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*Serious drought.  
Help save water!*

November 30, 2015

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Legislative Counsel  
State Capitol, Room 3021  
Sacramento, CA 95814

Mr. Daniel Alvarez  
Secretary of the Senate  
State Capitol, Room 3044  
Sacramento, CA 95814

Mr. E. Dotson Wilson  
Chief Clerk of the Assembly  
State Capitol, Room 3196  
Sacramento, CA 95814

Dear Ms. Boyer-Vine, Messers. Alvarez and Wilson:

I am pleased to transmit the California Department of Transportation's (Caltrans) report entitled "2014 Coastal Anadromous Fish Passage Assessment and Remediation Progress Report" prepared pursuant to California Streets and Highway Code Section 156, (Senate Bill 857, Kuehl Chapter 589, Statutes of 2005).

Although the report shows only three completed projects for last year, major efforts are ongoing. These efforts include: strategically planning for infrastructure and recovery efforts; aligning transportation needs and barrier remediation funding; standardizing design solutions for common types of barriers; streamlining the environmental review and project delivery process for fish passage remediation projects; and finding a way to allow for fish passage remediation projects to result in credits/value as Advance Mitigation Projects.

These efforts will continue to yield progress towards funding a number of high priority locations. Caltrans is committed to finding funding options for priority remediation locations with a transportation nexus and to partner with others to fund and deliver these projects.

Ms. Boyer-Vine, Messers. Alvarez and Wilson  
November 30, 2015  
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Caltrans is also now a member of the California Fish Passage Forum, as a signatory of the new Memorandum of Understanding. We look forward to partnering with the Forum to improve the implementation of projects and remediate barriers to fish passage on the State Highway System.

Distribution of this report to the Legislature has been made by Caltrans pursuant to California Government Code Section 9795. This report can be found at <http://www.dot.ca.gov/reports-legislature.htm>.

Sincerely,



MALCOLM DOUGHERTY  
Director



**Annual Report to the Legislature  
For Calendar Year 2014**

**COASTAL ANADROMOUS FISH PASSAGE ASSESSMENT  
AND REMEDIATION PROGRESS REPORT**



\*Fort Goff (District 2, Redding) Fish Passage structure

**Prepared:  
October 2015**

**Prepared by the California Department of Transportation  
Division of Environmental Analysis**

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## Executive Summary

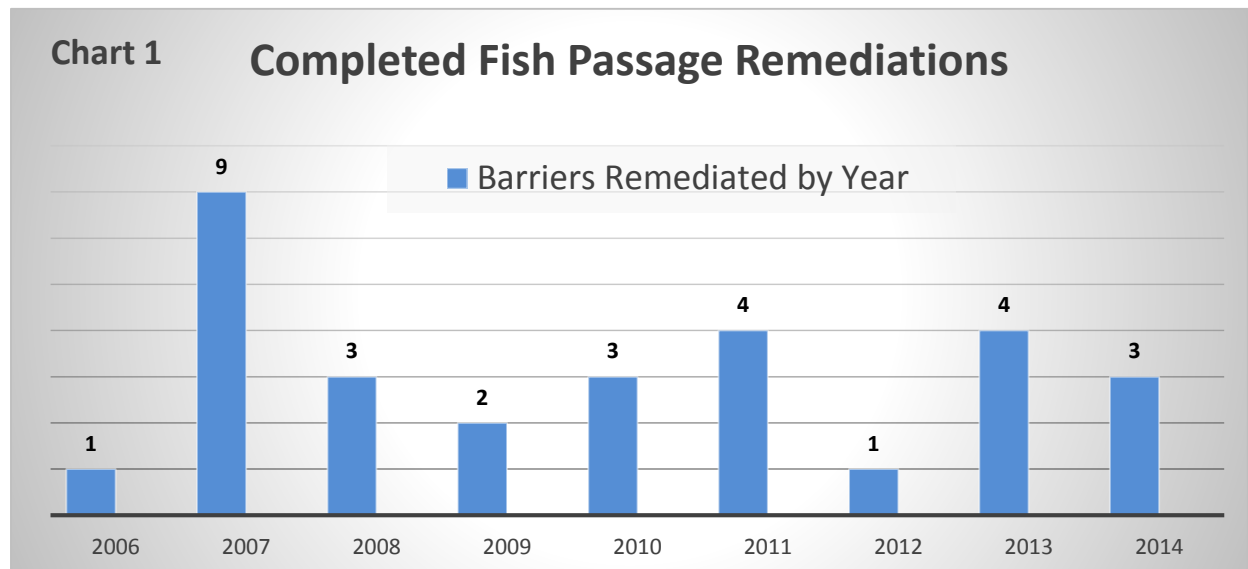
### 2014 Fish Passage Program Accomplishments

- Completed Fish Barrier Remediations = **3 Locations**
- Completed Fish Passage Assessments = **1 location**
- Active Fish Passage Remediation Projects (programmed) = **24 projects**
- Priority Fish Passage Barriers (future program) = **48 locations**

### Quality Assurance Review and New Assessments

In coordination with the California Department of Fish and Wildlife (CDFW), the California Department of Transportation (Caltrans) continues to assess the Passage Assessment Database (PAD) for quality assurance review (QA/QC) of state highway locations. The purpose of the QA/QC is to improve and refine data for existing and new locations, which will help to inform future assessment needs, help to determine staff and funding needs to develop and deliver fish passage remediation projects, and help to inform project priorities for recovery decisions. Completed locations have gone through the QA/QC process as well. Two additional locations have been added to the Completed list, which have not previously been reported, and 5 locations have been removed, due to continued partial barrier status, and duplicate or inaccurate information that has now been updated.

Chart 1 below, **Completed Fish Passage Remediations**, lists the 30 fish passage remediation projects by the Year which they were completed.



Based on the PAD QA/QC, additional assessments were funded in 2014, to survey identified data gaps within San Mateo, Marin, Santa Cruz, Mendocino, Humboldt and Trinity Counties.

This information was recently incorporated into the PAD and will be included in the report to legislature for the 2015 Calendar year (Oct 2016).

The PAD also tracks resident fish, such as Modoc sucker and Lahonton cutthroat trout. In the 2013 report to Legislature, resident fish species were not excluded from the estimate of known barriers. Since this report is specific to anadromous fish, it has been updated to exclude non anadromous barriers, thus reducing the currently known barriers to anadromous species on the State Highway System by approximately 40 locations.

As new assessments are completed, barriers are remediated, and existing information is further refined in the PAD, the relative number of barrier locations and associated priorities will be updated to reflect the best available science and prioritization information.

### **Prioritization – Criteria and Partnering with CDFW**

Caltrans and CDFW coordinate to determine the combined priority list of fish passage barriers on the state highway system. Once barrier locations have been assessed and identified, priorities are assigned, based on the relative habitat value at each location. The habitat value of each location is defined by the presence (or historic presence) and diversity of anadromous species, suitable upstream habitat quality and quantity and the localized knowledge of expert fisheries and hydraulic professionals.

Each parameter for prioritization criteria is necessary to understand and compare the recovery opportunities at individual locations. Any one parameter alone does not relay the significance of benefits for multiple species or translate into water availability during low flow, nor does it demonstrate the quality of habitat for rearing and migrating anadromous fish.

The drought has posed additional challenges to anadromous fish migration and the recovery of listed salmonid species. State and Federal partner agencies are working to identify stretches of watersheds that are likely to provide cool water during the late summer and early fall, in order to sustain salmon populations.

### **Partnering – Internal**

Towards the end goal of improving fish passage remediation through project delivery and internal processes, Caltrans is working to align internal project delivery stakeholders.

The following internal alignment efforts are currently underway;

- Define each division's roles and responsibilities, related to improving fish passage planning, development and implementation of projects.
- Work with districts to identify opportunities to incorporate the updated list of 48 high priority fish passage locations into existing or future funded projects.
- Ensure that all identified fish passage barriers (culverts and bridges) have current inspections to determine if there are any overlapping transportation deficiencies.



- Work with the National Marine Fisheries Service (NMFS) and CDFW engineers to develop standard design solutions for the varied state highway fish barrier types (e.g. culvert replacement, new bridges, weirs), in order to meet species migration needs and to achieve design and approval efficiencies.

### **Partnering – External**

Caltrans and NMFS finalized a Programmatic Biological Opinion (PBO) in October 2013, with the primary intent of streamlining fish passage projects. The geographic scope of the PBO is from the Oregon border to Santa Cruz County and is consistent with the range of Central California Coast Coho salmon, which are endangered in California. Caltrans and NOAA continue to work together to improve the efficiency of fish passage remediation projects. In July 2015, Caltrans and NOAA executed a new interagency agreement, which includes a Caltrans-funded fish passage engineer position. This engineer will work under the direction of NOAA, with a primary focus on Caltrans fish passage locations. The engineer will assist Caltrans in determining appropriate solutions to achieve efficiencies in fish passage design approvals.

In discussions with CDFW, management has conveyed a continued interest in working with Caltrans to streamline permitting efforts for routine activities, including fish passage. In September of 2015, Caltrans and CDFW executed a new interagency agreement. The updated agreement now includes a Caltrans-funded fish passage engineer position. This engineer will work under the direction of CDFW, with a primary focus on Caltrans fish passage locations. The engineer will assist Caltrans in determining appropriate solutions to achieve efficiencies in fish passage design approvals.

Caltrans continues to participate in the California Fish Passage Forum (Forum). The Forum is a collaborative group that was established in 1999 by the California Natural Resources Agency to facilitate coordination of state, local and federal partners, toward the end goal of restoring anadromous fish (salmon and steelhead) populations to naturally sustainable levels. Fish passage barriers are recognized as a major threat to anadromous fish in California and their removal or modification has the potential to yield the greatest cost-efficiency for short-term restoration activities. Based on this recognition, a primary objective of the Forum is to coordinate fish passage remediation activities in California.

The new Forum Memorandum of Understanding (MOU) is in the process of being renewed and signed by the directors of all Forum partners, including Caltrans. The Caltrans Director's approval provides a firm foundation for all partners of the Forum to work toward efficiencies and help to facilitate fish passage project delivery.

## Purpose of Report

The purpose of this report is to provide fish passage assessment and remediation information for locations which Caltrans is responsible. This is in accordance with Article 3.5 of Chapter 1 of Division 1 of the Streets and Highways Code, SB 857 (Kuehl, Chapter 589 and Statue of 2005). This report updates Caltrans' progress and describes assessment and remediation activities between January 1 and December 31, 2014. In California, salmon and steelhead are protected under the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA), as shown in the **Species Listing Status** below.

### Species Listing Status - State and Federal Anadromous Species Listing

Species	Range	State/Federal Listing	Caltrans Districts with identified Barriers to species Habitat
Coho	Oregon to Northern CA coast Oregon (N. Punta Gorda)	Threatened	District 1 (Eureka), District 2 (Redding)
Coho	Central CA coast (S. Punta Gorda to Monterey Bay)	Endangered	District 1 (Eureka), District 4 (Oakland)
Chinook	California Coastal – Klamath River to Russian River	Threatened	District 1 (Eureka), District 4 (Oakland)
Chinook	Central Valley Spring – Sacramento & Feather River	Threatened	District 2 (Redding), District 3 (Marysville) <sup>1</sup>
Chinook	Sacramento River Winter – Sac River & tributaries	Endangered	District 2 (Redding), District 3 (Marysville)
Steelhead	Northern CA Coastal – Redwood Creek to Gualala River	Threatened	District 1 (Eureka), District 4 (Oakland)
Steelhead	CA Central Valley – Sacramento, San Joaquin Rivers & tributaries	Threatened	District 2 (Redding), District 3 (Marysville), District 6 (Fresno), District 10 (Stockton)
Steelhead	Central CA Coast – Russian River to Aptos Creek	Threatened	District 1 (Eureka), District 4 (Oakland), District 5 (San Luis Obispo)
Steelhead	Southern Central CA Coastal – Pajaro River to, but not including, Santa Maria River	Threatened	District 5 (San Luis Obispo)
Steelhead	S. CA Coast – Santa Maria River to U.S./Mexico Border	Endangered	District 5 (San Luis Obispo), District 7 (Los Angeles), District 11 (San Diego), District 12 (Orange)

<sup>1</sup> District 3 (Marysville), District 6 (Fresno) and District 10 (Stockton); are within the ranges of anadromous fish, however there have been no barriers to anadromy identified on the state highway system within those Districts, by either Caltrans or the California Department of Fish and Wildlife.



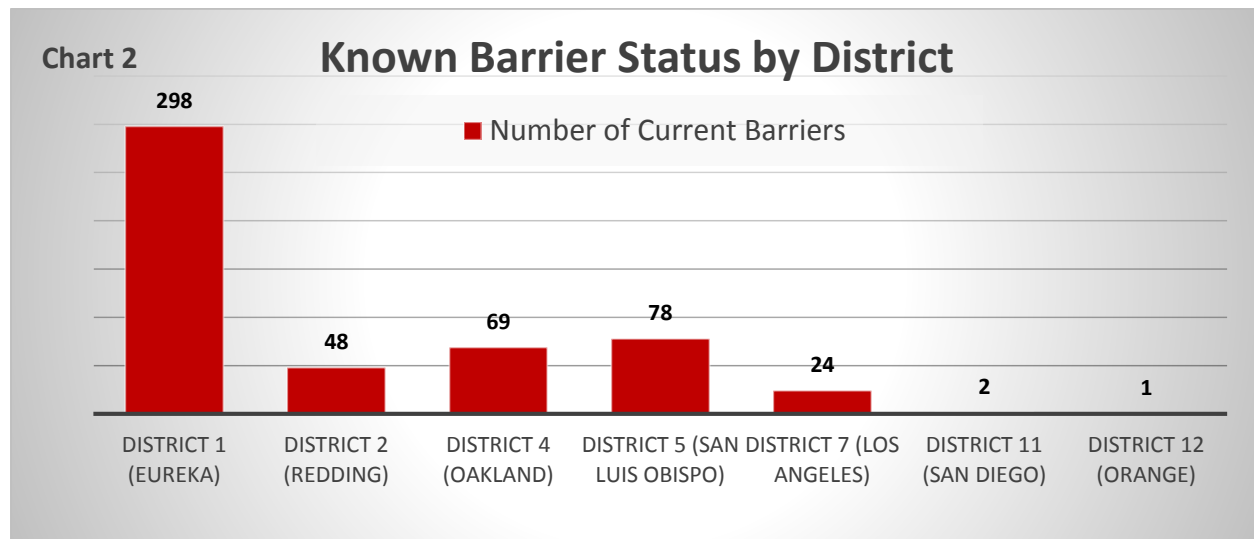
As noted in the **Species Listing Status** on page 6, three species are currently listed as endangered (red), while all other species noted are currently listed as threatened. In consideration of prioritizing fish barrier locations for funding, endangered species are assigned an increased priority value over species listed as threatened. The increased priority status is commensurate with the need of assisted recovery efforts for endangered species and in alignment with the California Environmental Quality Act. Locations with habitat for multiple listed species are also given increased priority value.

Caltrans District boundaries are shown below.



## Performance Measures

Since 2006, Caltrans has been tracking information related to planning, project delivery and implementation of fish passage remediation projects. Currently, there are an estimated 520 barriers to fish on the State Highway System, shown below in Chart 2, **Known Barrier Status by District**, (per PAD).



### Project costs

Costs associated with private, local or other state DOT's are not comparable to the costs of fish passage barrier remediations on the California State Highway System for a number of considerations, including;

- As a state, California has some of the highest seismicity (earthquake) standards, which require a foundation analysis, geotechnical investigations (drilling), load bearing analysis and, in general, a more robust substructure (foundation) is required.
- The standard design life-span for structures in California is 70 years. Many of the comparable fish passage remediations on the Oregon and Washington highway system are designed to a 30 year life span.
- Transport trucking, commerce and safety standards require wider shoulders, safety barriers, and other elements, which are not required on private, local and county routes.

After 10 years of delivering fish passage remediation projects, Caltrans staff and resource partners are becoming more efficient and expert at planning and implementation. Through efforts to increase staff expertise, the implementation of standard designs, and continued partnering with regulatory agencies for permitting and other efficiencies, the costs for planning and developing projects will likely continue to be reduced.

Ranges of those costs are in the **Cost Summary - Estimated Cost Ranges** table, below.  
Estimated costs include planning, design, permitting, construction and post-construction monitoring for successful implementation of fish passage projects.

### Cost Summary - Estimated Cost Ranges (2006 – 2013)

Remediation Category	Range of Costs in millions (average) <sup>2</sup>	Percentage of known barrier Locations Estimated for Each Remediation Category <sup>3</sup>
<b>Large Bridge</b> defined as <u>Greater</u> than 50-ft	\$3M to \$8.4M (\$5.7 M)	6%, (approx. 31 locations)
<b>Small Bridge</b> defined as <u>Less</u> than 50-ft	\$1.8M to \$2.5M (\$2.15M)	40% (approx. 208 locations)
<b>Large Culvert</b> Replacement of undersized culvert, with <u>80-inch culvert or larger</u> . Some foundation work may be necessary.	\$300K to \$1M (\$650K)	30% (approx. 156 locations)
<b>Retrofit</b> Retrofit existing culvert or structure to accommodate fish passage.	\$450K to \$1.4M (\$925K)	24% (approx. 125 locations)

#### Upstream Habitat Value

Passage Assessment Database staff at CDFW are working to estimate the extents of anadromous habitat that exist above barriers, by use of Geographical Information Systems (GIS). These estimates require field surveys to verify the extent of habitat. Caltrans is working with CDFW and other partners to verify habitat availability upstream of all locations, to include completed, active and priority locations. When upstream habitat areas are verified by field survey, information will be updated in PAD and used to prioritize current barriers. This information will help to determine the progress of efforts to restore habitat access above barriers on the State Highway System.

<sup>2</sup> The average estimated costs are reflective of materials, labor and items, at a rate that is consistent with 2006-2013 industry.

<sup>3</sup> Percentage of locations is an estimate of the types of solutions for the existing 520 known barriers. This estimate is based on the percentage of solutions in each category, for the 30 locations that have been remediated on the state highway system, since 2006. Information from the Caltrans Project Management database was used to estimate cost ranges and averages.

## 2014 Completed Fish Passage Remediations

Three fish passage remediation projects were completed in 2014. Table 1, 2014 Completed Fish Passage Remediations, contains information on the locations. Below Table 1 is Figure 1, a map of the locations listed in Table 1.

Table 1 – 2014 Completed Fish Passage Remediation							
Map #	Caltrans District	County	Route	Post Mile	Pad ID #	Stream Name	Project Name
1	2	Shasta	299	32.2	737295	Yank Creek/Lemm Creek Bridge	Yank Creek/Lemm Creek Bridge
2	2	Siskiyou	96	56.0	707168	Klamath River	Fort Goff Creek
3	5	Santa Barbara	101	38.8	707168	Pacific Ocean	Tajiguas Creek

**Figure 1 - 2014 Completed Fish Passage Remediation**

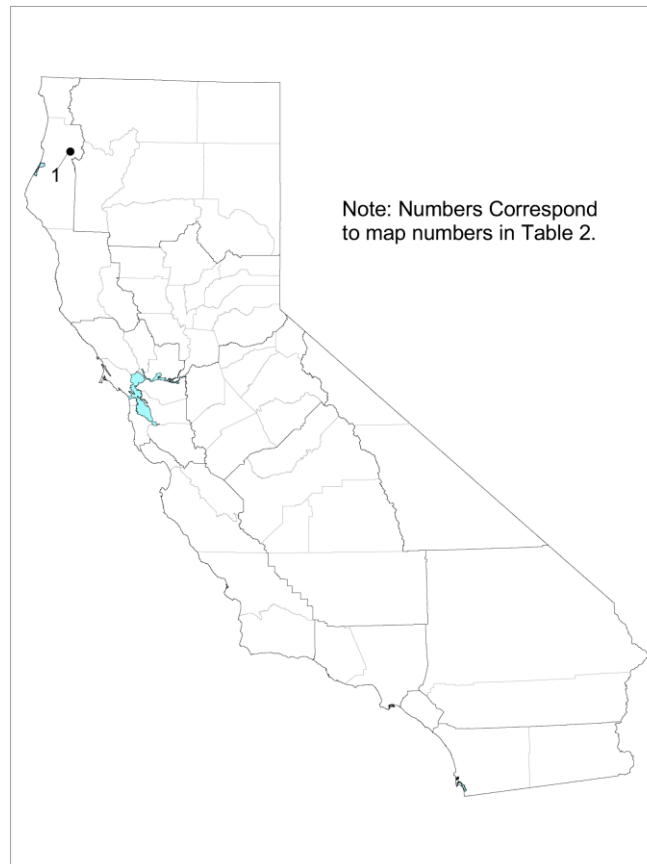


## 2014 Completed Fish Passage Assessments

One fish passage assessments was completed in 2014. Table 2, 2014 Completed Fish Passage Assessments, contains information on the assessment location. Below Table 2 is Figure 2, showing the locations that are listed in Table 2.

Table 2 – 2014 Completed Fish Passage Assessments								
Map #	Caltrans District	Report Date	County	Route	Post Mile	Pad ID #	Stream Name	Tributary to
1	1	Oct 2014	Humboldt	96	8.83	707141	Campbell Creek	Trinity River

Figure 2 - 2014 Completed Fish Passage Assessments



## Active Fish Passage Remediation Projects

Caltrans is currently developing projects to remediate 24 fish passage barrier locations. Table 3 below, Active Fish Passage Remediation Projects, lists the current remediation project locations. Locations are either funded through construction, or partially funded for planning, design or permitting. Figure 3, (page 14), is a map of locations that are listed in Table 3.

<b>Table 3 – Active Fish Passage Remediation Projects</b>						
<b>Map #</b>	<b>Caltrans District</b>	<b>County – Route – Post Mile</b>	<b>Estimated Year of Completion</b>	<b>PAD ID #</b>	<b>Stream Name</b>	<b>Project Name</b>
1	1	Mendocino – 101 – PM 44.0	2017	713107	Unnamed tributary to Haehl Creek	Willits Bypass
2	1	Mendocino – 101 – PM 44.5	2017	712894	Unnamed tributary to Haehl Creek	Willits Bypass
3	1	Mendocino – 101 – 48.14	2017	705136	Upp Creek	Willits Bypass
4	1	Mendocino – 101 – PM 52.36	2017	707085	South Fork Ryan Creek	Willits Bypass Mitigation
5	1	Mendocino – 101 – PM 52.25	2017	707086	North Fork Ryan Creek	Willits Bypass Mitigation
6	1	Mendocino – 101 – PM 66.5	2016	707096	Ten Mile Creek	36 Culverts
7	1	Mendocino – 101 – PM 89.04	2019	706954	Cedar Creek	Cedar Creek
8	1	Mendocino – 128 – PM 20.15	2016	707196	Unnamed	22 Culverts <sup>4</sup>
9	1	Mendocino – 128 – PM 21.8	2016	707199	Clow Creek	22 Culverts
10	1	Mendocino – 128 – PM 27.54	2016	707205	Graveyard Creek	22 Culverts
11	1	Mendocino – 128 – PM 36.63	2016	707208	Lost Creek	22 Culverts
12	1	Mendocino – 128 – PM 39.88	2016	707210	Beebe Creek	22 culverts
13	2	Trinity – 299 – PM 68.0	2015	720511	Little Grass Valley Creek	Trinity Dam Boulevard Fish Ladder

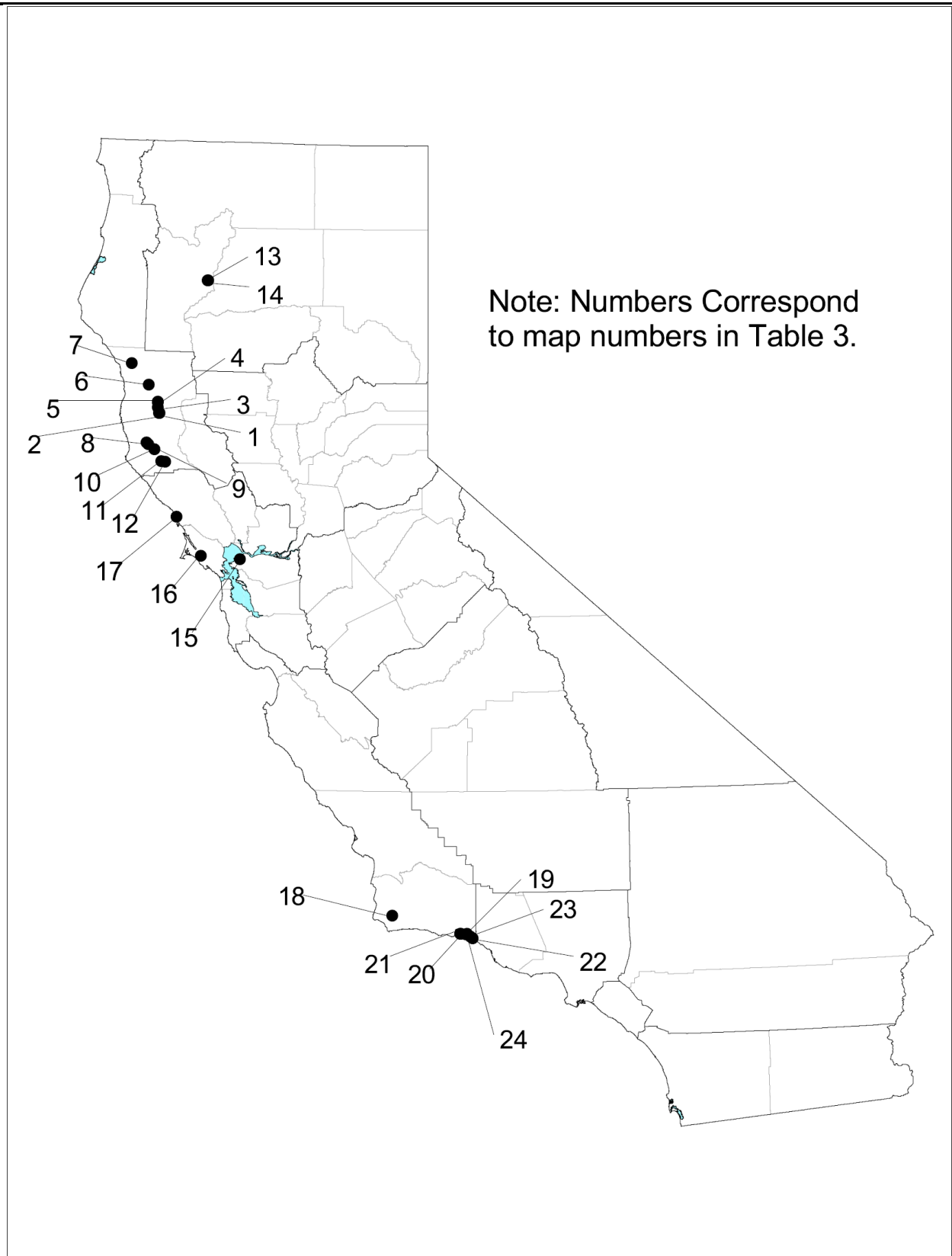
<sup>4</sup> 22 culverts; only 5 of the 22 culverts have fish passage issues, all 5 are listed in this table.



Map #	Caltrans District	County – Route – Post Mile	Estimated Year of Completion	PAD ID #	Stream Name	Project Name
14	2	Trinity – 299 – PM 68.2	2015	735688	Little Grass Valley Creek	Trinity Dam Boulevard Fish Ladder
15	4	Contra Costa – 80 – PM 8.4	2016	723716	Pinole Creek	Pinole Creek <sup>5</sup> (RCD, by Encroachment)
16	4	Marin – 1 – PM 24.77	2018	732502	Tributary to Olema Creek	Olema Creek Culvert Replacement
17	4	Sonoma – 1 – PM 15.1	2019	733223	Scotty Creek	Gleason Beach Highway Realignment
18	5	Santa Barbara – 1 – PM 15.6	2019	700085	Salsipuedes Creek	Salsipuedes Bridge Replacement
19	5	Santa Barbara – 101 – PM 5.6	2023	734310	Arroyo Parida Creek	South Coast HOV
20	5	Santa Barbara – 101 – PM 9.4	2023	705161	Romero Creek	South Coast HOV (0N700)
21	5	Santa Barbara – 101 – PM 9.6	2023	734342	San Ysidro Creek	South Coast HOV (0N700)
22	5	Santa Barbara – 101 – PM 0.0	2023	707368	Rincon Creek	South Coast HOV (0N700)
23	5	Santa Barbara – 101 – PM 2.2	2020	707182	Carpinteria Creek	Highway 101 Linden/ Casitas Pass (4482U)
24	5	Santa Barbara – 192 – PM 15.5	2019	706239	Arroyo Parida Creek	Arroyo Parida Creek (39610)

<sup>5</sup> The Contra Costa Resource Conservation District is the sponsor of this project and has worked with Caltrans through the Encroachment Permit process.

### Figure 3 - Active Fish Passage Remediation Projects



## Priority Fish Passage Barriers for Remediation

Table 4, Priority Fish Passage Barriers for Remediation, is listed below. All listed crossings have equal priority. The locations that are **bold and underlined** are locations that are new to the 2014 Fish Passage Annual Report. There are 48 locations identified on the priority table.

<b>Table 4 – Priority Fish Passage Barriers for Remediation</b>					
<b>Map #</b>	<b>Caltrans District</b>	<b>County – Route – Post Mile</b>	<b>PAD ID #</b>	<b>Stream Name</b>	<b>Tributary to</b>
1	1	Del Norte – 101 – PM 39.78	707134	Dominie Creek	Smith River
2	1	Del Norte – 197 – PM 5.0	707143	Sultan Creek	Smith River
3	1	Del Norte – 197 – PM 6.15	707142	Little Mill Creek	Smith River
4	1	Del Norte – 199 – PM 31.31	707137	Griffin Creek <sup>6</sup>	Middle Fork Smith River
5	1	Humboldt – 101 – PM 124.49	713025	Little Lost Man	Prairie Creek
6	1	Humboldt – 254 – PM 4.18	707157	Fish Creek – Ave of the Giants	South Fork Eel River
7	1	Humboldt – 299 – PM 2.97	713051	Essex Gulch	Mad River
8	1	Mendocino – 1 – PM 4.64	713068	Fish Rock Gulch	Pacific Ocean
9	1	Mendocino – 1 – PM 54.62	707070	Doyle Creek	Pacific Ocean
10	1	Mendocino – 1 – PM 58.78	707072	Digger Creek	Pacific Ocean
11	2	Shasta – 36 – PM 3.6	737281	Harrison Gulch	Middle Fork Cottonwood Creek
12	2	Shasta – 273 – PM 18.0	707132	Sulphur Creek	Sacramento River
13	2	Siskiyou – 3 – PM 6.5	707148	Big Mill Creek	Scott River
14	2	Siskiyou – 5 – PM 27.2	720504	Parks Creek	Shasta River

<sup>6</sup> Broken Kettle Creek was removed from the priority list, due to recent information, which indicated that another location, Griffin Creek, rates higher in biological significance. CDFW Region 1 staff and Caltrans District 1 staff partnered to make this determination.

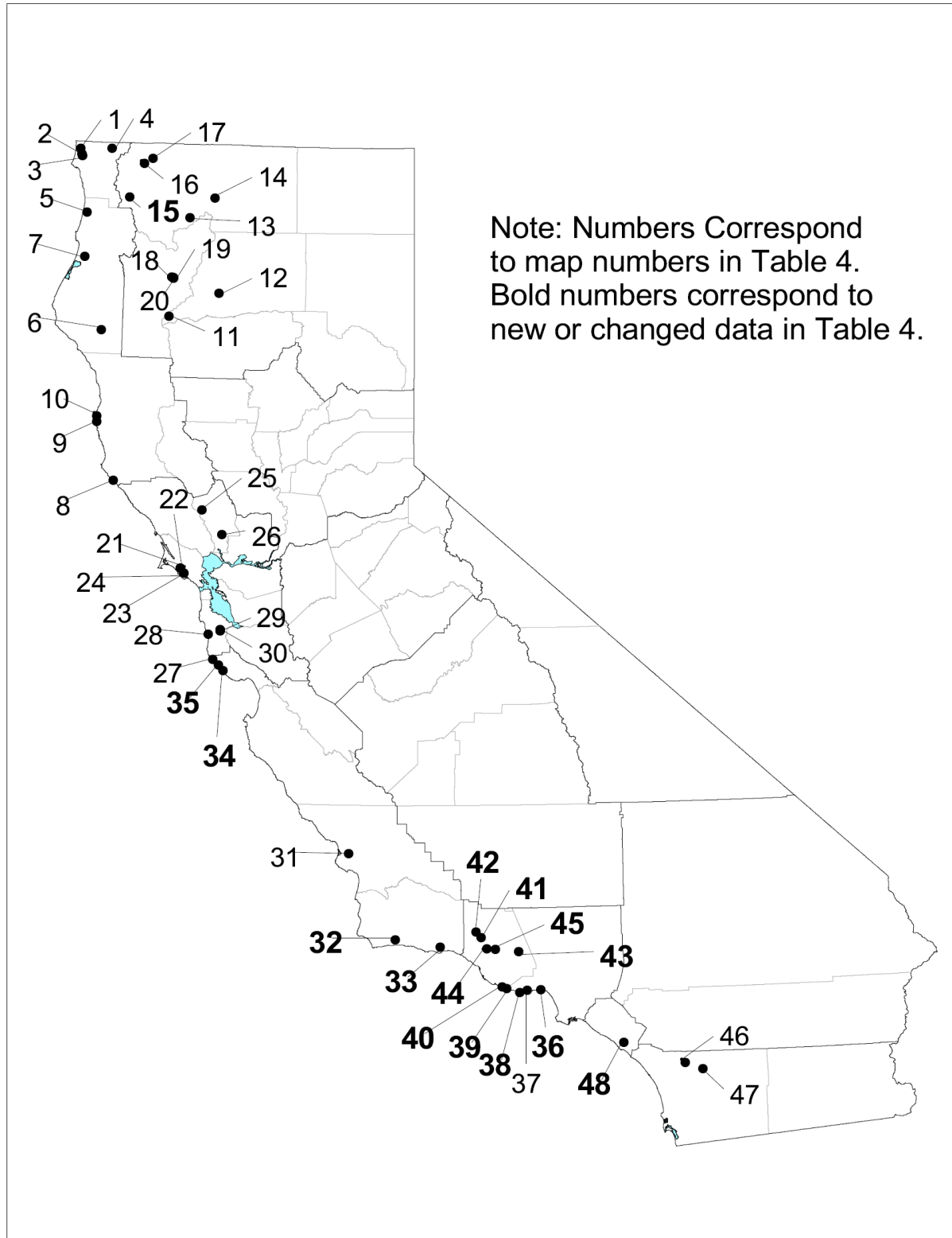
Map #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Tributary to
<b><u>15</u></b>	<b><u>2</u></b>	<b><u>Siskiyou – 96 – PM 9.1</u></b>	<b><u>720537</u></b>	<b><u>Sandy Bar Creek</u></b>	<b><u>Klamath River<sup>7</sup></u></b>
16	2	Siskiyou – 96 – PM 43.5	720541	Cade Creek	Klamath River
17	2	Siskiyou – 96 – PM 56.9	707169	Portuguese Creek	Klamath River
18	2	Trinity – 299 – PM 49.6	720522	West Weaver Creek	Trinity River
19	2	Trinity – 299 – PM 51.2	737674	Sydney Gulch	Trinity River
20	2	Trinity – 299 – PM 51.4	735941	Garden Gulch	Trinity River
21	4	Marin – 1 – PM 22.67	706059	John West Fork	Olema Creek
22	4	Marin – 1 – PM 22.78	706058	Giacomini Gulch	Olema Creek
23	4	Marin -1 – PM 18.69	706078	McCurdy Creek	Pine Gulch Creek (Bollinas Lagoon)
24	4	Marin – 1 – PM 18.69	706079	North Fork McCurdy Creek	McCurdy Creek/ Pine Gulch Creek
25	4	Napa – 29 – PM 33.17	705459	Ritchie Creek	Napa River
26	4	Napa – 121 – PM 9.3	758605	Sarco Creek	Miliken Creek
27	4	San Mateo – 1 – PM 4.32	705302	Whitehouse Creek	Pacific Ocean
28	4	San Mateo – 1 – PM 22.75	716835	Lobitos Creek	Pacific Ocean
29	4	San Mateo – 84 – PM 19.25	705766	Bear Creek	San Francisquito
30	4	San Mateo – 84 – PM 19.98	705768	West Union Creek	Bear Creek/San Francisquito Creek
31	5	San Luis Obispo – 1 – PM 22.8	700040	Pennington Creek	Chorro Creek
<b><u>32</u></b>	<b><u>5</u></b>	<b><u>Santa Barbara – 101 – PM 49.6</u></b>	<b><u>706388</u></b>	<b><u>Gaviota Creek</u></b>	<b><u>Pacific Ocean</u></b>

<sup>7</sup> All projects that are bold and underlined are new to Table 4, for the 2014 Fish Passage Annual Report.

<b>Map #</b>	<b>Caltrans District</b>	<b>County – Route – Post Mile</b>	<b>PAD ID #</b>	<b>Stream Name</b>	<b>Tributary to</b>
<b><u>33</u></b>	<b><u>5</u></b>	<b><u>Santa Barbara – 192 – PM 3.39</u></b>	<b><u>706538</u></b>	<b><u>Mission Creek<sup>8</sup></u></b>	<b><u>Pacific Ocean</u></b>
<b><u>34</u></b>	<b><u>5</u></b>	<b><u>Santa Cruz – 1 – PM 31.55</u></b>	<b><u>732371</u></b>	<b><u>Scott Creek</u></b>	<b><u>Pacific Ocean</u></b>
<b><u>35</u></b>	<b><u>5</u></b>	<b><u>Santa Cruz – 1 – PM 36.3</u></b>	<b><u>731839</u></b>	<b><u>Waddell Creek</u></b>	<b><u>Pacific Ocean</u></b>
<b><u>36</u></b>	<b><u>7</u></b>	<b><u>Los Angeles 1 – PM 40.99</u></b>	<b><u>716891</u></b>	<b><u>Topanga Creek</u></b>	<b><u>Pacific Ocean</u></b>
37	7	Los Angeles – 1 PM 50.3	705781	Solstice Creek	Pacific Ocean
<b><u>38</u></b>	<b><u>7</u></b>	<b><u>Los Angeles 1 – PM 54.97</u></b>	<b><u>716906</u></b>	<b><u>Zuma Creek</u></b>	<b><u>Pacific Ocean</u></b>
<b><u>39</u></b>	<b><u>7</u></b>	<b><u>Ventura – 1 – PM 1.23</u></b>	<b><u>723563</u></b>	<b><u>Little Sycamore Creek</u></b>	<b><u>Pacific Ocean</u></b>
<b><u>40</u></b>	<b><u>7</u></b>	<b><u>Ventura – 1 – PM 4.5</u></b>	<b><u>723529</u></b>	<b><u>Big Sycamore Creek</u></b>	<b><u>Pacific Ocean</u></b>
<b><u>41</u></b>	<b><u>7</u></b>	<b><u>Ventura – 33 – PM 24.17</u></b>	<b><u>713767</u></b>	<b><u>North Fork Matilija Creek</u></b>	<b><u>Ventura River</u></b>
<b><u>42</u></b>	<b><u>7</u></b>	<b><u>Ventura – 33 – PM 34.5</u></b>	<b><u>723804</u></b>	<b><u>Burro Creek</u></b>	<b><u>Sespe Creek</u></b>
<b><u>43</u></b>	<b><u>7</u></b>	<b><u>Ventura – 126 – PM 26.48</u></b>	<b><u>713878</u></b>	<b><u>Hopper Canyon Creek</u></b>	<b><u>Santa Clara Creek</u></b>
<b><u>44</u></b>	<b><u>7</u></b>	<b><u>Ventura – 150 – PM 22.8</u></b>	<b><u>700083</u></b>	<b><u>Lion Creek</u></b>	<b><u>Sespe Creek</u></b>
<b><u>45</u></b>	<b><u>7</u></b>	<b><u>Ventura – 150 – PM 28.48</u></b>	<b><u>705162</u></b>	<b><u>Sissar Creek</u></b>	<b><u>Santa Paula Creek</u></b>
46	11	San Diego – 76 – PM 29.5	712680	Pauma Creek	San Luis Rey River
47	11	San Diego – 76 – PM 45.5	735076	Wigham Creek	San Luis Rey River
<b><u>48</u></b>	<b><u>12</u></b>	<b><u>Orange – 5 – PM 11.30</u></b>	<b><u>706807</u></b>	<b><u>Trabuco Creek</u></b>	<b><u>San Juan Creek</u></b>

<sup>8</sup> Pismo Creek (District 5) was removed from the priority list. Investigations have determined that the state highway is not a barrier to fish. The identified barrier is actually a Department of Water Resources feature adjacent to the state highway. Mission Creek was added to the list to replace Pismo Creek.

**Figure 4 - Priority Fish Passage Barriers for Remediation**





## Appendix A – Completed Fish Passage Remediations

Senate Bill 857 was enacted into law effective January 1, 2006. Appendix A is a list of all fish passage barriers that have been remediated on the state highway system. The below table lists all anadromous barriers that have been remediated, from the time that SB 857 was enacted, until the end of the reporting period for this report, (December 31, 2014).

<b>Appendix A – Completed Fish Passage Remediations</b>						
<b>Map #</b>	<b>District</b>	<b>County-Route- Post mile</b>	<b>Pad ID #</b>	<b>Stream Name</b>	<b>Project Name</b>	<b>Year Barrier Resolved</b>
1	1	Del Norte- 101- PM 43.7	715563	Lopez Creek	Smith River Widening	2009
2	1	Del Norte- 197- PM 2.12	720982	Peacock Creek	Peacock Creek Emergency	2013
3	1	Humboldt- 101- PM 40.12	722460	Chadd Creek	Chadd Creek Fish Passage	2006
4	1	Humboldt- 101- PM 115.3	737005	Unnamed Tributary	Stone Lagoon	2007
5	1	Humboldt-169- PM 22.37	706198	Cappell Creek	Four Bridges Project	2011
6	1	Humboldt-299- PM 4.2	716742	Hall Creek	Mitigation Mad River Bridge	2013
7	1	Mendocino-1- PM 92.8	706958	Dunn Creek	10 Mile Bridge Mitigation	2013
8	1	Mendocino- 101 – PM 81.4	706986	Rattlesnake Creek	Rattlesnake Creek	2009
9	1	Mendocino - 101 – PM 83.99	706987	Rattlesnake Creek	Rattlesnake Creek Fish Passage	2013
10	1	Mendocino - 101 – PM 99.0	707115	Red Mountain Creek	Confusion Hill Mitigation	2010
11	1	Mendocino - 128 – PM 49.66	707220	Edwards Creek	Edwards Creek Fish Passage	2011
12	1	Mendocino - 128 – PM 39.95	713145	John Hatt Creek	Beebe Storm Damage	2011
13	2	Shasta - 299 – PM 20.7	737289	Salt Creek	Salt Creek Fish Passage Project	2007

Map #	District	County-Route- Post mile	Pad ID #	Stream Name	Project Name	Year Barrier Resolved
<b><u>14</u></b>	<b><u>2</u></b>	<b><u>Shasta – 299 – PM 32.2</u></b>	<b><u>737295</u></b>	<b><u>Yank /Lemm Creek Bridge</u></b>	<b><u>Yank Creek/Lemm Creek Bridge<sup>9</sup></u></b>	<b><u>2014</u></b>
<b><u>15</u></b>	<b><u>2</u></b>	<b><u>Siskiyou - 96 – PM 56.0</u></b>	<b><u>707168</u></b>	<b><u>Fort Goff Creek</u></b>	<b><u>Fort Goff Creek Fish Passage</u></b>	<b><u>2014</u></b>
16	2	Siskiyou - 96 – PM 65.4	707147	O’Neil Creek	O’Neil Creek Fish Passage	2008
17	2	Tehama - 5 – PM 16.9	737006	Elder Creek	Elder Creek Scour Mitigation	2007
18	2	Tehama - 5 – PM 28.1	737007	Dibble Creek	Dibble Creek Scour Mitigation	2007
19	2	Tehama - 99 – PM 14.0	737012	Craig Creek	Craig Creek and Sunset Canal Bridges Project	2011
20	2	Tehama - 99 – PM 15.6	737013	Sunset Canal	Sunset Canal Bridge	2010
21	4	Napa - 121 – PM 1	733333	Huichica Creek	Duhig Road Project	2010
22	5	Santa Barbara - 101 – PM 33.9	707398	El Capitan Creek	El Capitan Creek	2007
<b><u>23</u></b>	<b><u>5</u></b>	<b><u>Santa Barbara – 101 – PM 38.3</u></b>	<b><u>707403</u></b>	<b><u>Tajiguas Creek</u></b>	<b><u>Tajiguas Creek</u></b>	<b><u>2014</u></b>
24	5	Santa Barbara - 101 – PM 41.0	707405	Arroyo Hondo Creek	Arroyo Hondo	2008
25	5	Santa Barbara - 101 – PM 47.2	706669	Gaviota Creek	Gaviota Creek	2008
26	5	Santa Cruz -1 – PM 10.0	706703	Valencia Creek	Tributary to Aptos Creek (culvert 1)	2007
<b><u>27</u></b>	<b><u>5</u></b>	<b><u>Santa Cruz – 1 – PM 10.0</u></b>	<b><u>706704</u></b>	<b><u>Valencia Creek<sup>10</sup></u></b>	<b><u>Tributary to Aptos Creek (culvert 2)</u></b>	<b><u>2007</u></b>
28	5	Santa Cruz - 1 – PM 17.4	735367	Branciforte Creek	Hwy 1 Remediation	2007
<b><u>29</u></b>	<b><u>5</u></b>	<b><u>Santa Cruz - 1 – PM 17.42</u></b>	<b><u>735366</u></b>	<b><u>Carbonera Creek</u></b>	<b><u>Hwy 1 Remediation</u></b>	<b><u>2007</u></b>
30	7	Ventura - 150 – PM 28.7	723744	Santa Paula Creek	Santa Paula Creek	2012

<sup>9</sup> Projects that are bold and underlined are new to the Completed Table (Appendix A), for the 2014 Fish Passage Annual Report.

<sup>10</sup> Both Valencia Creek and Carbonera Creek were remediated in 2007, but have not been previously reported to Legislature.