APPENDIX E: NATIONAL MARINE FISHERIES SECTION 7 SERVICE CONCURRENCE LETTER, MAY 25, 2022

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

Refer to NMFS ECO#: WCRO-2022-00790

May 25, 2022

Serge Stanich
Director of Environmental Services
California High-Speed Rail Authority
770 L Street
Suite 620
Sacramento, California 95814

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter for the California High Speed Rail Authority's Palmdale to Burbank Project Section

Dear Mr. Stanich:

On April 4, 2022, NOAA's National Marine Fisheries Service (NMFS) received your request for written concurrence that California High Speed Rail Authority (Authority)'s proposed action of constructing, operating, and maintaining the Palmdale to Burbank Project Section of the high speed rail system, under the National Environmental Policy Act, Assignment of Memorandum of Understanding between the Federal Railroad Administration (FRA) and the State of California, effective July 23, 2019 (California State Transportation Agency 2019), 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 and implementing regulations at 50 CFR 402.

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 document will be available within two weeks at the Environmental Consultation Organizer (https://www.fisheries.noaa.gov/resource/tool-app/environmental-consultation-organizer-eco). A complete record of this consultation is on file at NMFS's California Central Valley Office in Sacramento, California.

Consultation History

On January 22, 2021, the Authority requested NMFS review and provide comments on the Administrative Draft of the EIR/EIS for the Palmdale to Burbank project section.

On February 4, 2021, NMFS staff Katie Schmidt provided three comments on the 2021, Administrative Draft for the EIR/EIS for the Palmdale to Burbank project section, via email.

On April 4, 2022, Authority representative Sue Meyer transmitted a letter requesting NMFS concur with the Authority's determination that the Palmdale to Burbank Project Section was NLAA Southern California (SC) steelhead (*Oncorhynchus mykiss*), with a biological assessment (BA) supporting that determination (Authority 2021e), via email.

On April 6, 2022, Katie Schmidt requested more information concerning (a) proposed conservation measures (CMs) in the Project Section for fishes in the action area, (b) proposed construction and post-construction water quality best management practices (BMPs), and (c) a more detailed map of the proposed crossing design over the Santa Clara River.

On April 26, 2022, Sue Meyer transmitted the requested information via email (Authority 2022).

On April 28, 2022, Katie Schmidt had a telephone conversation with Sue Meyer and determined the documents downloaded and filed during the 2021, EIR/EIS comment period would suffice for the project description of the proposed action and provided the best source of necessary information needed to complete the consultation. The consultation was initiated on this date.

Proposed Action

The Authority proposes to construct, operate, and maintain an electric-powered high-speed rail (HSR) system in California, connecting the San Francisco Bay Area and Central Valley to Southern California. When complete, the nearly 800-mile train system will provide new passenger rail service to more than 90 percent of the state's population. The California HSR system would use state-of-the art electrically powered, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train control systems (Authority 2021d).

The proposed 35- to 41-mile Palmdale to Burbank section would provide a connection between the rest of the HSR system that provides transit service from the California Central Valley and San Francisco Bay Area to southern California metropolitan areas; however, each section of the HSR system has independent utility regardless of whether other sections are completed (Authority 2009). The County of Los Angeles is the most populous county in the United States with more than ten million residents (U.S. Census Bureau 2021), and proposed HSR service through this section would have independent utility by providing expanded commuter services within the County. During operation, the Palmdale to Burbank project section would support regional transportation needs and improve long-distance commuter passenger rail services by offering a reduced travel time option from the northern County (Antelope Valley) to the middle of the County.

The proposed HSR viaduct will be approximately 90 feet tall and constructed using cast-in-place concrete bent caps and columns supported by structural steel and installed upon pile caps. A self-climbing formwork system may be used to construct piers and portal beams more than 90 feet high. The self-climbing formwork system is equipped with a winched lifting device, which is raised up along the column by hydraulic means with a structural frame mounted on top of the previous concrete pour. The final size and spacing of the piers depend on the type of superstructure and spans they will support. A typical aerial structure foundation pile cap is supported by an average of four large-diameter (5 to 9 feet) bored piles. Additional available pile

installation methods include bored piles, rotary drilling cast-in-place piles, driven piles, and a combination of pile jetting and driving. Following completion of the piles, pile caps can be constructed using conventional methods supported by structural steel: either precast and pre-stressed piles or cast-in-drilled hole piles. For pile caps constructed near existing structures such as railways, bridges, and underground drainage culverts, temporary sheet piling (i.e., temporary walls) may be used to minimize disturbances to adjacent structures. Construction activities necessary to complete the HSR structures include pre-construction biological surveys, installation of a variety of environmental BMPs, erosion-control measures, site access establishment, vegetation clearing, temporary road construction, heavy equipment movement and operation, earthwork preparation, excavation, vibratory and impact pile driving, material storage, railbed construction, and eventually site clean-up and restoration after construction is complete.

In association with the construction of the project section, the Authority has proposed to incorporate a variety of impact avoidance and minimization features (IAMFs (Authority 2016, 2021a)) as CMs or BMPs to minimize or avoid construction impacts to sensitive biological and hydrologic resources (Authority 2021b, c). NMFS hereby incorporates by reference the Supplementary Information provided, "Conservation Measures Specific to Unarmored Three-spined Stickleback" and "Hydrology and Water Resources IAMFs" (Authority 2022). According to the BA (Authority 2021e), construction at this location will occur outside the wetted channel of the river, proposed permanent pile installation locations will be located outside of the 25-year flood zone, and permanent structure construction will be completed during the dry season (June 1st through November 1st).

The Authority will regularly perform maintenance along the track and railroad right-of-way (ROW), as well as on the power systems, train control, signalizing, communications, and other vital systems required for the safe operation of the HSR system. A proposed Lancaster Maintenance Facility would occupy approximately 105 acres to accommodate rail car storage, cleaning, repair, overnight layover facilities, and servicing facilities for the lifetime of the HSR system. The Authority expects maintenance methods to be comparable to those of existing European and Asian HSR systems, adapted to the specifics of the California HSR system, with inspection and maintenance for some project elements occurring several times per week (e.g., track and overhead power system) and some inspection occurring only a few times a year (e.g., structural inspection, vegetation control within the ROW). Approximately every 4–5 years, ballasted track would require tamping where used. Steel structures would require painting every several years. Fencing and intrusion protection systems would be remotely monitored, as well as periodically inspected, with maintenance taking place as needed. The FRA will specify standards of maintenance, inspection, and other items in a set of regulations to be issued in the next several years.

Action Area

The action area consists of the approximately 35- to 41-mile Palmdale to Burbank Project Section's footprint which spans from Lancaster (north of Palmdale) in the north to Burbank in the south (Figure 1). The Palmdale to Burbank Project Section proposes to site a Maintenance Facility in the Lancaster area, which may not be needed depending on maintenance facilities included in the HSR project sections to the north and the south of this one. The Palmdale to

Burbank Project Section includes a station in the city of Palmdale at the existing Palmdale Transportation Center, and a station in the city of Burbank near the Hollywood Burbank Airport (Formerly Bob Hope Airport) (Authority 2021d). In addition, each of the Palmdale to Burbank Project Section Build Alternatives would require the construction of one adit and one intermediate window facility.

The Build Alternatives evaluated in this consultation include the Refined SR14 and SR14A, as described in the Final EIR/EIS for the Project Section. These two project alternatives require a viaduct crossing of the upper Santa Clara River (Figure 2). Project Alternatives E1, E1A, E2, and E2A as described in the Admin Draft EIR/EIS would effectively avoid the main channel of the upper Santa Clara River. Because a preferred alternative has not yet been chosen, NMFS took a conservative approach and evaluated the alternatives with the greatest potential to impact Southern California steelhead or their habitats. Therefore, NMFS assumed the proposed route under consultation is either Alternative SR14 or SR14A, which are identical in their crossing type and location over the Santa Clara River. NMFS will rely on EIR/EIS analyses assigned to these alternatives specifically to evaluate potential adverse impacts to Southern California (SC) steelhead and their habitat.

Alternatives Refined SR14 and SR14A consist of the HSR route from Lancaster and the new Palmdale Transportation Center Station, with underground tunnels through the San Gabriel Mountain Range, emerging through portals on the mountain and canyon sides to elevated aerial structures down to the San Fernando Valley, ending at the Burbank Airport Station. Throughout the action area NMFS analyzed locations where the SR14 and SR14A could affect waterways with NMFS trust resources, specifically the route from Soledad Canyon to elevated viaducts over the Santa Clara River, and in some cases, its tributaries. The location of greatest potential impact is a crossing over the Santa Clara River mainstem (Latitude 34.435698°, Longitude -118.369955°) approximately 58 river miles upstream from the Santa Clara River's connection with the Pacific Ocean (USGS 2022), and 26 miles upstream from the upstream extent of SC steelhead designated critical habitat at the Santa Clara and the Piru Reservoir tributary confluence.

We considered, under the ESA whether or not the proposed action would cause any other activities and determined that it would not.

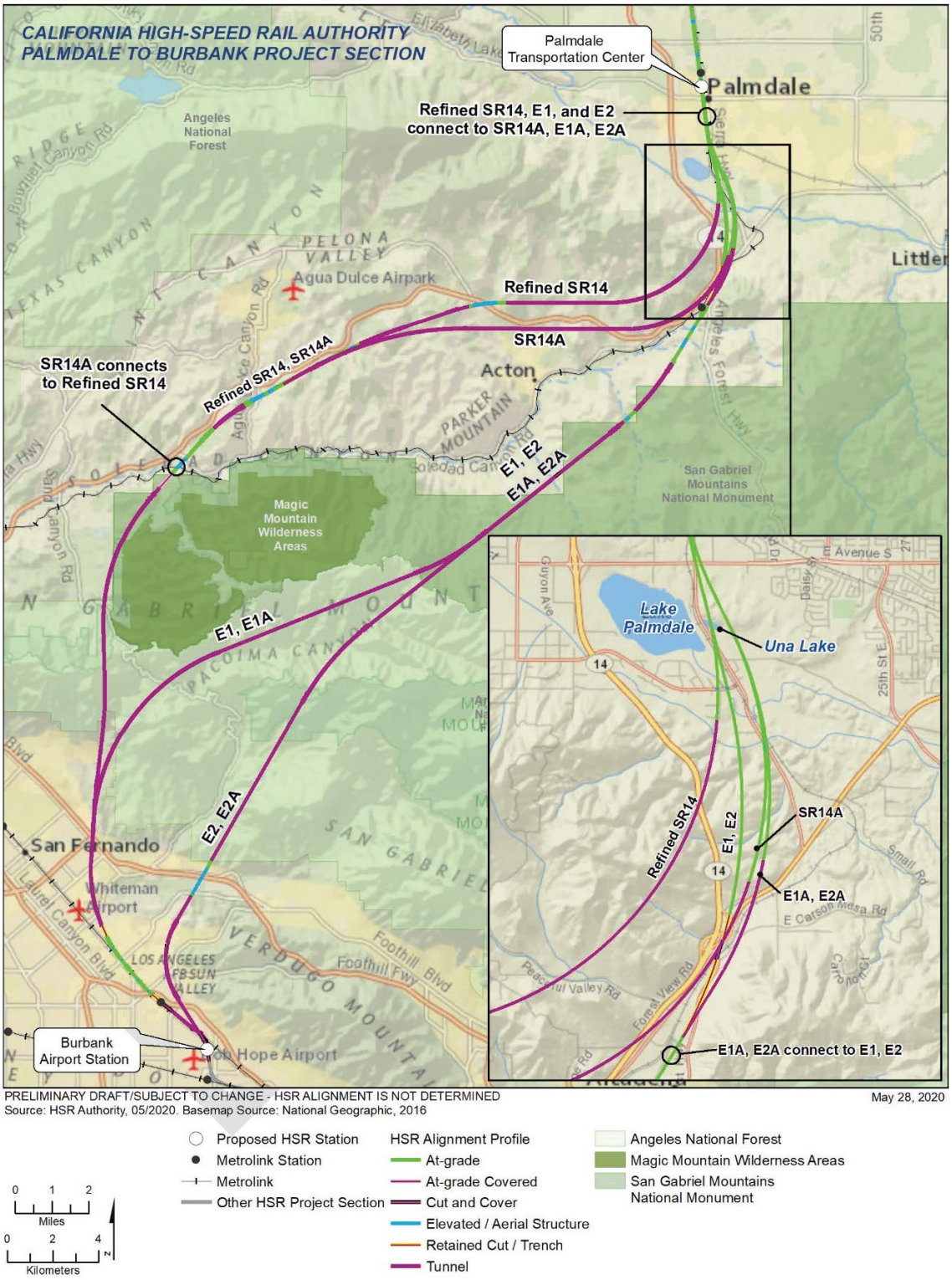

Figure 1. HSR Palmdale to Burbank Alternatives and Stations. Note Refined SR14 and SR 14A routes are identical at their Santa Clara River crossing (Authority 2021b).

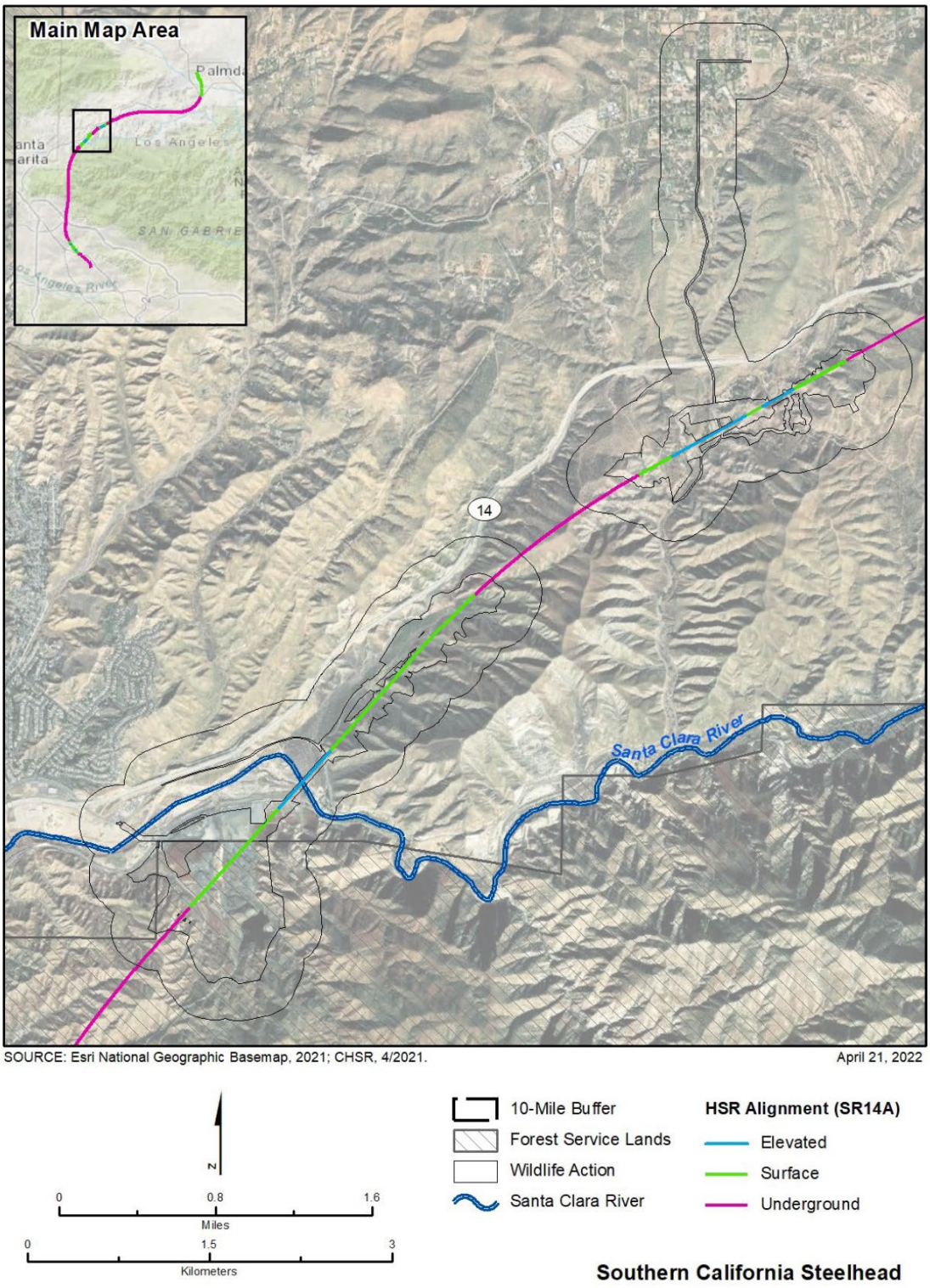

Figure 2. Focused map of Refined SR14 and SR 14A routes as the HSR route exits underground tunnels at Soledad Canyon and crosses the Santa Clara River on viaduct (Authority 2022).

Background and Action Agency's Effects Determination

The Authority determined the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the SC distinct population segment (DPS) of steelhead or its designated critical habitat. The Authority made this determination due to:

- The 26-mile distance between the active construction and operating locations in the project's footprint (the major crossing of HSR on the Santa Clara River) from current extant occurrences of steelhead downstream,

- The presence of one 'natural' barrier and a man-made barrier to fish passage several miles downstream of the action area, and

- Implementation of avoidance and minimization measures for unarmored three-spined stickleback (*Gasterosteus aculeatus williamsoni*) that are expected to occur at the viaduct crossing over the Santa Clara River mainstem near Soledad Canyon, and adoption and implementation of the water quality BMPs/IAMFs as proposed for both the construction and operations and maintenance phases of the proposed action.

SC steelhead have been federally listed as an endangered since August 18, 1997 (62 FR 43937; updated 79 FR 20802, April 14, 2014). The SC steelhead DPS description includes naturally spawned steelhead originating downstream of natural and manmade impassable barriers from the Santa Maria River to the U.S.-Mexico Border (NMFS 2016). Their critical habitat was designated September 2, 2005 (70 FR 52487). In the NOAA Fisheries 2019-2021 Report to Congress (NMFS 2022), SC steelhead had been given a recovery priority number of 1C. A recovery priority number is used to prioritize agency resources for recovery plan development and implementation, and is assigned based on the application of Endangered and Threatened Species Listing and Recovery Priority Guidelines. Recovery numbers range from 1 to 24, and the lower a recovery number indicates a higher recovery priority. The inclusion of 'C' indicates conflict. Therefore, a recovery number of 1C indicates a high demographic risk, that major threats are well understood, a high amount of U.S. jurisdiction, authority, or influence exists for management or protective actions to address major threats, high certainty that management or protective actions would be effective, and that conflict is present or expected (April 30, 2019; 84 FR 18243). For more information on SC steelhead, visit: https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/southern-california-steelhead.

The SC DPS of steelhead consists of five biogeographic population groups (BPGs). SC steelhead originating from the Santa Clara River watershed are part of the Monte Arido Highlands BPG. This area is naturally dominated by a series of steep mountain ranges and dry coastal valleys and terraces. The area has a Mediterranean climate with long, dry summers and brief winters that occasionally produce short-lived but intense storms that generate flash floods in the upper washes in river systems that extend inland. According to NMFS's SC steelhead recovery plan (NMFS 2012) the greatest threats to the Santa Clara River population are dams and surface water diversions, groundwater extraction, agricultural and urban development, and non-native species (NMFS 2012).

The priority recovery actions for the Monte Arido BPG, specific to the Santa Clara River, are:

- Developing and implementing dam operation plans for Santa Felicia, Pyramid, Vern Freeman Diversion, and Castaic Dams that include water releases that support adult and juvenile SC steelhead/*O. mykiss* life history requirements and provide essential habitat functions,

- Developing and implementing plans to physically modify Santa Felicia, Pyramid, Vern Freeman Diversion, and Castaic Dams to allow natural passage of adult and juvenile SC steelhead/*O. mykiss* between the estuary/ocean and upstream spawning/rearing habitats and,

- Developing and implementing a groundwater monitoring program to guide groundwater extractions within steelhead bearing watersheds to ensure surface flows can support all life-history stages.

Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b). When evaluating whether the proposed action is not likely to adversely affect listed species or critical habitat, NMFS considers whether the effects are expected to be completely beneficial, insignificant, or discountable. Completely 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. Effects are considered discountable if they are extremely unlikely to occur.

As identified in the action area description, the HSR viaduct for Refined SR14 and SR14A routes over the Santa Clara River near Soledad Canyon which is over 20 miles upstream of Vern Freeman Dam, the current limit of anadromy. The full extent of anadromy displayed in the SC steelhead recovery plan depicts the Santa Clara River as being viable past the viaduct crossing location, to the Santa Clara County boundary near Acton, California (NMFS 2012). Vern Freeman Dam and operation of its fishway is a significant, if not complete, passage barrier to SC steelhead (NMFS 2012) and is currently under litigation due, in part, to its impact on fish passage (Bottorff 2019, Center for Biological Diversity 2020). Timing for resolution of this issue is unknown and therefore the timing for upstream passage remains uncertain. Until such a time that litigation is resolved, adult SC steelhead passage to areas upstream of Vern Freemen will likely occur on a very infrequent basis.

However, flood events do occur in this region (Worden 2013, The City of Santa Clara 2022), and climate change forecasting warn that significant rain events, such as atmospheric rivers, are expected to increase in magnitude into the next century (Bedsworth et al. 2018, Huang et al. 2020). The upper Santa Clara River was regularly subjected to flash flooding before the region's

water resources were fully developed. Under these historical conditions SC steelhead likely capitalized on water years when additional spawning and rearing habitat were made available in the upper reaches of the Santa Clara River and its tributaries. Now that several of its tributaries are dammed into reservoirs and diversions redirect water outside of active flooding periods, the Santa Clara River channel in this reach is often dry.

In the event SC steelhead are able to access the action area (during an extreme wet water year for example) the Authority adopted several CMs with the intention to avoid three-spined stickleback. These measures will also serve to sufficiently avoid exposing juvenile SC steelhead to construction effects in the unlikely event they were in the action area. The foremost of these avoidance and minimization measures is that structure construction will only proceed during a work window of June 1 through November 1. This work window is the dry season in this region and outside of the adult migration and smolt migration season (January – May) (Sharpovalov and Taft 1954). Also, all work is proposed to occur outside of the wetted channel with special precautions to avoid disturbance to the wetted channel of the Santa Clara River, should it be wetted. In addition, the aforementioned CMs (Authority 2021a, b, c, 2022) stipulate construction stormwater management, offsite disposal of concrete wash, and pollution prevention plans to address construction pollution, debris, and sediment from entering the Santa Clara River and its tributaries. These measures are also expected to sufficiently contain and prevent construction pollutants from being transported outside of the action area.

Effects of the proposed action is not expected impact SC steelhead or potential historical habitat in the action area for the following reasons:

- The HSR viaduct footings will be located outside of the 25-year flood zone. It is unlikely that the new artificial structures will adversely affect spawning sediment supply or its transport down to accessible reaches of designated SC steelhead habitat, and

- During the operations and maintenance phase of the proposed action, the Authority proposes to capture and treat project-related stormwater prior to discharge, including using low-impact development (LID) designs, constructed wetlands, biofiltration, and bioretention techniques for pollutant-generating surfaces such as parking lots, access roads, over- and under-passes, reconstructed interchanges, and new or relocated roads/highways (Authority 2022) that have been proven to address contaminant of emerging concern, 6-PPD quinone (Tian et al., 2021, Brinkmann et al., 2022), which is acutely toxic to *O. mykiss* and other listed salmonids. Implementation of these measures is expected to be protective to both individual steelhead and the ability of their habitats to support steelhead through all life stages (McIntyre et al., 2015, Spromberg et al., 2016).

There are several efforts to conserve the remaining natural aspects of the Santa Clara River and to restore habitat functionality were opportunity and community engagement coincide (NMFS 2012, Carlson 2019, Stillwater Sciences et al., 2020). At this time there is no indication that construction, operation, or maintenance of the Palmdale to Burbank HSR project section would come into conflict with any of these efforts, or the prescribed recovery actions for the Santa Clara River watershed in pursuit of the recovery of the SC steelhead DPS in the action area.

Conclusion

Based on this analysis, NMFS concurs with the Authority that the proposed action is not likely to adversely affect the subject listed species.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Authority or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) the proposed action causes take; (2) 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; (3) 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 the written concurrence; or (4) 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 consultation.

Conservation Recommendations

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 Authority, under its National Environmental Policy Act (NEPA) assignment and Memorandum of Understanding between the FRA and the State of California as the lead federal agency on the proposed action, also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1). NMFS offers the following conservation recommendations in pursuit of these responsibilities in the context of the proposed action:

- The Authority should protect existing riparian buffer zones or establish new zones on all permanent and ephemeral streams that the Palmdale to Burbank Project Section interacts with in the action area as most will eventually drain to SC steelhead riverine, estuarine, and marine habitats downstream. Re-vegetate sites to resemble the natural plant community and maintain buffers that support large woody material and leaf litter input. Utilize alternatives to traditional riprap and hard armoring where streambank stabilization is needed, such as designing compacted fill lifts and vegetation plantings to stabilize banks where feasible. Doing so would aid in the maintenance of the functionality of existing habitats downstream, and improve the resiliency and probability of recovery of SC steelhead in the region.

- The Authority should incorporate LID designs and greenscape features into all HSR ROW and access roads, station designs, maintenance facilities, utilities, and parking area features whenever possible, including tree plantings, vegetated roofs, stormwater planters, infiltration or lined rain gardens, bioswales, vegetated strips, bioretention devices, and the enhancement of onsite natural hydrologic features that maximum water evapotransport and groundwater infiltration (as appropriate for the local biome). Doing so would aid in the restoration of the functionality of existing critical habitat water quality and water quantity PBFs for SC steelhead critical habitat in general, even in locations far from extant populations, and improve the resiliency and probability of recovery of SC

steelhead in the region by helping replenish available surface and groundwater supplies of the watersheds in the action area.

- The Authority and its contractors should continue to work cooperatively with other State and Federal agencies, private landowners, governments, and local watershed groups as possible to identify opportunities for fish passage and water management solutions, habitat restoration, biological monitoring, and/or funding to otherwise support SC steelhead recovery in this watershed, particularly efforts associated with the Wishtoyo Chumash Foundation, Santa Clara River Steelhead Coalition, Friends of the Santa Clara River, the Santa Clara River Conservancy, and CalTrout. Doing so would aid in the restoration of the functionality of existing habitats and connection between historically used waterways, and improve the resiliency and probability of recovery of SC steelhead in the region.

Please direct questions regarding this letter to Katie Schmidt, Fish Biologist for the Central Valley Office in Sacramento, California, at katherine.schmidt@noaa.gov or (916) 542-3515.

Sincerely,

Jonathan Ambrose,
San Joaquin River Branch Chief
California Central Valley Office

cc: To the File: ARN 15422-WCR2018-SA00467

Sue Meyer, California High Speed Rail Authority, Permitting, Compliance, and Mitigation Manager, Sue.Meyer@hsr.ca.gov

Mike Aviña, California High Speed Rail Authority, Senior Permitting Manager, mike.avina@hsr.ca.gov

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