

RECLAMATION

Managing Water in the West

Supplemental Environmental Assessment

Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program – Nimbus Basin



**U.S. Department of the Interior
Bureau of Reclamation**

August 2014

Introduction

The Proposed Action is being conducted pursuant to Section 3406 (b)(13) of the Central Valley Project Improvement Act. This Section mandates spawning gravel additions to the lower American River to mitigate for impacts to anadromous fish habitat resulting from the construction of Nimbus and Folsom Dams. The Proposed Action would improve both the quantity and quality of spawning and rearing habitat for anadromous fish in the lower American River.

In 2008, the Bureau of Reclamation (Reclamation) prepared an Environmental Assessment (EA) for the Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program (Program) (Reclamation 2008). Program work was permitted through 2013 for several locations, including the Proposed Action site, Nimbus Basin (Site 1, Reclamation 2008). A Finding of No Significant Impact (FONSI) was signed on August 4, 2008. Reclamation began the gravel and channel habitat work in September 2008 and continued in 2009. In 2010, Reclamation completed a supplemental EA and signed a FONSI to modify its Proposed Action to meet the Program objectives by including the gravel acquisition site at Sailor Bar which was identified, and analyzed, as an alternative in the 2008 EA. In 2011, Reclamation completed a supplemental EA and signed a FONSI to incorporate woody material into other main channel features to improve Chinook salmon and steelhead spawning and rearing habitat.

This 2014 supplemental EA is an informational update of the proposed Program activities for the Nimbus Basin project site that were not completed within the 2008 EA timeframe. This document includes additional details of the Proposed Action that were previously analyzed in the 2008 EA and the environmental effects of these activities relative to the 2008 EA, 2010 and 2011 supplemental EA's.

Proposed Action

Nimbus Basin is located just downstream of Nimbus Dam on the Lower American River at approximately River Mile (RM) 23 and extends about 190 yards downstream. The Proposed Action would place approximately 12,000 tons of gravel into the river and create a side-channel approximately 350 yards long on the south side of the Nimbus Basin (Figure 1). This would create approximately 3.3 acres (combined) of spawning and rearing habitat. The Proposed Action is located at approximately 38° 38' 09.88" N, 121° 13' 16.60" W (Section 16, T9N, R7E MDM) in the USGS 7.5 Minute Folsom Quadrangle.

The stream channel in the Proposed Action area is highly scoured, and the substrate consists mainly of large rocks. A few salmon and steelhead spawn on the south side stream channel area where there is a small amount of usable gravel in the riffle. During the duration of the project implementation, flows are anticipated to remain approximately 1,600 cfs with an exception of a lowered flow when the Reclamation staff would install the hatchery weir. The weir installation would begin around August 8, 2014 and would be completed within one week. The flows would be decreased to approximately 1,000 cfs for the picket installation. The Proposed Action's side-channel work would not be flow dependent, as most of the work would be done in isolation from the main channel.

Equipment to be used at the site would include a D-9 dozer, Cat 320 excavator (approximately), Cat 950 loader (approximately), a ten-wheel ten-yard on-road dump truck, and a 2,000 gallon water truck. The gravel would be delivered in transfer dump trucks (twelve tons in bed and twelve tons in trailer) and potentially some in 20 ton loads in end dump trucks. The dozer, excavator, and loader would use biodegradable hydraulic fluid.



Figure 1. Nimbus Basin gravel placement and side-channel creation areas of cut and fill. The northerly two polygons depict the gravel placement area and the southerly polygons show the area to be excavated to provide flow through the side-channel.

Proposed Action Schedule

Gravel haul trucks would begin delivery of gravel to the Proposed Action area on approximately August 4, 2014. The gravel would be stock piled on the existing open floodplain area a week before in-water work begins if logistics allow. The work would be conducted within a window of August through September. Work is expected to take approximately three to four weeks.

Proposed Action Activities

The Proposed Action was designed for flows at approximately 1,750 cubic feet per second (cfs) and was completed by CBEC Inc. with technical input from multiple federal, state, local, and private agencies. Water surface elevation upstream of the gravel placement would increase by approximately 1.4 feet at 1,750 cfs. California Department of Fish and Wildlife (CDFW) equipment operators would complete the

in-river gravel placement work. The side-channel, woody material placement, and additional associated project work would be completed by the City of Sacramento employees. Both CDFW and the City of Sacramento operators have been involved in similar restoration projects over the last six years. Both agencies are familiar with the regulatory requirements of the Proposed Action.

Gravel Placement

Gravel would be acquired from a commercial source and at Mississippi Bar, as described in the 2008 EA, and onsite. Samples of the source material have been taken to ensure appropriate gravel size and type to meet the needs of steelhead and Chinook salmon based on past project effectiveness monitoring in the American River and in consideration of specifications developed by the Anadromous Fish Restoration Program.

Side-channel Creation

The side-channel would be excavated using the dozer and excavator. Excavated material would be contoured over the bar and avoid existing vegetation as much as possible. The channel would have a variable width and depth to provide a diversity of spawning and rearing habitat for salmonids. Average channel width would be around 20 feet with gradually sloping banks. Average depth of excavation would be about four feet and maximum depth about six feet. Woody material obtained from orchard trees and other parkway sources would be installed in the side-channel in accordance with the 2011 Supplemental EA, as described below.

Side-channel - Woody Material Installation

The 2008 EA and the 2011 Supplemental EA analyzed the incorporation of woody material into side-channels of the lower American River, including the Proposed Action area. Woody material is a natural part of healthy rivers and provides important habitat for aquatic species, including cover from high flows and predators, collection of suitable spawning materials, and a food source for aquatic insects. It can create and maintain beneficial habitat features such as pools, islands, and gravel bars. Woody material was incorporated into the projects in 2011, 2012, and 2013. Monitoring showed utilization of habitat created by woody material was greatest in the 2012 and 2013 projects, although juvenile Chinook used the habitat at all three sites. Larger pieces and more closely spaced or clustered material with finer branches appeared most useful. The 2013 project utilized willows buried in with the larger wood to provide finer interstices for juvenile rearing.

The Proposed Action would incorporate woody material into the created side-channel with some closer clustering of individual pieces of wood if a source of finer material is found. Woody material would be placed below or above the low flow water line up to the ordinary high water line. The woody material would consist of trees and/or bushes, including willow, cottonwood, alder, oak, ash, walnut, conifer, or other suitable tree species with a single, intact root ball and at least one trunk and crown. The material would be less than 40 feet in length and two feet in diameter. It would be keyed into the bank by trenching into the bank to create a placement. The trench containing one end of the woody material would be covered with the onsite rock and soil to provide anchoring. The placement of woody material within the side-channel would not be flow dependent, as most of the work would be done in the dry.

The placement of natural woody material would be implemented to provide beneficial near-term use. It is not anticipated that either the gravel or woody material would stay in place through all high flow events. High flows that occur about once every five years on average could move the material. Gravel and woody material naturally moves around during high flow in a healthy properly functioning river. Reclamation initially considered engineering the woody material more securely into the banks using

materials such as steel cable; however, those measures were not put in the final plan due to a desire to create features more similar to naturally occurring woody material.

Affected Environment and Environmental Consequences

This Supplemental EA analyzes the potential Proposed Action's activities in order to document the potential impacts and cumulative effects on environmental resources under the existing Program. This 2014 supplemental EA includes details of the Proposed Action that were previously analyzed and the environmental effects of these activities relative to the 2008 EA, and 2010 and 2011 supplemental EA's. This document does not analyze environmental resources for which it would be reasonable to assume that no impacts would occur from the implementation of the Proposed Action. Specifically, potential impacts to land use, air quality, visual resources, transportation, noise, hazards and hazardous material, socioeconomics, global climate, public services, utilities, and service systems, Indian Trust Assets, Indian Sacred Sites, and Environmental Justice, are not analyzed because they were not identified as having potential environmental effects resulting from the Program. Therefore, it would not be reasonable to assume that the Proposed Action would result in impacts to these resources or services and are not considered further.

Hydrology

The water surface elevation upstream and downstream of a riffle is important to the suitability of the riffle for spawning and incubation of salmonids. The water surface elevation of the lower American River is controlled by riffles, and in the case of Nimbus Basis, the hatchery diversion weir foundation. The addition of gravel will increase the water surface elevation upstream of the gravel and create a more pronounced riffle at the site. The flow through the side-channel will slightly temper the water surface elevation change but the net effect will be an increase in upstream water surface elevation of around 1.4 feet at a design flow of 1,750 cfs. Gradient will be steepened at the downstream end of the gravel placement. It was anticipated that this project could be implemented after the new Nimbus Hatchery fish ladder construction but the fish ladder has no funding on the horizon until 2018 at the earliest. Following the fish ladder construction and the initial years of fish ladder effectiveness testing, the weir foundation may be removed. The removal would likely occur sometime after 2020. At that time the downstream control will change and the gravel will be more likely to move if flows prior to that time have not already transported much of the material downstream.

There is a chance that under certain elevated flow conditions gravel would be transported down to the weir site. Most material that reaches the top of the weir structure would likely be transported past and accumulation on the weir would not occur. Some material could fill interstices between the boulders that form a part of the weir foundation. This could improve the weir's ability to block fish by filling interstices that salmon could swim through and could also make weir installation more difficult. The Proposed Action would not result in impacts to the hydrology of the lower American River.

Biological Resources

The following federally listed species have the potential to be impacted by the Proposed Action.

Fisheries

The threatened Central Valley steelhead and its designated critical habitat would not be adversely impacted by the Proposed Action. Winter-run and spring-run Chinook salmon and green sturgeon do not occur in the Proposed Action area and therefore would not be affected by the Proposed Action.

Central Valley steelhead spawn in the river during winter and early spring, then the juveniles rear in the river for a year or more. Steelhead reared at Nimbus Hatchery are not considered to be a part of the Central Valley Steelhead DPS because of their Eel River ancestry.

A few steelhead are able to spawn in the project area in years when flows are high enough during the spawning period (Hannon 2013). Upstream of the weir, in the stilling basin, the gravel being used by most of the steelhead for spawning is large, making it difficult for the steelhead to dig a sufficiently deep redd; as such, this area has not recently supported significant spawning. Flows during the 2014 spawning period were too low to support spawning in the Nimbus Basin area. The suitable sized spawning gravel was either dry or very shallowly inundated (i.e. an inch or two water depth and no velocity). During the emergence period, surveys were completed to determine the presence of fry within the area upstream of the weir. No fry were detected, further verifying that no steelhead spawning occurred in Nimbus Basin in 2014. The nearest spawning occurred at upper Sailor Bar, approximately 500 yards downstream of the project area (Figure 2). In addition, no Chinook salmon fry were documented upstream of the weir in 2014.

The project area includes the coldest water in the lower American River during the warmest part of the year (cdec stream gauges). Cold water is a limiting factor to natural steelhead production in the American River. A goal of this project is to provide spawning habitat and juvenile steelhead rearing habitat and associated food production, both in the side-channel and in the main channel, in the area of the river with the greatest potential for over-summer survival of juvenile steelhead.

The Proposed Action area is upstream of the Nimbus Hatchery weir and is currently devoid of spawning habitat. Each year thousands of Chinook salmon are trapped upstream of the weir and unable to spawn so their reproductive potential is never realized. In addition recent coded wire tag recoveries from Chinook salmon upstream of the weir has indicated a higher proportion of naturally produced fish occur in this area than in the river below the weir. Although harvest from the area is high, many fish do survive and thousands perish naturally. CDFW annual escapement reports (Phillips and Gahan 2013) list fish picked up off the weir and annual observations of Chinook that perish upstream of the weir occur during steelhead spawning surveys (John Hannon, personal observations during 2002 through 2014). Although the project would not likely create enough habitat to satisfy the needs of all the fish in the Proposed Action area, a substantial increase in fry production could be realized through the creation of spawning habitat above the weir. In addition, the project will provide juvenile rearing habitat for these fish adjacent to where the spawning occurs.

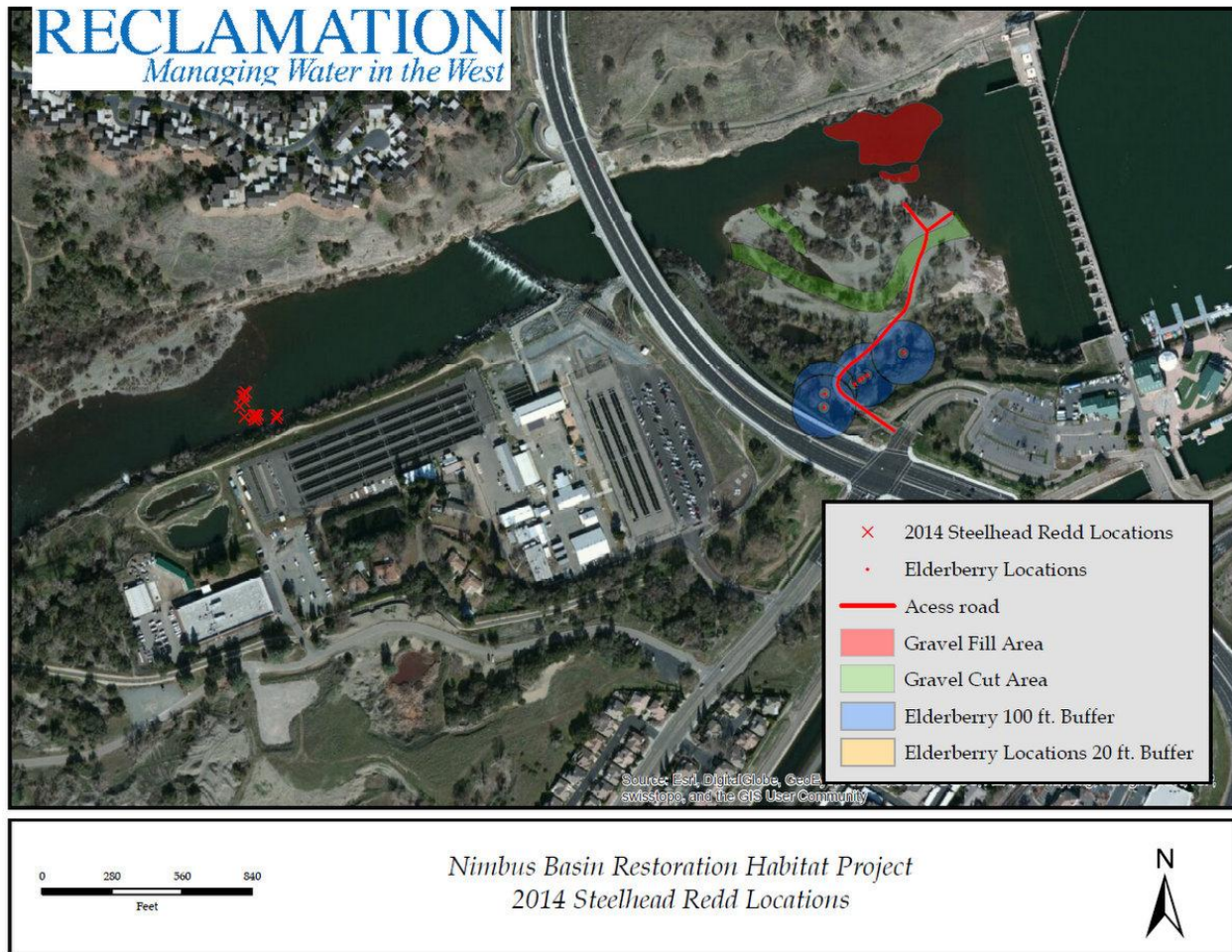


Figure 2. Steelhead redds at upper Sailor Bar in 2014 and elderberry shrub locations in relation to the project site. Note: see Figure 1 for a more accurate depiction of the area of cut and fill.

Construction would occur outside the window of egg incubation of listed anadromous species in the Proposed Action area. Juvenile steelhead rear year round in the Proposed Action area and therefore the following protective measures are included to minimize effects:

- Added gravel would be uncrushed, rounded “natural river rock” with no sharp edges, and the distribution of particle size would be in accordance with recommendations of the Anadromous Fish Restoration Program.
- Front loaders placing the gravel would have rubber wheels and would be moving slow enough for fish to avoid disturbed areas.
- Work would be during August through September (the period of lowest potential impact to salmonids).
- Gravel would have a cleanliness value of 85 or higher, based on CalTrans Test #227, and the gravel would be free of oils, clay, debris, and organic material.
- During in river work, turbidity would be monitored and construction curtailed if turbidity exceeds criteria established by the Regional Water Quality Control Board in its Clean Water Act §401 Water Quality Certification.
- All equipment working within the stream channel would be inspected daily for fuel, lubrication, and coolant leaks; and for leak potentials (e.g. cracked hoses, loose filling caps, stripped drain plugs); and all equipment must be free of fuel, lubrication, and coolant leaks.
- Vehicles or equipment would be washed/cleaned only at approved off-site areas.

- All equipment would be fueled and lubricated in a designated staging area located outside the stream channel and banks.
- Spill prevention kits would be in close proximity to construction areas, and workers would be trained in their use.

The Proposed Action would not result in impacts to fisheries resources. There would be potential positive cumulative effects on salmon and steelhead from the Proposed Action and other projects intended to improve conditions for salmonids in the lower American River, including: the yearly spawning and rearing habitat restoration projects that have occurred since 2008, the Nimbus Hatchery Fish Ladder Project, Isolation Pool Projects, and operational considerations associated with the operation of Folsom Dam and Reservoir.

The essential fish habitat (EFH) provisions of the Magnuson–Stevens Act provide guidelines for fishery management councils to identify and conserve necessary habitats for fish covered under federal fishery management plans. The Proposed Action area is designated as EFH for Chinook salmon. The Proposed Action would not have any adverse effect on EFH. Spawning and rearing habitat are key limiting factors to Chinook salmon production in the lower American River. The Proposed Action is expected to provide benefits to Chinook salmon EFH by substantially increasing the spawning and rearing habitat for Chinook salmon.

Wildlife

Elderberry shrubs are the host plant for the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) (VELB) and are found throughout the American River Parkway, which includes the Proposed Action area. The VELB is associated exclusively with elderberry plants in California's Central Valley and foothills during its entire life cycle. There is no designated critical habitat for VELB within the Proposed Action area.

The Sacramento County Department of Regional Parks had a survey done of all elderberry shrubs in the parkway in 2002-2004. An elderberry shrub inventory of the Nimbus Shoals area was conducted by Reclamation on May 27, 2008 and July 14, 2010 for the Nimbus Fish Hatchery Project. In 2014, Reclamation staff surveyed the location of all the elderberries within 100 feet of proposed ground disturbing activities (Figure 2) to confirm and document the locations of the elderberry bushes within the Proposed Action area.

The Proposed Action is designed for flows of 1,750 cfs, which potentially would increase the water surface elevation by approximately 1.4 feet within the surrounding area. All elderberry shrubs within the Proposed Action area and the surrounding area would not be impacted by the Proposed Action as operations of the Nimbus Dam would not change. All elderberry shrubs located within the Proposed Action area and within the surrounding area would not be impacted by the Proposed Action as all shrubs are located above the ordinary high water mark and would not be influenced by change in groundwater inter-action. In addition, all avoidance and minimization measures included in the USFWS 2008 concurrence for the Program would be implemented.

The access road (proposed for project gravel delivery) was previously used as access to the Nimbus Shoals park unit, but is currently closed to public vehicles. During the Proposed Action, gravel trucks would generate dust which may harm elderberry plants. Dust is listed in the species recovery plan as a threat to the VELB. To avoid affecting the VELB, the access road would be watered each day when being used by gravel trucks and other project-related vehicles. Construction would occur outside of the valley elderberry longhorn beetle's emergent period; therefore, no take of adults is anticipated during

project activities. Reclamation has designed the locations of haul roads, gravel storage sites, and side-channels to avoid the need to remove or trim elderberry shrubs; the sole host plant for the species. Elderberry shrubs within 100 feet of high construction activity would be buffered by placing orange fencing at a 20-foot radius around the shrub and securing species informational signage every 50 feet along the fencing. Contractors would be briefed on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. Work crews would be briefed about the status of the beetle and the need to protect its elderberry host plant. Vehicles would not come in contact with any elderberry shrubs. The Proposed Action would not adversely impact the valley elderberry longhorn beetle. The Proposed Action would not result in any cumulative adverse impacts to terrestrial species or their habitat.

Consultation & Coordination

Section 404 of the Clean Water Act

The US Army Corps of Engineers issued a Department of the Army permit number SPK-2008-0547 on September 5, 2008 for the 2008 EA project. The permit was modified on August 20, 2013 to extend the time limit for completing work through March 5, 2015.

Section 401 of the Clean Water Act

The original Water Quality Certification for the 2008 EA project was issued on August 12, 2008 (WDID#5A34CR00414A2). A time extension permitting the project through February 12, 2015 was approved on August 22, 2013.

Endangered Species Act of 1973

Reclamation requested concurrence from FWS and NOAA Fisheries on May 8, 2008 that the 2008 EA was not likely to adversely affect the federally-listed threatened valley elderberry long-horned beetle, the federally-listed threatened Central Valley steelhead, endangered Sacramento River winter-run Chinook salmon, threatened Central Valley spring-run Chinook salmon, their respective designated critical habitat, threatened Southern Distinct Population Segment of North American green sturgeon, or Essential Fish Habitat of the Pacific Salmon. FWS concurred on June 30, 2008 and NMFS concurred on July 22, 2008. Both FWS and NOAA Fisheries concurrence on the continuation of the Program and the Proposed Action will be obtained prior to project implementation.

References

- Hannon, J. 2013. American River Steelhead (*Oncorhynchus mykiss*) Spawning – 2013, with Comparisons to Prior Years. US Bureau of Reclamation, Central Valley Project, American River, California. Mid-Pacific Region. November 2013. 32p.
- Phillips, J. and K. Gahan 2014. Lower American River fall-run Chinook salmon escapement survey October 2013 – January 2014. Report to the US Bureau of Reclamation. California Department of Fish and Wildlife and Pacific States Marine Fisheries Commission, Sacramento, CA. 27p.
- Reclamation 2008. Final environmental assessment. Lower American River salmonid spawning gravel augmentation and side-channel habitat establishment program. US Bureau of Reclamation. Sacramento, CA.
- U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento, CA. July 9, 1999.



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2014-I-0456

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

JUL 11 2014

Memorandum

To: Susan Fry, Area Manager, Bay-Delta Office, Bureau of Reclamation,
Sacramento, California

From: 
Assistant Field Supervisor, Sacramento Fish and Wildlife Office
Sacramento, California

Subject: Informal Endangered Species Consultation on the Nimbus Basin Salmonid
Spawning and Rearing Habitat Improvement Project, Sacramento County, California

This memorandum responds to the request to the U.S. Fish and Wildlife Service (Service) from the U.S. Bureau of Reclamation (Reclamation) for informal consultation on the Nimbus Basin Salmonid Spawning and Rearing Habitat Improvement Project (Project) in Sacramento County, California. Reclamation's request for consultation was transmitted to our office via an electronic memorandum by Benjamin Nelson of your staff on June 17, 2014. At issue are the effects of the Project on the Federally-threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB). The Project is not within critical habitat for the VELB; therefore, none will be destroyed or adversely modified by the Project. This response is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

The findings and recommendations in this consultation are based on: (1) information provided in the June 17, 2014, electronic memorandum; (2) a conversation that took place between John Hannon (Reclamation) and Douglas Threlhoff (Service) during a June 27, 2014, site visit; and (3) a 2014 supplemental environmental assessment for the Project that was sent via email from John Hannon to Douglas Threlhoff on July 8, 2014.

In 2008, Reclamation prepared an environmental assessment for the Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program. Work was permitted through 2013 for several locations, including Nimbus Basin. The Project is an update to complete the Nimbus Basin site which was not completed within the timeframe specified in the environmental assessment. The Service concurred with Reclamation on June 30, 2008, that the proposed action in the environmental assessment was not likely to adversely affect the VELB.

The activities to be undertaken during the Project are described in the Reclamation's 2014 supplemental environmental assessment. The Project will increase and improve salmonid spawning and rearing habitat by replenishing spawning gravel in the American River and constructing additional side channel habitat in Nimbus Basin. The project site is located in the Nimbus Basin portion of the American River between Nimbus Dam and Hazel Avenue in the U.S. Geological Survey 7.5 Minute Folsom Quadrangle. Construction of the Project will be completed within a work window extending from July to early October, 2014. Gravel for the proposed project would be acquired at Mississippi Bar, as described in the 2014 supplemental environmental assessment, or from a commercial source. Transport trucks will deliver that gravel to in-river augmentation areas using existing improved and unimproved roads and small sections of new roads. A new side channel below Nimbus Dam will be created by excavating material from an existing gravel bar downstream of the dam and contouring that material over the gravel bar.

To ensure no damage occurs to elderberry shrubs that are used by the VELB, the following measures are proposed by Reclamation:

1. Roads and gravel sites within 100 feet of the elderberry shrubs that serve as a host to the VELB will be watered during construction to control dust that may adversely affect the shrubs;
2. Construction would occur outside the VELB's emergent period and vehicles will not come in contact with any elderberry shrubs;
3. No elderberry shrubs will be removed or trimmed during the Project;
4. Elderberry shrubs will be surrounded with orange fencing at a 20-foot radius from the drip line of each elderberry plant and flagged prior to construction;
5. Contractors will be briefed on the need to avoid damaging elderberry plants and the possible penalties for not complying with these requirements;
6. Work crews will be instructed about the status of the VELB and the need to protect its elderberry host plant; and
7. Signs will be erected every 50 feet along the fencing surrounding the elderberry plants. The signs will possess the following text: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs will be clearly readable from a distance of 20 feet, and will be maintained for the duration of construction.

The Service will be notified within 24 hours via the telephone and within three (3) working days in writing (email is acceptable) if any elderberry shrubs within the project site are damaged during the proposed work.

After reviewing the information provided, including on-site habitat, the potential for VELB or elderberry shrubs to be affected by the proposed action, and the proposed conservation measures described in the request, we concur with your determination that the proposed project as described, is not likely to adversely affect the VELB. This concurrence is provided specific to this action area, and for the proposed project action only as originally described within this request.

This concludes our review of your proposed action. Please note this memorandum does not authorize take of listed species. Section 9 of the Act prohibits the take (e.g., harm, harass, pursue, injure, or kill) of Federally-listed species. Therefore, unless new information reveals effects of the

proposed action that may adversely affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed project, no further action pursuant to the Act is necessary.

If you have questions concerning this memorandum, please contact Douglas Threlhoff of my staff at the letterhead address or by telephone (916) 414-6726.



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

JUL 31 2014

Refer to NMFS No: WCR-2014-1261

Susan M. Fry
Area Manger
Bureau of Reclamation
801 I Street, Suite 140
Sacramento, CA 95814-2536

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter, and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response, and Fish and Wildlife Coordination Act Recommendations for the Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program – Nimbus Basin Salmonid Spawning and Rearing Improvement Project.

Dear Ms. Fry:

On July 15, 2014, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence with the Bureau of Reclamation's determination that the Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program – Nimbus Basin Salmonid Spawning and Rearing Improvement Project (Proposed Action), under Section 3406 (b)(13) of the Central Valley Project Improvement Act, is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the Proposed Action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

Because the Proposed Action will modify a stream or other body of water, NMFS also provides recommendations and comments for the purpose of conserving fish and wildlife resources under the Fish and Wildlife Coordination Act (16 U.S.C. 662(a)).



This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System, <https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts> . A complete record of this consultation is on file at the NMFS California Central Valley Office.

Proposed Action and Action Area

In the gravel bar just downstream from Nimbus Dam on the American River the Bureau of Reclamation (Reclamation) proposes to excavate a side channel from the upper end of the gravel bar to the lower end of the gravel bar. The intent is to provide habitat for salmonids. The side channel is designed to be used by ESA listed threatened California Central Valley (CCV) steelhead (*Oncorhynchus mykiss*) adults for spawning, and for CCV steelhead juveniles for rearing. The side channel is also designed to be used by CCV fall-run Chinook salmon (*O. tshawytscha*). The proposed side channel would be approximately 350 yards long. Woody material will also be placed in the side channel. The woody material would consist of trees and/or bushes (Bureau of Reclamation 2011).

The channel excavation would occur at a time of year when flows are low and the gravel bar will be above the water level, and fish will not be present at the time of construction. Excavation of the middle of the channel will occur prior to the upper and lower ends being connected to areas with flowing water.

The Proposed Action will also provide spawning gravel for CCV steelhead and CCV fall-run Chinook salmon. The gravel is proposed to be added to the stream channel between the gravel bar and the north bank of the American River, just downstream of Nimbus Dam. Due to the existence of Nimbus Dam and further upstream Folsom Dam, stream substrate material that is moving downstream is trapped upstream of the dams. This has resulted in very little stream substrate material immediately downstream of Nimbus Dam, and a deficiency of spawning gravel in this area. While the gravel bar may be inundated at high flows as currently configured, salmonid eggs cannot survive when flows decrease. Gravel from the side channel excavation will be used to provide most of the material for the stream channel gravel augmentation. Based on test pits, this material has very little fine material, and should be a good source of spawning gravel. Some larger rock will be brought in from off site. This rock will be placed at the downstream end of the gravel augmentation to provide some stabilization for the new gravel. The Proposed Action would place approximately 12,000 tons of gravel into the American River. The proposed gravel augmentation together with the proposed side channel project would create about 3.3 acres of salmonid spawning and rearing habitat.

The work is proposed to be started on July 28, 2014 and continue for three to four weeks. The proposed side channel work is located at: 38°38'8.02"N, 121°13'18.48"W and the proposed gravel augmentation is located at: 38°38'11.67"N, 121°13'19.82"W.

On the American River, the Action Area extends downstream from Nimbus Dam (38°38'10.74"N, 121°13'11.27"W) to the Hazel Avenue Bridge (38°38'9.10"N, 121°13'29.49"W). The action area is based on the project area and the potential area affected by turbidity from the project and the potential effects to ESA listed species, and critical habitat from the accidental release of a hazardous substance from project activities.

No interrelated or interdependent activities were identified.

Action Agency's Effects Determination

The Bureau of Reclamation has determined that the Proposed Action may affect, but is not likely to adversely affect the federally listed threatened distinct population segment (DPS) of CCV steelhead (original listing: 3/19/1998, 63 FR 13347, Threatened; reaffirmed: 1/5/2006, 71 FR 834, Threatened), nor adversely affect steelhead designated critical habitat (9/2/2005, 70 FR 52488). The Bureau of Reclamation did not include a determination regarding effects to EFH under the MSA. NMFS has analyzed the effects to EFH and our conclusions are included in this consultation.

Consultation History

The Bureau of Reclamation originally submitted the Proposed Action as part of larger Proposed Action for salmonid habitat improvement in the lower American River. The Bureau of Reclamation requested ESA consultation on May 8, 2008, and NMFS concurred (July 22, 2008) with the Bureau of Reclamation's determination that the project may affect, but is not likely to affect Federally listed threatened CCV steelhead, endangered Sacramento River winter-run Chinook (*O. tshawytscha*), threatened Central Valley spring-run Chinook (*O. tshawytscha*), their designated critical habitat; or the threatened Southern DPS of North American Green Sturgeon (*Acipenser medirostris*). The proposed time period for that project ended in 2013. The work identified in the 2008 consultation was not completed. This required a new consultation for the habitat restoration work in 2014.

The Bureau of Reclamation included the lower American River habitat restoration project in its project description for the Continued Long-term Operations of the Central Valley Project and the State Water Project. A biological opinion for this consultation was issued on June 4, 2009.

NMFS received the request for consultation for the 2014 Proposed Action on July 15, 2014. NMFS also received the following information from Reclamation:

Chase, R. 2012. Findings of Site Fidelity and Movements Patterns of Juvenile and Adult Hatchery Steelhead in the Lower American River – 2011.

Email (June 19, 2014) from John Hannon (USBR) to Gary Sprague (NOAA) regarding answers to questions associated with the project. This email also provided web links to information associated with the 2008 project (e.g. environmental assessment, NMFS 2008 concurrence letter).

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a Proposed Action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the Proposed Action are reasonably likely to include:

- (1) Increased turbidity.
- (2) Potential with equipment to interact with ESA listed species.
- (3) Direct interactions with equipment, or gravel being deposited into the river.
- (4) Potential for accidental releases of toxic substances into the river, or onto critical habitat.
- (5) Loss of the functional value of designated critical habitat.
- (6) Improvement in salmonid spawning and rearing habitat.

Reasons effects to CCV steelhead are discountable

- (1) CCV adult steelhead are not expected to be in the vicinity of the project due to the time of year construction is occurring. While a few CCV steelhead may enter the Sacramento River from salt water in August, they are not expected to be high up in the lower American River in August. The peak of adult steelhead migration is in late January. Spawning is not expected to start until December. The work will take place prior to adult steelhead being present in the area. The hatchery weir will be put into place downstream of the Hazel Avenue bridge in early August. The weir extends across the width of the river, and is designed to prevent fish from going further up the American River, and direct them into the hatchery (it is known that the weir is not 100 percent effective).
- (2) While juvenile CCV steelhead could be present in the vicinity of the project, it is unlikely they would be upstream of the Hazel Avenue bridge in 2014 due to the locations of 2013/2014 steelhead spawning (all downstream of the Hazel Avenue bridge). Surveys are conducted most years for steelhead spawning in the American River. Due to the low flows (high visibility) in late 2013 and early 2014 during steelhead spawning, there is a higher than usual confidence in the results of the steelhead spawning surveys. Although the sample size was very small, Chase (2012) found that juvenile steelhead in the American river either stay in the vicinity of the area in which their eggs incubated, or move downstream.
- (3) Inclusion of general protection, conservation, and mitigation measures will reduce the risk of the potential for impacts to ESA listed anadromous fish species and the designated critical habitat. The Bureau of Reclamation (2008, 2014) will implement the following measures:

- Gravel placed in the stream will have a cleanliness value of 85 or higher, based on CalTrans Test #227, and the gravel will be free of oils, clay, debris, and organic material. This will reduce turbidity, and minimize any contaminants.
- During in river work, turbidity will be monitored and work curtailed if turbidity exceed criteria established by the Regional Water Quality Control Board in its Clean Water Act Section 401 Water Quality Certification. This measure will minimize the risk of turbidity increasing to a level that will affect fish.
- All equipment working within the stream channel will be inspected daily for fuel, lubrication, and coolant leaks; and for leak potentials; and all equipment must be free of fuel, lubrication, and coolant leaks. This measure will minimize the risk of hazardous materials accidentally entering the environment and affecting fish.
- Vehicles and equipment will be washed/cleaned only at approved off-site areas. This measure will minimize the risk of hazardous materials accidentally entering the environment and affecting fish.
- All equipment will be steam cleaned prior to working within the stream channel to remove contaminants that may enter the river and adjacent lands. This measure will minimize the risk of hazardous materials accidentally entering the environment and affecting fish.
- All equipment will be fueled and lubricated in a designated staging area located outside the stream channel and banks. This measure will minimize the risk of hazardous materials accidentally entering the environment and affecting fish.
- Spill prevention kits will be in close proximity to construction areas, and workers will be trained in their use. In the event of an accidentally release of toxic substances, this measure will minimize the effects to fish.

For these reasons the effects to ESA listed CCV steelhead are discountable, and the potential effects to critical habitat are temporary and discountable. The Proposed Action is likely to provide beneficial effects through improvement of spawning and rearing habitat for salmonids. Salmonids have been observed utilizing similar improved habitats in the American River for spawning and rearing.

Conclusion

Based on this analysis, NMFS concurs with the Bureau of Reclamation that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

This concludes the ESA consultation for the Proposed Action. This concurrence does not provide incidental take authorization pursuant to section 7(b)(4) and section 7(o)(2) of the ESA. It is illegal to "take" a species listed under the Federal ESA. The term "take" is defined by the ESA (section 3(19)) to mean *"to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."*

Harm in the definition of "take" in the ESA means 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. 64 FR 60727 (November 8, 1999)

Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. [50 CFR §17.3]

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Bureau of Reclamation or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

NMFS determined that Proposed Action would adversely affect EFH due to impacts to spawning and rearing habitat. However, any disturbance due to the implementation of the Proposed Action will be temporary and localized. Any anticipated adverse effects will be minimal in scope compared to the overall surrounding available habitat and will be temporary in nature. Thus, no EFH conservation recommendations are necessary to avoid, minimize, or otherwise offset the adverse effects to EFH. Therefore, additional EFH conservation recommendations are not being provided at this time and written response as required under section 305(b)(4)(B) of the Magnuson-Stevens Act and Federal regulations (50 CFR 600.920(k)) will not be required. Reclamation must reinitiate EFH consultation with NMFS if the Proposed Action is substantially revised in a way that may adversely affect EFH. This concludes the MSA portion of this consultation.

FISH AND WILDLIFE COORDINATION ACT

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. 661). The FWCA establishes a consultation requirement for Federal departments and agencies that

undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage (16 U.S.C. 662(a)). Consistent with this consultation requirement, NMFS provides recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. The FWCA provides the opportunity to offer recommendations for the conservation of species and habitats beyond those currently managed under the ESA and MSA. NMFS recommends that interpretive signs be placed at access points to inform the public of the purpose of the Proposed Action, during the construction activity. This concludes the FWCA portion of this consultation.

Please direct questions regarding this letter to Gary Sprague, NMFS California Central Valley Office. He may be reached at the letterhead address, or at (916) 930-3615 or via email at Gary.Sprague@NOAA.gov.

Sincerely,



for

William W. Stelle, Jr.
Regional Administrator

CC: CHRON File: 151422WCR2014SA00186

John Hannon USBR

REFERENCES

Bureau of Reclamation. 2008. Lower American River Salmonid Spawning Gravel Augmentation and Side Channel Habitat Establishment Program

Bureau of Reclamation. 2011. Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program. Supplemental Environmental Assessment.

Bureau of Reclamation. 2014. Lower American River Salmonid Spawning Gravel Augmentation and Side-Channel Habitat Establishment Program-Nimbus Basin. Supplemental Environmental Assessment.

Chase, R. 2012. Findings of Site Fidelity and Movements Patterns of Juvenile and Adult Hatchery Steelhead in the Lower American River – 2011. Bureau of Reclamation.

Central Valley Regional Water Quality Control Board

22 August 2013

John Hannon
United States Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95817

CERTIFIED MAIL
7012 1640 0000 4750 9095

ORDER AMENDING CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION; UNITED STATES BUREAU OF RECLAMATION, LOWER AMERICAN RIVER SALMONID SPAWNING GRAVEL AUGMENTATION PROJECT (WDID#5A34CR00414A2), SACRAMENTO COUNTY

This Order responds to the 24 June 2013 request for an amendment of the Lower American River Salmonid Spawning Gravel Augmentation Project § 401 Water Quality Certification (WDID#5A34CR00414). The original Water Quality Certification (Certification) was issued on 12 August 2008 and an amendment to the Certification (WDID# 5A34CR00414A1) was issued on 13 June 2012. The requested amendment is hereby approved. The original Certification is therefore amended as described below. Please attach this document to the original Certification.

REASON FOR AMENDMENT:

The United States Bureau of Reclamation (Applicant) is requesting a time extension through 12 February 2015. A time extension request was sent to the United States Army Corps of Engineers by the United States Bureau of Reclamation on 12 August 2013; and is still under review.

ADDITIONAL CONDITIONS:

1. This amendment is valid once the United States Army Corps of Engineers approves the time extension.
2. The Applicant shall submit a copy of the United States Army Corps of Engineers approval of the time extension to the Central Valley Regional Water Quality Control Board contact.

APPLICATION FEE RECEIVED:

No fees are required for this amendment. Total fees of \$500.00 for the original Certification were submitted to the Central Valley Regional Water Quality Control Board as required by 23 CCR §3833b (3)(A) and by 23 CCR §2200(a)(e) of the California Code of Regulations.

CENTRAL VALLEY WATER BOARD CONTACT:

Trevor Cleak, Environmental Scientist
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-8114
tcleak@waterboards.ca.gov
(916)464-4684

WATER QUALITY CERTIFICATION:

I hereby issue an Order amending the existing Clean Water Act, Section 401 Technically Conditioned Water Quality Certification for the Lower American River Salmonid Spawning Gravel Augmentation Project (WDID#5A34CR00414A2). All other conditions and provisions of the original Water Quality Certification and any previously approved amendments remain in full force and effect, except as modified based on the conditions of this Order. Failure to comply with the terms and conditions of the original Water Quality Certification, previously approved amendments, or of this Order may result in suspension or revocation of the Water Quality Certification.


Pamela C. Creedon
Executive Officer

cc: Distribution List, page 3

DISTRIBUTION LIST

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401 Certification and Wetlands Unit Chief

Jason A. Brush (Electronic copy only)
Wetlands Office Supervisor (WTR-8)
United States Environmental Protection Agency



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

August 20, 2013

Regulatory Division SPK-2008-00547

John Hannon
Bureau of Reclamation
Bay Delta Office, Science Division
Sacramento, California 95814-2536

Dear Mr. Hannon:

We are responding to your June 21, 2013, request to modify your Department of the Army permit number SPK-2008-00547. The permit was issued on September 5, 2008, for salmonid spawning and rearing habitat restoration. The project is located on the American River, in Section 35, Township 10 North, Range 7 East, Mount Diablo Meridian, Latitude 38.64205°, Longitude -121.21908°, Sacramento County, California. The modification is a request for a time extension of 1.5 years. This would allow two complete construction seasons to complete the project.

Permit number SPK-2008-00547 is hereby modified as follows:

1. We have modified the "time limit for completing the work" under General Condition 1 of DA Permit Number SPK-2008-00547 to replace, "September 5, 2013" with, "March 5, 2015".

All other terms and conditions of the permit remain in full force and effect. Failure to comply with the terms and conditions of this authorization may result in the suspension or revocation of your permit.

Please refer to identification number SPK-2008-00547 in any correspondence concerning this project. If you have any questions, please contact me at California South Branch, 1325 J Street, Room 1350, Sacramento, California 95814-2922, email William.H.Guthrie@usace.army.mil, or telephone 916-557-5269. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

A handwritten signature in black ink, appearing to read "William Guthrie", is written over a large, stylized, light-colored signature that is partially obscured.

William Guthrie
Chief, California South Branch