Work Plan and Accomplishments Report Guidance and Template
FY22 NFHP Project Funding Cycle

Fish Habitat Partnership: California Fish Passage Forum

Contact Person Name: Alicia Marrs

Phone Number: 360.319.7916

Email Address: aliciamarrs@cafishpassageforum.org

General Instructions

1. Complete Section 1 if requesting FHP operational support.
2. Complete Section 3 if requesting NFHP funding for projects.
3. Email one electronic copy of the completed report by 11:59 pm local time, **May 17, 2021** to Alex Atkinson at Alex.Atkinson@NOAA.gov and Ryan Roberts at RRoberts@fishwildlife.org.
4. Incomplete reports will not be considered for funding. Information received after the submission deadline will not be considered.

General Guidance for Completing Section 1. Justification for Stable Operating Support

The intent of Section 1 is to ensure that FHPs receiving operating support are thriving, active organizations making concerted efforts to achieve fish habitat conservation goals and objectives established by both the FHPs and National Fish Habitat Partnership.

Narrative responses should provide an overview of all projects and activities supported by NFHP/FWS funds and all other sources or in-kind contributions for anticipated projects and activities over the previous three federal fiscal years (FY2018, FY2019, and FY2020 or October 1, 2017 through September 30, 2020) and anticipated projects and activities over the next three federal fiscal years (FY2022, FY2023, and FY2024 or October 1, 2021 through September 30, 2024).

Project summaries should not be an itemized list of individual projects. Project summaries should instead focus on the associated outputs and outcomes of the habitat conservation projects implemented by the FHP *(e.g., completed ten fish passage projects resulting in X number of miles reopened, link to strategic plan, objective addressed, outcomes, socioeconomic impacts, etc.)*

Activity summaries should focus on salient operational and programmatic activities (*e.g. update strategic plan, improved capacity of FHP, monitoring and assessments, outreach events, socioeconomic impacts, etc.*). Day-to-day FHP activities (e.g. the number of meetings or teleconferences an FHP representative participated in) are not pertinent to this performance report and should not be included in this summary.

Please make efforts to keep your justification in Section 1 concise. Do not exceed six pages.

Section 1. Justification for Stable Operational Support (maximum 6 pages)

Enter your responses in the space provided below, adding additional pages up to a maximum of 6 pages.

From October 2017 through September 2020 (FY2018-FY2020), the California Fish Passage Forum (Forum) supported 16 fish passage design and barrier removal projects in California, ultimately opening access to more than 93 miles of spawning and rearing habitat for threatened and endangered anadromous fish. During this reporting period a total of $576,588 in Forum contributions leveraged $23,101,630 in partner contributions to support $23,678,218 in fish passage barrier removal projects in California and other Forum initiatives.

In addition to supporting fish passage barrier removal projects, the Forum provided support to projects that contribute to monitoring and assessment of fish passage barrier removal in California. For example, the Forum also funded a two phased evaluation in FY2019 to assess barriers to lamprey passage in the Sacramento Basin, field test protocols and Forum-developed tools and products, and inform data inputs to the California Passage Assessment Database (PAD), BIOS, and the Forum's decision support tool FISH*Pass*. Additionally, in FY20 the Forum supported a project that leverages FISH*Pass* and applies it in a real world setting to develop an optimized list of barrier removals in the Smith River, one of California's most important watersheds for the conservation of anadromous fish. The project provides an opportunity to learn more about the tool, and identify ways the model could be strengthened for future applications in other watersheds in California.

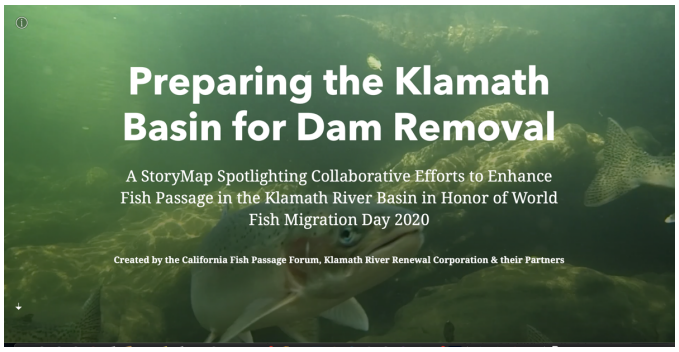
The Forum's conservation priorities and objectives are based on the goal of restoring and protecting healthy anadromous fish populations by restoring habitat connectivity. Remediation of fish passage barriers in California is complex. The Forum seeks opportunities to achieve its short and long-term goals by contributing nominal amounts of funding to projects of all sizes, and supporting the development of tools, science and data to inform fish passage restoration efforts throughout the state. The following activities and deliverables illustrate the ways the Forum has worked to achieve these goals from October 2017 through September 2020 (FY2018 through FY2020).

Forum Impact through Strategic Collaboration & Outreach

The Forum is comprised of individuals representing key state and federal agencies, as well as local, regional and national non-profits and environmental organization who support the its mission to protect and revitalize anadromous fish populations in California by restoring connectivity of freshwater habitats throughout their historical range. The structure of the Forum is designed to support fish passage efforts statewide, and disseminate information to policy makers, other Fish Habitat Partnerships (FHPs), restoration and fish passage practitioners, and the general public. The following include examples of the Forum's efforts to increase awareness of the importance of removing barriers to fish passage, promote the work of partners and Forum-funded projects, and support the efforts of partner agencies and other organizations in the mutual pursuit of improving fish passage in California.

- Three Forum-nominated water bodies selected to NFHP's 10 Waters to Watch**.** The Forum has a strong history of nominating projects selected to this annual list: 2018 (Manly Gulch/Big River), 2019 (Upper Green Valley Creek), 2020 (San Juan & Santiago Watersheds). The Forum celebrated these announcements by highlighting them on the Forum website, sending email blasts to its listserv which has grown to more than 600 recipients, leveraging communications tools of Forum signatory agencies and partners that shared the announcements on their websites and social media channels. In 2020, the Forum also used the announcement to launch a new Twitter® handle (@CAFishPassForum).
- The Forum's Science & Data Committee continued to identify innovative projects to highlight in case studies that describe barrier removal effectiveness monitoring. Two case studies were developed in 2018, and two more were initiated in 2020 with a planned release in 2021.

- A portion of the Forum's website is dedicated to educating the public about the importance of fish passage barrier removal.
- The Forum produced and maintains a web-based StoryMap to help illustrate the scope and scale of Forum-funded projects.
- In 2019 the Forum developed a new "intranet" to serve as a document repository and archive for the partnership. This password protected site is accessible to all members of the Steering Committee (designees and alternates from each of the Forum's signatory agencies).



- In the summer of 2020, members of the Education & Outreach Committee worked with USFWS Pacific Southwest region on an article highlighting the release of FISH*Pass* - *"Finding their way: New Website Helps Public Remove Fish Passage Barriers"*. This article garnered interest from Jefferson Public Radio, resulting in the Forum chair and coordinator being interviewed during the daily call-in show "Jefferson Exchange" on July 28, 2020.
- In honor of World Fish Migration Day 2020, the Forum worked with NOAA Fisheries, Pacific States Marine Fisheries Commission, and the Klamath River Renewal Corporation to develop a StoryMap to highlight the collaborative efforts underway in the Klamath River Basin to enhance fish passage in preparation for the removal of the four lower Klamath River Dams.

Forum Administrative Accomplishments

Forum members visit the I-5 Trabuco Fish Passage Site (Sept 2019) (left) and Alpine Creek (2020) (below)

- The Forum holds two to three meetings of its membership each year. In all cases, local entities were invited to participate in the in-person meetings to facilitate engagement with local partners and interested parties. In addition to Forum business, each meeting featured at least one presentation by a local partner or stakeholder, to increase awareness of local fish passage issues amongst Forum members and increase awareness of the Forum to local partners. There were six Forum meetings held between October 1, 2017 and September 30, 2020 at a variety of locations throughout California and via webinar.

  The Forum's September 2019 meeting, held in San Diego, CA, featured a full day field tour led by CalTrout that showcased the diversity of key fish passage advancements in Southern California for endangered Southern steelhead to Forum members, partners, and guests. In February 2020, the Forum met in Santa Cruz, CA and preceded its business meeting with a half-day demonstration of FISH*Pass* for local stakeholders, followed by a field tour to local fish passage projects in the region led by USFWS and San Mateo RCD.
- The Forum revisits and updates its strategic framework annually as needed. In 2018, the Forum released a more strategic and comprehensive overhaul of this document spanning 2018-2023. This also included updating the Forum's geographic scope to encompass all anadromous and soon-to-be anadromous waters

in California by adding the Klamath River Basin and additional portions of Southern California based on revised fish distribution data and dam removal planning efforts.

- Produced annual reports for 2018, 2019, 2020.
- Revised and updated its Memorandum of Understanding in 2020, as well as added new members, Trout Unlimited (2018) and California Department of Parks & Recreation (2020). The Forum also drafted, adopted (and updated 2019) its bylaws.
- Each of the Forum's committees (Governance, Science & Data, and Education & Outreach) developed, and regularly updated work plans as they meet throughout the year, and presented progress towards goals at Forum Steering Committee meetings. In 2020, the Forum reconstituted the Policy & Permitting Committee, and in doing so invited partner organizations (The Nature Conservancy and Sustainable Conservation) to participate.
- The Forum created a new factsheet in 2019 highlighting the goals, mission and accomplishments of the Forum to use at conferences and workshops.
- The Forum participated in numerous NFHP meetings and committees. Representatives of the Forum sat on the Partnership Committee, and attended the Science & Data Committee meetings, as well as NFHP Board and Coordinator meetings.

Forum Impact through Addressing Fish Passage Priorities in California Fish Passage

- **Barrier Prioritization through FISH*Pass*:** From 2018 through 2020, the Forum continued its near decade long work to develop a fish passage barrier optimization tool that any fish passage practitioner in California can use to select and prioritize barriers for remediation. With additional USFWS funding, the Forum contracted with Ecotrust in Portland, Oregon to develop a web-based user-friendly interface that made the tool more easily accessible to a wider audience in California and beyond.

  The Forum's Science & Data Committee worked throughout 2018 with partners and stakeholders to help Ecotrust further refine the data inputs and the user interface. This included co-hosting a full day in-person workshop in concordance with the 36th Annual Salmon Restoration Conference in Fortuna, California (April 11-14, 2018). This workshop, titled "Using an Optimization Model to Select Fish Passage Barriers for Remediation," contained two segments. The first, provided an overview of the California Department of Fish & Wildlife Section IX Passage Assessment Methodology, as well as FishXing Software. The second, gave fish passage practitioners an opportunity to familiarize themselves with FISH*Pass* in numerous watersheds along the coast of California. The workshop was attended by 55 participants, and in addition to serving as an excellent outreach opportunity, also provided the Forum with an important feedback on FISH*Pass's* functionality and data inputs during the final stages of integrating the excel-based version of the tool with the new user-interface.

In 2019, the Forum continued to work with Ecotrust to refine the user-interface and initiated beta testing of the tool internally and with Forum partners. The Forum also met with fellow fish habitat partnerships (FHPs) that had also developed barrier prioritization tools (Southeast Aquatic Resource Partnership), as well as others interested in finding ways to develop similar tools for their region (Midwest Glacial Lakes Partnership) to discuss lessons learned. The Forum previewed FISH*Pass* during the poster session at the Salmonid Restoration Federation annual conference in Santa Rosa, CA in April 2019.

The Forum continued to refine the input data (including cost data, PAD updates, baseline fish habitat, and barrier tracing) for FISH*Pass*. The Science and Data Committee formed the FISH*Pass* Working Group (FPWG) to focus explicitly on refining the input data and user manual for FISH*Pass* in preparation for its Phase 1 release at the national American Fisheries Society national meeting September 30-October 3, 2019 in Reno, NV. The release included a well-received presentation on the tool, dissemination of outreach materials at the NFHP booth followed by blast emails and e-newsletters announcing the tool's deployment.

In conjunction with the release of FISH*Pass* in 2019, the Forum held an introductory recorded webinar posted on the Forum's website. The FPWG had already initiated targeted outreach to stakeholders in specific regions. The first target region was Santa Cruz, CA where the Forum held its next in-person Steering Committee meeting (February 2020). The FPWG hosted a half-day in-person FISH*Pass*.

While not included in the Phase 1 rollout of FISH*Pass*, habitat quality was recognized early on in the development of the tool as an important component. The Forum previously supported the development of important resources (e.g. the NorWeST Stream Temperature Database in 2015) needed to help develop this input. Forum members from USFWS and the Pacific States Marine Fisheries Commission (PSMFC) continued to develop possible approaches and datasets to incorporate into the layer in Phase 2 of the tool.

- **Improving Data in the California Passage Assessment Database (PAD):** Recognizing the importance of the PAD as a key data input to *FISHPass* (as well as for other efforts in support of fish passage in California), in 2020, the Forum embarked on a collaborative multi-year QA/QC effort to update the information in the PAD. Led by the PAD Manager and the Forum's Science & Data Committee, this effort will include updates to the PAD Methodology and Data Standards, reviews of barriers and assessments by geographic region, and the engagement of local fish passage practitioners to verify information collected with their local knowledge. Implementation of this effort is expected to extend through 2022.

- **Barriers to Tidal Connectivity:** In FY19, the Forum received Multi-State Conservation Grant (MSCG) program funding to implement the Barriers to Tidal Connectivity project in collaboration with the Pacific Marine and Estuarine Fish Habitat Partnership (PMEP), and the Pacific Lamprey Conservation Initiative (PLCI). This project:
  - Identifies documented restrictions to tidal connectivity in U.S. West Coast estuaries;
  - Provides data mining to build data management relationships across the region and compiles a list of data sources that identify locations of passage/connectivity sites;
  - Conducts a data gap analysis by identifying locations where data and information are lacking;

- Explores spatial analysis methods to improve identification of inland areas behind identified barriers, structures and passage restrictions;
- Hosts a summit to identify gaps and technical (science and data) information needed to address ways to reduce passage restrictions as well as share tools and products developed.

In 2019 the coordinators of the three FHPs established an inter-FHP working group to help guide the project, consisting of representatives from all three partnerships. Work to compile existing data on tidal connectivity issues also began by PSMFC and USFWS. In 2020 the project was forced to pivot due to restrictions related to COVID-19 as hosting an in-person summit was not possible. The Inter-FHP Working Group decided instead to hold a virtual Symposium in late October 2020. The event was open to the public, and preceded an initiation-only follow-up Workshop for key members and stakeholders from each of the participating FHPs. The Symposium had more than 300 attendees from across the country, and the Workshop built off the presentations given at the Symposium, and other work done throughout this effort to explore issues surrounding tidal connectivity issues along the US West Coast, identify common science and data gaps, and begin to discuss possible next steps.

The project will continue into 2021 as the outcomes from the workshop are synthesized and presented to each FHP to identify mutual paths forward. Planned activities include the development of a data hub of resources developed throughout this project, a literature search resulting in a white paper exploring barriers to tidal connectivity for native lamprey species, and a final report synthesizing the overarching effort.

- **Effectiveness Monitoring:** In an effort to collect more comprehensive information on post-implementation/project completion monitoring and evaluation, in 2020 the Forum's Science & Data Committee revisited and updated the NOAA Tier 1 Monitoring Worksheet. The Forum used this new version, rebranded as the California Fish Passage Forum's Fish Passage Barrier Removal Performance Measures & Monitoring Worksheet, in outreach to effort to Forum-funded projects to gather information on monitoring efforts following project completion. This effort will be expanded beyond Forum-funded projects in 2021.

Forum-Funded On-the-Ground Restoration and Assessment Projects

- In 2018, the Forum provided funding for four projects: Cooper Mill Fish Passage Improvement Project Design, Davey Brown & Munch Creek Fish Passage Project, Mid Klamath Fish Passage Improvement Project, and Neefus Gulch Coho Salmon Barrier Removal Project Design at Appian Way. Three of these projects (Cooper Mill, Davey Brown & Munch Creek, and Neefus Gulch) generated designs for remediation or removal of barriers to fish passage in key watersheds across California. The Forum's contribution to the Mid Klamath Fish Passage Improvement Project builds on nearly two decades of collaborative assessments and treatment of barriers in the Mid Klamath Subbasin seeking to enhance habitat connectivity, specifically at the mouths of cold water tributaries. All of these projects address anticipated impacts of climate change (increased/exacerbated flooding and limited cold water refugia), and will ultimately contribute to opening more than 13 miles of habitat for anadromous species.

- In 2019, the Forum provided funding for seven fish passage projects, as well as a two phased barrier assessment and prioritization, that addressed connectivity needs and habitat restoration for Coho salmon, Chinook salmon, steelhead, Pacific Lamprey, and other anadromous species throughout California. Funding for these projects illustrates the multi-faceted nature of restoring fish passage in California and promoting recovery and persistence of at-risk populations. These include a) traditional removal/remediation of physical barriers to fish passage (M-1 Road Fish Passage Improvement Project and Upper Noyo River Fish Passage Improvement and Sediment Reduction Project), b) an innovative and

cost-effective approach to promote Pacific Lamprey passage at the Tolowa Dee-ni' Nation's fish hatchery (Lamprey Passage at Rowdy Creek), and enhance off-channel habitat (Seiad Creek Off-Channel Connection Project), and c) multi-benefit monitoring and assessment work to remediate the concrete barriers to passage, and provide water quality data (Iron Horse Vineyards Dam Removal Project). Finally, the Lamprey Passage Design for Priority Obstacles in the Sacramento Basin Project (Phase 1 & 2) helped test and ensure that Forum developed tools (e.g. FISH*Pass* and the Fish Passage Incidental Report mobile application) address the specific needs of lamprey, and provided updated barrier status information to the PAD.

- In 2020, the Forum provided funding for five projects. These projects address connectivity needs of priority species of all life stages by testing and employing tools developed by the Forum, and remediating passage barriers to improve access to at least 42 miles of spawning and rearing habitat. These projects: a) leverage the effort the Forum has invested in FISH*Pass* to develop a list of priority barriers to remove in the Smith River watershed at varying levels of effort (Applying FISH*Pass* in the Smith River), b) address a principal threat to endangered Southern California steelhead by removing a low-flow river crossing and replacing it with a bridge (Santa Margarita River Fish Passage & Bridge Replacement Project), c) create 100% passable conditions to adult and juvenile salmonids and lamprey by retrofitting an existing structure to create a fishway through a grade control channel (Strawberry Creek at Clam Beach Fish Passage Remediation Project), d) improve fish passage for all life states of salmonids (particularly juveniles) by adding a fishway while maintaining the integrity of open flow characteristics to a weir (Montague-Grenada Weir Retrofit & Barrier Removal), e) create 100% designs for improved fish passage, diversion method, and screening, as well as outreach to landowners (West Tule Creek Diversion Fish Passage Project).

- In FY22 the Forum is recommending four projects for NFHP funding (described in further detail in Section 3 of this report) to address connectivity needs and habitat restoration for priority anadromous species in urban and rural environments. In addition to supporting the overarching coordination and operations of the Forum and its mission, projects remove barriers to fish passage while providing collaborative and outreach opportunities to key partners and stakeholders the Forum has not worked with in the past such as inter-city neighborhoods in the Bay Area. The Forum is also recommending funding for a project that will remove or remediate barriers in the Smith Coastal Plain, a region where most barriers to fish passage are located on private agricultural land. This project will serve as an opportunity to actively educate and demonstrate to other landowners and restoration practitioners in the region of ways to restore stream habitat while also serving the needs of the landowner.

  Additionally, the Forum plans to continue development of an interactive map of current fish passage projects being executed not only by the Forum, but all of its signatory agencies. The Forum is also seeking funding to support the following efforts and activities to address key priorities including: evaluating the efficacy of certain fish passage structures, empowering local groups/field crews to address regional unmet fish passage needs, and leading rapid response to wildland fire impacts relating to native trout protection and fish passage.

Section 2: Not required for FY22 project submittal

Section 3: Work Plan (1-Year Planning Horizon)

Complete attached excel spreadsheet adding rows for additional projects as needed. This table should include all proposed projects for which you are seeking FY22 NFHP project funds, including FHP operational funds.

You will be asked in the spreadsheet to indicate your FHP has evaluated the extent to which each fish habitat conservation project addresses the following elements as described in the America's Conservation Enhancement (ACE) Act:

- Fulfills a local or regional priority that is directly linked to the strategic plan of the Partnership
- Address the national priorities of the Board
- Is supported by the findings of the habitat assessment of the Partnership or the Board and aligns with or is compatible with other conservation plans
- Identifies appropriate monitoring and evaluation measures and criteria
- Provides well defined budget linked to deliverables and outcomes
- Address the causes and process behind the decline of fish populations or fish habitats
- Includes a local or regional outreach or educational component
- Will increase fish populations in a manner that leads to recreational fishing opportunities for the public.
- Increases public access to land or water for fish and wildlife dependent recreation
- Advances the conservation of Species of Greatest Conservation Need (SGCN) as designated by State agencies
- Advances the conservation of fish and fish habitat under Magnuson Act
- Promotes healthy fish habitats so that desired biological communities are able to persist and adapt
- Requirement for Evaluation – No project may be recommended by the Board unless it includes an evaluation plan designed using applicable Board guidance –

In recognition of the requirement to meet the May 17, 2021 deadline for submission of FY22 projects that meet the requirements of the ACE Act, the Fish Habitat Partnerships have compiled the list below of *new requirements* for projects and the information needed to verify compliance with these new requirements. The requirements and information needs identified below are the Fish Habitat Partnership coordinators' best attempt at identifying these new requirements and information needs, in order to support fish habitat conservation project grant processes, promote consistency, and meet the requirements of the ACE Act. These have not been deliberated upon or approved by the National Fish Habitat Partnership Board, and as such are intended to serve only as informal guidance to support the Fish Habitat Partnerships. The Fish Habitat Partnerships recognize that additional information may be requested of project applicants as the National Fish Habitat Board develops guidance for project solicitation, submission, review, and funding allocation.

1) NFHP funds being requested must be matched 1:1 with non-federal funds. Non-federal match can include cash and/or in-kind labor, materials, equipment if there are no federal ties to those funds. State agency funds can be used for the nonfederal match if labor and/or materials are not being charged to another federal grant. State agency funds that are used to match other federal grants would not be eligible as match. Once the grant funds are matched with non-federal funds/in-kind, an unlimited amount of federal contributions to the project are allowed.

2) Monitoring and evaluation plans and measures need to be included as part of each project proposal.

3) Projects are encouraged to include an outreach or education component that includes the local or regional community.

4) Improvements in public access as a component of the project are encouraged and should be tracked.

7. Strategic Implementation

Percentage of projects that include measurable goals and objectives to address:

- *FHP priority species or priority areas; and/or*
- *Species of Greatest Conservation Need (SGCN)*

Choose one, complete the table below, and provide narrative responses describing the measurable goals & objectives (max. 1,000 characters). Example narrative is provided in the Appendix.

☐ 75%
☐ 85%
X 95%
☐ Less than 75%

Complete table adding rows for additional projects as needed.

Project Title	Identify FHP Priority Species / Area	Identify Species of Greatest Conservation Need
#1 - CFPF Coordination & Operational Support	This project consists of the coordination and operational activities supporting the Forum's work to improve fish passage for anadromous species and other aquatic organisms across California.	All anadromous salmonid species, Pacific Lamprey, and other aquatic organisms and their habitats in California.
#1 - Lower Stotenburg Creek Fish Passage Project	Southern Oregon/Northern California Coho salmon (*Oncorhynchus kisutch)*, Chinook salmon (*Oncorhynchus tshawytscha)*, Northern California steelhead trout (*Oncorhynchus mykiss irideus)*, Pacific Lamprey (*Entosphenus tridentatus)*, Coastal cutthroat trout (*Oncorhynchus clarkii clarkii)*	Southern Oregon/Northern California Coho salmon (*Oncorhynchus kisutch)*, Chinook salmon (*Oncorhynchus tshawytscha)*, Northern California steelhead trout (*Oncorhynchus mykiss irideus)*, Pacific Lamprey (*Entosphenus tridentatus)*, Coastal cutthroat trout (*Oncorhynchus clarkii clarkii)*
#2 - Wildcat Creek Fish Passage & Community Engagement Project – Phase 2	Central California Coast steelhead trout (*Oncorhynchus mykiss irideus)*, Threespine stickleback (*Gasterosteus aculeatus williamsoni)*	Central California Coast Steelhead trout (*Oncorhynchus mykiss irideus)*, Threespine stickleback (*Gasterosteus aculeatus williamsoni)*
#3 - Hosie Low Water Crossing	Chinook salmon – Central Valley spring run ESU (*Oncorhynchus tshawytscha)* and California Central Valley (CCV) steelhead (*Oncorhynchus mykiss irideus)*	Chinook salmon – Central Valley spring run ESU (*Oncorhynchus tshawytscha)* and California Central Valley (CCV) steelhead (*Oncorhynchus mykiss irideus)*
#4 – CFPF Data Stewardship & GIS Support	This project consists of data stewardship and GIS support activities supporting the Forum's work to improve fish passage for anadromous species and other aquatic organisms across California.	All anadromous salmonid species, Pacific Lamprey, and other aquatic organisms and their habitats in California.

Enter narrative responses below for each project (max. 1000 characters/project)

#1 – CFPF Coordination & Operational Support

This project consists of coordination and operational activities to support the Forum's various activities and initiatives in support of its goal to restore connectivity of freshwater habitats throughout the historic range of anadromous fish in California. Activities include coordinating and participating in the Forum's Science & Data, Governance, and Policy & Permitting committees, as well as leading the Education & Outreach Committee. Planning and facilitating Forum Steering Committee meetings, and overseeing the creation and distribution of outreach materials relating to the importance of fish passage barrier removal including but not limiting the Forum's website, and barrier case studies. This project also manages and coordinates the Forum's annual funding solicitation process (development of the request for proposals (RFP), evaluation criteria, facilitating project selection, and collection of triannial progress reports from funded projects). This project supports all of the Forum's goals in its strategic framework, and targets all of the Forum's priority species and areas, as well as Species of Greatest Conservation Need.

#1 – Lower Stotenburg Creek Fish Passage Project

This project will remediate all barriers (four) to fish passage along 0.5 miles of Lower Stotenburg Creek. By improving the connection of Lower Stotenburg Creek to the mainstem Smith River through the removal or replacement of these four stream crossings, 0.7 stream miles and 9.17 acres of habitat will be restored increasing habitat complexity and improving a native riparian corridor. Most barriers in the Smith Coastal Plain are on private agricultural land, the removal of these four barriers as part of this project will serve as a site to educate other landowners and restoration practitioners for ways to restore stream habitat while also serving the needs of the landowner. This project supports goal 1 in the Forum's strategic framework, and targets Southern Oregon/Northern California Coho salmon (*Oncorhynchus kisutch)*, Chinook salmon (*Oncorhynchus tshawytscha)*, Northern California steelhead trout (*Oncorhynchus mykiss irideus)*, Pacific Lamprey (*Entosphenus tridentatus)*, Coastal cutthroat trout (*Oncorhynchus clarkii clarkii)* all FHP and Species of Greatest Conservation Need.

#2 – Wildcat Creek Fish Passage & Community Engagement Project

The primary goal of the overall project is to replace a failed fish passage facility resulting in the restoration of 1.125 of stream miles and 13 acres of habitat. This project will develop final design drawings for the fish passage facility replacement and obtain the permits necessary to reevaluate the Corps/NHC design to enable the project to move forward. The California Department of Water Resources supports the project and has committed the remaining funding needed for 100% designs. The project includes community outreach to raise awareness of creek ecology and fish passage restoration. Outreach deliverables will include K-12 educational programing, development of a children's book, community facing web page, and presentations at community meetings. This project supports goals 1, 2, 3, and 7 in the Forum's strategic framework, and targets Central California Coast steelhead trout (*Oncorhynchus mykiss irideus)*, and Threespine stickleback (*Gasterosteus aculeatus williamsoni)* both FHP and Species of Greatest Conservation Need.

#3 – Hosie Low Water Crossing

This project will replace the Hosie Low Water Crossing will be replaced from a road to box culverts and a road crossing to allow passage of water under the site with lower velocities. Replacing this crossing with box culverts will allow for passage of water under the crossing with lower velocities thereby lessening the barrier for the fish populations at high and low flows. The project will improve habitat, natural production, and viability of native fish populations in the lower San Joaquin River watershed on the Mormon Slough. Stockton East Water District (project lead and implementer) is working with the California Department of Water Resources (project partner and funding provider) has prepared presentations and workshops. This project supports goals 1, 5, and 7 in the

Forum's strategic framework, and targets Chinook salmon – Central Valley spring run ESU (*Oncorhynchus tshawytscha)* and California Central Valley (CCV) steelhead (*Oncorhynchus mykiss irideus)* both FHP and Species of Greatest Conservation Need.

#4 – CFPF Data Stewardship & GIS Support

The California Fish Passage Forum has developed a number of GIS processes and datasets that are instrumental to the mission of the partnership. This project will include maintenance and updates to core data layers used by the Forum and routines to assign value-added-attributes to the California Passage Assessment Database (PAD) in preparation for use with the FISH*Pass* application. FISH*Pass* is a decision support tool, developed by the Forum, which uses an optimization model to help identify anadromous fish passage barriers for remediation. This project supports goals 1, 2, 3, 5, and 7 and targets all of the Forum's priority species and areas, as well as Species of Greatest Conservation Need.

8. Conservation Actions and Project Outcomes

Percentage of proposed projects with specific conservation actions that will produce desired conservation outcomes and achieve project goals and objectives?

Choose one and provide narrative responses below.

- ☐ 50%
- ☐ 75%
- X 100%
- ☐ Less than 50%

Narrative responses (max. 1000 characters/project)

#1 – CFPF Coordination & Operational Support

This project consists of the coordination and operational activities to support the Forum's various activities and initiatives in support of its mission to protect and revitalize anadromous fish populations by restoring connectivity of freshwater habitats throughout the historic range of anadromous fish in California. To support this mission, the Forum will continue promoting collaboration among public and private sectors for fish passage improvement projects and programs. This will be done through the facilitation and coordination of the Forum's various Committees (Governance, Science & Data, Education & Outreach, and Policy & Permitting) and Steering Committee meetings (both in-person and virtually). The Forum provides targeted funding towards fish passage projects in California, and this project will coordinate the annual funding solicitation and continued support and outreach to funded projects to ensure project completion in alignment of the goals of the Forum, USFWS and NFHP.

#1 – Lower Stotenburg Creek Fish Passage Project

Lower Stotenburg Creek is a small Smith River Plain tributary, with a watershed area of 452 acres, and shown to provide important non-natal winter rearing habitat for juvenile Coho salmon (Parish and Garwood 2015 & 2016). Treating the four barriers on Lower Stotenburg Creek will reduce the number of stream crossings, decrease flow velocities throughout the project reach, inundate and create additional winter rearing habitat, and reduce the potential for stranding as the stream dries in the spring. This project will aid in the recovery of Coho salmon in the Smith River by increasing habitat complexity, improving fish passage, and extending migration timing and survival for juvenile rearing in Stotenburg Creek. The project addresses NFHP National Conservation Strategies 2 and 3, as well as USFWS Climate Change Strategies 3.2, 3.3, and 3.5.

#2 – Wildcat Creek Fish Passage & Community Engagement Project – Phase 2

The primary goal of the overall project is to replace a failed fish passage facility constructed in the mid 1990's by the Army Corps of Engineers, the most downstream of three significant barriers to Central California Coast Steelhead migration in Lower Wildcat Creek. The project will help reconnect the headwaters of Wildcat Creek with San Francisco Bay, providing additional spawning and rearing habitat for steelhead and other anadromous fish, and potentially restoring steelhead in the creek. Community outreach and education is a critical element in the success of this project. The project site is in a disadvantaged community that is currently involved in a stream trail enhancement effort and near an elementary school that could benefit from a nearby restoration effort. The project addresses NFHP National Conservation Strategies 2 and 3, as well as USFWS Climate Change Strategies 3.1, 3.2, and 3.5.

#3 – Hosie Low Water Crossing

The Hosie Low Water Crossing is currently a partial barrier to juveniles (unimpaired passage ~30% of the time during migration period), and adult salmonids (steelhead have unimpaired passage ~16% and Chinook ~5% of the time during their migration periods). Replacing this low water crossing with box culverts and a road crossing will improve habitat, natural production, and viability of native fish populations in the San Joaquin River watershed on the Mormon Slough. The replacement will allow for passage of water under the crossing with lower velocities thereby lessening the barrier for fish at high and low flows. This project will also help mitigate against the impacts of climate change. Runoff, which to date had usually consisted primarily of snow melt, will more likely the result of rain events consisting of reduced flows and limited runoff periods. By eliminating this barrier, this project will provide increase access throughout a wider range of water levels and flows. Outreach associated with this project will be led by California Department of Water Resources. This project addresses NFHP National Conservation Strategies 1 and 3, as well as USFWS Climate Change Strategies 3.2, 3.3, and 3.4.

#4 – CFPF Data Stewardship & GIS Support

This project consists of data stewardship and GIS activities to support the Forum's various activities and initiatives in support of its mission to protect and revitalize anadromous fish populations by restoring connectivity of freshwater habitats throughout the historic range of anadromous fish in California. To support this mission, this project will include maintenance and updates of the core data layers used by the Forum and routines to assign value-added-attributes to the California Passage Assessment Database (PAD) in preparation for use with FISH*Pass* application. FISH*Pass* is a decision support tool, developed by the Forum, which uses an optimization model to help identify anadromous fish passage barriers for remediation. FISH*Pass* and the PAD are important tools used by restoration practitioners, fish passage experts, biologists, engineers and others to inform decisions and conservation actions in support of improving fish passage in California. This project supports the goals of the Forum, and addresses NFHP National Conservation Strategies 1, 2, 3, and 4, as well as USFWS Climate Change Strategies 3.1, 3.2, and 3.3.

Supplemental Guidance for Selected Performance Criterion

Brief project summary for each prioritized project (examples included below)

In Section 3, FHPs must present the suite of ranked projects proposed for FWS NFHP project funding in the current fiscal year and describe how these projects demonstrate strategic use of NFHP project funds and will achieve desired conservation outcomes. Example narrative is provided below for criteria 7 and 8.

Criterion 7 - Measurable Goals & Objectives (Max. 1000 characters): This project replaces one barrier to fish passage and opens 2.8 miles of upstream habitat to juvenile Coho and Chinook salmon. The crossing has been identified as a partial barrier to juvenile salmon by the State. An estimated 8-10-foot embedded culvert will replace the existing culvert. The FHP ranked this culvert in the top 16 culverts to be replaced for fish barrier issues. The project partner and FHP members, the City of Caribou Creek and local Soil District, have expressed the need to construct this project and has funding to support the project. This project addresses Objective 4 in the FHP strategic plan. It targets interjurisdictional fish, an FWS Trust Species, and a species priority for the FHP. It is being implemented in the Anchor River watershed - a priority watershed for the FHP.

Criterion 8 - Conservation Actions & Project Outcomes (Max. 1000 characters)**:** Barrier removal will make 2.8 miles of upstream habitat accessible for chinook and coho salmon. The project will be designed using stream simulation standards/techniques, proven techniques to accommodate fish and other aquatic species. The project partner has an established fish passage program and has considerable capacity to implement the project and achieve project goals. The state fish and game agency will evaluate juvenile use of the reopened habitat pursuant to the state's fish passage monitoring plan.