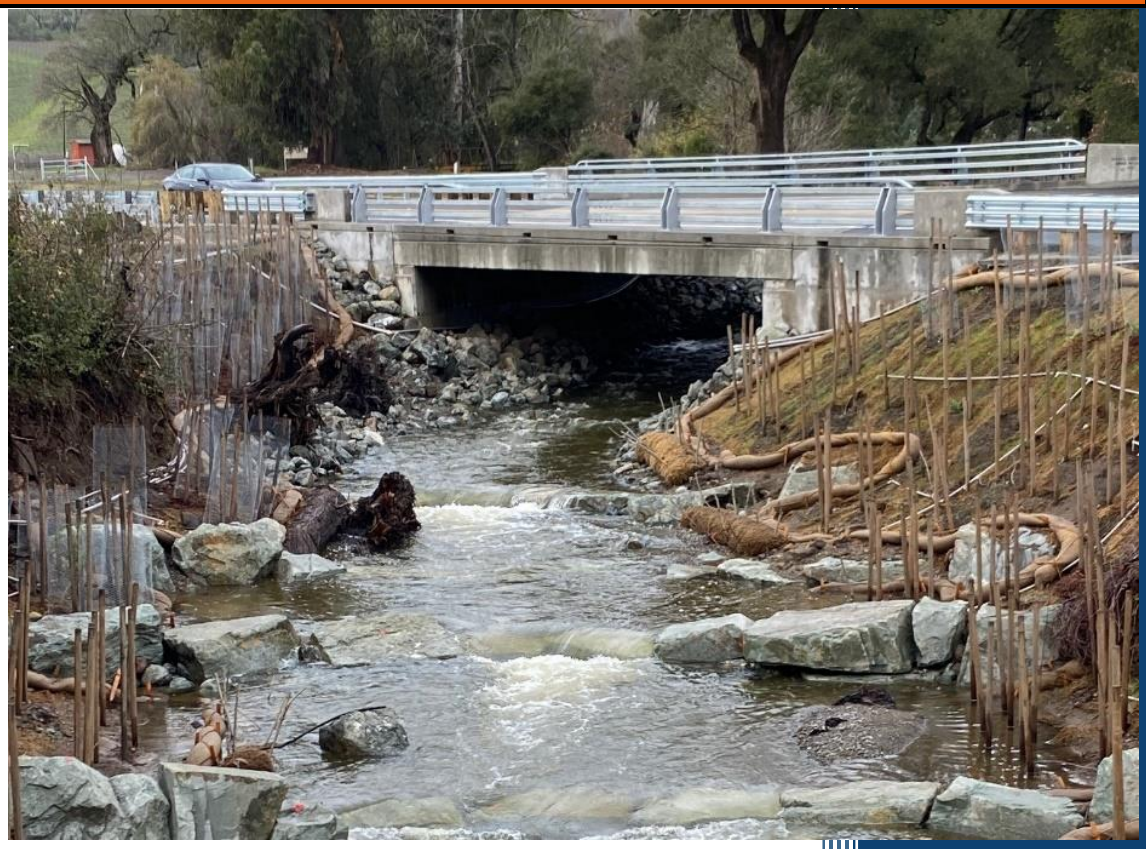
2022 Fish Passage Annual Legislative Report



Report to the Legislature

2023

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Executive Summary

Streets and Highways Code, Section 156.1 requires the California Department of Transportation (Caltrans) to report annually on the status of the department's progress in locating, assessing, and remediating barriers to fish passage. This report covers progress from January 1, 2022 to December 31, 2022, and includes updated status on fish passage barrier assessments, active project and planned remediation projects, priority fish passage barriers, and completed fish passage remediations on the State Highway System.

2022 Fish Passage Program Accomplishments

In 2022, Caltrans completed fish passage remediation projects at six barrier locations, improving access to an estimated 25.3 miles of salmon and steelhead habitat.

Caltrans is currently developing projects to remediate 38 active (funded) fish passage barrier locations, estimated to improve habitat access to 187 miles of currently blocked, high-quality salmon and steelhead habitat.

Fish Passage Advisory Committees have identified 88 barrier locations for priority remediation which are currently barriers to an estimated 331 miles of high-quality salmon and steelhead habitat. Planning analysis have identified aligned transportation funding for 27 of the 88 priority locations, which are currently in the pre-project planning process. Currently there are 61 unfunded priority fish passage barriers for remediation.

In 2022, 1,197 first pass (reconnaissance) and second pass (detailed) fish passage assessments were completed at road/stream crossings throughout the state. Of those assessments, the following was identified: 71 new barriers, 651 non-barriers, and 475 locations are potential barriers which need additional surveys to determine habitat suitability and barrier status.

Since the enactment of Senate Bill 857 (Kuehl, Chapter 589, Statutes of 2005), Caltrans has remediated a total of 65 barrier locations. Those 65 locations account for an estimated 920.4 miles of improved access to salmon and steelhead habitat. This includes 20 full span, long term remediation solutions, which allow full access to an estimated 355.14 miles of habitat, and 45 partial/hydraulic fish passage remediation locations, which have improved access to an estimated 565.3 miles of habitat. See Appendix A. Fish Passage Locations Completed, for additional information.

Caltrans continues to provide management oversight, meeting facilitation, mapping, science and data, engineering support, and coordination for the six Fish Passage Advisory Committees, the Interagency Engineering Working Group, the Leadership Action Team, and the Science and Innovation Team. Caltrans and Fish Passage Advisory Committee partners continue to develop and implement tools and efficiencies that are further described in this report.

Background

Streets and Highways Code, Section 156.1 (see Appendix B. Statutory Reporting Reference) requires Caltrans to prepare an annual report to the Legislature describing the status of progress in assessing fish barriers, funding priority barriers, and remediating priority barriers. The bill also requires Caltrans to do the following:

- Complete assessments for potential barriers to anadromous fish prior to commencing any project using state or federal transportation funds;
- Provide a status on active remediation locations; and
- Construct new projects so that they neither pose nor create a barrier to fish passage.

2022 Fish Passage Barrier Remediation Progress

Due to complex considerations associated with successful planning, project delivery, and implementation of successful fish passage barrier remediation on the State Highway System, a comprehensive approach focused on science and data, engineering, training, permitting, research, funding, multi-species and habitat benefits, and partnerships has been needed. Caltrans has improved fish passage coordination and partnering across California through the implementation and development of Fish Passage Advisory Committees, which include staff from the Caltrans, the California Department of Fish and Wildlife, the National Marine Fisheries Service, as well other state, federal, and local partners. The Interagency Fish Passage Engineering Working Group, the Fish Passage Leadership Action Team, and the Science and Innovation Team continue to collaborate toward improved education and application of successful fish passage remediation throughout California.

Science and Data

In 2022, Caltrans, the California Conservation Corps, and the Pacific States Marine Fisheries Commission, took major steps in statewide fish passage barrier assessment work by completing 1,197 fish passage barrier assessments statewide. New science and data have been updated in the California Department of Fish and Wildlife's Passage Assessment Database, made available to the Fish Passage Advisory Committee, as well as all other statewide fish passage partners to advance the understanding of fish passage barriers throughout California.

California Conservation Corps member teams in Los Angeles, Monterey, San Luis Obispo, Stockton, and Ukiah were selected or hired and trained to assess fish passage barriers using innovative software, tablet devices, and geospatial technology. This technology efficiently conveys assessment assignments and allows teams to collect high-quality data and photographs statewide. By using this technology Caltrans has increased the rate of barrier assessments by over 300% and has efficiently submitted data directly to the Passage Assessment Database. Furthermore, the new technology

requires a fraction of the time of conventional input methods significantly reducing the time and labor for the database manager to verify information and integrate data into the Passage Assessment Database.

From January 1 to December 31, 2022, 934 first pass (reconnaissance) assessments were completed by the California Conservation Corps-member teams, and 263 second pass (detailed) assessments were completed by professional biologists at the Pacific States Marine Fisheries Commission, for a total of 1,197 completed assessments (Figure 1. History of Assessments on the State Highway System (2008-2022), below.

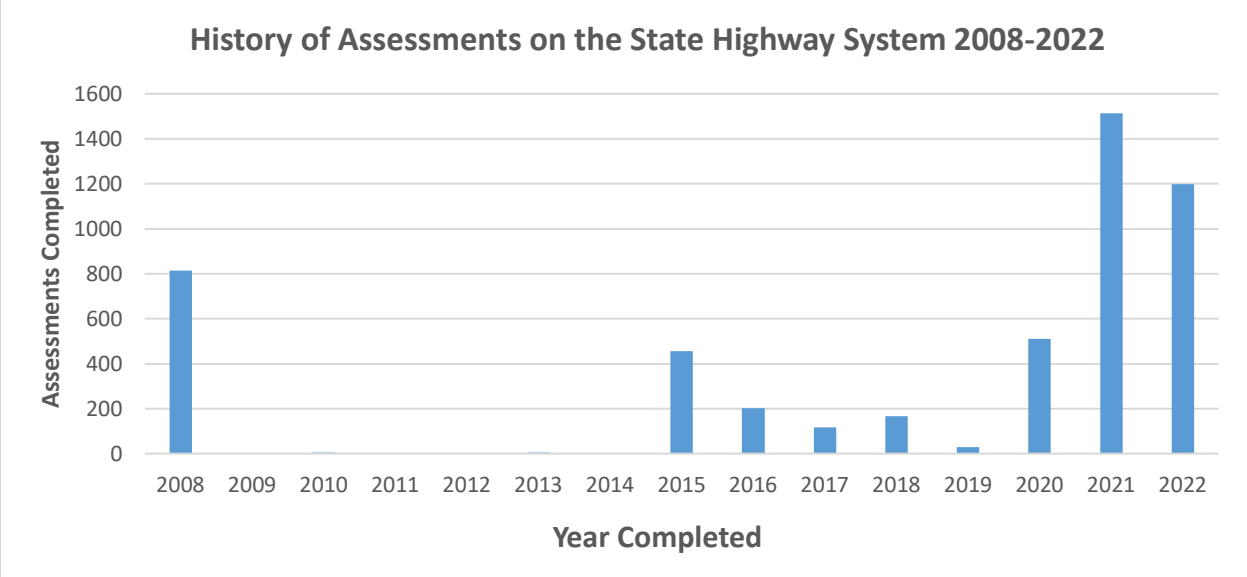


Figure 1. History of Assessments on the State Highway System (2008-2022)

Due to the growing number of Corpsmember identified second pass assessment needs in 2022, Caltrans and the Pacific States Marine Fisheries Commission collaborated to create a second professional biologist team to conduct assessment work, based out of Eureka, and in 2023 created a new professional biologist team based in Marysville. As of May 2023, three teams of Pacific States Marine Fisheries Commission professional biologists are working full-time to perform detailed (second pass) assessment needs throughout California.

Over the last four years the Caltrans Fish Passage Program has leveraged the latest in geospatial software and field data collection hardware to streamline the assessment of road/stream crossings for fish passage barriers on the State Highway System. These technologies include comprehensive workforce management software (ArcGIS Workforce), digital data recording (ArcGIS Survey123), and sophisticated data management (ArcGIS Online), which are customized to meet Caltrans' program needs. The combination of software and hardware has provided an estimated 80% reduction in person-hours over previous analog workflows. This process allows for real time verification of all data recorded and management from several simultaneous data

pipelines collected by partners at the California Conservation Corps, Pacific State Marine Fisheries Commission, and Caltrans District Fish Passage Coordinators.

This technology allows for instantaneous query and visualization of assessment needs and work progress and is essential to the ongoing assessment work for Caltrans' Fish Passage Programs goal of a fully vetted fish passage barrier inventory across the entire State Highway System (ArcGIS Dashboards; Figure 2), below.

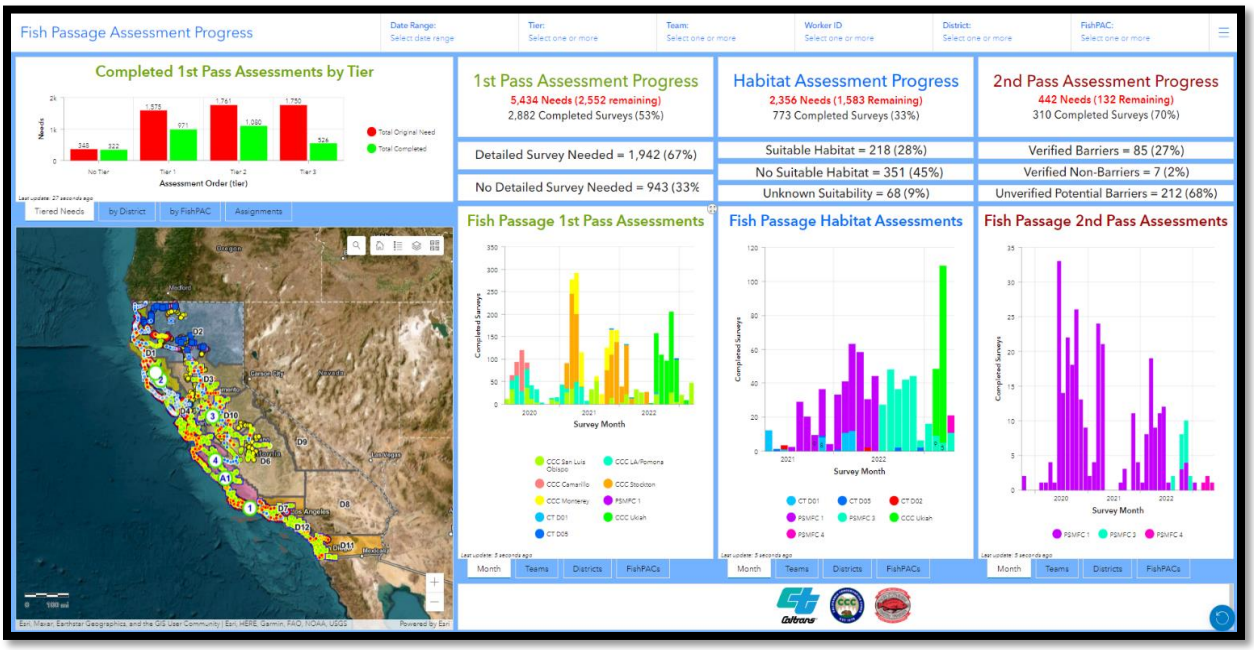


Figure 2. Example Screenshot - Fish Passage Assessment ArcGIS Dashboard

The Fish Passage Advisory Committee, Science and Innovation Team has been working collaboratively since May 2020 to advance innovation in the collection and sharing of fish passage barrier and habitat data. This has been accomplished by developing innovative approaches to conduct State Highway System assessments and data collection using innovative software and device technologies, developing products and protocols to support the Fish Passage Advisory Committee story maps, multi-species camera project, and to convey technical information for Caltrans and Fish Passage Advisory Committee barrier assessment and prioritization goals.

The Science and Innovation Team continues to lead California in fish barrier and habitat assessment data collection and improvements to the Passage Assessment Database. These efficiencies in data exchange have rapidly improved the State Highway System inventory of barriers and provides vital data for the prioritization of barriers.

Engineering

The Interagency Engineering Work Group (Working Group) includes members from Caltrans, the California Department of Fish and Wildlife, and the National Marine

Fisheries Service. The Working Group convenes monthly to collaborate on training, guidance, research, project-specific design considerations, and information sharing. Member expertise includes fish passage engineering, hydraulic engineering, structures design and foundations engineering, watershed modeling, maintenance inspection, and design guidance for fish passage remediation and channel restoration.

The Working Group contributes to early scoping and planning for priority and funded fish passage remediation projects, and the research panel have contributed to the Fish Passage Engineering Efficacy research conducted by Cal Poly Humboldt, as well as planning the next Fish Passage Engineering Workshop. The Working Group helps educate fish passage practitioners on short and long-term engineering solutions. This includes the costs and benefits of long-term full span solutions that do not require continuous, intensive maintenance, which is particularly important for priority barriers and the recovery of threatened and endangered salmon and steelhead habitat.

Training

Fish Passage Advisory Committees continue to provide high-quality training related to biological science and data collection, fish passage engineering, project case studies, and other content related to successful project delivery, funding, and monitoring for species success. Webinar training events have offered educational opportunities for more than 200 Fish Passage Advisory Committee members and other fish passage partners in California and beyond. The training events are recorded and then immediately posted on the Fish Passage Advisory Committee training webpage: www.cafishpac.org/training.

Fish Passage Advisory Committees typically meet by webinar and in-person several times annually. The Caltrans and Fish Passage Advisory Committees Program Status webinar was delivered in December 2022 and provided a comprehensive science and innovation overview focused on Caltrans' Fish Passage Program progress to include innovations in science and technology, assessment protocols, engineering innovations, and priority project funding updates.

Permitting

Caltrans continues to pursue development of a programmatic fish passage environmental review process that will streamline permitting and approvals with appropriate state and federal agencies for remediating barriers. Current fish passage remediation projects are primarily permitted on a project-by-project basis. The draft programmatic effort continues to define and assess remediation project actions and construction methods, and analyzes temporary construction impacts to threatened and endangered species. The programmatic permit will reduce permitting timelines and expedite fish passage remediation projects.

Caltrans continues to implement pre-designed Accelerated Bridge Construction precast bridge solutions for fish passage remediation, as well as collaborative work with

the California Department of Fish and Wildlife, the National Marine Fisheries Service, and the Fish Passage Advisory Committees on engineering design solutions and environmental analysis to inform expedited full-span fish passage pre-design and programmatic permitting efficiencies, including:

- Describing the types, sizes, and depths of proposed foundations.
- Completing an analysis of various anticipated sediment types, to determine pile type and size of foundations, and to complete a pile strike and hydroacoustic analysis.
- Collaborate with the California Department of Fish and Wildlife, the National Marine Fisheries Service, and Fish Passage Advisory Committees on all aspects of design and permitting efficiencies work.

Fish and wildlife connectivity projects are considered environmental enhancement projects. The fish passage programmatic scope of work defines construction methods and actions that avoid and minimize impacts to species. Full span fish passage remediation projects benefit aquatic and terrestrial migration and improve stream process and function, which far outweigh temporary construction impacts. Districts may also negotiate assurances for fish remediation projects with state and federal partners to develop and implement full-span fish passage solutions for priority barriers that have no maintenance or replacement needs by funding mitigation to offset unavoidable impacts from other current transportation projects.

Partnerships

The Fish Passage Advisory Committees include more than 200 member partners representing all aspects of fish passage remediation, to include barrier assessment work, prioritization, training, engineering, planning, and advocating for funding.

In 2022, all statewide Fish Passage Advisory Committee priority lists were exhausted due to improved funding outcomes and updates to inventories, related to reporting to the Legislature and Caltrans' Fish Passage Program priority program inventory. In February of 2022, the North Coast and Southern Steelhead Fish Passage Advisory Committees engaged in a new prioritization effort where all known barriers within their geographic area were evaluated by team members to identify and nominate barriers on important watersheds based on criteria of species diversity, quality and quantity of habitat, and other professional knowledge. Both ranking efforts concluded in February of 2023 and were successful in creating new ranked future priority lists that will backfill current priorities as they are funded and allocated for remediation projects.

In May of 2023 the Bay Area and Central Coast Fish Passage Advisory Committees engaged in an updated prioritization process, and in September of 2023 the final two Fish Passage Advisory Committees, Klamath-Cascades, and Central Valley, will begin the updated ranking process.

As part of the nomination, evaluation, and ranking process, additional science and data is collected for many barrier locations. New tools have also been developed to efficiently nominate barriers for ranking and to guide and facilitate the ranking process. Coordination between Caltrans' fish passage program and the Fish Passage Advisory Committee partnerships is essential to achieving a fully vetted fish passage priority inventory, improving funding outcomes for State Highway System funding as well as competitive grant opportunities.

The Fish Passage Advisory Committee Leadership Action Team currently has eight member managers from Caltrans, the California Department of Fish and Wildlife, the National Marine Fisheries Service, the U.S. Army Corps of Engineers and one non-governmental partner, who all provide guidance to the Fish Passage Advisory Committees. Selection to the Leadership Action Team is made based on demonstrated commitment to the goals of the six Fish Passage Advisory Committees as well as expertise, accountability, communication, and problem-solving skills, as well as the ability to be a team player and motivate others.

Funding

Caltrans' Division of Environmental Analysis and the Asset Management office continue to work collaboratively on the fish passage priority inventory as a component of the State Highway System Management Plan. The State Highway System Management Plan is a performance driven and integrated plan for California's State Highway System. The plan integrates rehabilitation, maintenance, and operations into a single 10-year management strategy, which is updated biennially.

Fish passage barrier remediation was introduced as a new performance objective in the 2021 State Highway System Management Plan and was updated for inclusion in the 2023 State Highway System Management Plan. This goal is managed and tracked to align fish passage priorities with State Highway System needs, investments, and resulting performance objectives. As part of the 2023 State Highway Management Plan, the Divisions of Environmental Analysis, Project Management, and Asset Management office continue to collaborate with Caltrans Districts to identify needs and solutions for remediating priority fish passage barriers. Currently 27 of 88 priority fish passage barriers are funded and in the planning stages for fish passage barrier remediation. (see Table 5. 2022 Planned Funding for Priority Fish Passage Remediation). The 27 planned priority locations will be allocated for funding once the scope, schedule, and costs have been determined for project delivery.

Of the 27 priority fish passage locations with planned funding, preliminary estimates have identified 17 priority remediation locations will deploy the pre-design Accelerated Bridge Construction bridge solutions. Five locations are scoped for long-term hydraulic solutions and five check dams will be removed and the respective sections of stream channels will be restored. Every two years, Caltrans will update the State Highway System Management Plan five-year needs and investments for priority fish passage barriers.

Currently, 38 active (funded) fish passage barrier locations are in the project delivery process, being developed for remediation, totaling approximately $300 to $310 million in transportation funding. The scope for many of the projects being developed are small bridges, or other full-span or high-quality, long-term fish passage solutions. *(See Appendix C, Active Fish Passage Remediation Locations Funding,* for an outline of project and funding information.

Multi-Species and Habitat Benefits

Fish Passage Advisory Committees continue to identify priority salmon and steelhead barrier locations that also provide high quality connectivity opportunities for other aquatic and terrestrial species. Watersheds and riparian areas are used by both aquatic and terrestrial species to meet some, or all, of their life history needs, including migration for food, mating, or to move into more suitable habitat. Rising temperatures, changing precipitation patterns, wildfires, sea level rise, and shifts in vegetative communities affect suitability of habitat and range for salmon, steelhead, and other threatened and endangered species as well as common species (e.g., deer, black bear, bobcats, coyotes, etc.).

Full-span fish passage solutions span the historically active channel, minimizing interference between the State Highway System facility, and improve natural channel processes, providing both terrestrial and aquatic species passage as well as full ecosystem function. Full-span solutions represent the most strategic investment in fish passage barrier remediation and require minimal maintenance over time. Caltrans continues to deploy wildlife cameras to pre- and post-project fish and stream corridor remediation projects. In 2022, 32 additional wildlife cameras and two underwater GoPro cameras were deployed to districts to study Caltrans facilities associated with priority, active, or completed fish passage remediation locations. See Figure 4. Example Fish and Wildlife Monitoring Photos, below, for photos of fish passage remediation locations that provide data in support of fish and wildlife benefits of full-span fish and wildlife remediation projects.

Figure 3. Examples of Fish and Wildlife Monitoring Photos.

Pre-designed Accelerated Bridge Construction fish passage bridges can be implemented for in-channel (wet/bridge), or over-land (dry/viaduct), fish and wildlife connectivity projects that require a 20-foot to 116.5-foot span, or for any bridge replacement that fits the scope of the small bridge pre-designed work. Wet channel solutions require more expensive deep-water foundations (drilled or driven piles) to avoid and minimize scour risk and ensure the long-term performance of the in-water fish passage and wildlife connectivity solution.

Research

In 2018, Caltrans funded an engineering research project to investigate the efficacy of full and partial fish passage remediation solutions to provide guidance and share lessons learned from previous remediation projects. The Interagency Engineering Working Group and Cal Poly Humboldt expert engineers collaborated to complete the research project, which was finalized in July of 2022. Research panelists include hydraulic engineers, fish passage engineers, fluvial geomorphologists, geologists, and structures engineers from Caltrans, the California Department of Fish and Wildlife, and the National Marine Fisheries Service. The final research report was made available to all interested partners on the Fish Passage Advisory Committee website: www.cafishpac.org/fish-passage-solutions.

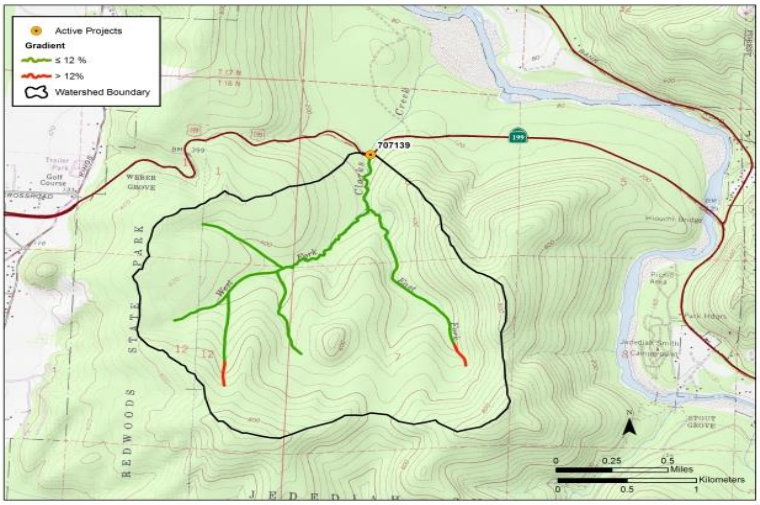
In November of 2023, the Caltrans Division of Research, Innovation, and System Information hosted a webinar to present the Humboldt Cal Poly Fish Passage Engineering Project Site Analysis and Final Report, to include scope of work, findings, and recommendations for over 400 Fish Passage Advisory Committee members and other interested partner attendees.

2022 Completed Fish Passage Remediation Locations

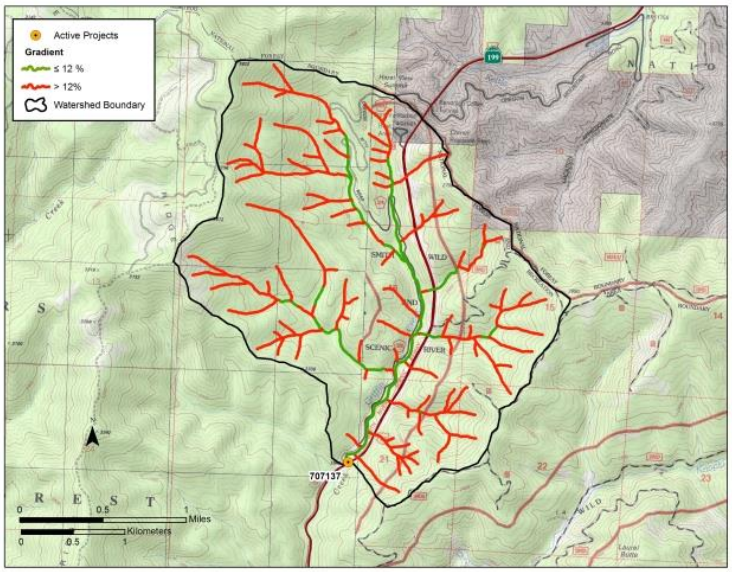
Six fish passage barriers were remediated in 2022, improving access to an estimated 25.3 miles of habitat for salmon and Steelhead Trout. Table 1 contains information on the completed locations. Figure 4 is a map of the locations listed in Table 1.

Table 1 (Maps 1-6). 2022 Completed Fish Passage Remediation Locations

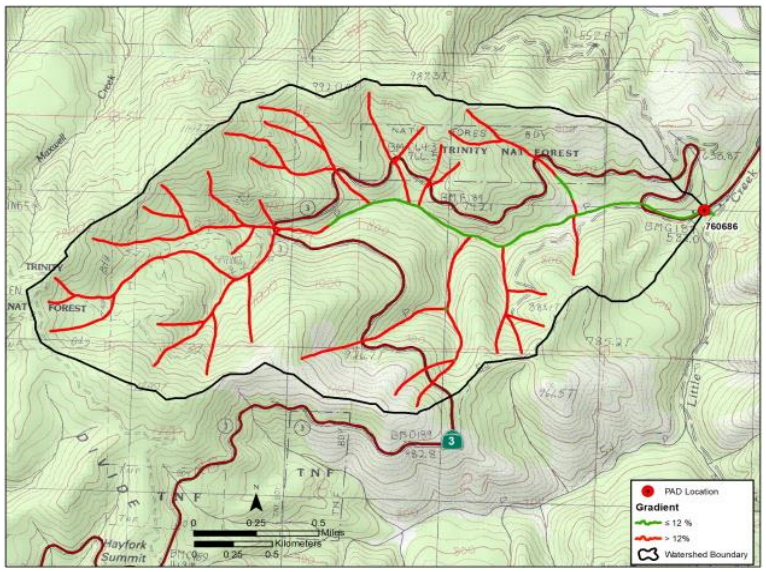
Map #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
1	1	Del Norte – 199– 2.56	707139	Clarks Creek	Hydraulic Channel restoration
	Species	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead Trout (Threatened).			
	Habitat	There is an estimated **3.69** miles of salmon and Steelhead Trout habitat above this barrier.			

Pre-Construction Fish Passage (Barrier)	**Post-Construction Fish Passage (Remediation)**
	
Notes	**Watershed model - run/rise habitat estimate**
• The existing reinforced concrete box culvert was modified to allow for weir construction on the left side and improved invert access on the right side. • The long-term partial/hydraulic design solution improved the depth of water within the weirs and throughout the culvert provides improved passage for migrating salmon and steelhead. **Note:** Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.	

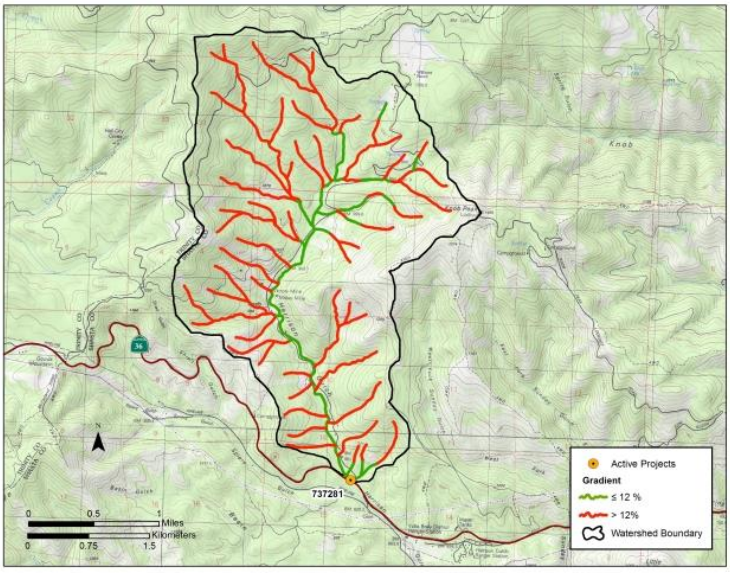
Map #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
2	1	Del Norte – 199 – 31.31	707137	Griffin Creek	Hydraulic Channel restoration
	Species	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead Trout (Threatened).			
	Habitat	There is an estimated **3.66** miles of salmon and Steelhead Trout habitat above this barrier.			

Pre-Construction Fish Passage (Barrier)	**Post-Construction Fish Passage (Remediation)**
	
Notes	**Watershed model - run/rise habitat estimate**
• The existing metal pipe culvert was modified for weir construction to allow for jump height improvements. • The long-term partial/hydraulic design solution improved the depth of water within the weirs and throughout the culvert provides increased passage for migrating salmon and steelhead. **Note:** Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.	

Map #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
3	2	Trinity – 3 – 25.25	760686	Unnamed/ Frazier Creek	Hydraulic Channel restoration
	Species	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).			
	Habitat	There is an estimated **1.7** miles of salmon and Steelhead Trout habitat above this barrier.			

Pre-Construction Fish Passage (Barrier)	**Post-Construction Fish Passage (Remediation)**
	
Notes	**Watershed model - run/rise habitat estimate**
• The existing corrugated metal pipe culvert was replaced using innovative trenchless (jack and bore) technology for a stream simulation design that provides a natural substrate like the natural channel. • The long-term stream simulation design solution provides increased passage for migrating salmon and steelhead. **Note:** Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.	

Map #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
4	2	Shasta – 36 – 3.6	737281	Harrison Gulch	Hydraulic Channel restoration
	Species	Central Valley Steelhead (Threatened), Central Valley Spring-run and Fall-run Chinook (Threatened), Sacramento Winter-run Chinook (Endangered).			
	Habitat	There is an estimated **3.57** miles of salmon and Steelhead Trout habitat above this barrier.			

Pre-Construction Fish Passage (Barrier)	**Post-Construction Fish Passage (Remediation)**
	
Notes	**Watershed model - run/rise habitat estimate**
• The invert of the double-bay reinforced concreate box culvert was modified to create a low flow channel in one bay and rock weirs were place inside and at the inlet of the culvert. • The project provided depth of water for fish to swim through the culvert and improved partial/ hydraulic passage for migrating salmon and steelhead. **Note:** Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.	

Map	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
5	4	Napa – 121 – 0.75	714975	Huichica Creek	Full Span Bridge
	Species	Northern California Steelhead Trout (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).			
	Habitat	There is an estimated **7.82** miles of salmon and Steelhead Trout habitat above this barrier.			

Pre-Construction Fish Passage (Barrier)

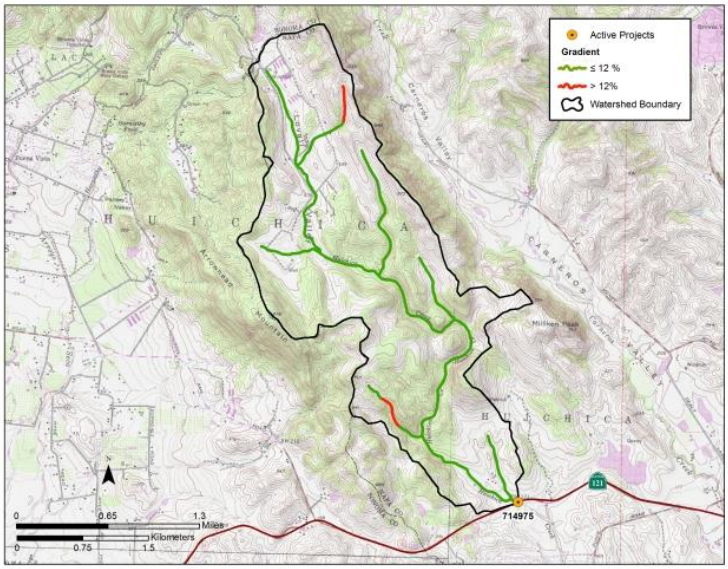
Post-Construction Fish Passage (Remediation)

Notes

- The old triple corrugated metal culverts and headwall barrier was replaced with a new full-span bridge solution.
- The new full-span bridge fully remediates the previous barrier and provides full access for salmon, steelhead, other aquatic, and terrestrial species that migrate within the estimated 2,056 acres of Huichica Creek watershed area.

Note: Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.

Watershed model - run/rise habitat estimate



Map	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Treatment Status
6	4	Santa Clara – 85 – 12.6	733945	San Tomas Aquinas Creek	Partial Hydraulic
	Species	Northern California Steelhead Trout (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).			
	Habitat	There is an estimated **4.9** miles of salmon and Steelhead Trout habitat above this barrier.			

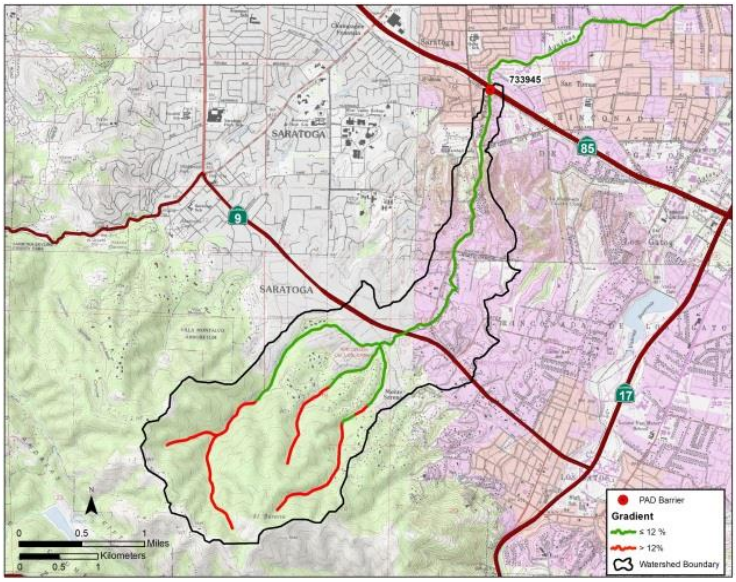
Pre-Construction Fish Passage (Barrier)	**Post-Construction Fish Passage (Remediation)**
	
Notes	**Watershed model - run/rise habitat estimate**
• As part of the bridge replacement project, the channel was restored by removing old concrete weirs and other debris barrier remnants, re-grading the channel, and replanting the banks. • This restoration work improved partial passage for migrating salmon and steelhead. **Note:** Green lines on the map were established using gradient over distance to simulate adult Steelhead Trout swimming and jumping capabilities.	

Figure 4. 2022 Completed Fish Passage Remediation Locations.

2022 Completed Fish Passage Assessment Locations

In 2022, **1,197** reconnaissance (first pass) and detailed (second pass) fish passage assessments were completed in Districts 1 (Eureka), 2 (Redding), 3 (Marysville), 4 (Oakland), 5 (San Luis Obispo), 6 (Fresno), 7 (Los Angeles), 10 (Stockton), 11 (San Diego), and 12 (Orange). Table 2 below lists **71** new identified barriers and **475** potential barriers that need detailed assessments (listed below). The other **651** assessed locations are not barriers to salmon or Steelhead Trout. Assessment information has been submitted to the California Department of Fish and Wildlife, Passage Assessment Database. Figure 6 demonstrates new barriers, assessed non barriers, and further assessments needed.

Table 2. 2022 Completed Fish Passage Assessment Locations.

District/FishPAC	Counties	Total Assessments	Assessed Non-Barriers	Detailed Assessments Needed	New Identified Barriers
District 1 (Eureka) – North Coast FishPAC	Humboldt, Mendocino	509	254	242	13
District 2 (Redding) – Klamath-Cascades FishPAC	Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, Trinity	117	43	73	1
District 3 (Marysville) – Central Valley FishPAC	Butte, El Dorado, Glenn, Nevada, Sacramento, Sutter, Yolo, Yuba	128	92	5	31
District 4 (Oakland) – Bay Area FishPAC	Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, Sonoma	124	67	56	1
District 5 (San Luis Obispo) – Central Coast FishPAC	Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz	94	47	44	3
District 6 (Fresno) – Central Valley FishPAC	Fresno, Kings, Madera, Tulare	142	89	52	1
District 7 (Los Angeles) – Southern Steelhead FishPAC	Los Angeles, Ventura	1	1	0	0
District 10 (Stockton) – Central Valley FishPAC	Amador, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus, Tuolumne	78	55	3	20
District 11 (San Diego) – Southern Steelhead FishPAC	San Diego	3	3	0	
District 12 (Orange) – Southern Steelhead FishPAC	Orange	1	0	0	1
Totals		**1197**	**651**	**475**	**71**

2022 New Identified Fish Passage Barrier Locations

In 2022, detailed (second pass) fish passage assessments and Habitat Evaluations were completed in Districts 1, (Eureka), 2 (Redding), 3 (Marysville), 4 (Oakland), 5 (San Luis Obispo), 6 (Fresno), 7 (Los Angeles), 10 (Stockton), 11 (San Diego), and 12 (Orange). As a result, **71** new barriers were identified. Assessment information has been submitted to the California Department of Fish and Wildlife, Passage Assessment Database. Table 3 below lists the new barriers, and Figure 5 shows new barriers listed in Table 3.

Table 3. 2022 New Identified Fish Passage Barriers.

New Barrier #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Tributary to
1	1	Humboldt - 101 - PM 40.7	722447	unnamed	Chadd Creek
2	1	Humboldt - 101 - PM 62.22	707128	Palmer Creek	Eel River
3	1	Humboldt - 254 - PM 1.82	707158	Anderson Creek	South Fork Eel River
4	1	Mendocino - 1 - PM 10.18	761933	Hearn Gulch	Pacific Ocean
5	1	Mendocino - 1 - PM 11.55	712449	Galloway Creek	Pacific Ocean
6	1	Mendocino - 1 - PM 14.85	712450	Point Arena Creek	Pacific Ocean
7	1	Mendocino - 1 - PM 24.41	761944	Irish Creek	Pacific Ocean
8	1	Mendocino - 1 - PM 33.59	761950	Bonee Gulch	Greenwood Creek
9	1	Mendocino - 1 - PM 73.5	761985	Kibesillah Creek	Pacific Ocean
10	1	Mendocino - 1 - PM 92.23	761997	unnamed	North Fork Cottaneva Creek
11	1	Mendocino - 1 - PM 94.8	761999	unnamed	North Fork Cottaneva Creek
12	1	Mendocino - 101 - PM 79.2	707103	Rattlesnake Creek	South Fork Eel River
13	1	Mendocino - 101 - PM 88.82	705107	Little Dann Creek	Big Dann Creek
14	2	Trinity - 299 - PM 18.98	720509	Italian Creek	Trinity River
15	3	Butte - 149 - PM 0.85	764642	Cottonwood Creek	Western Canal
16	3	Butte - 149 - PM 1.26	764644	Gold Run	Dry Creek
17	3	Butte - 162 - PM 14.6	764842	unnamed	Western Canal
18	3	Butte - 70 - PM 15.34	764496	unnamed	Feather River
19	3	Butte - 70 - PM 8.27	764494	Oak Knob Draw	Feather River

New Barrier #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Tributary to
20	3	El Dorado - 50 - PM 1.57	764898	unnamed	Carson Creek
21	3	El Dorado - 50 - PM 1.9	764802	Carson Creek	Deer Creek
22	3	El Dorado - 50 - PM 5.11	764710	unnamed	Deer Creek
23	3	El Dorado - 50 - PM 5.31	764712	Deer Creek	Cosumnes River
24	3	Nevada - 20 - PM 0.8	764632	Slacks Ravine	Deer Creek
25	3	Nevada - 20 - PM 0.96	764634	Slacks Ravine	Deer Creek
26	3	Nevada - 20 - PM 8.2	764818	Grub Creek	Squirrel Creek
27	3	Sacramento - 12 - PM 3.6	764533	unnamed	Sevenmile Slough
28	3	Sacramento - 244 - PM 1	764507	unnamed	Arcade Creek
29	3	Sacramento - 50 - PM 13.94	764688	Buffalo Creek	American River
30	3	Sacramento - 50 - PM 19.9	764687	unnamed	Alder Creek
31	3	Sacramento - 50 - PM 20	764689	unnamed	Alder Creek
32	3	Sacramento - 99 - PM 5.6	762801	Willow Creek	Badger Creek
33	3	Sutter - 70 - PM 2.5	764460	Coon Creek	Main Canal
34	3	Sutter - 70 - PM 6.5	764746	Ping Slough	Coon Creek
35	3	Sutter - 99 - PM 10.5	764851	Coon Creek	Main Canal
36	3	Sutter - 99 - PM 10.6	764855	Ping Slough	Coon Creek
37	3	Sutter - 99 - PM 28.8	764611	Gilsizer Slough	East Barrow
38	3	Yolo - 128 - PM 0.9	764810	Bray Canyon	Putah Creek
39	3	Yolo - 128 - PM 5.08	764808	unnamed	Putah South Canal
40	3	Yolo - 128 - PM 6.53	764720	School Draw	Dry Creek
41	3	Yolo - 80 - PM 0.01	764518	Putah Creek	Toe Drain
42	3	Yuba - 20 - PM 13.53	764525	unnamed	Dry Creek
43	3	Yuba - 20 - PM 16.98	764524	unnamed	Yuba River
44	3	Yuba - 20 - PM 19.56	764437	Sanford Creek	Big Ravine
45	3	Yuba - 20 - PM 21.06	764440	unnamed	Yuba River

New Barrier #	Caltrans District	County – Route – Post Mile	PAD ID #	Stream Name	Tributary to
46	4	Sonoma - 116 - PM 39.27	732865	Stage Gulch Creek	Petaluma River
47	5	Santa Barbara - 101 - PM 18.66	707382	Cieneguitas Creek	Atascadero Creek
48	5	Santa Barbara - 101 - PM 27.16	734459	Winchester Creek	Pacific Ocean
49	5	Santa Barbara - 101 - PM 35.58	734505	Canada del Venadito	Pacific Ocean
50	6	Madera - 41 - PM 14.86	764415	Cottonwood Creek	San Joaquin River
51	10	Amador - 88 - PM 8.36	763499	Copper Creek	Sutter Creek
52	10	Calaveras - 26 - PM 3.34	763924	unnamed	Indian Creek
53	10	Calaveras - 26 - PM 4.31	763438	Indian Creek	Calaveras River
54	10	Calaveras - 26 - PM 5.92	763706	unnamed	Indian Creek
55	10	Calaveras - 4 - PM 4.85	763225	McCarty Creek	Littlejohns Creek
56	10	Calaveras - 4 - PM 6.35	763223	unnamed	Littlejohns Creek
57	10	Merced - 59 - PM 27.6	763392	unnamed	Merced River
58	10	Merced - 59 - PM 28.11	763396	unnamed	Dana Slough
59	10	Merced - 59 - PM 28.18	763384	Dana Slough	Merced River
60	10	Merced - 59 - PM 28.8	763644	unnamed	Hopeton Slough
61	10	Merced - 59 - PM 31.25	763268	Ingalsbe Slough	Merced River
62	10	San Joaquin - 132 - PM 2.7	763537	Lone Tree Creek	Lateral Six East
63	10	San Joaquin - 4 - PM 22.72	763378	Duck Creek	Walker Slough
64	10	San Joaquin - 99 - PM 26.86	763457	Pixley Slough	Disappointment Slough
65	10	San Joaquin - 99 - PM 36	763456	Jahant Slough	Mokelumne River
66	10	Stanislaus - 120 - PM 12.22	761515	Blitz Creek	Stanislaus River
67	10	Stanislaus - 120 - PM 15.04	761519	Wildcat Creek	Stanislaus River
68	10	Stanislaus - 132 - PM 37.96	763525	Salter Gulch	Tuolumne River
69	10	Stanislaus - 132 - PM 41.4	763839	Rairden Gulch	Tuolumne River
70	10	Stanislaus - 132 - PM 5.49	763822	Riley Slough	Stanislaus River
71	12	Orange - 5 - PM 14.8	759493	Oso Creek	Arroyo Trabuco

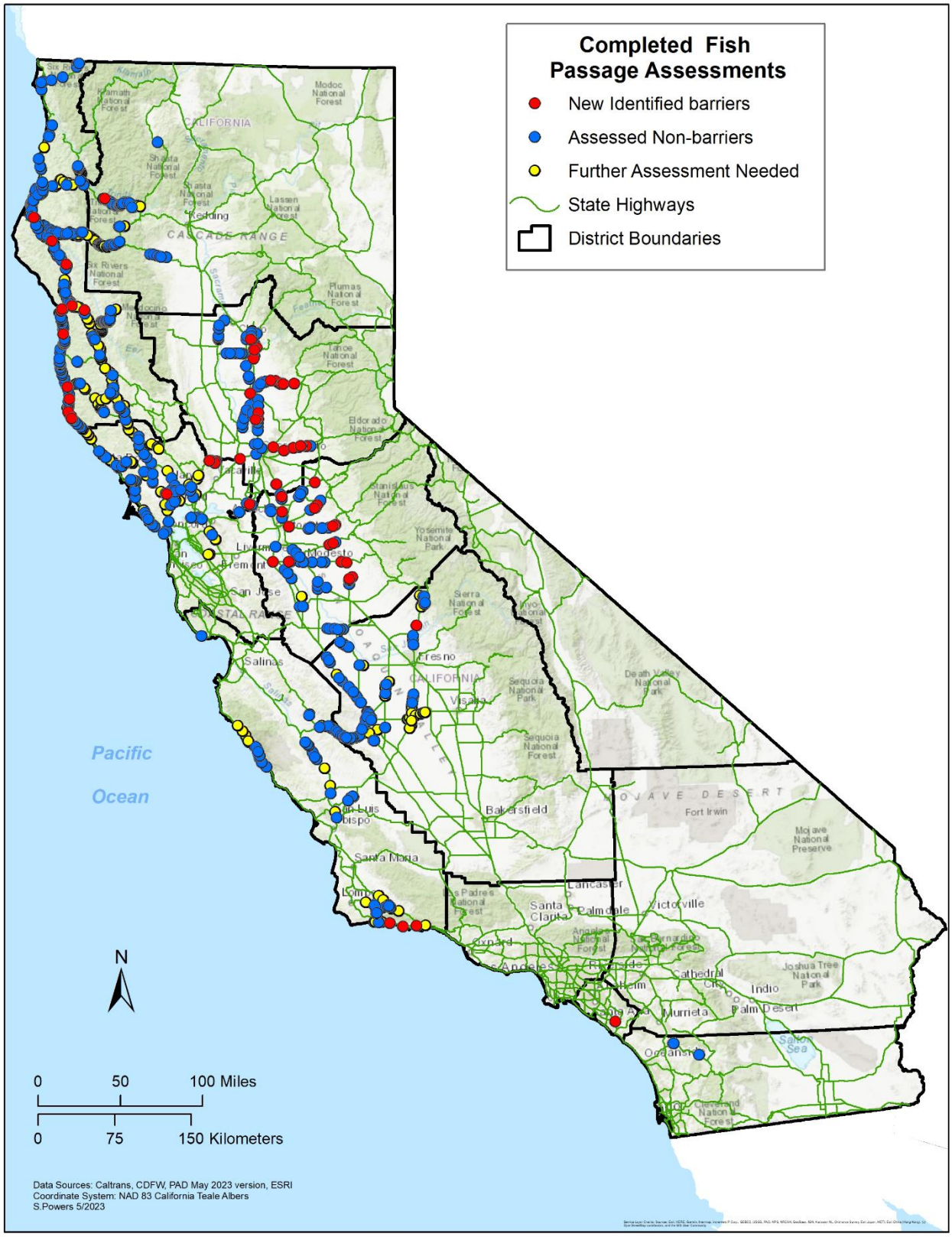


Figure 5. 2022 Completed Fish Passage Assessment Locations.

2022 Active Fish Passage Remediation Locations

Caltrans is currently developing projects to remediate 38 fish passage barriers. Thirteen new barrier locations have been funded on the State Highway System, which are indicated in **bold and underline (new)**. The 38 active locations account for an estimated **187** miles of currently blocked habitat for salmon and steelhead. Table 4 lists the locations that are either funded through construction, or partially funded for planning, design, or permitting. Figure 6 is a map of the locations listed in Table 4.

Table 4. 2022 Active Fish Passage Remediation Locations.

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
1	1	Del Norte – 101 – PM 37.46	Mello Creek	Mello Creek Fish Passage	Full Span Bridge	712951	0.46	Southern Oregon/Northern California Coast Coho (Threatened).
2 (new)	**1**	**Del Norte 101 – PM 40.6**	**Delilah Creek**	**DN 101 Drainage**	**Stream Simulation Design**	**761539**	**0.50**	**Southern Oregon/Northern California Coast Coho (Threatened).**
3	1	Humboldt – 36 – PM 4.39	Ward Creek	Carlotta Widening	Full Span Bridge	712971	2.83	Southern Oregon/Northern California Coast Coho (Threatened).
4 (new)	**1**	**Humboldt – 101 – PM 0.88**	**Hartsook Creek**	**Hartsook Creek Fish Passage**	**Stream Simulation Design**	**707160**	**0.85**	**Southern Oregon/Northern California Coast Coho (Threatened).**
5	1	Humboldt – 254 – PM 4.18	Fish Creek	Fish Passage	Full Span Bridge	707157	4.00	California Central Valley Steelhead Trout (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened), Sacramento Winter-run Chinook (Endangered).

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
6 (new)	**1**	**Humboldt – 254 – PM 8.13**	**Unnamed**	**Culvert Rehabilitation**	**Stream Simulation Design**	**713038**	**0.04**	**California Central Valley Steelhead Trout (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened), Sacramento Winter-run Chinook (Endangered).**
7	1	Humboldt – 254 – PM 15.04	Mowry Creek	Culvert Rehabilitation	Full Span Bridge	713040	0.52	Southern Oregon/Northern California Coast Coho (Threatened).
8	1	Humboldt – 254 – PM 16.44	Unnamed	Culvert Rehabilitation	Hydraulic/ Partial	713042	0.07	California Central Valley Steelhead Trout (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened).
9	1	Humboldt – 254 – PM 40.83	Chadd Creek	Storm Water Mitigation	Stream Simulation Design	722439	2.03	California Central Valley Steelhead Trout (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened).
10 (new)	**1**	**Mendocino – 128 – PM 7.27**	**Mustard Gulch**	**Navarro River**	**Full Span Bridge**	**707187**	**1.55**	**Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).**

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
11	2	Siskiyou – 96 – PM 43.5	Cade Creek	Cade Creek	Full Span Bridge	720541	2.58	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead Trout (Threatened).
12	2	Siskiyou – 96 – PM 57.0	Portuguese Creek	Portuguese Creek	Full Span Bridge	707169	2.79	Southern Oregon\Northern California Coasts Coho Salmon (Threatened).
13	2	Trinity – 3 – PM 24.95	Unnamed / Frazier Creek	Hayfork Mountain Culverts	Hydraulic/ Partial	735849	1.38	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
14	**4**	**Marin 1 – PM 21.06**	**Unnamed Tributary to Olema Creek**	**Olema Creek**	**Full Span Bridge**	**732665**	**0.70**	**Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).**
15	4	Napa – 29 – PM 33.13	Ritchie (Ritchey) Creek	Fish Passage Remediation	Full Span Bridge	705459	2.36	Central California Coast Steelhead (Threatened).
16	4	Napa – 29 – PM 38.96	Horns Creek	Bridge Preventative Maintenance Scour Mitigation	Hydraulic/ Partial	705526	0.87	Central California Coast Steelhead (Threatened0.

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
17	4	San Mateo – 280 – PM 0.01	Los Trancos Creek	Seismic Restoration - King DR. UC #35-0202L	Hydraulic/ Partial	705760	11.82	Central California Coast Steelhead (Threatened).
18	4	Sonoma – 1 – PM 15.1	Scotty Creek	Gleason Beach Highway Realignment	Full Span Bridge	733223	3.87	Central California Coast Steelhead Trout (Threatened), Central California Coast Coho (Endangered).
19	5	Santa Barbara – 101 – PM R0.0	Rincon Creek	Rincon Creek Fish Passage	Hydraulic/ Partial	707368	10.56	Southern Central California Coast Steelhead (Threatened).
20	5	Santa Barbara – 101 – PM 5.6	Arroyo (Parida) Paredon Creek	South Coast 101 HOV Lanes - Padaro	Full Span Bridge	734310	2.37	Southern California Coast Steelhead (Endangered).
21	5	Santa Barbara – 101 – PM 5.63	Toro Creek	South Coast 101 HOV Lanes	Hydraulic/ Partial	734309	2.38	Southern California Coast Steelhead Trout (Endangered).
22	5	Santa Barbara – 101 – PM 9.4	Romero Creek	South Coast 101 HOV Lanes - Padaro Montecito	Full Span Bridge	705161	5.84	Southern California Coast Steelhead (Endangered).
23	5	Santa Barbara – 101 – PM 9.6	San Ysidro Creek	South Coast 101 HOV - Padaro Montecito	Full Span Bridge	734342	2.36	Southern California Coast Steelhead (Endangered).

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
24	5	Santa Barbara-101-PM 10.51	Oak Creek	South Coast 101 HOV - Montecito	Full Span Bridge	734353	1.99	Southern California Coast Steelhead (Endangered).
25 (new)	**5**	**Santa Barbara - 101-PM 21.63**	**San Jose Creek**	**San Jose Ck Bridge Replacement**	**Hydraulic/ Partial**	**734429**	**6.63**	**Southern Central California Coast Steelhead (Threatened).**
26	5	Santa Barbara-101-PM 36.7	Refugio Creek	Refugio Creek Bridge Replacement	Full Span Bridge	707402	4.50	Southern California Coast Steelhead (Endangered).
27 (new)	**5**	**Santa Barbara – 101 – PM 46.92**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Hydraulic/ Partial**	**706655**	**0.02**	**Southern Central California Coast Steelhead (Threatened).**
28 (new)	**5**	**Santa Barbara – 101 – PM 46.95**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Hydraulic/ Partial**	**706656**	**0.17**	**Southern Central California Coast Steelhead (Threatened).**
29 (new)	**5**	**Santa Barbara – 101 – PM 47.12**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Hydraulic/ Partial**	**706657**	**0.03**	**Southern Central California Coast Steelhead (Threatened).**
30 (new)	**5**	**Santa Barbara – 101 – PM 47.15**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Hydraulic/ Partial**	**706658**	**0.04**	**Southern Central California Coast Steelhead (Threatened).**
31 (new)	**5**	**Santa Barbara – 101 – PM 47.19**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Hydraulic/ Partial**	**706659**	**0.18**	**Southern Central California Coast Steelhead (Threatened).**

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Project Name	Solution Type	PAD ID #	Estimated Habitat	Species
32 (new)	**5**	**Santa Barbara – 101 – PM R49.38**	**Gaviota Creek**	**Giorgi Culvert Improvement Project**	**Full Span Bridge**	**706388**	**2.71**	**Southern Central California Coast Steelhead (Threatened).**
33 (new)	**5**	**Santa Cruz – 9 – PM 19.2**	**San Lorenzo River**	**Waterman Gap Fish Passage**	**Full Span Bridge**	**713774**	**2.92**	**Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).**
34	7	Los Angeles – 1 – 50.3	Solstice Creek	Solstice Creek Bridge Replacement	Stream Simulation Design	705781	2.25	Southern California Coast Steelhead (Endangered).
35	7	Ventura – 1 – PM 4.54	Big Sycamore Canyon	Bridge Replacement	Full Span Bridge	723631	4.54	Southern California Steelhead (Endangered).
35	7	Ventura – 33 – PM 7.62	San Antonio Creek	Scour Mitigation & Rail Upgrade	Hydraulic/ Partial	713867	56.40	Southern California Coast Steelhead (Endangered).
37	11	San Diego – 76 – PM 29.5	Pauma Creek	Storm Water Mitigation/Fish Passage	Full Span Bridge	712680	5.74	Southern California Coast Steelhead (Endangered).
38	12	Orange – 5 – PM 11.30	Trabuco Creek	Trabuco	Hydraulic/ Partial	706807	36.16	Southern California Coast Steelhead (Endangered).

Figure 6. 2022 Active Fish Passage Remediation Locations.

2022 Planned Funding - Priority Fish Passage Remediation

In 2022, priority fish passage barrier locations were evaluated to identify transportation funding nexus opportunities. The 27 priority locations listed in Table 5 below have planned funding and are currently in the planning (pre-project) phase, working to complete Project Initiation Documents to determine the scope, cost, and schedule to program for project delivery. Once locations are programmed, they will begin the Project Analysis and Environmental Document phase of project delivery and will be reported as Active (funded). The 27 locations planned for funding and listed in Table 5 below account for an estimated **163.73** miles of currently blocked habitat for salmon and steelhead. Figure 7 demonstrates the 27 locations identified for planned funding.

Table 5. 2022 Planned Funding for Priority Fish Passage Remediation

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	Solution Type	PAD ID #	Estimated Habitat	Species
1	1	Humboldt – 36 – PM 5.18	Wilson Creek	Yager Creek (Van Duzen River)	Full Span Bridge	712972	3.47	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
2	1	Humboldt – 36 – PM 9.17	Fox Creek	Van Duzen River	Full Span Bridge	707129	2.31	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
3	1	Humboldt – 101 – PM 1.61	Durphy Creek	South Fork Eel River	Full Span Bridge	707159	2.44	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened).

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	Solution Type	PAD ID #	Estimated Habitat	Species
4	1	Humboldt – 101 – PM 59.94	Strongs Creek	Eel River	Full Span Bridge	715460	20.26	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened).
5	1	Mendocino – 1 – PM R25.48	Mallo Pass Creek	Pacific Ocean	Hydraulic/ Partial	706971	4.65	Northern California steelhead (Threatened), Central California Coast Coho (Endangered).
6	1	Mendocino – 1 – PM 88.71	Powderhouse Gulch	Cottaneva Creek	Full Span Bridge	713078	0.87	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
7	2	Trinity – 3 – PM 32.62	East Weaver Creek	Weaver Creek (Trinity River)	Full Span Bridge	707178	7.42	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
8	2	Trinity – 299 – PM 49.6	West Weaver Creek	Weaver Creek (Trinity River)	Full Span Bridge	720522	4.64	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
9	2	Trinity – 299 – PM 51.2	Sydney Gulch	West Weaver Creek (Trinity River)	Full Span Bridge	737674	5.54	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	Solution Type	PAD ID #	Estimated Habitat	Species
10	2	Trinity – 299 – PM 51.4	Garden Gulch	Sydney Gulch (Trinity River)	Hydraulic/ Partial	735941	4.52	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
11	4	Marin -1 – PM 18.69	McCurdy Creek	Pine Gulch Creek (Bolinas Lagoon)	Full Span Bridge	706078	0.38	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
12	4	Marin – 1 – PM 18.69	North Fork McCurdy Creek	McCurdy Creek (Pine Gulch Creek)	Full Span Bridge	706079	0.37	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
13	4	Marin – 1 – PM 22.67	John West Fork	Olema Creek	Full Span Bridge	706059	2.85	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
14	4	San Mateo – 1 – PM 4.32	Whitehouse Creek	Pacific Ocean	Full Span Bridge	705302	4.04	Central California Coast Steelhead (Threatened).
15	4	San Mateo – 84 – PM 19.89	West Union Creek	Bear Creek	Full Span Bridge	705768	4.83	Central California Coast Steelhead (Threatened).
16 (new)	**5**	**Santa Barbara – 101 – PM 47.21**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706661**	**0.28**	**Southern Central California Coast Steelhead (Threatened).**
17 (new)	**5**	**Santa Barbara – 101 – PM 47.37**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706660**	**0.04**	**Southern Central California Coast Steelhead (Threatened).**

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	Solution Type	PAD ID #	Estimated Habitat	Species
18 (new)	**5**	**Santa Barbara – 101 – PM 47.69**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706663**	**1.06**	**Southern Central California Coast Steelhead (Threatened).**
19 (new)	**5**	**Santa Barbara – 101 – PM 47.75**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706664**	**0.02**	**Southern Central California Coast Steelhead (Threatened).**
20 (new)	**5**	**Santa Barbara – 101 – PM 47.77**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706665**	**0.04**	**Southern Central California Coast Steelhead (Threatened).**
21 (new)	**5**	**Santa Barbara – 101 – PM 47.81**	**Gaviota Creek**	**Pacific Ocean**	**Stream Simulation Design**	**706666**	**25.04**	**Southern Central California Coast Steelhead (Threatened).**
22 (new)	**5**	**Santa Barbara 101 – PM 48.35**	**Las Canovas Creek**	**Gaviota Creek**	**Full Span Bridge**	**707414**	**0.96**	**Southern California Coast Steelhead (Endangered).**
23	5	Santa Cruz – 1 – PM 9.88	Valencia Creek	Aptos Creek	Hydraulic/ Partial	706704	0.03	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
24	5	Santa Cruz – 1 – PM 9.97	Valencia Creek	Aptos Creek	Hydraulic/ Partial	706703	16.33	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
25	7	Ventura – 1 – PM – 1.23	Little Sycamore Creek	Pacific Ocean	Full Span Bridge	723563	2.19	Southern California Coast Steelhead (Endangered).

Map #	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	Solution Type	PAD ID #	Estimated Habitat	Species
26	7	Ventura – 33 – PM 34.5	Burro Creek	Sespe Creek	Full Span Bridge	723802	0.54	Southern California Coast Steelhead (Endangered).
27	10	Stanislaus – 120 – PM R15.04	Wildcat Creek	Middle San Joaquin River (Lower Stanislaus River)	Full Span Bridge	761519	48.61	California Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook Salmon (Threatened).

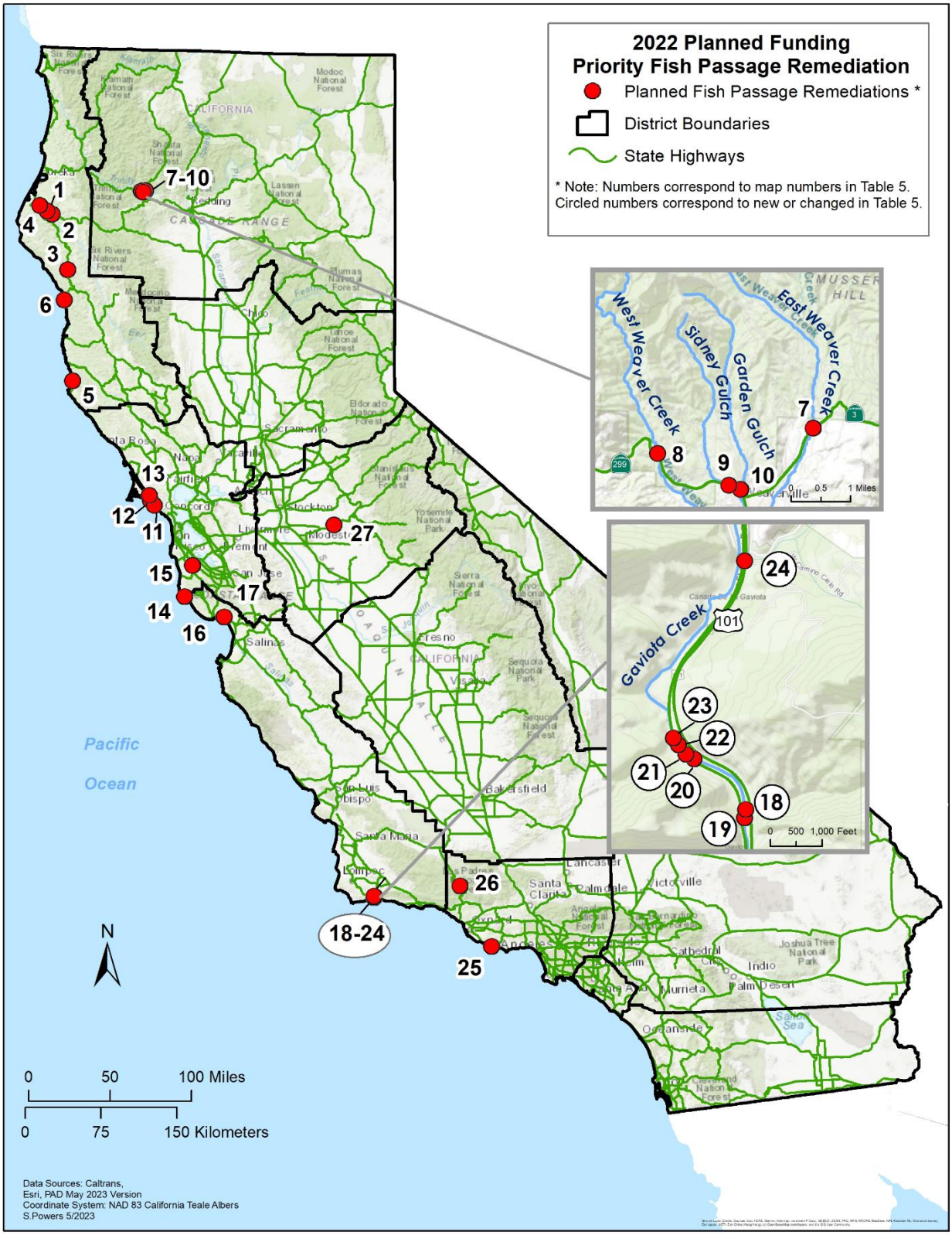


Figure 7. 2022 Planned Funding Priority Fish Passage Remediations

2022 Priority Fish Passage Locations Requiring Funding

Table 6 (below) lists 61 Priority locations as determined by the six statewide Fish Passage Advisory Committees, which do not currently have identified funding. Two new priorities have been added, which are indicated in **bold and underline (new)**. The 61 Priority locations account for an estimated **331.34 miles** of blocked habitat for salmon and steelhead. Figure 8 is a map of the locations listed in Table 6.

Table 6. 2022 Priority Fish Passage Locations Requiring Funding

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
1	1	Del Norte – 199 – PM 34.04	Broken Kettle Creek	Elk Creek	712954	2.86	Southern Oregon/Northern California Coast Coho (Threatened).
2	1	Humboldt – 36 – PM 9.92	Flannigan Creek	Van Duzen River (Lower Eel)	712977	1.34	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
3	1	Humboldt – 101 – PM 11.71	Bear Canyon	South Fork Eel	712991	3.46	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
4	1	Humboldt – 101 – PM 93.27	North Fork Widow White Creek	Mad River	716739	6.42	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
5	1	Humboldt – 101 – PM R126.2	May Creek	Prairie Creek	718442	3.16	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
6	1	Humboldt – 299 – PM R2.97	Essex Gulch	Mad River	713051	3.51	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
7	1	Mendocino – 1 – PM 4.64	Fish Rock Gulch	Pacific Ocean	713068	0.99	California Coastal Chinook (Threatened), Northern CA Steelhead (Threatened), Central California Coast Coho (Endangered).
8	1	Mendocino – 1 – PM R54.62	Doyle Creek	Pacific Ocean	707070	2.36	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered).
9	1	Mendocino – 1 – PM 57.81	Mitchell Creek	Pacific Ocean	707071	5.22	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered).
10	1	Mendocino – 1 – PM 58.78	Digger Creek	Pacific Ocean	707072	2.39	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered).
11	1	Mendocino – 20 – PM 30.87	Unnamed Tributary to Broaddus Creek	Broaddus Creek	713093	1.81	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
12	1	Mendocino – 101 – PM 54.89	Reeves Canyon	Outlet Creek (Upper Eel)	713110	2.57	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
13	1	Mendocino – 101 – PM 61.09	Long Valley Creek	Outlet Creek (Upper Eel)	707091	2.38	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
14	1	Mendocino – 101 – PM 63.47	Long Valley Creek	Outlet Creek (Upper Eel)	707094	14.79	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
15	1	Mendocino – 101 – PM 73.56	Lewis Creek	Tenmile Creek	706969	1.79	Southern Oregon/Northern California Coast Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
16	1	Mendocino – 101 – PM 75.66	Steep Creek (Steep Gulch)	Tenmile Creek	706994	4.48	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
17	1	Mendocino – 101 – PM 80.75	Twin Rocks Creek	Rattlesnake Creek (South Fork Eel)	707105	2.20	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
18	1	Mendocino – 101 – PM 81.17	Cummings Creek	Rattlesnake Creek (South Fork Eel)	707106	0.77	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
19	1	Mendocino – 101 – PM 82.41	Elk Creek	Rattlesnake Creek (South Fork Eel)	707107	2.07	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
20	1	Mendocino – 128 – PM 4.30	Barton Gulch	Navarro River	707185	2.39	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
21	1	Mendocino – 128 – PM 18.69	Lazy Creek	Navarro River	706968	3.89	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
22	2	Shasta – 5 – PM R17.14	Boulder Creek	Churn Creek	737799	0.26	California Central Valley Steelhead (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened), Sacramento Winter-run Chinook (Endangered).
23	2	Shasta – 44 – PM 33.78	Millseat Creek	North Fork Battle Creek	737802	2.84	California Central Valley Steelhead (Threatened), Central Valley Spring-run and Fall/Late Fall-run Chinook (Threatened), Sacramento Winter-run Chinook (Endangered).
24	2	Shasta – 273 – PM 18.0	Sulphur Creek	Sacramento River	707132	9.33	Sacramento River Winter-run Chinook (Endangered), California Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened).
25	2	Shasta – 273 – PM 19.1	Boulder Creek	Churn Creek (Sacramento River)	737800	5.41	Sacramento River Winter-run Chinook (Endangered), California Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened).
26	2	Shasta – 299 – PM 19.14	Middle Creek	Sacramento River	707130	3.28	California Central Valley Steelhead (threatened), Central Valley Spring-run Chinook Salmon (threatened), Sacramento River Winter-run Chinook Salmon (endangered), Central Valley Fall & Late Fall-run Chinook Salmon (species of concern).
27	2	Shasta – 299 – PM 24.7	Boulder Creek	Churn Creek (Sacramento River)	737798	1.00	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
28	2	Siskiyou – 96 – PM 38.56	Benjamin Creek	Klamath River	707164	0.62	Southern Oregon/Northern California Coho (Threatened).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
29	2	Tehama – 36 – PM 9.98	Dry Creek (Budden Canyon Creek)	Dry Creek	737285	13.42	California Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened).
30	2	Tehama – 36 – PM 22.13	Little/Big Crane Creek	Dry Creek	737286	19.45	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
31	2	Trinity – 3 – PM 10.9	Barker Creek	Hayfork Creek	707231	14.48	Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).
32	4	Marin – 1 – PM 25.57	Unnamed Tributary	Olema Creek	759027	1.07	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
33	4	Marin – 1 – PM 25.63	Quarry Gulch	Olema Creek	706054	0.87	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
34	4	Marin – 1 – PM 25.67	Quarry Gulch	Olema Creek	759028	0.15	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
35	4	Napa – 29 – PM 6.04	Suscol Creek	Napa River	705518	4.83	Central California Coast Steelhead (Threatened).
36	4	Napa – 29 – PM 32.07	Mill Creek	Napa River	705448	2.87	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
37	4	San Mateo – 1 – PM 22.75	Lobitos Creek	Pacific Ocean	716835	5.55	Central California Coast Steelhead (Threatened).
38	4	San Mateo – 1 – PM 30.29	Frenchmans Creek	Pacific Ocean	707274	4.61	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
39	4	San Mateo – 84 – PM 4.6	Bogess Creek	San Gregorio Creek	706675	6.10	Central California Coast Steelhead (Threatened).
40	4	San Mateo – 84 – PM 19.25	Bear Creek	San Francisquito Creek	705766	0.75	Central California Coast Steelhead (Threatened).
41	4	San Mateo – 92 – PM 3.3	Pilarcitos Creek	Pacific Ocean	758036	3.48	Central California Coast Steelhead (Threatened).
42	4	Sonoma 1 – PM – 34.36	Fort Ross Creek	Pacific Ocean	723192	1.35	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
43	4	Sonoma 1 – PM – 34.36	Kolmer Gulch (Fort Ross Creek)	Pacific Ocean	723191	3.09	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
44	4	Sonoma 1 – PM – 34.36	Miller Creek	Pacific Ocean	723190	1.46	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
45	5	San Luis Obispo – 1 – PM 25.71	San Luisito Creek	Chorro Creek	700066	14.49	Southern Central California Coast Steelhead (Threatened).
46	5	San Luis Obispo – 101 – PM 30.5	San Luis Obispo Creek	Pacific Ocean	700058	2.33	Southern Central California Coast Steelhead (Threatened).
47	5	San Luis Obispo – 101 – PM 32.83	San Luis Obispo Creek	Pacific Ocean	700061	14.45	Southern Central California Coast Steelhead (Threatened).
48	5	San Luis Obispo – 101 – PM 36.59	Santa Margarita Creek	Salinas River	707246	2.64	Southern Central California Coast Steelhead (Threatened).

#	Caltrans District	County – Route – Post Mile	Stream Name	Tributary to	PAD ID #	Estimated Habitat	Species
49	5	Santa Barbara – 192 – PM 3.39	Mission Creek	Pacific Ocean	706538	4.26	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
50	5	Santa Cruz – 1 – PM 28.59	San Vicenta Creek	Pacific Ocean	706003	4.40	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
51	5	Santa Cruz – 1 – PM 31.25	Molino Creek	Pacific Ocean	705994	2.31	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
52	5	Santa Cruz – 9 – PM 5.5	Gold Gulch	San Lorenzo River	712260	1.62	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
53	7	Los Angeles – 1 – PM 40.99	Topanga Creek	Pacific Ocean	716891	3.76	Southern California Coast Steelhead (Endangered).
54	7	Los Angeles – 1 – PM 54.97	Zuma Creek	Pacific Ocean	716906	3.99	Southern California Coast Steelhead (Endangered).
55	**7**	**Ventura – 33 – PM 4.2**	**Canada Larga**	**Ventura River**	**759835**	**35.58**	**Southern California Coast Steelhead (Endangered).**
56	7	Ventura – 33 – PM 15.85	North Fork Matilija Creek	Ventura River	731927	11.41	Southern California Coast Steelhead (Endangered).
57	7	Ventura – 126 – PM 18.6	Boulder Creek	Sespe Creek	723760	4.59	Southern California Coast Steelhead (Endangered).
58	7	Ventura – 126 – PM R26.48	Hopper Canyon Creek	Santa Clara River	713878	10.38	Southern California Coast Steelhead (Endangered).
59	7	Ventura – 150 – PM 18.75	San Antonio Creek	Ventura River	713873	10.35	Southern California Coast Steelhead (Endangered).
60	7	Ventura – 150 – PM 28.48	Sissar Creek	Santa Paula Creek	761522	10.26	Southern California Coast Steelhead (Endangered).
61	**7**	**Ventura – 150 – PM 28.63**	**Santa Paula Creek**	**Santa Clara River**	**723744**	**17.40**	**Southern California Coast Steelhead (Endangered).**

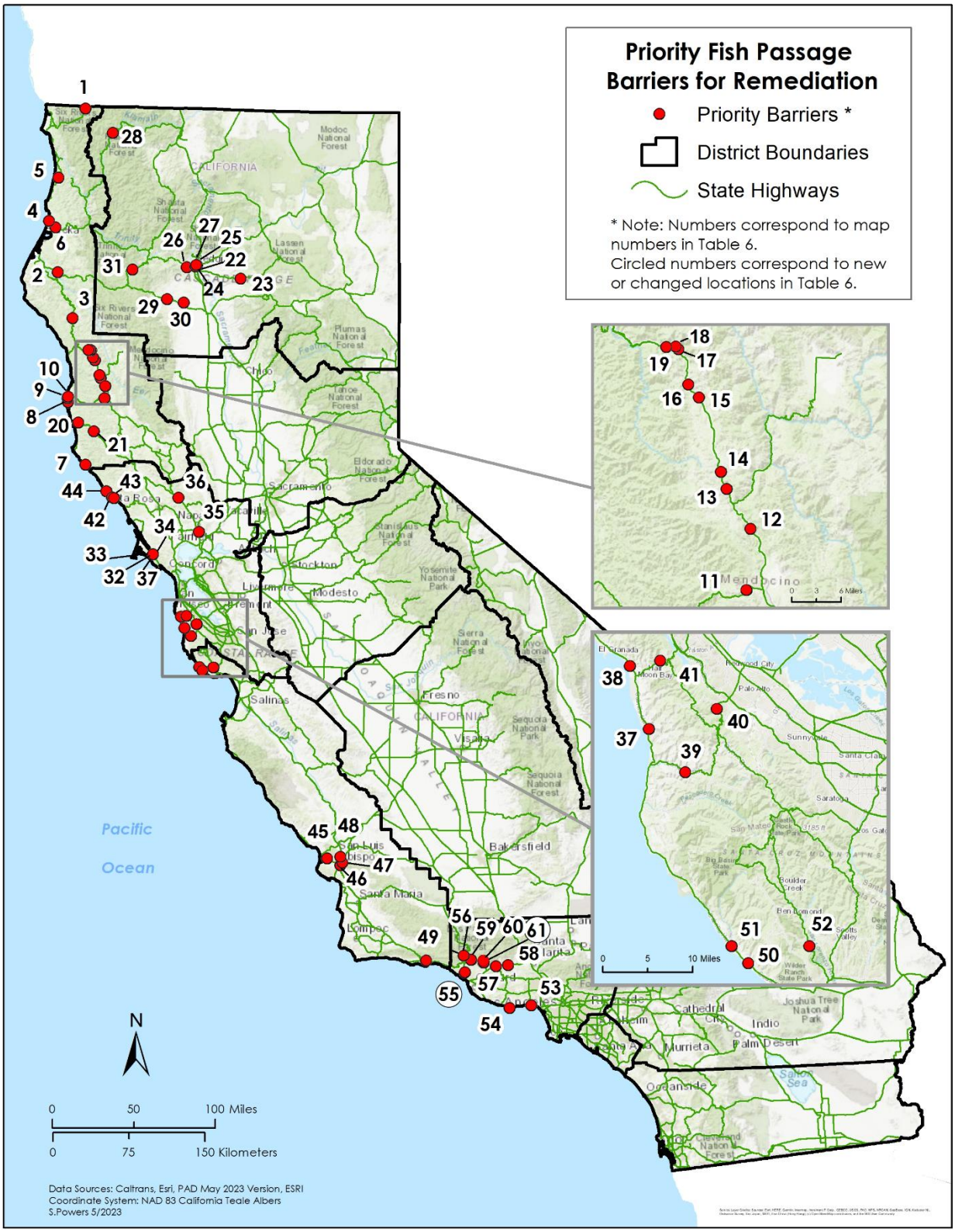


Figure 8. 2022 Priority Fish Passage Locations Requiring Remediation.

Appendix A. Fish Passage Locations Completed

Appendix A lists fish passage locations that have been either fully or partially remediated on the State Highway System since 2006, when Senate Bill 857 (Kuehl, Chapter 589, Statutes of 2005) was passed. Table 7 lists remediated barriers from January 1, 2006, to December 31, 2022. **Bold and underlined (new)** locations are new to this report and were constructed in 2020. The **65** locations listed in Appendix A account for an estimated **920.48 miles** of improved access to salmon and steelhead habitat. Figure 9 is a map of the locations listed in Table 7.

Table 7. Fish Passage Locations completed

Map #	Caltrans District	County-Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
1	1	Del Norte – 101– 39.78	Dominie Creek	Dominie Creek Fish Passage	2022	Full	707134	2.49	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened).
2	1	Del Norte - 101 - PM 41.41	Ritmer Creek	Ritmer Creek Emergency	2019	Partial	707135	1.11	Southern Oregon/Northern California Coast Coho (Threatened).
3	1	Del Norte - 101 - PM 43.7	Lopez Creek	Smith River Widening	2009	Partial	715563	0.50	Southern Oregon/Northern California Coast Coho (Threatened).
4	1	Del Norte - 197 - PM 2.12	Peacock Creek	Peacock Creek Emergency	2013	Partial	720982	1.68	Southern Oregon/Northern California Coast Coho (Threatened).
5	1	Del Norte - 197 - PM 2.9	Unnamed Tributary to Smith River	Emergency Culvert	2019	Partial	712952	0.31	Southern Oregon/Northern California Coast Coho (Threatened).
6	1	Del Norte – 197 – PM 5.0	Sultan Creek	Emergency Bridge Project	2015	Full	707143	1.33	Southern Oregon/Northern California Coast Coho (Threatened).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
7	1	Del Norte – 197 – PM 6.15	Little Mill Creek	Emergency Bridge Project	2016	Partial	707142	1.00	Southern Oregon/Northern California Coast Coho (Threatened).
8 (new)	**1**	**Del Norte – 199 – PM 2.56**	**Clarks Creek**	**199 Culverts**	**2022**	**Partial**	**707139**	**3.69**	**Southern Oregon/Northern California Coast Coho (Threatened).**
9 (new)	**2**	**Del Norte – 199 – PM 31.31**	**Griffin Creek**	**199 Culverts**	**2022**	**Partial**	**707136**	**3.66**	**Southern Oregon/Northern California Coast Coho (Threatened).**
10	1	Humboldt – 96 – 8.87	Campbell Creek	Hydraulic Channel Restoration	2022	Partial	707141	1.62	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened).
11	1	Humboldt - 101- PM 40.12	Chadd Creek	Chadd Creek Fish Passage	2006	Partial	722460	1.81	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
12	1	Humboldt – 169 - PM 22.37	Cappell Creek	Four Bridges Project	2011	Partial	706198	0.50	Southern Oregon/Northern California Coast Coho (Threatened).
13	1	Humboldt – 101 - PM 124.5	Little Lost Man	Prairie Creek	2020	Full	713025	1.21	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
14	1	Humboldt – 299 - PM 4.2	Hall Creek	Mitigation Mad River Bridge	2013	Partial	716742	3.50	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
15	1	Mendocino – 1 - PM 92.8	Dunn Creek Bridge	10 Mile Bridge Mitigation	2013	Full	706958	2.13	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
16	1	Mendocino – 1 – PM 14.85	Point Arena Creek	Emergency Culvert	2019	Partial	712450	2.86	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
17	1	Mendocino – 101 – PM 48.14	Upp Creek	Willits Mitigation	2017	Partial	705136	2.98	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).

Map #	Caltrans District	County-Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
18	1	Mendocino – 101 – PM 52.25	South Fork Ryan Creek	Willits Mitigation	2017	Partial	707085	2.52	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
19	1	Mendocino – 101 – PM 52.36	North Fork Ryan Creek	Willits Mitigation	2017	Partial	707086	1.46	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
20	1	Mendocino – 101 – PM 66.5	Ten Mile Creek	Culvert Scour Project	2017	Partial	707096	4.70	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
21	1	Mendocino -- 101 – PM 81.4	Rattlesnake Creek	Rattlesnake Creek	2009	Partial	706986	2.59	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).

Map #	Caltrans District	County-Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
22	1	Mendocino -- 101 – PM 83.99	Rattlesnake Creek	Fish Passage	2013	Partial	706987	22.31	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
23	1	Mendocino – 101 – PM 89.24	Cedar Creek	Cedar Creek Fish Passage Retrofit	2018	Partial	706954	11.91	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
24	1	Mendocino - 101 – PM 99.0	Red Mountain Creek	Confusion Hill Mitigation	2010	Partial	707115	10.58	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
25	1	Mendocino – 128 – PM 21.8	Clow Creek	Culvert Upgrade	2015	Partial	707199	1.36	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
26	1	Mendocino – 128 – PM 27.54	Graveyard Creek	Culvert Upgrade	2015	Partial	707205	1.22	Southern Oregon/Northern California Coast Coho (Threatened), Northern California Steelhead (Threatened), California Coastal Chinook (Threatened).
27	1	Mendocino – 128 – PM 36.63	Lost Creek	Culvert Upgrade	2015	Partial	707208	0.26	Northern California Steelhead (Threatened), California Coastal Chinook (Threatened), Central California Coast Coho (Endangered).
28	1	Mendocino – 128 – PM 39.88	Beebe Creek	Culvert Upgrade	2015	Partial	707212	0.07	Northern California Steelhead (Threatened), California Coastal Chinook (Threatened), Central California Coast Coho (Endangered).
29	1	Mendocino - 128 – PM 39.95	John Hatt Creek	Beebe Storm Damage	2011	Partial	713145	1.48	Northern California Steelhead (Threatened), California Coastal Chinook (Threatened), Central California Coast Coho (Endangered).
30	1	Mendocino - 128 – PM 49.66	Edwards Creek	Edwards Creek Fish Passage	2011	Partial	707219	0.62	Northern California Steelhead (Threatened), California Coastal Chinook (Threatened), Central California Coast Coho (Endangered).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
31	2	Shasta – 5 – R24.54	Spring Branch Creek	Fish Passage Restoration	2022	Partial	759970	2.29	Southern Oregon\Northern California Coasts Coho Salmon (Threatened).
32 (new)	**2**	**Shasta – 36 – PM 3.6**	**Harrison Gulch**	**Harrison Gulch**	**2022**	**Partial**	**737281**	**3.57**	**Southern Oregon\Northern California Coasts Coho Salmon (Threatened).**
33	2	Shasta - 299 – PM 20.7	Salt Creek	Salt Creek Fish Passage Project	2006	Partial	737289	7.10	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened), Sacramento River Winter-run Chinook (Endangered).
34	2	Shasta – 299 – PM 32.2	Yank/Lemm Creek Bridge	Yank/Lemm Creek Bridge	2014	Full	737295	14.66	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened).
35	2	Siskiyou – 5 –PM 27.18	Parks Creek	Shasta River	2020	Full	720504	19.10	Southern Oregon\Northern California Coasts Coho Salmon (Threatened).
36	2	Siskiyou - 96 – PM 56.0	Fort Goff Creek	Fort Goff Creek Fish Passage	2014	Full	707168	3.98	Southern Oregon/Northern California Coast Coho (Threatened).
37	2	Siskiyou - 96 – PM 65.4	O'Neil Creek	O'Neil Creek Fish Passage	2008	Full	707147	0.89	Southern Oregon/Northern California Coast Coho (Threatened).
38	2	Tehama - 5 – PM 16.9	Elder Creek	Elder Creek Scour Mitigation	2008	Partial	737006	245.54	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened), Sacramento River Winter-run Chinook (Endangered).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
39	2	Tehama - 5 – PM 28.1	Dibble Creek	Dibble Creek Scour Mitigation	2008	Partial	737007	94.30	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened), Sacramento River Winter-run Chinook (Endangered).
40	2	Tehama - 99 – PM 15.6	Sunset Canal	Sunset Canal Bridge	2010	Partial	737013	6.12	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened), Sacramento River Winter-run Chinook (Endangered).
41	2	Tehama - 99 – PM 21.1	Craig Creek	Craig Creek	2011	Full	737012	165.44	Central Valley Steelhead (Threatened), Central Valley Spring-run Chinook (Threatened), Sacramento River Winter-run Chinook (Endangered).
42 (new)	**2**	**Trinity – 3 – PM 25.25**	**Unnamed/ Frazier Creek**	**Hayfork Mountain Culverts**	**2022**	**Partial**	**760686**	**1.70**	**Southern Oregon/Northern California Coho (Threatened), California Coastal Chinook (Threatened), Northern California Steelhead (Threatened).**
43	2	Trinity – 299 – PM 68.06	Little Grass Valley Creek	Little Grass Valley Creek Fish Passage	2015	Partial	720511	0.14	Southern Oregon/Northern California Coast Coho (Threatened).
44	2	Trinity – 299 – PM 68.2	Little Grass Valley Creek	Little Grass Valley Creek Fish Passage	2015	Partial	735688	12.32	Southern Oregon/Northern California Coast Coho (Threatened).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
45	4	Alameda – 84 – 121.1	Stonybrook Creek	Niles Canyon	2022	Full	713729	7.01	Northern California Steelhead (Threatened), Central California Coast Coho (Endangered), California Coastal Chinook (Threatened).
46	4	Contra Costa – 80 – PM 8.4	Pinole Creek	Pinole Creek Bridge Retrofit	2016	Partial	723716	28.23	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
47	4	Marin – 1 – PM 22.78	Giacomini Gulch	Giacomini Gulch Bridge	2018	Full	706058	1.56	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
48	4	Marin – 1 – PM 24.77	Tributary to Olema Creek	Tributary to Olema Creek Bridge	2018	Full	732502	0.79	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
49	4	Marin – 1 – PM 33.4	Millerton Gulch	Millerton Gulch Emergency	2017	Partial	732518	0.76	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
50 (new)	**4**	**Napa – 121 – PM 0.75**	**Huichica Creek**	**Hiuchica Creek Bridge Replacement**	**2022**	**Full**	**714975**	**7.82**	**Central California Coast Steelhead Trout (Threatened), Central California Coast Coho (Endangered).**
51	4	Napa - 121 – PM 1	Huichica Creek	Duhig Road Project	2010	Full	733333	1.33	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
52	4	Napa – 121 – PM 9.3	Sarco Creek	Sarco Creek Bridge	2017	Partial	758605	8.70	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
53	4	Sonoma – 116 – PM 31.14	Laguna de Santa Rosa	Laguna de Santa Rosa	2020	Full	732859	2.24	Central California Coast Coho (Endangered), Central California Coast Steelhead (Threatened).
54 (new)	**4**	**Santa Clara – 85 – PM 12.6**	**San Tomas Aquinas Creek**	**Sub-Structure Rehab/Scour Mitigation**	**2022**	**Partial**	**733945**	**4.90**	**Central California Coast Steelhead (Threatened).**
55	5	Santa Barbara—1— PM 15.61	Salsipuedes Creek	Santa Ynez River	2020	Full	700085	101.81	Southern Oregon\Northern California Coasts Coho Salmon (Threatened).
56	5	Santa Barbara – 101 – PM 2.2	Carpinteria Creek	Carpinteria Creek Retrofit	2018	Full	707182	12.22	Southern California Steelhead (Endangered).
57	5	Santa Barbara - 101 – PM 33.9	El Capitan Creek	El Capitan Creek	2007	Partial	707398	6.34	Southern California Steelhead (Endangered).
58	5	Santa Barbara – 101 – PM 38.3	Tajiguas Creek	Tajiguas Creek	2014	Partial	707403	8.20	Southern California Steelhead (Endangered).
59	5	Santa Barbara - 101 – PM 41.0	Arroyo Hondo Creek	Arroyo Hondo	2008	Partial	707405	2.00	Southern California Steelhead (Endangered).
60	5	Santa Barbara - 101 – PM 47.2	Gaviota Creek	Gaviota Creek	2008	Partial	706669	25.60	Southern California Steelhead (Endangered).
61	5	Santa Barbara – 192 – 8.12	Montecito Creek	Montecito Creek Bridge	2022	Full	706527	3.02	Southern California Coast Steelhead (Endangered).
62	5	Santa Barbara – 192 – PM 15.5	Arroyo	Bridge Replacement	2019	Full	706239	1.20	Southern California Steelhead (Endangered).

Map #	Caltrans District	County- Route- Post mile	Stream Name	Project Name	Year Completed	Treatment	PAD ID #	Estimated Habitat	Species
63	5	Santa Cruz - 1 – PM 17.4	Branciforte Creek	Hwy 1 Remediation	2007	Partial	735367	18.00	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
64	5	Santa Cruz - 1 – PM 17.42	Carbonera Creek	Hwy 1 Remediation	2008	Partial	735366	3.23	Central California Coast Steelhead (Threatened), Central California Coast Coho (Endangered).
65	12	Orange – 74 – PM 13.30	San Juan Creek	San Juan Creek Fish Passage	2018	Full	759565	4.91	Southern California Steelhead (Endangered).

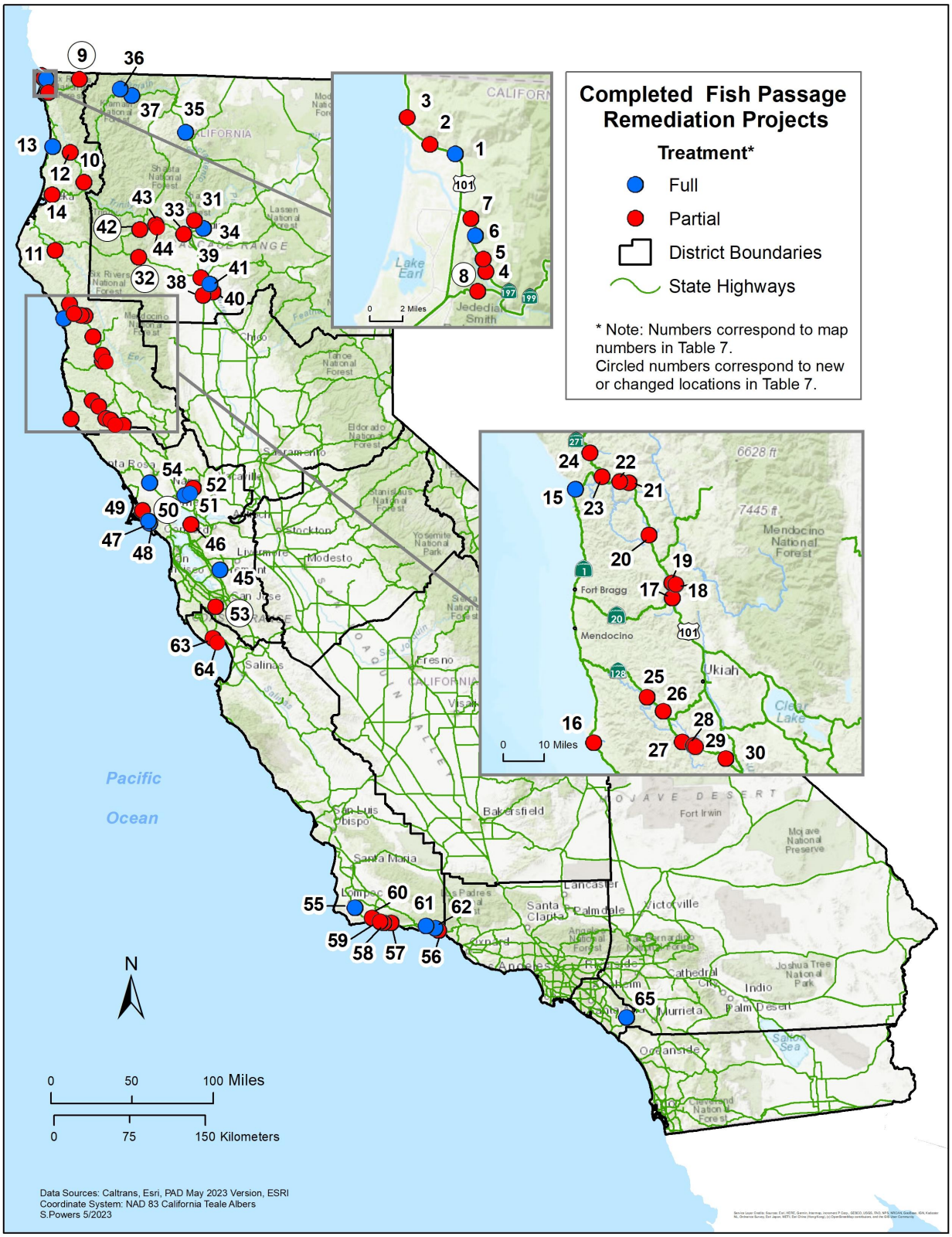


Figure 9. Fish Passage Locations Completed.

Appendix B. Statutory Reporting Reference

Streets and Highways Code Section 156 became effective January 1, 2006, per Senate Bill 857 (Kuehl, Chapter 589, Statutes of 2005) and was amended by AB 95 (Committee on Budget, Chapter 12, Statutes of 2015).

156.1. (a) The Director of Transportation shall prepare an annual report describing the status of the department's progress in locating, assessing, and remediating barriers to fish passage. This report shall be given to the Legislature by October 31 of each year through the year 2025.

(b) Each report issued after October 31, 2016, shall include a status report on the remediation of barriers to fish passage on projects that have been identified pursuant to Section 156.5. The status report shall include, but is not limited to, all of the following information regarding a project identified pursuant to Section 156.5:

(1) Any updated information received by the department from the Department of Fish and Wildlife regarding the barriers to fish passage on the project.

(2) Whether funding has been committed to the project.

(3) The source of any funding for the project.

(4) The budget summary of the project.

(5) The status of inspections of culverts to ensure they are functioning properly and any other actions by the department to assess or remediate barriers to fish passage.

(6) The applicable program initiation document work plan review.

(7) The estimated completion date for the project.

156.2. The department shall pursue development of a programmatic environmental review process with appropriate state and federal regulatory agencies for remediating barriers to fish passage that will streamline the permitting process for projects. The department shall include a description of its progress on this review process in the report specified in Section 156.1.

156.3. For any project using state or federal transportation funds programmed after January 1, 2006, the department shall ensure that, if the project affects a stream crossing on a stream where anadromous fish are, or historically were, found, an assessment of potential barriers to fish passage is completed prior to commencing project design. The department shall submit the assessment to the Department of Fish and Wildlife and add it to the Passage Assessment Database. If any structural barrier to passage exists, remediation of the barrier shall be designed into the project by the implementing agency. New projects shall be constructed so that they do not present a barrier to fish passage. When barriers to fish passage are being addressed, plans and projects shall be developed in consultation with the Department of Fish and Wildlife.

Appendix C. 2022 Active Fish Passage Remediation Locations Funding

This table represents current available funding information for the 38 active locations that are being developed, consistent with Table 4. As these fish passage remediation locations are further developed through the design, permitting, and construction process, costs and schedule information will be updated.

No.	District	County – Route – Post Mile	EA	Project ID	Project Name	Programming Document[1]	PAD ID #	Stream Name	Estimated Year of Construction	Estimated Year Construction Completed	Total Programmed Fish Passage Project Funding[2]
1	1	Del Norte – 101 – PM 37.46	0K690	0120000135	Mello Creek Fish Passage	SHOPP	712951	Mello Creek	2027/28	2029/2030	$9,314,000
2	1	Del Norte 101 – PM 40.6	0K690	0120000135	DN 101 Drainage	SHOPP	761539	Delilah Creek	2027/28	2029/2030	**$1,000,000**
3	1	Humboldt – 36 – PM 4.39	0J890	0119000119	Carlotta Shoulders Widening	SHOPP	712971	Ward Creek	2023/24	2024/25	**$5,000,000**
4	1	Humboldt – 101 – PM 0.88	0H641	0123000062	Hartsook Creek Fish Passage	SHOPP	707160	Hartsook Creek	2025/26	2026/27	**$5,800,000**
5	1	Humboldt – 254 – PM 4.18	0E790	0115000021	Fish Creek Fish Passage	SHOPP	707157	Fish Creek	2022/23	2024/25	$17,312,000
6	1	Humboldt – 254 – PM 8.13	0H240	0117000140	HUM 254 Culvert Rehabilitation	SHOPP	713038	Unnamed	2025/26	2027/28	**$600,000**
7	1	Humboldt – 254 – PM 15.04	0H240	0117000140	HUM 254 Culvert Rehabilitation	SHOPP	713040	Mowry Creek	2025/26	2027/28	**$7,000,000**
8	1	Humboldt – 254 – PM 16.44	0H240	0117000140	HUM 254 Culvert Rehabilitation	SHOPP	713042	Unnamed	2025/26	2027/28	**$450,000**
9	1	Humboldt – 254 – PM 40.83	0H240	0117000140	HUM 254 Culvert Rehabilitation	SHOPP	722439	Chadd Creek	2025/26	2027/28	**$7,000,000**
10	1	Mendocino – 128 – PM 7.27	0K680	0120000134	Navarro River	SHOPP	707187	Mustard Gulch	2025/26	2026/27	**$5,800,000**
11	2	Siskiyou – 96 – PM 43.5	1H590	0216000025	Cade Creek	SHOPP	720541	Cade Creek	2023/24	2027/28	**$9,877,000**
12	2	Siskiyou – 96 – PM 57.0	1H590	0216000025	Portuguese Creek	SHOPP	707169	Portuguese Creek	2023/24	2027/28	**$9,958,000**
13	2	Trinity – 3 – PM 24.95	0J500	0219000130	Hayfork Mountain Culverts	SHOPP	735849	Unnamed/ Frazier Creek	2022/23	2022/23	**$1,726,700**
14	4	Marin 1 – PM 21.06	2Q53U	0422000077	Olema Creek	SHOPP	732665	Unnamed Tributary to Olema Creek	2024/25	2025/26	$11,858,000
15	4	Napa – 29 – PM 33.13	4J990	0416000037	Fish Passage Remediation	SHOPP	705459	Ritchie (Ritchey) Creek	2021/22	2022/23	$11,570,000
16	4	Napa – 29 – PM 38.96	2J88U	0418000401	Bridge Maintenance and Scour Project	SHOPP	705526	Horns Creek	2022/23	2022/23	**$3,078,000**
17	4	San Mateo – 280 – PM 0.01	4J850	0416000028	Seismic Restoration - King DR. UC #35-0202L	SHOPP	705760	Los Trancos Creek	2022/23	2022/23	**$2,100,000**
18	4	Sonoma – 1 – PM 15.1	0A020	0400000129	Gleason Beach Highway Realignment	SHOPP	733223	Scotty Creek	2023/24	2024/25	**$22,500,000**
19	5	Santa Barbara – 101 – PM R0.0	1J911	0521000086	Rincon Creek Fish Passage	SHOPP	707368	Rincon Creek	2027/28	2029/30	$15,000,000

[1] Abbreviations for Program Document: SHOPP = State Highway Operation and Protection Program, and STIP = State Transportation Improvement Program.

[2] This column lists the programmed transportation funding for fish passage remediation locations based on the best available project information. The **bold and underlined** costs are ranges of costs for the identified fish passage solution type, since the true programmed amount includes funding for greater project efforts which are not related to fish passage.

No.	District	County – Route – Post Mile	EA	Project ID	Project Name	Programming Document[1]	PAD ID #	Stream Name	Estimated Year of Construction	Estimated Year Construction Completed	Total Programmed Fish Passage Project Funding[2]
20	5	Santa Barbara – 101 – PM 5.6	0N702	0518000113	South Coast 101 HOV Lanes - Padaro	STIP	734310	Arroyo (Parida) Paredon Creek	2023/24	2024/25	**$6,500,000**
21	5	Santa Barbara – 101 – PM 5.63	1C8B3	0521000072	South Coast 101 HOV Lanes	SHOPP/STIP	734309	Toro Creek	2027/28	2028/29	**$800,000**
22	5	Santa Barbara – 101 – PM 9.4	0N70B	0518000131	South Coast 101 HOV Lanes - Padaro Montecito	STIP	705161	Romero Creek	2023/24	2024/25	**$4,500,000**
23	5	Santa Barbara – 101 – PM 9.6	0N70B	0518000131	South Coast 101 HOV Lanes - Padaro Montecito	STIP	734342	San Ysidro Creek	2023/24	2024/25	**$4,500,000**
24	5	Santa Barbara-101-PM 10.51	0N70B	0518000131	South Coast 101 HOV Lanes - Montecito	STIP	734353	Oak Creek	2023/24	2024/25	**$4,500,000**
25	5	Santa Barbara-101-PM 36.7	1C950	0513000018	Refugio Creek Bridge Replacement	SHOPP	707402	Refugio Creek	2023/24	2026/27	$5,900,000
26	5	Santa Barbara – 101 – PM 46.92	1N830	0521000132	Channel Restoration Project	SHOPP	706655	Gaviota Creek	2029/30	2030/31	**$2,040,000**
27	5	Santa Barbara – 101 – PM 46.95	1N830	0521000132	Channel Restoration Project	SHOPP	706656	Gaviota Creek	2029/30	2030/31	**$2,040,000**
28	5	Santa Barbara – 101 – PM 47.12	1N830	0521000132	Channel Restoration Project	SHOPP	706657	Gaviota Creek	2029/30	2030/31	**$2,040,000**
29	5	Santa Barbara – 101 – PM 47.15	1N830	0521000132	Channel Restoration Project	SHOPP	706658	Gaviota Creek	2029/30	2030/31	**$2,040,000**
30	5	Santa Barbara – 101 – PM 47.19	1N830	0521000132	Channel Restoration Project	SHOPP	706659	Gaviota Creek	2029/30	2030/31	**$2,040,000**
31	5	Santa Barbara – 101 – PM R49.38	1N830	0521000132	Giorgi Culvert Improvement Project	SHOPP	706388	Gaviota Creek	2029/30	2030/31	**$6,000,000**
32	5	Santa Cruz – 9 – PM 19.2	1K901	0523000059	Waterman Gap Fish Passage	SHOPP	713774	San Lorenzo River	2025/26	2026/27	$12,300,000
33	5	Santa Barbara -101-PM 21.63	1H430	0516000073	San Jose Ck Bridge Replacement	SHOPP	734429	San Jose Creek	2024/25	2026/27	$30,628,000
34	7	Los Angeles – 1 – 50.3	31350	0715000090	Solstice Creek Bridge Replacement	SHOPP	705781	Solstice Creek	2023/24	2025/26	$36,248,131
35	7	Ventura – 33 – PM 7.62	29130	0712000083	Scour Mitigation & Rail Upgrade	SHOPP	713867	San Antonio Creek	2024/25	2025/26	$15,852,000
36	7	Ventura – 1 – PM 4.54	36010	0719000268	Bridge Replacement	SHOPP	723631	Big Sycamore Canyon	2026/27	2027/28	$56,393,000
37	11	San Diego – 76 – PM 29.5	42220	1115000179	Storm Water Mitigation/Fish Passage	SHOPP	712680	Pauma Creek	2026/27	2029/30	$24,862,000
38	12	Orange – 5 – PM 11.30	PEER	PEER	Trabuco	Local Agency	706807	Trabuco Creek	N/A	2024	$1,100,000[3]
Total Estimated Fish Passage Funding Investment											**$300,000,000 - $310,000,000**

[3] Trabuco Creek funding estimate is in the form of planning and engineering grants and in CalTrout project management. Funding for implementation has not been identified.