UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
501 West Ocean Boulevard, Suite 4200
LONG BEACH, CA 90802

Refer to NMFS No: WCRO-2023-02678

August 21, 2025

Matt Huffaker
City Manager
City of Santa Cruz
809 Center Street
Santa Cruz, California 95060
mhuffaker@santacruzca.gov

Re: Issuance of Endangered Species Act Section 10(a)(1)(B) Incidental Take Permit for City of Santa Cruz Anadromous Salmonid Habitat Conservation Plan

Dear Mr. Huffaker:

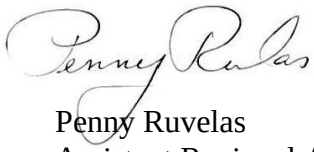
Enclosed is an Incidental Take Permit (WCRO-2023-02678) issued to the City of Santa Cruz under the authority of Section 10(a)(1)(B) of the Endangered Species Act (ESA). The permit authorizes the City of Santa Cruz, while carrying out its lawful services, to incidentally take endangered Central California Coast coho salmon (*Oncorhynchus kisutch*) and threatened Central California Coast steelhead (*O. mykiss*). The permit term is 30 years, covering activities as described in the City of Santa Cruz Anadromous Salmonid Habitat Conservation Plan.

NOAA's National Marine Fisheries Service (NMFS) requires that the individuals acting under the authority of the Permit review the Permit before engaging in the permitted activities. Please sign and date the last page and: (1) email a PDF file of the signature page to Mandy.Ingham@noaa.gov. Please note that you are not authorized to conduct activities under the Permit that incidentally take ESA-listed species until we receive a signed copy of the signature page.

We direct you to Section III, which describes the permit conditions and annual take limits. The Permit authorizes take up to the levels, by the means, in the areas, and for the purposes stated in the permit application. The permit is also subject to annual authorization based on the reported annual take and compliance with the permit conditions. Annual reports are due by June 30 of each year covering the previous calendar year. The water quality-related monitoring and reporting will include data and analysis for the previous water year (October 1 through September 30). NMFS shall be notified within 24 hours if an ecological surrogate or individual species take threshold is exceeded. The City of Santa Cruz shall continue to coordinate with NMFS during all phases of implementation and monitoring by issuing annual reports throughout implementation of the Habitat Conservation Plan.

Please contact Mandy Ingham, North-Central Coast Office in Santa Cruz, at Mandy.Ingham@noaa.gov or 831-837-7209 if you have any questions concerning this permit, or require additional information.

Sincerely,



Penny Ruvelas
Assistant Regional Administrator
West Coast Region

Enclosure

Copy to: NMFS File # 151401WCR2002SR00002
151422WCR2022SR00133

NOAA'S NATIONAL MARINE FISHERIES SERVICE

PERMIT TO INCIDENTALLY TAKE ENDANGERED/THREATENED SPECIES

Permit Number:	WCRO-2023-02678
Expiration Date:	30 Years from the Signing Date
Permittee:	City of Santa Cruz 809 Center Street Santa Cruz, California 95060
Principal Officer and Contact:	City Manager City of Santa Cruz 809 Center Street Santa Cruz, California 95060
Permit/Plan Area:	The Permit/Plan Area for the City of Santa Cruz Anadromous Salmonid Habitat Conservation Plan is located in Santa Cruz County on the central coast of California, approximately 70 miles south of San Francisco (Figure 1). The total watershed and water service/urban areas containing the Permit/Plan Area are approximately 176 square miles and include three geographically distinct areas: The North Coast watersheds, the San Lorenzo River watershed, and the Santa Cruz urban center, as well as the water service areas outside of the city limits.

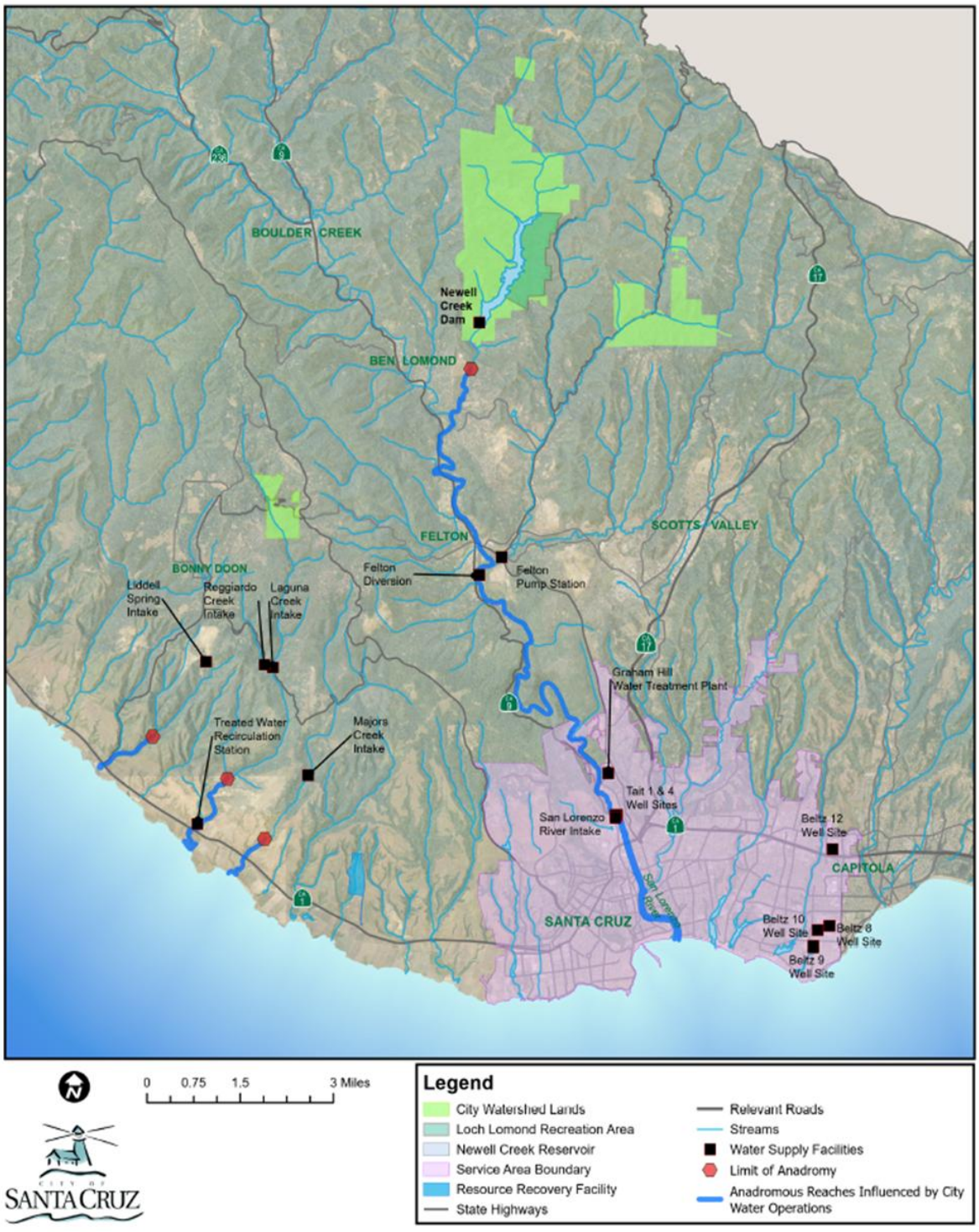


Figure 1. City of Santa Cruz Anadromous Salmonid Habitat Conservation Permit/Plan Area. Santa Cruz County, California. The Permit/Plan Area is approximately 176 square miles and includes three geographically distinct areas: The North Coast watersheds (18 square miles), the San Lorenzo River watershed (138 square miles), and the Santa Cruz urban center, as well as the water service areas outside of the city limits. The City's urban center encompasses approximately 12 square miles centered around the mouth of the San Lorenzo River.

1. AUTHORIZATION

The City of Santa Cruz (the City) applied to National Marine Fisheries Service (NMFS) for an incidental take permit (ITP) under the Endangered Species Act (ESA) Section 10(a)(1)(B) (16 U.S.C. §§ 1539), for a 30-year period authorizing the incidental take of the following listed species (hereinafter referred to collectively as "Covered Species"):

- Endangered Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU); and
- Threatened CCC steelhead (*O. mykiss*) Distinct Population Segment (DPS).

Proposed activities under the Permit (Covered Activities) include those activities necessary for the City to provide a wide range of essential public services for its citizens and visitors, such as the construction, operation and maintenance of water supply facilities, the construction and maintenance of roads, waste management activities, stormwater management, and the operation and maintenance of recreation and open space areas. Mitigation and conservation measures identified in the City of Santa Cruz Anadromous Salmonid Habitat Conservation Plan (ASHCP) are also Covered Activities.

The City is hereby authorized to incidentally take the Covered Species listed above for a period of 30 years, while conducting the Covered Activities in the manner specified in the Permit Holder's application and supporting documents and communications, subject to the provisions of Section 10(a)(1)(B) of the ESA, the NMFS regulations governing listed species permits (50 CFR Parts 222), and the conditions hereinafter set forth. The Covered Activities are those necessary to operate and maintain the City's operations during the ITP duration, and are described below. Table 1 summarizes the HCP Covered Activities, which are comprised of General and Sub-Activities.

Table 1. Covered Activities Summary (Based off of Table 3-3 from HCP).

General Activity	Sub-Activity	Notes (including activity frequency during the HCP term)
Rehabilitation of Diversion Structures and Pipeline Reaches	1. Majors Diversion 2. Felton Diversion 3. Tait Street Diversion	1. Sediment transport improvements 2. Fish screening improvements 3. Fish passage improvements at the Tait Street and Felton diversions 4. Diversion capacity increase at the Tait Street Diversion.
Water Diversion	1. Liddell Diversion 2. Reggiardo Diversion 3. Laguna Diversion 4. Majors Diversion 5. Newell Creek Dam 6. Felton Diversion 7. Tait Street Diversion and Wells	

General Activity	Sub-Activity	Notes (including activity frequency during the HCP term)
Reservoir Operations	1. Chemical Algaecide Treatment of Reservoir 2. Testing Deluge and Gate Valves 3. Woody Debris Removal on Reservoir Face	1. 1-5 algaecide treatments annually 2. 1 test annually of 5-10 cubic feet per second (cfs) for several hours. Bigger tests during winter/high flows as possible. 3. 10 cubic yards of < 10-inch diameter/8-foot-long wood removed annually
Water Diversion Sediment Management	1. Laguna Diversion 2. Majors Diversion	1. Excavation of up to 3 yards per event up to 1-3x/year. Valve operations. 2. Excavation of 5-10 cubic yards per event up to 1-3x/year. Valve operations. 3. Excavation of 5-10 cubic yards per event up to 1-3x/year. Valve operations.
Fish Ladder and Screen Maintenance	1. Felton Diversion 2. Tait Street Diversion	1. 1-3 x/year up to a yard of sediment and woody material needs to be removed from the ladder. 2. 1-3x/year up to a yard of sediment and woody material needs to be removed from intake.
Pipeline Operations	1. Conveyance Pipeline System Inspections and Repairs 2. Finished Water Pipeline System Flushing and Repairs 3. Pumping Well Return to the San Lorenzo River 4. North Coast Valve Blow Off to the San Lorenzo River	1. Inspection and leak response on 19.23 miles of water line and 5.5 miles of leachate line. 2. Flushing and leak response on 270 miles of water line. 3. Ongoing pumping from clear well to remove sediment during high and moderate flows in winter and spring. 4. 5-10 cfs blow off to riverbank occurring < 1x time/year during any part of the year for 1-4 hours.
Dewatering of Creeks for Maintenance and Repairs for any projects requiring in-channel work when channels are not dry	1. Fish capture and relocation	1. Dewatered stream reaches can range from approximately 20-200 feet at 1-10 sites for 1-4 weeks in any given year. 2. Branciforte Creek Flood Control Channel dewatering will occur up to 6 times over 30-year permit-term (every 5 years).

General Activity	Sub-Activity	Notes (including activity frequency during the HCP term)
Flood Control Maintenance	1. Debris/Obstruction Removal 2. Flood Control Sediment Management/Removal 3. Vegetation Management	1. 1-3x/year in wet water years up to 100 cubic yards of material. 2. Removal of approximately 2 cubic yards of sediment per drainage structure/annually or biannually for up to 30 drainage structures. 3. Thin riparian groves and remove willows >3-inch dbh and alders >6-inch dbh. Retain 5-10-foot wide riparian buffer adjacent to low flow channel, but remove vegetation >6-inch dbh annually.
Stormwater Maintenance	1. Inspection and Cleaning 2. Structural Retrofits of Storm Drain Inlets and Basins 3. Sanitary Landfill Leachate Management	1. Inspect and clean as needed but as frequently as weekly. Sweep 35 miles of streets daily. 2. As needed, improvements of storm drain infrastructure. 3. Ongoing maintenance of two leachate ponds, transmission of leachate to wastewater plant and repair of leachate line.
General Vegetation Management Within Riparian Corridors	1. NA	1. Pruning and limited removal of riparian trees <5,000 square feet on an annual basis during the summer/fall months as needed adjacent to pipeline ROWs, water diversions and other utility infrastructure.
Land Management	1. Management of Loch Lomond Recreation Area and Watershed Lands 2. Trail Maintenance and Repair 3. Road Maintenance and Decommissioning	1. Operation and management of 180-acre recreation area and 3,880 acres of open space. 2. <50 yards of trail in non-anadromous watersheds annually. 3. Maintenance: Approximately 6.9 miles of road maintained annually. Decommissioning: up to 5 miles over permit term including up to 3.4 culverts/mile of decommissioned road on non-anadromous drainages

General Activity	Sub-Activity	Notes (including activity frequency during the HCP term)
Habitat Management and Restoration	1. Aquatic Habitat Management and Restoration 2. Dewatering of Creeks 3. Fish Capture and Relocation	1. Dewatering and fish removal in <100-yard stream reach per dewatering event per year, for up to 10 events per year.
Monitoring	1. Habitat typing 2. Individual Project Monitoring 3. Steelhead and Coho Habitat Quality and Population Monitoring	1. Habitat typing up to 20 miles of stream and 2. tagging/handling of fish annually 3. Visual census of up to 5,000 feet of stream annually and 4. Maintenance of up to 10 stream gages, 2 PIT tag antennas, 10 temperature loggers, 1 fish trap and 2 water quality data sondes annually

Covered Activities will take place in the water service/urban areas containing the Permit/Plan Area (Figure 1). The Permit/Plan Area is approximately 176 square miles and includes three geographically distinct areas: The North Coast watersheds (18 square miles), the San Lorenzo River watershed (138 square miles), and the Santa Cruz urban center, as well as the water service areas outside of the city limits. The City's urban center encompasses approximately 12 square miles centered around the mouth of the San Lorenzo River. The Permit/Plan Area includes anadromous streams (inclusive of adjacent riparian areas and lagoons) within the City's purview: Liddell Creek downstream from the Liddell Creek intake, Laguna Creek downstream of the Laguna Creek intake, Reggiardo Creek downstream of the Reggiardo Creek intake, Majors Creek downstream of the Majors Creek intake, San Lorenzo River downstream of the Newell Creek confluence, Newell Creek downstream of Loch Lomond Reservoir (Figure 1). The Permit/Plan Area also includes anadromous reaches of San Gregorio Creek, Pescadero Creek, Gazos Creek, Waddell Creek, Scott Creek, San Vicente Creek, Soquel Creek, and Aptos Creek, inclusive of estuarine reaches (lagoons), where restoration projects may occur outside of the Plan Area (Figure 2).

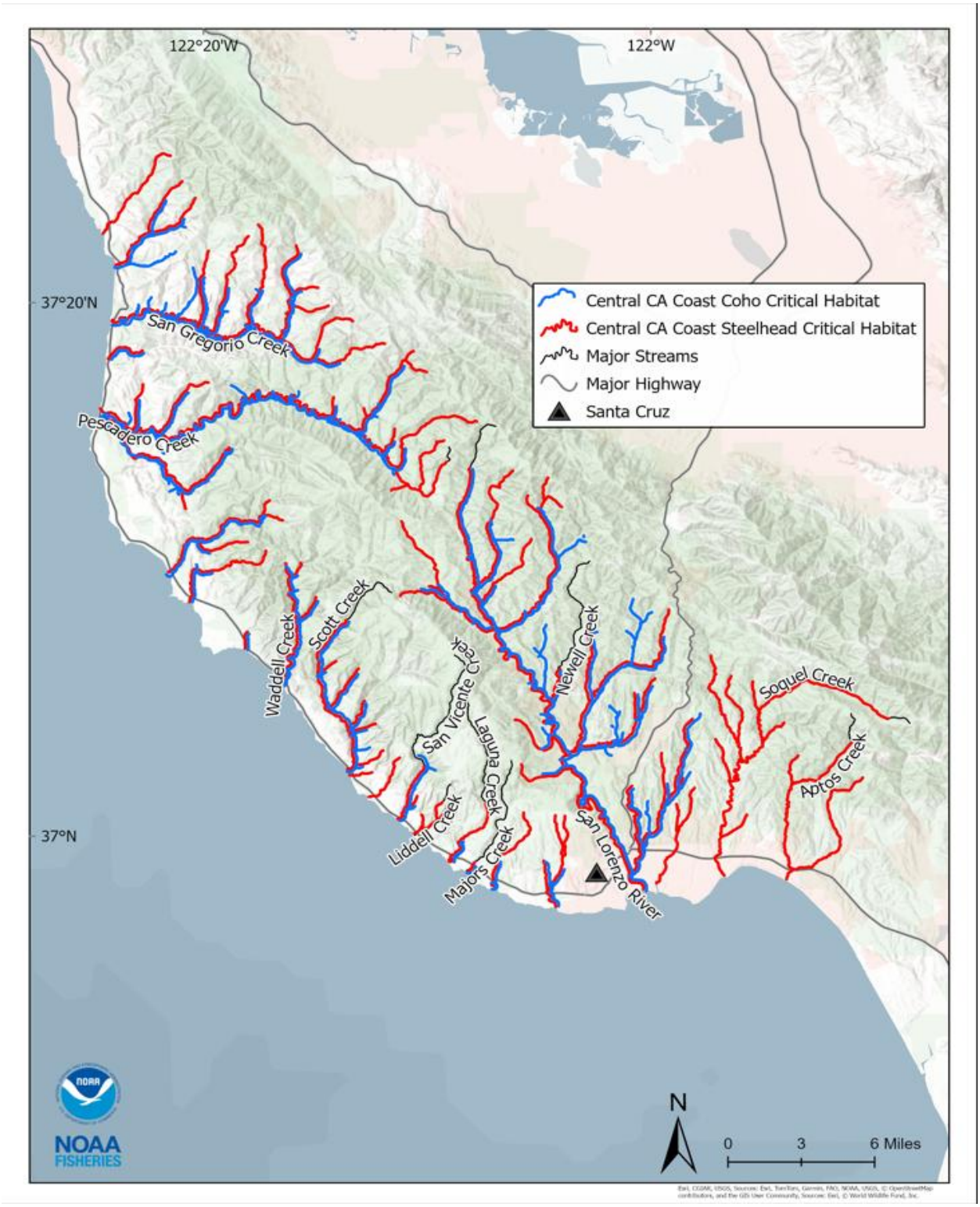


Figure 2. The anadromous reaches of San Gregorio Creek, Pescadero Creek, Gazos Creek, Waddell Creek, Scott Creek, San Vicente Creek, Soquel Creek, and Aptos Creek, inclusive of estuarine reaches (lagoons), where restoration projects may occur outside of City's water service/urban areas.

2. ABSTRACT

The City's key objective is to use available water supplies to restore natural flow regimes at times and locations where it will have the most beneficial effects on steelhead and coho salmon production. In order to meet this objective, the City established priorities for the different streams and life-stages influenced by City diversions. The City deemed the San Lorenzo River the highest priority because of the large amount of potential habitat compared with other Plan Area streams, the potential to support both steelhead and coho salmon, and the relative magnitude of potential effects of City activities on anadromous species. The San Lorenzo River lagoon was also determined by the City to be one of the highest priorities for its potentially large contribution to the steelhead population from juveniles rearing there. Of the North Coast streams, Laguna Creek was given highest priority since it has the greatest length of anadromous habitat influenced by City diversion; it is the only one with a functional lagoon system; it has experienced the largest proportional flow diversion; and it has more frequent observations of coho salmon reproduction in recent years (2005, 2015, 2016, 2020). Liddell Creek was given the lowest priority since the City diversion influences only a portion of the potential anadromous habitat; base flows are generally higher in the anadromous reach due to augmentation from the West Branch, the Middle Branch, and basin hydrology; there is no lagoon; and there is a high level of fine particles in the substrate that diminish habitat quality and potentially limit the benefits of any flow augmentation.

The City designed the HCP conservation strategy to avoid, minimize, and fully mitigate the effects of the Covered Activities on Covered Species and their habitat in support of the long-term viability of those populations within streams affected by the Covered Activities. The City's conservation strategy will support and coordinate overarching efforts to preserve these species within Santa Cruz County and the larger DPS and ESU boundaries.

The City's Conservation Strategy has been structured around Biological Goals and Objectives (Section 4.3 of the HCP), avoidance and minimization measures (Section 4.4 of the HCP), and a Non-flow Conservation Fund (Section 4.5 of the HCP). The biological goals and objectives provide a statement of desired future conditions and provide the basis for determining strategies, monitoring effectiveness, and evaluating the success of actions. The avoidance and minimization measures define specific tools and techniques and measurable steps to meet HCP objectives and achieve desired future conditions. The avoidance and minimization measures may involve the removal of an activity from a particular location or the scheduling of an activity to occur during a period in which a covered species is unlikely to be affected. Avoidance and minimization measures may also apply constraints or limitations on an activity that allow it to proceed while avoiding or minimizing effects to covered species. In cases where avoidance and minimization measures are insufficient to entirely avoid potential effects, the City will implement a mitigation program that will fund habitat enhancement and restoration through the Non-flow Conservation Fund to fully offset those remaining effects. The NFCF will allocate $8 million to fund approximately 22 proposed projects over the 30-year term of the HCP. Mitigation actions carried out with money from this fund will focus on actions that improve salmonid habitat in the Plan Area and will include improvement of instream habitat, riparian conservation, and prioritization of support for coho salmon conservation hatchery development and operations as well as other related recovery actions.

The HCP monitoring program is intended to provide the information necessary to assess compliance with the terms of the HCP, verify progress toward the biological goals and objectives[1], validate effectiveness of habitat management and restoration actions and implement a feedback loop to ensure that management/mitigation measures of the HCP can be changed as needed in response to changing conditions and new knowledge. The monitoring program is summarized below and more fully described in Sections 3.6.2 and 6.4 of the HCP.

The majority of Covered Activities will have either temporary and minor impacts or long-term improvements to salmonid critical habitat. Some of the Covered Activities involving fish relocation and dewatering and monitoring, water diversions, and sediment management will result in the injury or mortality of salmonids. Habitat enhancement and restoration projects implemented under the auspices of the NFCF will target high priority threats to salmonid recovery such as the removal of passage barriers, placement of large wood, and implementation of other critical actions identified in recovery plans. NMFS expects large-scale beneficial effects to instream habitat conditions in the action area from the NFCF that will lead to benefits for multiple life stages of salmonids: adult spawning success, juvenile survival, and smolt outmigration.

The City worked with NMFS during development of the HCP to ensure the impacts of water diversions were minimized to the maximum extent practicable in the Lower San Lorenzo River (downstream of the Felton Diversion Dam) and Laguna Creek because these streams/reaches support both coho salmon and steelhead, have more accessible freshwater habitat than other streams in the action area, have functional lagoon systems important to population life history development and productivity, and are listed as essential/focus or supporting/supplemental populations to the ESU or DPS. In Laguna Creek and the lower San Lorenzo River, the City's water diversions are expected to have negligible or minor effects on PBF of salmonid critical habitat. The City's proposed bypass flows in the lower San Lorenzo River coupled with improved lagoon management flexibility will minimize anticipated affects to rearing habitat in the lagoon and ultimately lead to higher carrying capacities for juvenile steelhead.

Impacts from the City's water diversions in other streams (Newell Creek, Majors Creek, and Liddell Creek) were also minimized to the maximum extent practicable, yet tradeoffs were made to preserve habitat conditions in the lower San Lorenzo River and Laguna Creek over Newell, Majors, and Liddell creeks due to limited accessible habitat to salmon and steelhead and degraded extant habitat conditions in the latter. In Newell, Majors, and Liddell creeks, the City's diversions during the adult and smolt migration period are expected to result in truncations to migration windows and diminish stream flow during spawning, rearing, and egg incubation, particularly in dry or critically dry years. In Liddell Creek, water diversions are expected to translate into the loss of a small number of adult steelhead and coho as a result of stranding and predation, delayed migration and straying of a small number of adults, small reductions in

[1] Biological Goals and Objectives in the proposed HCP are broad, guiding principles based on the conservation needs of the resources. Biological Objectives are expressed as conservation targets or desired conditions for each Biological Goal. Biological Goals include provision of bypass flows at each diversion source to improve habitat conditions; creation, restoration, and enhancement of physical habitat to mitigate any residual effects of the diversions; and avoiding, minimizing, and fully mitigating effects to Covered Species resulting from City operations and maintenance activities.

spawning success and egg survival, and minor effects to rearing juveniles (reduced forage and growth) during low flow periods of drier than normal years. In Majors Creek, during dry and critically dry years, water diversions will reduce spawning success and impair egg incubation. Otherwise, habitat suitability in Majors Creek will be sufficiently maintained to support salmonid life stages. In Newell Creek, habitat suitability for salmonids will be maintained except in dry and critically dry years when reduced spawning and egg incubation habitat suitability will translate into a small number of redds becoming desiccated.

NMFS does not anticipate any of the implemented activities, individually or in combination, performed as described and intended, will have significant negative impacts to the value of critical habitat in large portions of the action area. The long-term negative impacts will be isolated to reaches of streams where water diversions cause minor truncations to fish passage windows or short-term reduced flow during spawning and redd incubation periods. The long-term beneficial impacts derived from habitat restoration and enhancement actions implemented under the NFCF will address pervasive factors negatively influencing habitat conditions throughout the action area through large-scale improvements to migration, spawning, and rearing PBF. These improvements will provide some additional resilience to salmonids and their habitats in the face of long-term climate change.

3. PERMIT TERMS AND CONDITIONS

A. Incidental Take Authorization

NMFS determined that incidental take is reasonably certain to occur as follows:

Due to capture and relocation of salmonids related to dewatering activities, and monitoring of salmonids, NMFS anticipates no more than the number of fish summarized in Table 2 and Table 3, respectively, will be captured, relocated, injured, or killed.

Table 2. Summary of incidental take from fish relocation and dewatering activities.

General Activity	Steelhead juveniles			Coho salmon juveniles		
	Fish captured for relocation per event (per HCP Term)	Unintentional injury or mortality/ Event (Per HCP Term)		Fish captured for relocation per event (per HCP Term)	Unintentional injury or mortality/ Event (Per HCP Term)	
		Capture/ Relocation	Dewatering		Capture/ Relocation	Dewatering
Maintenance and Repair at Felton and Tait St Diversions	150 (600)	5 (20)	3 (12)	Not expected	--	--
Changed Circumstances - Maint at Felton and Tait St Div	150 (3000)	5 (100)	3 (60)	Not Expected	-	-
Habitat Restoration and Management	150 (4500)	5 (150)	3 (90)	75 (750)	2 (20)	2 (20)
Changed Circumstances - dewatering and fish relocation for Habitat Restoration and Maintenance	150 (3000)	5 (100)	3 (60)	75 (525)	2 (14)	2 (14)
Branciforte Creek FCC Sediment Management/ Removal	62 (372)	2 (12)	2 (12)	Not Expected	--	--
Changed Circumstances- Branciforte Creek FCC Sediment Management/ Removal	62 (620)	5 (50)	3 (30)	Not Expected	-	-
Max Over HCP Term for All Activities	**12092**	**432**	**264**	**1275**	**34**	**34**
Max Per Event	**150**	**5**	**3**	**75**	**2**	**2**

Table 3. Summary of incidental take from monitoring activities

Line	Species	Origin	Life Stage	Number Captured	Number Killed	Action	Observe or Collect Method	Procedures	Details
1	CCC Steelhead	Natural	Adult	3,000	5	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Weir or Fish Ladder Trap	Anesthetize; Tag, PIT, Floy, Acoustic, Radio (External/Internal); Tissue Sample, Fin, Opercle, Scale	Adult Abundance
2	CCC Steelhead	Natural	Adult	15	0	Observe/Harass	Snorkel/Dive surveys		
3	CCC Steelhead	Natural	Juvenile	5,500	0	Observe/Harass	Snorkel/Dive surveys		Juvenile Abundance – Riverine
4	CCC Steelhead	Natural	Juvenile	3,680	74	Capture/Handle/ Release Animal	Electrofishing, Backpack		Juvenile Abundance – Riverine
5	CCC Steelhead	Natural	Juvenile	2,500	75	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Electrofishing, Backpack	Anesthetize; Tag, PIT; Tissue Sample, Fin, Opercle, Scale	Juvenile Abundance – Riverine
6	CCC Steelhead	Natural	Juvenile	8,700	174	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Seine, Beach		Juvenile Abundance – Lagoons
7	CCC Steelhead	Natural	Juvenile	4,000	120	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Seine, Beach	Anesthetize; Tag, PIT; Tissue Sample, Fin, Opercle, Scale	Juvenile Abundance – Lagoons

Line	Species	Origin	Life Stage	Number Captured	Number Killed	Action	Observe or Collect Method	Procedures	Details
8	CCC Coho Salmon	Natural and Listed Hatchery	Adult	200	2	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Weir or Fish Ladder Trap	Anesthetize; Tag, PIT, Floy, Acoustic, Radio (External/Internal); Tissue Sample, Fin, Opercle, Scale	Adult Abundance
9	CCC Coho Salmon	Natural and Listed Hatchery	Juvenile	1,100	0	Observe/Harass	Snorkel/Dive surveys		Juvenile Abundance – Riverine
10	CCC Coho Salmon	Natural and Listed Hatchery	Juvenile	1,200	24	Capture/Handle/ Release Animal	Electrofishing, Backpack		Juvenile Abundance – Riverine
11	CCC Coho Salmon	Natural and Listed Hatchery	Juvenile	300	9	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Electrofishing, Backpack	Anesthetize; Tag, PIT; Tissue Sample, Fin, Opercle, Scale	Juvenile Abundance – Riverine
12	CCC Coho Salmon	Natural and Listed Hatchery	Juvenile	100	2	Capture/Handle/ Release Animal	Seine, Beach		Juvenile Abundance – Lagoons
13	CCC Coho Salmon	Natural and Listed Hatchery	Juvenile	100	3	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Seine, Beach	Anesthetize; Tag, PIT; Tissue Sample, Fin, Opercle, Scale	Juvenile Abundance – Lagoons

Small numbers of juvenile steelhead using lower reaches of the Branciforte Creek FCC from May Street to Water Street (stations 19+00 to 36+00) where the City manages sediment in the flood control channel are likely to experience sublethal effects to their fitness such as reduced growth or habitat utilization, and reductions in prey resources in the areas being utilized. We cannot accurately estimate the number of fish injured or monitor these situations as they occur due to the small size of fish in the aquatic environment, and the complexities of their behavior, which makes finding fish that have been affected extremely difficult. The best available indicator for the extent of incidental take expected due to sediment management and associated habitat effects is the number of sediment management events, which roughly corresponds to the amount of habitat impacted (up to 16 projects over the 30-year permit term,).

Small numbers of juvenile and adult salmonids attempting to rear, spawn, or migrate in areas where stream diversions affect stream flows are likely to experience harm from habitat degradation. We cannot accurately estimate the number of fish harmed or monitor these situations as they occur due to the small number of fish in the aquatic environment, and the complexities of their behavior, which makes finding fish that have been injured or killed extremely difficult. The best available surrogate for the extent of incidental take expected due to stream diversions is the instream flow schedules listed below (Table 4 - Table 8) and the linear feet of stream downstream of the diversions, which corresponds to length of altered habitat.

Table 4. Minimum instream flow targets for avoidance and minimization of effects on steelhead due to the Liddell Spring Diversion (Table 4-2 in HCP).

	Minimum Flow at Liddell Creek Anadromous Gage[2] (cfs)								
	Rearing Base flow					Migration		Spawning	
	Hydrologic Condition 5 80-100% (driest)	Hydrologic Condition 4 60-80% (dry)	Hydrologic Condition 3 40-60% (normal)	Hydrologic Condition 2 20-40% (wet)	Hydrologic Condition 1 0-20% (very wet)	Adult[3] (Lower Threshold /Upper Threshold)	Smolt[4]	Spawn[5]	Incubate[6]
Jan	0.25	0.25	2.9	3.6	4.7	4.9/11.3	2.0	7.4	2
Feb	0.25	0.25	4.6	3.9	5.1	4.9/11.3	2.0	7.4	2
Mar	0.25	0.25	3.5	4.8	5.2	4.9/11.3	2.0	7.4	2
Apr	0.25	0.25	3.0	4.3	4.6	4.9/11.3	2.0	7.4	2
Ma	0.25	0.25	2.6	3.3	4.0		2.0	7.4	2
Jun	0.25	0.25	2.0	2.4	2.9				
Jul	0.25	0.25	1.6	1.9	2.2				
Au	0.25	0.25	1.4	1.7	1.8				
Sep	0.25	0.25	1.3	1.5	1.6				
Oct	0.25	0.25	1.5	1.5	1.6				
No	0.25	0.25	1.8	1.9	1.9				
Dec	0.25	0.25	2.1	2.6	3.0	4.9/11.3		7.4	

Table 5. Minimum instream flow targets for avoidance and minimization of effects on steelhead due to the Laguna Creek Diversion (Table 4-3 from HCP).

	Minimum Flow at Laguna Creek Anadromous Gage (cfs)								
	Rearing Base flow					Migration		Spawning	
	Hydrologic condition 5 80-100% (driest)	Hydrologic condition 4 60-80% (dry)	Hydrologic condition 3 40-60% (normal)	Hydrologic condition 2 20-40% (wet)	Hydrologic condition 1 0-20% (very wet)	Adult[7] (Lower Threshold/ Upper Threshold)	Smolt Migration[8]	Spawn[9]	Incubate[10]
Jan	2	2	2	2	2	11.3/15	3.8	9.4	4
Feb	2	2	2	2	2	11.3/15	3.8	9.4	4
Mar	2	2	2	2	2	11.3/15	3.8	9.4	4
Apr	2	2	2	2	2	11.3/15	3.8	9.4	4
May	2	2	2	2	2		3.8	9.4	4
June	2	2	2	2	2				
Jul	2	2	2	2	2				
Aug	2	2	2	2	2				
Sep	2	2	2	2	2				
Oct	2	2	2	2	2				
Nov	2	2	2	2	2				
Dec	2	2	2	2	2	11.3/15		9.4	

Table 6. Minimum instream flow targets for avoidance and minimization of effects on steelhead due to the Majors Creek Diversion (Table 4-4 from HCP).

	Minimum Flow at Majors Creek Anadromous Gage (cfs)								
	Rearing Base flow					Migration		Spawning	
	Hydrologic condition 5 80-100% (driest)	Hydrologic condition 4 60-80% (dry)	Hydrologic condition 3 40-60% (normal)	Hydrologic condition 2 20-40% (wet)	Hydrologic condition 1 0-20% (very wet)	Adult[11] (Lower Threshold/ Upper Threshold)	Smolt[12]	Spawn[13]	Incubate[14]
Jan	0.25	0.25	2.2	2.7	4.1	9/16	3.4	12.1	2.9
Feb	0.25	0.25	4.1	3.0	4.4	9/16	3.4	12.1	2.9
Mar	0.25	0.25	2.4	4.3	4.7	9/16	3.4	12.1	2.9
Apr	0.25	0.25	1.7	3.1	3.2	9/16	3.4	12.1	2.9
May	0.25	0.25	1.4	1.8	2.4		3.4	12.1	2.9
June	0.25	0.25	1.0	1.2	1.6				
Jul	0.25	0.25	0.8	1.0	1.1				
Aug	0.25	0.25	0.7	0.8	0.9				
Sep	0.25	0.25	0.6	0.7	0.7				
Oct	0.25	0.25	0.8	0.9	0.8				
Nov	0.25	0.25	1.1	1.2	1.2				
Dec	0.25	0.25	1.5	1.9	2.1	9/16		12.1	

[2] A City maintained stream gage in the anadromous reach of Liddell Creek, a short distance upstream of Highway 1. The point of diversion is approximately 2 miles upstream of the gage.
[3] Provided in 0%-60% hydrologic conditions only.
[4] Smolt migration flows provided in 0-60% (hydrologic conditions 1-3), and for 3 consecutive days per week in March, April, and May in 60%-100% (hydrologic conditions 4 and 5).
[5] 80% of peak steelhead spawning WUA for 14-day period after any potential migration event in 0-60% hydrologic conditions; not provided in 60-100% hydrologic conditions.
[6] Provided in 0-60% hydrologic conditions for 60-day period following occurrence of last spawning flow or May 30, whichever occurs first; not provided in 60-100% hydrologic conditions.
[7] April adult migration flows provided in 0-60% exceedance conditions/hydrologic conditions 1-3.
[8] Smolt migration flows shall be provided in 0-80% (hydrologic conditions 1-4), and for 3 consecutive days per week in 80%-100% (hydrologic condition5) in March, April, and May.
[9] 80% of peak steelhead spawning WUA for 14-day period after any potential migration event.
[10] For 60-day period following occurrence of last spawning flow or May 30, whichever occurs first.
[11] Provided in 0%-60% hydrologic conditions only.
[12] Smolt migration flows provided in 0-60% (hydrologic conditions 1-3), and for 3 consecutive days per week in March, April, and May in 60%-100% (hydrologic conditions 4 and 5).
[13] 80% of peak steelhead spawning WUA for 14-day period after any potential migration event in 0-60% hydrologic conditions; not provided in 60-100% hydrologic conditions.
[14] Provided in 0-60% hydrologic conditions for 60-day period following occurrence of last spawning flow or May 30, whichever occurs first; not provided in 60-100% hydrologic conditions.

Table 7. Minimum instream flow targets for avoidance and minimization of effects on steelhead due to the Newell Creek Diversion (Table 4-6 from HCP).

		Minimum Flow at Newell Creek below Dam (cfs)				
		Rearing Baseflow				
	Exception Minimum	Hydrologic Condition 5 80-100% (driest)	Hydrologic Condition 4 60-80% (dry)	Hydrologic Condition 3 40-60% (normal)	Hydrologic Condition 2 20-40% (wet)	Hydrologic Condition 1 0-20% (very wet)
Jan	0.25	1.0	1.0	1.0	1.0	1.0
Feb	0.25	1.0	1.0	1.0	1.0	1.0
Mar	0.25	1.0	1.0	1.0	1.0	1.0
Apr	0.25	1.0	1.0	1.0	1.0	1.0
May	0.25	1.0	1.0	1.0	1.0	1.0
June	0.25	1.0	1.0	1.0	1.0	1.0
Jul	0.25	1.0	1.0	1.0	1.0	1.0
Aug	0.25	1.0	1.0	1.0	1.0	1.0
Sep	0.25	1.0	1.0	1.0	1.0	1.0
Oct	0.25	1.0	1.0	1.0	1.0	1.0
Nov	0.25	1.0	1.0	1.0	1.0	1.0
Dec	0.25	1.0	1.0	1.0	1.0	1.0

Table 8. Minimum instream flows at the Tait Street Diversion (Table 4-8 from HCP).

	Minimum Flow in the San Lorenzo River below Tait Street (cfs)						
	Rearing Baseflow					Migration	
	Hydrologic condition 5 80-100% (driest)	Hydrologic condition 4 60-80% (dry)	Hydrologic condition 3 40-60% (normal)	Hydrologic condition 2 20-40% (wet)	Hydrologic condition 1 0-20% (very wet)	Adult[15] (Lower Threshold/ Upper Threshold)	Smolt[16]
Jan	8	8	15.8	16.4	17.5	17/25.2	10
Feb	8	8	15.9	16.7	18.0	17/25.2	10
Mar	8	8	16.3	17.3	18.2	17/25.2	10
Apr	8	8	17.2	17.9	18.4	17/25.2[17]	10
May	8	8	17.7	18.2	18.5		10
Jun	8	8	16.6	18.1	18.5		
Jul	8	8	12.4	15.8	18.2		
Aug	8	8	9.8	11.9	16.4		
Sep	8	8	9.0	11.1	13.3		
Oct	8	8	9.8	11.4	13.3		
Nov	8	8	12.5	14.1	16.4		
Dec	8	8	15.1	16.2	17.6	17/25.2	

[15] Adult migration flows may be reduced to 3 consecutive days a week if storage levels in Loch Lomond Reservoir fall below the following levels (MG): Dec-1900 MG; Jan-2,000 MG; Feb-2,100 (MG); Mar-2,200 (MG). Further, adult migration flows may be reduced to 5 consecutive days after each storm event that exceeds 17 cfs if storage levels in Loch Lomond Reservoir fall below the following levels: Dec-1600 (MG); Jan-1700 (MG); Feb-1800 (MG); Mar-1900 (MG).

[16] During critically dry conditions (80%-100% Hydrologic condition) smolt outmigration flows shall be provided at least 3 days per week in March, April, and May. If additional water is determined to be required, the City may further reduce smolt outmigration requirements at the Tait Street Diversion provided that: (a) drought has been officially declared; and (b) this reduction in smolt outmigration opportunities will not reduce smolt migration more than one full day/week in the lower San Lorenzo River system or there is evidence from the San Lorenzo River or neighboring watersheds (i.e. Scott Creek) indicating that smolt migration is no longer occurring.

[17] April adult migration flows provided in hydrologic conditions 1-3.

B. Avoidance and Mitigation Measures

Section 10(a)(2)(A) of the ESA requires that an HCP specify the measures that the permittee will take to minimize and mitigate to the maximum extent practicable the impacts of the taking of any ESA-listed species as a result of activities covered by the HCP.

a) The City shall implement all of the avoidance and minimization measures conservation strategies as described in Chapter 4 of the HCP.

b) The City shall implement all of the compliance and effectiveness monitoring as described in Chapter 6 of the HCP.

C. General Permit Conditions

1. All applicable sections of Title 50 Code of Federal Regulations, Part 222, NMFS regulations governing ESA-listed species permits (50 CFR § 222.301-222.307), are conditions of this permit. If any such regulations are modified, any future action taken with respect to this permit shall be in accordance with such regulations in existence at the time such action is taken except as specifically otherwise provided for by law.

2. NMFS may suspend or revoke the permit for cause in accordance with applicable laws and regulations (See 5 U.S.C. § 558; 50 CFR § 222.306; 15 CFR Part 904). Such suspension or revocation may apply to the entire permit, or only to specified Covered Species, Permit Areas, or Covered Activities.

3. The City may not transfer or assign this permit to any other person(s), as person is defined in Section 3(12) of the ESA, except in conformance with the permit transfer procedures and requirements provided in 50 CFR § 222.305.

4. Upon request by the Regional Administrator of the West Coast Region (WCR), the City must permit any employee(s) of NMFS, or any other person(s) duly designated by the Regional Administrator, to inspect the City's records and facilities if such records and facilities pertain to activities for which a take of ESA-listed species is authorized by this permit, relate to ESA-listed species covered by this permit, or pertain to NMFS' responsibilities under the ESA.

5. The provisions of this permit may be amended upon reasonable notice by the Regional Administrator of the WCR, in accordance with applicable law.

6. Upon locating any dead, injured, or sick individuals of any ESA-listed species covered by this incidental take permit, the City shall, within three working days, notify the NMFS Central Coast Branch Supervisor. Instructions for proper handling and disposition of such specimens will be issued at that time. Care must be taken in handling sick or injured specimens to ensure effective treatment and care and in the handling of dead specimens to preserve biological material in the best possible state. This condition does not apply to spawned-out carcasses.

7. The City shall provide NMFS with a reasonable opportunity to rescue individual specimens of a Covered Species before any authorized incidental take occurs, where appropriate and feasible.

8. In the event any ESA-listed species not authorized by this or another incidental take permit is killed, injured, or collected during the course of activities, the City must notify the NMFS Central Coast Branch Supervisor as soon as possible, but not later than three working days after the event. If the individual is killed, it must be retained for scientific analysis. Instructions for proper handling and disposition of such specimens will be issued at that time. The City must then submit a written report to the Assistant Regional Administrator for the California Coastal Office (care of the Central Coast Branch Supervisor) describing the circumstances of the unauthorized take. Pending review of these circumstances, NMFS may suspend or amend this permit.

9. The City is responsible for the activities of any individual who is operating under the authority of this permit. Such activities include capturing, handling, releasing, transporting, maintaining, and caring for any animal authorized to be taken by this permit.

10. Under the terms of the ESA regulations, a violation of any of the terms and conditions of this permit will subject the City, and/or any individual who is operating under the authority of this permit, to penalties as provided for in the ESA.

11. NMFS will annually review this permit and determine whether it needs to be suspended or amended. Yearly evaluation of this permit by NMFS will include re-analyses of all data, a reassessment of the take levels, and a written response to the sufficiency of the City's annual reports within 60 days.

12. 50 CFR § 222.307(d)(5) provides for the payment of an adequate fee to process the application. The fee for this permit has been waived.

13. The City is required to ensure adequate funding for the HCP. Upon request by NMFS, the City shall provide documentation that the HCP is receiving adequate funding. If at any time during the permit term NMFS reasonably believes that the HCP is not being adequately funded, NMFS may require the City produce an annual budget for the HCP, which will be subject to review and approval by NMFS.

14. The City shall strictly adhere to the HCP and the conditions of this Permit. If the City is not implementing or adhering to the HCP or the conditions of this Permit, then the take authorization provided by this Permit shall not apply.

15. The City shall notify NMFS prior to any new ground-disturbing activity that has the potential to adversely affect cultural resources that are not covered by an existing California Environmental Quality Act (CEQA) process. Upon receiving such notification, NMFS will initiate consultation under Section 106 of the National Historic Preservation

Act with the State Historic Preservation Officer for such a project. The City shall cooperate and incorporate the results of that consultation before commencing such a project.

16. This permit does not relieve the City from compliance with other applicable foreign, state, local, or other federal law.

17. If the City violates any permit condition, the City will be subject to any and all penalties provided by the ESA. NMFS may revoke this permit if the authorized activities are not conducted in compliance with the permit and the requirements of the ESA or if NMFS determines that its ESA Section 10(d) findings are no longer valid.

D. Reporting and Notification

1. Effectiveness, Implementation, and Compliance Monitoring. The City will provide an annual report to NMFS for the duration of the HCP to verify that the conservation measures are being implemented and to ensure that the level of authorized take is not exceeded. The report will be prepared by the City and provided to NMFS by June 30 of each year, covering the previous calendar year that the HCP is in effect. The report will contain summaries of all effectiveness, implementation, and compliance monitoring, and will include:

    a) Incidental take tracking
    b) Instream flow targets
    c) Felton Diversion operations
    d) Copper monitoring at Newell Creek Reservoir and downstream locations
    e) Testing deluge and gate valves
    f) Relocation of large wood downstream of Loch Lomond Reservoir
    g) Installation of sediment management upgrades at Laguna, Reggiardo, and Majors creeks diversions.
    h) Fish screen upgrades and juvenile bypass improvements at Felton and Tait Street diversions.
    i) Water System Operations and Maintenance
    j) Municipal Facilities Operations and Maintenance
    k) mitigation effectiveness monitoring- the level of funding provided to the TAC for the year and a description of the projects implemented with that funding; the rationale for project selection and its relationship to effects to be mitigated under the HCP will be described; a list of all mitigation projects involving City funding implemented to-date together with their status as complete or not, an assessment of their success, and an accounting of City funds allocated to each project to date. Every five-years, the City will include a synopsis of effectiveness monitoring results for each project completed during the five-year period.

2. Adaptive Management Report. The City shall provide an adaptive management planning report every five years for the duration of the HCP to capture data covering different lifestages of Covered Species and population fluctuations due to timing of fish maturity

and annual weather cycles. The report will be prepared by the City and provided to NMFS by June 30 every five years.

3. Salmonid Population and Habitat Monitoring. The City will provide an annual report to NMFS for the duration of the HCP to monitor the status of Covered Species populations and habitat in the Plan Area. The report will be prepared by the City and provided to NMFS by June 30 of each year, covering the previous calendar year that the HCP is in effect. Salmonid population and habitat monitoring elements will include:

    a) Juvenile population abundance
    b) Adult population abundance
    c) PIT tag antenna array
    d) Stream habitat
    e) Instream temperature
    f) Fish passage obstacles
    g) Laguna Creek and San Lorenzo River lagoon habitat

    The monitoring elements are described above from the perspective of current monitoring efforts, modifications consistent with the Coastal Monitoring Program, and recognition that the final design will come under the guidance of a Monitoring Technical Committee to reflect the state of the art in regional salmonid assessment and to ensure consistency with regional efforts as they develop. At five-year intervals the City will review the monitoring program in association with NMFS and CDFW and the value of existing studies will be appraised and monitoring elements may be revised accordingly.

Annual reports and permit-related notifications shall be sent to the NMFS California Coastal Office by email or mail using the addresses below; email is preferred:

Southwest Fisheries Science Center Fisheries Ecology Division
Attn: NMFS Central Coast Branch Supervisor
110 McAllister Way
Santa Cruz, California 95060
Email: Mandy.Ingham@noaa.gov

E. Penalties and Permit Sanctions

1. Any person who violates any provision of this permit is subject to civil and criminal penalties, permit sanctions and forfeiture as authorized under the ESA and 15 CFR part 904 [Civil Procedures].

2. All permits are subject to suspension, revocation and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.

8/21/2025

Penny Ruvelas — Date
Assistant Regional Administrator, California Coastal Office
West Coast Region, National Marine Fisheries Service

Acceptance of the permit serves as evidence that the permittee agrees to abide by all conditions stated.

Matt Huffaker — Date
City Manager, City of Santa Cruz
California