RECLAMATION

Managing Water in the West

Supplemental Environmental Assessment

CVPIA Replenishment Program Stanislaus River – River Mile 58

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region

2017

Introduction

The purpose of this supplemental environmental assessment (SEA) is to provide additional environmental analysis for continuing the gravel addition project begun in 1997 in the Stanislaus River at Goodwin Canyon. The supporting documents for this SEA are the Bureau of Reclamation's (Reclamation's) Finding of No Significant Impact (FONSI)/ Environmental Assessment (EA) on *Goodwin Canyon Gravel Addition Project Stanislaus River Phases I and II*, Reclamation's SEA/FONSI on *Stanislaus River Salmonid Habitat Improvement 2000-2003 Goodwin Canyon Gravel Addition Project*, and Reclamation's SEA/FONSI on *CVPIA Gravel Replenishment Program Stanislaus River at River Mile 58.2*. These environmental documents analyzed the impacts of adding gravel to several sites on the Stanislaus River below Goodwin Dam to increase and improve Chinook salmon, steelhead and native rainbow trout spawning habitat by restoring, at minimal cost, spawning gravels to an otherwise suitable spawning area in the Lower Stanislaus River. Figure 1 shows the general project vicinity.

The methodologies and locations of this SEA are the same as the methods and gravel placement sites covered in the above referenced EA and Supplements. This action is a continuation of the gravel replacements in this reach, and is intended to maintain the habitat created by the initial action and naturally provide gravel sources to downstream river reaches. The impact descriptions in the two supplemental EAs also cover this action described below. This 2017 SEA is an informational update of the Proposed Action activities for the Stanislaus River that were not completed within the previous EAs' timeframe. This document includes additional details of the Proposed Action that were previously analyzed.

Purpose of Action

The purpose of the action is to replenish spawning gravel at an existing restoration site in the Lower Stanislaus River to increase and improve Chinook salmon, steelhead, and native rainbow trout spawning habitat. The need of the action derives from the declines of salmonid stocks due in part to loss of spawning habitat through curtailment of gravel recruitment due to blockage of the river channel by dams.

Supplemental Proposed Action

Spawning gravel will be added to the existing restoration sites annually as needed in the reach of the Stanislaus River at river mile 58. Initially (in the first year) up to 14,000 tons of gravel will be added at this site and distributed across the active channel in the area shown in Figure 1. Gravel would be placed at depths ranging from approximately 1 to 7 feet deep. As gravel is distributed downstream by flows, additional gravel, as needed, would be added to this area in subsequent years. The gravel washed downstream would be utilized until it reaches a deep bedrock pool about ¼ mile downstream. Gravel would be placed at intervals of one to a few years apart as the need is determined by ongoing monitoring of gravel conditions and fish use of the gravel. New gravel would be needed to replenish spawning gravel that washes downstream and is not replaced by upstream sources. Gravel would be added to the lower part of the reach using front end loaders. Access to the upstream reach for equipment is limited so gravel would be added using a "habitat builder". The habitat builder is a gravel pump as described below.

Gravel was initially added at the upstream by helicopter. The cost of using a helicopter is very high, so Reclamation would continue to use a proprietary method termed the "Habitat Builder" in an effort to decrease costs. Costs during the initial project precluded adding the desired amount of gravel. Spawning gravel has been added nearly every year since about 1997 in the lower part of the reach. Spawning gravel has been added at numerous locations in the Stanislaus River from two to about 15 miles downstream over the past several years. Additional gravel would be added in any of the subsequent years as river flows transport gravel downstream.

Habitat Builder Description

The "Habitat Builder", as it is termed, is basically a gravel pump system. There are two six-inch water pumps which "y" into an eight-inch line. Gravel is screened and fed into a hopper. The gravel is then forced by water via a pump into the eight-inch line and is directed to wherever it is to be placed. Barrels are used to support the discharge pipe on the water's surface, and help with the placement of the material.

This system is ideal in locations where leaving a minimal construction footprint is desired. The eight-inch "Yelomine" pipe is durable and fairly flexible and can be placed over the existing ground surface. Head-loss is a large concern with this system, so it needs to be placed in such a manner so that the pipe continuously maintains a downward slope. Clogging is an area of concern, although modifications have reduced clogging. The water pump needs to be within 30 vertical feet of a water source in order to have sufficient head to pump the water. This has been utilized two times at this site with positive results.

The project site has an irrigation canal immediately adjacent to where the gravel pump would be running. Water from the canal would be used to operate the gravel pump. The water taken would be metered and Reclamation would credit Oakdale Irrigation District for the water taken from the canal. The water quality in the canal is identical to that in the river. The canal water comes from Goodwin Dam, about 500 feet upstream of the project site.

The gravel would be stockpiled at the U.S. Army Corps of Engineers (USACE) property as shown in Figure 1 and transported via a front-end loader along the canal access road to the gravel pump.

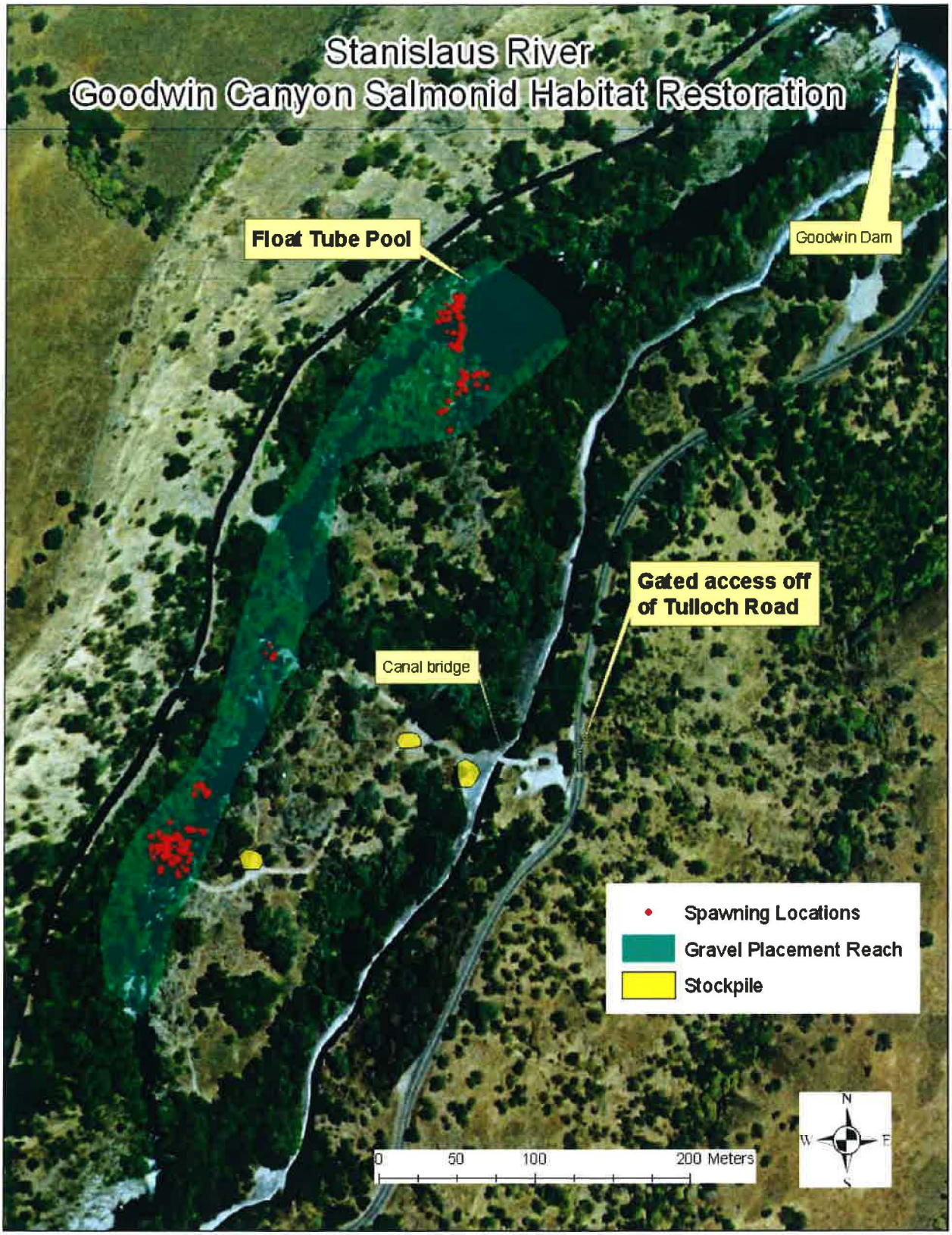

Figure 1. Stanislaus River at Goodwin Canyon spawning gravel placement reach map. Location of gravel stockpile areas and access roads are shown.

Timing for instream work
The timing window for instream work in the Stanislaus River as recommended by National Marine Fisheries Service (NMFS) is June 30 to September 15, before the spawning season and after the incubation period for steelhead and salmon. Work involving mobilizing gravel and equipment to the sites could occur outside of this time window, but all work in the water needs to be confined to this window.

Supplemental Environmental Analysis

During gravel placement, some turbidity would occur as the gravel is placed into the river. Turbidity would extend for approximately ¼ mile downstream to a large bedrock pool where turbidity is likely to dissipate. Past gravel placement projects have demonstrated that the turbidity at the placement site would end within less than one hour following completion of instream activities.

Gravel placement would occur in the late summer/early fall to avoid times when steelhead or Chinook eggs, the life stages most sensitive to such activities, could be incubating. Snorkel observations have revealed that during past gravel placement projects at this site and instream work at other sites, trout have been attracted by the activity and feed heavily just downstream of the site where food particles are often abundant. This area has a high concentration of trout year round, but the turbidity does not appear to be substantial enough to negatively affect the fish in the river at the time as they are attracted to the sites.

Terrestrial effects would be limited to the existing equipment access routes and the area that the eight inch diameter pipe would be laid across the ground surface. This area is a vegetated riparian area. Grass and smaller shrubs could be flattened along the pipe path. The project would not affect the valley elderberry longhorn beetle. Prior to laying the pipe from the staging area to the river, Reclamation would conduct a site survey to identify and flag any elderberry bushes. The pipe would be placed to avoid damage to any elderberry bushes by laying and removal of the pipe. If circumstances change and the project may affect the valley elderberry longhorn beetle, Reclamation would consult with the Fish and Wildlife Service. No trees would be cut or damaged. The rest of the work area is already in a developed state.

Project construction would be regularly monitored by California Department of Fish and Wildlife (CDFW) personnel to help insure environmental compliance.

The placement of gravel would improve salmon and trout spawning habitat. Spawning habitat in the Stanislaus River near Goodwin Dam is limited to the areas where spawning gravel is artificially placed. This area of the river has the coolest temperatures of the anadromous section of the river and is therefore an area where spawning needs to occur to maintain the resident trout and steelhead because they rear in the river year round. Steep cascades downstream of the project site preclude access to the area by juvenile trout and salmon from the next suitable spawning area two miles downstream. The habitat in between is primarily deep bedrock pool habitat with no available spawning habitat, but sufficient rearing area. In addition to the spawning habitat benefits, juvenile salmon and trout heavily utilize the areas where gravel has been added because velocities are favorable and food availability is high. Reclamation and CDFW annually survey Chinook spawning at the restoration sites and have documented heavy spawning use of placed gravel.

The proposed action would not affect the threatened Central Valley steelhead or the threatened valley elderberry longhorn beetle, as discussed above. No other threatened or endangered species have appropriate habitat in the area to be disturbed. It would not affect the Essential Fish Habitat of Chinook salmon.

Consultation and Coordination

Reclamation has worked with the U.S. Fish and Wildlife Service (FWS), NMFS, CDFW, USACE, and Oakdale Irrigation District in developing the proposed action.

Following are the permits or approvals needed for the proposed action:

PERMIT	PERMIT OBTAINED	STATUS
Section 404, Clean Water Act, discharge permit with the USACE - General Permit	No	Requested permission to use Nationwide permits 4 and 27.
Section 401, Clean Water Act, water quality certification, with SWRCB - waver for water quality	Yes	Expires in August, 2018
DWR Encroachment (on flood way of dam) with California Central Valley Flood Protection Board (Board)	Yes	Board said that there will never be a need to re-apply for the encroachment permit. Reclamation will contact DWR 10-days prior to any activities.
USACE Access permit (to access USACE property)	No	Permit requested soon.
Oakdale Irrigation District Access Permit	No	Will request renewal of temporary access permit.
Oakdale Irrigation District Water Use Permit	No	Will request renewal of permit
State Lands Lease Agreement	Yes	Existing agreement is still valid until 2022.
Endangered Species Act - FWS	Not needed	Project would not affect any listed or proposed species.
Endangered Species Act – NMFS	Yes	Will receive concurrence of not likely to affect determination.

Environmental Commitments

1. Equipment access. maintenance. refueling. parking and staging areas will be identified in consultation with USACE personnel prior to project construction. Construction specifications will prohibit any equipment in or near the river which might affect water quality. Project construction will be regularly monitored by CDFW personnel to help insure environmental compliance.

2. Turbidity downstream from the project site will be kept to a minimum during construction. Only a temporary increase in turbidity is expected. River flows at the time of construction will be low enough (200 to 700 cfs.) to allow disturbed fine sediment to settle out of the water column.

3. Prior to laying the pipe from the staging area to the river, Reclamation will conduct a site survey to identify and flag any elderberry bushes. The pipe will be placed to avoid damage to any elderberry bushes caused by placing and removing of the pipe. If circumstances change and the project may affect the valley elderberry longhorn beetle, Reclamation will consult with the Fish and Wildlife Service.

4. The annual placement of gravel will occur during an approximately 2 to 3-week period from June 30 to September 15, before the spawning season and after the incubation period for steelhead and salmon.

5. All appropriate permits and access agreements will be obtained prior to construction. USACE park officials will be consulted on all activities within park boundaries or involving riparian vegetation. Oakdale Irrigation District officials will be consulted on all activities influencing their facilities.