Enclosure 4

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

November 22, 2017 **Refer to NMFS No:** WCR-2017-6858

Rick M. Bottoms, Ph.D.
Chief, Regulatory Division
U.S. Department of the Army
San Francisco District, Corps of Engineers
1455 Market Street
San Francisco, California 94103-1398

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Reinitiation of the Carmel Lagoon Interim Sandbar Management Plan project (Corps File No. 1996-19089S)

Dear Dr. Bottoms:

On December 21, 2016, NOAA's National Marine Fisheries Service (NMFS) received your reinitiation request for a written concurrence that the United States Army Corps of Engineers' (Corps) proposal to permit Monterey County Resource Management Agency's (County) Interim Sandbar Management Plan (ISMP) in the Carmel River Lagoon, pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403 *et seq.*) and Section 404 of the Clean Water Act (33 U.S.C. § 1344 *et seq.*), is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on Essential Fish Habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554).

The concurrence letter will be available through NMFS' Public Consultation Tracking System.[1] A complete record of this consultation is on file at NMFS' West Coast Region North Central Coast Office located at 777 Sonoma Avenue, Room 325, Santa Rosa, California 95404.

Proposed Action

The County proposes to implement the ISMP at the Carmel River Lagoon (Carmel Lagoon) in Monterey County, California between fall 2017 and summer 2018. The objectives of the ISMP are to help protect private property from flooding in a manner that would minimize impacts to steelhead and designated critical habitat, and maintain or enhance habitat for fish and wildlife, including threatened South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*), by maximizing the volume of freshwater in the lagoon during the dry season.

The ISMP includes the following elements[2]:

a) Sand Bags: Before the rainy season (October 15 – April 15), and before management of the sandbar is necessary, the County would stockpile sand and place sand bags around homes along the north end of Carmel Lagoon (Camino Real, River Park Place, Monte Verde Street, 16th Avenue). This action is subject to receiving permission from property owners.

b) Public Outreach: The County will initiate public outreach to warn homeowners to take appropriate precautions to protect their property during the rainy season (October 15 – April 15). Public outreach will include education on the potentially adverse effects of artificially opening the sandbar by members of the community.

c) Immediate-need Sandbar Management: The County, after receiving appropriate approvals from permitting agencies, would manage the sandbar for flood protection (*e.g.*, targeted sandbar grading). Any such work would be performed only when necessary (based on pre-determined river and/or tide conditions) to prevent flooding of homes, and would be implemented in a manner that would minimize impacts to steelhead and their habitat. Prior to management of the sandbar, the County will implement all flood protection measures described above (*e.g.*, sand bags, public outreach, *etc.*) to reduce the flood risk to the surrounding homes and infrastructure to the greatest extent feasible.

d) Re-establishment/summer management: Should the County implement sandbar management for flood protection, they would also be required to implement actions to close the lagoon the following spring or early summer (typically around April 15) to ensure the outlet channel is closed. The intent of the summer sandbar closure is to promote habitat for listed species in the lagoon throughout the summer months. When or if the level of water subsides in the Carmel Lagoon so the area around State Parks' parking lot is dewatered, and there is adequate quantities of sand located on the beach, the County would harvest sand from the beach to restore beach access from Carmel River Beach State Park parking lot.

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[1] On the PCTS homepage (https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts), use the following PCTS tracking number within the Quick Search column: WCR-2017-6858.

[2] The general elements of the ISMP are described in more detail in a section of the 2013 MOU entitled "Exhibit A, Interim Plan and Criteria for Flood Control and Summer Management of the Carmel River Lagoon."

The decision to mobilize and conduct immediate-need sandbar management would be based upon one or more of the following conditions:

a) Lagoon Water Surface Elevation: Implementation would occur when the lagoon water elevation reaches a surface elevation of 12.77 feet North American Vertical Datum of 1988 (NAVD88).[3] Actual sandbar grading would begin when the lagoon reaches a surface elevation of 13.27 feet (NAVD88);

b) River Flows: When the rate of increase in water elevation in the lagoon indicates less than six hours until the lagoon reaches a surface elevation of 12.77 feet (NAVD88), or when Carmel River flows reach or exceed approximately 200 cubic feet per second (cfs); or

c) Ocean Influence (High Tides and/or Storm Surge): Data indicates the likelihood of wave overwash events would begin to rapidly increase the water surface elevation of the lagoon or increase the sandbar elevation.

Immediate-need sandbar management would include the following actions. As necessary, a bulldozer or excavator would be used to grade a section of the sandbar (a low point) to an elevation that would allow water in the lagoon to begin spilling over the sandbar and induce a breach prior to flooding nearby property. The specific location and orientation of the sandbar grading will be determined through close coordination with the resource permitting agencies. For this coming winter, this location is likely to occur within the existing low point of the sandbar that is a remnant of last winter's outlet channel (Figure 1). The specified area of the sandbar would be graded to a maximum elevation of 12.77 feet NAVD88. Graded sand would be stockpiled adjacent to the low point. Depending on water year type (*e.g.*, drought year), and observations of both lagoon water surface elevation and river inflow, sand may be dumped in the opening of the sandbar to ensure the lagoon water surface level does not drop below 8.77 feet (ft) NAVD88. Implementation of this action would also require close coordination and agreement from NMFS and other permitting agencies. The intent of this action is to avoid prolonged periods of low lagoon elevation and volume when river inflow is low and habitat suitability in the lagoon may be limited. The primary area of site disturbance (including the channel, side-cast area, and sand stockpile area) is estimated at approximately 0.60 acres and 300 linear feet. If sand grading is required this winter, the County will provide more specific calculations based on actual beach sand conditions and the work area.

The objective of the summer management action is to maintain and enhance habitat for fish and wildlife, including threatened S-CCC steelhead, by maximizing the volume of freshwater in the lagoon during the dry season. The goal is to maximize the lagoon water level by modifying (building) the sandbar that separates the lagoon from the ocean before freshwater river flows

[3] At the project location, 12.77 feet North American Vertical Datum of 1998 (NAVD88) is equivalent to 10 feet National Geodetic Vertical Datum of 1929 (NGVD29). The County would mobilize based on the staff gauge located in the north arm of the lagoon (*i.e.*, as measured at the staff gauge, the County would mobilize at 10 feet NGVD29, and actual channel excavation would begin when the lagoon reaches a surface elevation of 10.5 feet NGVD29).

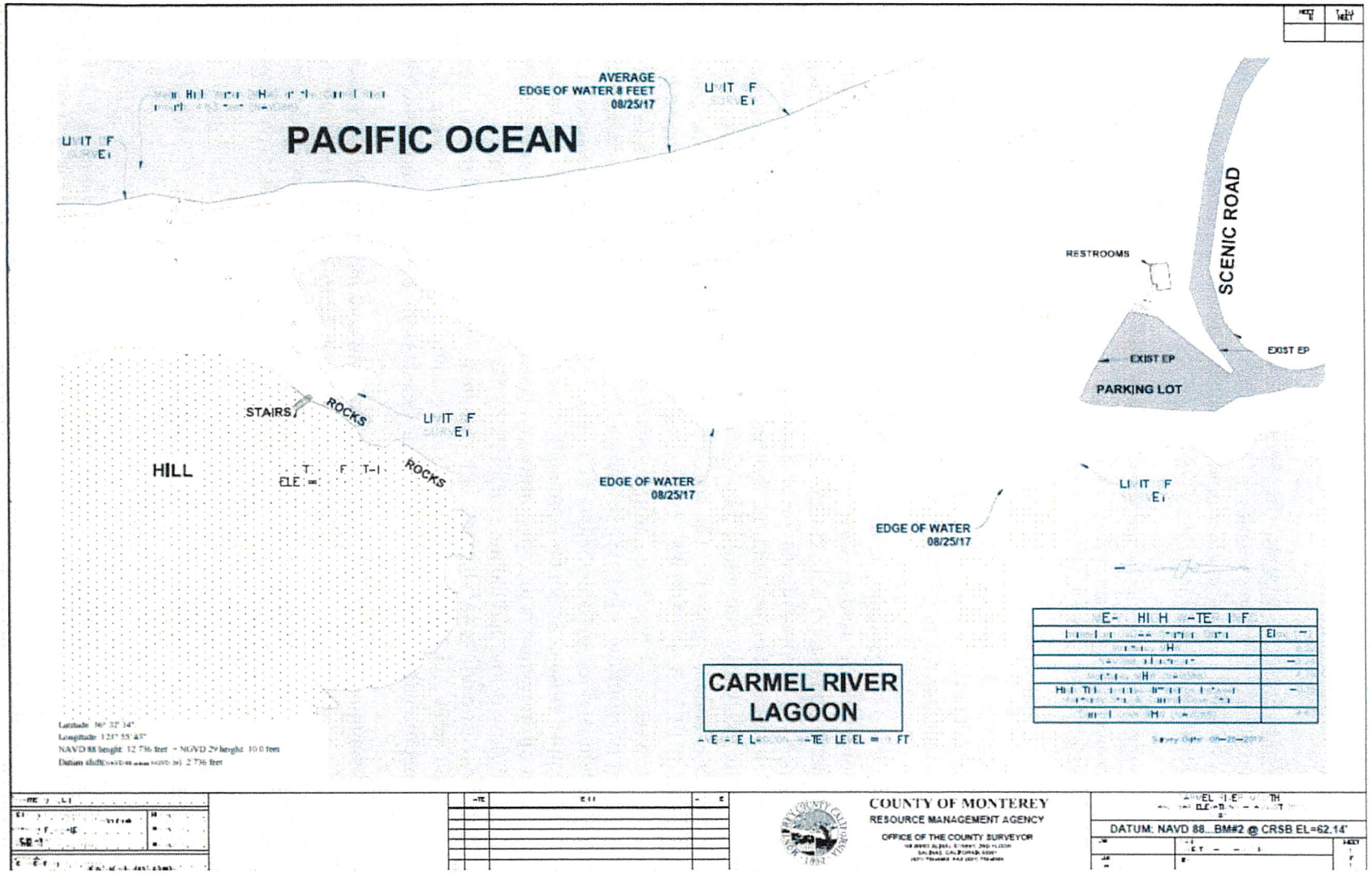

Figure 1. Results of a sandbar elevation survey conducted on August 25, 2017. Data are in NAVD 88. MCRMA 2017.

diminish to low summer levels. Implementation of the summer closure will include placement of sand with tools and heavy equipment to close the channel on the sandbar between the lagoon and the ocean. The County will work with NMFS regarding the timing of beach modification and the placement of sand on the sandbar to maximize the benefits to steelhead. The goal is to raise the lagoon water level to a maximum elevation of 12.77 feet NAVD88. The timing of the work will depend on river flow and lagoon and beach conditions. When river inflow declines to approximately 20 cfs (though project activities may occur at higher or lower flows), the County will implement the closure shortly after sandbar dimensions are determined. Sandbar dimensions (elevation and width) to be constructed will likely be determined between April and June, in consultation with NMFS. Implementation of the summer closure is only required by the County if they manage the sandbar to induce a breach during the preceding winter.

The County proposes to implement the following minimization measures:

1) Subsequent to any sandbar management and after high inflows from the river have receded, the sandbar will either be allowed to naturally close or remain with an open outlet channel flowing over the sandbar in a meandering channel that would be designed to mute tidal influence and rapid draining of the lagoon. The County will consult with NMFS on whether actions should be taken to maintain water surface elevation in the lagoon at a minimum of 8.77 ft NAVD88. This may include placement of sand into the outlet channel to reduce outlet flows, or close the lagoon entirely.

2) County staff will monitor the sandbar and lagoon water elevations during and after the sandbar opens, and as often as necessary as conditions warrant. A qualified biological monitor (*i.e.*, minimum three years of experience with anadromous salmonids) will be present during the initial opening (or soon after opening) and closing of the sandbar. The day of (or morning after if the lagoon drains at night), the biologist will monitor the channel twice daily (a.m. and p.m.) to document if any steelhead become stranded, or other occurrences that pose a risk to steelhead. During closure, the biologist will monitor the channel and surrounding areas. A report produced by the biological monitor documenting construction activities will be submitted to the Corps and NMFS within two weeks post-construction. The report will also outline all implemented measures of flood protection to protect surrounding homes and infrastructure, and estimated volume of sand moved.

3) County staff require approximately 24 to 48 hours, depending on weather conditions and the size of the sandbar, to mobilize and implement sandbar management activities with one to two bulldozers or excavators. Equipment will be driven on the beach for sand management only. Loading and fueling will take place on paved areas to ensure containment of hazardous materials.

4) County staff will usually work during daylight hours when large waves can be seen. In addition, work would occur outside of active rain storms to the greatest extent feasible while maintaining the primary goals of preventing flooding impacts and/or maintaining minimum water levels in the lagoon. Heavy equipment will not be operated in open waters of the lagoon.

There are no interrelated or interdependent actions associated with this project.

Action Area

The ISMP would be conducted at Carmel River Beach State Park and surrounding streets, in Monterey County, near the City of Carmel, California. The action area includes the Carmel Lagoon sandbar that forms across the mouth of the lagoon, and Corps jurisdictional waters of the U.S. 25 feet into the Pacific Ocean and 25 feet upstream into the Carmel Lagoon. The substrate within the action area consists primarily of sand with smaller amounts of gravel and silt. The action area was extended beyond jurisdictional waters of the U.S. to include the upland sandbar area because project access and heavy equipment operation could result in indirect effects to ESA-listed species and/or designated critical habitat and EFH.

Action Agency's Effects Determination

The Corps has concluded that the proposed project may affect, but is not likely to adversely affect S-CCC steelhead or their designated critical habitat. The Corps' rationale for this determination was based on restriction of sandbar grading above waters, implementation of the proposed minimization measures, the extremely low likelihood of steelhead presence in the outlet channel during closure, and the potential benefit of closing the lagoon to S-CCC steelhead and their designated critical habitat by trapping limited freshwater river flows in the lagoon.

Available information indicates that the following listed species and designated critical habitat occur in the project area:

> **South-Central California Coast (S-CCC) steelhead DPS**
> Threatened (January 5, 2006; 71 FR 834)
> Critical habitat (September 2, 2005; 70 FR 52488).

The Carmel Lagoon is used by all lifestages of steelhead throughout the year. Adults migrate from the ocean upstream when the lagoon is open, generally from December through June. Smolts and kelts (post-spawned adults) migrate downstream to or through the lagoon in winter and spring, primarily February through June. Young-of-the-year and older juveniles migrate to the lagoon when flow in the Carmel River reaches the lagoon where they rear through the dry season if water quality conditions remain suitable.

Regarding EFH, the Corps has determined that the proposed project may adversely affect EFH. The Corps has also determined that the proposed action would not have a substantial adverse impact on EFH for species managed under the Pacific Groundfish Fishery Management Plan (FMP), Coastal Pelagic Species FMP, and Pacific Coast Salmon FMP, pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(b). This determination is based on implementation of the minimization measures cited above, which are anticipated to reduce project effects to a minimal level or be considered entirely beneficial. The project area is located within an area identified as EFH for various life stages of fish species managed with the following FMPs under the MSA:

> **Pacific Coast Groundfish FMP** (starry flounder, English sole, *etc.*), and
> **Coastal Pelagic Species FMP** (northern anchovy, Pacific sardine, *etc.*)

The project area is also located within an area designated as a Habitat Area of Particular Concern (HAPC) for various federally-managed fish species within the Pacific Coast Groundfish FMP. HAPCs are described in the regulations as subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPCs are not afforded any additional regulatory protection under MSA; however, federal projects that may adversely affect HAPC are more carefully scrutinized during the consultation process.

As defined in the Pacific Coast Groundfish FMP (PFMC 2014), the Carmel Lagoon, including the project area, is defined as Estuary HAPC. The inland extent of Estuary HAPC for the Groundfish FMP is defined as the Mean Higher High Water tidal extent, or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 parts per thousand during the period of average annual low flow. The seaward extent is an imaginary line closing the mouth of a river, bay, or sound; and to the seaward limit of wetland emergent, shrubs, or trees species occurring beyond the lines closing rivers, bays, or sounds. This HAPC also includes those estuary-influenced offshore areas of continuously diluted seawater. This definition is based on the classification system developed by Cowardin *et al.* (1979). The Carmel Lagoon may provide habitat for the Groundfish FMP species during project implementation. Some Groundfish FMP species' juvenile stages are estuary dependent, such as starry flounder (*Platichthys stellatus*) which utilize riverine habitat near the mouth in and around the Monterey Bay Area (Orcutt 1950; Kukowski 1972; Hughes *et al.* 2014). It is possible that other groundfish may use the lagoon as nursery habitat, although the function and value of the habitat may be limiting to some groundfish when the sandbar is closed.

The boundary of EFH for the Coastal Pelagic Species FMP is defined to be all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington offshore to the limits of the EEZ and above the thermocline where sea surface temperatures range between 10 degrees (°) Celsius (C) to 26°C (PFMC 2011). The Carmel Lagoon may provide potential habitat for these species, however, because the lagoon is closed to the ocean seasonally, the function and value of the habitat may be limiting when the sandbar is closed.

Consultation History

On May 7, 2015, NMFS concurred with the Corps' determination that implementation of the ISMP activities between April 2015 and October 2016. However, due to other permitting delays, the Corps permit for the ISMP was not issued. Your current request for reinitiation of consultation is for the issuance of the permit for one full fall/winter (2017) through spring/summer (2018) season. The components include: (1) placement of sand bags, (2) public outreach, (3) immediate-need sandbar management, and (4) re-establishment/summer management as outlined in the 2013 Memorandum of Understanding (MOU) between the County, Corps, and NMFS (County of Monterey *et al.* 2013) signed on September 6, 2013. On October 16, 2017, the County submitted a revised project description per NMFS's request to clarify the amount and intent of the sandbar grading. With the receipt of this information, NMFS determined the information was sufficient to initiate consultation.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

There are two elements in the County's proposed ISMP that may affect listed species or critical habitat: immediate-need sandbar management, and re-establishment/summer management. The objective of the immediate-need sandbar management action is to help protect private property from flooding in a manner that would minimize impacts to steelhead and designated critical habitat.

To minimize effects to S-CCC steelhead and designated critical habitat, the County's proposed use of heavy equipment to grade the sandbar and influence the subsequent breach location will only occur on the sandbar, with no equipment operating in the waters of the Carmel Lagoon or Pacific Ocean. Any grading of the sandbar would be limited to the elevation above 12.77 feet NAVD88 and the location and direction of the graded area will be conducted, to the best extent practical, in a manner that mutes tidal influence and minimizes a rapid draining of the lagoon. The intent of limiting the grading to above 12.77 feet NAVD88 is to encourage the sandbar to open as a result of riverine or oceanic influences that will erode the low point of the sandbar. The graded material will be stockpiled and placed nearby to avoid unnecessary loss of sand and to better ensure a supply of sand is available to close the outlet channel in spring or summer. In the case where lagoon outflow rates exceed inflow rates, the County will coordinate with NMFS and other agencies on whether efforts should be made to maintain the water surface elevation of the lagoon. Based on the current sandbar dimensions and low elevation, NMFS anticipates the sandbar will breach on its own, or with minimal sand grading by the County. Based on the above, NMFS expects the minimal grading of the sandbar that may be necessary to initiate an opening of the sandbar will result in insignificant impacts to steelhead rearing in the lagoon or its designated critical habitat.

NMFS understands that successful implementation of sandbar management activities is dependent upon difficult operational and environmental conditions, which may vary during project implementation. Given the inherent challenges of successfully implementing sandbar management activities in a safe and environmentally responsible manner, the County has agreed that sandbar management activities are a short-term, temporary action to help protect against urban flooding for the winter-spring season, while progress continues on the development of long-term solutions (described above, and in further detail in the MOU).

The County's re-establishment/summer management action is a strategy for managing water levels in the Carmel Lagoon at the beginning of the dry season, and would assure any outlet channel work performed on the sandbar during the winter is closed off and the sandbar restored. During typical years, spring/summer inflow to the lagoon decline and the lower river eventually dries. Before the lower river dries, and the amount of freshwater into the lagoon decreases, the sandbar usually closes naturally without assistance. The resulting depth of the lagoon and initial volume of trapped

saltwater can vary from year to year. A larger and deeper lagoon with a higher proportion of impounded freshwater at the end of the annual river inflow period also increases the chances that the lagoon will maintain, and/or improve both the quantity and quality of habitat to sustain healthy conditions for fish and wildlife during the summer/fall period until river flows resume. Because rearing habitat will be enhanced and maximized, it is expected the summer management action performed by the County, as described above, will result in a beneficial effect to S-CCC steelhead and designated critical habitat and is unlikely to result in any adverse impacts to individuals or the Carmel River population.

Conclusion

Based on this analysis, NMFS concurs with the Corps that the proposed action is not likely to adversely affect threatened S-CCC steelhead and designated critical habitat.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Corps or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

NMFS determined the proposed action would adversely affect EFH. Species that are federally managed under the Pacific Groundfish FMP and Coastal Pelagic Species FMP may depend on the natural function of the sandbar at the mouth of Carmel Lagoon.

In particular, species managed under the Pacific Groundfish FMP may depend on the habitat in Carmel Lagoon during open and closed sandbar configurations. The juvenile lifestage of the starry flounder, for example is documented to prefer low-salinity habitats such as river mouths and lagoons in the Monterey Bay Area (Orcutt 1950; Kukowski 1972; Hughes *et al.* 2014). The re-establishment/summer management activity described in the proposed project would adversely affect EFH by altering the timing of the sandbar's natural function. For example, if the configuration of the sandbar was open in April, artificially closing the sandbar earlier could limit juvenile starry flounder, and related species, from accessing marine resources for prey, shelter,

migration, *etc*. However, although adverse effects to EFH are possible, the proposed avoidance and minimization measures are anticipated to limit project effects to a minimal level. Closing the sandbar in spring to optimize lagoon water levels for S-CCC steelhead is expected to occur at a time that is relatively similar to the timing of natural sandbar closure. Therefore, NMFS has no EFH Conservation Recommendations to provide at this time.

The Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600. 920(l)). This concludes the MSA portion of this consultation.

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. The Corps also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1).

Please direct questions regarding this letter to Joel Casagrande, (707) 575-6016, joel.casagrande@noaa.gov.

Sincerely,

for Barry A. Thom
Regional Administrator

cc: Gregory Brown, Regulatory Division, San Francisco District, Corps of Engineers
Carl Holm, Interim Director, Monterey County Resources Management District
Copy to File ARN 151422WCR2015SR00132

References

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