was in response to Senate Bill 857 requiring the California Department of Transportation to complete an assessment of potential barriers to anadromous fish prior to commencing any project using State or Federal transportation funds. In addition to the expectation that both agencies would develop a mutual list of priority barriers occurring along transportation corridors, a request was made to CDFW to provide a statewide list of priority barriers based on significance to fish migration and independent of who manages or is responsible for the stream crossing. These documents list the top priorities for 2011 and 2012 in each of the twenty-four Coastal and Central Valley counties for fish passage improvement. These lists represent CDFW's continuing effort to review priorities and track accomplishments in addressing statewide priorities. These lists are a result of compilation and review by CDFW Regional biologists and supervisors (Regions 1-5) and by the Fisheries Branch.

Links to CDFW Anadromous Fish Passage Priority Lists:

[Department of Fish and Game Statewide Priority Anadromous Fish Passage Barriers for 2011](#)
[Department of Fish and Game Statewide Priority Anadromous Fish Passage Barriers for 2012](#)

Geospatial layers identifying these 2011 and 2012 priorities are available as [downloadable shapefiles](#) and via the [Map Viewer](#).

Quick Finder

- >> [Map Viewer](#)
- >> [Data Downloads](#)
- >> [Data Explorer](#)
- >> [Digital Libraries](#)
- >> [Fish Passage Forum](#)
- >> [CalFish FAQ](#)
- >> [Tutorials](#)

PAD Barrier Removal Reports on CalFish PAD Program Page

» Data Explorer
» Digital Libraries
» Fish Passage Forum
» CalFish FAQ
» Tutorials

About Data Status and Source Priority Barriers Barrier Removals Additional Resources

PAD Barrier Removal Reports

Detailed reports describing fish passage barriers removed in 2011 are available.
To view reports please begin by selecting a region of interest.

Status of Barrier Prior to Removal

- Total Barrier
- Partial Barrier
- Unknown Passage Status
- Passage Status Not Available
- Unscreened Diversion
- Hydrologic Region

PAD Barrier Removal Reports on CalFish PAD Program Page (continued)

South Coast Barrier Removal Reports

Quick Finder

- » Map Viewer
- » Data Downloads
- » Data Explorer
- » Digital Libraries
- » Fish Passage Forum
- » CalFish FAQ
- » Tutorials

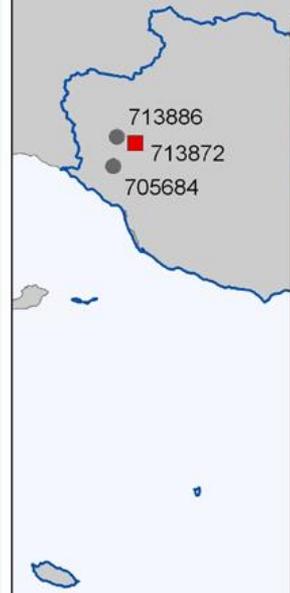


Detailed reports describing fish passage barriers removed in 2011 are available.

Each barrier location is labeled with its unique PAD ID. Click the PAD ID to open a detailed report for the barrier removed.

Status of Barrier Prior to Removal

- Total Barrier
- Partial Barrier
- Unknown Passage Status
- Passage Status Not Available
- ★ Unscreened Diversion
- 🗺 Hydrologic Region



2011Reports_713872.pdf - Adobe Acrobat Pro

File Edit View Window Help

Create [Icons]

1 / 1 [Navigation icons] 50.5% [Zoom] Tools Comment Share

Legend:

- Barrier Remediated in 2011
- Section Opened to Fish Passage
- Section Above Partial Barrier
- Total Barrier
- Partial Barrier
- Not a Barrier
- ▲ Remediated, Fish Response Unconfirmed
- ▲ Natural Total Barrier
- ▲ Natural Partial Barrier
- ★ Unscreened Diversion
- ★ Unscreened Diversion
- Unknown Passage Status
- Unscreened

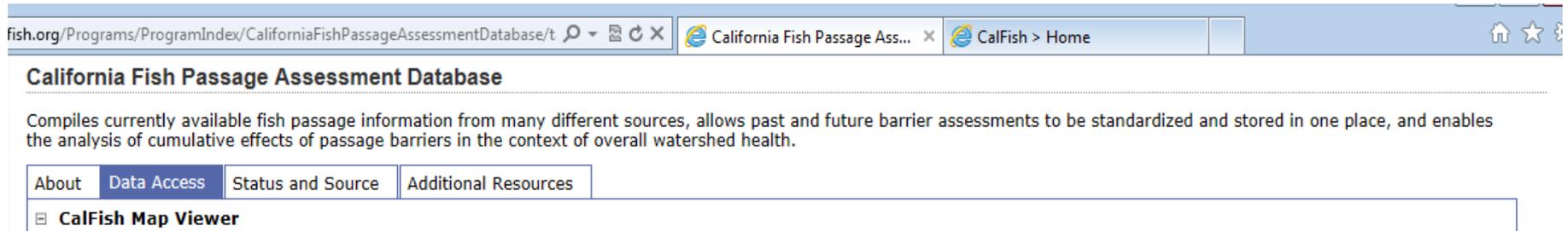
Before Photo Not Available

After Photo Not Available

Site Name: Soule Golf Course Crossing
Stream Name: San Antonio Creek
Structure Owner: Ventura County Parks
Year Removed: 2011
Barrier Description Prior to Removal: Dry weather crossing
Site Description After Removal: Bridge
Site Status After Removal: Remediated, fish response unconfirmed
Count of Total Barriers Downstream: 0
Count of Barriers with Unknown Passage Status Downstream: 6
Distance to Next Barrier Upstream with Barrier Status and PAD ID: 0.27 miles, Partial barrier, 713873
Distance to Next Total Barrier Upstream with PAD ID: 0.60 miles, 705670
*Site station based on February 2013 version of the Passage Assessment Database

PAD ID: 713872
Tributary To: Ventura River
Barrier Removed By: Not available
Barrier Status Prior to Removal: Total barrier
Species Benefited After Removal: Not available
Count of Partial Barriers Downstream: 5
Count of Unscreened Diversions Downstream: 0
Distance to End of Natural Anadromy: Unknown

Various ways to review and retrieve PAD data



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:

<https://map.dfg.ca.gov/bios/?al=ds69> (preloaded PAD layer in BIOS)

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:

<https://map.dfg.ca.gov/pad/>

Updated Quarterly

Note: This frequency of these updates is dependent upon receivable of updates or new barrier information.

PAD Layer in BIOS

Direct link to preloaded PAD Layer: <https://map.dfg.ca.gov/bios/?al=ds69>

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE BIOS

Basemaps Layers

Active Layer: California Fish Passage Assessment Database [ds69]

BIOS Layers

— California Fish Passage Assessment Database [ds69] [Go]

WebLegend

- Total Barrier
- Partial Barrier
- Not a Barrier
- Remediated, Fish Response Unconfirmed
- ▲ Natural Total Barrier
- ▲ Natural Partial Barrier
- ★ Screened Diversion
- ★ Unscreened Diversion
- Unknown Passage Status
- Unassessed

Use the 'Add Data: BIOS' input box at top to search for and see list of BIOS datasets. Double click on the list item, or highlight one and hit Enter to add a data layer to the map.

Reference Layers

Add Data: BIOS

Identify Features

Hello guest [Login](#)

v5.16.14 [Help](#)

Map Scale=1: 9,244,649 (Zoom level 6)

Table

The screenshot displays the BIOS web application interface. At the top, there is a search bar for datasets and a user login area. Below the search bar are navigation buttons for 'Identify Features' and 'Advanced Tools'. The main map area shows California and the Great Basin region, with numerous colored markers representing different types of fish passage barriers. A legend on the left side of the map provides a key for these markers, including categories like 'Total Barrier', 'Partial Barrier', 'Not a Barrier', 'Remediated, Fish Response Unconfirmed', 'Natural Total Barrier', 'Natural Partial Barrier', 'Screened Diversion', 'Unscreened Diversion', 'Unknown Passage Status', and 'Unassessed'. A 'Table' button is located at the bottom center of the map area. The map includes geographical labels such as 'HARNEY BASIN', 'GREAT BASIN', 'NEVADA', 'UTAH', 'CALIFORNIA', 'ARIZONA', 'NEW MEXICO', and 'SACRAMENTO MOUNTAINS'. Major cities like San Francisco, San Diego, Los Angeles, Tijuana, Mexicali, Las Vegas, Phoenix, Tucson, and Salt Lake City are also labeled. The map scale is indicated as 1:9,244,649 at zoom level 6. The Esri logo is visible in the bottom right corner.

PAD Data Portal

Browser address: https://nrm.dfg.ca.gov/PAD/view/query.aspx

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Home | Data Portal | Document Library | IT Services | My Account | Help

Species & Vegetation | Fisheries | Habitat Conservation | Water Policy | Wildlife

Data Portal » Fisheries » Passage Assessment Database (PAD) » Query

Passage Assessment Database (PAD) - Query

Select Fields To View | Select Criteria | View Query Results | View Documents

Available Fields	Selected Fields
Treatment Status	PAD ID
Treatment Needed	Passage ID
Treatment Recommendation	Stream Name
Date Removed	Tributary To
Keystone Barrier	Site Name
Miles Upstream	Passage Type
Miles To Barrier	Barrier Status
Notes	Protocol
WRIMSID	Assessed By
Route	County
Post Mile	Watershed HUC4
LLID	
NHD ComID	
NHD ComMeas	
BegFt	
Point X	
Point Y	
Land Owner	

Reset All | Run Query

Select Fields To View | Select Criteria | View Query Results | View Documents

Fields	Criteria
PAD ID	PAD ID
Passage ID	
Stream Name	
Tributary To	
Site Name	
Passage Type	
Barrier Status	
Protocol	
Assessed By	
County	
HUC 4	
HR Watershed	
HU Watershed	
HA Watershed	
HSA Watershed	

PAD Data Portal (continued)

ca.gov/PAD/view/query.aspx

Passage Assessment Datab...

Skip to: [Content](#) | [Footer](#) | [Accessibility](#)

Search

CDFW California

Not logged in: [Login](#)

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Library | IT Services | My Account | Help

Habitat Conservation | Water Policy | Wildlife

[Data Portal](#) → [Fisheries](#) → [Passage Assessment Database \(PAD\)](#) → [Query](#)

Passage Assessment Database (PAD) - Query

Select Fields To View | Select Criteria | **View Query Results** | View Documents

Print | More Actions | 374 rows return from a total of 19,544. 

Search Criteria: County is (Monterey)

Rows per page: 50 | 1 2 3 4 5 6 7 8 | Page 1 of 8

	PAD_ID	Passage ID	Stream Name	Tributary To	Site Name	Passage Type	Barrie
 	705299	5498	Big Creek	Pacific	Bedrock Waterfall	Non-structural (waterfall, grade, temperatu...	Total
 	705303	5502	Granite Creek	Pacific	Bedrock waterfall	Non-structural (waterfall, grade, temperatu...	Total
 	705317	5522	Anderson Canyon Creek	Pacific	Anderson Canyon Falls	Non-structural (waterfall, grade, temperatu...	Total
 	705318	5523	Kirk Creek	Pacific	bedrock waterfall	Non-structural (waterfall, grade, temperatu...	Total
 	705320	5526	Arroyo Seco River	Salinas River	Thorne Road Crossing	Road crossing (culvert, bridge, low-flow, et...	Remediated
 	705321	5527	Zigzag Creek	Lost Valley Creek	Potential end of anadromy	Non-structural (waterfall, grade, temperatu...	Unknown
 	705322	5528	Negro Fork	Nacimiento River	Bedrock barrier	Unknown	Unknown
 	705324	5530	San Antonio River	Salinas River	Flashboard Dam	Dam (debris, earth, rock, flashboard, drop...	Unassesse
 	705325	5531	Salmon Creek	Nacimiento River	End of anadromy	Non-structural (waterfall, grade, temperatu...	Total
 	705326	5532	San Jose Creek	Pacific	Bedrock Waterfall	Non-structural (waterfall, grade, temperatu...	Partial
 	705327	5533	San Jose Creek	Pacific	Earth-fill Dam	Dam (debris, earth, rock, flashboard, drop...	Total
 	705328	5534	Soberanes Creek	Pacific	Waterfall	Non-structural (waterfall, grade, temperatu...	Unknown

Links to the reference in the document library and to a map view.

4

What's new to the PAD?

New fields tracking

- passage status prior to removal,
- group responsible for removing the barrier,
- species benefited from barrier removal,
- whether a water diversion is mobile and/or operational,
- number of structures (i.e., # of culverts under a crossing),
and
- name of fish passage professional that determined passage status.

What's coming to the PAD?

- 1) New field(s) to track
 - Implementation costs (actual and estimated)
 - CDOT districts
- 2) Clean up the PAD data including
 - identifying and correcting locations,
 - updating passage statuses (i.e., with barrier removal project information) and,
 - getting rid of duplicate records.

Questions and Comments

Any suggestions or comments?

How can we make submitting information to the PAD easier?

How can we make retrieving information from the PAD easier?