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Via Certified U.S. Mail
and Electronic Mail

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Sixty-Day Notice of Intent to Sue for Endangered Species Act and Clean Water Act Violations in Relation to the Salinas Valley Water Project

Dear Secretary Pritzer, Ms. Sobeck, Mr. Hart, and Lieutenant Colonel Morrow:

On behalf of The Otter Project, we write to notify the National Marine Fisheries Service ("NMFS"), Monterey County Water Resources Agency ("MCWRA"), and the U.S. Army Corps of Engineers ("Army Corps") of our intent to sue over ongoing violations of Sections 7 and 9 of the Endangered Species Act in connection with the ongoing operation of the Salinas Valley Water Project, as well as ongoing violations of the Section 404 Clean Water Act permit issued by the Army Corps to MCWRA for that project.

STATUTORY BACKGROUND

The Endangered Species Act ("ESA") was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] a program for the conservation of such endangered species and threatened species." 16 U.S.C. § 1531(b). Species may be listed as endangered or threatened if they are in danger of extinction or likely to become so in the foreseeable future. 16 U.S.C. §§ 1532(6), (20). Once a species is listed, the statute prohibits any person, including any agency, from causing harm to the species unless authorized by either the National Marine Fisheries Service or the U.S. Fish and Wildlife Service (collectively, "Service").

The Clean Water Act was enacted to restore and maintain the chemical, physical and biological integrity of the nation's waters through national goals such as prohibiting the discharge of toxic pollutants and providing for the protection and propagation of fish, shellfish and wildlife. 33 U.S.C. § 1251.

A. ESA Section 9 Prohibition on Take of Listed Species

The ESA generally prohibits "take" of listed species. 16 U.S.C. § 1538(a). The term "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). The term "harm" includes "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." 50 CFR § 17.3 (2006). The term "harass" means "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." *Id*.

A person or agency may avoid liability for unlawful take under Section 9 through compliance with the Section 7 consultation provisions described below. After Section 7 consultation is completed, however, *only* take activity "in compliance with the terms and conditions specified in" the resulting biological opinion and incidental take statement "shall not be considered to be a prohibited taking of the species concerned. 16 U.S.C. § 1536(o)(2). Accordingly, a person who fails to comply with an incidental take statement is not shielded from Section 9 liability for actions that harm or harass a listed species.

B. ESA Section 7 Consultation and Duty to Reinitiate

Section 7(a)(2) of the ESA requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of [the critical] habitat of such species . . . ." 16 U.S.C. § 1536(a)(2). Once a federal agency determines that its action "may affect listed species or critical habitat," it must consult with the authorized representative of appropriate Service. 50 C.F.R. § 402.14(a); *see id.* § 402.02 (definitions).

Following consultation, the Service will provide the federal action agency with a written biological opinion that details how the proposed agency action affects listed species and their critical habitat. Where the Service determines that the proposed action will jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat, the biological opinion also must suggest "reasonable and prudential alternatives" that the Secretary believes will avoid jeopardy and adverse modification. 16 U.S.C. § 1536 (b)(3)(A); 50 C.F.R. § 402.14.

If the Service concludes that the proposed action, with implementation of these reasonable and prudent alternatives, will not cause jeopardy or adverse modification of critical habitat, the Service will also issue an incidental take statement. 16 U.S.C. § 1536(b)(4). The incidental take statement "specifies those reasonable prudent measures" that are "necessary or appropriate to minimize such impact" and "sets forth the terms and conditions . . . that *must* be complied with" by the Federal agency and applicant to implement those measures. 16 U.S.C. § 1536(b)(4) (emphasis added); *see also* 50 C.F.R. § 402.14(i)(1).

The ESA requires the Service and the federal agency to reinitiate formal consultation when "discretionary Federal involvement or control over the action" has been retained or is authorized by law and any of the following circumstances apply:

(a) the amount or extent of take specified in the incidental take statement is exceeded;
(b) 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;
(c) 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 biological opinion; or
(d) a new species is listed or critical habitat designated that may be affected by the identified action.

50 C.F.R. § 402.16

C. Clean Water Act Section 404 Permits

The Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States without a permit from the Army Corps of Engineers ("Army Corps"). 33 U.S.C. §§ 1311(a), 1344(a); 33 C.F.R. § 320.3. Failure to comply with the terms of a Section 404 dredge and fill permit is unlawful, 33 U.S.C. §§ 1311(a), and subjects the permittee to civil liability. 33 U.S.C. § 1344 (s)(4)

FACTUAL BACKGROUND

A. Status of Steelhead Trout in the Salinas River Watershed

The Salinas River watershed is a large river system that extends from valleys between coastal mountain ranges over a hundred miles into the Pacific Ocean. The watershed is a spawning site, rearing habitat, and migration route for South-Central California Coast ("S-CCC") Steelhead Trout, a threatened species. Steelhead trout are anadromous fish, meaning they are born in fresh water, migrate to the ocean, and then return to fresh water to spawn. Biological Opinion and Incidental Take Statement for the Salinas Valley Water Project (June 21, 2007) ("2007 BiOp"), at 23, available at http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/south_central_southern_california/nmfs_bo_salinas_valley_water_project_opinion_6-21-07pdf.pdf. Because steelhead experience several different life-history stages that require use of all portions of a river system, they serve as an indicator of the health of watersheds. Steelhead require gravelly areas for spawning, increasingly deeper water as they grow into adolescence, woody debris to protect them from predation, and cool flowing waters with ocean access for migration. See Peter B. Moyle, et al.,"Salmon, Steelhead, and Trout in California: Status of an Emblematic Fauna," (2008) ("Moyle Report"), at 80, available at https://watershed.ucdavis.edu/pdf/SOS-Californias-Native-Fish-Crisis-Final-Report.pdf.

Adult steelhead migrate to the fresh waters of the Salinas River and its tributary rivers such as the Arroyo Seco, San Antonio, and Nacimiento between November and June, with peak migration in March. Spawning begins shortly after the adult fish reach spawning areas, which are gravel "nests" or the downstream end of pools. After four to eight weeks, depending on water temperatures, young steelhead emerge from the gravel and move into shallow, low velocity areas in side channels. They travel to deeper water as they grow. After one or more years, these juveniles – called smolts – biologically and physiologically adapt in preparation of their March through late May or June process of downstream migration and entry into saltwater. Steelhead may go through this extraordinary life cycle and migrate between saltwater and freshwater to spawn multiple times. *See generally*, NMFS, South-Central California Coast Steelhead Recovery Plan (Dec. 2013) ("Recovery Plan"), at Chapter 2, available at http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/south_central_southern_california/nmfs_bo_salinas_valley_water_project_opinion_6-21-07pdf.pdf; *also* Moyle Report at 79-85.

The steelhead population has experienced a dramatic decline in the Salinas Watershed. Historically, an estimated 25,000 adult fish returned to the Central Coast region. Recovery Plan at xi. Now less than 500 return to the region. Id. And while 4,750 adult steelhead returned to the Salinas River in 1965, Moyle Report at 81, the most adult steelhead to return since 2010 were a mere 43 steelhead that were detected in 2013. Attachment A (Letter from NMFS to MCWRA, dated Oct. 6, 2015), at 2. In 2011 and 2012, 13 and 17 steelhead returned to the Salinas River, respectively. *Id.* No steelhead returned to the Salinas River in 2010, 2014, and 2015. *Id.*

B. History of Consultation for the Salinas River Water Project

After listing the South-Central California Coast Steelhead – the population of steelhead that inhabit the Salinas River and its tributaries – as a threatened species in 1997, NMFS has been significantly involved in management of the declining Salinas watershed population, including through development of the Recovery Plan and consultation with agencies and entities conducting activities that may result in take of the species. NMFS attributes the steelhead population declines in the Salinas watershed to water development, agriculture, flood control programs, forestry practice, mining, and urbanization. Recovery Plan at xi. Specifically:

> Habitat modification of natural flow regimes by dams and other water control structures have resulted in increased water temperatures, changes in fish community structures, depleted flow necessary for migration, spawning, rearing, flushing of sediments from spawning gravels, and reduced gravel recruitment. In addition to these systemic threats to steelhead habitat, dams and other water control structures have also resulted in increased direct mortality of adult and juvenile steelhead.

Id. at 3-2.

MCWRA, a local agricultural water agency, conducts extensive water and wastewater management activities throughout the Salinas River watershed, including dam operations and water diversion activities that directly impact freshwater habitat quality and availability for steelhead. Most significantly, MCWRA's Salinas Valley Water Project ("Water Project") included increased the spillway capacity of the Nacimiento Dam and a seasonal river diversion facility ("Salinas River Diversion Facility") with a small dam and diversion structure to impound and distribute increased spring, summer, and early fall reservoir releases from the San Antonio and Nacimiento Dams to provide surface water deliveries for irrigation. 2007 BiOp at 6.

In 2002, MCWRA applied to the Army Corps for a Clean Water Act Section 404 permit to construct the Salinas River Diversion Facility as part of the Water Project. 2007 BiOp at 3. The Army Corps then initiated ESA Section 7 consultation with NMFS because the Water Project would affect ESA-listed steelhead trout and its critical habitat. *Id.* at 4, 7. After years of reviewing engineering plans and analyzing river flows, NMFS issued the a final Biological Opinion and Incidental Take Statement to the Army Corps on June 21, 2007. *Id.* at 6. The 2007 BiOp incorporated the "Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River" and its supplements ("Flow Prescription") (Oct. 11, 2005), at 31, available at http://www.mcwra.co.monterey.ca.us/

flow_monitoring/ documents/2005%20FlowPrescriptionWithAppendicesAndErrata.pdf. In November 2007, the Army Corps issued MCWRA a Clean Water Act Section 404 permit for the diversion facility and conditioned that permit on MCWRA's adherence to the requirements in the Biological Opinion and Incidental Take Statement. Attachment B, (Department of the Army Permit No. 24976S) ("Corps Permit"). NMFS subsequently issued a letter modification of the BiOp with respect to the take limit on sampling activities. Attachment C (Letter from NMFS to Army Corps, dated Apr. 25, 2012) at 2.

The Water Project was constructed in 2010. The Salinas River Diversion Facility portion of the project is located at river mile 4.8, at a lagoon with a sandbar that is sometimes open, allowing river flow to reach the ocean, and sometimes closed, directing river flow into the Old Salinas River channel. BiOp at 8. The Salinas River Diversion Facility is operated seasonally from April 1 through October 31 and includes a small dam and intake structure, fish bypass facilities, a pump station, and a pipeline connection to the Castroville Seawater Intrusion Project. *Id.* at 7-8. The Water Project also increased the Nacimiento Dam spillway capacity and changed the amount, frequency, and schedule for releases of water from the Nacimiento and San Antonio reservoirs. *Id.* at 8-9.

C. MCWRA's Noncompliance with the Biological Opinion/Incidental Take Statement

Since 2007, MCWRA has failed to implement key elements of the Salinas Valley Water Project as outlined in the "project description" of the BiOp. MCWRA also has repeatedly violated the nondiscretionary "terms and conditions" imposed by NMFS as part of the Incidental Take Statement. NMFS explicitly detailed specific items of BiOp non-compliance in its January 28, 2011 letter to the Army Corps. See Attachment D. Despite the fact that these identified violations by MCWRA are ongoing, NMFS and the Army Corps have not reinitiated consultation or taken any other steps to address them.

1. Flow Prescription

Since 2007, MCWRA has repeatedly failed to comply with the Flow Prescription outlined in the BiOp, and NMFS and the Army Corps have permitted these violations to continue. Moreover, in recent drought years, MCWRA has implemented new actions that are beyond the scope of the BiOp, and may jeopardize S-CCC steelhead and its critical habitat. NNMFS and the Army Corps are aware of these attempts to evade ESA protections.

The Flow Prescription relies on triggers based on reservoir conditions and stream flow to initiate passage flows for adult upstream migration, smolt downstream migration, and juvenile and adult downstream migration. The Flow Prescription also requires that MCWRA maintain spawning and rearing habitat in the Nacimiento River. BiOp at 16. For spawning, MCWRA must provide reservoir releases of 60 cfs from the Nacimiento Reservoir beginning the eighth day after the first adult steelhead passage day after January 1 through May 31. *Id.* at 16-17. For rearing, MCWRA must release a minimum of 60 cfs throughout the year as long as the water surface elevation of the Nacimiento Reservoir is

above 687.8 feet mean sea level (msl). *Id.* at 17.

The BiOp allows for some limited flexibility in the Flow Prescription during drought conditions: "Under drought conditions, the MCWRA will evaluate reservoir storage with regard to the continuation of minimum releases. When the water surface of Nacimiento Reservoir is at or below elevation 748 feet msl recommendations may be presented to NMFS for a reduction of the minimum flow criterion." Flow Prescription at 31. But that flexibility does not permit agencies to use a drought as a perpetual excuse to avoid the protections for steelhead required by the ESA and incorporated into the BiOp. Indeed, any modifications or adaptations to the Flow Prescription must be "mutually agreed upon" by MCWRA and NNMFS. BiOp at 10. As described below, in 2014 and 2015, MCWRA deviated from the Flow Prescription without NMFS's agreement.

On March 18, 2014, MCWRA requested permission from NMFS to reduce flows from Nacimiento Reservoir from 60 cfs to 25 cfs, thereby prolonging flow into Nacimiento River for as long as possible during a drought. Attachment E (Letter from MCWRA to NMFS, dated Mar. 18, 2014), at 2. In response, NMFS explained that lower flow volume is likely to cause increased temperature and reduced flow velocity, thereby "result[ing] in adverse impacts to the quality and quantity of S-CCC steelhead habitat, which could result in take of S-CCC steelhead." Attachment F (Letter from NMFS to MCWRA, dated Apr. 25, 2014), at 2. NMFS suggested additional protective measures, but emphasized that the measures did not exempt MCWRA from any resulting take. *Id.* The MCWRA Board unanimously voted to reduce minimum releases to 25 cfs following the conditions suggested by NMFS. Attachment G (MCWRA Board of Directors Meeting Minutes, dated June 2, 2014). Releases remained below 60 cfs – in noncompliance with the BiOp – for approximately one year, from June 2014 until June 2015. Attachment H (Letter from MCWRA to NMFS, dated July 31, 2015), Attachment 2, at 2-3 (chronicling history of reservoir release communications).

Yet just after MCWRA restored Nacimiento releases to the 60 cfs volume required by the BiOp, while confronting the same drought conditions, MCWRA proposed increasing flow releases from Nacimiento Reservoir to 250 or 300 cfs. Attachment I (Letter from NMFS to MCWRA, dated July 1, 2015), at 1. NMFS indicated that it "strongly objects to the proposed increase" and that the flow increase would "likely result in adverse consequences to the federally threatened Salinas River population of [SCCC steelhead] because there will not be adequate water supplies reserved in the reservoir to maintain stream flows for fish in the Salinas River." *Id.* Noting MCWRA's previous request to conserve water releases, NMFS stated that it was "alarmed to hear the [Board of Directors] is considering such an aggressive increase in flow releases that will provide temporary benefits to a very limited number of stakeholders and beneficial uses" – namely, providing surface water and recharge to the King City and Greenfield area. *Id.* at 2. NMFS emphasized that MCWRA would not be exempt from any resulting take. *Id.* at 3.

MCWRA proposed a water release plan for the Nacimiento and San Antonio Rivers that NMFS warned exceeded the scope of the 2007 BiOp. NMFS explained: "MCWRA needs to obtain a section 10(a)(1(B) permit from NMFS, receive incidental take coverage

through a section 7 consultation between NMFS and another federal agency, or implement the project without causing take of a listed species." Attachment J (Letter from NMFS to MCWRA, dated Aug. 5, 2014), at 1-2. Ultimately, MCWRA went forward with its proposed increased flow: it began increasing releases from San Antonio Reservoir from 5 cfs on August 28, 2015 to a maximum rate of 200 cfs on September 4, 2015, gradually reducing them back down to 5 cfs at the end of the month, while Nacimiento Reservoir releases stayed at 60 cfs. Attachment K (MCWRA Board of Directors Update, dated Sept. 28, 2015). MCWRA's unilateral decision to increase flows, in spite of NMFS's jeopardy warnings, was not authorized by the 2007 BiOp and required Section 7 consultation.

The BiOp requires annual adaptive management to ensure effectiveness of the Flow Prescription. Terms and Condition 28 of the 2007 BiOp states: "If the annual evaluation indicates the flow prescription is not performing as expected, MCWRA shall develop modified flow prescriptions," which "shall be mutually agreed upon by MCWRA and NMFS prior to implementation." BiOp at 105. "These modifications should include consideration of any opportunities to improve steelhead habitat conditions if they are identified." *Id*. In accordance with this requirement, and because the ongoing drought is no longer an unexpected or temporary state, MCWRA must develop a new Flow Prescription that sufficiently protects endangered steelhead in light of changed conditions.

MCWRA has violated the Flow Prescription incorporated into the 2007 BiOp and has also violated the adaptive management obligations set forth in Terms and Conditions 28, by failing to modify the Flow Prescription to achieve effective protections for steelhead in light of changed circumstances. NMFS and the Army Corps have unlawfully failed to reinitiate consultation or take any other action in response to these clear violations.

2. Fish Screen

As part of the Salinas River Diversion Facility, MCWRA agreed to construct a fish screen at the inlet of the Old Salinas River Channel. BiOp at 9. The purpose of the fish screen is to prevent fish from migrating into the Old Salinas River Channel, an impaired water body, and dying at a rate that exceeds allowable take. Attachment D at 2. To date, MCWRA has not installed the fish screen. Although NMFS criticized MCWRA for its failure to design, permit or construct the fish screen, Attachment D, neither it nor the Army Corps has reinitiated consultation or taken any other action to compel MCWRA to remedy this violation.

3. Pesticide Reductions

Under Terms and Conditions 26 of the 2007 BiOp, MCWRA is required to install a Vegetated Treatment System within the Blanco Drain to reduce pesticide loads and to implement other measures in the event that the system is inadequate. BiOp at 103. The terms of the Flow Prescription incorporated into the BiOp required that MCWRA's Vegetated Treatment System reduce the levels of two particular pesticides by 50 to 75 percent. Flow Prescription at 26. Within three years of the Water Project's startup, MCWRA was required to achieve the required minimum 50 percent reduction. *Id.*

The Vegetated Treatment System was poorly designed, poorly implemented and ineffective. Attachment D at 2-4. An ineffective system does not satisfy the requirements of the BiOp. To date, MCWRA has not constructed an effective system to reduce the pesticide load to the Salinas River by 50 percent. Although NMFS is aware of this violation and criticized MCWRA for its ineffective system, neither it nor the Army Corps has reinitiated consultation or taken any other action to compel MCWRA to remedy this violation.

4. Water Quality Monitoring

The BiOp imposes water quality monitoring requirements on MCWRA. Specifically, "pesticide concentrations for Blanco Drain will be monitored and recorded for the period of April through the first significant storm flow discharge to the Salinas River no less than four times during the SRDF operating season (once in April, June, August, and October)." BiOp at 20. MCWRA has repeatedly failed to fulfill its water quality monitoring requirements.

On March 26, 2010, NMFS objected to MCWRA's failure to conduct sufficient monitoring, which it deemed necessary to understand how the Salinas River Diversion Facility affects "water quality, specifically toxicity levels." Attachment L (Letter from NMFS to MCWRA, dated Mar. 26, 2010), at 1. Yet MCWRA failed to properly monitor the input and output of the Blanco Drain to assess the effectiveness of contaminant reduction by the Vegetated Treatment System. Attachment D at 2-4. NMFS further directed that monitoring should include pesticides beyond chlorpyrifos and diazinon, in order to "give a true account of the toxicity levels in the water entering the Salinas River from the Blanco Drain." *Id.* at 3. MCWRA did not take any action in response to this directive.

NMFS subsequently warned MCWRA that data were "inconclusive to evaluate the risk and impacts of the Blanco Drain discharge water to S-CCC steelhead" due to five deficiencies:

(l) inconsistent monitoring design;
(2) no data collection or analyses on sediment and water toxicity;
(3) detection of diazinon in water column at levels high enough to effect S-CCC steelhead and their critical habitat (Table 2);
(4) no comparison or use of [reporting limits] or effective concentrations that may affect the species; and
(5) no information on [non-detect] concentration below reporting limits that may impact S-CCC steelhead.

Attachment M (Letter from NMFS to MCWRA, dated May 21, 2013), at 2. Accordingly, NMFS again admonished MCWRA to develop a robust sampling regime and to incorporate new discoveries on the exposure and risk of different pesticides to S-CCC steelhead. *Id.* at 3. Although MCWRA has not complied with this directive, neither NMFS nor the Army

Corps have reinitiated consultation or taken any other action to compel MCWRA to correct these violations of the 2007 BiOp.

5. Steelhead Monitoring

Under Term and Condition 27, MCWRA must conduct biological monitoring of adult steelhead escapement and juvenile smolt migration. MCWRA has failed to fulfill multiple biological monitoring requirements.

For example, first, MCWRA has only installed three rotary screw traps rather than the required four to quantify downstream migration of smolts in the Arroyo Seco and Salinas Rivers. BiOp at 103; Attachment D at 5. Second, for three years, MCWRA also failed to install a system for monitoring adult escapement. *Id.* at 4-6. The monitoring equipment must be operated from December 1 through March 31 to monitor adult migration numbers once the lagoon is breached. BiOp at 103; Attachment D at 5. Although the system was in place at one point, MCWRA indicated that it was "subsequently destroyed by high flows from the March 19 – 27, 2011 storms and was unable to be replaced." MCWRA has not indicated how it will fund a replacement monitoring system. *E.g.*, MCWRA Board of Directors Meeting Agenda (May 23, 2016), at 6 (Budget "goal" indicating that agency needs to develop a sustainable funding source for the fish monitoring requirements), available at http://www.mcwra.co.monterey.ca.us/board_of_directors/agenda/2016/5%20Regular%20BOD%20Meeting%20Agenda%20and%20Packet%20052316.pdf.

6. Section 404 Permit

By violating the Terms and Conditions of the 2007 BiOp, as described above, MCWRA is also violating its Clean Water Act Section 404 permit, which incorporates those provisions by reference and authorizes MCWRA to construct the Salinas Valley Diversion Facility "conditional" on complete compliance. Corps Permit at 2. Noncompliance constitutes a permit violation. *Id.*

D. New Information Affecting Steelhead Survival and Requiring Additional Consultation

Additionally, new circumstances in the Salinas River Watershed – changes in pesticide use, drought, and the presence of fish in the San Antonio River – have altered the baseline environmental conditions on which the 2007 BiOp's protections were premised. These changes undermine the sufficiency of the measures prescribed by NMFS in 2007 to protect threatened steelhead from harm as a result of MCWRA's ongoing water diversion activities.

1. Pesticide Use

The Biological Opinion focuses primarily on chlorpyrifos and diazinon, but since 2007, new information has come to light about the application rate of pesticides in the

Salinas Valley region and the adverse effect of different pesticide classes on steelhead. This new information requires NMFS and the Army Corps to reinitiate consultation.

The application rate of different pesticides in the Salinas Valley region has changed. When the BiOp was issued in 2007, chlorpyrifos and diazinon were applied in amounts 4 and 100 times greater, respectively, than in 2013. Compare 2007 Annual Pesticide Use Report Indexed by Chemical – Monterey County, http://www.cdpr.ca.gov/docs/pur/pur07rep/chemcnty/monter07_ai.pdf, with 2013 Annual Pesticide Use Report Indexed by Chemical – Monterey County, http://www.cdpr.ca.gov/docs/pur/pur13rep/chemcnty/monter13_ai.pdf. NMFS has also concluded that it is "reasonable to assume that concentrations of chlorpyrifos and diazinon are likely decreasing in the Salinas River watershed due to:

(1) prohibitions on the use of chlorpyrifos and diazinon by state and federal regulatory agencies;
(2) agricultural community increased use of other organophosphates (OPs); and
(3) implementation of pesticide specific TMDLs and agricultural orders to reduce use in the Lower Salinas River.

Attachment M at 2-3. The use of pyrethroids and neonicotinoids has also increased.

As volumes of chlorpyrifos and diazinon have decreased in application, NMFS has started to look at the impacts of other substitute pesticides. Since November 2008, NMFS has issued seven biological opinions related to the U.S. Environmental Protection Agency's proposed registration of 31 active pesticide ingredients, analyzing their effects on listed Pacific salmonids and their critical habitats. "Pesticide Consultations with EPA," http://www.nmfs.noaa.gov/pr/ consultation/pesticides.htm. For S-CCC steelhead, NMFS concluded that the following 16 pesticides could jeopardize the fish's continued existence and/or adversely modify designated critical habitat: 2, 4-D butoxypropyl ester, carbaryl, carbofuran, chlorothalonil, chlorpyrifos, diazinon, malathion, methidathion, naled, oryzalin, pendimethalin, phosmet, trifulalin, diflubenzuron, fenbutatin oxide, and propargite. See May 21, 2013 Letter at 3 (first 13 pesticides); Biological Opinion on EPA's Registration of Pesticides Containing Diflubenzuron, Fenbutatin Oxide, and Propargite at 559 (final 3 pesticides). Many of these pesticides are currently applied for agricultural use in the Salinas Valley. *See generally* 2013 Annual Pesticide Use Report Indexed by Chemical – Monterey County, http://www.cdpr.ca.gov/docs/pur/pur13rep/chemcnty/monter13_ai.pdf.

2. Drought

The Biological Opinion assumed precipitation would follow historical wet and dry year patterns, *see, e.g.*, BiOp at 12-13, and the Water Project would operate as planned. Neither assumption has proved correct, however. California has experienced a severe, multi-year drought that began years after NMFS issued the Biological Opinion in 2007. The Flow Prescription only contemplated water releases from the Nacimiento and San Antonio Reservoirs for steelhead flows in the Salinas River when combined water storage is above 150,000 acre-feet for smolt outmigration or 220,000 acre-feet for adult upstream

migration and juvenile passage to the lagoon. Flow Prescription at 3. The Flow Prescription does allow for 2 cfs of flow to the lagoon during dry years where flows for migration are not triggered. Id. Due to the drought, reservoir storage capacity has not exceeded the migration-flow trigger levels for years, relieving MCWRA from any obligation to provide conservation releases. Due to declining reservoir storage and low rainfall, there have been no fish passage days since 2011, effectively precluding steelhead reproduction. Attachment A at 1-2. As a result, steelhead trout receive essentially no conservation flow benefit from the BiOp that was crafted with the object of protecting the species.

Moreover, the effects of drought are exacerbated by MCWRA's large-scale repair and maintenance projects. For example, in August 2015, MCWRA asserted that it needed to reduce the San Antonio Reservoir to dead pool so it could conduct necessary dam maintenance activities. Attachment N (Letter from NMFS to MCWRA, dated Sept. 2, 2015), at 1. Although NMFS recommended that MCWRA explore "all feasible alternatives to conduct the maintenance before drying up the river," *id.*, MCWRA went forward with its plan and reduced the San Antonio Reservoir to "dead pool." Such new information and changed operations may cause effects on steelhead that were not previously considered in the 2007 BiOp.

3. Presence of Fish in San Antonio River

New information on the presence of steelhead in San Antonio River requires NMFS to revisit the BiOp. When the BiOp was issued in 2007, NMFS believed that steelhead were not present in the San Antonio River, and accordingly did not prescribe sufficient flow protections in that water body. *See* BiOp at 55 ("Current flow and temperature parameters in the San Antonio River downstream of San Antonio Reservoir preclude rearing, and spawning gravel is thought to be limited[.]") When MCWRA shut down the San Antonio Dam in 2013 for repairs and maintenance, the water became too warm to support steelhead, leading to fish deaths on September 19, 2013. The discovery dead fish demonstrates that the San Antonio can support – and was supporting – steelhead trout. Accordingly, the BiOp must be amended to protect steelhead and their San Antonio River habitat.

LEGAL VIOLATIONS

The forgoing facts demonstrate that NMFS, the Army Corps, and MCWRA are in ongoing violation of both the Endangered Species Act and the Clean Water Act. First, NMFS and the Army Corps had a duty to reinitiate consultation in response to MCWRA's ongoing noncompliance with the requirements, terms, and conditions of the 2007 BiOp Statement and in response to new information about changed conditions or changed project circumstances, but unlawfully has failed to do so. Second, NMFS unlawfully modified the BiOp in 2012, that modification is invalid, and reinitiation of consultation is required. Third, as a result of MCWRA's noncompliance with the 2007 BiOp, MCWRA and the Army Corps are in violation of the Section 9 "take" provision of the ESA. Fourth, MCWRA and the Army Corps are in violation of the Clean Water Act because of

MCWRA's noncompliance with the terms and conditions of its section 404 permit, and the Army Corps' failure to redress this failure.

A. ESA Section 7 Violation by NMFS and Army Corps for Failure to Reinitiate Consultation

NMFS and the Army Corps are required to reinitiate formal consultation because both federal agencies retained discretionary involvement and control over the Salinas Valley Water Project, 50 C.F.R. § 402.16, and because changed conditions and subsequent modification of the Water Project have revealed new information about impacts on steelhead trout not previously considered in the BiOp. 50 C.F.R. § 402.16(b)-(c). Each agency has an independent duty to reinitiate consultation. See Envtl. Prot. Info. Ctr. v. Simpson Timber Co., 255 F.3d 1073, 1076 (9th Cir. 2001) ("The duty to reinitiate consultation lies with both the action agency and the consultation agency"). Failure to reinitiate consultation violates the ESA. Sierra Club v. Marsh, 816 F.2d 1376 (9th Cir. 1987) (abrogated on other grounds by Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv., 789 F.3d 1075, 1085 (9th Cir. 2015)).

1. NOAA Fisheries and the Army Corps Retained Discretionary Involvement and Control

NMFS retained discretionary involvement and control over the Salinas Valley Water Project through, among other things, Terms and Conditions 28, which established an Adaptive Management Strategy that "shall continue in an iterative fashion for the life of the project." BiOp at 105. Under that condition, MCWRA is required to annually evaluate the effectiveness of the Flow Prescription and modify it when performance is inadequate, and both MCWRA and NMFS must "mutually agree[]" to the modified plan. BiOp at 105. The monitoring provisions in Term and Conditions 21 and 27 are further evidence of NMFS's continuing role in overseeing implementation of the project. BiOp at 101-04.

The Army Corps retained discretionary involvement and control over the Salinas Valley Water Project through the Incidental Take Statement, which imposes on the Corps "a continuing duty to regulate the activity covered by this incidental take statement." BiOp at 95. Furthermore, the BiOp provided that "If the Army Corps: (1) fails to assume and implement the terms and conditions, or (2) fails to require any permittee to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to any permit, grand document, or contract, the protective coverage of section 7(o)(2) may lapse." *Id.* Finally, the Section 404 permit itself is conditioned on compliance with the BiOp. Corps Permit at 2.

2. Noncompliance with the Biological Opinion

MCWRA's noncompliance with the requirements, terms, and conditions of the 2007 BiOp obligated NMFS and the Army Corps to reinitiate consultation pursuant to 50 C.F.R. § 402.16(b) ("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") and 50

C.F.R. § 402.16(c) ("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 biological opinion"). As described above, MCWRA has failed to effectively reduce pesticide loads in the Blanco Drain by 50 percent (Term and Condition 26) and to fulfill its adaptive management obligations related to the Flow Prescription (Term and Condition 28). These mitigation measures were deemed "necessary and appropriate to minimize take of SCCC steelhead" by NOAA Fisheries. BiOp at 97. Additionally, MCWRA's failure to adequately monitor water quality and steelhead constitute "subsequent modifications" that require the agencies to reinitiate consultation. MCWRA's failure to install the fish screen and adhere to the Flow Prescription, as described in the Project Description, are also "subsequent modifications" of the Project as it was understood in 2007.

An agency's failure to undertake mitigation measures relied on by NMFS in issuing a biological opinion constitutes "new information" triggering the duty to reinitiate conservation. Sierra Club v. Marsh, 816 F.2d 1376 (9th Cir. 1987) (holding that reinitiation was required when it became apparent that mitigation measure specified in the biological opinion – the preservation of 188 acres of marshland for a flood control project – "had been delayed and might not take place at all." Similarly, an agency's failure to meet monitoring requirements on which the "not likely to adversely affect" determination was premised constitutes a "subsequent modification" triggering the duty to reinitiate consultation. Forest Guardians v. Johanns, 450 F.3d 455, 463-465 (9th Cir. 2006)

3. New Information on Pesticide Use, the Drought, and Presence of Fish in the San Antonio River

Since NMFS issued the BiOp in 2007, new information and changed circumstances that may directly affect the survival of steelhead in the Salinas watershed have been revealed. Of most significance, changes in agricultural pesticide use, a severe drought, and the demonstrated presence of steelhead in the San Antonio River all constitute – conditions that were not present or known in 2007 – all constitute "new information [which] reveals effects of the action that may affect listed species or qualify habitat in a manner or to an extent not previously considered" triggering an obligation on the part of NMFS and the Army Corps to reinitiate consultation. 50 C.F.R. § 402.16(b). The agencies' failure to do so is an ongoing violation of the ESA, actionable under 16 U.S.C. section 1540(g).

More generally, NMFS's conclusions in the 2007 BiOp were premised on routine operating assumptions for the MCWRA dam and water diversion system that have proved substantially incorrect. System failures, repairs, maintenance, and adjustments to external conditions have dramatically affected river flows over the course of the last several years, in a manner that was not contemplated or considered in the BiOp. NMFS and the Army Corps cannot simply ignore these substantial changes and pretend that the system and the Water Project are functioning as originally described by MCWRA. Rather, because these operational changes constitute new information not previously considered in the BiOP, the agencies must reinitiate consultation and reconsider the project impacts on steelhead trout survival.

B. Unlawful Failure by NMFS to Specify Numerical Take Limit in Modified BiOp

As explained above, NMFS arbitrarily and capriciously modified the BiOp's Incidental Take Statement in 2012. That modification is invalid and reinitiation of consultation is required.

In general, incidental take statements must "set a 'trigger' that, when reached, results in an unacceptable level of incidental take, invalidating the safe harbor provision, and requiring the parties to re-initiate consultation. Ideally, this "trigger" should be a specific number." Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife, Bureau of Land Mgmt., 273 F.3d 1229, 1249 (9th Cir. 2001). The ideal of specifying a "numerical limitation" comes from Congress. Oregon Nat. Res. Council v. Allen, 476 F.3d 1031, 1037-38 (9th Cir. 2007) (citing H.R.Rep. No. 97-567, at 27 (1982), reprinted in 1982 U.S.C.C.A.N. 2807, 2827) (finding that quantifying take of owls in terms of acreage of habitat lost was insufficient). When no numerical limit on take is specified, the Service must establish that a numerical limit could not be practically obtained. Ctr. for Biological Diversity v. Bureau of Land Mgmt., 422 F. Supp. 2d 1115, 1137-38 (N.D. Cal. 2006) (concluding that issuance of an incidental take statement with no numerical limit on desert tortoises that could be taken was arbitrary and capricious and therefore invalid and rejecting Service's assertions that it was "impractical" to estimate the number of desert tortoise in an area because a previous biological opinion *did* make such a numerical estimation).

Similarly here, NMFS originally established a numerical take limit for monitoring purposes, but later arbitrarily backpedaled and eliminated any fixed numerical limit. The original 2007 BiOp specified: "no more than 500 juvenile steelhead to be captured from fish sampling activities with mortality not to exceed 3% of total juveniles captured." In a subsequent letter purporting to modify this BiOp term, NMFS stated "If mortalities of juveniles from fish sampling events are greater than 3%, incidental take is exceeded." Attachment C at 2. The modified Incidental Take Statement thus removes any numerical limit for take during fish sampling. This modification is especially troublesome given the changed circumstances and dramatic reductions in returning fish, discussed above. Capture of steelhead – even for sampling – is a form of take under the ESA, 16 U.S.C. § 1532(19), and NMFS improperly failed to quantify capture in the modified Incidental Take Statement.

C. Unlawful ESA Section 9 Take by Army Corps and MCWRA

MCWRA and the Army Corps are in ongoing violation of the Section 9 "take" provision of the ESA by engaging in or permitting activities causing harm and habitat modification to steelhead without authorization to do so. The Incidental Take Statement does not shield the agencies from liability for takes when those agencies fail to satisfy the terms and conditions of the underlying 2007 BiOp. MCWRA is liable under Section 9 because its habitat modifications actually kill or injure steelhead by impairing essential behavioral patterns, including migrating, breeding, rearing, and sheltering. The Army Corps, as the agency to which the BiOp was issued, it is liable under the ESA for any

resulting violations by the federal permit holder.

1. MCWRA Is Taking Threatened Steelhead by Acting Contrary to the Biological Opinion and Incidental Take Statement

The Special Conditions section of MCWRA's section 404 permit makes it clear: MCWRA must follow the Biological Opinion and the Terms and Conditions of the Incidental Take Statement that NMFS issued to Army Corps in order to be shielded from section 9 take liability. MCWRA failed to follow the requirements of the Biological Opinion and Incidental Take Statement, and its actions have taken steelhead.

First, the Ninth Circuit has repeatedly stated that an agency is exempt from ESA section 9 liability if – and only if – it complies with the terms and conditions of its incidental take statement. *See, e.g.*, National Wildlife Federation v. NMFS, 422 F.3d 782, 790 (9th Cir. 2005); Ariz. Cattle Growers' Ass'n v. United States Fish & Wildlife, 273 F.3d 1229, 1239 (9th Cir.2001) ("if the terms and conditions of the Incidental Take Statement are disregarded and a taking does occur, the action agency or the applicant may be subject to potentially severe civil and criminal penalties under Section 9."). A citizens' group may sue for noncompliance with an Incidental Take Statement. South Yuba River Citizens League v. National Marine Fisheries Service, 629 F.Supp.2d 1123 (E.D. Cal. 2009) (noting that plaintiffs could bring a citizen suit alleging that take had occurred in violation of the ITS's conditions).

Second, because incidental take statements depend upon biological opinions, if a biological opinion is revoked or altered, or the circumstances upon which the biological opinion was based change, then the incidental take statement no longer shields the agency from take liability. Oregon Natural Resources Council v. Allen, 476 F.3d 1031, 1032, 1036-37 (9th Cir. 2007). Noncompliance with the biological opinion or circumstances that change the conditions on which it was based render the protections of a corresponding incidental take statement obsolete. *See id.* at 1032, 1034, 1036-37 (when the number of acres used by an endangered owl that the Service incorporated in the Biological Opinion was invalidated, a new Incidental Take Statement was necessary).

Third, "[w]hen reinitiation of consultation is required, the original biological opinion loses its validity, as does its accompanying incidental take statement, which then no longer shields the action agency from penalties for takings." Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt., 698 F.3d 1101, 1108 (9th Cir. 2012) (citing Or. Natural Resources Council, 476 F.3d at 1037; U.S. Fish & Wildlife Serv. & Nat. Marine Fisheries Serv., Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities under Section 7 of the Endangered Species Act 4–23 (1998)).

For all three of the above reasons, the Incidental Take Statement from the 2007 BiOp no longer shields MCWRA from Section 9 take liability. First, MCWRA violated BiOp by failing to construct a fish screen, failing to reduce pesticides, failing to properly monitor the water quality or fish, and failing to follow the flow prescription. Second,

changed pesticide use and the drought, as well as changes to the underlying Water Project operational assumptions of the original consultation, alter the conditions upon which the BiOp was based. And third, these facts render the existing BiOp inadequate and invalid.

MCWRA has harmed and harassed steelhead trout in violation of the Section 9 take provision by not complying with the Flow Prescription that NMFS incorporated in the Biological Opinion and Incidental Take Statement. From June 2014 until June 2015 MCWRA maintained flows lower than what NMFS required for a finding of no jeopardy in its BiOp. Similarly, by choosing to dramatically increase reservoir releases from the Nacimiento Dam in the summer of 2015, MCWRA caused there to be inadequate water supplies reserved in the reservoir to maintain required stream flows to protect fish in the Salinas River. Lowering flows below what the steelhead require for migration to spawning habitat "significantly disrupt[s] normal behavior patterns" and modifies the steelhead's habitat to the point of "impairing essential behavioral patterns, including breeding, feeding, or sheltering." 50 CFR § 17.3 (2006) (defining harass and harm).

Indeed, MCWRA's operations in the Salinas River watershed have resulted in actual fish deaths. For example, when MCWRA shut down the San Antonio dam in 2013 for maintenance, the waters became too warm, water chemistry changed, and endangered steelhead died. Additionally, by not constructing a fish screen or reducing pesticide concentrations, MCWRA has likely caused injury or death by exposure to poor water quality.

Each individual steelhead death or injury violates the ESA's prohibition against the take of listed species. 16 U.S.C. §§ 1532(19), 1538(a)(1)(B) (prohibiting killing or harm to a listed species); Strahan v. Coxe, 127 F.3d 155, 165 (1st Cir. 1995) (a single injury to one member of a listed species constitutes a take); Loggerhead Turtle v. County Council of Volusia County, Florida, 92 F. Supp. 2d 1296, 1301 (M.D. Fla. 1995) ("The future threat of even a single taking is sufficient to invoke the authority of [the ESA].")

2. The Army Corps Failed to Satisfy the Biological Opinion and Incidental Take Statement and is Liable for Steelhead Takes

Army Corps' failure to implement the Incidental Take Statement in the 2007 BiOp exposes the agency to liability for any Section 9 takes that occurred. The language in the Incidental Take Statement makes it clear that the Army Corps has "a continuing duty" to ensure MCWRA's compliance with the BiOp. Its failure to do so constitutes an actionable violation of the ESA.

Moreover, the Army Corps is liable under ESA Section 9 for facilitating unlawful take. MCWRA may only lawfully operate the Water Project pursuant to the Army Corps' Clean Water Act Section 404 permit. By authorizing the Water Project and failing to take necessary steps to ensure compliance with the Terms and Conditions of the 2007 BiOp, the Army Corps is causing or contributing to the unlawful take of steelhead trout in the Salinas River watershed. Strahan v. Coxe, 127 F.3d at 163 (where private party could not legally operate without governmental permit, the agency issuing permit "just as clearly" falls

within Section 9's take prohibition and may be deemed liable under the ESA); *see also* Ctr. for Biological Diversity v. C.L., No. 1:14-CV-258-BLW, 2016 WL 233193, at *7 (D. Idaho Jan. 8, 2016); Loggerhead Turtle, 92 F. Supp. 2d at 1307 (holding that an agency's regulation may cause take where it facilitates, rather than prohibits, a violation of the ESA); Palila v. Hawaii Dept. of Land and Natural Resources, 852 F.2d 1106, 1110 (9th Cir. 1988) (a State violates Section 9 when it permits activity that harms a protected species by destroying its habitat).

D. Clean Water Act Violation by MCWRA and Army Corps

MCWRA has violated the Clean Water Act by failing to comply with its Section 404 permit, which constitutes an actionable violation of "an effluent standard or limitation." 33 U.S.C. § 1365(a)(1). The definition of an effluent standard or limitation includes "an unlawful act under subsection (a) of section 1311 of this title." Id. § 1365(f). In turn, the definition of an unlawful act under section 1311(a) includes the discharge of any pollutant in non-compliance with section 1344, which outlines permitting for dredge and fill operations. Id. §§ 1311(a), 1344(a). See Envtl. Def. Fund v. Tidwell, 837 F. Supp. 1344, 1350 (E.D.N.C. 1992) (finding a discharger liable under section 1365(f) for failing to obtain a permit under section 1344, and thereby violating an effluent standard under section 1311(a)). By failing to comply with the Incidental Take Statement in the 2007 BiOp, MCWRA has violated and is continuing to violate the mandatory conditions of its Section 404 permit. That violation is actionable under the citizen suit provisions of the Clean Water Act, 33 U.S.C. § 1365.

The Army Corps has violated the Clean Water Act by failing to redress MCWRA's permit violations, a duty that is "not discretionary." 33 U.S.C. § 1365(a)(2). Under section 1344, if the Army Corps finds, on the basis of any information available, a "violation of any condition or limitation set forth in a permit," then "the Secretary *shall* issue an order requiring such person to comply with such condition or limitation, or the Secretary *shall* bring a civil action in accordance with paragraph (3) of this subsection." 33 U.S.C. 1344(s)(1) (emphasis added). The word "shall" denotes mandatory action. The Army Corps' failure to issue a compliance order or bring a civil action to redress MCWRA's noncompliance violates the Clean Water Act and is actionable under the Clean Water Act citizen suit provision, 33 U.S.C. § 1365, and/or the Administrative Procedures Act, 5 U.S.C. §§ 701-706.

CONCLUSION

If NMFS, the Army Corps, and MCWRA do not act within 60 days to correct these violations, The Otter Project[1] intends to commence suit in federal court to redress the

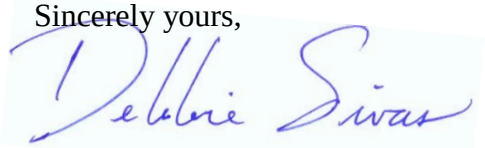
[1] The Otter Project is a California non-profit organization dedicated to protecting the State's watersheds and coastal environments for the benefit of California sea otters and humans through science-based policy and advocacy. The Otter Project has an interest in protecting water quality and watershed function in the Salinas River. The organization has approximately 3000 members. The Otter Project's contact information is as follows: Steve

ongoing harm to listed species. The Otter Project is entitled to seek injunctive and declaratory relief, as well as attorney fees, against any or all of the parties named in this letter. 16 U.S.C. § 1540(g); 33 U.S.C. § 1365; Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1066 (9th Cir. 1996) ("A reasonably certain threat of imminent harm to a protected species is sufficient for issuance of an injunction under section 9 of the ESA."). An appropriate remedy would be to reinitiate and complete consultation on the Water Project and suspend the Clean Water Act Section 404 permit for the project until the consultation process is complete and new biological opinion/incidental take statement is issued.

Time is of the essence here. Several projects that MCWRA is planning in the Salinas Watershed, including the channel maintenance project, removal of invasive arundo, the Interlake Tunnel between the Nacimiento and San Antonio Reservoirs, Pure Water Monterey, and use of the 11043 water right. Individually, these projects are cause for concern and will require Army Corps' permits and/or Section 7 consultation with NMFS. Collectively, they could spell extinction for the Salinas River watershed steelhead trout. Accordingly, the agencies must take immediate, affirmative steps to understand the cumulative threats to the species and to put in place sufficient protections to ensure its continued survival.

We look forward to working with you to achieve our shared goal of preserving steelhead and would be happy to discuss these issues with you further. Thank you for your timely attention to this urgent matter.

Sincerely yours,



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ATTACHMENT A

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

October 6, 2015

Claude Hoover, Chair
Board of Directors
Monterey County Water Resources Agency
893 Blanco Circle
Salinas, California 93901-4455

Re: Interlake Tunnel Project

Dear Mr. Hoover:

The purpose of this letter is to convey NOAA's National Marine Fisheries Service's (NMFS) concerns regarding the Monterey County Water Resource Agency's (MCWRA) proposed Interlake Tunnel and the San Antonio Reservoir Spillway Modification Projects. Over the past year, NMFS and MCWRA representatives have discussed several issues associated with the Interlake Tunnel and its relationship to the 2007 Salinas Valley Water Project (SVWP). This letter outlines NMFS' concerns for the purpose of furthering our discussions and guiding MCWRA's development of project plans.

The MCWRA has indicated to NMFS that upon completion of the Interlake Tunnel Project releases from Nacimiento and San Antonio reservoirs will be conducted in a manner consistent with the operations assessed under the 2007 SVWP biological opinion (NMFS 2007) issued to the U.S. Army Corps of Engineers (Corps). Reservoirs releases and resulting streamflow conditions developed for the SVWP were designed to meet MCWRA's water supply goals and minimize impacts to federally listed threatened South-Central California Coast (SCCC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) and their designated critical habitat. The *Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River* (MCWRA 2005; flow prescription) relies on triggers primarily based on combined reservoir storage and mean daily stream flow to initiate releases from the reservoirs to maintain upstream passage conditions that are similar to conditions that existed historically. Under the SVWP, MCWRA is to achieve, on a 10-year average, the median number of upstream passage days (within a 10 percent variance, and based on water year type) that occurred historically.

As stated in our July 1, 2015, letter to you, recent monitoring by MCWRA from 2010 through 2013 suggests the total run size of SCCC steelhead in the Salinas watershed is quite low (Cuthbert *et al.* 2011; Cuthbert *et al.* 2013). Since monitoring began in 2010, the highest annual number of adult steelhead detected at the MCWRA's trap location was 43 during the winter of 2012-13

(Cuthbert *et al.* 2013). Due to low rainfall and declining reservoir storage levels over the past four years, there have not been any fish passage days since 2011 (see Table 1 below). Since October 2013, passage for any life stage has not been possible because significant stretches of the lower Salinas River have remained dry. Therefore, the lack of river flow has precluded all steelhead reproduction for at least the last two years, and the potential for successful reproduction the previous two years was very low, if any.

Table 1. Adult steelhead upstream passage days by operational year (2010-2015), Salinas River, Monterey County, California (MCWRA 2014 and unpublished data).

Operational Year[1]	Year Type	Number of passage days required on a 10-year average (MCWRA 2005)	Number of passage days achieved	Reservoir releases made to augment natural flows?	Adult steelhead detected
2010	Wet	Not required	70	No	N/A
2011	Wet	Not required	69	No	13
2012	Dry	Not required	0	No	17
2013	Dry-Normal	16	0	No	43
2014	Dry	Not required	0	No	0
2015	Dry	Not required	0	No	0

Our analyses in the 2007 SVWP biological opinion expected there would likely be reductions in adult upstream passage opportunities between November and January in the mainstem Salinas River due to reduced water releases from the Nacimiento and San Antonio reservoirs. We expected these decreases would be relatively minor and that they would be partially offset by increases in adult passage opportunities in February and March of most normal years. However, as indicated in Table 1, the SVWP has not provided increases in adult passage opportunities (*i.e.*, zero passage days occurred in 2013 when there could have been 16 days if MCWRA made adequate reservoir releases).

Regarding the proposed Interlake Tunnel Project, it is our understanding that post-construction the project would divert water from the Nacimiento Reservoir to San Antonio Reservoir that would have otherwise been spilled or released at Nacimiento Dam. To date, MCWRA has not provided to NMFS information regarding the effect of the Interlake Tunnel Project on reservoir release and spill events, and the associated effects on river health and steelhead migration opportunities. Under existing conditions, reservoir storage operations have significantly affected the magnitude and frequency of flows supporting steelhead migrations in the mainstem Salinas River, and have reduced peak discharges from the dams resulting in the aggradation of sediment and vegetation throughout the lower Salinas River. As the result of the combination of pumping and reservoir storage, the flow of the Salinas River to the lagoon and ocean has been reduced from 533,000 acre-feet per year (Simpson 1946) to approximately 238,000 acre-feet per year (EDAW 2001). The

[1] Operational Year is the spring/summer season, and includes the previous winter. For example, Operational Year 2010 includes December 2009.

average annual controlled releases from MCWRA's reservoirs are approximately 200,000 acre-feet per year (MCWRA 2015). The proposed Interlake Tunnel project could exacerbate these two problems in the Salinas River by further reducing steelhead passage days and channel aggradation. Thus, the Interlake Tunnel Project has the potential to impact SCCC steelhead in the Salinas River in a manner and to an extent not considered in the SVWP biological opinion. For this reason, there will be a need to conduct a new section 7 consultation pursuant to the federal Endangered Species Act for the Interlake Tunnel Project on the Corps' issuance of a Section 404 of the Clean Water Act permit for this activity.

NMFS has also reviewed the *Informational Notice of pending RFP's for engineering design and environmental compliance services* for the San Antonio Reservoir Spillway Modification Project (MCWRA 2015). Although it is described by the MCWRA as a separate and distinct project from the Interlake Tunnel Project, the Spillway Modification Project would accommodate storage of new water diverted from Nacimiento River by the Interlake Tunnel Project. By modifying the existing spillway at San Antonio Dam with a crest control device, San Antonio Reservoir's maximum lake elevation would effectively increase by 10 feet and water storage capacity increase by approximately 60,000 acre feet. This modification to the storage capacity of San Antonio Reservoir could affect the SVWP's flow prescription for SCCC steelhead that relies on triggers based on a combination of reservoir storage and mean daily streamflow to initiate fish passage flows.

Both the Spillway Modification Project and the Interlake Tunnel Project, individually and in combination, allow MCWRA to manage reservoir levels differently than under existing conditions and reduce the frequency and duration of reservoir release and spill events to downstream reaches. These changes have the potential to significantly compromise fish passage for threatened steelhead in the Salinas River and contribute to the further decline of the watershed's population.

To address these issues, it is essential for MCWRA to initiate an analysis regarding the effects of these projects on flood control releases and fish passage opportunities for steelhead. NMFS requests the opportunity to work with MCWRA and your consultants to design these projects in a manner that provides passage for steelhead under the anticipated range of water year conditions. The additional water supplies obtained by construction of these projects have the potential to benefit both future MCWRA projects as well as fish in the Salinas River watershed.

According to the *Interlake Tunnel and Spillway Modification Projects Pre-proposal Meeting* (MCWRA 2015), construction is scheduled to begin in June 2017 (and end July 2018). This schedule seems highly ambitious and it is unclear if the schedule allows for consideration of the above concerns for threatened steelhead. We have the sense that the project is moving quickly ahead either without much analysis, or at best, with analyses that have not been shared. We strongly recommend you meet with us early in the process to ensure this project will not result in jeopardy to listed steelhead and for MCWRA to be able to move forward in a timely manner on the design and scope of the project.

Thank you for your attention to these concerns. We look forward to hearing from you soon to discuss the above issues. Please direct questions regarding this letter to Mr. William Stevens, North-Central Coast Office, at (707) 575-6066, or via e-mail at William.Stevens@noaa.gov.

Sincerely,

Gary Stern
Acting North-Central Coast Office Supervisor
California Coastal Office

cc: David Chardavoyne, MCWRA, Salinas
Robert Johnson, MCWRA, Salinas
Brent Buche, MCWRA, Salinas
Elizabeth Krafft, MCWRA, Salinas
German Criollo, MCWRA, Salinas
Howard Franklin, MCWRA, Salinas
Holly Costa, U.S. Army Corps, San Francisco
Jacob Martin, U.S. Fish and Wildlife Service, Santa Cruz
Linda Connolly, CDFW, Fresno
Margaret Paul, CDFW, Fresno
Jon Rohrbough, CCRWQCB, San Luis Obispo
Copy to Chron File

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ATTACHMENT B

DEPARTMENT OF THE ARMY PERMIT

Permittee: **Monterey County Water Resources Agency**

Permit No.: **24976S**

Issuing Office: **San Francisco District**

NOTE. The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

You are hereby authorized to discharge approximately 1.2 acres of fill to construct a seasonal diversion structure in the Salinas River. Work shall be carried out in accordance with the attached plans and drawings labeled "Salinas River Diversion Facility, Monterey County Water Resources Agency" dated 06-08-07 in 7 sheets.

Project Location: **in the Salinas River near the City of Salinas, Monterey County, California**

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **January 1, 2017**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

This Department of the Army permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA). The enclosed National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) Biological Opinions (BO) contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with the "incidental take statement" that is specified in the BOs. Your authorization under this Department of the Army permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take statement in the attached BOs. Those terms and conditions are hereby incorporated in this permit by reference. A failure to comply with the terms and conditions associated with incidental take statement in the BO, resulting in a take of the above listed species would constitute an unauthorized take, and would also constitute noncompliance with this Department of the Army permit. The NMFS and FWS Service are the appropriate authority to determine compliance with the terms and conditions of their BOs, and with the ESA.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

   ( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

   (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

   ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

   a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

   b. This permit does not grant any property rights or exclusive privileges.

   c. This permit does not authorize any injury to the property or rights of others.

   d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

   d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Matt V. Wyl — 11/6/07

(Permittee) (Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

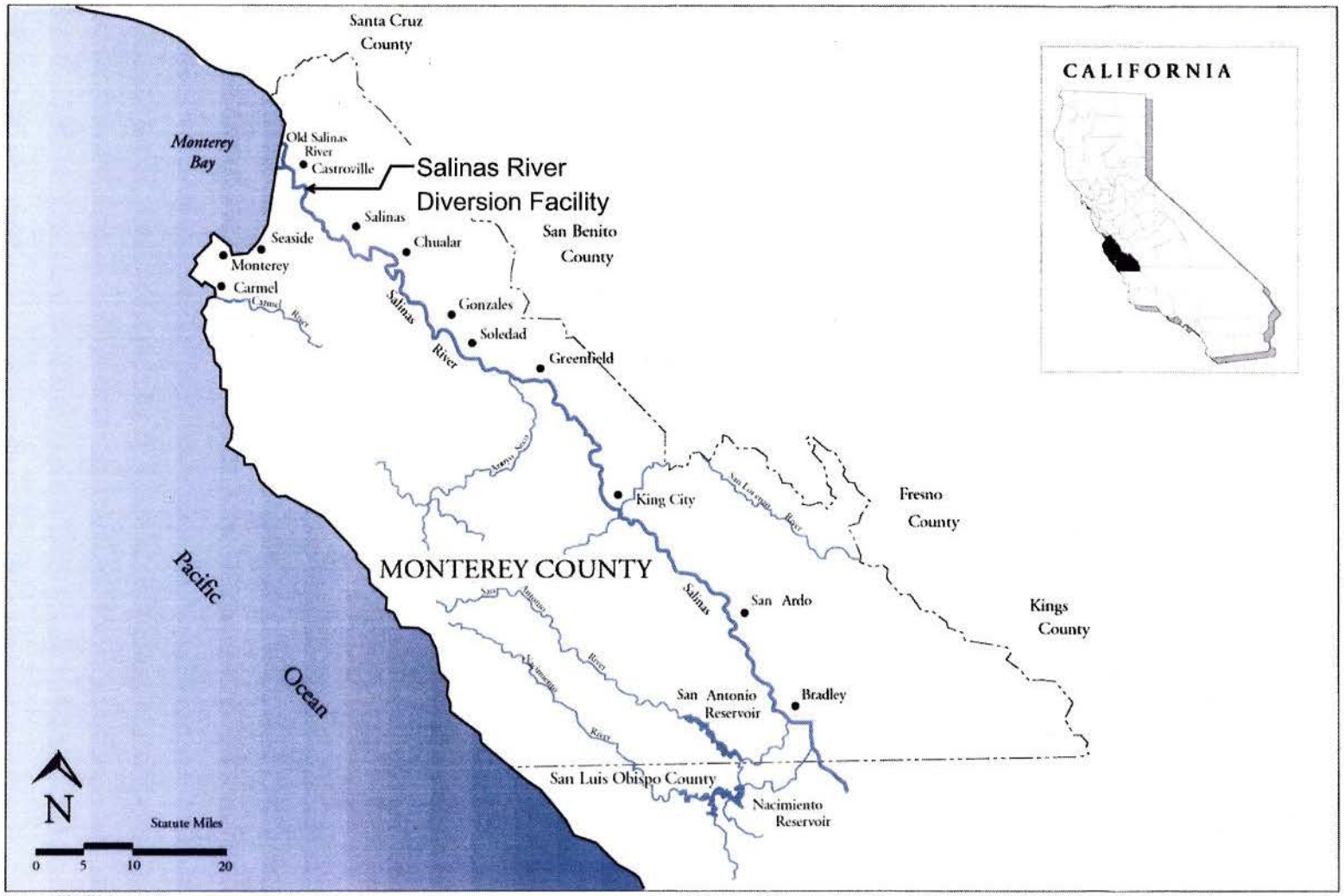
Mike Dillaby — 11/29/07

(District Engineer) (Date)

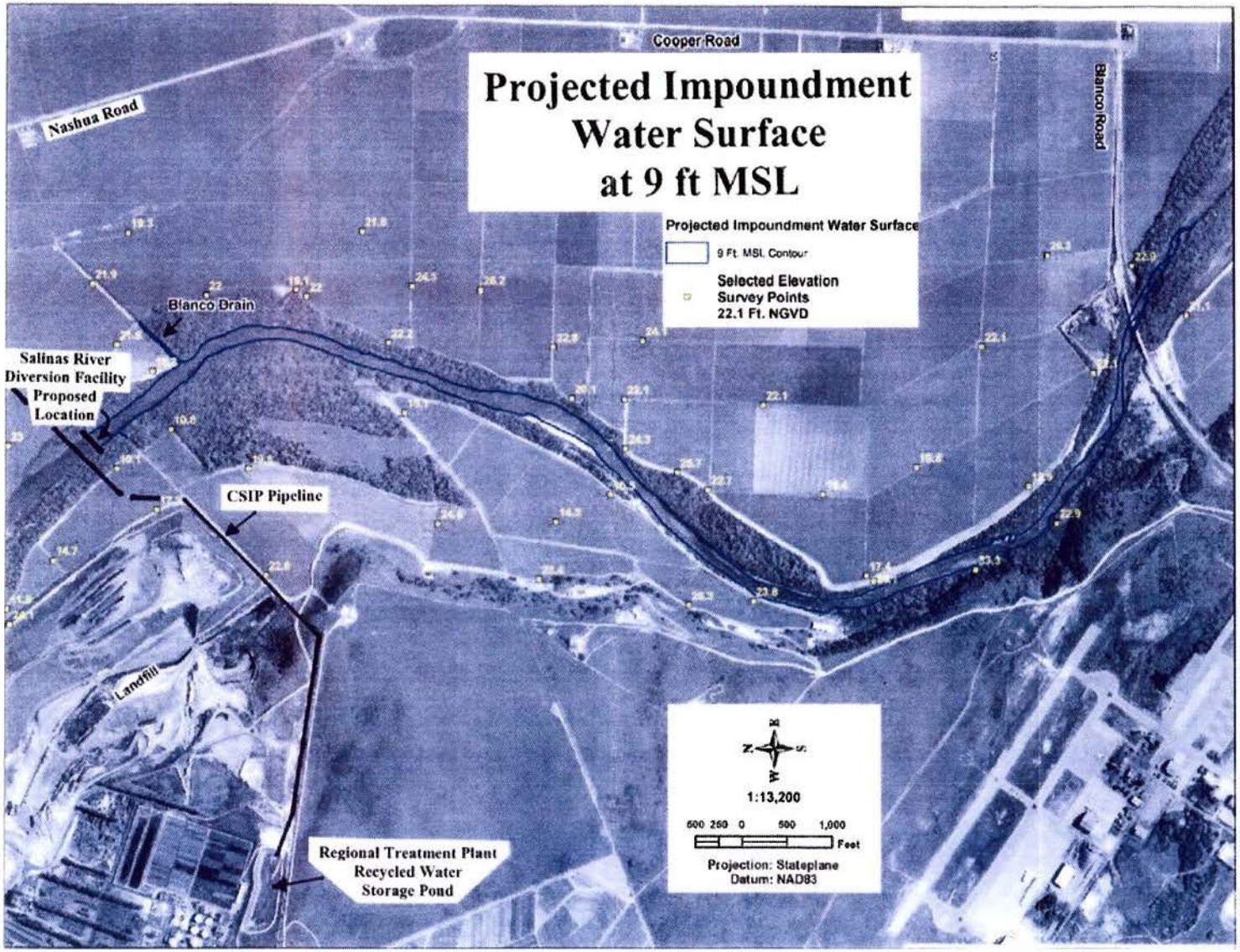
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____

(Transferee) (Date)



Source: EDAW, Inc., 1998.


Projected Impoundment Water Surface at 9 ft MSL
Projected Impoundment Water Surface
9 Ft. MSL Contour
Selected Elevation Survey Points 22.1 Ft. NGVD
Cooper Road
Nashua Road
Blanco Road
Blanco Drain
Salinas River Diversion Facility Proposed Location
CSIP Pipeline
Landfill
Regional Treatment Plant Recycled Water Storage Pond
1:13,200
500 250 0 500 1,000
Feet
Projection: Stateplane
Datum: NAD83

PROPOSED SALINAS RIVER DIVERSION FACLITY PIPELINE & EASEMENT

WITH EXISTING CASTROVILLE SEAWATER INTRUSION PROJECT (CSIP) DISTRIBUTION SYSTEM PIPE

LEGEND:

- PROPOSED CONSTRUCTION EASEMENT (60ft. WIDTH, UNLESS OTHERWISE NOTED)
- PERMANEMENT EASEMENT (20ft. WIDTH)
- PROPOSED SALINAS RIVER DIVERSION FACILITY PIPELINE
- EXISTING CASTROVILLE SEAWATER INTRUSION PROJECT PIPELINE
- APPROXIMATE EXISTING PROPERTY BOUNDARY
- PROPOSED SALINAS RIVER DIVERSION FACILITY PARCEL

NOTES:

1. ALL EASEMENTS, PIPELINES, & PROPERTY BOUNDARIES ARE APPROXIMATE.
2. THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE AND ARE NOT INTENDED AS A GUIDE FOR SURVEY OR DESIGN WORK.
3. DATE OF PHOTOGRAPH: 1998

N

W E

S

0 160 320 640

SCALE IN FEET

REV	DATE	DESCRIPTION	BY

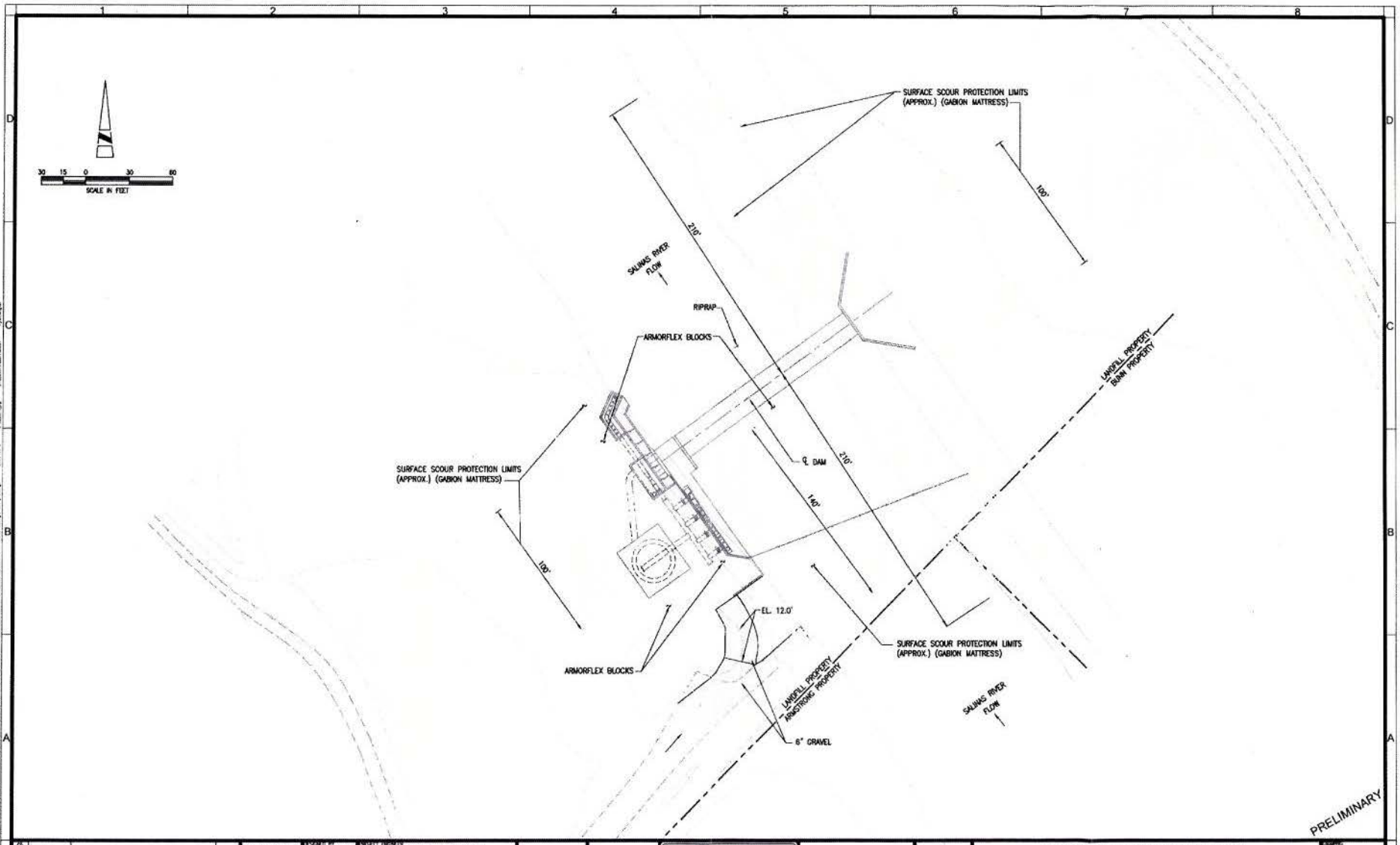
DRAWN BY: N.P.B.
DATE: 06-08-2007
CHECKED BY: C.M.
SCALE: AS SHOWN

MONTEREY COUNTY
WATER RESOURCES AGENCY
893 BLANCO CIRCLE
SALINAS, CA 93901
TELEPHONE: (831) 755-4860
FAX #: (831) 424-7935
MAILING ADDRESS
P.O. BOX 930
SALINAS, CA. 93902

Salinas River Diversion Facility

Proposed SRDF Parcel & Easement Locations

SHEET
2 of 12



REV	DATE	DESCRIPTION	APP'D
1			
2			
3			
4			
5			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: DWG
DRAWN BY: DWG
CHECKED BY: MTZ
DATE: 12-8-06
CADD STANDARDS: BOYLE

PROJECT ENGINEER: THEODORE FELDSHER
REG NUMBER: C44717
EXP DATE: 3/31/2008
PROJECT NUMBER: FR-M15-200-01

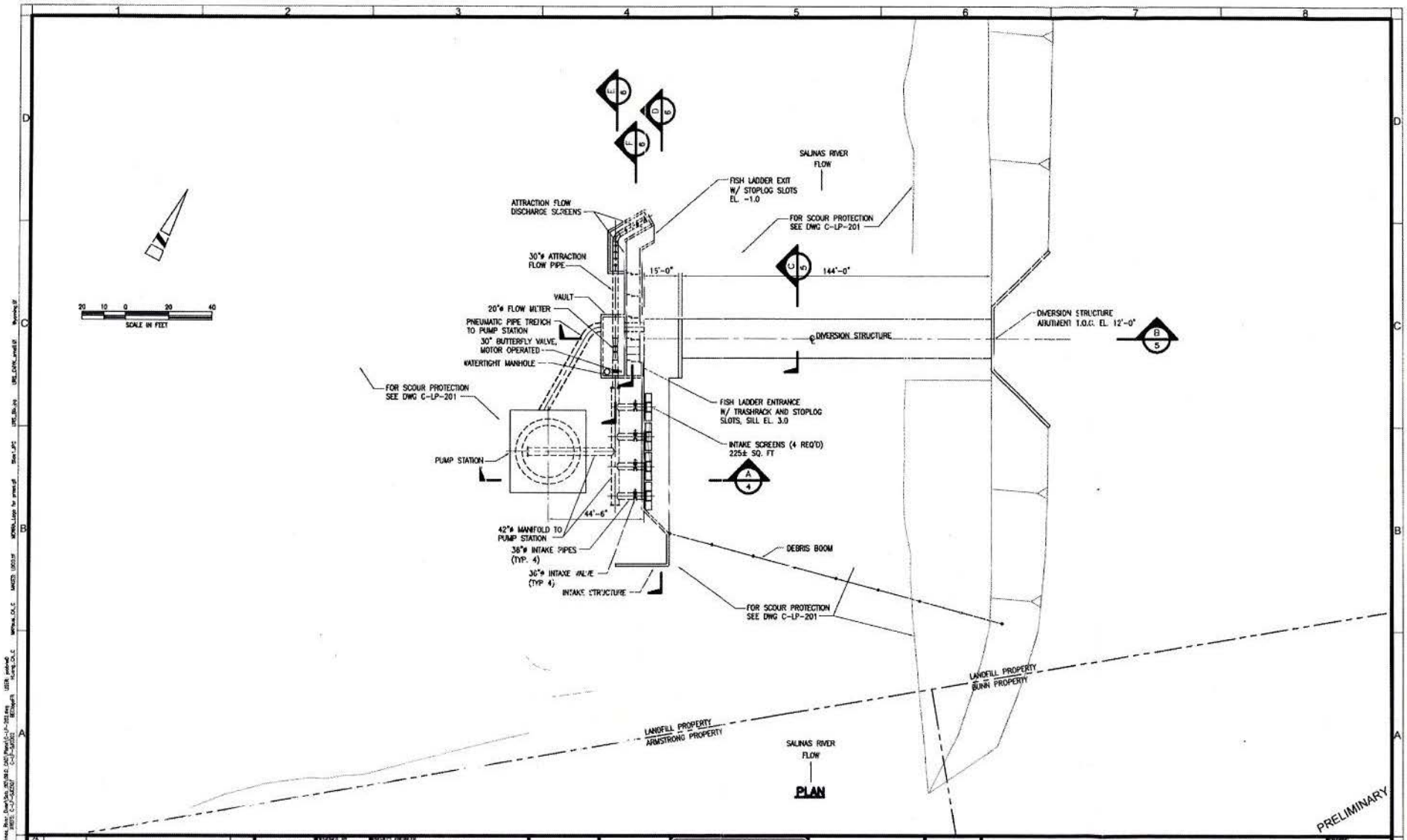
BOYLE engineering corporation
1286 E. Spruce Avenue Suite 101
Fresno, California 93720
559-448-8222
WWW.BOYLEENGINEERING.COM

URS

SALINAS RIVER DIVERSION FACILITY

DIVERSION FACILITY
CIVIL LAYOUT PLAN

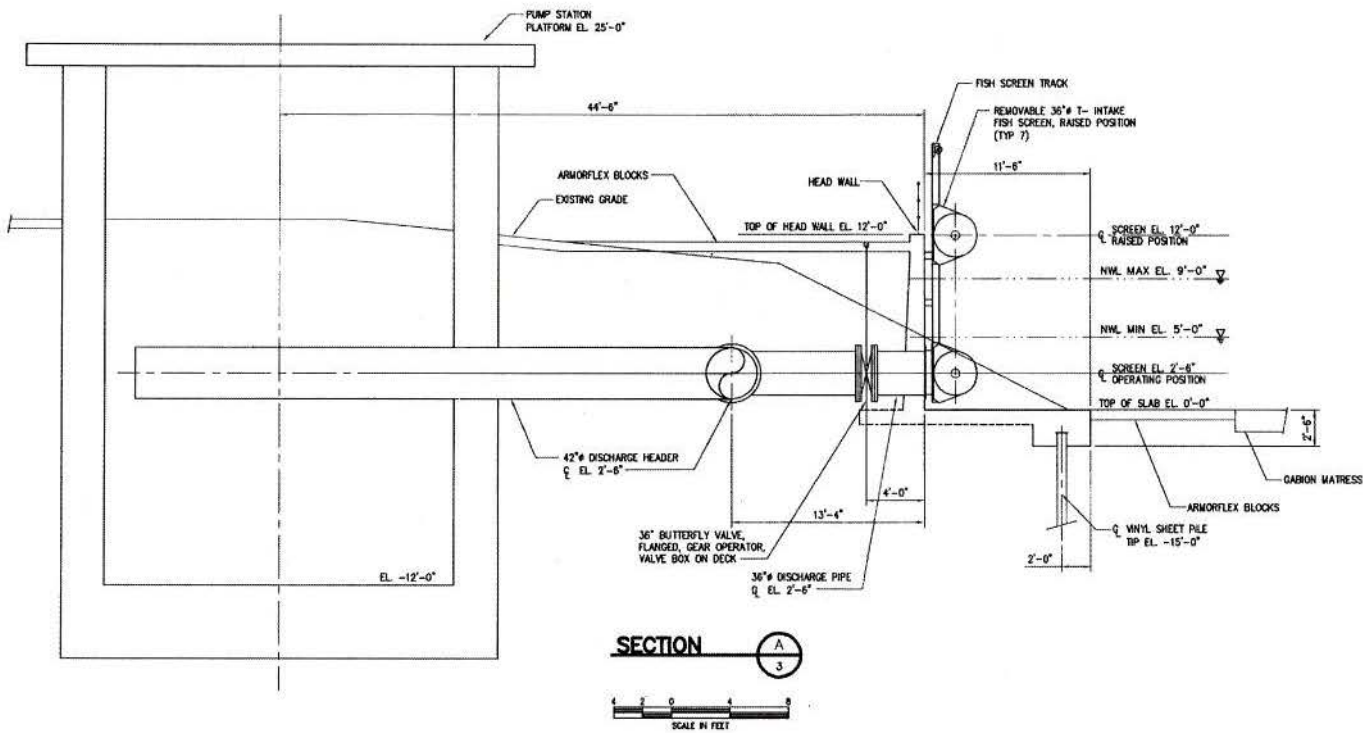
DRAWING: C-LP-201
SHEET: 002
OF: SHEETS



PLAN

PRELIMINARY

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: DWG	PROJECT ENGINEER: THEODORE FELDSHER	BOYLE ENGINEERING CORPORATION, 1300 E. Spruce Avenue, Suite 101, Fresno, California 93720, 559-448-0222, WWW.BOYLEENGINEERING.COM	URS	SALINAS RIVER DIVERSION FACILITY	DRAWING: C-LP-202
	DRAWN BY: DWG	REG. NUMBER: C44717	CIP DATE: 3/31/2008			
	CHECKED BY: MTZ	PROJECT NUMBER: FR-M15-200-01			DIVERSION FACILITY GENERAL ARRANGEMENT	SHEET: 003
	DATE: 12-8-06	CADD STANDARDS: BOYLE				



SECTION A/3

4 2 0 4 8
SCALE IN FEET

PRELIMINARY

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY DWG DRAWN BY DWG CHECKED BY MTZ DATE 12-8-06	PROJECT ENGINEER THEODORE FELDSHER RCE NUMBER C44717 EXP. DATE 3/31/2008 PROJECT NUMBER FR-M15-200-01 CADD STANDARDS BOYLE	BOYLE engineering Corporation 1394 E.Spruce Avenue Suite 101 Fresno, California 93720 559-445-8222 WWW.BOYLEENGINEERING.COM	URS	SALINAS RIVER DIVERSION FACILITY DIVERSION FACILITY INTAKE STRUCTURE SECTIONS	DRAWING C-LP-203 SHEET 004 OF - SHEETS

ATTACHMENT C

Mini De

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-4731

For Board packet. DU 5/2

April 25, 2012

In response, refer to:
2003/2080

Lieutenant Colonel Terry A. DiCiro
U.S. Department of the Army
San Francisco District, Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398

Dear Lieutenant Colonel DiCiro:

This letter is in regards to Monterey County Water Resources Agency's (MCWRA) incidental take limit for the monitoring component of the Salinas Valley Water Project Biological Opinion (SVWP BO). On April 3, 2012, MCWRA contacted NOAA's National Marine Fisheries (NMFS) stating that 365 South-Central California Coast (S-CCC) steelhead juveniles had been captured as part of MCWRA's smolt outmigration monitoring efforts using rotary screw traps (RST) in the Salinas River and its tributaries. MCWRA was concerned that additional outmigration monitoring efforts would exceed the take limit in the SVWP BO. The Incidental Take Statement (ITS) of the SVWP BO authorizes no more than 500 juvenile steelhead to be captured from fish sampling activities with mortality not to exceed 3% of total juveniles captured.

Historical information regarding S-CCC steelhead population densities in the Salinas River and its tributaries was sparse in drafting the BO, and NMFS used the best scientific information available at that time. It now appears that the ITS needs to be modified regarding incidental take during fish sampling activities. We anticipated that population densities in the Salinas River and its tributaries were low due to existing conditions in the basin (*e.g.*, reduced summer base flows that have reduced the amount of available rearing space, exacerbating high temperatures, and otherwise reducing the survival of steelhead fry, parr, and pre-smolts). The Arroyo Seco has suitable habitat conditions for spawning and rearing and NMFS expects more juveniles will be captured here than elsewhere in the basin. Additionally, based on recent scientific information and the suitability of habitat conditions, NMFS expects more juveniles will be present in the Arroyo Seco River than previously anticipated in the BO. Limiting the annual amount of take to 500 juveniles for fish sampling activities prohibits adequate monitoring of steelhead abundance and migration patterns in the Salinas River. Because fish sampling activities are expected to have low mortality rates (less than 3%), NMFS does not expect fish sampling activities to jeopardize the continued existence of S-CCC steelhead. The effects analyzed in the SVWP BO for fish sampling events are consistent with the changes to the ITS. Therefore, modifying the ITS does not affect the monitoring analysis nor does it change the jeopardy analysis of the SVWP BO.

The information collected from fish sampling activities, particularly smolt outmigration surveys, is essential to determine the effectiveness of the SVWP. MCWRA should, therefore, continue to deploy and operate the RSTs in the Salinas, Nacimiento, and Arroyo Seco rivers from March 15 to May 31, as stated in the BO. The amount of incidental take authorized for fish sampling events in the ITS is now modified to read: *If mortalities of juveniles from fish sampling events are greater than 3%, incidental take is exceeded. In such a situation, MCWRA must contact NMFS immediately.*

The amount of incidental take authorized is not modified for other annual activities MCWRA conducts under the BO. A total of 20 juvenile steelhead could be captured and relocated annually in association with fish relocation activities at the Salinas River Diversion Facility (SRDF) and the Old Salinas River (OSR) facility. Additionally, 20 fish may die annually via desiccation or predation as pools dry up in association with decommissioning the SRDF impoundment. Finally, in association with annual decommissioning of the fish ladder, no more than three fish can be stranded per year. If more than 20 juvenile steelhead are captured, 20 fish die, or more than three fish are stranded annually in association with annual operations of the SRDF and OSR, take will be exceeded.

If you have any questions regarding this letter, please contact Mr. Devin Best at (707) 578-8553 or via email at devin.best@noaa.gov, or Joyce Ambrosius at (707) 575-6064 or via email at joyce.ambrosius@noaa.gov.

Sincerely,

Dick Butler
North Central Coast Office Supervisor
Protected Resource Division

CC: David Chardavoyne, Interim General Manager, Monterey County Water Resources Agency
Brent Buche, Chief Operations Manager, Monterey County Water Resources Agency
Robert Johnson, Chief, Water Resources Planning and Management
Tom Skiles, Fisheries Biologist, Monterey County Water Resources Agency
Elizabeth Krafft, Program Manager, Monterey County Water Resources Agency
David Potter, Chair, Board of Supervisors, Monterey County
Leslie J. Girard, Assistant County Counsel, County of Monterey
Holly Costa, U. S. Army Corps of Engineers
Julie Means, Department of Fish and Game, Region 4
Deanna Harwood, Attorney-Advisor, NOAA Office of the General Counsel
Roger Briggs, Central Coast Regional Water Quality Control Board
Copy to file: 151422SWR2003SR8711

ATTACHMENT D

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

January 28, 2011

In response, refer to:
2003/2080

Lieutenant Colonel Torrey A. DiCiro
U.S. Department of the Army
San Francisco District, Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398

Dear Colonel DiCiro:

This letter is in regards to Monterey County Water Resources Agency's (MCWRA) compliance with the Salinas Valley Water Project Biological Opinion (SVWP BO). In reviewing the BO, NOAA's National Marine Fisheries Service (NMFS) has found MCWRA non-compliant with a number of terms and conditions as well as failing to implement the project as it was described in the Project Description as NMFS analyzed it. As you know, during section 7 consultation with the U.S. Army Corps of Engineers (Corps), NMFS analyzes the applicant's project description to assist the Corps in ensuring that its proposed project will not jeopardize the existence of listed species or result in destruction or adverse modification of critical habitat. Additional terms and conditions are usually imposed to further minimize impacts to listed species. As noted in the incidental take statement of the SVWP BO, "[t]he measures described (terms and conditions) are nondiscretionary, and must be undertaken by the Corps and its permittee for the exemption in section 7(o)(2) to apply. If the Corps: (1) fails to assume and implement the terms and conditions, or (2) fails to require any permittee to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to any permit, grant document, or contract, the protective coverage of section 7(o)(2) may lapse."

The following actions have not been implemented in a manner analyzed by NMFS under the SVWP BO and therefore, NMFS is concerned MCWRA is out of compliance with their Corps 404 permit.

Proposed Action: Fish Screen

In the Project Description of the BO, the applicant agreed that, "In addition to construction of the Salinas River Diversion Facility (SRDF), a fish screen will be placed at the inlet to the Old Salinas River channel (OSR) whenever it is open via the slide gate" (see page 9 of the SVWP BO). To date, the fish screen has not been completed, and it is not clear when MCWRA intends to have the construction completed. In fact, it has come to our attention MCWRA does not have a Corps permit for the construction of the fish screen. The 404 permit issued by the Corps for

the SVWP inadvertently did not include the fish screen although the fish screen was part of NMFS' section 7 consultation with the Corps for the SVWP. However, once NMFS was given the design of the fish screen (after the SVWP permit was issued), we became aware that the proposed fish screen and its construction and maintenance impacts were much greater than NMFS analyzed in the BO. Therefore, it was agreed by the Corps, NMFS, and MCWRA that the fish screen would need to be permitted and consulted on separately.

The purpose of the screen on the inlet to the OSR was to prevent the entrainment of fish into the OSR because, in NMFS's opinion, the OSR is not capable of supporting sensitive aquatic organisms such as Federally-protected South-Central California Coast (S-CCC) steelhead due to impaired water quality conditions (CCRWQCB 2010). We are concerned it may take several years for MCWRA to complete the fish screen. This is particularly concerning as steelhead smolts that have migrated out of the tributary streams are likely congregating in the lagoon. If the screens are not in place, and the slide gates to the OSR are open, then it is likely steelhead smolts may be entrained into the OSR and exposed to poor water quality conditions, thus exceeding the anticipated incidental take of ESA-listed steelhead analyzed under the BO.

NMFS' BO analyzed the impacts of the SVWP on steelhead with the consideration that the fish screen would be installed at the same time the SRDF was constructed. MCWRA may be exceeding allowable take. MCWRA must now move ahead without delay with design, permitting and construction of the fish screen.

Proposed Action: Flow

The Project Description states that, "In an attempt to meet project goals and minimize impacts to ESA-listed steelhead and designated critical habitat, MCWRA has proposed a flow prescription that relies on triggers based on a combination of reservoir conditions and stream flow to initiate fish passage flows" (see page 10 of the SVWP BO).

Beginning April 1, the flow prescription requires a minimum of 45 cubic feet per second (cfs) to be maintained at Spreckels (USGS 11152500) for a period of ten days or until the lagoon closes, and then 15 cfs until June 30. On May 31, 2010, flows dropped below the minimum 15 cfs, to a low of 0.48 cfs at Spreckels. Flows increased on June 13, 2010 to the required 15 cfs.

After June 30, a minimum of 2 cfs is to be maintained flowing to the lagoon. On September 21, 2010, flows declined below the 2 cfs minimum to 1.4 cfs. MCWRA contacted NMFS in both instances to inform them that MCWRA was aware of the issue and was working to resolve it.

As operators of the flow releases from Nacimiento and San Antonio reservoirs, MCWRA has the sole responsibility of discharges and maintenance of surface flows. To prevent the continual decline of S-CCC steelhead in the Salinas River watershed, adherence to the flow prescription is critical.

Term and Condition 26: Vegetated Treatment System

Reasonable and Prudent Measure (RPM) 2, Term and Condition 26 states, "MCWRA will begin

creating a vegetated treatment system (VTS) within Blanco Drain prior to the completion of SRDF construction activities." In a Technical Memorandum to the BO, dated May 16, 2008, MCWRA states it will reduce chlorpyrifos and diazinon contaminant loads by 50 percent (%) in the Blanco Drain within three years of SVWP startup. The SRDF was deemed operational on January 15, 2010, and NMFS visited the Blanco Drain on June 8, 2010, to find the VTS was not planted according to standard specifications for bioremediation of surface waters. Only pennywort (*Hydrocotyle ranuculoides*) was planted by MCWRA to reduce contaminants within the Blanco Drain system. In order for the VTS to be effective, there needs to be a sufficient buffer width and length of appropriate plants capable of bioremediation. To achieve this, vegetation should be well established along the water course. It is NMFS' opinion that at the current state of the Blanco Drain, the VTS is poorly designed and implemented and ineffective at meeting its intended goal (Photo 1). This is particularly concerning given the daily mean discharge in the Salinas River at the USGS gage at Spreckels was below the prescribed targets of 15 cfs for a duration of 13 days, with a majority of the only inputs to the lagoon coming from Blanco Drain (please see section on Flow above).

In order to assess the effectiveness of the VTS, MCWRA agreed to monitor the input and output of the Blanco Drain to analyze whether or not the VTS was reducing contaminant input into the Salinas River by 50%. The SVWP BO states, "Additionally, *pesticide concentrations* for Blanco Drain will be monitored and recorded for the period of April through the first significant storm flow discharge to the Salinas River no less than four times during the SRDF operating season (once in April, June, August, and October). " The BO also states *diazinon and chlorpyrifos* will be monitored four times during the SRDF operating season (once in April, June, August, and October). Diazinon and chlorpyrifos are only two of many pesticides that are used in the Salinas Valley. Other pesticides, primarily in the pyrethroid group, have been increasingly used (Hunt *et al.* 2010).

The intended purpose of the VTS is to treat contaminant-laden water that will discharge into the Salinas River and have a negative impact on S-CCC steelhead fitness. The monitoring program is to verify the functionality of the VTS for reducing contaminants into the Salinas River. However, if chlorpyrifos and/or diazinon ceased being used and replaced with other chemicals, monitoring only for chlopyrifos and diazinon will not give a true account of the toxicity levels in the water entering the Salinas River from the Blanco Drain.

To determine the effectiveness of the VTS, and to collaboratively determine water toxicity levels in the Blanco Drain and Salinas River, NMFS staff established a series of recommended scenarios that would transition away from the strict sampling of organophosphates and test for the contaminant in use at the time. NMFS recognizes MCWRA is not responsible for poor water quality inputs, but they are responsible to ensure the VTS is effective and that juvenile fish holding within the impoundment are not subjected to lengthened exposure time to contaminants.

If MCWRA does not follow the SVWP BO and sample for pesticides in the Blanco Drain and downstream, reinitiation of formal consultation may be required. Reinitiation of formal consultation may be required where "...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." In addition, if the VTS is found not to have decreased contaminant loads by 50% by year 3 (January

2012), MCWRA must implement an alternative to the VTS, *e.g.*, pumping Blanco Drain discharge to the wastewater treatment plant, as was agreed to in the BO.

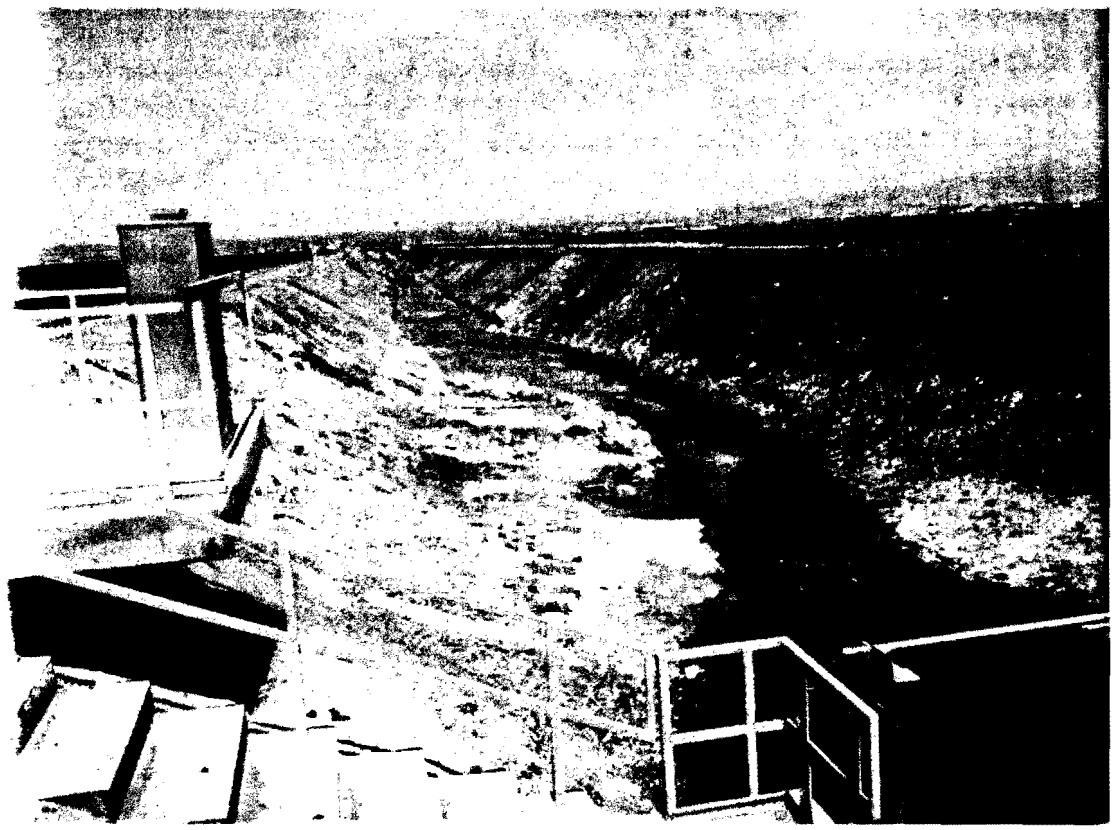


Photo 1: Blanco Drain Vegetated Treatment System – June 8, 2010

SVWP Monitoring Plan

RPM 3, Term and Condition 27 states, "MCWRA shall develop and implement a plan to monitor physical and biological parameters for the purposes of providing relevant information to be used in an adaptive management approach to water management and steelhead conservation in the Salinas River." The monitoring plan would provide information to evaluate the SVWP and develop reasonable adaptive management strategies to minimize impacts to S-CCC steelhead. MCWRA submitted a draft monitoring schedule to NMFS on September 28, 2009. NMFS staff reviewed the schedule and had concerns regarding the water quality monitoring portion of the plan (as mentioned in the previous section on VTS). On January 15, 2010, NMFS held a conference call with MCWRA staff to review our concerns with the Water Quality Plan, resulting in NMFS developing recommendations for MCWRA on March, 26, 2010, providing an outlet for MCWRA to reduce the frequency and intensity of sampling if proven that no changes could be determined from year to year. On April 23, 2010, MCWRA responded to NMFS' recommendations stating that it did not have the financial resources, or the staff capacity, to implement the suggested monitoring plans.

a. Downstream migrant traps

Under RPM 3, Term and Condition 27 c (ii), four downstream migrant traps will be employed to quantify downstream migration of smolts in the Arroyo Seco and Salinas Rivers. In 2010, MCWRA used three rotary screw traps (RST) (one at each location in the Arroyo Seco, Nacimiento, and Upper Salinas River) to determine site effectiveness and suitability of RST's for enumerating juveniles at each location. In the Draft SVWP Monitoring Plan, MCWRA has proposed to operate only three screw traps (not four as required in the terms and conditions). In order to comply with the SVWP BO, MCWRA must install four (4) traps that meet this objective.

NMFS and MCWRA staff have been in discussion about the feasibility of RSTs in the Salinas River watershed over the past year. NMFS staff has suggested using an alternative method in the lower Salinas and in the Upper Salinas, where conditions may not be suitable for operating RSTs. On April, 8, 2010, NMFS and MCWRA staff, including FishBio (consulting contractor to MCWRA) began discussions on alternative methods for enumerating migrating juvenile steelhead. In a meeting on October, 5, 2010, NMFS, MCWRA, and FishBio representatives discussed biological monitoring objectives, focusing on adult escapement estimates (see discussion below). NMFS is willing to assist MCWRA in development of a monitoring program that clearly identifies the timing, abundance, and location of outmigrating S-CCC steelhead in the Salinas River watershed.

b. Adult Steelhead Escapement

Under RPM 2, Term and Condition 27a(i), MCWRA is to install and operate a DIDSON camera to enumerate adult escapement in the Salinas River from December 1 to March 31 of each year for a period no less than 10 years. MCWRA and NMFS have been undergoing discussions since January 2010 when MCWRA, FishBio, and NMFS Protected Resource Division and Science Center staff reviewed the DIDSON being deployed on Scott Creek, Santa Cruz County. The conditions in the Salinas River at the SRDF posed several concerns whether the DIDSON would function appropriately to yield the dataset needed to determine migration patterns and population abundance in the Salinas River. In a collaborative effort, a Vaki system (portable resistance board weir and Vaki Riverwatcher) was suggested in lieu of the DIDSON. NMFS submitted a letter on October 15, 2010, approving the Vaki system, emphasizing the importance of having this system operational by the December 1 deadline. On December 15, 2010, the Vaki system had not yet been installed and was not operational although MCWRA was preparing to breach the Salinas River lagoon. The intent of having the monitoring system in place by December 1 of each year is to monitor adult migration numbers once the lagoon is breached. MCWRA has had three years to employ an adult monitoring station. MCWRA submitted an amendment to their streambed alteration agreement to California Department of Fish and Game (DFG) (Permit#1600-2007-0004-R4) in October, 2010. DFG agreed to the request on December 14, 2010. Due to the several large rain events, and subsequent high flows[1], MCWRA installed the Vaki system on January 18, 2011. By not having this monitoring equipment in place by

[1] Peak daily discharge of 2,920 cfs 6:45 PST on January 4, 2011, at USGS gage #11152500 Salinas River near Spreckels, California.

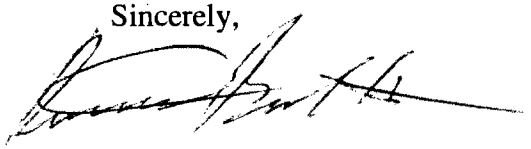
December 1 of each year, MCWRA is out of compliance with the terms and conditions of the BO to enumerate adult escapement.

Summary

NMFS staff wishes to continue the long history of collaboration that it has developed with MCWRA, and hopes to improve lines of communication and the effectiveness of the implementation of the SVWP BO. MCWRA has been trying to collaborate on the forefront of these issues. However, it is the responsibility of the action agency (the Corps) to conserve endangered and threatened species that are covered under the Endangered Species Act (ESA Sec 7(a)(1)). MCWRA is remiss in meeting a number of the terms and conditions outlined in the BO. If MCWRA cannot come into compliance with the SVWP BO, NMFS will need to discuss reinitiation with the Corps. MCWRA, with the assistance of NMFS, needs to: (1) obtain permits and complete the installation of the fish screen by the end of 2012; (2) follow the SVWP Flow Prescription for Steelhead Trout as written in the SVWP BO; (3) monitor the Salinas River and Blanco drain to determine if contaminants in the Blanco Drain are being reduced by 50% with the installation of a VTS by April, 2012; (4) complete the Monitoring Plan with a outmigrating steelhead monitoring plan within 60 days of receipt of this letter; and (5) provide any monitoring data collected to date.

NMFS would like to offer its services and expertise to MCWRA to assist in resolving these issues expediently. We appreciate your immediate attention on this matter. If you have any questions regarding this letter, please contact Mr. Devin Best at (707) 578-8553 or via email at devin.best@noaa.gov, or Joyce Ambrosius at (707) 575-6064 or via email at joyce.ambrosius@noaa.gov.

Sincerely,



Dick Butler
North Central Coast Office Supervisor
Protected Resource Division

cc: Curtis V. Weeks, General Manager, Monterey County Water Resources Agency
William L. Phillips, Deputy General Manager, Monterey County Water Resources Agency
Robert Johnson, Chief, Water Resources Planning and Management
Board of Supervisors, Monterey County Water Resources Agency
Leslie J. Girard, Assistant County Counsel, County of Monterey
The Honorable Sam Farr, Salinas Office
Bob Smith, U. S. Army Corps of Engineers
Julie Means, Department of Fish and Game, Region 4
Deanna Harwood, NOAA General Counsel
Steve Shimek, Monterey Coastkeeper
Roger Briggs, Central Coast Regional Water Quality Control Board
Copy to file: 151422SWR2003SR8711

References

Hunt, J., D. Markiewicz, M. Pranger. 2010. Summary of Toxicity in California Waters: 2001-2009. Surface Water Monitoring Program, California State Water Resource Control Board. Sacramento, California.

Central Coast Regional Water Quality Control Board. 2010. Preliminary Staff Recommendations For An Agricultural Order: Conditionally Waiving Individual Waste Discharge Requirements For Discharges On Irrigated Lands. State Water Resources Control Board. Sacramento, California.

National Marine Fisheries Service [NMFS]. 2007. Salinas Valley Water Project Biological Opinion. Southwest Region, North Central Coast Office. File # 151422SWR2001SR8602

Federal Register Cited

16 U.S.C. §§ 1531 to 1544: Endangered Species Act of 1973. Chapter 35, Endangered Species. United States Congress, Washington, D.C.

ATTACHMENT E

MONTEREY COUNTY

WATER RESOURCES AGENCY

PO BOX 930
SALINAS , CA 93902
(831)755-4860
FAX (831) 424-7935

DAVID E CHARDAVOYNE
GENERAL MANAGER

STREET ADDRESS
893 BLANCO CIRCLE
SALINAS, CA 93901-4455

March 18, 2014

Ms. Joyce Ambrosius
National Marine Fisheries Service
North-Central Coast Office Central Coast Branch
777 Sonoma Ave. Rm 325
Santa Rosa, CA 95404

Dear Ms. Ambrosius:

On February 24, 2014 the Monterey County Water Resources Agency's (Agency) Board of Director's authorized the Agency's Reservoir Operations Committee to determine whether or not the Agency would initiate operations of the Salinas River Diversion Facility (SRDF) for the 2014 irrigation season based on rainfall, inflow to the reservoirs and reservoir water elevations.

On March 5, 2014 the Reservoir Operations Committee unanimously passed a motion for the Agency to not operate the Salinas River Diversion Facility (SRDF) for the 2014 irrigation season (April-October) based on the lack of water in the Agency's two reservoirs, Nacimiento and San Antonio and insufficient rainfall. As you are aware, the National Marine Fisheries Service (NMFS) issued Biological Opinion (BO) SWR/2003/2080 in June 2007 for the Salinas Valley Water Project (SVWP) of which the SRDF is a component.

A second motion unanimously passed by the Committee requested Agency staff to make a formal recommendation to NMFS to allow the reduction in the minimum flow criterion from Nacimiento Reservoir from 60 cubic feet per second (cfs) to 25 cfs. This letter forwards that recommendation and is presented in accordance with page 31 of the "Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River" (Flow Prescription) which is included in the description of the proposed action in the BO (page 10) for the SVWP. The Flow Prescription states that "Under drought conditions the Monterey County Water Resources Agency will evaluate reservoir storage with regard to the continuation of minimum releases. When water surface of Nacimiento Reservoir is at or below 748 feet mean sea level (msl) recommendations may be presented to NMFS for a reduction of the minimum flow criterion".

On March 12, 2014 the water surface elevation at Nacimiento Reservoir was 727.6 feet, 30.4 feet below elevation 748. To date, total inflow to Nacimiento Reservoir this winter has amounted to approximately 7,500 acre-feet. Weather forecasts for the Central Coast of California, specifically the Nacimiento watershed, indicate very little to no additional rainfall for the remainder of the rainy season. At the current release rate of 60 cfs Nacimiento

Reservoir will reach its minimum pool elevation of 687.8 feet msl by early February 2015 (next winter), at which time releases from Nacimiento Reservoir will cease, as described on page 31 of the Flow Prescription and page 17 of the BO. With the reduction of releases to 25 cfs it is estimated that reaching minimum pool could be delayed by as much as 180 days, thereby providing prolonged flow into Nacimiento River, maintaining steelhead habitat as long as possible and offsetting the uncertainties of continuing drought conditions through winter 2015 - 2016.

In the summer of 2013 the Agency conducted a "Nacimiento River Low Flow Survey" (Appendix 1) to assess potential habitat and stranding impacts of reduced Nacimiento releases. This survey evaluated low flows between 26-28cfs. This survey concluded that while wetted width of the channel was reduced at these lower flows, there was connectivity along the entire length of the river and adequate areas for summer refugia for fish, including steelhead trout.

Monterey County is currently in an extreme or exceptional drought as depicted in Figure 1. On January 27, 2014 California Governor Jerry Brown declared a State of Emergency due to drought (Appendix 2) with "2014 projected to become the driest year on record."

There will be an agenda item for the March 31, 2014 Agency Board of Directors meeting to discuss progress in achieving the reduction of flows from Nacimiento Reservoir from 60 cfs to 25 cfs. A response is requested from NMFS prior to March 31, 2014 on this recommendation that "integrates an adaptive approach to implement the SVWP Flow Prescription for steelhead and provides flows fostering recovery of steelhead sub-populations in the Salinas Watershed" (page 98 BO).

If you have any questions regarding this request, please contact Elizabeth Krafft at 831.755.4860.

Sincerely,

David E. Chardavoyne

Attachment:
U.S. Drought Monitor - California

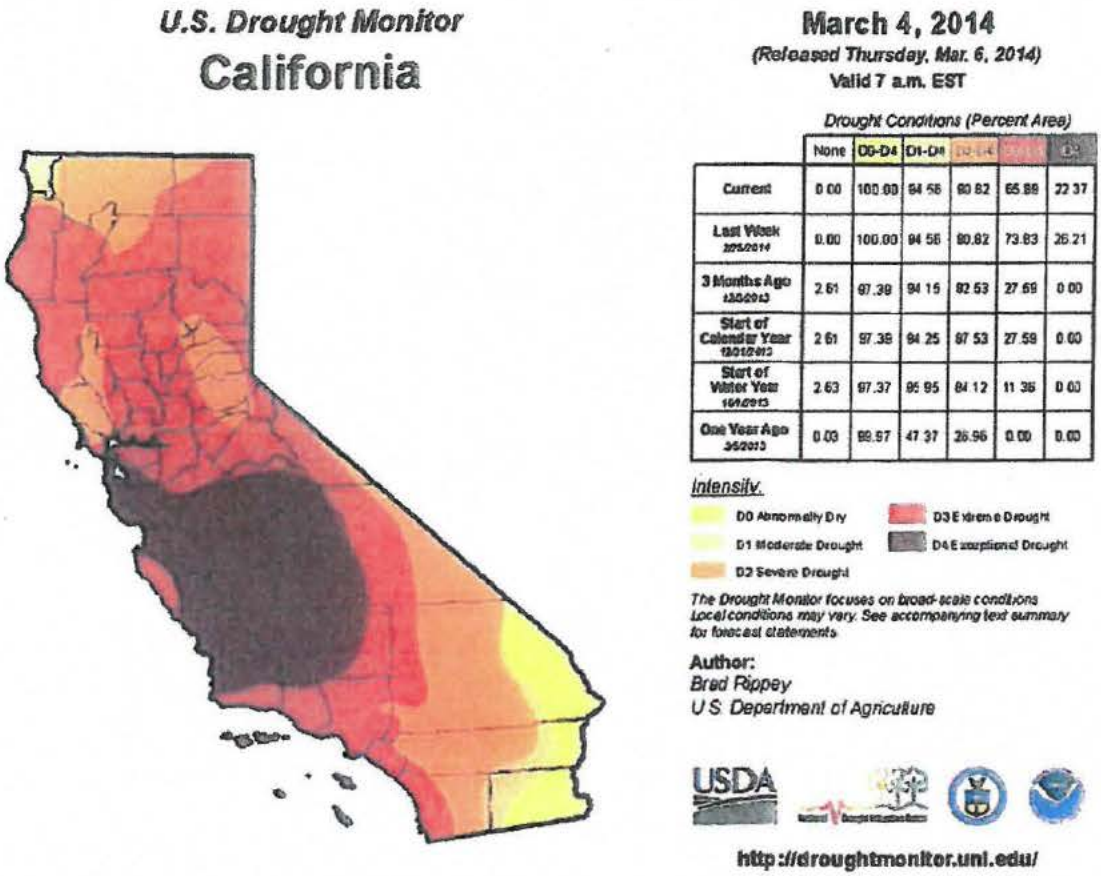

U.S. Drought Monitor
California
March 4, 2014
(Released Thursday, Mar. 6, 2014)
Valid 7 a.m. EST
Drought Conditions (Percent Area)
None D0-D4 D1-D4 D2-D4 D3 D4
Current 0.00 100.00 94.56 80.82 65.89 22.37
Last Week 0.00 100.00 94.56 80.82 73.83 26.21
3 Months Ago 2.61 97.39 94.15 82.53 27.59 0.00
Start of Calendar Year 2.61 97.39 94.25 87.53 27.59 0.00
Start of Water Year 2.63 97.37 95.95 84.12 11.36 0.00
One Year Ago 0.03 99.97 47.37 26.96 0.00 0.00
Intensity
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Brad Rippey
U.S. Department of Agriculture
USDA
http://droughtmonitor.unl.edu/

Figure 1.

ATTACHMENT F

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

April 25, 2014 **Refer to NMFS No: 2003-2080**

David Chardavoyne, General Manager
Monterey County Water Resources Agency
893 Blanco Circle
Salinas, California 93901-4455

Re: Monterey County Water Resources Agency's Recommendations to NOAA's National Marine Fisheries Service for a Reduction of Nacimiento Reservoir Minimum Flow Criterion

Dear Mr. Chardavoyne:

On March 21, 2014, NOAA's National Marine Fisheries Service (NMFS) received Monterey County Water Resources Agency's (MCWRA) March 18, 2014, recommendation to reduce Nacimiento Reservoir releases from the existing 60 cubic feet per second (cfs) to 25 cfs. The recommendation is in response to Monterey County experiencing an extreme or exceptional drought. On January 17, 2014, California Governor Edmund G. Brown issued a Proclamation of a State of Emergency regarding drought conditions throughout California. MCWRA has determined that, at the current release rate of 60 cfs, Nacimiento Reservoir will reach its minimum pool elevation of 687.7 feet mean sea level (msl) by early February 2015, assuming there is no additional rain or inflow to the reservoir. Once minimum pool elevation is reached, releases from Nacimiento Reservoir will cease. Nacimiento River is a tributary to the Salinas River, and both rivers support threatened South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*) and are designated critical habitat for this species.

NMFS has reviewed your recommendation, and on April 1 and 7, 2014, staff from NMFS and MCWRA held a conference call to discuss your recommendation. As you know, on June 21, 2007, in accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), NMFS issued its biological opinion to the U.S. Army Corps of Engineers for their proposal to permit the construction of the Salinas River Diversion Facility (SRDF). In that biological opinion, we analyzed the effects of both the proposed construction/operation of the SRDF and Nacimiento Reservoir Spillway modification and those changes in flow releases from Nacimiento and San Antonio reservoirs that would not otherwise occur without the operation of the SRDF. This included any change in flows along the Salinas River mainstem as well as changes in flows to the Salinas River Lagoon. As part of the project,

MCWRA proposed a set of flow prescriptions that included a minimum flow release of 60 cfs from Nacimiento Reservoir to protect and maintain suitable spawning and rearing habitat in the Nacimiento River downstream of Nacimiento Reservoir. Therefore, the biological opinion only analyzed the effects of the proposed flow prescription, including a minimum release of 60 cfs. Operation of the SRDF and concomitant changes in flow releases began in 2010.

NMFS understands MCWRA proposes to reduce Nacimiento Reservoir releases from 60 cfs to 25 cfs as soon as possible. According to MCWRA provisional dam and reservoir daily data (http://www.mcwra.co.monterey.ca.us/), on April 2, 2014, the elevation of Nacimiento Reservoir was 726.8 msl. As noted above, at the current release rate, Nacimiento Reservoir will reach its minimum pool elevation by early February 2015 (assuming there is no appreciable rain/inflow). According to MCWRA, with the reduction of releases to 25 cfs, they estimate that reaching minimum pool elevation could be delayed as much as an additional 180 days (also assuming no appreciable rain/inflow), or until approximately early August 2015. MCWRA states their proposed reduction to 25 cfs will extend the duration of surface flows in the Nacimiento River, which would maintain steelhead habitat and provide sufficient water for the operation of wells along the Nacimiento River for as long as possible.

NMFS has determined reducing the minimum flow releases from 60 cfs to 25 cfs is likely to result in adverse impacts to the quality and quantity of S-CCC steelhead habitat, which could result in take of S-CCC steelhead. The reduced flow volume will likely cause water temperatures to increase during spring through fall and with distance downstream from Nacimiento Reservoir. The reduction in flow volume also will likely reduce overall flow velocities and the extent of higher velocity habitats (*e.g.*, riffles, runs, and the heads of pools). Juvenile steelhead generally utilize fast water habitats to feed on drifting invertebrates and obtain sufficient food necessary to meet elevated metabolic demands while rearing in warm water environments. In our 2007 biological opinion, NMFS did not analyze minimum flows from Nacimiento River downstream of the dam less than 60 cfs, and therefore, the potential for the effects described above were not analyzed. Thus, any take[1] associated with the proposed reduction in reservoir releases would be unexempted take, and MCWRA could be in violation of section 9 of the ESA.[2]

If MCWRA wishes to implement their proposed reduction in reservoir releases, NMFS offers the following measures to help address our concerns. These measures do not obviate your need to contact other regulatory agencies, nor does implementation of these measures supersede any permits or authorization already in place from other agencies. Implementation of these measures does not exempt MCWRA from any take of listed species that may occur.

---

[1] Under section 3 of the ESA, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by NMFS as an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102).

[2] Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption.

Ramping rate

In order to minimize impacts to steelhead, their habitat, and macroinvertebrate prey, MCWRA should ramp down flows such that changes in stage will be approximately two inches per hour (Hunter 1992).

Temperature monitoring

In order to evaluate the impact of flow reduction on steelhead and their habitat, MCWRA should conduct continuous stream temperature monitoring for as long as flows are at a reduced level and provide stream temperature data to NMFS on a monthly basis. Water temperature data should reflect the longitudinal and seasonal range of conditions present in the Nacimiento River downstream of Nacimiento Dam.

Fish monitoring

To assess longitudinal presence/absence and relative abundance of steelhead and to evaluate the effect of the flow reduction, MCWRA should conduct summer fish monitoring (*e.g.*, snorkel/electrofishing) in addition to the required fish sampling typically done annually in October. NMFS staff is available to assist with the summer monitoring efforts.

Supplemental Flow Release

To offset the potential negative impacts of the proposed flow reduction in 2014 to the Salinas River steelhead population, NMFS recommends MCWRA provide additional flow releases in the future to help facilitate successful steelhead passage. This recommendation comports with language in the 2007 biological opinion ("[w]hen hydrologic conditions permit, MCWRA may maintain adult upstream passage flow after triggers are no longer met, such as between storm events, when meteorological forecasting indicates the imminent possibility of Arroyo Seco trigger flows reoccurring."). If sufficient water is stored, implementation of supplemental flow releases could be used to augment existing flows to improve or extend the window for successful downstream migration of smolts and kelts or for the upstream migration of adults. The supplemental flow release would be a collaborative effort between MCWRA and NMFS and decisions on the volumes necessary to achieve the enhanced passage would be contingent on reservoir elevation, existing flows in the river (and lower Arroyo Seco) and future weather forecast at that time.

Our 2007 biological opinion did not analyze ongoing Nacimiento and San Antonio dam operations and maintenance as a part of the proposed action, because they are neither indirect effects nor interrelated or interdependent actions to the proposed action. Most dam operations and maintenance were part of the environmental baseline to which the effects of the proposed action were added. As a result, the Incidental Take Statement for the 2007 biological opinion does not exempt any incidental take resulting from those baseline operations. You are aware of our determination that the bulk of the flow released from the Nacimiento and San Antonio dams do not have take exemption coverage. We recommend MCWRA apply to NMFS (and the U.S. Fish and Wildlife Service) for a ESA section 10 (a)(1)(B) permit, *i.e.*, a habitat conservation plan, so that ongoing dam operations, maintenance, and drought contingency plans could be exempted from ESA section 9 prohibitions. NMFS is willing and able to work with you on such an effort.

Thank you again for providing us with your recommendations. We look forward to future collaboration. Please direct questions regarding this letter to Mr. William Stevens, North-Central Coast Office, at (707) 575-6066, or via e-mail at William.Stevens@noaa.gov.

Sincerely,

Irma Lagomarsino
Assistant Regional Administrator
California Coastal Area Office

cc: Elizabeth Krafft, MCWRA, Salinas
Howard Franklin, MCWRA, Salinas
Richard Ortiz, Chair, Board of Directors, MCWRA, Salinas
Deidre Sullivan, Board of Directors, MCWRA, Salinas
Patrick McGreal, Deputy County Counsel, MCWRA, Salinas
Holly Costa, U.S. Army Corps of Engineers, San Francisco
Ho Truong, NOAA Office for Law Enforcement, Long Beach
Julie Means, California Department of Fish and Wildlife, Fresno
Jennifer Epp, Central Coast Regional Water Quality Control Board, San Luis Obispo

Literature Cited

Hunter, M.A. 1992. Hydropower flow fluctuations and salmonids: a review of the biological effects, mechanical causes, and options for mitigation. State of Washington, Department of Fisheries, Technical Report No. 119, Olympia, Washington.

ATTACHMENT G

ACTION:

Motion and Second by Directors Ken Ekelund and David Hart to approve and authorize the General Manager to execute a Memorandum of Understanding with the County of Monterey for the supervision and management of the 2010 General Plan Salinas Valley Groundwater Basin Zone 2C Study.

Motion carried unanimously by those Directors present.

Director John Huerta left the dais @ 2:13 pm and returned at 2:18 pm.

B. Consider receiving an update on discussions with the National Marine Fisheries Service (NMFS) regarding reducing the minimum release criterion from Nacimiento Reservoir from 60 cubic feet per second (cfs) to 25 cfs; and, providing direction to Staff.

Howard Franklin, Senior Hydrologist, stated the day's presentation responds to the Board's request for an update on reducing the minimum release criterion. On May 22, 2014, Staff met with NMFS to clarify the directives included in their response letter dated April 25, 2014. NMFS offered four measures the Agency could take if it decided to implement its proposed minimum release reduction:

- Ramping Rate – Stage change not to exceed two inches per hour;
- Temperature Monitoring – continuous stream temperature monitoring for as long as flow are at a reduced level (provided to NMFS monthly);
- Fish Monitoring – Summer monitoring in addition to required sampling usually performed in October;
- Supplemental Flow Release – provide additional future flow releases to facilitate successful steelhead passage; augment existing flows to improve or extend window for successful downstream migration of smolts and kelts or upstream migration of adults; contingent upon reservoir storage, existing flows in the river and weather forecasts.

NMFS staff indicated implementation of these measures does not exempt the Agency from any take of listed species that may occur. NMFS recommends that the Agency apply for an ESA section 10(a)(1)(B) permit and consider developing a habitat conservation plan.

Mr. Franklin also discussed Possible Release Options for Nacimiento River, including:

- Maximizing Conservation Releases (minimum pool by mid-August 2014);
- Maintaining 60 cfs minimum releases (minimum pool by mid-March 2015);
- Reducing minimum releases to 25 cfs (minimum pool by mid-August 2015); and,

Board Questions/Comments ***(Staff responses are emboldened and italicized)***:

1. Did NMFS state there was no analysis of reduced releases? ***We have about 50 years of data. NOAA Fisheries stated 25 cfs was not enough. The Biological Opinion allowed for additional study (which has not taken place).***

2. Wasn't there a 'No Project' analysis done for the EIR in SVWP? ***Yes. As a clarification, there was no analysis of "take" at 25 cfs.***

3. There are obviously costs associated with the SVWP and assessments based on beneficial use. Since beneficial use changed because of lack of water, will fees be returned to those people? ***No response was provided.***

4. The NMFS letter was fairly positive, and this seems like an opportunity to study releases at less than 60 cfs.

5. We must initiate effective communications with NMFS. We need to get coverage for incidental take that will occur at some point. We should work toward 25 cfs and begin working things out. ***In our consultation with NOAA Fisheries, we did not discuss who would or would not go to jail. They will not give an opinion regarding prosecution. They did say the Agency's plans seem reasonable and attainable. They do not believe the Agency will experience take if we follow their recommendations. In the event of incidental take when following the plan outlined by NMFS, we can negotiate to avoid jail time.***

6. This is an opportunity to begin building a database that NOAA Fisheries will accept, while saving water.

7. Where are you going to monitor temperature? ***There are two locations thus far. We did something similar last summer during the emergency repairs.***

8. How much does a low head runner cost? Staff time for about a week. ***We already have the parts. We need to bypass water at the same time…we cannot just shut down and pumping will be required.***

9. Government leaves us in the position that even you discuss with us in advance, we reserve the right to prosecute you even though you have good intentions.

10. In these types of scenarios, what do we do about the costs? What happens when those benefits are not being realized? ***There is a cost to maintain the facilities. Agency costs are increasing because of the drought. It becomes a risk of doing business.***

11. Please provide a report regarding the return of assessments to ratepayers when benefits are not being realized.

Public Comments: None.

ACTION:

Motion and Second by Directors Ken Ekelund and Deidre Sullivan to direct staff to gradually reduce minimum releases to 25 cfs or as close as possible following the conditions imposed by NOAA Fisheries.

Motion carried unanimously by those Directors present.

C. Consider recommending the Regional Advisory Committee's conceptual project recommendation be incorporated into the Notice of Preparation (NOP) for utilization of Water Rights Permit #11043.

Robert Johnson, Assistant General Manager, reported Staff is currently developing the NOP, making its completion the priority before the July 1, 2014 deadline. The NOP will be sent to

ATTACHMENT H

ATTACHMENT 1

MONTEREY COUNTY

WATER RESOURCES AGENCY

PO BOX 930
SALINAS , CA 93902
(831)755-4860
FAX (831) 424-7935

DAVID E. CHARDAVOYNE
GENERAL MANAGER

STREET ADDRESS
893 BLANCO CIRCLE
SALINAS, CA 93901-4455

July 31, 2015

Ms. Joyce Ambrosius
National Marine Fisheries Service
North-Central Coast Office Central Coast Branch
777 Sonoma Ave. Rm 325
Santa Rosa, CA 95404

Dear Ms. Ambrosius:

California, the Central Coast, and Monterey County are experiencing its fourth consecutive critically dry winter. A combination of these dry conditions and an unexpected hydroelectric plant breakdown at Nacimiento Reservoir has resulted in conditions that have not allowed the Monterey County Water Resources Agency (Agency) to operate the Salinas River Diversion Facility or provide reservoir conservation releases to the Salinas River Groundwater Basin for two consecutive years. As a result of these conditions all hydrologic subareas of the Salinas Valley, with the exception of the Pressure 400-Foot Aquifer, are currently experiencing historic groundwater level declines (Attachment 1 – "Salinas River Groundwater Basin Water Conditions for the third Quarter of Water Year 2014 – 2015").

Although Nacimiento Reservoir has had over 80,000 acre-feet of water available for conservation release to the Salinas Valley this summer, this water has had to remain in reservoir storage due to release limitations of the outlet works that restrict the Agency from providing releases of sufficient capacity to maintain a minimum flow of 2 cfs to the Salinas River Lagoon.

Due to the extreme drought conditions and concerns raised by Salinas Valley Stakeholders; the Monterey County Water Resources Agency Board of Directors and the Monterey County Board of Supervisors have directed the Agency to prepare recommendations for providing additional releases to the Salinas River. This release plan (Attachment 2 – "Proposed Release Plan for Nacimiento and San Antonio Reservoirs for Summer 2015") is in response to that direction. The Agency has developed these recommendations in order to:

- Meet the most immediate and extreme needs for groundwater availability
- Perform repair and maintenance work on San Antonio Dam outlet works to prevent emergency work due to equipment failure
- Maintain water for minimum flow releases from Nacimiento Reservoir (60 cfs)

Ms. Joyce Ambrosius
July 31, 2015

- Provide a unique and adaptive approach to enhance steelhead habitat and migration opportunities.

The Monterey County Water Resources Agency Board of Directors will be scheduling an emergency meeting in August in order to discuss this conservation release plan and direct Agency staff on options for implementation.

As time is of the essence, staff from the Agency, along with a Salinas Valley Stakeholder is hoping to meet with you and/or other appropriate National Marine Fisheries staff at your earliest convenience to discuss a response to this recommended conservation release plan. The Agency believes this plan integrates an adaptive approach to implementation of the Salinas Valley Water Project Flow Prescription for steelhead and provides flows fostering recovery of steelhead subpopulations in the Salinas Watershed.

If you have any questions regarding this request, please contact Howard Franklin at 831.755.4860.

Sincerely,

David P. Chardavoyne

Proposed Release Plan for Nacimiento and San Antonio Reservoirs for Summer 2015

Monterey County Water Resources Agency
893 Blanco Circle
Salinas, CA 93901

July 31, 2015

Attachment 2

Proposed Release Plan for Nacimiento and San Antonio Reservoirs for Summer 2015

Introduction

Four consecutive critically dry winters have resulted in extreme drought conditions in the Salinas Valley, Monterey County, and much of California. As a result of these conditions and concerns raised by Salinas Valley Stakeholders; the Monterey County Water Resources Agency Board of Directors and the Monterey County Board of Supervisors have directed the Monterey County Water Resources Agency (Agency) to prepare recommendations for immediately providing additional releases to the Salinas River. This proposed plan is in response to that direction. The Agency has developed these recommendations in order to:

- Meet the most immediate and extreme needs for groundwater availability
- Perform repair and maintenance work on the San Antonio Dam outlet works to prevent potential emergency work do to equipment failure
- Maintain water for minimum flow releases from Nacimiento Reservoir (60 cfs)
- Provide a unique and adaptive approach to enhance steelhead habitat and migration opportunities

Background

On March 5, 2014 the Reservoir Operations Committee unanimously passed a motion advising the Agency not to operate the Salinas River Diversion Facility (SRDF) for the 2014 irrigation season (April – October) based on lack of water in the Agency's two reservoirs, Nacimiento and San Antonio, and insufficient winter rainfall. A second motion unanimously passed by the Committee requested Agency staff to make a formal recommendation to the National Marine Fisheries Service to comment on the reduction of minimum flow criterion from Nacimiento Reservoir from 60 cubic feet per second (cfs) to 25 cfs.

On March 18, 2014 the Agency sent a letter to NMFS (Attachment 2A) forwarding that recommendation in accordance with page 31 of the "Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River" (Flow Prescription) which is included in the description of the proposed action in the NMFS issued biological opinion (B.O.) SWR/2003/2080, June 2007.

"Under drought conditions, the MCWRA will evaluate reservoir storage with regard to the continuation of minimum releases. When the water surface of Nacimiento Reservoir is at or below elevation 784 feet (mean sea level) recommendations may be presented to NMFS for a reduction of the minimum flow criterion."

On March 31, 2014 the Agency Board of Directors unanimously adopted Board Order No. 14-24 directing staff to reduce the minimum flow criteria from Nacimiento Reservoir from 60 cfs to 25 cfs, as agreed upon with NMFS, *"... in order to prolong flow into the Nacimiento River*

maintaining steelhead habitat as long as possible, offsetting the uncertainties of continuing drought conditions."

On April 25, 2014 NMFS provided a response to the Agency regarding minimum flow releases form the Nacimiento Reservoir (Attachment 2B). In that response NMFS noted that *"...reducing the minimum flow release from 60 to 25 cfs is likely to result in adverse impacts to the quality and quantity of S-CCC steelhead habitat, which could result in take of S-CCC steelhead."* Of concern to NMFS was that the reduced flow volume would cause adverse temperature increases with distance downstream from the reservoir and that their 2007 biological opinion did not analyze minimum flows of less than 60 cfs. But in order to work with the Agency in its water conservation efforts, NMFS made several operational recommendations that could be implemented in order to minimize potential impacts to steelhead habitat should the Agency choose to implement a reduction in minimum releases; along with recommendations to expanded monitoring procedures in the Nacimiento River downstream of the reservoir.

On April 28, 2014 the Agency Board of Directors received an update on NMFS response to the Agency's recommendation to reduce minimum releases from Nacimiento Reservoir. By unanimous decision, the Board directed Staff to continue discussions with NMFS and return with additional information and recommendations.

On June 2, 2014 the Agency Board of Directors received an update on discussions with NMFS regarding reducing the minimum release criterion from Nacimiento Reservoir from 60 cfs to 25 cfs; and was requested to provide direction to Staff. Agency Staff evaluated and presented three release options for the Board to consider:

1. Maximize conservation releases from Nacimiento Reservoir
   Under this release option, Nacimiento would reach "Minimum Pool" by late August, 2014.
2. Maintain 60 cfs minimum release from Nacimiento Reservoir
   With no winter inflow, under this release option, Nacimiento would reach "Minimum Pool" by early February, 2015.
3. Reduce minimum releases from Nacimiento Reservoir to 25 cfs
   With no winter inflow, under this release option, Nacimiento would reach "Minimum Pool" by late summer, early fall of 2015.

By unanimous decision, the Board directed Staff to gradually reduce minimum releases to 25 cfs, or as close as possible without dropping below 25 cfs, following the guidelines recommended by NMFS.

On June 4, 2014 Agency Staff began a gradual ramp down of releases from Nacimiento. A minimum release of 25 cfs was reached on June 18, 2014. Actual minimum release rates as a result of this action varied from between 25 – 35 cfs.

On March 5, 2015 at the Reservoir Operations Committee meeting, Staff discussed the amount of reservoir storage needed to operate the Salinas River Diversion Facility (SRDF). To operate

the SRDF for a minimum of 30 days staff reported it would require approximately 10,000 acre-feet (AF) of storage above minimum pool at San Antonio and about 40,000 AF of storage above minimum pool at Nacimiento would be needed. On March 5, 2015 there was 86,000 AF above minimum pool at Nacimiento. San Antonio reservoir storage would need to increase by about 19,000 AF in order to supplement releases needed to deliver water to the SRDF. The Committee advised that the reservoirs should continue at current minimum releases and staff would continue to monitoring river and reservoir conditions.

On April 2, 2015 at the Reservoir Operations Committee meeting, Staff again discussed the amount of reservoir storage needed to operate the Salinas River Diversion Facility (SRDF). With San Antonio Reservoir storage 6,500 AF below minimum pool, and needing at least 10,000 AF above minimum pool in order to provide the release capacity to operate the SRDF; it was decided through general consensus that with conditions similar to March 2014, the SRDF should not be operated in 2015.

On May 26, 2016 the Agency Board of Directors received a report from Staff updating them on the status of releases from both reservoirs. At that meeting Staff was directed to increases releases from Nacimiento Reservoir to 60 cfs beginning May 27, 2015. Additionally, the Reservoir Operations Committee was directed by the Board to discuss the impacts of increasing the minimum flow criteria at its next regular meeting and provide its recommendation(s) to the Board of Directors for further action.

On June 5, 2015 Staff presented various release options to the Reservoir Operations Committee. The Committee advised maintaining 60 cfs releases from Nacimiento Reservoir and to continue evaluating issues and policies related to reservoir release.

On June 22, 2015 the Agency Board of Directors received an update on reservoir releases and directed Staff and Counsel to investigate:

- The definition of conservation releases and the requirement for 2 cfs to the lagoon
- Benefits of release options of flows up to 300 cfs
- And to confer with NMFS reservoir release options above minimum flow

From June 23 thru June 30, 2013 Agency staff consulted numerous times with Staff from NMFS regarding questions related to the Biological Opinion for the Salinas Valley Water Project (SWR/2003/2080).

On July 1, 2015 NMFS issued a letter to Claude Hoover, Chair of Monterey County Water Resources Agency Board of Directors regarding the Agency's proposal for increasing releases from Nacimiento Reservoir during summer 2015 (Attachment 2C). In that letter, the NMFS *"...strongly objects to the proposed increase in flow releases form Nacimiento Reservoir in light of the severe ongoing drought conditions, particularly releases as high as 250 to 300 cfs."*

"Implementing this flow release is likely to result in adverse consequences to the federally threatened Salinas River population of the South-Central California Coast (SCCC)steelhead

(Oncorhynchus mykiss) Distinct Population Segment because there will not be adequate water supplies reserved in the reservoir to maintain stream flows for fish in the Salinas River."

On July 2, 2015 the Reservoir Operations Committee considered the impacts of release options presented by Staff, NMFS input received in their July 1, 2015 letter, and legal opinion from Counsel regarding conservation releases above 60 cfs and up to 300 cfs without maintaining 2 cfs minimum flow to the lagoon. After consideration of this information, the Committee recommended keeping Nacimiento releases at 60 cfs.

On July 6, 2015 at a "Special" meeting of the Board of Directors of the Monterey County Water Resources Agency by Board Order No. 15-46 the directors directed Staff to:

- Maintain Reservoir releases at 60 cfs; and
- Discuss with NOAA Fisheries the possibility of making temporary conservation releases from Nacimiento Reservoir

On July 28, 2015 Agency Staff received direction from the Monterey County Board of Supervisors to prepare a written proposal for immediate releases increases to the Salinas River, and to submit that proposal to NMFS for consideration.

Flow Proposal

The Monterey County Water Resources Agency is proposing to make immediate release increases to the Salinas River. Under this proposal both Nacimiento and San Antonio Reservoirs would be utilized to provide an average combined flow of approximately 230 cfs (maximum combined release of 250 cfs) for a period of 60 days. Table 1 provides an accounting of proposed mean daily releases from each reservoir. The Agency is proposing a ramping of releases through the various increases and decreases that occur through this 60 day period. An approximate total of an additional 29,550 acre-feet of releases, above the prescribed minimum reservoir release requirements for this period, would be released in the implementation of this proposed action. This proposed release plan would include the lowering of San Antonio Reservoir to "Dead Pool" by the second week in September in order to perform needed repairs and maintenance on the low level outlet works in order to prevent unscheduled emergency work due to potential equipment failure.

Benefit/Impact Analysis

In order to fully evaluate the potential benefits and impacts of this proposed release plan it is necessary to evaluate those benefits and impacts relative to a range of forecasted inflow scenarios that might occur in the upcoming winter. The Agency has developed, through statistical analysis of the period of record, representative "year type" inflows to both Nacimiento and San Antonio Reservoir corresponding to "Dry" "Normal" and "Wet" year types as defined in the Flow Prescription. The results of this analysis are presented in detail in Tables 2, 3, and 4; and graphically in Figures 1 thru 6.

Mitigation

The Monterey County Water Resources Agency views this proposed action as an opportunity for NMFS to discuss and recommend unique and adaptive strategies in a joint approach to enhance steelhead habitat and migration.

Next Steps

The Agency is proposing a meeting be scheduled at NMFS earliest convenience to discuss a response to this proposed release plan. Specifically, the Agency would propose that Senior Hydrologist Howard Franklin, Senior Water Resources Engineer Chis Moss, along with Upper Valley Stakeholder Mr. Jerry Rava, meet with NMFS Staff the week of August 3rd. The Agency hopes to present NMFS response at a special scheduling of the Agency's Board of Directors in early August in order to receive direction on possible options regarding the implementation of this proposed release plan.

ATTACHMENT I

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

July 1, 2015 **Refer to NMFS No:** SWR-2003-2080

Claude Hoover, Chair
Board of Directors
Monterey County Water Resources Agency
893 Blanco Circle
Salinas, California 93901-4455

Re: Monterey County Water Resources Agency Board of Director's proposal for substantially increasing stream flow releases from Nacimiento Reservoir during summer 2015

Dear Mr. Hoover:

On June 23, 2015, NOAA's National Marine Fisheries Service (NMFS) was notified that during the June 22, 2015 meeting of the Monterey County Water Resource Agency (MCWRA) Board of Directors (BOD), a motion was put forth to the Reservoir Operations Committee (ROC) to consider increasing flow releases from Nacimiento Reservoir to 250 or 300 cubic feet per second (cfs), with a goal of approaching minimum pool[1] by September 30, 2015. Current reservoir releases are 60 cfs.

The purpose of this letter is to notify the BOD, ROC, and MCWRA that NMFS strongly objects to the proposed increase in flow releases from Nacimiento Reservoir in light of the severe ongoing drought conditions, particularly releases as high as 250 to 300 cfs. Implementing this flow release is likely to result in adverse consequences to the federally threatened Salinas River population of the South-Central California Coast (SCCC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) because there will not be adequate water supplies reserved in the reservoir to maintain stream flows for fish in the Salinas River.

Although long-term status and trend data for the Salinas River steelhead population are lacking, recent monitoring by MCWRA from 2010 through 2013 suggests the total run size is quite low (Cuthbert *et al.* 2011; Cuthbert *et al.* 2013). Since monitoring began in 2010, the highest annual total of adult steelhead detected at the MCWRA's trap location was 46 during the winter of 2012-13 (Cuthbert *et al.* 2013). NMFS believes the highly impaired status of the population has been further impacted by the prolonged drought conditions, which has greatly restricted or eliminated migration for adult and smolt life stages. Since October 2013, successful passage of any life stage has not been possible because significant stretches of the lower Salinas River have remained dry (Figure 1).

[1] Minimum pool occurs at an elevation of 687.8 feet mean sea level (msl) at which point, releases from the reservoir will cease.

For example, according to MCWRA (2014a), there have been no suitable passage days for adult steelhead since the end of 2010-11 winter, and since October 2013, passage for any life stage has not been possible because significant stretches of the lower Salinas River have remained dry (Figure 1). Therefore, the lack of river flow has precluded all steelhead reproduction for at least the last two years, and the potential for reproduction the previous two years was very low, if any.

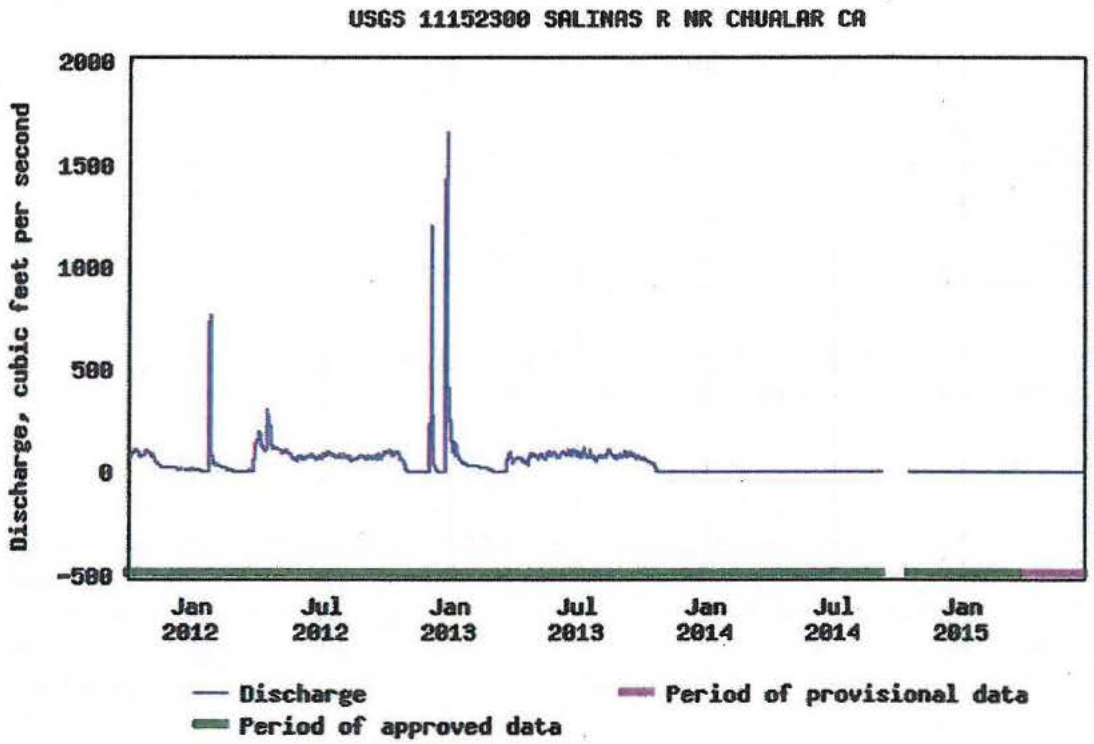


Figure 1. Daily mean stream flow for the Salinas River at Chualar (10/1/2011- 6/24/2015).

The lack of flows in the Salinas River during the winter and spring of 2014-15 was, in part, due to the limited storage in both Nacimiento and San Antonio reservoirs which was affected by drought and the operation of the Salinas Valley Water Project (SVWP) in back-to-back dry years of 2012 and 2013.[2] Implementation of the proposed flow release plan would result in an accelerated depletion of the remaining reservoir storage (~96,000 acre-feet), and would increase the likelihood of precluding a third consecutive steelhead year-class from reproducing. Absent an exceptionally wet winter, NMFS is concerned that insufficient inflows to the reservoirs would not provide enough storage so that MCWRA would not be able to implement adult and smolt passage flows outlined in NMFS's June 21, 2007 Biological Opinion (BiOp) for the SVWP (NMFS 2007). Considering the unpredictable nature of future weather conditions and the high margin for error, implementation of the proposed high flow releases would invoke a tremendous amount of risk to the steelhead population, as well as other beneficial uses.

[2] Agricultural production values in Monterey County continued to reach new heights in both 2012 ($4.14 billion) and 2013 ($4.38 billion) despite diminishing water supplies. Crop reports for 2014 have not been released as of June 24, 2015.

In March 2014, MCWRA contacted NMFS seeking agreement to reduce the minimum flow releases from Nacimiento Reservoir from the required 60 cfs, to 25 cfs in order to *conserve remaining storage* through the ongoing and severe drought conditions (MCWRA 2014b). In their letter, MCWRA cited the flow prescription from NMFS' BiOp which states –"*Under drought conditions the Monterey County Water Resources Agency will evaluate reservoir storage with regard to the continuation of minimum releases. When water surface of Nacimiento Reservoir is at or below 748 feet mean sea level (msl) recommendations may be presented to NMFS for a reduction of the minimum flow criterion.*" Since March 2014, the region has experienced another critically dry winter that resulted in a minimal increase in storage in both reservoirs and a second consecutive year in which MCWRA has been unable to operate the SVWP. According to the MCWRA website, the current surface elevation in Nacimiento Reservoir is 731 feet,[3] and on March 12, 2014, the reservoir surface elevation was 728 feet. Considering the current conditions and MCWRA's previous request to conserve limited water resources in 2014, NMFS is alarmed to hear the BOD is considering such an aggressive increase in flow releases that will provide temporary benefits to a very limited number of stakeholders and beneficial uses.

It is NMFS' understanding that a sustained release of approximately 300 cfs would provide surface water and recharge down to the King City/Greenfield area. Implementation of this action would provide water for agricultural use in the southern half of the valley, at the expense of steelhead and other aquatic species, and other beneficial uses. NMFS is also alarmed the BOD would propose actions intended to purposefully drain Nacimiento Reservoir to minimum pool by the end of summer at which point releases to the Nacimiento River downstream would cease. This would likely result in mortality to all aquatic species present, including threatened SCCC steelhead, and would cause great harm to designated critical habitat (*i.e.,* drying up of the Nacimiento River). The implementation of actions with the consequence of drying the Nacimiento River (and thus killing steelhead) would be a violation of section 9 of the Endangered Species Act. NMFS did not consider the effects to steelhead from these proposed summer releases during our consultation for the SVWP, and, therefore, MCWRA would not have incidental take authorization under the June 21, 2007 BiOp.

California is in a four-year record drought and the governor has required Californians to conserve water. Agriculture in the Central Valley and other areas, as well as residential users, are having to cut back water use extensively to conserve as much water as possible. NMFS believes increasing the flow releases from Nacimiento this summer is short-sighted in light of the on-going drought and the unknown condition of next winter's runoff potential.

NMFS strongly objects to the proposed flow increases and encourages MCWRA and the BOD to rescind this proposal and maintain releases at 60 cfs, per our BiOp requirements. We recommend MCWRA coordinate with us and other resource agencies on the development of an interim drought flow release plan (*i.e.,* drought contingency plan) that will maximize benefits for multiple beneficial uses while minimizing harm to steelhead. As always, we look forward to continuing our collaboration on ways to improve water resource and fisheries management strategies in the Salinas River Watershed.

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[3] http://www.mcwra.co.monterey.ca.us/index.php. Accessed on June 24, 2015.

Please direct questions regarding this letter to Mr. Joel Casagrande, North-Central Coast Office, at (707) 575-6016, or via e-mail at Joel.Casagrande@noaa.gov.

Sincerely,

Gary Stern
Acting Office Supervisor
North-Central Coast Office

cc: David Chardavoyne, MCWRA, Salinas
Elizabeth Krafft, MCWRA, Salinas
German Criollo, MCWRA, Salinas
Howard Franklin, MCWRA, Salinas
Holly Costa, U.S. Army Corps, San Francisco
Julie Vance, CDFW, Fresno
Margaret Paul, CDFW, Fresno
Jon Rohrbough, CCRWQCB, San Luis Obispo
Ho Truong, NOAA Office for Law Enforcement, Long Beach
Kevin Painter, NOAA Office of Law Enforcement, Santa Rosa

Literature Cited

Cuthbert, R., Ainsley, S., and D. Demko. 2011. Salinas River Basin Adult Steelhead Escapement Monitoring. 2011 Annual Report. Prepared for the Monterey County Water Resources Agency. FishBio, Oakdale, California. 33 pp.

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Monterey County Water Resources Agency. 2014a. Salinas Valley Water Project Annual Flow Monitoring Report. Operational Season 2013. Salinas, California. April 2014, Revised July 2014. 18 pages + appendices.

Monterey County Water Resources Agency. 2014b. Letter to NMFS dated March 18, 2014. 2pp. + attachments

NMFS (National Marine Fisheries Service). 2007. Biological Opinion to the Monterey County Water Resources Agency for the Salinas Valley Water Project in Monterey County, California. 123 pp.

ATTACHMENT J

ATTACHMENT 3

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

August 4, 2015 **Refer to NMFS No:** SWR-2003-2080

David Chardavoyne, General Manager
Monterey County Water Resources Agency
893 Blanco Circle
Salinas, California 93901-4455

Re: Monterey County Water Resources Agency's proposal for increasing stream flow releases from Nacimiento and San Antonio Reservoirs during summer 2015

Dear Mr. Chardavoyne:

On July 31, 2015, NOAA's National Marine Fisheries Service (NMFS) received your July 31, 2015, letter with two attachments (Salinas River Groundwater Basin Water Conditions for the third Quarter of Water Year 2014-2015 [Attachment 1] and Proposed Release Plan for Nacimiento and San Antonio Reservoirs for Summer 2015 [Attachment 2]). According to your letter, the Monterey County Water Resources Agency (MCWRA) Board of Directors and the Monterey County Board of Supervisors directed MCWRA staff to prepare recommendations for providing additional releases to the Salinas River in order to increase aquifer recharge in the southern portion of the Salinas Valley. Attachment 2 is MCWRA's response to that direction. Your letter also noted that the Board of Supervisors directed MCWRA staff to schedule a meeting between MCWRA, a Salinas Valley stakeholder, and NMFS to discuss a response to your recommendations.

According to Attachment 2, MCWRA proposes immediate increases in reservoir releases to the Salinas River of up to 250 cfs. This would reduce current reservoir storage by approximately 29,550 acre-feet and bring San Antonio Reservoir to "dead pool" by the second week in September. In addition to aquifer recharge, the reduction would allow MCWRA to perform needed repairs and maintenance on the low level outlet works.

Your proposed reservoir releases are outside the scope of analysis in our Salinas Valley Water Project (SVWP) biological opinion (NMFS 2007). Section 9 of the Endangered Species Act (ESA) and federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Additionally, reducing San Antonio Reservoir storage to dead pool would preclude releases from the reservoir and dry most, if not all, of the San Antonio River downstream of the dam. Such an action is not exempt from ESA prohibitions. In order to comply with the ESA, MCWRA needs to obtain a section 10(a)1(B) permit from NMFS, receive incidental take coverage through a section 7 consultation between

NMFS and another federal agency, or implement the project without causing take of a listed species.

NMFS fully understands the severity of this unprecedented drought and its wide-ranging consequences to stakeholders and the environment throughout California. However, your proposed increased reservoir releases pose a risk to steelhead. While we appreciate your viewpoint that the proposed increased reservoir releases provide an opportunity to discuss strategies to enhance steelhead habitat and migration through mitigation, we cannot allow mitigation after-the-fact under existing conditions. We further appreciate the offer to meet with a Salinas Valley stakeholder and hear of their particular concerns, however, information shared at such a meeting would not change our determination that the proposed increased reservoir releases are inconsistent with our SVWP biological opinion.

We look forward to continuing our collaboration on ways to improve water resource and fisheries management strategies in the Salinas River Watershed. Please direct questions regarding this letter to Mr. William Stevens, North-Central Coast Office, at (707) 575-6066, or via e-mail at William.Stevens@noaa.gov.

Sincerely,

Alecia Van Atta
Acting Assistant Regional Administrator
California Coastal Office

cc: Elizabeth Krafft, MCWRA, Salinas
German Criollo, MCWRA, Salinas
Howard Franklin, MCWRA, Salinas
Holly Costa, U.S. Army Corps, San Francisco
Linda Connolly, DFW, Fresno
Julie Vance, CDFW, Fresno
Margaret Paul, CDFW, Monterey
Jon Rohrbough, CCRWQCB, San Luis Obispo
Ho Truong, NOAA Office for Law Enforcement, Long Beach
Kevin Painter, NOAA Office of Law Enforcement, Santa Rosa

Literature Cited

NMFS (National Marine Fisheries Service). 2007. Biological opinion issued to the U.S. Army Corps of Engineers for the Monterey County Water Resources Agency's Salinas Valley Water Project in Monterey County, California. National Marine Fisheries Service, Southwest Region, Long Beach, California. File No: SWR/2003/2080; ARN: 151422SWR2003SR8711. June 21, 2007. 123 pp.

ATTACHMENT K

MONTEREY COUNTY WATER RESOURCES AGENCY
BOARD OF DIRECTORS

MEETING DATE:	September 28, 2015		**AGENDA ITEM:**
AGENDA TITLE:	Reservoir Release Update		
	Consent ( ) **Action ( )** **Information (X)**		
SUBMITTED BY: **PHONE:**	Germán Criollo (831) 755-4860	**PREPARED BY:** **PHONE:**	Jason Demers (831) 755-4860
DEADLINE FOR BOARD ACTION:		September 28, 2015	

RECOMMENDED BOARD ACTION:

None – item presented for informational purposes.

SUMMARY:

The Board of Directors receives monthly updates on the status of Agency reservoirs.

DISCUSSION/ANALYSIS:

RESERVOIR ELEVATION / STORAGE: As of September 20, 2015, San Antonio Reservoir is at an elevation of approximately 646.45 feet mean sea level (msl), 10,735 acre-feet of storage. Nacimiento Reservoir is at elevation 724.45 feet msl, 78,785 acre-feet of storage. San Antonio Reservoir is currently at 3% of storage capacity and Nacimiento Reservoir is at 21% of capacity.

RESERVOIR RELEASES: Beginning Friday, August 28, 2015, releases from San Antonio Reservoir were gradually increased from a rate of 5 cubic feet per second (cfs) up to a maximum rate of 200 cfs on September 4, 2015. Since that time, releases from San Antonio have gradually reduced due to head loss back to a rate of approximately 5 cfs. Releases from Nacimiento Reservoir remain at 60 cfs.

Releases as of September 20, 2015:

- Nacimiento Reservoir: 60 cfs
- San Antonio Reservoir: 5 cfs

Total releases from both reservoirs to the Salinas River are approximately 65 cfs. The following "provisional" flows have been recorded by the USGS:

- Salinas River near Spreckels: 0 cfs
- Salinas River near Chualar: 0 cfs
- Salinas River near Soledad: 0 cfs
- Salinas River near Bradley: 57 cfs (decreasing)

ATTACHMENT L

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-4731

March 26, 2010

In response refer to:
2003/2080: DWB

Elizabeth Krafft
Program Manager
Monterey County Water Resources Agency
893 Circle Drive
Salinas, California 93901

Dear Ms. Krafft:

In response to the telephone conference on January 15, 2010, NOAA's National Marine Fisheries Service (NMFS) has prepared a series of scenarios to evaluate the effects of the Monterey County Water Resources Agency's (MCWRA) Salinas River Diversion Facility (SRDF) to the South-Central California Coast (S-CCC) steelhead trout in the Salinas River. The purpose of the recommendations is to develop a monitoring plan strategy that could clearly define how the impoundment affects water quality, specifically toxicity levels, in the Salinas River. The recommendations for monitoring the effects of the SRDF are not intended to supersede the monitoring of Blanco Drain water quality conditions as part of the Conditional Waiver of Waste Discharge Requirements (WDR) as detailed in the Central Coast Regional Water Quality Control Board (CCRWQCB) Monitoring and Reporting Program (Order No. R3-2009-0050).

The 2007 Biological Opinion for the Salinas Valley Water Project (NMFS, 2007) states that MCWRA will install a Vegetated Treatment System (VTS) to reduce contaminant loads entering the Salinas River. It is possible that the VTS may improve instream water quality conditions significantly enough to prevent toxicity within and downstream of the impoundment, but without monitoring of the inputs into and out of the VTS, it will be difficult to evaluate any changes that may occur as a result of the VTS. A series of scenarios were created (see Appendix A) to assess the possible outcomes from the toxicity sampling. In each scenario, a minimum of 3 instream sampling locations were identified. The locations are: upstream of the diversion dam (outside of the impounded area but close enough to be representative), within the impoundment, and downstream of the impoundment (far enough to allow adequate mixing). Toxicity monitoring within the Blanco Drain would distinguish contaminant inputs between upstream river sources and those from the Blanco Drain, especially if the river is non-toxic upstream and toxic within the impounded area. Depending upon the results of the first sampling season, alternate strategies, and thus monitoring scenarios, will be employed. For instance, if toxicity levels are present in the impoundment, alternative management strategies such as installation of the VTS or modification of the SRDF will require continued monitoring for a period until toxicity levels are

decreased to levels that do not impact fish or it can be verified that the operation of the SRDF has no adverse impact to listed species. The monitoring plan therefore establishes a feedback loop where monitoring will be informative for implementing management strategies and conversely determine the following monitoring effort. A flow chart (see Appendix B) has been created to assist in outlining the potential outcomes and pathways.

Toxicity testing methods and quality control procedures should match the requirements of the WDR for Discharges from Irrigated Lands (Order No. R3-2009-0050). This will ensure that the data generated is comparable to other data points from the watershed and may allow the MCWRA to utilize the monitoring of others (*e.g.*, monitoring points located upstream and downstream of the impoundment) as part of this evaluation. To determine if a water column sample is toxic, water fleas (*C. dubia*) should be used in accordance with the Waiver of WDR (Environmental Protection Agency (EPA) method 1002.0 7-day chronic survival and reproduction test as detailed in EPA 2002). Sediment toxicity testing using *Hyallella azteca* should also be conducted in accordance with the Waiver of WDR procedures (10-day survival and growth test as detailed in EPA 1994). If a sample proves to be toxic, pesticide sampling needs to be conducted. Monitoring and numerous studies that have taken place within the watershed indicate that toxicity in the Salinas River is often caused by organophosphate (OP) or pyrethroid class insecticides. The water column testing method recommended by the CCRWQCB for OP pesticides is EPA method 625M and for pyrethroid insecticides, it is EPA method 825 Negative Chemical Ionization (NCI). Ammonia concentrations should also be examined, as its concentration in the Salinas River may also be high enough to cause toxicity. If these tests fail to show which chemical or mixture of chemicals is responsible for the observed toxicity, then a Toxicity Identification Evaluation to determine the source or sources of toxicity needs to be conducted.

For sediment toxicity testing, CCRWQCB recommends EPA method 8270CM for the OP pesticides (as well as organochlorine pesticides such as DDT, aroclor PCBs and PCB congeners). For pyrethroid pesticides, EPA method 8270 CM NCI is recommended. All analyte identifications should be confirmed by Gas Chromatography/Mass Spectroscopy (GC/MS).

Monitoring results will be sent to NMFS within one month of sample results returning from a certified analytical laboratory approved by the State of California. Results should also be sent to CCRWQCB in order to inform their efforts in protecting steelhead trout and their habitat throughout the watershed. To ensure quality assurance, MCWRA will need to coordinate with the CCRWQCB to employ the most appropriate monitoring techniques.

Scenario 1

The focus of the monitoring is to determine how the operation of the SRDF affects the fitness of the species. If sampling events indicate that waterbodies are toxic upstream and within the impoundment (downstream conditions could be either toxic or non-toxic), then it is not likely that the operation of the SRDF has an effect on toxicity conditions in the river or is affecting the exposure of steelhead trout to toxic contaminants. NMFS recommends sampling for the first year (2010) on a monthly basis when the SRDF is operational from April to October. If no net change has occurred over the duration of the sampling season for 2010, then the sampling events could be reduced to once every two months (April, June, August, and October) in 2011. If the

same results occur in 2011 as 2010, then MCWRA would not be required to continue monitoring for toxicity and associated contaminants, but still monitor for all other parameters. To show that toxic conditions are not developing in the impounded area due to changing pesticide use patterns in the watershed, periodic monitoring efforts should continue on a once-per-five-year basis with sampling events occurring once every other month (April, June, August, October).

Scenario 2

If sampling events indicate that waterbodies are non-toxic upstream and downstream of the impoundment area, but are toxic within the impoundment, then the operation of the SRDF may be contributing to impaired water quality conditions. With this scenario, it is essential to determine the effects of the Blanco Drain discharge and the VTS in relation to the impoundment from the SRDF; as either the Blanco Drain discharge or SRDF could be causing toxic conditions. Monitoring efforts in this scenario will be a two part process of identification and modification followed by evaluation of the implemented modifications. The first step will be to identify the factors causing toxicity within the impoundment, albeit operation of the SRDF and/or discharges from the Blanco Drain, and then to modify operations to improve water quality conditions within the impoundment. Monitoring will need to occur in the Blanco Drain in addition to the other three sampling locations, to determine if the toxicity is due to the Blanco Drain discharge. Sampling of inputs (upstream of VTS) and discharges (downstream of VTS) of the Blanco Drain will verify that the performance of the VTS is meeting the objective of reducing contaminant loading by 50%. If monitoring of the Blanco Drain (independently or through performance testing of the VTS) verifies that the discharge is causing toxic conditions within the impoundment and the VTS is unsuccessful in reducing contaminant loading by 50%, then alternative management strategies will need to be implemented (such as pumping the discharge to the regional wastewater treatment facility), as per the 2007 Biological Opinion. Once modifications have been employed, a subsequent evaluation period, which will require monthly sampling from April to October, will need to be administered. If toxic conditions are still persistent within the impoundment after alternative management strategies of the Blanco Drain have been implemented, MCWRA will need to consult with NMFS on implementing other adaptive management strategies within the impoundment to lower toxicity levels. Once adaptive managements strategies have been implemented, continued monitoring of all three sites will continue for a minimum period of five years or until non-toxic conditions occur in two subsequent years (*e.g.* 2012 and 2013).

Scenario 3

If sampling events indicate that waterbodies are non-toxic upstream, but are toxic within and downstream of the impoundment, then the SRDF may be contributing to impaired water quality conditions. Again, as in scenario 2, monitoring of the Blanco Drain (and VTS performance) is needed to distinguish between the impacts from the Blanco Drain or operation of the SRDF. NMFS recommends that the same management and monitoring strategy outlined in scenario 2 be employed for scenario 3.

Scenario 4

If sampling events indicate that waterbodies are toxic upstream, but not within the impoundment, then the SRDF may not have an adverse effect on toxicity conditions in the impounded area. NMFS recommends sampling for the first year (2010) on a monthly basis when the SRDF is

operational from April to October. If no net change has occurred over the duration of the sampling season for 2010, then the sampling events could be reduced to once every two months (April, June, August, October) in 2011. If the same results occur in 2011 as 2010, then MCWRA would not be required to continue monitoring for toxicity and associated contaminants, but still monitor for all other parameters. If nontoxic conditions are confirmed between 2010 and 2011, periodic monitoring efforts should continue on a once per-five year basis, as described above.

Scenario 5

If sampling events indicate that waterbodies are toxic downstream of the impoundment, but non-toxic upstream and within the impoundment, then the SRDF is not likely contributing to toxicity conditions downstream. Monitoring and management should follow the schematics outlined in scenario 1 to determine the SRDF is not contributing to the toxic conditions downstream.

If you have any questions regarding this letter, please contact Devin Best at (707) 578-8553 or via e-mail at Devin.Best@noaa.gov.

Sincerely,

Dick Butler
Santa Rosa Area Office Supervisor
Protected Resources Division

cc: Joe Dillon, NMFS, Habitat Conservation Division
Copy to File ARN #151422SWR2001SR8602

Enclosure

Appendix A: *SVWP Water Quality Monitoring Plan Outcomes and Management Strategy*
Appendix B: *SVWP Monitoring Plan Flow Chart*

References

NMFS (National Marine Fisheries Service). 2007. Biological Opinion for the Salinas Valley Water Project. Southwest Region Office, Santa Rosa, CA.

USEPA 1994. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates. Office of Research and Development, Washington, D.C.

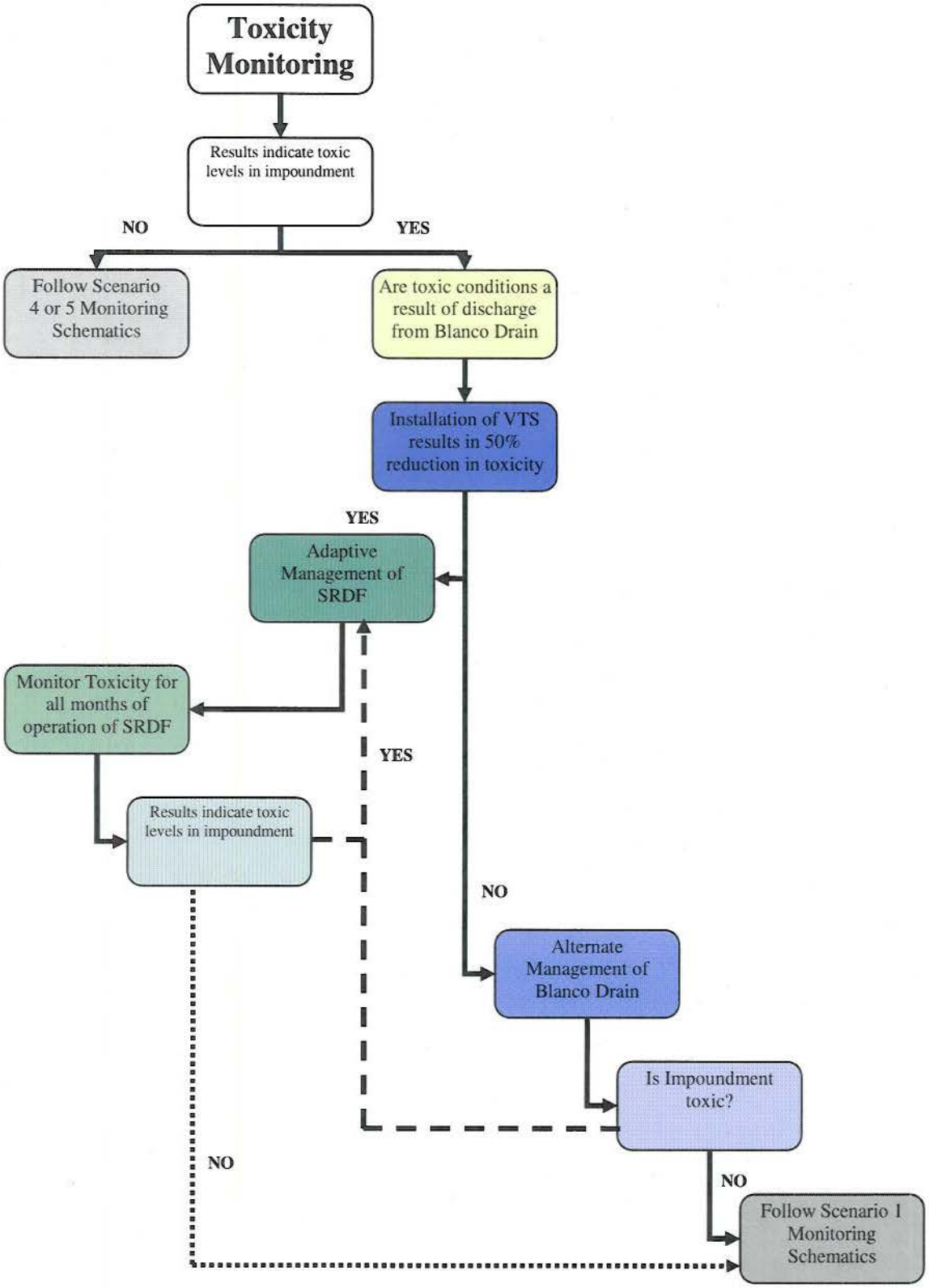
USEPA 2002. Short-term methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition. Office of Water, Washington, D.C. EPA-821-R-02-013.

Appendix A: *SVWP Water Quality Monitoring Plan Outcomes and Management Strategy*

Scenario	Upstream	Impoundment	Downstream	Result	Management Plan
1	T	T	T/N	Likely no change in toxicity due to impoundment	1st year monitor monthly when SRDF is operating (April – October), reduce to four times per operating season in 2nd year. Continue with monitoring (April, June, August, October) on a once every five year period.
2	N	T	N	Impoundment may be affecting toxicity conditions	Monitor monthly when SRDF is operating (April – October) for first 5 years or until two consecutive years' results are non-toxic.
3	N	T	T	Impoundment may be affecting toxicity conditions	Monitor monthly when SRDF is operating (April – October) for first 5 years or until two consecutive years' results are non-toxic.
4	T/N	N	N	Likely no change in toxicity due to impoundment	1st year monitor monthly when SRDF is operating (April – October), reduce to four times per operating season in 2nd year, and continue with monitoring (April, June, August, October) on a once every five year period.
5	N	N	T	Likely no change in toxicity due to impoundment	1st year monitor monthly when SRDF is operating (April – October), reduce to four times per operating season in 2nd year, and continue with monitoring (April, June, August, October) on a once every five year period.

T = Toxic; N = Non-toxic

Appendix B: ***SVWP Monitoring Plan Flow Chart***



ATTACHMENT M

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-4731

RECEIVED
JUN 12 2013
BY:

May 21, 2013

In response, refer to:
SWR/F/SWR3:MH

David Chardavoyne
General Manager
Monterey County Water Resources Agency
893 Circle Drive
Salinas, California 93901

Dear Mr. Chardavoyne:

In response to the March 21, 2013, Monterey County Water Resource Agency's (MCWRA) Salinas Valley Water Project (SVWP) update meeting on the implementation of the Biological Opinion (BO), NMFS has prepared an evaluation of the results for chlorpyrifos and diazinon provided by MCWRA. This letter also provides recommendations for: (1) additional toxicity and water quality testing, (2) various pesticide monitoring techniques, and (3) describes scenarios to assess the effects of the proposed action of the project on South-Central California Coast Steelhead (S-CCC) and their designated critical habitat.

Evaluation of MCWRA's Results for Chlorpyrifos and Diazinon

MCWRA collected water column grab samples for chlorpyrifos and diazinon in four locations within the project area, which included: two locations in the Blanco Drain and two locations within the Salinas River Lagoon (*e.g.*, site #1 and site # 2). Each location was sampled periodically during two consecutive monitoring periods when MCWRA's operations occurred. However, monthly grab samples collected and analyzed varied across locations and dates within the Blanco Drain and the Salinas River Lagoon. Samples were collected during April - September 2010 ($n = 25$) and April –September 2011 ($n = 20$). Samples were not collected in May and August of 2011.

Laboratory analyses provided by MCWRA used a reporting limit (RL) for chlorpyrifos and diazinon of 10 ng/L or 0.010 µg/L and 100 ng/L or 0.10 µg/L, respectively. These RLs are below the California Central Coast Regional Water Quality Control Board's (CCRWQCB) Established Guidelines for 303(d) assessment of chlorpyrifos and diazinon of 15 ng/L (0.015 µg/L) and 100 ng/L (0.10 µg/L), respectively. The laboratory only reported concentrations at or above the RL. If samples were below the RL they were recorded as a non-detect (ND).

Chlorpyrifos was reported as ND in all locations sampled during both sampling periods (*e.g.*, 2010 and 2011) within the Blanco Drain and Salinas River Lagoon. However, data collected on April 20, 2010 showed a higher RL of 0.05 µg/L (50 ng/L), which is greater than the Evaluation Guidelines for chlorpyrifos (see Table 1). The values for samples collected in the Salinas River Lagoon were 0.015 µg/L (15 ng/L).

In May, June, and July of 2010, diazinon was reported above laboratory RLs in the Blanco Drain and Salinas River Lagoon at concentrations ranging from 0.10 to 98 ng/L. On May 10, 2010, diazinon was detected at site #1 and #5 at 98.2 ng/L and 25.2 ng/L, and in the Blanco Drain on May 26, 2010 of 20.0 ng/L. In June 2010, diazinon was reported above RL limits site #1 (12 ng/L). In 2011, diazinon was reported as ND for all sites, with the exception of site #1 and site #2 in the lagoon. Although most sample concentrations reported for diazinon were not detected above the laboratory RL, and each of those were below the CCWQCB Evaluation Guideline of 100 ng/L (0.10 µg/L) (see Table 1), any detection is evidence of a source of pollution that could likely be controlled.

Table 1. MCWRA's pesticide water quality sampling results 2010-2011

Pesticide	Reporting Limit (ng/L)	2010	2011
Chlorpyrifos	15	n/a	ND
Diazinon	100	98.2, 25	ND

The collected water quality data provided by MCWRA for chlorpyrifos and diazinon does not include toxicity testing of the water column and sediments. As previously mentioned and outlined in a letter to MCWRA on March 26, 2010, the exclusion of toxicity testing and evaluation severely restricts the usefulness of the data provided by MCWRA regarding the potential risks and effects to S-CCC steelhead and their habitat within the project area. During the meeting on March 21, 2013, staff from MCWRA referred to CCRWQCB staff report, which states that the Salinas is typically non-toxic, and that chlorpyrifos and diazinon was not detected in the Blanco Drain. A non-detection of these two pesticides does not constitute a final determination of "no presence of the active ingredients," it means that the samples tested do not exceed the designated laboratory RLs. NMFS evaluated the laboratory results and found that diazinon was detected in the Blanco Drain and the Salinas River Lagoon. The effects to S-CCC steelhead should be evaluated at RLs, effective concentrations, and toxicity levels that are found to have lethal and sub-lethal effects to S-CCC steelhead and their designated critical habitat (Table 2). Therefore, NMFS found the laboratory data provided by MCWRA to be inconclusive to evaluate the risk and impacts of the Blanco Drain discharge water to S-CCC steelhead due to the: (1) inconsistent monitoring design, (2) no data collection or analyses on sediment and water toxicity, (3) detection of diazinon in water column at levels high enough to effect S-CCC steelhead and their critical habitat (Table 2), (4) no comparison or use of RLs or effective concentrations that may effect the species, and (5) no information on ND concentration below reporting limits that may impact S-CCC steelhead.

In summary, it is reasonable to assume that concentrations of chlorpyrifos and diazinon are likely decreasing in the Salinas River watershed due to the: (1) prohibitions on the use of chlorpyrifos and diazinon by state and federal regulatory agencies, (2) agricultural community increase use of

other organophosphates (OPs), and (3) implementation of pesticide specific TMDLs and agricultural orders to reduce use in the Lower Salinas River. The Lower Salinas Pesticide Total Maximum Daily Load (TMDL) (http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/salinas/pesticide/index.shtml) was established to reduce chlorpyrifos and diazinon in the Lower Salinas River watershed and implementation of the TMDL is facilitated through the Agricultural Irrigated Lands Order (Order No. R3-2009-0050). In addition, preliminary data provided by the California Department of Pesticide Regulation (CDPR) has observed a decreasing trend in the use of diazinon over the last decade and an increasing trend in use of malathion. Malathion is a broad-spectrum OP insecticide applied to various agricultural and feed crops, and has been shown to jeopardize and adversely modify critical habitat for S-CCC steelhead (NMFS, 2008).

Given, the data provided by MCWRA and the use of new and existing scientific data (see next section) on the impacts of chlorpyrifos, diazinon and other pesticides on S-CCC steelhead populations and critical habitat, a robust sampling regime and protocol is needed to determine the effects to S-CCC steelhead.

New Scientific Information on the Exposure and Risk of Pesticides to S-CCC Steelhead

Since the issuance of the SVWP Biological Opinion, NMFS completed six-batched national biological opinions (Opinions), issued under the authority of section 7(a)(2) of the Endangered Species Act (ESA), and analyzed effects of the U.S. Environmental Protection Agency's (EPA) action of proposing registration of pesticide products containing 16 active ingredients to 28 listed Pacific salmonids and their critical habitats (NMFS, 2008; NMFS, 2009; NMFS, 2010; NMFS, 2011; NMFS, 2012). Specifically for S-CCC steelhead, NMFS concluded 2, 4-D butoxypropyl ester, carbaryl, carbofuran, chlorothalonil, chlorpyrifos, diazinon, malathion, methidathion, naled, oryzalin, pendimethalin, phosmet, and trifulalin could jeopardize the continued existence and/or adversely modify designated critical habitat of this Distinct Population Segment. The final jeopardy biological opinions include analyses of direct effects, cumulative effects and reasonable and prudent alternatives (RPAs), developed for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, and methomyl, which are currently available at http://www.nmfs.noaa.gov/pr/consultation/pesticides.htm.

Effects of the Proposed Action on S-CCC steelhead and critical habitat

This information guides our evaluation of the proposed action to S-CCC steelhead and their critical habitat. The "Effects of the Proposed Action" section in the opinions present a number of studies that establish various direct and indirect effect levels for listed salmonids. A summary of the assessment endpoints for each active ingredient include impacts to fish survival, growth, reproduction, swimming ability, olfactory-mediated behaviors and habitat. Table 2 provides a list of the assessment endpoints, evidence of adverse responses, range of observed effects concentrations and degree of confidence in those effects for chlorpyrifos, diazinon, malathion, other ingredients such as nonylphenol[1], additive and synergistic toxicity.[2] The excerpt below

[1] A type of adjuvant that may be present as an ingredient of a formulated product or added to a tank mix prior to application.

[2] A phenomenon in which the toxicity of a mixture of chemicals is greater than that which would be expected from a simple summation of the toxicities of the individual chemicals present in the mixture.

provides a brief description on the the direct and indirect effects in the Opinion for chlorpyrifos, diazinon, and malathion.

> *"Juvenile steelhead remain in freshwater for one or more years before migrating downstream to smolt. They often remain in estuaries for a longer period before entering the marine environment. The S-CCC steelhead has adapted to the warmer climate and can withstand higher temperatures than northern populations. Given the long freshwater residence time by steelhead juveniles, and the relatively high urbanization and presence of agriculture within watersheds used by the species, we expect the proposed uses of chlorpyrifos, diazinon, and malathion pesticides products that contaminate aquatic habitat will lead to both individual fitness level consequences and subsequent population level consequences, i.e., reductions in population viability. The widespread uses of these materials indicate substantial overlap with the populations that comprises the S-CCC steelhead DPS. Given the low abundance of the DPS, the extensive habitat modification and loss that has occurred, and the high water temperatures, the risk to this species' survival and recovery from the stressors of the proposed action is high."*

Based on the available data regarding the impacts to S-CCC steelhead, NMFS believes the water quality objectives and established guidelines provided by the CCRWQCB has importance in regulatory processes and are reflective of a single-containment concentrations that are expected to be acceptable for drinking water standards. However, the established guidelines and RL's are not protective enough for S-CCC steelhead populations, in particular their designated critical habitat. For example, diazinon was detected in some cases, above the RL for the CCRWQCB of 0.10 µg/L. Recent exposure and risk assessment analysis for diazinon showed adverse response to fish olfactory mediated behaviors at or above 0.10 µg/L (see Table 2) (NMFS, 2008). More importantly, the opinion provides evidence of adverse impacts to S-CCC steelhead critical habitat, which affect survival of prey at lower concentrations (*e.g.*, 0.03 µg/L) than the CCWQCB RL for diazinon (Table 2). In addition, there maybe sub-lethal effects below concentrations that directly cause death. Exposure to sub-lethal concentrations of a material may produce less obvious effects on behavior, biochemical, and/or physiological function of the species often leading to latent moralities. In summary, the RL's established by the CCWQCB and thus used by MCWRA are within the range for evaluating impacts to S-CCC steelhead, but above the range of effect concentrations used to evaluate effects to their critical habitat. The information provided in these documents provide the best available scientific information on the minimum effective concentrations at which S-CCC steelhead and their habitat are affected, and provide a basis for our recommendations in this letter and planned correspondence with MCWRA.

Table 2. Summary of assessment endpoints and effect concentrations (µg/L) for chlorpyrifos, diazinon, malathion, and other ingredients (NMFS, 2008)

Assessment Endpoint	Evidence of adverse responses	Concentration ranges of observed effect (µg/L)	Degree of confidence in effects
Chlorpyrifos			
Fish:			
-survival (LC50)	Yes	0.8 - 2000	High
-growth	Yes	0.12 - 4.8	High
-reproduction	Yes	1.09 - 1.21	High
-swimming	Yes	0.3 - 40	High
-olfactory-mediated behaviors	Yes	0.635 - 2.5	High
Habitat			
-prey survival (LC50)	Yes	0.05 - 600	High
Diazinon			
Fish:			
-survival (LC50)	Yes	90 - 7800	High
-growth	Yes	0.8	High
-reproduction	Yes	0.35 - 3.2	High
-swimming	Yes	500	High
-olfactory-mediated behaviors	Yes	0.1 - 1.0	Medium
Habitat			
-prey survival (LC50)	Yes	0.03 - 2500	High
Malathion			
Fish:			
-survival (LC50)	Yes	2.8 - 234	High
-growth	Yes	NS	Low
-reproduction	Yes	NS	Low
-swimming	Yes	40 - 175	High
-olfactory-mediated behaviors	No	-	-
Habitat			
-prey survival (LC50)	Yes	0.5 - 100	High
Other ingredients			
Nonylphenol			
Fish:			
-survival (LC50)	Yes	130 - >1000	High
-growth	Yes	0.15 - 10	High
-reproduction	Yes	5 - 100	Medium
-swimming	Yes	5.0 - 100	High
-olfactory-mediated behaviors	Yes		
Habitat			
-prey survival (LC50)	Yes	1 - < 1000	High
Additive toxicity of OPs	Yes	multiple	High
Synergistic toxicity of Ops	Yes	multiple	High

Conclusion

The monitoring data provided by MCWRA between the sampling periods of April 2010-October 2010 and April 2011-October 2011 show that chlorpyrifos concentrations were not detected above CCRWQCB RLs, however, diazinon was detected above RL limits. The data reported are lower than pervious data collected in the Blanco Drain and Lower Salinas River compared to data collected between the 1990s and late 2000's. In the Salinas River watershed, it appears the use of these insecticides are decreasing as the agricultural community has adopted other types of pesticides such as malathion and pryrethroids classes of pesticides; which are also known to impact listed salmonids. Monitoring and numerous studies taken place within the watershed indicate OPs and pyrethroid class insecticides often cause toxicity in the Salinas River.

Monitoring by MCWRA focused primarily on two pesticides organophoshates, chlorpyrifos, and diazinon, and did not address other toxins (pyrethorids and nutrients) that may directly or indirectly affect the species. Although, the laboratory results provided by MCWRA showed ND of chlorpyrifos and diazinon, the monitoring design and RLs used to evaluate the potential impacts to S-CCC steelhead and their designated critical habitat was not sufficient to build a weight-of-evidence regarding impacts to the species. A robust toxicity and monitoring program should be developed by MCWRA and submitted to NMFS for approval as recommended in the SVWP BO.

As previously stated in a letter to MCWRA on March 26, 2010, NMFS recommended that toxicity measurements and quality assurance and control procedures correspond to the requirements of the WDR for Discharge of Irrigated Lands (Order No. R3-2009-0050). NMFS recommends MCWRA focus on preventing impacts to salmonids and their habitat caused by exposure to all pesticides and agricultural contaminants found in the Blanco Drain. For the purposes of evaluating the impacts to S-CCC steelhead and their habitat, NMFS recommends a phased approach to identify toxicity of the water column and sediment. Phase I will evaluate toxicity levels in water column and sediment samples. In Phase II, more refined procedures can be used to focus on the specific category of chemicals implicated in Phase I. The goal of Phase II is to isolate the causative toxicant(s) from other chemicals in the sample, thereby simplifying the sample for chemical analysis. This process generally culminates in the analytical identification of the suspected toxicant. In Phase III, corroborating data is collected to build a weight-of-evidence case the suspect toxicant is or is not the cause of toxicity, an important step before initiating management actions to control the problem chemical(s).

Phase I: Characterize sediment and water toxicity in the Blanco Drain and Salinas Lagoon

- If samples are found to be non-toxic for OP's, pyrethroids, and nutrients:
    - continue monthly monitoring during periods of operation for conventional constituents of concern on the State's 303(d) list for the Lower Salinas River.

- If samples are found to be toxic conduct further analyses to characterize source of toxicity, identify and confirm chemicals of concern.
    - Conduct water column and sediment toxicity testing using test organisms (*i.e.*, water flea and rainbow trout) (see section on recommended techniques for appropriate methodology).

Phase II: If test are positive for toxicity, but basic sediment and water toxicity testing is not conclusive to identify the chemical(s) of concern responsible for the observed toxicity then,

- conduct a toxicity evaluation identification (TIE) to further characterize, identify and confirm chemicals of concern. It is important to note that the quality of the TIE lies partially in the quality of the data collected.

Phase III: If toxic, identify viable alternative management techniques/strategies to eliminate toxicity to the Lower Salinas River and impacts to S-CCC steelhead and their critical habitat. Alternatives may include:

- installation of a vegetated treatment system (VTS)
    - identify the appropriate design (*i.e.*, treatment area, vegetation, residence time) need to eliminate toxicity to Salinas River;
- reroute toxic water before it is discharge to the Salinas River
    - provide a design proposal for this project for review by NMFS.

Recommended Techniques and Procedures

Pesticides

The water column testing method recommended by the CCRWQCB for OP pesticides is EPA method 625M and for pyrethroids insecticides is EPA method 825 Negative Chemical Ionization (NCI). The CCRWQCB recommends EPA method 8270 for OP pesticides and EPA method 8270 CM NCI is recommended for pyrethroids. All analyte identification should be confirmed by gas chromatography/mass spectroscopy (GC/MS).

Water and Sediment Toxicity

To determine if water samples are toxic, water fleas (C. *dubia*) should be used in accordance with the EPA method 1002.0 seven-day chronic survival and reproduction test as detailed in USEPA, 2002). Sediment toxicity should be conducted using *Hyallella Azteca* ten-day survival and growth test as detailed in USEPA 1994. NMFS recommends the use of these standard protocols using hatchery rainbow trout as the test organisms instead of fathead minnow.

Water column monitoring should take place at least quarterly similar to other efforts in the project area, *e.g.*, CCAMP protocols used by the CCRWQCB. Sediment testing should occur twice a year at the start and completion of the diversions. Reporting should be required and the lowest effective concentration limit for the most sensitive species should be use (*i.e.*, rainbow trout). As previously mentioned in the SVWP BO, adaptive management is a part of the implementation of the SVWP and allows for adjustments to the monitoring scheme.

At minimum, surface water monitoring should include: a) flow monitoring, b) water quality (physical parameters, metals, nutrients and pesticides), c) toxicity using rainbow trout (in both water and sediment), and d) assessment of benthic invertebrates.

Please contact Dr. Melanie D. Harrison at (707) 575-1253, or via email at Melanie.Harrison@noaa.gov, if you have any questions regarding this letter.

Sincerely,

for Dick Butler
North Central Coast Office Supervisor
Protected Resources Division

cc: Elizabeth Krafft, MCWRA

References Cited

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ATTACHMENT N

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BY:

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

September 2, 2015 **Refer to NMFS No:** SWR-2003-2080

David Chardavoyne, General Manager
Monterey County Water Resources Agency
893 Blanco Circle
Salinas, California 93901-4455

Re: Monterey County Water Resources Agency's request for technical assistance on proposed San Antonio dam outlet maintenance activities

Dear Mr. Chardavoyne:

On August 25, 2015, NOAA's National Marine Fisheries Service (NMFS) received your August 25, 2015, letter via electronic mail. Enclosed with your letter was FISHBIO's August 24, 2015, *Summary of findings – O. mykiss presence/absence and stream survey on the San Antonio River, California, August 18-19, 2015* (FISHBIO 2015). According to your letter, the Monterey County Water Resources Agency (MCWRA) proposes to increase releases from San Antonio Reservoir to the extent dead pool is reached so that deferred dam outlet maintenance activities can be conducted under the safest conditions. It is our understanding San Antonio dam outlet maintenance activities can be conducted without draining the reservoir to dead pool and drying up the San Antonio River. We recommend MCWRA explore all feasible alternatives to conduct the maintenance before drying up the river.

The San Antonio River is designated critical habitat for, and historically supported, federally threatened South-Central California Coast (S-CCC) Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*). Based on FISHBIO (2015), MCWRA has determined that *O. mykiss* survival in the current San Antonio River conditions is improbable. We have reviewed FISHBIO (2015) and agree, under existing conditions, there is some uncertainty regarding steelhead presence in the San Antonio River below the dam.

Nonetheless, drying up the San Antonio River as proposed would not have federal Endangered Species Act (ESA) incidental take coverage under the Salinas Valley Water Project (SVWP) biological opinion issued to the U.S. Army Corps of Engineers (NMFS 2007) because your current proposal would be outside the scope of the action analyzed in our SVWP biological opinion. That is, the drying up of the San Antonio River may affect S-CCC DPS steelhead or their designated

critical habitat in a manner or to an extent that was not considered in the SVWP biological opinion. If MCWRA dries up the San Antonio River as proposed without first obtaining appropriate ESA section 7 or section 10(a)(1)(B) coverage, MCWRA runs the risk of violating section 9 of the ESA.

Please direct questions regarding this letter to Mr. William Stevens, North-Central Coast Office, at (707) 575-6066, or via e-mail at William.Stevens@noaa.gov.

Sincerely,

for Alecia Van Atta
Acting Assistant Regional Administrator
California Coastal Office

cc: √MCWRA Board of Directors, Salinas
MCWRA Board of Supervisors, Salinas
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Holly Costa, U.S. Army Corps of Engineers, San Francisco
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Jon Rohrbough, CCRWQCB, San Luis Obispo
Ho Truong, NOAA Office for Law Enforcement, Long Beach
Kevin Painter, NOAA Office for Law Enforcement, Santa Rosa
Copy to ARN 151422SWR2003SR8711
Copy to Chron File

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