United States Department of the Interior

NATIONAL PARK SERVICE
Point Reyes National Seashore
Point Reyes, California 94956

IN REPLY REFER TO:

L7617

JUN 30 2016

Dear Interested Party:

In accordance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) is beginning the preparation of an Environmental Assessment (EA) for Phase I and Phase II of a Winter Habitat and Floodplain Enhancement Project on Lagunitas Creek. The project is proposed by the Marin Municipal Water District (the district/MMWD) as part of the district's efforts to improve habitat for coho salmon and steelhead, both federally listed species under the Endangered Species Act. A further description of the proposed enhancement project is included with this letter.

The project was originally divided into two staggered phases, based on funding initially being only available for Phase I. A month-long scoping period was completed for Phase I on January 11, 2016. However, more recently, the funding for implementation of Phase II has also been secured by the district. Therefore, Phase I and II will now be assessed for environmental effects as a single project though it would be implemented in two phases.

The proposed locations for habitat enhancement are within NPS lands in western Marin County administered by Point Reyes National Seashore and are shown on Figure 2 included with this letter. As such, the proposed project requires NPS approval through a public NEPA planning process. Compliance with the California Environmental Quality Act has already been completed by the funding agency, the California Department of Fish and Wildlife (CDFW), through the 2015 (Phase I) and 2016 (Phase II) Mitigated Negative Declarations for projects funded under the CDFW's Fisheries Restoration Grant Program.

Scoping is the first step to of involve the public in the NEPA process. Its objective is to engage agencies, organizations and the public early in the EA development process and receive input on the proposed action, environmental issues that should be addressed in the EA, potential project alternatives, and sources of data that should be considered. Scoping allows agency and public concerns to be identified early and helps focus the analysis on important issues.
If you previously submitted comments during the scoping period for the Phase I project EA earlier this year, those comments will be carried forward to this scoping process and considered in the development of the scope of this EA. A summary of the comments received during scoping for the Phase I project is included as an attachment to this letter.

Scoping Questions

Below are example questions focusing on issues pertinent to the scoping process that you may consider as you are reviewing the attached information on the proposed project.

- What issues or potential effects of the proposed action should be considered?
- Would there be short- or long-term impacts to park visitors as a result of this action?
- What alternatives to the proposed action should be considered?

A "Summary of Scoping Comments Received" from the previous scoping period for the Phase I EA is included with this letter and may be helpful in developing your scoping comments.

How to Comment

The 30-day comment period will close at 5:00 pm on August 3, 2016. You are encouraged to participate by submitting comments online or by letter. The preferred method for submitting comments is via the internet through the NPS Planning, Environment, and Public Comment (PEPC) site at http://parkplanning.nps.gov/lagunitas. Click on the "Open for Comment" link to comment. You may also mail or hand deliver comments to "Lagunitas EA c/o Superintendent, Point Reyes National Seashore, 1 Bear Valley Road, Point Reyes Station, CA 94956".
Comments will not be accepted by FAX, email, or in any other way than those specified above. Bulk comments in any format (hard copy or electronic) submitted on behalf of others will not be accepted. Before including your address, phone number, email address or other personal identifying information in your comment, you should be aware that your entire comment - including your personal identifying information- may be made publically available at any time. While you can ask us in your comment that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.

Project Timeline

- August 3, 2016: Public Scoping End Period
- Fall 2016: Release EA for public review and comment
- Winter 2017: Planning process complete
- Summer/Fall 2017 and 2018: Construction (Phase I – 2017; Phase II - 2018)

If you have any questions regarding this process, please contact John Dell'Osso, Chief of Interpretation at 415-464-5135. We appreciate your participation in this process.

Sincerely,

Cicely A. Muldoon
Superintendent

Enclosures:

Project Summary and Maps
Summary of Comments Received by the National Park Service During Public Scoping on the Winter Habitat and Floodplain Enhancement Project Phase I EA (December 11, 2015 to January 11, 2016).

Summary of Comments Received by the National Park Service During Public Scoping on the Winter Habitat and Floodplain Enhancement Project Phase I EA (December 11, 2015 to January 11, 2016).

The following is a summary of the substantive scoping comments received by the NPS from December 11, 2015 to January 11, 2016 during the initial scoping period for the MMWD Winter Habitat and Floodplain Enhancement Project, Phase I. These scoping comments will be considered in the EA to be prepared in 2016 addressing Phases I and II of the Winter Habitat and Floodplain Enhancement Project.

- What are the flow expectations for the side channels in Lagunitas Creek? Would side channels be filled in higher than normal flows? Would channels be drained in summer?
- Compare impacts of a side channel versus dewatering during construction at the Tocaloma and McIsaac sites.
- What is the extent of the area to be restored to floodplain? What are the target elevations and water depth across the future potential floodplain?
- Where are the staging areas and access routes for construction? Address impacts to areas used as access routes.
- How would project design react to storms and other natural events? What would be the impact of storms on the proposed wood structures? What monitoring and adaptive management components would ensure project structures and channels would be rebuilt or replaced by another design if they damaged by storms?
- Describe the current channel conditions and the potential carrying capacity of the post-project channel.
- What is the process for invasive plant species control methodology during construction and restoration?
- What are the cut and fill ratios for grading? Where would materials be disposed? Would stabilization and revegetation at the disposal site be needed?
- What are the effectiveness and success criteria?
- Address changes from the project to current habitat types. Address impacts of revegetation including source of revegetation materials.
- What is the potential for flood-inducing impacts from the proposed project on upstream and downstream private property and public resources, both during average wintertime flows, but also during high-water flow events?
- What is the potential for damage to private property or public structures if logs from the restoration structures should break loose?

- What would be the effects on the hydrologic regime of Lagunitas Creek?
- Address effects on sensitive biological resources within and adjacent to Lagunitas Creek, such as California freshwater shrimp and California red-legged frog.
- Address potential impacts to water quality including mitigation and monitoring.
- Address potential impacts to soils and mitigation measures for protection of disturbed soils.
- What would be the success criteria for revegetation of disturbed areas?

Project Summary:
Proposed Lagunitas Creek Winter Habitat and Floodplain Enhancement Project - Phases I and II

Summary

The Marin Municipal Water District (district/MMWD), with support from the California Department of Fish and Wildlife (CDFW), the US Fish and Wildlife Service (USFWS), the California State Water Resources Control Board (SWRCB) and the National Park Service (NPS) proposes to stabilize and restore Lagunitas Creek salmonid[1] populations by increasing the winter carrying capacity for coho salmon and steelhead trout in Lagunitas Creek. The district proposes to increase winter carrying capacity through projects to modify hydrology and enhance and restore existing floodplain and instream habitat at a number of locations in Lagunitas Creek and Olema Creek within NPS lands managed by Point Reyes National Seashore. Originally, due to the availability of funding, the district planned to implement two staggered phases of five project sites each. However, funding has now been secured for both Phases, thus the district has combined Phases I and II, which will now be evaluated together.

Draft Project Purpose

The purpose of the proposed project is to increase the winter carrying capacity for coho salmon and steelhead in the Lagunitas Creek watershed.

Need for Action

The Lagunitas and Olema Creek watersheds are designated as critical habitat for the coho salmon (*Onchorynchus kisutch*) and steelhead trout (*O. mykiss*) listed under the Endangered Species Act as endangered and threatened, respectively, by the National Marine Fisheries Service. The creeks support populations of California freshwater shrimp (*Syncaris pacifica*) also an endangered species. Coho and steelhead are both anadromous[2] salmonids that occupy coastal California streams from parts of southern California up into Oregon. Both species have declined significantly throughout their range in California compared to historic numbers (Stillwater Sciences 2008, NMFS 2012 and 2015) with coho in central California considered to be on the verge of extinction (NMFS 2012). Lagunitas Creek represents one of the largest and most stable populations of coho salmon throughout the state. The creek also supports an

[1] Salmonid: Fishes which are members of the family Salmonidae and are elongated, bony fishes including salmon and trout.

[2] Anadromous fish are born in fresh water streams and rivers and then swim out to the ocean to mature and spend most of their adult life in the sea, returning to fresh water to spawn; examples include salmon, smelt, shad, striped bass, Pacific lamprey, and sturgeon.

important population of steelhead that is considered to be an essential population for the recovery of steelhead in central California (Stillwater Sciences 2008, NMFS 2015). In addition, Lagunitas Creek supports a robust population of the federally listed endangered California freshwater shrimp (*Syncaris pacifica*). Of the roughly 20 streams known to support California freshwater shrimp throughout its limited range of only Marin, Sonoma, and Napa Counties, Lagunitas Creek has been the highest rated stream for its abundance and distribution of shrimp (USFWS 1998).

Based on a number of regulatory mandates and policy objectives, the district has recognized that its water supply operations impact salmonid habitat and, consequently, they have a responsibility to manage and maintain aquatic resources in the Lagunitas Creek watershed for the benefit of coho salmon, steelhead, California freshwater shrimp, and other aquatic species.

Project Location

Lagunitas Creek is located in western Marin County, with a significant portion of the lower part of the creek flowing through NPS lands within the Golden Gate National Recreation Area and Point Reyes National Seashore (Figure 1). The creek stretches approximately 22 miles from its headwaters on Mt. Tamalpais to its mouth at the southern end of Tomales Bay. Olema Creek is the second largest tributary in the Lagunitas Creek watershed. Mainstem Olema Creek flows for 9 miles parallel to the Shoreline Highway 1, with a catchment area of 14.5 square miles. After Olema Creek flows into Lagunitas Creek, at its tidal estuary, the waterway turns northward and then empties into wetlands at the southeast end of Tomales Bay.

MMWD has been funded by CDFW to implement winter habitat enhancement projects at 10 sites – nine sites on Lagunitas Creek (Sites 1-8 and 10) and one site on Olema Creek (Site 9). Of the eight sites, seven are on the mainstem of Lagunitas Creek (Sites 3 – 8) and one is located on Olema Creek (Site 9). Two additional sites (Sites 1 and 2) are on California State Parks lands, within Samuel P. Taylor State Park. This NEPA review focuses on the eight sites under NPS jurisdiction that require NPS review and approval. The two sites on California State Parks land will be assessed in the forthcoming EA as part of the cumulative impact analysis.

Background

In 1953, the Peters Dam was built across Lagunitas Creek to form Kent Lake. After its construction, the Peters Dam became the upstream limit of anadromous fish migration in the main stem of Lagunitas Creek (MMWD 2011). In 1982, Peters Dam was raised by 45 feet in response to the severe drought California experienced in 1976 and 1977. The dam-raising was approved under the authority of the State Water Resources Control Board (SWRCB). Along with their decision to approve the dam raising, the SWRCB required that the MMWD conduct studies to identify impacts of the additional diversion of water from Lagunitas Creek, including

impacts on coho salmon, steelhead, and California freshwater shrimp. Studies were conducted throughout the 1980s and early 1990s.

Based on the results of the studies, and water rights hearings held between 1990 and 1995, the SWRCB issued Order WR95-17 requiring MMWD to develop and implement a ten-year sediment and riparian management plan to mitigate the impacts on the aquatic resources of Lagunitas Creek resulting from diversion. In response to the SWRCB order, MMWD developed the *Lagunitas Creek Sediment and Riparian Management Plan* in 1997, which was updated as the *Lagunitas Creek Stewardship Plan* (MMWD 2011).

Between 2006 and 2008, an analysis of the Lagunitas Creek watershed was conducted to determine which factors were limiting the breeding and rearing success of coho salmon and steelhead. These limiting factors analysis identified the availability of winter habitat as the primary limiting factor in coho and steelhead population recovery (*Lagunitas Limiting Factors Analysis*, Stillwater Sciences, 2008). Given MMWD's continuing responsibility to manage aquatic resources in Lagunitas Creek based on the stipulations of the SWRCBs order, District Policy, California Fish and Game Code, the Federal Endangered Species Act and Public Trust Doctrine, the District included assessment, restoration and enhancement of winter habitat into the 2011 Lagunitas Creek Stewardship Plan. This plan serves as the principal planning document for MMWD's management of natural resources in Lagunitas Creek.

To address overall water quality in the watershed, in 2014, the SWRCB developed the *Lagunitas Creek Watershed Fine Sediment Reduction and Habitat Enhancement Plan* and an implementing *Basin Plan Amendment;* collectively referred to as the "Lagunitas Sediment Total Daily Maximum Load (TMDL)". The TMDL identifies the maximum quantity of sediment per day that Lagunitas Creek can tolerate and remain within the established water quality standards and beneficial uses for fisheries, aquatic wildlife, aesthetics, and recreation. The goal of the TMDL is to limit and control sedimentation in the creek; support and restore coho salmon, steelhead and California freshwater shrimp populations; and protect and enhance the native fish, aquatic wildlife, aesthetics, and recreational values of Lagunitas Creek. The Plan sets out four basic strategies to achieve these goals; two of which are related to the objectives of this project: 1) reconnecting the stream channel to the floodplain to allow sediment to be trapped on the floodplain; and 2) controlling sediment within the channel with large wood structures (SWRCB 2014).

Proposed Project

The District proposes to restore and enhance natural hydrological processes and habitat within the creek at the nine sites on Lagunitas Creek and one site on Olema Creek, as shown in Figure 2. Implementation of the proposed project would promote the formation of more frequently

active high flow side channels and floodplain, features that would provide additional critical winter habitat for juvenile coho salmon and steelhead. The primary method proposed for modifying creek hydrology is the construction of large log structures in the main stream channel that would obstruct and backwater flows to raise creek water levels while deflecting flows into the existing floodplain side channels on a more frequent basis than currently occurs (which is typically only during very large storms). This approach would be implemented at project sites 1 – 9. The proposed log structures would consist of 30-35 foot long logs, with their root systems attached, stacked and placed in an upstream pointing configuration, with other logs driven vertically into the stream bed to pin and anchor the structures. Some of the structures would be placed after excavating the streambed so that the structures are imbedded into the channel; other structures would simply be placed on the streambed surface. The structures would be stabilized by placing rocks, sand and gravel from the existing stream bed over the top of the downstream half of the structure. Native vegetation would also be planted to help stabilize the log structures. In addition, habitat enhancement features, such as the clearing of vegetation and loose rack material (woody debris generated during clearing, creek-born woody debris and live willow), would be implemented along the reconnected floodplain channels in order to provide habitat structure and improve flow within the floodplain.

Habitat enhancement at Site 10 (which has also been described as the Tocaloma Floodplain site) would involve excavation of a roughly 850-foot long floodplain side channel and installation of large wood structures adjacent to the creek, deepening and reestablishing a historic and remnant side channel. Large wood structures would also be added to the excavated channel, allowing for the deepening and stability of the channel; and to provide instream forage, flow refuge, resting, and cover habitat for fish occupying the channel.

Allowing side channels to be more frequently inundated would provide additional high quality sites for coho and steelhead to successfully forage, find high flow refuge, seek cover from predators, grow and survive through the winter (Stillwater Sciences 2008). Installation of large wood structures within the main channel would provide the same habitat enhancement benefits within the main channel of the creek. Another result of the project will be to reduce the channel slope, through the project area, and spread flows across the valley floor, thus reducing the average depth of water flowing over a wider area. This in turn will distribute the energy of the flow over a broader area, reducing stress on the stream bed, and reducing stream bed mobility and bed scour. The large wood structures and floodplain channel features will sort, meter, and store fine sediment, particularly in the floodplain, thereby substantially enhancing the stream in the main channel.

The proposed restorations and enhancements have been designed with the objectives of correcting and **avoiding** the following circumstances:

- stranding juvenile salmonids,
- rapidly filling any channel with sediment,
- allowing invasive predators (bass and bullfrogs),
- degrading water quality,
- creating stagnant water that could foster mosquitos, and
- impact habitat for freshwater shrimp.

Project construction would occur during the late summer and early fall months (August – October) to work outside of the sensitive bird nesting or salmonid spawning seasons. The Phase I sites (Sites 3 - 6 and 10) would be constructed in 2017 with the Phase II (7 – 9) sites constructed in 2018.

References

Stillwater Sciences 2008. Limiting Factors Analysis, Limiting Factors for Coho Salmon and Steelhead. Prepared for Marin Conservation District. Stillwater Sciences. March 2008.

MMWD 2011. Lagunitas Creek Stewardship Plan. Marin Municipal Water District. June 2011

National Marine Fisheries Service (NMFS). 2012. Final Recovery Plan for Central California Coast coho salmon Evolutionarily Significant Unit. National Marine Fisheries Service, Southwest Region, Santa Rosa, California.

National Marine Fisheries Service (NMFS). 2015. Public Draft Coastal Multispecies Recovery Plan. National Marine Fisheries Service, West Coast Region, Santa Rosa, California.

U.S. Fish and Wildlife Service (USFWS). 1998. California Freshwater Shrimp (*Syncaris pacifica* Holmes) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon, 94 pp.

SOURCE: Bing Imagery, 2015; County of Marin, 02/29/2015.

FIGURE 1

Regional Map

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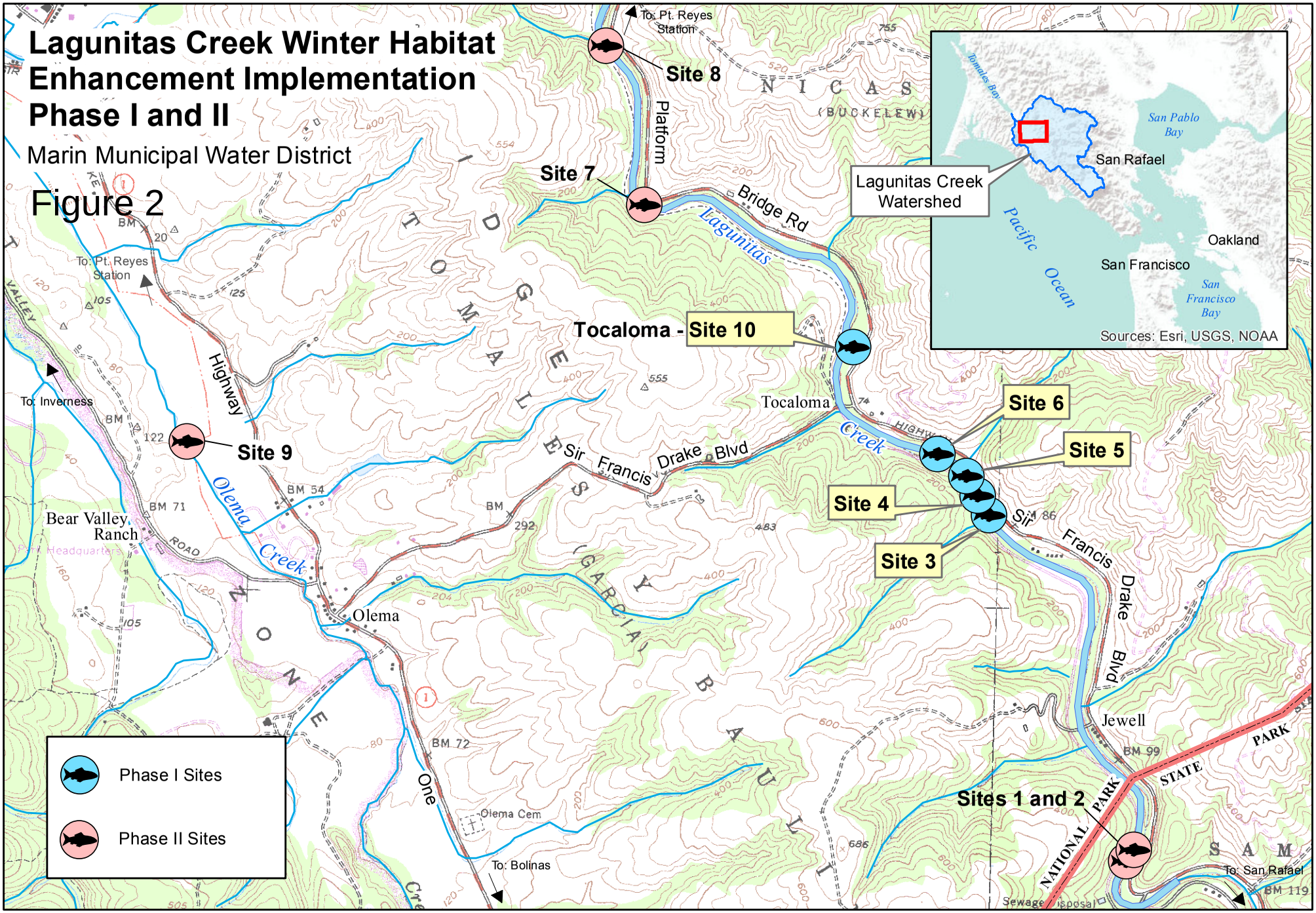
Lagunitas Creek Winter Habitat and Floodplain Enhancement

Lagunitas Creek Winter Habitat Enhancement Implementation Phase I and II

Marin Municipal Water District

Figure 2



Sources: Kaman Engineers, 2014, NPS, Balance Hydrologics, MMWD GIS, and USGS Quad Maps (7.5 min.)
Portions of San Geronimo and Inverness.

Prepared by MMWD Sky Oaks Wtrshd HQ GIS
June 2016

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