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

December 5, 2016

Refer to NMFS No: WCR-2016-5540

Douglas E. Eberhardt
Manager, Infrastructure Section
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105-3901

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Pure Water Monterey Groundwater Replenishment Project

Dear Mr. Eberhardt:

On November 18, 2016, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence with the determination made by the United States Environmental Protection Agency (U.S. EPA) that Pure Water Monterey Groundwater Replenishment Project (GWR Project) is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). The GWR Project is being funded by way of the Clean Water State Revolving Fund (CWSRF), a federal-state shared fund as prescribed in 33 U.S.C. Section 1381–1386. 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. In this case, NMFS concluded the action would not adversely affect EFH and instead would result in reduced discharge of pollutants to EFH. Thus, consultation under the MSA is not required for this action.

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 available at: https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts.[1] A complete record of this consultation is on file at NMFS' North-Central Coast Office in Santa Rosa, California.

Proposed Action

The U.S. EPA, through the CWSRF, will fund the modification and construction of existing and new facilities for the GWR Project. The GWR Project is being proposed by the Monterey Regional Water Pollution Control Agency (MRWPCA) in partnership with the Monterey Peninsula Water Management District (MPWMD) (the applicants) to create a new water supply source to offset existing water supply sources in areas of northern Monterey County. The purpose of the GWR Project is to: (1) create 3,500 acre-feet per year (AFY) of purified recycled water for recharge of the Seaside Groundwater Basin, which would provide a replacement water supply for the California American Water Company (Cal-AM) and allow them to reduce diversions of equal amount from the Carmel River Groundwater Basin; and (2) provide additional recycled water for agricultural irrigation in the northern Salinas Valley, which could reduce pumping from the Salinas Groundwater Basin.

The GWR Project will include facilities located within unincorporated areas of the northern Salinas Valley as well as the cities of Salinas, Marina, and Seaside. Raw waters will be collected from a variety of sources, including: (1) agricultural wash water from the City of Salinas agricultural wash water system, (2) urban stormwater runoff from the southern part of the City of Salinas, and (3) surface waters from the Reclamation Ditch and Blanco Drain (see Figure 1 and the *Action Area* section for a description of these waterbodies). Collectively, these waters will be combined with the existing raw wastewater inflows to MRWPCA's Regional Wastewater Treatment Plant (RTP). Some of the secondary treated effluent that is not further treated to tertiary levels and delivered to areas for agricultural irrigation will be conveyed to a new Advanced Water Treatment Facility (AWTF). The highly-treated recycled water produced at the AWTF will be used for replenishment of the Seaside Groundwater Basin through the injection of the water into a series of shallow and deep injection wells located in the City of Seaside. Once injected, the purified water is mixed with other groundwater in the basin and would then be available for future extraction by Cal-Am for delivery to its customers.

The modification and construction of existing and new facilities for the GWR Project include a new AWTF at the RTP site, modifications at the existing Salinas Valley Reclamation Plant, construction of a new pipeline, pump station and appurtenant facilities, new wells, and new in-channel diversion facilities. The new in-channel diversion facilities are proposed within the Blanco Drain and the Reclamation Ditch. The Monterey County Water Resources Agency (MCWRA) will be the water rights holder for these two proposed diversions. The new source waters (Reclamation Ditch, Blanco Drain, Salinas Agricultural Wash Water, and Stormwater Runoff), diversion facilities, and operations are described below.

Reclamation Ditch Diversion Facilities: A new diversion structure would be constructed in the Reclamation Ditch at the Davis Road crossing, which is located at river mile (RM) 6.5 in the

[1] Once on the PCTS homepage, use the following PCTS tracking number within the Quick Search column: WCR-2016-5540.

City of Salinas. The facility would divert flows, when available, into an existing adjacent sanitary sewer gravity main, which conveys wastewater to the MRWPCA Salinas Pump Station.

The diversion facility would consist of a new intake structure that sits in a 12-inch deep depression created within a constructed alcove along the toe of channel's left bank. The intake structure would be fitted with a self-cleaning cone screen to prevent fish and small debris from being entrained into the pump station. The fish screen is designed to meet NMFS criteria (NMFS 2011) for slot size and velocities. In addition, the intake structure will be fitted with a trash rack to prevent debris from damaging or clogging the intake structure. The trash rack will be cleaned weekly, or more frequently as needed, to ensure proper function and to minimize changes in velocities at the intake. The volume of stream bypass flows and diverted waters will be controlled by an adjustable slide weir gate between the cone screen and the pump wet well. When bypass flow criteria are satisfied, diverted waters will be pumped from the wet well by two submersible pumps into two new force mains that are approximately 50 feet long. The force mains will discharge into the existing sanitary sewer gravity main. Two underground vaults would be installed along the force main, one to hold the check and isolation valves, and one for a flow meter.

The channel bed and banks surrounding the diversion facility will be lined with open cell, articulated concrete block mats. The open cells will be filled with angular gravel and interstitial voids are expected to eventually fill with fine depositional sediments. The open cells will also allow vegetation to volitionally re-colonize the area. The purpose of the mats are to ensure the channel bed and banks do not erode and risk damage to the diversion intake facility or change the elevation of the bed which would affect water surface elevation and yield. The channel cross section will be modified in order to angle the channel bottom slightly towards the intake on the left bank.

The 12-inch depression is anticipated to also fill with deposited sediments, which will require maintenance using one of two potential methods. Option 1 is to use a sewer vacuum cleaning truck and suction out the accumulated sediments. Option 2 is to manually shovel out accumulated sediment by sending an operator down the ladder with a shovel and a bucket. Both methods would be implemented primarily during summer at low-flow water conditions, or as needed to ensure sediment accumulation does not inhibit fish passage.

Reclamation Ditch Diversion Facility Site Construction: Construction of the Reclamation Ditch diversion would include minor grading, installation of a wet well/diversion structure, modification of an existing sanitary sewer manhole, and a short pipeline from the existing manhole to the new pump station. This work would disturb approximately 0.15 acres of land, including approximately 0.05 acres of the Reclamation Ditch banks and channel bottom.

Construction will occur from May 1 through October 31, 2017. At this location, streamflow is perennial, so a temporary diversion system will be required. Construction requiring a temporary streamflow diversion system would be limited to July 1 through September 30. Temporary cofferdams would be installed to isolate the work area. These would consist of waterproof tarps or plastic membranes wrapped around gravel fill material, which would be removed when the work is completed. Streamflow will be moved past the work area with a small diversion pump.

Open excavation will be required to install the new intake structure, new wet well, and new pipeline to connect the existing sanitary sewer main. The new pump station will be constructed approximately 60 feet from the receiving sanitary sewer manhole.

Reclamation Ditch Diversion Facility Operation: The applicants will abide by the following terms and commitments in regards to the Reclamation Ditch Diversion (NMFS 2016a):

(a) MCWRA[2] will cause MRWPCA to commit to divert no more than 6 cubic feet per second (cfs) under the Reclamation Ditch diversion water right and those diversions would be subject to the following minimum bypass flows:

   i. Bypass a minimum of 2.0 cfs, as available, from December 1 through May 31 (in- and out-migration period) except as allowed by item iii, below.
   ii. Bypass a minimum of 1.0 cfs, as available, from June 1 through June 30 (transitional period).
   iii. Bypass a minimum of 0.7 cfs, as available, from July 1 through November 30 (non-migration period). Note: This minimum bypass applies through the end of February of the following year, if no storm event has occurred that results in a flow of 30 cfs or more at the San Jon Road USGS stream gage.

(b) To ensure adequate flows for both adult upstream and smolt/kelt downstream migration in the Reclamation Ditch below Davis Road, the MCWRA will cause MRWPCA to commit to cease diverting when flows measured at San Jon Road gage are above 30 cfs. Diversion may resume when streamflow recedes below 20 cfs at the San Jon Road gage.

(c) Operational decisions will be based on provisional mean daily and real-time USGS streamflow data (*i.e.*, San Jon Road gage).

(d) The right holder (MCWRA) shall provide, on a quarterly basis, graphs comparing the daily mean diversion from the Reclamation Ditch and the daily mean flow recorded at the San Jon gage downstream of the diversion.

As a result of these operational and bypass flow requirements, the estimated average-year diversion yield from the Reclamation Ditch would be approximately 1,014 AFY. The proposed diversion facilities would be equipped with supervisory control and data acquisition (SCADA) equipment which allows the diversions to be turned off remotely.

Blanco Drain Diversion Facilities: The Blanco Drain is the only raw water source not located near an existing wastewater collection facility that could be used to convey flows to the RTP. Development of this source would require not only a new pump station, but also a two-mile force main, or pipeline, that would cross under the Salinas River. The proposed Blanco Drain Diversion Pump Station (BDDPS) would be located adjacent to an existing seasonal pump station within the Blanco Drain and would include a new intake structure on the channel bottom

[2] As the water right holder for the proposed Blanco Drain and Reclamation Ditch diversions, MCWRA is responsible for adhering to and tracking the compliance of the terms and operation criteria set forth in the approved water rights.

that would connect to a new wet well on the channel bank via a new gravity pipeline. The new BDDPS would use three submersible pumps to convey the diverted water through a new force main approximately 9,000 feet in length to a connection in an interceptor that connects to the RTP. A 600-foot long segment of the new pipeline crosses beneath the Salinas River. The force main is 16-inch diameter polyvinyl chloride pressure pipe, except for the segment beneath the river, which will consist of an 18-inch diameter high density polyethylene pipe.

Pumped flow will be measured by a magnetic flow meter located at the BDDPS. All three pumps are furnished with variable speed drives in order to maximize and control diversion from the Blanco Drain under conditions of varying flow. Maximum pumping capacity with three pumps operating at full speed is 6 cfs. The facility also includes a flow measurement flume on the discharge from the Blanco Drain, to be continuously monitored and recorded. A principal purpose of this flow measurement flume is to confirm compliance with requirements for downstream bypass (see below).

Blanco Drain Diversion Facility Site Construction: Construction of the new diversion facility would include grading and excavation to install the new intake structure, new wet well, and new pipeline. Construction of the force main crossing under the Salinas River would be performed using the horizontal directional drilling method in order to avoid any contact with the riparian habitat area along the river, and to achieve sufficient depth below the riverbed to provide a margin of safety to minimize the risk of frac-out[3]. Temporary receiving pits will be constructed on either side of the river which will be approximately 40 feet by 60 feet in size. The channel banks and invert near the Blanco Drain diversion pump station intake would be lined with concrete to prevent scouring. Construction is anticipated to occur from April 1 through November 30, 2017.

Blanco Drain Diversion Facility Operation: Diversions from Blanco Drain would typically occur between April and September (March through September during drought year scenarios). The monthly average diversion rate would range between 0.1 and 6.0 cfs, and annual yield would range from 1,400 to over 2,600 AFY. Flow diverted from the Blanco Drain would not exceed a maximum diversion rate of 6 cfs. The applicants will abide by the following terms and commitments in regards to the Reclamation Ditch Diversion:

(a) Between April 1 and October 31 of years when MCWRA has not operated the Salinas River Diversion Facility (SRDF) due to dry or drought conditions, and when the Salinas River Lagoon is closed to the ocean, MCWRA shall:

i. Monitor and provide the State Water Resources Control Board (SWRCB) Division of Water Rights, CDFW, and NMFS monthly reports on the average daily water levels in the Salinas River Lagoon and the operational characteristics of the slide gate between the lagoon and the Old Salinas River (OSR) channel. Monthly reports shall include the following:
   - Water elevation in the lagoon (daily mean, referenced to NGVD29).
   - Dates of when the slide gate to the OSR was closed versus opened.

[3] Frac-out is the unintentional return of drilling fluids to the surface or waters during horizontal direction drilling.

- Size of slide opening (inches) and estimated flows released to OSR when flow is required (daily mean, cfs).

ii. Maintain Salinas River Lagoon water surface elevation and provide flows to the OSR channel by adhering to the following two conditions:

a. If the water level in the Salinas Lagoon drops below 3.0 feet NGVD29 (or the then current lagoon water surface elevation management requirement) for seven (7) consecutive days, then cause MRWPCA to limit Blanco Drain diversions to flows above 2.0 cfs (or to provide an alternative source of 2 cfs to the lagoon that does not currently exist, if not prohibited by other regulations) until the lagoon water surface elevation increases to a minimum of 3.2 feet NGVD29 or until October 31 whichever occurs first.

b. If the slide gate between the Salinas Lagoon and the OSR channel has been closed for more than seven (7) consecutive days, adjust the slide gate to allow 0.5 to 1.0 cfs of Salinas Lagoon water to flow into the OSR Channel and cause MRWPCA to limit Blanco Drain diversions to flows above 2.0 cfs (or to provide an alternative source of 2.0 cfs that does not currently exist, if not prohibited by other regulations) until the lagoon water surface elevation reaches 3.2 feet NGVD29 or until October 31 whichever occurs first.

(b) MCWRA will cause MRWPCA to commit to monitoring water quality of diverted water as required by the SWRCB and Regional Water Quality Control Board for construction activities and during operations.

(c) MCWRA will cause MRWPCA to commit to including a flow meter and totalizer (*i.e.*, a flow meter that reports total flows) on the Blanco Drain diversion.

Salinas Agricultural Wash Water: The GWR Project proposes to divert and recycle waters used at the City of Salinas industrial wastewater collection and treatment system, which serves approximately 25 agricultural processing and related businesses located east of Sanborn Road and south of U.S. Highway 101. Over 80 percent of the wastewater flows in this system are from fresh vegetable packing facilities. The remaining flows originate from businesses associated with seafood processing, refrigerated warehousing, manufactured ice, preserves (frozen fruits, jams and jellies) and corrugated paper boxes. Wastewater is conveyed in a pipeline that traverses near the Salinas Pump Station to the Salinas Industrial Wastewater Treatment Facility (Salinas Treatment Facility) located adjacent to the Salinas River, downstream of the Davis Road crossing. The Salinas Treatment Facility consists of an influent pump station, an aeration lagoon, percolation ponds, and evaporation/infiltration beds to treat, percolate, and evaporate the industrial wastewater.

The Salinas Treatment Facility operates year-round, with a peak monthly inflow during summer months of approximately 3.5 to 4.0 million gallons per day (mgd), with an annual average of approximately 3 mgd. For the GWR Project, agricultural wash water would only be diverted to the RTP during the peak irrigation demand months (typically April through October). From November through March, agricultural wash waters would continue to be sent to the Salinas Treatment Facility for treatment and stored in the existing percolation and evaporation ponds,

which can hold approximately 1,250 acre-feet. The net yield of the agricultural wash water source for the GWR Project would be approximately 2,710 AFY.

Stormwater Runoff Diversions: In addition to the City's agricultural wash waters, the GWR Project would also include diversion and recycling of urban runoff from the southwestern part of the City of Salinas using pipes that cross near the Salinas Pump Station site southeast of the intersection of Blanco and Davis roads. Urban runoff from an area of about 2.5 square miles of the City of Salinas is currently discharged into the Salinas River near Davis Road via a 66-inch, outfall line. Under the GWR Project, this urban runoff would be diverted to the RTP rather than discharged to the Salinas River. This source is estimated to yield an average supply of 225 AFY.

Minimization Measures: In addition to the water rights permits, the applicants have proposed several avoidance and minimization measures (*i.e.*, erosion control, seasonal work windows, bypass flows and operating criteria, *etc.*) related to the construction and operation of the GWR Project, which are listed in Table 3-10 in Snider *et al.* (2016).

There are no interrelated or interdependent actions associated with the proposed action.

Action Area

The action area for the GWR Project will include portions of various waterbodies, as well as upland areas extending from the City of Salinas south to the cities of Marina and Seaside (Figure 1). Specific segments of waterbodies within the action area include: (1) Salinas River from the Salinas Treatment Facility near Davis Road (RM 11.2) downstream through the Salinas River lagoon, (2) Blanco Drain from the proposed point of diversion to its confluence with the Salinas River (approximately 750 feet of channel), and (3) the Reclamation Ditch from Davis Road (RM 6.5) downstream through Tembladero Slough, and the Old Salinas River channel to the Potrero Road tide gates.

The lower Salinas River channel is a confined and entrenched single-thread channel largely bordered by a mature willow-cottonwood riparian forest. Within the channel, emergent vegetation is present in areas and channel substrate consists of primarily sand and fine sediments. Surface flow in the river is typically present year-round due to the operation of the Salinas Valley Water Project (SVWP) as well as agricultural return flows (including the Blanco Drain), discharge of urban runoff, and seepage from the Salinas Treatment Facility percolation ponds. During periods when the sandbar at the river mouth is closed (which is most of the year and sometimes all year), water surface elevation in the lagoon is managed by a slide gate weir located in the northwest corner of the lagoon that connects to the Old Salinas River channel. The Old Salinas River channel flows north behind the coastal sand dunes where it is joined by Tembladero Slough and then discharges to Moss Landing Harbor and hence Elkhorn Slough.

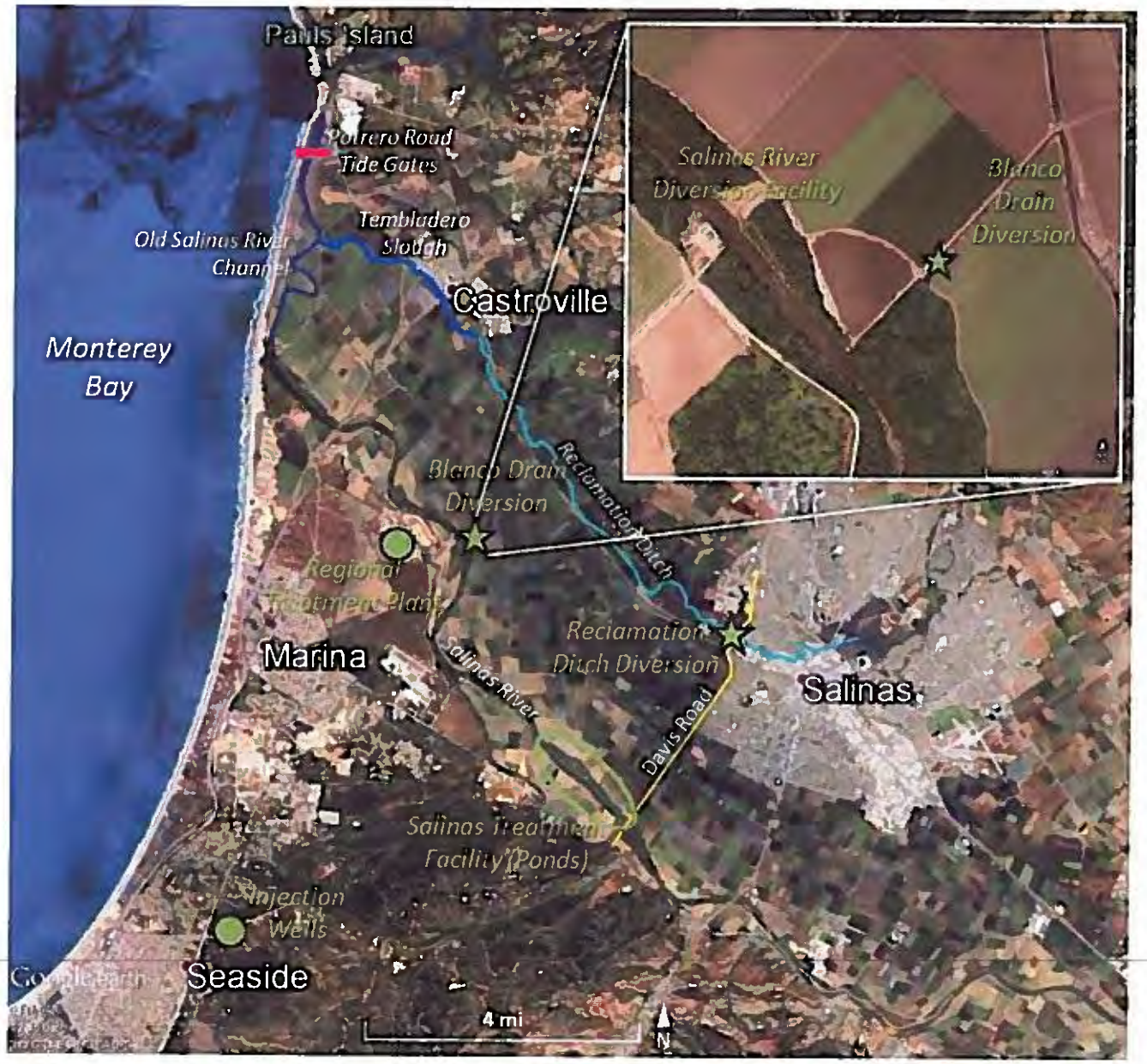

Figure 1. The action area vicinity for the GWR Project including the locations of affected water bodies, existing and proposed infrastructure, and nearby cities. Inset map shows the Blanco Drain diversion facility and its proximity to the Salinas River and the SRDF.

The Blanco Drain receives runoff from approximately 6,400 acres of primarily row crop agricultural lands. The drain enters the Salinas River just upstream of the SRDF, which is located at RM 4.8 near the head of the lagoon. The Blanco Drain is separated from the Salinas River by a flap gate, which prevents Salinas River water from entering the Blanco Drain under high water conditions. The small section of the Blanco Drain affected by the project consists of a highly entrenched and artificial channel with substrate consisting of fine sediments (Figure 2). Streamflow is present throughout the year due to agricultural return flows from tile drains and surface runoff during winter and irrigation events. Average monthly flow rates range from 2.2 to 4.6 cfs, however daily flows rates over 6 cfs have been recorded in recent years. During drought

years, flow from the Blanco Drain is the primary source of freshwater to the lower-most reach of the Salinas River and the lagoon, particularly during summer.

Figure 2. The Blanco Drain looking upstream from the proposed diversion site (a) and looking downstream (b) from the same location. September 22, 2016.

The Reclamation Ditch is natural water course that was engineered (straightened and deepened) between 1917 and 1920 to serve as a major drainage canal for expanding agricultural and urban developments (Casagrande and Watson 2006). The ditch now serves as the primary conduit for urban runoff from nearly all of the City of Salinas. The new diversion facility will be constructed within the bed and banks of the Reclamation Ditch at Davis Road (Figure 3). From this location and downstream, the Reclamation Ditch is an entrenched, trapezoidal channel with substrate consisting of fine sediments (clays and silts). Vegetation, particularly native riparian species, is extremely scarce. Streamflow is perennial due to a combination of natural runoff from the upper watershed (intermittent contributions during winter and spring) as well as agricultural return flows, tile drainage, and urban runoff throughout the year. Stream flow volume in the Reclamation Ditch varies from less than 1 cfs to more than 400 cfs, and flow response times are very flashy due to the heavy influence from impervious surfaces.

a.

b.

Figure 3. A view of the Reclamation Ditch from approximately the proposed diversion site (a), and a close-up view of typical water quality conditions near the proposed diversion site during the low flow period (b). September 22, 2016.

Downstream of the State Highway 183 crossing, the Reclamation Ditch is joined with the Merritt Lake drainage and becomes Tembladero Slough. The Tembladero Slough channel is lower gradient and more sinuous but is also surrounded by intensive row-crop agriculture. The channel is tidally influenced with perennial streamflow provided by the Reclamation Ditch, surrounding agricultural return flows, and tile drains. Tembladero Slough discharges into the Old Salinas River channel approximately 1.3 miles upstream of the Potrero Road tide gates. The Old Salinas River channel (historic course of the Salinas River) is also a tidally influenced slough that receives flows from the Salinas River lagoon and the Tembladero Slough-Reclamation Ditch drainage, as well as adjacent agricultural return flows. The tidal influence is the result of leakage through the Potrero Road tide gates, which results in both longitudinal and vertical salinity gradients within the Tembladero Slough and the Old Salinas River channel (Casagrande and Watson 2006; Snider *et al.* 2016).

Water quality in each waterbody is highly degraded, with all listed for number of impairments, or pollutants, on the Clean Water Act Section 303d list of water quality limited segments[4]. These impairments include, but are not limited to, nutrients, pesticides, copper, sediment toxicity, turbidity, fecal coliform, *E. coli*, and low dissolved oxygen. Sources contributing to these impairments include, but are not limited to, agriculture, grazing, and runoff from urban and industrial land uses.

[4] http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml

A more thorough description of the action area is provided in the Biological Assessment for the GWR Project (Snider *et al.* 2016).

Action Agency's Effects Determination

The U.S. EPA has determined that the proposed project may affect, but is not likely to adversely affect the South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS), or its designated critical habitat. This determination was based on the species life history, the existing condition of habitats within the action area, the small footprint of the project construction areas, as well as the proposed minimization measures and potential benefits of the project to the Carmel River steelhead population (also within the S-CCC DPS), and a reduction in pollutant loads to receiving water bodies.

Available information indicates the following listed species may be affected by the proposed project:

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

The life history of steelhead is summarized in Shapovalov and Taft (1954) and Busby et al. (1996). In streams along the California coast, including the Salinas River and the Reclamation Ditch drainage, adult steelhead typically migrate between December and April (Shapovalov and Taft 1954; Casagrande and Watson 2006; Cuthbert *et al.* 2013a). Steelhead smolts and kelts typically emigrate between February and June, with peak migrations typically occurring March through May (Shapovalov and Taft 1954; Cuthbert *et al.* 2013b).

In the Salinas River watershed, a long history of anthropogenic impacts has resulted in a progressive and substantial decline in steelhead abundance. The population has declined from an estimated 3,600 fish in 1946 (Dettman 1988), to less than 50 individuals by the end of the 20th Century (EDAW 2001). Between 2010 and 2014, the highest annual total of adult steelhead detected at MCWRA's video counting station on the lower Salinas River was 43 individuals (63 passage events; 53 upstream and 10 downstream) during the winter of 2012-13 (Cuthbert *et al.* 2013a). In the Reclamation Ditch basin, there has been only one confirmed observation of an adult steelhead, which was found in Gabilan Creek[5] in March 2004 (Casagrande and Watson 2006). Juvenile *O. mykiss* (life history strategy unknown) have been observed on multiple occasions in the upper reaches of Gabilan Creek (Casagrande and Watson 2006; Casagrande 2010). In their current conditions, the Reclamation Ditch, Tembladero Slough, and the Old Salinas River channel are not suitable dry-season rearing habitat for juvenile steelhead.

[5] Gabilan Creek is considered a primary tributary to the Reclamation Ditch. Historically, the lower half of the Reclamation Ditch, from Carr Lake in the center of Salinas downstream to Tembladero Slough, was considered as part of Gabilan Creek. See Casagrande and Watson (2006) for a more comprehensive description of the Reclamation Ditch watershed, its hydrology, and change in land uses.

Observations of juvenile steelhead in the Salinas River lagoon are very limited. Annually since 2002, the lagoon has been sampled seasonally at multiple sites, which has resulted in a total of four steelhead captured. These included one steelhead during each of three sampling events in 2011 (spring, summer, and fall), and one steelhead captured in the fall of 2013 (Hagar 2014). NMFS is unaware of any comprehensive fisheries assessment conducted in the Old Salinas River channel, and therefore its use by steelhead is currently unknown. However, in addition to functioning as a potential migration corridor, the muted tidal conditions in Old Salinas River channel and Tembladero Slough may function as seasonal, estuarine rearing habitat and as a saltwater acclimation zone for emigrating steelhead smolts in spring and early summer. The Blanco Drain is not accessible to steelhead.

Consultation History

NMFS participated in early coordination and technical assistance with the GWR Project applicants during the development of the Environmental Impact Report (EIR) between April and December 2014. On June 3, 2015, NMFS provided the project applicants comments on the Draft EIR (NMFS 2015) pertaining to the assessment of S-CCC steelhead habitat and anticipated project effects. On August 11, 2015, MCWRA submitted applications for three new water rights for surface water diversions on Blanco Drain (Application 32263A), Reclamation Ditch (Application 32263B), and Tembladero Slough (Application 32263C). The intended uses outlined in the applications were consistent with those of the GWR Project.

On September 25 and September 28, 2015, the applicant provided NMFS with a notice of availability for the Final EIR. Between September 28, 2015 and February 11, 2016, NMFS staff met or conducted conference calls with the applicants and their consultants to discuss project components, minimization measures (*i.e.*, bypass flows), potential species and habitat impacts, and project alternatives.

On February 16, 2016, NMFS filed protests with the SWRCB on the three water rights applications submitted by MCWRA (NMFS 2016b, c, d). Between February 16 and June 20, 2016, staff from NMFS, the applicants, their consultants, as well as the SWRCB and the California Department of Fish and Wildlife (CDFW) held several meetings or conference calls to review and discuss the protests, MCWRA's written response to the protests (MCWRA 2016), and to develop minimization measures (terms) that would result in NMFS dismissing their protests. Final dismissal terms were tentatively agreed upon by the applicants and NMFS on June 20, 2016, and on August 23, 2016, NMFS submitted its final protest dismissal letter for two of the three water rights applications (Blanco Drain and Reclamation Ditch) to the SWRCB (NMFS 2016a). NMFS' protest on the new Tembladero Slough diversion has not been resolved; however MCWRA and the GWR Project applicants agreed not to pursue the diversion as part of the GWR Project.

Between August and September 2016, NMFS participated on multiple conference calls with the applicants, their consultants, and the SWRCB staff regarding the fish screens proposed for the Reclamation Ditch diversion facility. On September 22, 2016, the applicants hosted a meeting and site visit with NMFS and the SWRCB to discuss the project status, anticipated timeline to

complete the necessary consultations and permits, and to visit the proposed diversion sites for the purpose of engineering review.

On October 20, 2016, NMFS received the biological assessment (Snider *et al.* 2016) for the GWR Project from the SWRCB. NMFS submitted its final engineer review comments to the applicants on November 3, 2016. NMFS received an email response from the applicants on November 20, 2016, which included an agreement to incorporate all recommendations by NMFS engineers regarding the maintenance and inspection of the fish screen at the Reclamation Ditch diversion into the compliance plan related to the water right permit #32263B.

NMFS received a letter requesting informal consultation from the U.S. EPA on November 18, 2016, at which time NMFS determined the project's information was complete and initiated consultation.

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.

Portions of the action area, including the Salinas River, its lagoon, Reclamation Ditch, Tembladero Slough, and the Old Salinas River channel have been designated as critical habitat for the S-CCC steelhead DPS (70 FR 52488). The designation of critical habitat for S-CCC steelhead uses the term primary constituent elements (PCEs). The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original designation identified primary constituent elements, physical or biological features, or essential features. In this letter of concurrence, we use the term PBF to mean PCE. PBFs include sites essential to support one or more life stages of the species. These sites in turn contain physical and biological features that are essential to the conservation of the species. The PBFs of designated critical habitat for S-CCC steelhead include freshwater migration corridors free of obstruction and excessive predation, with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.

The proposed action is likely to result in localized impacts to surface flows from the operations of the diversions, water quality from construction of the diversion facilities, as well as permanent impacts to the bed and banks of the Reclamation Ditch, regional groundwater recharge, and water quality improvements within downstream waters.

Snider *et al.* (2016) indicates the diversion of the agricultural wash water would result in the loss of seepage into the Salinas River of between 0 and 3 cfs, with the greater amounts occurring during summer and fall when steelhead are not migrating. Demand for wash waters during winter and spring, when steelhead migration occurs, is much lower and therefore diversion of these source waters would be reduced or non-existent during these periods.

Regarding diversions from the Blanco Drain, per the biological opinion for the SVWP, MCWRA must bypass a minimum of 2 cfs of freshwater to the lagoon (bypass rates vary by season and water year type) when operating the SVWP. Per the water right protest settlement terms for the proposed Blanco Drain diversion (described above), the GWR Project can divert up to 6 cfs from the Blanco Drain during years when the SVWP is operating. During dry years (such as 2014-2016), the Blanco Drain supplies a majority of the freshwater surface flows to the lagoon during the dry season. When the SVWP is not operating and flow in the Salinas River is not connected, the protest settlement terms for this water right require a minimum bypass of 2 cfs from the Blanco Drain into the Salinas River/Lagoon to maintain minimum lagoon elevations (rearing space) and flows to the Old Salinas River channel.

With the incorporation of the bypass flows and operating criteria, the combined diversions of all three proposed source waters in the Salinas River watershed (Salinas stormwater runoff, agricultural wash water, and Blanco Drain) would result in reduced flows in the Salinas River near the Blanco Drain by less than 1 percent of the total flow on an annual average basis. Based on the above, NMFS believes the impact of these diversions on migration windows for steelhead and on the PBFs of critical habitat in the lower river, lagoon, and the Old Salinas River channel would be insignificant.

As with the Blanco Drain and agricultural wash waters, the demand for waters from the Reclamation Ditch will be highest during the peak irrigation season. As described above, summer flows in the Reclamation Ditch are the result of agricultural return flows and tile drainage. Because water quality (*e.g.*, water temperature) is unsuitable for steelhead rearing, steelhead are not expected to be present in the Reclamation Ditch during the peak irrigation season and NMFS expects impacts to the PBFs of critical habitat as a result of diversions during the dry season will be insignificant.

For the winter and spring periods, bypass flows and operating criteria were developed for the Reclamation Ditch diversion to protect steelhead migration opportunities. Based on fish passage analyses, a minimum of 75 cfs is required for adult steelhead to successfully pass upstream through the Reclamation Ditch. Per the operating terms, diversions will cease once flows exceed 30 cfs and would not resume until flows decline to less than 20 cfs. Based on the above, and considering the life history of steelhead, the proposed location for the new diversion, NMFS anticipates the impact of diverting a maximum of 6 cfs from the Reclamation Ditch during winter and spring on steelhead migration success to be insignificant.

By restricting in-channel construction work activities in the Reclamation Ditch to the period between July 1 and September 30, the construction schedule avoids the primary migration periods of adult and juvenile steelhead in the Reclamation Ditch. Temporary de-watering of the Salinas River is not necessary for the construction of the Blanco Drain diversion facility and

related pipelines. Similarly, NMFS expects any minor temporary increases in turbidity resulting from the construction of the diversion facility, the stream flow bypass system, or during periodic sediment removal from the 12-inch depression to settle within a short distance in the slow moving water and not affect the condition of critical habitat in the Reclamation Ditch. As shown in Figure 3, the banks of the Reclamation Ditch lack vegetation, which exposes them to erosion. Any minor and temporary increases in turbidity during the first storm following construction would be similar to ambient conditions during storm events in the Reclamation Ditch (Casagrande and Watson 2006) and would therefore be discountable.

The Reclamation Ditch diversion facility will be equipped with a NMFS-approved, self-cleaning cone screen that is designed to meet NMFS criteria for slot size and velocities for steelhead fry. Steelhead are extremely rare in the Reclamation Ditch (and the Gabilan Creek watershed) and the proposed diversion will be located in an area used only as a migratory corridor for adult and smolt life stages. Also, the modified channel design will increase the depth near the intake and ensure fish have enough depth to swim away from the intake. As a result, NMFS believes direct impacts to migrating steelhead related to impingement or entrainment are discountable. The applicants agreed to allow NMFS engineers to periodically access and inspect the screen to ensure adequate performance. The Blanco Drain diversion facility is not located within anadromous waters, and therefore construction of this new diversion facility would not result in direct impacts to steelhead.

The addition of an open-cell concrete mat surrounding the new diversion within the Reclamation Ditch will result in a small area of channel armoring. However, the use of the open cell design would reduce the roughness of the armoring and will allow fine sediments to settle and fill the interstitial voids between the placed gravel. In turn, this would allow vegetation to recolonize the area. Based on the small area to be affected by the mats, and considering the Reclamation Ditch is used as migratory habitat for steelhead, NMFS believes the impacts to critical habitat PBFs from the addition of the mat would be insignificant.

The GWR Project will likely result in benefits to the S-CCC steelhead DPS, as well as EFH utilized by several federally managed fisheries (*e.g.*, estuarine habitats in the Salinas River, Old Salinas River channel, Moss Landing Harbor, *etc.*). As described above, one of the primary objectives of this project is to provide up to 3,500 AFY of recycled water for injection into the Seaside Groundwater Basin, which would allow Cal-AM to reduce its diversions from the Carmel River Groundwater Basin by equal amount (Snider *et al.* 2016). NMFS has identified the Carmel River steelhead population as a Core 1 population for the recovery in its recovery plan for the S-CCC steelhead DPS (NMFS 2013). In the recovery plan, groundwater extraction was identified as a threat to the recovery of the Carmel River population. Furthermore, additional product waters will be delivered to agricultural users in Castroville area for direct irrigation. This will further reduce groundwater pumping in the northern-most reaches of the Salinas Groundwater Basin, which would help reduce the rate of seawater intrusion into the 180- and 400-foot aquifers.

As described above, the primary sources of the raw waters for the GWR Project are agricultural return flows (including tile drainage), urban runoff, and industrial wash waters. These waters have a long history of pollution and are currently discharged into designated critical habitat, the

Elkhorn Slough State Marine Reserve, and the Monterey Bay National Marine Sanctuary. The removal, treatment, and reuse of these waters will substantially reduce pollutant loads to these sensitive habitats that support S-CCC steelhead, several federally managed fisheries, and protected marine mammals.

Construction and operation of the following GWR Project components would not be located adjacent to water bodies and therefore would not affect S-CCC steelhead or their designated critical habitat: the AWTF, product water conveyance pipelines and booster stations, and injection well facilities.

Conclusion

Based on this analysis, NMFS concurs with the U.S. EPA that the proposed action is not likely to adversely affect S-CCC steelhead or its designated critical habitat.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by U.S. EPA 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.

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

Sincerely,

for

Barry A. Thom
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Copy to File ARN 151422WCR2016SR00321
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