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January 18, 2018

Mr. Len Materman, Executive Director
San Francisquito Creek Joint Powers Authority
615 B Menlo Avenue
Menlo Park, CA 94025
Email: len@sfcjpa.org

Subject: Alternatives for the San Francisquito Creek Flood Risk Management Phase 2 Project, Interstate 101 to Middlefield Road, San Mateo and Santa Clara Counties

Dear Mr. Materman:

This letter offers our appreciation of the San Francisquito Creek Joint Power Authority's (JPA's) two public outreach meetings and field trip, conducted in October, for the subject project (Project). One purpose of those meetings was to solicit input from community members for project alternatives to be analyzed in the Project's draft environmental impact report (DEIR). This letter provides additional input on Project planning, with the goal of ensuring Project design and regulatory approvals can proceed smoothly. We would emphasize that close coordination between Stanford University (Stanford) and the JPA is critical to ensure that the planning and management efforts for all projects involving the Creek are coordinated and that all efforts, assessments, tools, and goals are integrated across the watershed. This should help ensure design and implementation of a Project that most efficiently and effectively addresses flood management and stream stewardship goals over the long term.

More specifically, we will look to the JPA to consider the following as a part of Project design and permitting:

1. The discharge of additional sediment loads from Searsville Dam to the Creek are imminent and must be included in the DEIR's cumulative impacts analysis;

2. Stanford has developed a sediment transport model that is available for the JPA to use in developing Project alternatives. We urge the JPA to appropriately incorporate this tool into its Project design process;

3. We urge the JPA to use the Goals and Objectives developed collaboratively by Stanford, the resource agencies, and the Water Board in 2015 (attached), in developing the Project alternatives. We plan to use the Goals and Objectives for projects throughout the watershed; and

4. We encourage the JPA to continue additional community engagement with meetings with State legislators and other local decision-makers, community stakeholders, and agencies.

Water Board staff participated in the public meetings on October 4 and 25, 2017. Representatives from Stanford were not present. However, Stanford's participation is crucial because Stanford is developing a project at Searsville Dam (Dam) that will result in increased sediment loads downstream. The Dam has trapped naturally-occurring annual sediment loads since 1892, and the reservoir behind the dam is now substantially filled with sediment. The Stanford University Steering Committee, in its April 2015 recommendations, determined that ongoing dredging to keep the reservoir from filling with sediment is not a desirable long-term management action. Instead, the committee recommended an approach that will allow the natural annual sediment loads to flow downstream. In addition, Stanford is under a court order[1] to prepare and file completed applications for regulatory authorizations to implement the Searsville Alternatives Study Recommendations; that is, to modify or remove the Dam and reservoir to address sediment management and flood risk and to provide passive fish passage to and from the upper San Francisquito Creek watershed. Furthermore, such modifications are to occur "as expeditiously as practicable"[2] so that annual sediment loads originating from the watershed upstream of the Dam can flow unimpaired into the downstream channel. This means that regardless of the alternative chosen for the Dam, sediment loads delivered to the Project reach will be higher in the near future. To ensure that the Project design appropriately addresses the reasonably foreseeable sediment flows, the JPA must consider this imminent change and the increased sediment loads in the cumulative impacts analysis for the Project DEIR. Reach. In addition, the JPA must also anticipate and plan for sedimentation and associated maintenance activities in the DEIR's alternatives analysis.

Following issuance of the recommendations, Stanford initiated a collaborative process, in fall 2015, with the Water Board and the resource agencies, including the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife CDFW, and the U.S. Army Corps of Engineers (Corps). This process solicited input for dam modification alternatives and required studies for permit applications. As part of these efforts, the agencies—with input from Stanford—developed a set of goals and objectives for the Searsville Dam and Reservoir project (see attached). The Goals and Objectives document reflects the consensus of the participating regulatory agencies and lays out the criteria the agencies would apply to any project proposals and permits in the entire San Francisquito Creek watershed, including the Project. Accordingly, we expect the Goals and Objectives to help guide development of the DEIR's alternatives, and we plan to use this guidance for context in our review of the DEIR.

As part of the collaborative process, Stanford has been regularly updating the resource agencies on the development of alternatives for the Dam project and has presented the preliminary results of hydraulic and sediment transport studies as they are developed. Stanford's efforts include

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[1] Our Children's Earth Foundation and Ecological Rights Foundation vs. Leland Stanford Junior University. Case 3:13-cv-00402-EDL Document 231 Filed 01/25/16.

[2] Ibid., p. 2.

development of a state-of-the-art hydraulic and sediment transport model for the entire Creek. We understand that Stanford is willing to share this model with the JPA for use in the JPA's assessment of Project alternatives in the DEIR. We expect that the JPA will be able to use Stanford's hydraulic and sediment transport model to develop Project alternatives and/or will incorporate Stanford's results into its cumulative impacts analysis for accuracy, adequacy, and consistency with Stanford's Dam project, and for a holistic approach with greater potential to meet the Goals and Objectives.[3] This will also help ensure a smooth permitting process for the Project because it would help demonstrate to the permitting agencies how channel capacity and stability will change and how flows and sediment will be managed as part of the Project.

We also expect the DEIR to include Federal Emergency Management Administration flood hazard maps based on existing conditions and anticipated conditions resulting from each alternative. Currently, at least 5,000 structures are within the 100-year flood hazard zone and their owners are paying flood insurance, and we assume the JPA will track and present the effects of each alternative on the flood hazard zone. We also expect the JPA to include maps in the DEIR of where flows break out from the Creek, the estimated flow rates, and the duration of break-out flows both under existing conditions and under each alternative. These factors are relevant to the Water Board to evaluate how proposed flood Project alternatives avoid and minimize impacts to the Creek and its beneficial uses. Other stakeholders may have other concerns with respect to the FEMA map status of individual structures under post-Project conditions for each alternative.

We would also like to reiterate, and expand upon, comments we sent to the JPA in our letter of March 10, 2017, for the DEIR to integrate different strategies to provide incremental, cumulative flood protection over time as funding becomes available, including (but not limited to) the following:

- Construction of upstream detention, such as "alternative 2" in the JPA's alternatives analysis (JPA, 2009),[4] could reduce the design flow for a 100-year flow event at Middlefield Road by 14 percent, which could help alleviate the need to modify the creek channel. Other surface and underground detention options should also be included in the DEIR for additional incremental benefits as funding becomes available.
- Constructing an underground flood bypass channel could reduce the need for altering the creek channel and riparian corridor. Bypass channels should be considered on both localized and more reach-wide scales, as appropriate.
- The JPA should maximize non-structural flood damage reduction measures for short- and long-term flood risk reduction. Non-structural measures can include landscaping berms,

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[3] GEOMORPHIC (GEO) GOALS AND OBJECTIVES. GEO G1. Watershed processes (hydrologic, sediment, and wood) connected throughout the upstream, reservoir, and downstream reaches, creating a functional resilient dynamic river corridor (channel and floodplain) and hillslope throughout the reservoir reach and downstream reach.

[4] San Francisquito Creek Joint Powers Authority (JPA), 2009. *San Francisquito Creek Flood Reduction Alternatives Analysis*. Prepared by Philip Williams & Associates, Ltd. (PWA), and H.T. Harvey and Associates, 2009. PWA Ref. # 1965.00. San Francisco, CA: JPA.

portable door dams for businesses and homes, elevating structures, and inflatable and portable dams. In addition, this could entail the JPA working with local land-use agencies to develop planning policies that regulate new development in the floodplain and encourage land acquisition for flood storage, which may require eminent domain.

- We support alternatives that would remove hydraulic constrictions that cause sedimentation and the need for maintenance resulting in recurring impacts to the Creek. Any bridge replacements analyzed should be free span designs to eliminate the potential for fill impacts in creek water while avoiding visual impacts (e.g., to the non-contact water recreation beneficial use, through activities like walking, hiking, and cycling) by meeting the public's desire for aesthetically pleasing views of the Creek and bridges. To this end, we strongly urge the JPA to include renderings of each alternative in the DEIR to fully disclose such potential impacts.

We commend the JPA's commitment to public engagement for the Project, as demonstrated by the last round of meetings in October. Our suggestions here are intended to help address a variety of concerns raised by community members in those meetings, including minimizing channel erosion and scour; preserving creek habitat function and value; and providing multiple benefits to the community. We recognize that some of these options would require long-term planning, could potentially require eminent domain of personal property, and/or would temporarily disrupt typical neighborhood conditions such as traffic routes. To that end, we urge the JPA to engage with local decision-makers, including Assemblyman Berman and State Senator Hill, to provide the opportunity to fully engage stakeholders and decision-makers for this important project. A meeting at the State legislators' local offices, to be facilitated by an objective, third party, would highlight the importance of the Project in protecting the Creek's natural resources and promoting environmental sustainability. It would also help ensure that various efforts and projects in the entire watershed, including the Searsville Dam project, are coordinated and that the planning process for the Project is efficient, inclusive, and aligns with the multiple needs of the community and agency stakeholders.

Please contact Susan Glendening at (510) 622-2462 or Susan.Glendening@Waterboards.ca.gov or Setenay Bozkurt-Frucht at (510) 622-2388 or Setenay.Frucht@Waterboards.ca.gov if you have any questions.

Sincerely,

Bruce Wolfe

Digitally signed by Bruce H. Wolfe
Date: 2018.01.18 18:21:53 -08'00'

Bruce H. Wolfe
Executive Officer

Enc. Stanford's Searsville Project, Resource Agencies' Goals and Objectives

Cc: *JPA Board members*

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Stanford's Searsville Project
Resource Agencies' Goals and Objectives

INTRODUCTION:

Federal and state resource agencies have developed the following goals and objectives to complement and build on the goals and objectives that were produced by the Stanford University's Searsville Alternative Study Steering Committee to guide the development of recommendations for modifications at Searsville Dam and Reservoir. The agencies recognize and respect the full range of goals that the Steering Committee identified in the Searsville Alternatives Study process, including protect Jasper Ridge Biological Preserve academic mission and programs, contribute to the long-term sustainability of Stanford's water supply, enhance the ecological health of the San Francisquito Creek watershed, do not contribute to an increase in flood risk and explore opportunities to reduce flood risk, preserve cultural resources, and maintain land use flexibility ; and we only further developed the resource management goals/objectives to inform our permitting responsibilities. Some of these goals and objectives will have measurable performance standards and time frames, while others will necessarily be evaluated using less specific, but as descriptive means as possible. Ultimately, these goals and objectives will guide the development and evaluation of more definitive implementation measures. These goals and objectives are intended to supplement Stanford's proposed Searsville project and the goals and objectives developed in the Searsville Alternatives Study process, reflecting the agencies' priorities and the goals and objectives that the agencies will use to inform the development of measures (e.g., adaptive management, monitoring plans, and maintenance plans) and alternatives to be considered in the permitting and environmental process.

In coordination with Stanford, these goals and objectives have been developed collaboratively by resource agency staffs who will be directly involved in project permitting. These agencies are the U.S. Army Corps of Engineers, National Marine Fisheries Service, U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the San Francisco Bay Regional Water Quality Control Board. It is our expectation that these goals and objectives will provide a framework that will be utilized by the agencies to assess a full range of project development and implementation measures and consideration of alternatives for environmental review. We hope by communicating these goals and objectives in a transparent, proactive manner, they can be easily incorporated into future CEQA/NEPA assessments and project alternatives development, thus ensuring the production of an adequate planning and public review document.

DEFINITIONS:

Goals (G). Goals are outcome statements that define accomplishments. A goal should succinctly express the intent of a project, serving as the fixed vision to continually assess all project elements against.

Objectives (O). Objectives are statements of measurable actions that support completion of a goal within a specified time frame. However, at the time of this writing, which was relatively early in the planning and designing phase, there were some instances in which limited information restricted our ability to develop specific time frames or actions for all objectives.

Reaches. The open-water section of the current Searsville Reservoir is the reservoir reach[1], the predominantly coarse sediment deposited in the reservoir is the delta reach, the upstream reach is the riparian channel upstream from the influence of the coarse delta that is likely to be directly or indirectly impacted by the project, and the downstream reach is an incised and armored reach of San Francisquito Creek extending downstream of Searsville Dam to Alpine Road (approximately 3.5 miles in length) where coarse sediment aggradation and storage would be expected and beneficial. The urban reach extends from the downstream reach, downstream to Highway 101 through the urbanized area of the watershed. The estuary reach is an approximate 1 mile reach extending from the head of tide, at the Highway 101 crossing, to the confluence of San Francisquito Creek with San Francisco Bay (approximately 12 miles downstream of Searsville Dam).

Phases. When developing these phases, the team relied on a scope of initial alternatives presented by Stanford University which ranged from taking no action to full dam removal. We particularly focused on describing phases we anticipated would occur when implementing the more complex, long-term alternatives, such as full dam removal, or constructing an orifice in the dam. Therefore, the phases encompass a wide range of activities and describe the full suite of actions that may result from implementing the range of alternatives considered. In some cases, only a subset of the phases listed below will be relevant to an alternative. For instance, Phase 3 would not be relevant to an alternative proposing to build a fish ladder over the dam with little to no release of stored sediment downstream since Phase 3 describes an equilibrium state that would occur following a large scale sediment transport event.

Phase 0 includes pre-construction and technical assistance activities. It begins with initiation of discussions with the resource agencies and other stakeholders and ends when construction (or removal) activities begin (i.e., Phase 1).

Phase 1 includes all site preparation and construction/excavation/demolition activities with direct, short-term (one construction season) impacts to resources. Phase 1 could extend for several years in situations where multiple construction seasons are required to complete the project activities.

Phase 2 entails the short-term, high-impact period resulting from initial large-scale sediment transport events associated with alternatives where sediment stored in the reservoir and delta reaches will be released to downstream reaches. Initial aggradation of sediment in the downstream and reservoir reaches will also occur during Phase 2, but will not have reached an equilibrium yet. Phase 2 is not anticipated to last longer than 1 winter.

Phase 3 begins with the passing of the Phase 2 maximum disturbance event. It is the onset of the relaxation signal toward a new dynamic equilibrium that begins after the high intensity impacts of Phase 2 have passed and substantial ecosystem benefits begin to accrue. Phase 3 could be defined as not to extend beyond a few 5-year flow events, or other recurrence interval. Monitoring and adaptive management actions will occur during this phase and will be incorporated into a long-term management and monitoring plan that will be developed in collaboration with the agencies and Stanford by the end of Phase 3.

Phase 4 begins after Phase 3, when conditions in the project area have reached an equilibrium. Implementation of the long-term management plan, adaptive management actions, and long-term monitoring will occur during this phase. Resource agency involvement will be much less frequent during this phase.

[1] In some goals and objectives, Upper and Middle lakes are specifically mentioned.

PERMITTING (PER) GOALS AND OBJECTIVES

PER G1. A coordinated environmental review and permitting process among all agencies.

PER O1. A commitment by the federal and state resources agencies to resolve perceived conflicts among different resources.

PER O2. A commitment by the federal and state resources agencies to timely and coordinated facilitation of the permit process for modification of Searsville Dam and Reservoir.

PER O3. The development of one coordinated CEQA/NEPA document to present all relevant information needed for the review of project impacts (i.e., avoid generating multiple documents with conflicting information or objectives).

PER O4. A coordinated approach to project mitigation across the different agency missions. Mitigation will be based in part on adequate existing resources assessments. The resource agencies' priority is to facilitate a project which enhances all physical processes, ecosystem, and habitat types, thereby addressing project impacts to existing resources through ecosystem restoration achieved by the project.

GEOMORPHIC (GEO) GOALS AND OBJECTIVES

GEO G1. Watershed processes (hydrologic, sediment, and wood) connected throughout the upstream, reservoir, and downstream reaches, creating a functional resilient dynamic river corridor (channel and floodplain) and hillslope throughout the reservoir reach and downstream reach.

GEO O1. During Phases 2-4, allow coarse sediment erosion in the reservoir deposits, and deposition and sorting processes in the reservoir reach to establish a quasi-stable channel.

GEO O2. During Phases 2-4, allow coarse sediment deposition processes (including the interaction of sediment with large wood resources (see HAB O6) in the reservoir and downstream reaches to restore complex sorted bars, riffles, and inset floodplains.

GEO G2. Functional fine sediment processes in targeted areas to support habitats (see Habitat Goals and Objectives) and marsh replenishment and growth.

GEO O3. Implement actions to promote Phase 2-4 outcomes that will support habitats (see Habitat Goals and Objectives) and marsh replenishment. Additional information and analysis is needed to identify desirable Phase 2-4 outcomes.

HABITAT (HAB) GOALS AND OBJECTIVES

HAB G1. A diverse and dynamic community of native woody and herbaceous species in the upstream, delta, reservoir, and downstream reaches. The vision is not an end result mature forest, but a successional trajectory of native species.

HAB O1. During Phases 1 and 2, minimize occurrences of invasive species within the upstream, delta, reservoir, and active project areas in the downstream reaches to Alpine Road, with the ideal being no more than 10 percent cover of invasive species rated as moderate or high in the California Invasive Plant Council Inventory Database (http://cal-ipc.org/). In Phases 3 and 4, establish appropriate upper limits for acceptable percent coverage by invasive species in active project areas. Management goals for percent cover by invasive species should be consistent with invasive species cover at appropriate reference sites in the watershed, but may be set lower for highly invasive species that are not yet well established in the watershed.

HAB O2. During Phases 2 and 3, allow processes to form a new channel system through the delta and reservoir deposits with new slope, terrace, floodplain, and bar features with hydrology and soils appropriate for the natural colonization of native species and succession of woody species. Also, exploit disturbance events that drop the base level of reservoir deposits through the erosion of stored sediment, so new sediment deposits that support vegetation in the reservoir and downstream reaches can be formed by the processes of erosion and deposition.

HAB O3. By the end of Phase 3, achieve native vegetation establishment along the newly exposed slopes within the upstream and reservoir reach.

HAB O4. During Phase 4, achieve dynamically stable floodplain, terrace, and bench features with suitable native vegetation cover and in equilibrium with the site hydrology and sediment load within the reservoir reach (from valley wall to valley wall).

HAB O5. During Phase 4, achieve a diverse and functional riparian corridor with appropriate native shrub and tree species within the upstream, delta, reservoir, and downstream reaches that provides: breeding cover and foraging habitat for migratory songbirds, raptors, mammals (including bats), reptiles, amphibians, fish, invertebrates, and other native flora and fauna. Examples of target habitat features and their benefits include overhanging vegetation at the toe of channel banks for fish refuge, shade on the active channel to maintain cool water temperatures, and dynamically stable banks to prevent high rates of suspended sediments in the water column.

HAB G2. A dynamic palette of multi-elevation dynamically stable habitats spanning the range from aquatic fluvial channel to upland ridges throughout the delta, reservoir, and downstream reaches.

HAB O6. During Phases 2-4, promote the interaction of wood resources (the delta forest and wetland) with sediment transport and sorting processes to create complex habitat.

HAB O7. By the end of Phase 3, achieve channel dimensions in the reservoir and delta reaches similar to upstream and downstream reference reaches[2] (within 30% of reference width, depth, and slope).

HAB O8. By the end of Phase 3, achieve dynamically stable riffle/pool channel conditions in the downstream and reservoir reaches that are similar to reference reaches.

HAB O9. By the end of Phase 3, achieve alcove backwaters on the downstream sides of gravel bars/floodplains that could serve as habitat for California Red-Legged Frog (CRLF), Western Pond Turtle (WPT), and Central California Coast (CCC) steelhead.

HAB G3. Habitat suitable for CRLF, that will also consequently benefit WPT and other species (including bats and birds) present throughout the upstream, delta, reservoir, and downstream reaches.

HAB O10. Following Phases 1 or 2, depending on the nature of the alternative, configure open water areas to be free of bullfrogs. Remove bullfrogs by eliminating or managing breeding habitat characteristics (perennial open water) and/or removing and dispatching non-native individuals.

HAB O11. During Phases 3 and 4, enhance CRLF habitat connectivity between the upper reaches (upstream, delta, and reservoir reaches) and the downstream reach such that frogs could move between breeding, non-breeding, and migratory habitats.

HAB G4. Habitat suitable for all freshwater lifestages of steelhead in the upstream, delta, reservoir, and downstream reaches.

[2] Reference reaches need to be identified, quantified, and agreed upon prior to project implementation.

HAB O12. During Phases 1-3, enhance steelhead habitat within the project area by exploiting natural processes of sediment transport, restoring hydrologic connectivity between the upstream and downstream reaches, and expanding habitat accessible to all freshwater lifestages of steelhead in the delta, reservoir, and upstream reaches (*i.e.*, removal or modification of passage barriers between reaches).

HYDROLOGY (HYD) GOAL AND OBJECTIVE

HYD G1. A variable hydrograph that includes peak and pulsing flows**,** and hyporheic flow, benefitting habitat, water quality, and groundwater recharge.

HYD O1. Following Phase 2, restore the naturally occurring seasonally variable hydrologic connectivity between upstream and downstream reaches.

SPECIES (SPP) GOALS AND OBJECTIVES

SPP G1. A self-sustaining anadromous steelhead population and a self-sustaining community/assemblage of other native fish species throughout the delta, reservoir, upstream, and downstream reaches, as appropriate for the elevation and stream gradient.

SPP O1. Following Phase 2, attain safe, timely, and effective passage of adults and juvenile steelhead (upstream and downstream) at key migration periods, and year round where streamflow conditions allow.

SPP G2. Protect existing steelhead

SPP O2. During Phase 0, obtain and utilize baseline steelhead population data to inform population impact analyses and avoidance and mitigation measures (short-term and long-term).

SPP O3. During Phases 1-3, avoid and minimize harm to steelhead through the implementation of avoidance and minimization measures. Negative disturbance to steelhead and other fish species from construction related increases in TSS and temporarily unstable habitats (e.g., eroding banks) should be minimal. Habitat goals should begin to be realized (see Habitat Goals and Objectives).

SPP G3. Protect existing CRLF and WPT

SPP O4. During Phase 0, within the anticipated project areas, obtain and utilize baseline CRLF and WPT population data to inform population impact analyses and avoidance and mitigation measures (short-term and long-term).

SPP O5. During Phases 1-4, avoid and minimize harm to CRLF and WPT through the implementation of avoidance and minimization measures. Habitat goals should begin to be realized (see Habitat Goals and Objectives).

PERMANENT ENGINEERED FACILITIES (ENG) GOALS AND OBJECTIVES

ENG G1. Fish passage that provides long-term volitional fish passage when hydrologic conditions allow between the downstream, delta, reservoir, and upstream reaches within the active project areas for all freshwater life stages of steelhead, as well as transport of sediment and wood.

ENG O1. Any instream facilities to provide passage are consistent with NMFS/CDFW stream crossing and fish screen guidelines and criteria (i.e., the active channel method or stream simulation method is preferred over maintenance-requiring hydraulically designed passage structures).

ENG O2. Instream facilities are designed to be durable, self-sustaining, require minimal maintenance (as delineated in project's maintenance manual), and have design lifespans consistent with the permitted requirements of regulatory authorities (e.g. DSOD, Corps, and County).