UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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Long Beach, California 90802

November 21, 2024

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Re: Piru Creek Wild and Scenic River Comprehensive River Management Plan (October 2024)

Dear Mr. Torres and Mr. Stubbs:

NOAA's National Marine Fisheries Service (NMFS) provides the enclosed comments concerning the Draft Piru Creek Wild and Scenic River Comprehensive River Management Plan (CRMP).

NMFS supports designating Piru Creek between the Pyramid Dam and Santa Felicia Dam as a Wild and Scenic River, and the related development of a CRMP for this portion of Piru Creek.

If you have any questions regarding these comments, please contact Mr. Mark H. Capelli at mark.capelli@noaa.gov or (805) 963-6478.

Thank you for the opportunity to review the Draft Piru Creek Wild and Scenic River CRMP.

Sincerely,

Anthony P. Spina
Branch Supervisor, Southern California
California Coastal Office

Enclosure

cc: Kristie Klose, U.S. Forest Service, Los Padres National Forest
Stephen Henry, U.S. Fish and Wildlife Service, Ventura Office
Chris Dellith, U.S. Fish and Wildlife Service, Ventura Office
Kyle Evans, California Department of Fish and Wildlife, Region 5

NOAA's National Marine Fisheries Service's Comments on the U.S. Forest Service's Draft Piru Creek Wild and Scenic River Comprehensive River Management Plan (October 2024)

November 21, 2024

General Comments

As background, in 1997, NOAA's National Marine Fisheries Service's (NMFS) listed populations of steelhead (*Oncorhynchus mykis*s) extending from the Santa Maria River south to the Santa Monica Mountains as "endangered" under the U.S. Endangered Species Act (ESA) (62 FR 43937). In 2002, NMFS extended the range of that listing south to the U.S.-Mexico border (67 FR 21586). In 2006, the listing of the species as "endangered" was reaffirmed (71 FR 834). In 2012, NMFS published a Southern California Steelhead Recovery Plan to guide the recovery of southern California Steelhead (NMFS 2012), and in 2023 issued a 5-Year Review for Southern California Steelhead, which includes updated information on the species' status, including the population in Piru Creek (NMFS 2023).

Piru Creek is a sub-watershed of within the Santa Clara River Watershed, which is designated as a "Core 1" watershed in NMFS' Southern California Steelhead Recovery Plan (Figure 1). Core 1 populations have the highest priority for recovery based on: 1) the intrinsic potential of the population in an unimpaired condition; 2) the role of the population in meeting recovery viability criteria; 3) the current condition of the populations; 4) the severity of the threats facing the populations; 5) the potential ecological or genetic diversity the watershed and population could provide to the species; and 6) the capacity of the watershed and population to respond to the critical recovery actions needed to abate those threats. Core 1 populations form the nucleus of the recovery implementation strategy and are the focus of recovery efforts.

Specific Comments

Water Resource Projects

Page 4.

NMFS assessed the effects of Santa Felecia Dam Hydroelectric Project on endangered steelhead and designated critical habitat for this species in Piru Creek (and by extension on the steelhead population in the Santa Clara River). That assessment resulted in a comprehensive Biological Opinion with a reasonable and prudent alternative to the proposed operations of that Project (NMFS 2008). The Biological Opinion address multiple issues, including impacts to creek hydrology and water releases from the dam, sediment transport, and a provision for volitional steelhead passage around Santa Felicia Dam to minimize the effects of the ongoing impassible presence of the dam on passage of steelhead to historical spawning and rearing habitats in the upper reaches and tributaries, where extant native *O. mykiss* populations remain.

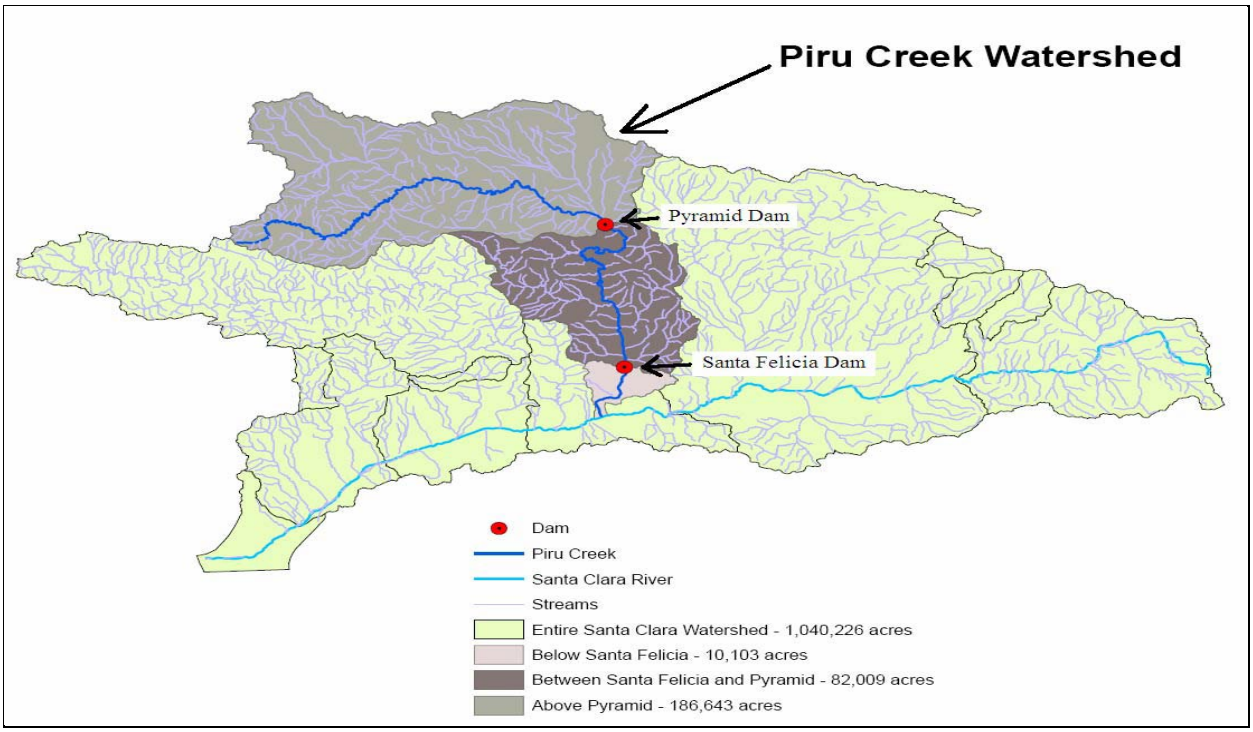

Figure 1. Piru Creek watershed and Santa Clara River Watershed. Note: darker shaded area identifies that portion of Piru Creek between Santa Felicia Dam and Pyramid Dam designated as a Wild and Scenic River and administered by the U.S. Forest Service.

Fisheries

Baseline and Present Conditions

Page 12.

Santa Felicia Dam blocks steelhead from accessing historical spawning, rearing, and refugia habitat in the middle reaches of Piru Creek, including tributaries such as Aqua Blanca Creek and Fish Creek. However, it appears that *O. mykiss* inhabiting reaches upstream Santa Felecia Dam are likely to volitionally or non-volitionally access Piru Creek downstream of the dam during certain environmental conditions, thereby utilizing designated critical habitat for the species within lower Piru Creek and the Santa Clara River Watershed (Figure 2 and 3).

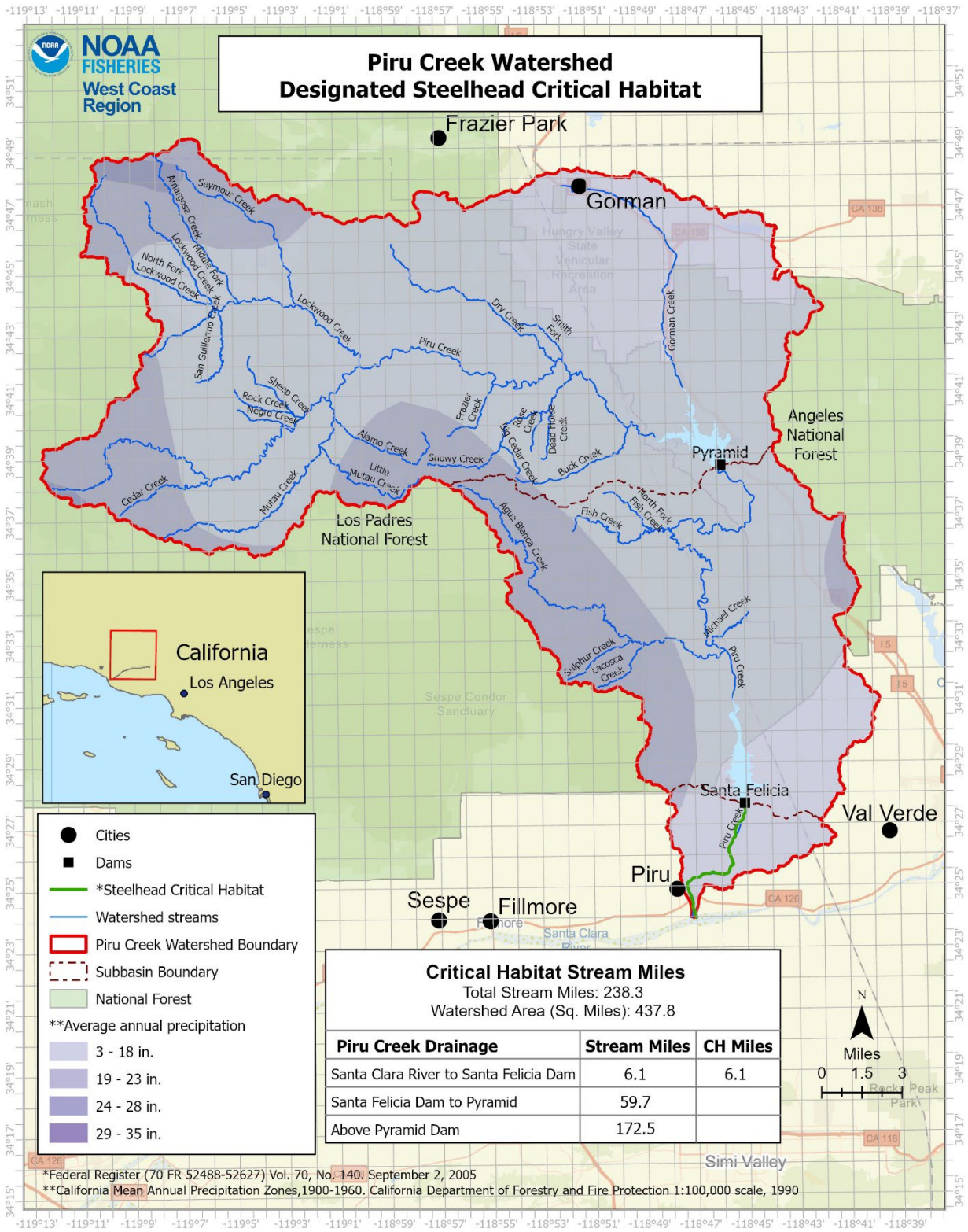

Figure 2. Designated Steelhead Critical Habitat within lower Piru Creek.

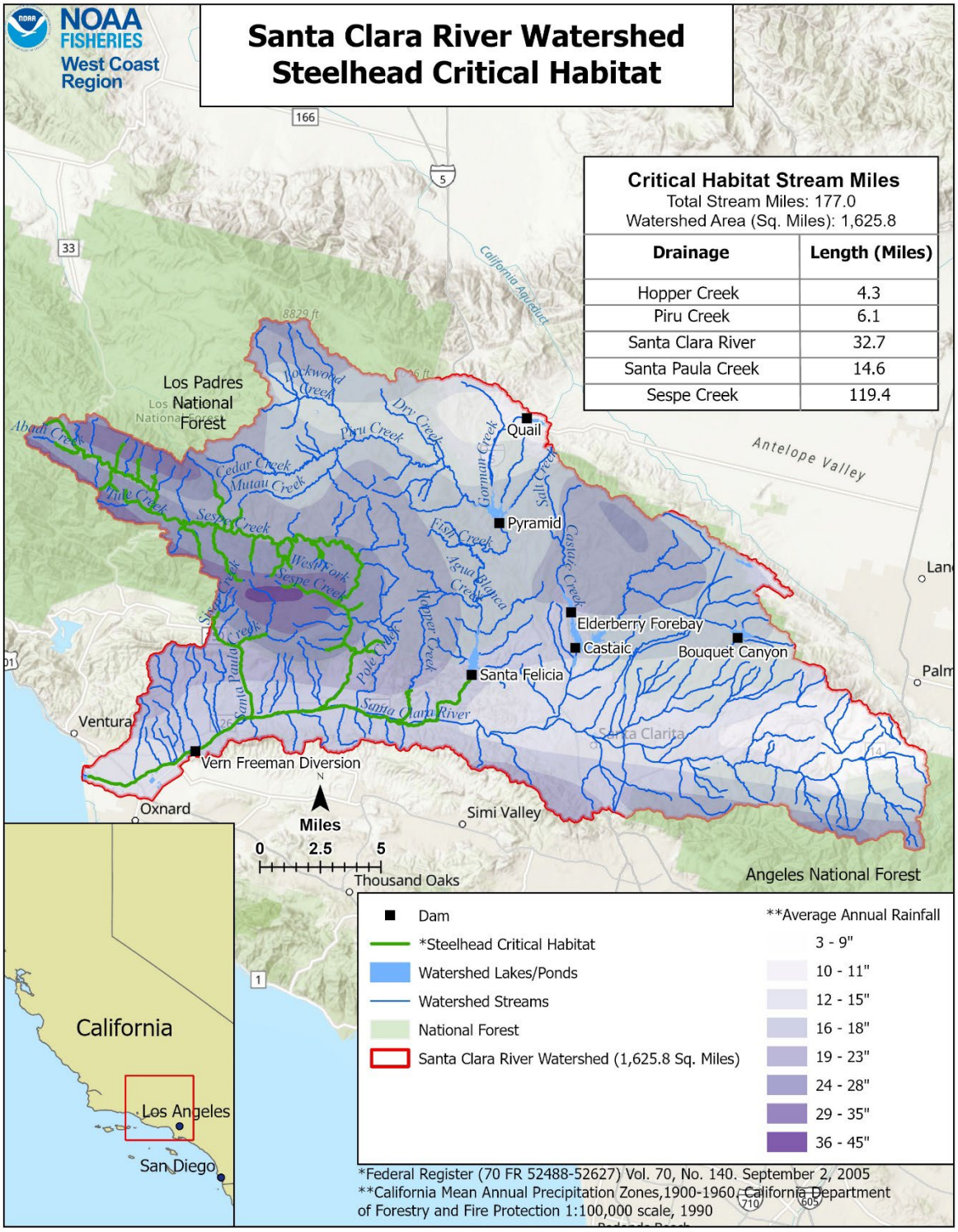

Figure 3. Designated Steelhead Critical Habitat within the Santa Clara River Watershed.

The Piru Creek population of native *O. mykiss* (which includes land-locked fish with anadromous ancestry) possesses a number of attributes that contribute to its ecological importance to the steelhead population of the Santa Clara River Watershed (NMFS 2008, Pearse and Garza 2008, Abadía-Cardoso, *et al*. 2016, NMFS 2022).

The Piru Creek sub-basin also serves as refugia habitat within the larger Santa Clara River Watershed. This is evidenced by the reproduction of *O. mykiss* and extensive suitable habitat (Moore 1980, Deinstadt *et al*. 1990) and the confirmation that *O. mykiss* upstream of Santa Felicia Dam and Pyramid Dam exhibit ancestral native steelhead genetics (Nielsen *et al*. 1997, Girman and Garza 2006, Boughton *et al*. 2007, Boughton and Garza 2008, Pearse and Garza 2008, Abadía-Cardoso *et al*. 2016, Cramer Fish Science 2018, 2019a, 2019b). Research has confirmed that fish residing upstream of the dam that retain Omy5 A haplotype still possess the potential for smoltification and migrate to the ocean (*e.g*., Thrower *et al*. 2004a, 2004b, Pearse *et al*. 2014, Pearse 2016, Apgar *et al.* 2017). The characteristics of the *O. mykiss* population upstream of the Pyramid and Santa Felicia dams, and the quantity and quality of habitat, suggest the Piru Creek sub-basin has the potential to support large, naturally reproducing population of steelhead (NMFS 2008).

These features of Piru Creek are reflected in the intrinsic potential steelhead spawning and rearing habitat that NMFS has identified within the Piru Creek sub-basin as part of its steelhead recovery planning process. Intrinsic potential habitat was identified to determine the historic location, distribution and extent of suitable steelhead habitat, particularly over-summering rearing habitat, within the species natural range (Boughton and Goslin 2006) (Figure 4).

NMFS concurs with the Draft CRMP's conclusion that:

> "The population of resident rainbow trout with native [anadromous] ancestry may also be important resources to the recovery of Southern California steelhead (Abadía-Cardoso *et al*. 2016)." p. 14.

We would note that an important feature of *O. mykiss* populations in the Southern California Steelhead Recovery Planning Area is that they are typically composed of anadromous (steelhead) and resident fish (rainbow trout). The ratio of anadromous and non-anadromous *O. mykiss* in an individual population (or watershed) can vary geographically and temporally, depending on local conditions. Further, anadromous steelhead in most of these coastal watersheds can sometime interbreed (Clemento *et al*. 2009, Pearse *et al.* 2019). More recent research indicates that that the resident and anadromous forms of *O. mykiss* that interbreed are closely integrated at the population level, and that each form can play an important role in perpetuating the other (Pearse *et al*. 2014, Apgar *et al*. 2017, Abadía-Cardoso *et al*. 2011, 2016, Campbell *et al*., Hale et al. 2024).

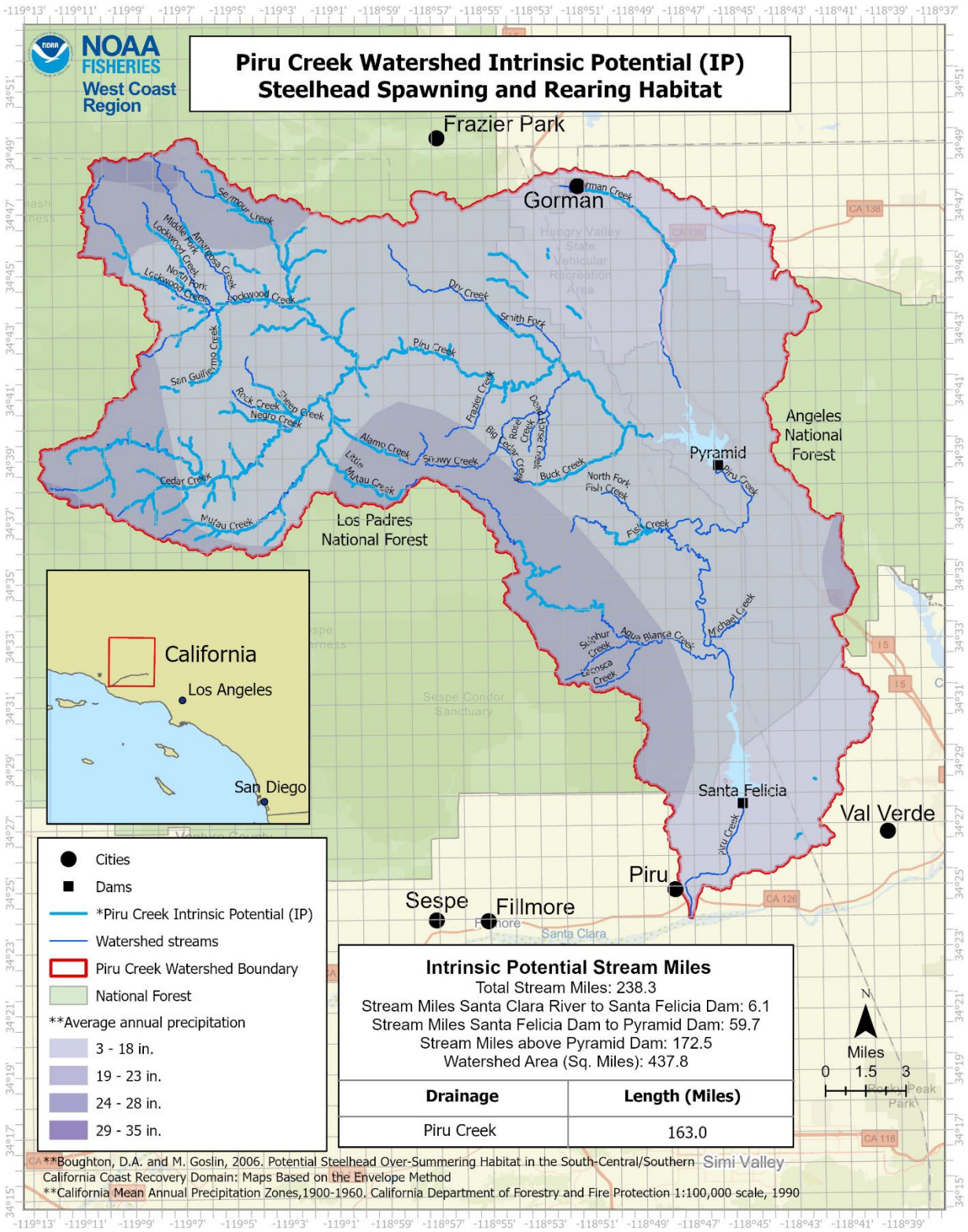

Figure 4. Intrinsic potential steelhead spawning and rearing habitat within the Piru Creek watershed.

NMFS' most recent 2023 5-Year Review of Southern California Steelhead concluded:

> "To meet the viability criteria for the species' naturally variable life-history expression, viable populations within each BPG [Biogeographic Population Group] would need to exhibit both the resident and anadromous life-history strategies, as well as a third life-history of anadromous fish (lagoon-anadromous) that rear in estuaries for a significant time prior to smolting and emigrating to the ocean." (NMFS 2023, p. 5)

Potential Future Management Actions

Pages 24-25.

NMFS notes that the Draft CRMP's proposed future management actions include:

> "Support NOAA's National Marine Fisheries Service (NMFS) and United Water in reintroducing Pacific Steelhead to Piru Creek above Santa Felicia Dam; coordinate with California Department of Fish and Wildlife in achieving desired conditions for fisheries." p. 25

NMFS appreciates the explicit recognition of this future management action. However, native *O. mykiss* already exist above Santa Felicia Dam. In that context, we note that in view of the ancestral steelhead heritage of the *O. mykiss* currently occupying the reach of Piru Creek (and its tributaries) between Santa Felecia Dam and Pyramid Dam, providing volitional fish passage for both upstream migrating steelhead and downstream emigrating smolts is more accurately characterized as "re-integrating" or "re-connecting" these historic native populations (Girman and Garza 2006, NMFS 2023).

NMFS' most recent 2023 5-Year Review of Southern California Steelhead also identified **"**Recommended Future Actions Over the Next 5 Years Toward Achieving Population Viability," These include:

> "Implement the fish passage program at Santa Felicia Dam on Piru Creek (Santa Clara River) as provided for in NMFS' May 5, 2008, Biological Opinion for the Santa Felicia Hydroelectric Project (NMFS 2012a: PC-SCS-4.1 – 4.2)." p. 60.

Further, NMFS recommends that regulated flow regimes, to the maximum extent possible, mimic the natural pattern of flow in a river system – the hydrographic cycle to which steelhead, in their various fresh-water life history phases, have become adapted through evolutionary processes. Artificially manipulating the natural hydrograph can obscure hydrologic and water temperature cues, or create false cues, that can affect the instream behavior of both adult and juvenile *O. mykiss.* In some situations this can alter or restrict the migratory behavior and volitional passage throughout the watershed.

For example, manipulation of flows in the middle reaches of Piru Creek that alters the seasonal pattern of connectivity between mainstem and tributary flows can affect volitional fish

movement between the mainstem and tributaries (e.g., Agua Blanca Creek and Fish Creek), preventing fish in the mainstem from reaching cooler waters in upstream tributaries. NMFS has previously commented on this issue (NMFS 2007, NMFS 2013). Providing ecologically meaningful flows from Pyramid Dam and Reservoir is essential to restore and maintain ecological functions for native aquatic species in the middle reaches of Piru Creek Wild and Scenic River, including, but not limited to, native *O. mykis*s (NMFS 2005, NMFS 2016, 2017, 2018, 2021).

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