

Attachment J
County of Monterey
Mitigation Monitoring and Reporting Program (MMRP) for the
Salinas River Bridges Seismic Retrofit Project

Project Proponent: State of California Department of Transportation

Project Description: Seismically Retrofit the Salinas River Bridges and Modify the Northbound Bridge to Meet Current Standards, located on HWY 1, King City, Monterey County, California (requires .1 AC of County land for easement to be used as a staging area for construction activities).

CalTrans has made a preliminary determination that this temporary use of park property meets the criteria of a *de minimis* impact. A *de minimis* impact is defined as an impact that, after taking into account avoidance, minimization, mitigation, and enhancement measures, does not adversely affect the activities, features, and attributes of the Section 4(f) resource. The gas line will be installed under the Salinas River and any areas of ground disturbance will be re-contoured and revegetated. Based on the incorporation of these minimization measures, CalTrans has determined that the seismic retrofit project will not adversely affect the activities, features, and attributes of San Lorenzo Park.

The County has adopted a *Mitigation Monitoring and Reporting Program* (“County MMRP”) to require Caltrans to report on the implementation of the Caltrans Mitigation and Monitoring Plan.

- A. Submit verification to the County upon start of project (project staging/ mobilization) and completion of construction activities.
- B. Report on the implementation of the Caltrans Mitigation and Monitoring Plan.
- C. Implement all mitigation, monitoring and reporting measures described in Mitigation and Monitoring Plan, State of California Department of Transportation, Salinas River Bridges Seismic Retrofit Projects in the temporary easement area.
- D. Prepare and submit a report to the County of Monterey upon completion of construction activities that identifies how the mitigation measures were implemented and achieved in the easement area.

Mitigations:

This Mitigation and Monitoring Plan (MMP) provides a strategy for mitigating impacts. As most areas within the construction staging area will only be subjected to temporary impacts (approximately .1 ac), these areas will be re-established at a 1:1 ratio (essentially returned to their pre-construction condition) to remove ruts and other heavy equipment disturbances to return the area to its pre-construction condition. This will occur once the work has been completed.

Staging area will be confined to areas of lower sensitivity outside of riparian vegetation. The northern boundary near the town of King City and a small section of heavily maintained ROW (San Lorenzo Park Road) are vegetated by ruderal/disturbed species. Plants in these areas

are dominated by non-native, weedy and/or invasive species tolerant of disturbed conditions (e.g., compacted soils, maintained roadsides, etc.) and/or naturalized ornamental vegetation. Dominant ruderal species include many of the non-native grasses, such as ripgut brome (*Bromus diandrus*), slender wild oat (*Avena barbata*), and black mustard (*Brassica nigra*), and also include non-native plant species near the urbanized area of San Lorenzo Park such as blue gum (*Eucalyptus globulus*) and hottentot fig (*Carpobrotus edulis*).

It must be emphasized that impacts and mitigation are presented as maximum estimates. It is possible that during the course of construction, less area and/or fewer native trees may actually be impacted through avoidance, where feasible.

Hydroseeding will be used to stabilize disturbed areas along the river banks and floodplain. These areas will be hydroseeded with mixes of native grasses, forbs, and shrubs (see list of Seed Mixes 1 - 4) and compost where needed to stabilize the soil and provide erosion control.

Methods to Meet Performance Standards:

With avoidance, minimization, and mitigation, the proposed project will completely avoid impacts to wetlands and will have no net-loss of riparian vegetation upon completion of the project

- 1) As most areas along the streambed within the construction area will only be subjected to temporary impacts (approximately .1 ac), these areas will be re-established at a 1:1 ratio (essentially returned to their pre-construction condition). Reestablishment of the area will likely only require simple grooming of the area to remove ruts and other heavy equipment disturbances to return to its pre-construction condition.
- 2) The post-construction hydroseeding and planting of riparian vegetation along the embankment and/or staging area is anticipated to somewhat exceed the riparian acreage impacted. Caltrans proposes a 5-year monitoring and reporting period (or until success criteria have been met as approved by the County with concurrence from RWQCB) to ensure mitigation success.
- 3) Caltrans will monitor the success of the on-site mitigation throughout the monitoring period. Monitoring requirements will be implemented to determine if the mitigation project is on track to meet performance standards and if adaptive management is necessary.
- 4) During a 5-year monitoring period (or until success criteria have been met as approved by the County with Concurrence from the RWQCB), Caltrans will conduct monitoring every year (annually) using the following methods.
- 5) Qualitative Erosion Control Monitoring In order to verify the effectiveness of the hydroseeding mixes used for erosion control, Caltrans will verify that erosion controls have been applied, conduct species inventories of the hydroseeded areas, and qualitatively evaluate the overall effectiveness of erosion control measures. Recommendations may be necessary if it is determined that erosion controls have been deficient or are otherwise not functioning properly.

- 6) Qualitative Erosion Control Monitoring. In order to verify the effectiveness of the hydroseeding mixes used for erosion control, Caltrans will verify that erosion controls have been applied, conduct species inventories of the hydroseeded areas, and qualitatively evaluate the overall effectiveness of erosion control measures. Recommendations may be necessary if it is determined that erosion controls have been deficient or are otherwise not functioning properly.
- 7) Monitoring Schedule and Reporting - For a 5-year period (or until success criteria have been met as approved by the RWQCB), Caltrans will perform annual monitoring and will submit a total of five (5) annual monitoring reports to the County (by May 31 of each year) following mitigation installation.
- 8) The monitoring reports will include information such as planting plans, delineation maps, data forms, and photographs that assess site conditions quantitatively and qualitatively to determine whether the implemented mitigation has met the success criteria. In addition, the reports may include both quantitative and qualitative measures of the functions provided by the compensatory mitigation site.
- 9) Repeatable photo monitoring from established photo point locations, an assessment of the health/vigor of the mitigation plantings. The monitoring program will be performed by a qualified biologist.
- 10) If performance standards are not met after the 5-year monitoring period, additional plantings, seeding, or exotic species control may be necessary. Caltrans would be responsible for implementing this work and any other unforeseen challenges. The actual monitoring results will be used to make adaptive management decisions. The following events may occur within the mitigation areas and may require action:
 - Flood: Flood conditions naturally occurring along the Salinas River may result in erosion, scour, and loss of vegetation, but would likely be temporary in nature. Riparian vegetation would be expected to mostly withstand flood conditions with some minor potential loss from scour. In case of catastrophic losses to the mitigation site as a result of flood, Caltrans will coordinate with County to evaluate an appropriate response.
 - Drought: If the mitigation area experiences severe enough drought, not all planted vegetation may survive. If necessary, during the 3-year plant establishment and maintenance period, supplemental irrigation will be provided plantings to keep them alive. Plants that do not survive will be replaced during this time. After plant establishment, dead plants will be quantified, and a new plant establishment effort may be initiated if success criteria have not been met. Some plants have roots that are viable even if the above-ground portion of the plant perishes, and therefore have the potential to re-sprout the following growing season. On-site seed collection and dispersal may be another option to regenerate plants on the site after a drought. If a severe enough drought causes massive plant die-off and the site cannot naturally be reseeded, a separate landscape project may be developed.

- Exotic species infestation: Eradicating all non-native vegetation is not a realistic goal, however once natives are established and regenerating, they compete well against non-natives. Exotic species “control” is the management goal and this will be best accomplished by establishing healthy native populations. During plant establishment, a rigorous exotic species control plan will involve both hoeing and hand-pulling.
- Herbivore damage: Fencing off the on-site mitigation area is not an option as it would present a visual impact as well as a barrier for other species. If it is determined that wildlife are damaging plants, either plant protection barriers will be installed to protect the plants from browsing, or additional plantings will be installed.
- Public use: The on-site mitigation area would be relatively open throughout the duration of mitigation; however, the area is currently not visited frequently by recreationists because a pedestrian bridge offers access across the river. In lieu of fencing, signage will be placed to inform the public of the need to avoid sensitive mitigation areas.

List of Seed Mixes 1 - 4

Seed Mix 1

<u>Common/(Botanical Name)</u>	<u>Min. % Germination</u>	<u>Lbs. Pure Live Seed Per AC</u>
CA brome (<i>Bromus carinatus</i>)	60	9.0
CA poppy (<i>Eschscholzia californica</i>)	60	3.0
Tidy Tips (<i>Layia platyglossa</i>)	50	1.0
Creeping wild rye (<i>Elymus triticoides rio</i>)	50	5.0
Miniature Lupine (<i>Lupinus bicolor</i>)	60	3.0
CA melic (<i>Melica californica</i>)	60	5.0
Tomcat Clover (<i>Trifolium willdenovii</i>)	60	7.0
Small fescue (<i>Festuca microstachys</i>)	40	7.0
TOTAL 40 lbs/ac		

Seed Mix 2

<u>Common/(Botanical Name)</u>	<u>Min. % Germination</u>	<u>Lbs. Pure Live Seed Per AC</u>
Thin grass (<i>Agrostis pallens</i>)	45	3.0
CA mugwort (<i>Artemisia douglasiana</i>)	20	0.1
coyote brush (<i>Baccharis pilularis</i>)	25	0.1
mule fat (<i>Baccharis salicifolia</i>)	25	0.1
tufted hairgrass (<i>Deschampsia cespitosa</i>)	40	2.0
creeping wild rye (<i>Elymus triticoides rio</i>)	45	4.0
CA buckwheat (<i>Eriogonum fasciculatum</i>)	20	2.0
small fescue (<i>Festuca microstachys</i>)	40	8.0

low barley (<i>Hordeum depressum</i>)	40	5.0
clammy clover (<i>Trifolium obtusiflorum</i>)	40	3.0
		TOTAL 27.3 lbs/ac

Seed Mix 3

<u>Common/(Botanical Name)</u>	<u>Min. % Germination</u>	<u>Lbs. Pure Live Seed Per AC</u>
white yarrow (<i>Achillea millefolium</i>)	40	2.0
California brome (<i>Bromus carinatus</i>)	45	10.0
CA poppy (<i>Eschscholzia californica</i>)	45	3.0
small fescue (<i>Festuca microstachys</i>)	40	10.0
tidy tips (<i>Layia platyglossa</i>)	30	1.0
miniature lupine (<i>Lupinus bicolor</i>)	45	4.0
		TOTAL 30.0 lbs/ac

Seed Mix 4

<u>Common/(Botanical Name)</u>	<u>Min. % Germination</u>	<u>Lbs. Pure Live Seed Per AC</u>
white yarrow (<i>Achillea millefolium</i>)	40	1.0
CA sagebrush (<i>Artemisia californica</i>)	40	0.1
CA mugwort (<i>Artemisia douglasiana</i>)	20	0.1
coyote brush (<i>Baccharis pilularis</i>)	25	0.1
CA brome (<i>Bromus carinatus</i>)	45	8.0
giant wild rye (<i>Elymus condensatus</i>)	35	1.0
CA buckwheat (<i>Eriogonum fasciculatum</i>)	20	2.0
CA poppy (<i>Eschscholzia californica</i>)	45	2.0
small fescue (<i>Festuca microstachys</i>)	40	8.0
black sage (<i>Salvia mellifera</i>)	35	1.0
		TOTAL 23.3 lbs/ac

Native Riparian Vegetation Planting

<u>Common/(Botanical Name)</u>	<u>Type/Size</u>	<u>Spacing Quantity</u>
box elder (<i>Acer negundo</i>)	1-gallon	As shown on plans 10
mule fat (<i>Baccharis salicifolia</i>)	1-gallon	20-ft centers 180
coyote brush (<i>Baccharis pilularis</i>)	1-gallon	20-ft centers 40
CA gooseberry (<i>Ribes californicum</i>)	1-gallon	20-ft centers 180
fuchsia-gooseberry (<i>Ribes speciosum</i>)	1-gallon	20-ft centers 180
blue elderberry (<i>Sambucus nigra</i>)	1-gallon	20-ft centers 180
Fremont cottonwood (<i>Populus fremontii</i>)	cuttings	15-ft centers 77
sandbar willow (<i>Salix exigua</i>)	cuttings	15-ft centers 175
red willow (<i>Salix laevigata</i>)	cuttings	15-ft centers
		150 TOTAL 1,172