

**Meeting of the Central Valley Flood Protection Board
September 28, 2012
Staff Report – Encroachment Permit
Three Rivers Levee Improvement Authority
Elderberry Shrubs Transplantation – Anderson Mitigation Site, Yuba County**

1.0 – ITEM

To consider Board approval of Permit No. 18773.

2.0 – APPLICANT

Three Rivers Levee Improvement Authority (TRLIA).

3.0 – LOCATION

The proposed project is located within the existing Anderson Mitigation Site along the overflow area of the left bank levee of the Feather River, approximately 6 miles south of the City of Marysville and the confluence of the Feather and Yuba Rivers, in Yuba County. The approximate site coordinates are 39.044856 north latitude and 121.606472 west longitude (See Attachment A for Location Map, Vicinity Map, Site Plan and Site Photos). Pursuant to California Code of Regulations, Title 23 (CCR 23), Table 8.1, this reach of the Feather River is a regulated major stream contained by levees of the Sacramento River Flood Control Project.

4.0 – DESCRIPTION

The applicant proposes to plant an additional 228 elderberry seedlings into the Anderson Mitigation Site to mitigate for elderberry shrub impacts of the Upper Yuba Levee Improvement Project (UYLIP), which was constructed by TRLIA in 2011. The applicant has submitted this permit application to meet revised elderberry shrub mitigation requirements for the UYLIP as determined by the U.S. Fish & Wildlife Service (USFWS). (See Attachment B for planting plan).

5.0 – PROJECT ANALYSIS

5.1 – Project Background

The Anderson Mitigation Site was established by the U.S. Army Corps of Engineers (USACE) and the Department of Water Resources (DWR) in 1995 and 1996 to mitigate

impacts from the Marysville/Yuba City Phase 2 Reconstruction Project. Although initially planted, not all of the area set aside for elderberry mitigation was used by the Marysville/Yuba City Phase 2 Reconstruction Project, and therefore the remainder of the site has been available for elderberry mitigation use on other projects.

The CVFPB issued Encroachment Permit No. 18642 BD on February 7, 2011 to TRLIA which allowed them to transplant elderberry shrubs and plant associated elderberry seedlings into the Anderson Mitigation Site to mitigate for elderberry shrub impacts of the UYLIP. TRLIA has accomplished all transplants and has planted the 22 initial seedlings under Permit No. 18642 BD. However to meet revised mitigation requirements, an additional 228 seedlings need to be planted by TRLIA in the same general area as the other transplants and seedlings.

Initially when TRLIA applied for Permit No. 18642 BD, the intent was to transplant all of the impacted elderberry shrubs during the dormant season. This would have only required planting the 22 associated elderberry seedlings, but due to protracted negotiations with a landowner over access, TRLIA was not able to access three shrubs for transplanting during the dormant season. These last three shrubs were transplanted in mid-June 2011. Because these three shrubs were transplanted in the non-dormant season, the quantity of associated elderberry seedlings required to be planted was increased from 22 to 250 per a revised Biological Opinion (BO) issued on June 7, 2011 by the USFWS (See Attachment C). The large number of seedlings is required because the three transplanted elderberry shrubs were very large with many stems, and this revised elderberry shrub mitigation requirement is calculated based on the number and size of stems impacted, and not simply the number of shrubs.

In October 2011, the applicant contacted the CVFPB and inquired about the need to revise original Permit No. 18642 BD to accommodate the increased required number of seedlings. CVFPB staff determined that a new permit would be required for these additional seedlings, and TRLIA submitted this permit application for CVFPB review.

5.2 – Authority of the Board

- Title 23, §112, Regulated Streams, Table 8.1, §131, Vegetation

5.3 – Hydraulic Analysis

A hydraulic impact analysis was performed for the proposed transplanting of elderberry plants as part of the review process for Permit No. 18642 BD in January 2011 (See Attachment D1). In areas where plants were to be transplanted a Manning's roughness coefficient (n value) of 0.07 was used for the proposed project condition, and for the existing condition a Manning's roughness coefficient of 0.052 was used.

The hydraulic model simulation results showed no significant changes in the maximum water surface elevation (WSE), or velocities upstream and downstream of the initial proposed project for the 200-year flood event, which has a flow of approximately

352,000 cubic feet per second (cfs) in the Feather River downstream of the Yuba River. However, after the USACE reviewed the January 2011 hydraulic analysis results, they requested an additional hydraulic simulation using a Manning's roughness coefficient of 0.1 to 0.2 to represent the addition of elderberry. It should be mentioned that an n value of 0.1 represents a condition of dense trees, and is an increase of 92% over the without project conditions n value of 0.052. Although the applicant did not agree with the USACE's request to use higher n values in the hydraulic analysis, to expedite review of this permit application the additional hydraulic simulation run was made with the higher n value of 0.1 (See Attachment D2).

The additional model run results showed there is still no significant impact to the design conditions due to these additional plantings. There are no impacts to the WSE and velocity adjacent to the Feather River east and west levees. This is due to the proposed overall project is much smaller than the overall floodway width. The proposed project is approximately 500 feet wide encompassing 1.2 acres within the Feather River floodway. The floodway itself is approximately 7,000 feet wide at the proposed project's location. Based on width alone, the proposed project only blocks approximately 7.14% of the total Feather River floodway 7,000 foot width $[(500 \div 7,000) \times 100 = 7.14\%]$.

It should be mentioned the TRLIA program has reduced the 200-year WSE to approximately 1.5 feet below the 1957 Design Profile in and above this reach of the Feather River where this proposed project is located. The Feather River Setback Levee in this area was designed to withstand both the 200-year and 1957 Design Profiles. The transplanted shrubs and seedlings will pose no threat to the recently constructed Feather River Setback Levee or the existing levees.

CVFPB staff received a request from the USACE on September 18, 2012, for an additional hydraulic model analysis using a Manning's roughness coefficient of 0.2. The applicant's hydraulic engineer was contacted by CVFPB staff and made aware of this request. They will perform this additional analysis and submit it to CVFPB staff for review before the September 28, 2012 Board meeting. CVFPB staff will provide the Board with a summary of the additional hydraulic analysis at this Board meeting to consider as part of this staff report.

5.4 – Geotechnical Analysis

This proposed planting project is not expected to have any geotechnical impacts related to the integrity of the project levees and the floodway.

5.5 – Additional Staff Analysis

TRLIA has entered into a license with the Sacramento San Joaquin Drainage District (SSJDD) for use of the Anderson Mitigation Site for UYLIP mitigation purposes. The license is not specific as to the number of mitigation plantings. Therefore additional seedling plantings would not change the use specified in the license and no modification to the license will be necessary (See Attachment E).

TRLIA has also entered into an agreement with Reclamation District (RD) 784 to maintain and manage the mitigation area once the transplanted shrubs and planted seedlings have become established (See Attachment F, Exhibit A).

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The USACE 208.10 comment letter has not been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the permit language and incorporate it into the permit as Exhibit B.
- RD 784 endorsed this permit application on April 3, 2012 with conditions as part of the overall permit application received by the CVFPB. The draft permit (see Attachment G) reflects the receipt of RD 784's endorsement with conditions in special condition 41. These RD 784 conditions are incorporated into the permit as Exhibit C.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA Findings:

The Board, as a Responsible Agency under CEQA, has reviewed the Initial Study, Mitigated Negative Declaration (IS/MND) (State Clearinghouse No: 2010022039, February 2010) and Mitigation Monitoring and Reporting Plan (MMRP) for the Upper Yuba Levee Improvement Project prepared by the lead agency, Three Rivers Levee Improvement Authority. These documents including project design, elderberry shrub mitigation, and Three Rivers Levee Improvement Authority resolutions may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvfpb.ca.gov/meetings/2012/9-28-2012.cfm> under a link for this agenda item. The documents are also available for review in hard copy at the Board and Three Rivers Levee Improvement Authority offices.

The Three Rivers Levee Improvement Authority determined that the project would not have a significant effect on the environment and adopted Resolution 2010-01 on April 20, 2010. Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where

no significant impacts will occur. These mitigation measures are included in the project proponent's MMRP and address impacts to air quality, biological resources, cultural resources and geology, hazardous materials, hydrology, noise, and transportation. The description of the mitigation measures are further described in the adopted MMRP.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the facilities of the State Plan of Flood Control, and consistency of the proposed project with the Central Valley Flood Protection Plan as adopted by Board Resolution 2012-25 on June 29, 2012:

The proposed project has no adverse effect on facilities of the State Plan of Flood Control and is consistent with the Central Valley Flood Protection Plan.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

Changes in hydrology, climate and development within the applicable watershed may affect the flows within the Feather River over time.

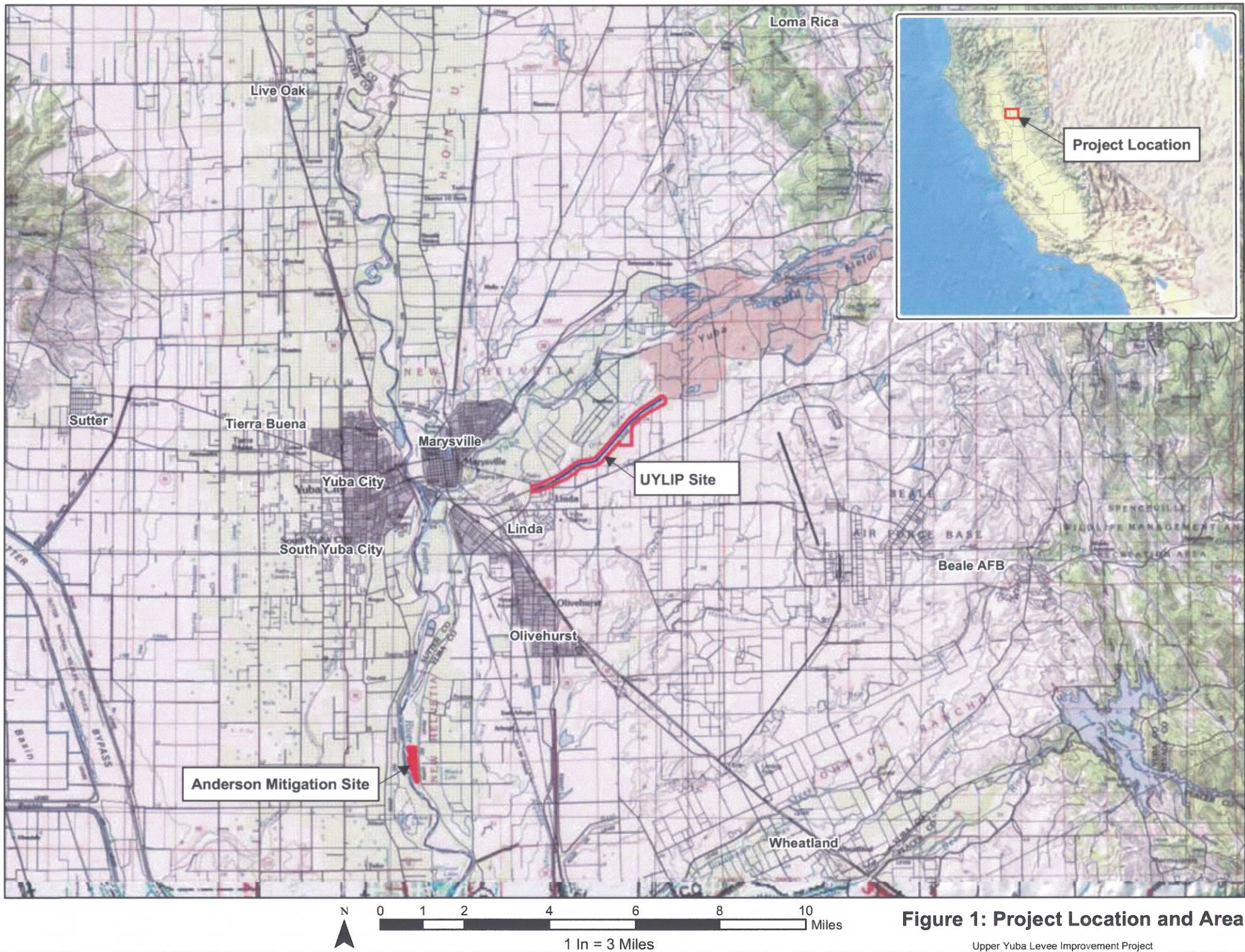
9.0 – STAFF RECOMMENDATION

Staff recommends that the Board adopt the CEQA findings, approve the permit, conditioned upon receipt of a U.S. Army Corps of Engineers comment letter indicating that the District Engineer has no objection to the project subject to any conditions provided, and direct staff to file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

- A. Location Maps and Photos
- B. Planting Plan
- C. USFWS Revised Biological Opinion
- D. Feather River Hydraulic Information
- E. SSJDD License Agreement with TRLIA
- F. Draft Permit No. 18773
 - A. Maintenance Agreement between RD 784 and TRLIA
 - B. USACE 208.10 Comment Letter
 - C. RD 784 Endorsement with Conditions

Technical/Design Review:	Jon P. Tice, Jr., PE
Permit Author:	Jon P. Tice, Jr., PE
Environmental Review:	James Herota / Andrea Mauro
Document Review:	David R. Williams, PE; Eric Butler, PE; and Len Marino, PE

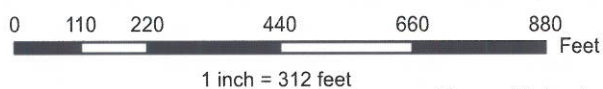


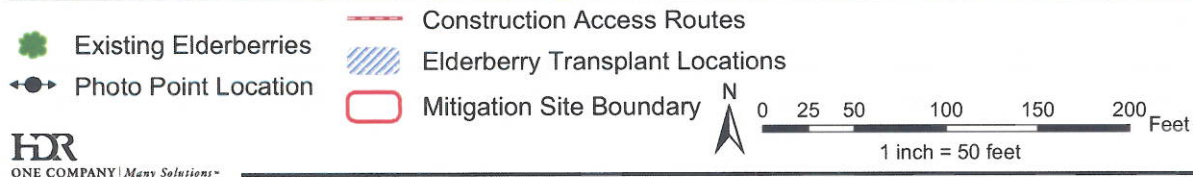
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Figure 3: Anderson Mitigation Site and Vicinity
Habitat Map

Attachment A





Anderson Mitigation Site
Elderberry Planting Plan NORTH Area
Figure 4

Site Photos



View looking east showing the northwest portion of the northern study area. Photo was taken from the western boundary of the northern study area.



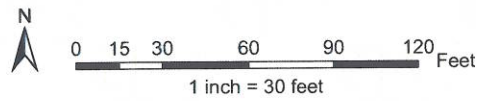
View looking east showing the central portion of the northern study area. Photo was taken from the western boundary of the northern study area.



View looking northeast showing the southwest portion of the northern study area. Photo was taken from the southwest boundary of the northern study area.



View looking north showing the central portion of the southern study area. Photo was taken from the interior of the southern study area.



- | | | | |
|------------------------|---|--------------------------|---------------------------------|
| x | Elderberry Seedling Locations | T | Elderberry Transplant Locations |
| Orange dashed line | 100 Foot Setback Buffer | Black dot with crosshair | Photo Point Locations |
| Red line | Construction Access Routes | Green dot | Existing Elderberries |
| Blue hatched rectangle | Elderberry Transplant Area
(# indicates the UYLIP Elderberry Shrub ID) | Red outline | Mitigation Site Boundary |

Anderson Mitigation Site
Detailed Planting Plan

Additional Seedlings

FIGURE 6



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In Reply Refer To:
81420-2010-F-0814-R001

7 June 2011

Ms. Alicia Kirchner
Chief, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814

Subject: Re-initiation of Section 7 Programmatic Formal Consultation on the Upper Yuba River Levee Improvement Project, Yuba County, California

Dear Ms. Kirchner:

This is in response to your April 13, 2011, request to re-initiate formal consultation with the U.S. Fish and Wildlife Service (Service) on the Upper Yuba River Levee Improvement Project (proposed project) in Yuba County, California. Your request was received in our office on April 14, 2011. The following changes to the biological opinion are due to modifications in the proposed project schedule and changes to timing of elderberry shrub (*Sambucus sp.*) transplantation, habitat for the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This amended biological opinion is issued under the authority of section 7(a)(2) the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This amendment is based on: (1) your April 13, 2011, letter requesting re-initiation under section 7; (2) an e-mail with further refinements on the project description sent on April 22, 2011; (3) the information prepared by HDR dated April 2011; and (4) other information available to the Service.

The biological opinion (Service # 81420-2010-F-0814-1) is now amended as follows:

Page 5, Change the 2nd paragraph from:

Eighteen elderberry shrubs with 344 stems greater than one inch in diameter at ground level will be transplanted due to the construction of waterside levee slope erosion protection.

Ms. Alicia Kirchner

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To:

Eighteen elderberry shrubs with 342 stems greater than one inch in diameter at ground level will be transplanted due to the construction of waterside levee slope erosion protection.

Page 8, Change the 2nd paragraph under Operations and Maintenance Corridors from:

Nine elderberry shrubs with 115 stems greater than one inch in diameter at ground level will be transplanted to create the 15-foot vegetation free zone.

To:

A local landowner has removed four elderberry shrubs since the original stem count was completed. Three of these shrubs would have been transplanted by TRLIA due to project activities. Therefore, six elderberry shrubs with 107 stems greater than one inch in diameter at ground level will be transplanted to create the 15-foot vegetation free zone.

Page 8, Change Construction Scheduling from:

Construction Scheduling

A construction period of up to four months is planned for the project, beginning in the summer of 2010 with contractor mobilization, and ending in November 2010 with clean-up and contractor demobilization. The proposed project could be constructed using two different scenarios: construction over a four month timeframe working 15 hours per day, or construction over a three month timeframe working 24 hours per day. It is likely that under the second scenario construction will not need to occur continuously for 24 hours per day for the entire three month period and will likely include a combination of 15 hour per day activities and 24 hour per day activities.

In addition to the elderberry shrubs which will be transplanted due to the proposed construction twenty-six elderberry shrubs are located within 100 feet of cutoff wall construction, levee reshaping, Operation and Maintenance corridor creation, waterside levee slope protection, and berm construction. These twenty-six elderberry shrubs will not be transplanted because the conservation measures listed below are sufficient to avoid adversely affecting them. Conservation measures to avoid and minimize effects to valley elderberry longhorn beetle habitat are described below.

To:

Construction Scheduling

A construction period of up to four months is planned for the project, beginning in mid-April 2011 with contractor mobilization, and ending the end of August 2011 with clean-up and contractor demobilization. The proposed project could be constructed using two different scenarios: construction over a four month timeframe working 15 hours per day, or construction

over a three month timeframe working 24 hours per day. It is likely that under the second scenario construction will not need to occur continuously for 24 hours per day for the entire four month period and will likely include a combination of 15 hour per day activities and 24 hour per day activities.

TRLIA transplanted 28 elderberry shrubs during the first 2 weeks of February 2011. Because TRLIA does not have access to the entire project footprint, three elderberry shrubs will be transplanted after June 15, 2011. In addition to the elderberry shrubs which will be transplanted due to the proposed construction twenty-five elderberry shrubs are located within 100 feet of cutoff wall construction, levee reshaping, Operation and Maintenance corridor creation, waterside levee slope protection, and berm construction. These twenty-five elderberry shrubs will not be transplanted because the conservation measures listed below are sufficient to avoid adversely affecting them. Conservation measures to avoid and minimize effects to valley elderberry longhorn beetle habitat are described below.

Page 10, change the 1st bullet and Table 1. from:

- Transplant 34 elderberry shrubs with 311 stems between 1 and 3 inches, 109 stems between 3 and 5 inches and 66 stems greater than 5 inches at ground level, and provide additional plantings as described in Service's 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Conservation Guidelines). Elderberry shrubs that require removal will be transplanted. Because all 34 elderberry shrubs will be transplanted between August and October 2010 (outside of the elderberry dormant season) TRLIA has proposed to compensate an additional 2.5 times the Conservation Guidelines ratios. Shrubs will be planted either at the Anderson Road Compensation Site or at a Service-approved conservation bank. Elderberry and associated native seedlings at Anderson Road were established in 1996 for the Sacramento River Flood Control Project, Phase II compensation, and the site has been monitored for 10 years. Transplanting will occur outside of the transplantation window (approximately November through the first two weeks of February) identified in the Conservation Guidelines. TRLIA will work with the Service on determining the transplant and additional planting location (Table 1).

Table 1: Proposed minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry shrubs at ground level, and presence or absence of exit holes when transplanted in August or September 2010.

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Out of Season Multiplier	Associated Native Plant Ratio	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Riparian	stems $\geq 1"$ & $\leq 3"$	No	2:1	2.5	1:1	97	485	485
Riparian	stems $> 3"$ & $< 5"$	No	3:1	2.5	1:1	24	180	180

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Riparian	stems $\geq 5''$	No	4:1	2.5	1:1	16	160	160
Non-riparian	stems $\geq 1''$ & $\leq 3''$	No	1:1	2.5	1:1	214	535	535
Non-riparian	stems $> 3''$ & $< 5''$	No	2:1	2.5	1:1	85	425	425
Non-riparian	stems $\geq 5''$	No	3:1	2.5	1:1	50	375	375
Total replacement plantings							2,160	2,160
Total Elderberry shrubs to be transplanted								34
4,320/10 = 432 valley elderberry longhorn units or 17.85 acres								

To:

- Transplant 31 elderberry shrubs with 301 stems between 1 and 3 inches, 109 stems between 3 and 5 inches, and 66 stems greater than 5 inches at ground level, and provide additional plantings as described in Service's 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Conservation Guidelines). Shrubs will be planted at the Anderson Road Compensation Site. Elderberry and associated native seedlings at Anderson Road were established in 1996 for the Sacramento River Flood Control Project, Phase II compensation, and the site has been monitored for 10 years. Transplanting for 28 shrubs will occur during the dormant season (November 1 to February 15) identified in the Conservation Guidelines. Transplanting for three shrubs will occur after June 15 and TRLIA will compensate and additional 2.5 times the Conservation Guidelines. TRLIA and the Central Valley Flood Protection Board have agreed that TRLIA will use 22.68 acres of the 74.69 acre Anderson Road Compensation Site as compensation for effects to the valley elderberry longhorn beetle and its habitat. These 22.63 acres were needed as compensation for the Phase II project effects. Included in these 22.63 acres is a 100-foot wide buffer (6.87 acres) adjacent to the patrol road that is required as part of the long-term operations and maintenance of the site. Any elderberries which were documented in this buffer were excluded as part of the compensation. There are 455 elderberry shrubs and 6,243 associated native within the 15.76 acres (buffer removed) that were planted over 10 years ago. According to Table 1, TRLIA is responsible for planting 1,007 elderberry seedlings and 1,007 associated natives. The compensation site supports more than the 1,007 associated native species, however if only 60 percent of the 1,007 elderberry seedlings survived, at the end of 10 years of monitoring there would be at least 605 elderberries present at the site. Because the site is short 150 elderberry shrubs at the compensation site, TRLIA will plant an additional 250 elderberry seedlings at the northern portion of the site near the placement of the transplants. These seedlings will be monitored for survivorship and valley elderberry longhorn beetles for either 10 or 15 years as described in the Conservation Guidelines.

Table 1: Proposed minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry shrubs at ground level, and presence or absence of exit holes when transplanted in.

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Riparian	stems $\geq 1"$ & $\leq 3"$	No	2:1	1:1	95	190	190
Riparian	stems $> 3"$ & $< 5"$	No	3:1	1:1	24	72	72
Riparian	stems $\geq 5"$	No	4:1	1:1	16	64	64
Non-riparian	stems $\geq 1"$ & $\leq 3"$	No	1:1	1:1	154	154	154
Non-riparian	stems $\geq 1"$ & $\leq 3"$	No	2.5:1	1:1	52	130	130
Non-riparian	stems $> 3"$ & $< 5"$	No	2:1	1:1	70	140	140
Non-riparian	stems $> 3"$ & $< 5"$	No	5:1	1:1	15	75	75
Non-riparian	stems $\geq 5"$	No	3:1	1:1	43	129	129
Non-riparian	stems $\geq 5"$	No	7.5:1	1:1	7	53	53
Total replacement plantings						1,007	1,007
Total Elderberry shrubs to be transplanted							31
2,014/10 = 201.4 valley elderberry longhorn units or 8.32 acres							

Page 19, Change the 1st two paragraphs of the Effects of the Proposed Action from:

The proposed project will result in the transplantation, outside of the action area, of the 34 elderberry shrubs within the action area with stems greater than 1.0 inch in diameter. The 34 shrubs affected shrubs have 311 stems between 1 and 3 inches, 109 stems between 3 and 5 inches and 66 stems greater than 5 inches at ground level.

Loss of an elderberry shrub or even a stem can affect valley elderberry longhorn beetle breeding and feeding because adult beetles rely solely on elderberry foliage and flowers for food and must lay their eggs on elderberry stems to successfully reproduce. Due to the schedule of the project elderberry shrubs will be transplanted outside of the elderberry shrubs dormant season (November 1 to February 15). Additional stress occurs to elderberry shrubs when transplanted outside of their dormant season particularly when temperatures are high. This stress increases the likelihood of shrub mortality and consequently an additional temporal loss of habitat for the

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beetle. Beetles that inhabit those shrubs would die as a result of the shrubs dying. To offset the temporal loss of habitat by transplanting elderberry shrubs outside of the dormant season, the Corps and TRLIA have proposed to increase compensation by 2.5 times the recommended ratios in the Conservation Guidelines. Increasing the compensation will provide additional available habitat for the valley elderberry longhorn beetle.

To:

The proposed project will result in the transplantation, outside of the action area, of 31 elderberry shrubs within the action area with stems greater than 1.0 inch in diameter. The 31 shrubs affected shrubs have 301 stems between 1 and 3 inches, 109 stems between 3 and 5 inches and 66 stems greater than 5 inches at ground level.

Loss of an elderberry shrub or even a stem can affect valley elderberry longhorn beetle breeding and feeding because adult beetles rely solely on elderberry foliage and flowers for food and must lay their eggs on elderberry stems to successfully reproduce. Due to the schedule of the project three elderberry shrubs will be transplanted outside of the elderberry shrubs dormant season (November 1 to February 15). Additional stress occurs to elderberry shrubs when transplanted outside of their dormant season particularly when temperatures are high. This stress increases the likelihood of shrub mortality and consequently an additional temporal loss of habitat for the beetle. Beetles that inhabit those shrubs would die as a result of the shrubs dying. To offset the temporal loss of habitat by transplanting these three elderberry shrubs outside of the dormant season, the Corps and TRLIA have proposed to increase compensation by 2.5 times the recommended ratios in the Conservation Guidelines. Increasing the compensation will provide additional available habitat for the valley elderberry longhorn beetle.

Page 21, Change **Amount or Extent of Take** from:

The Service anticipates incidental take of the valley elderberry longhorn beetle will be difficult to detect or quantify. The cryptic nature of these species and their relatively small body size make the finding of a dead specimen unlikely. The species occur in habitats that make them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level (beetle habitat) that will become unsuitable for beetles due to direct or indirect effects as a result of the action. Therefore, the Service estimates that all beetles inhabiting 34 elderberry shrubs containing stems 1 inch or greater at ground level (311 stems between 1-3 inches, 109 stems between 3 and 5 inches and 66 stems ≥ 5 inches; see Table 1 in the text) will be harmed or killed as a result of the proposed action.

To:

The Service anticipates incidental take of the valley elderberry longhorn beetle will be difficult to detect or quantify. The cryptic nature of these species and their relatively small body size make the finding of a dead specimen unlikely. The species occur in habitats that make them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as

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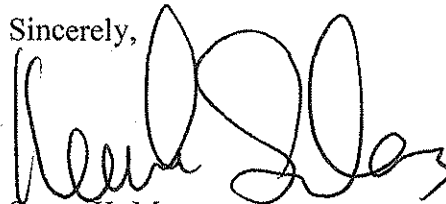
a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level (beetle habitat) that will become unsuitable for beetles due to direct or indirect effects as a result of the action. Therefore, the Service estimates that all beetles inhabiting 31 elderberry shrubs containing stems 1 inch or greater at ground level (301 stems between 1-3 inches, 109 stems between 3 and 5 inches and 66 stems ≥ 5 inches; see Table 1 in the text) will be harmed or killed as a result of the proposed action.

RE-INITIATION - CLOSING STATEMENT

This concludes our re-initiation with the Corps on the Upper Yuba Levee Improvement Project. As provided in 50 CFR 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the proposed action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or (4) a new species or critical habitat is designated that may be affected by the proposed action.

If you have any questions regarding this biological opinion on the Upper Yuba River Levee Improvement Project, please contact Jennifer Hobbs at (916) 414-6541 or Kellie Berry, Chief, Sacramento Valley Branch at (916) 414-6645.

Sincerely,



Susan K. Moore
Field Supervisor

cc:

John Suazo, Corps, Sacramento, CA

Paul Brunner, TRLIA, Rancho Cordova, CA



MEMORANDUM

DATE: January 31, 2011

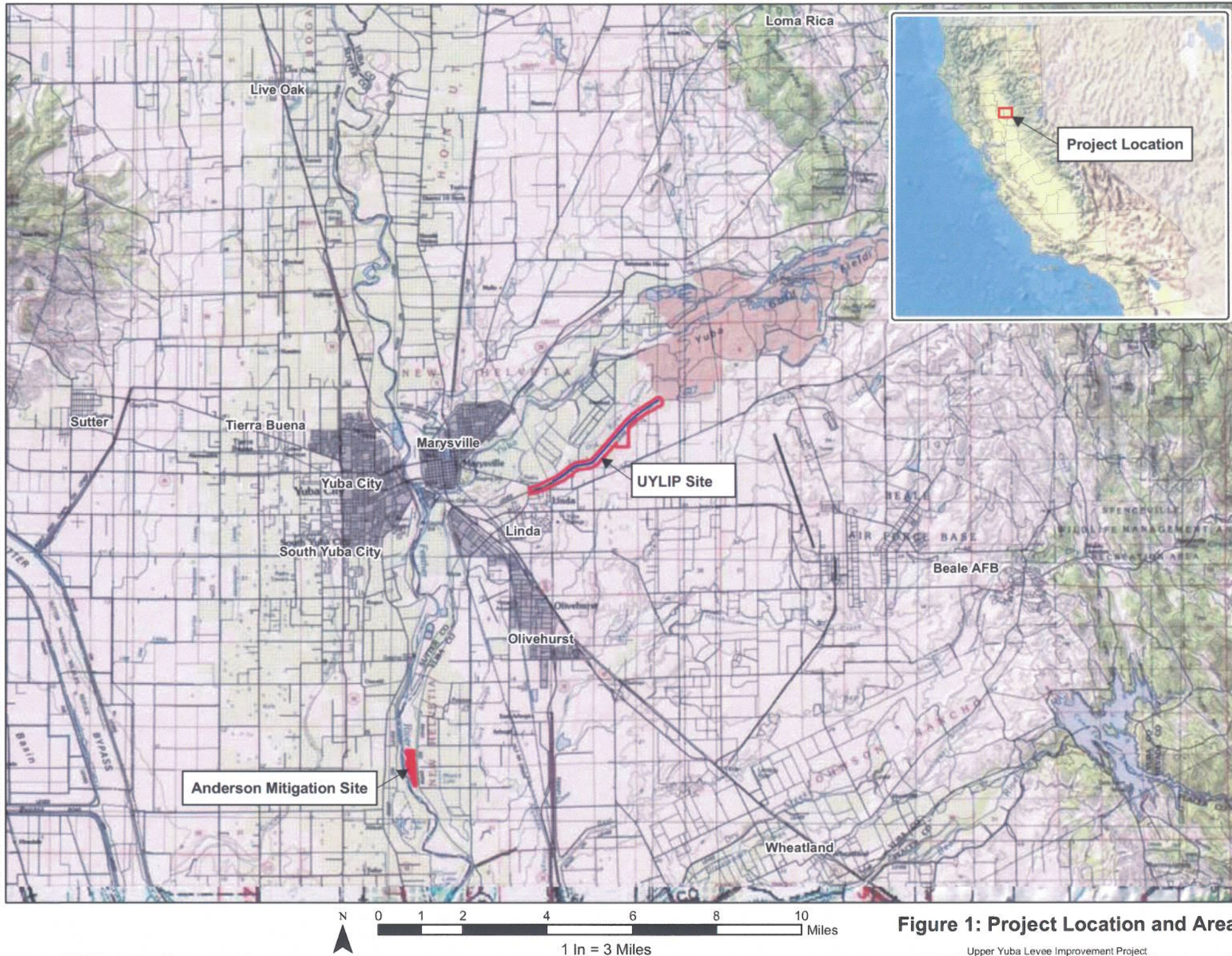
TO: United States Army Corps of Engineers, Sacramento District, Hydraulic Design Section

FROM: Don Trieu, P.E.

SUBJECT: Hydraulic Impacts of Additional Plantings in the Anderson Mitigation Site Along the Feather River.

The Anderson Mitigation Site was established by the United States Army Corps of Engineers (USACE) and the California Department of Water Resources (DWR) to provide for mitigation for levee improvements along the Feather and Yuba Rivers, see Figure 1 for location. As part of the Three Rivers Levee Improvement Authority (TRLIA) levee improvement program, a portion of the Yuba South Levee will be repaired. This repair will impact 34 elderberry shrubs and these impacts must be mitigated. The mitigation will consist of transplanting the 34 impacted shrubs to the existing Anderson Mitigation Site along with an additional 33 seedlings. Each transplant will be placed in a 1,800 square foot area. Three of these areas will have an additional 11 seedlings planted in it. Therefore a total area of 1.28 acres will have 31 transplanted shrubs added to it and 0.12 acres will have 35 plants added to it (3 transplanted shrubs and 33 seedlings). See Figures 2 and 3 for transplant locations within the Mitigation Site.

A hydraulic impact analysis was performed for the proposed transplanting of elderberry plants. The transplants were simulated using an RMA-2 model of the Feather River developed for design of the TRLIA Feather River setback levee documented in "Basis of Design for Feather River Setback Levee", January 2008. To determine the impacts, two model simulations were developed, a without project condition model and a project condition simulation. The two simulations were compared to determine hydraulic impacts of the proposed project. The project simulation consisted of simulating the transplanted plants by increasing the Manning's roughness coefficient at the proposed site. The mesh elements where the plants will be transplanted were assigned a Manning's roughness coefficient of 0.07 (Figure 4). Under the without project condition simulation, the Manning's roughness coefficient for the area is 0.052. The total transplant area simulated in the project condition simulation is 1.55 acres. The with-project condition was simulated using the 1-in-200 AEP hydrology which has a flow of approximately 352,000 cfs in the Feather River downstream of the Yuba River





Existing Elderberries

Construction Access Routes

Elderberry Transplant Locations

Photo Point Location

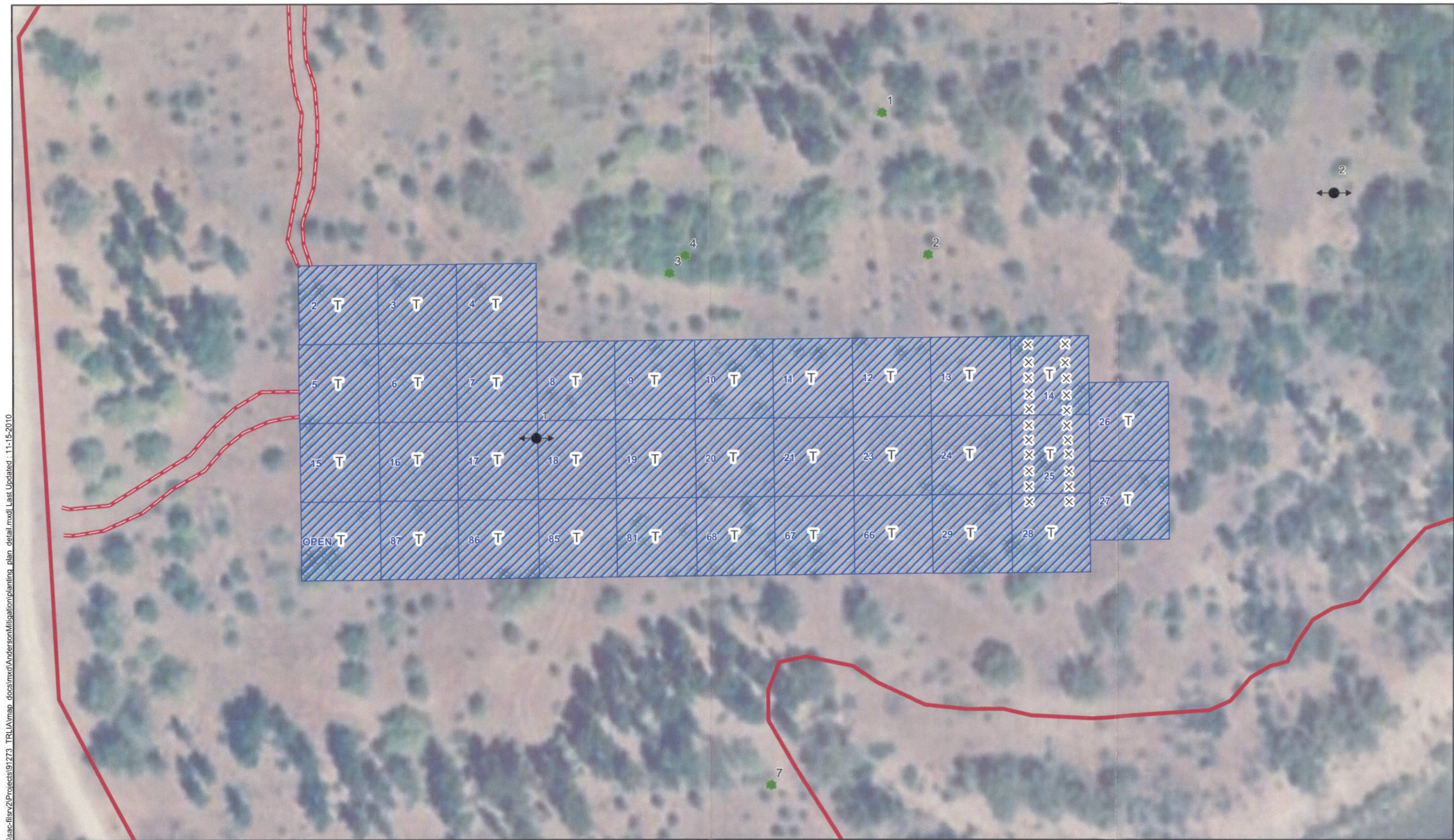
Mitigation Site Boundary

N

0 25 50 100 150 200 Feet

1 inch = 50 feet

Anderson Mitigation Site
Elderberry Planting Plan NORTH Area
Attachment D1 Figure 2



1 inch = 50 feet

0 25 50 100
Feet

Legend

- × Elderberry Seedling Locations
- ◀●▶ Photo Point Location
- ★ Existing Elderberries

- T Elderberry Transplant Locations
- Construction Access Routes
- ▨ Elderberry Transplant Area
(# indicates the UYLIP Elderberry Shrub ID)
- ▭ Mitigation Site Boundary

**Anderson Mitigation Site
Detailed Planting Plan
(Dormant Season Transplant Option)**

Figure 3

Figure 4: RMA-2 Model Grid

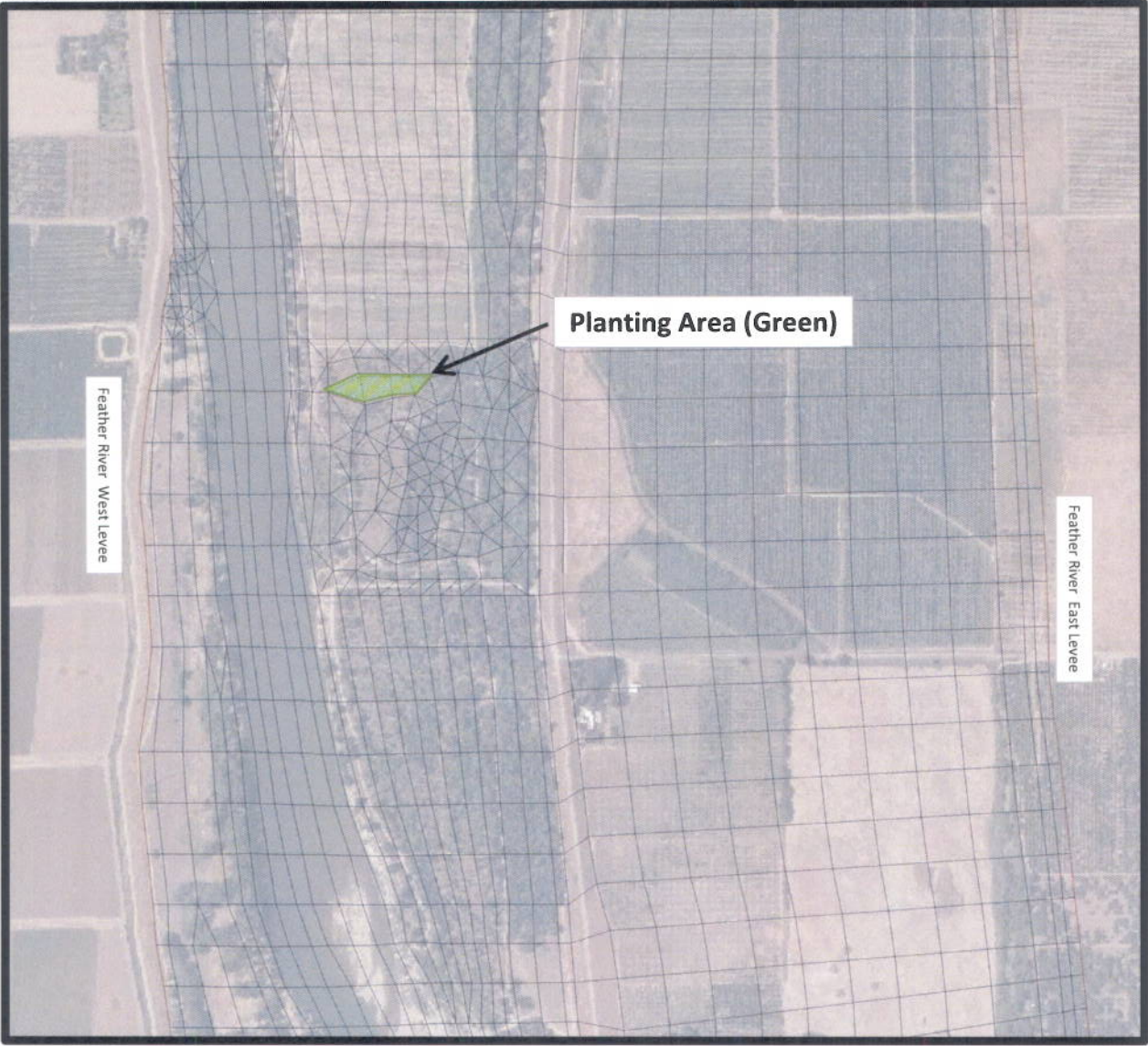


Figure 5: 1-in-200 AEP Velocity Difference (fps)

With MBK Original Proposed n-Values

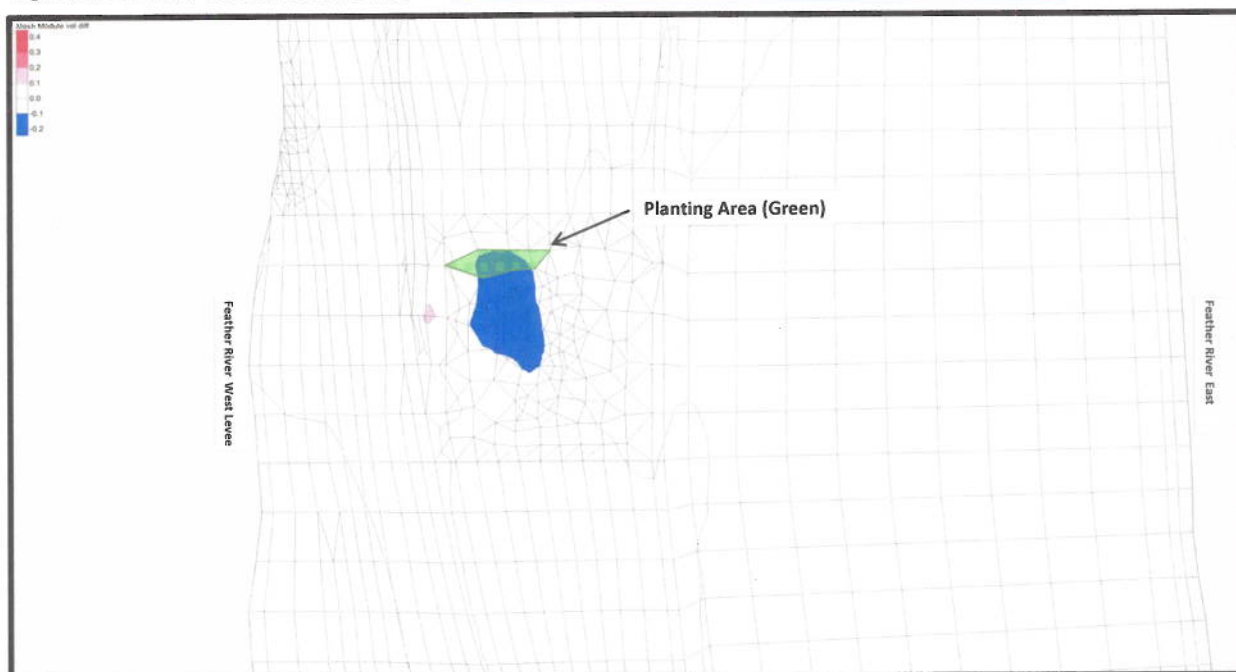
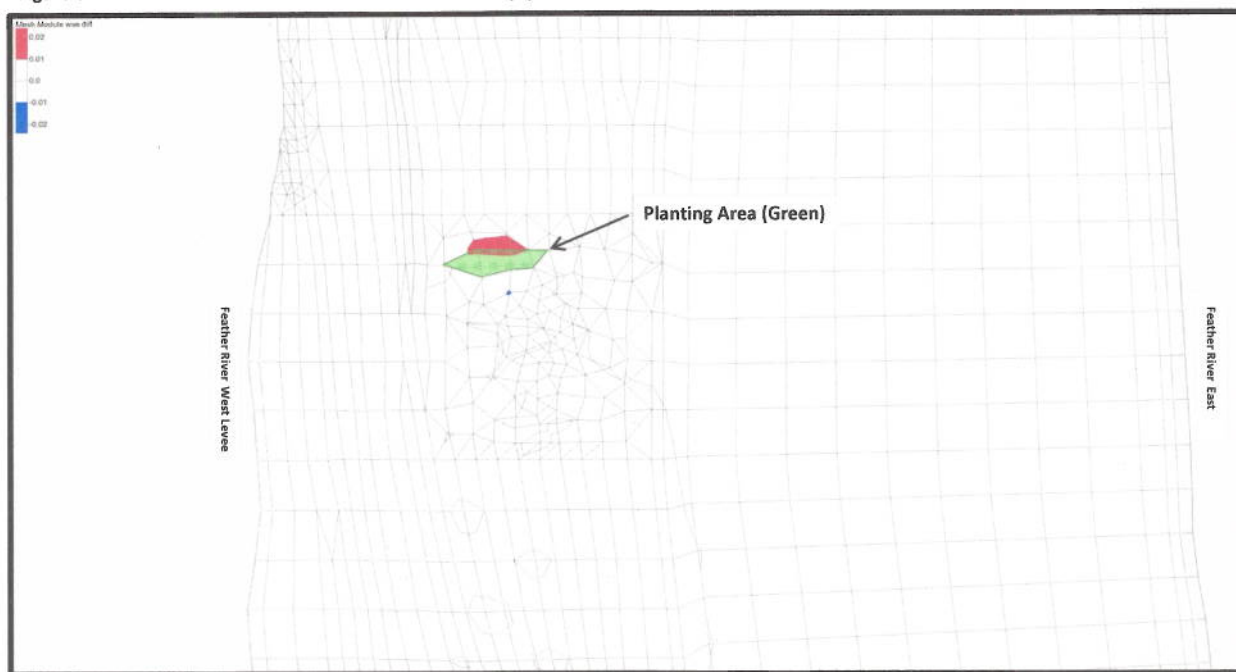


Figure 6: 1-in-200 AEP Water Surface Elevation Difference (ft)

With MBK Original Proposed n-Values



MBK Response to USACE Comment Regarding Appropriate n-Value for Additional Plantings
February 1, 2011

MBK supplied the Sacramento District a memorandum on January 31, 2011 showing the hydraulic impacts of planting approximately 67 additional plants in a small area within the large floodway of the Feather River. Sacramento District has directed that the runs be made with a higher n-value to reflect their opinion of the roughness coefficient for the additional plants. The n-values used in the without project model were determined based on calibration runs of the 1997 flood event. Based on the calibration accomplished, MBK is of the opinion that the n-values in the model best represent current vegetation conditions. The increase to 0.07 to represent the addition of vegetation in this area is considered to be a conservative estimate of impact to n-values caused by the planting of these additional elderberry shrubs. The Sacramento District has suggested that a n value of 0.1 to 0.2 to represent the addition of elderberry. MBK does not agree with the suggested n-values for the following reasons. 1) An n value of 0.1 in the without project condition represents dense trees which is not proposed under the proposed conditions and 2) A n value of 0.1 would be an increase of 92% over the without project condition n value which would overly conservative to a transplanted elderberry shrub. However, in an effort to expedite the approval of this action, MBK has made the run using 0.1 in the planting area as directed by the Sacramento District and provides the attached revised Figures 5 and 6 showing that there is still no significant impact to design conditions due to these additional plantings.

It should be pointed out that the TRLIA program has lowered the 200-year water surface to approximately 1.5 feet below the 1957 Design Profile in and above this reach. The Feather Setback Levee was constructed to withstand not only the 200-year Design Profile but also the 1957 Design Profile. Levees on the west side of the Feather River should also be able to pass the 1957 Design Profile when they are remediated in the future. The transplanted shrubs will pose no increased threat to the recently constructed Feather Setback levee or the existing levees on the west side.

Figure 5: 1-in-200 AEP Velocity Difference (fps)

With USACE Suggested n-Values

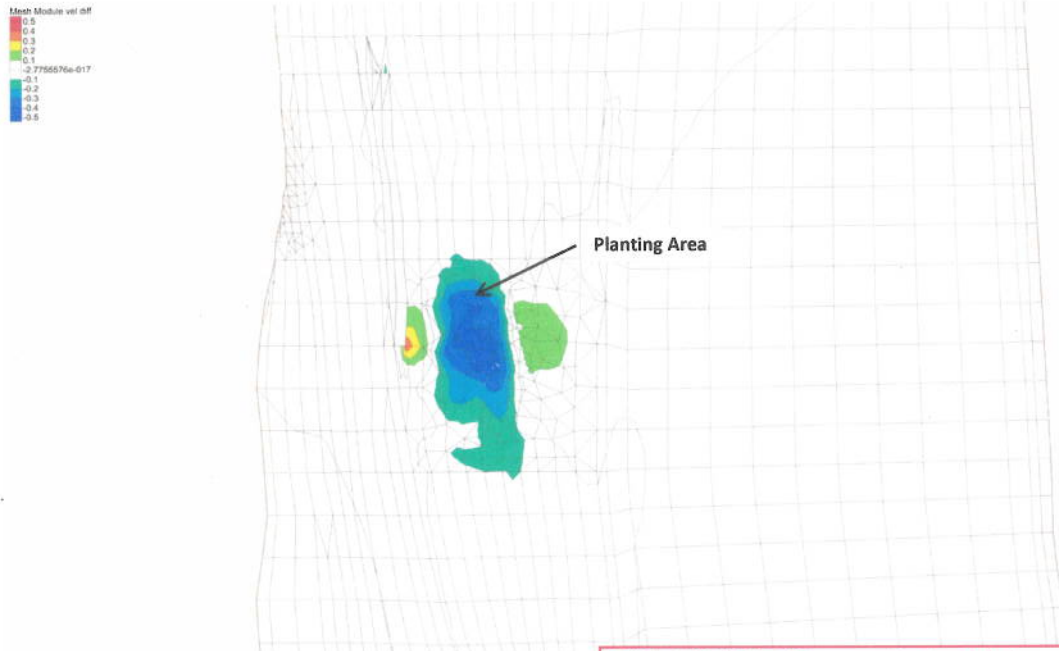
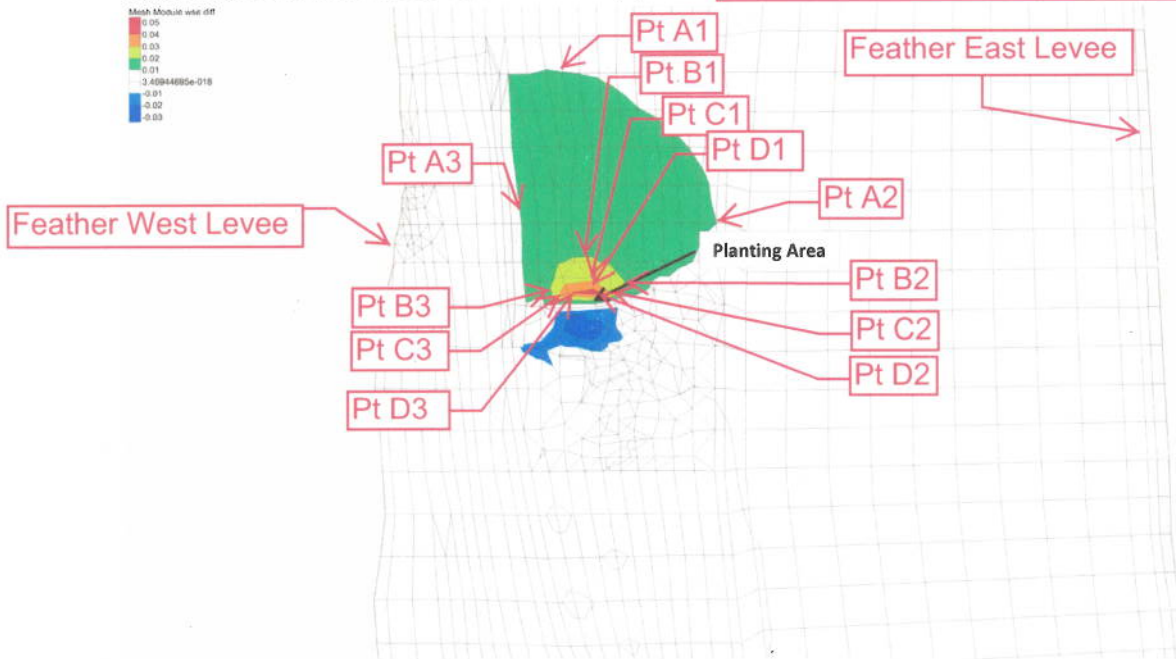


Figure 6: 1-in-200 AEP Water Surface Elevation Difference (ft)

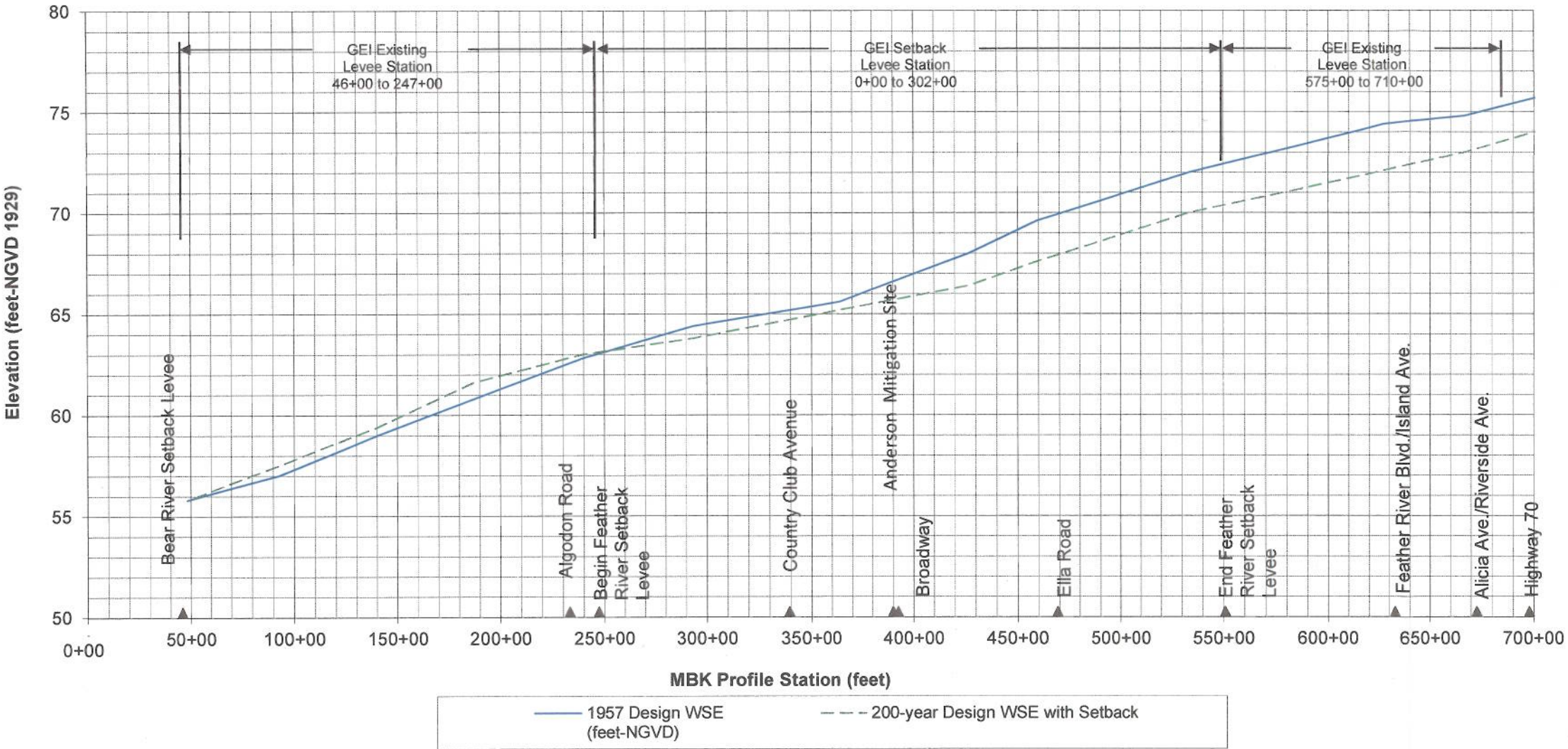
With USACE Suggested n-Values



Water Surface Elevation Impact from Anderson Mitigation Plantings in the Feather Flood Way

Point ID	Point Location					WSE Information		
	Feet Upstream from Plantings	Feet West of Plantings	Feet East of Plantings	Feet from East Levee	Feet from West Levee	Pre-Planting WSE Feet NGVD29	Post-Planting WSE Feet NGVD29	WSE Increase Inches
A1	1600	n/a	n/a	4000	1150	65.78	65.79	0.12
A2	500	n/a	600	3100	2250	65.61	65.62	0.12
A3	600	100	n/a	4550	850	65.67	65.68	0.12
B1	250	n/a	n/a	4050	1320	65.64	65.66	0.24
B2	100	n/a	n/a	3750	1650	65.57	65.60	0.36
B3	100	n/a	n/a	4300	1160	65.60	65.62	0.24
C1	100	n/a	n/a	4000	1430	65.63	65.66	0.36
C2	0	n/a	n/a	3850	1600	65.56	65.59	0.36
C3	0	0	0	4200	1230	65.56	65.59	0.36
D1	50	0	0	4000	1450	65.58	65.62	0.48
D2	0	0	0	3950	1500	65.56	65.60	0.48
D3	0	0	0	1280	2400	65.56	65.60	0.48

Figure 1
1-in-200 AEP Shanghai Centering
Feather River - Left Bank (RM 13.2 to 27.1)
Water Surface Profiles 1957 Design and 200-Yr Project Conditions



DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

**Attachment E****RECEIVED**

FEB 11 2011

TRLIA

FEB 11 2011

Mr. Paul Brunner
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, California 95901

Dear Mr. Brunner,

Enclosed is a fully executed License from Central Valley Flood Protection Board (Board) for Board Deed No. 705, Parcel Nos. 10 and 11 also identified as Yuba County Assessor's Parcel Nos. 014-370-001 and 014-290-001, located adjacent to the Feather River south of Yuba City for the Three Rivers Levee Improvement Authority – Anderson Mitigation Site Project.

Please note, on or before the expiration of the License, as required by the Board's Encroachment Permit 18642, a Joint Use Agreement for perpetual right to use this property will need to be in place. Also, please submit the \$100 annual fee as stated in Section 1 of the License.

If you need any further assistance, you may contact me directly by telephone at (916) 653-9283.

Sincerely,

A handwritten signature in blue ink, appearing to read "Alejandra Lopez".

Alejandra Lopez
Associate Land Agent

Enclosure

cc: Mr. Dan Fua, P.E.
Supervising Engineer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

State of California

Department of Water Resources

California Natural Resources Agency

Maint. Yard: Reclamation 784
Location: Anderson Mitigation Site
Confluence of the Yuba-Feather
Rivers
Parcel No.: Yuba County APN(s) 1437000100
and 14290001000

State of California

CENTRAL VALLEY FLOOD PROTECTION BOARD

LICENSE

THE SACRAMENTO AND SAN JOAQUIN DRAINAGE DISTRICT, acting by and through the Central Valley Flood Protection Board of the State of California, hereinafter referred to as BOARD, licenses revocable, nonexclusive use of State property, hereinafter referred to as PREMISES, at the location and under conditions set forth in Sections 1, 2, and 3 of this License.

SECTION 1

LICENSEE: Three Rivers Levee Improvement Authority and agents of TRLIA

LICENSEE ADDRESS AND PHONE: c/o Paul Brunner
1114 Yuba Street, Ste 218
Marysville, CA 95901
(530)749-7841

STATE ADDRESS: The Central Valley Flood Protection Board
c/o Department of Water Resources
Division of Engineering
Real Estate Branch
Post Office Box 942836
Sacramento, California 94236-0001

LOCATION: Yuba County. See Section 3 (map)

LICENSED USE: Planting, maintenance and operation of mitigation area

IMPROVEMENTS LICENSED FOR USE:

TERM: Ten years

LICENSE FEE: \$100 annual fee

INSURANCE REQUIRED: ____ yes ☒ no

CONSENT OF TENANT REQUIRED: ____ yes ☒ no

SPECIAL CONDITIONS:

SECTION 2

1. **USE OF PREMISES:** LICENSED USE is to be strictly construed. LICENSEE shall not use or permit use of any part of PREMISES for any purpose or purposes other than the use hereinabove specified. This License is revocable permission, grants no interest in real property to LICENSEE for the use herein licensed, and BOARD does not warrant that the land is capable of being used for the licensed use. This License and the uses licensed hereunder are not assignable.

LICENSEE shall exercise reasonable care that no damage shall occur to PREMISES and shall not do or permit any act or thing to be done upon the PREMISES which is a nuisance or which may disturb the quiet enjoyment by BOARD or interfere with the operations of BOARD or any tenant of property.

BOARD makes no warranty or representation as to its title to the area covered by this License. Licensed uses shall be subordinate to all existing easements, covenants, servitudes, licenses and rights of way for canals, ditches, levees, roads, highways, telegraph, telephone and electric power lines, railroads, pipeline and other purposes whether recorded or not and rights of others under any existing oil, gas, mineral lease or other leases or uses affecting the PREMISES or any portion thereof, whether recorded or not.

LICENSEE agrees to hold BOARD and the State of California harmless for any damage that may occur to the plantings or the mitigation site as a result of any reasonably necessary flood maintenance or flood fighting activities. LICENSEE acknowledges that the premises is subject to an inherent risk of inundation and agrees to hold BOARD and the State of California harmless for any damage to the plantings therefrom.

2. **COMPLIANCE WITH LAW:** LICENSEE shall, at its expense, promptly comply with any and all laws, ordinances, rules, regulations, requirements and orders whatever, present or future, of the national, State, county or municipal government which may in any way apply to the use, maintenance or occupation of or operations on the PREMISES by LICENSEE hereunder.
3. **INDEMNIFICATION:** This License is made upon the express condition that the State of California is to be held harmless from all liability and claims for damages by reason of any injury to any person or persons, including LICENSEE, or property of any kind whatsoever and to whomsoever belonging, including LICENSEE, from any cause or causes related to LICENSEE's use of the premises as herein specified, while LICENSEE is in, upon, or in any way connected with the PREMISES during the term of this License or any occupancy hereunder, except those arising out of the sole negligence of BOARD. LICENSEE agrees to defend, indemnify and save harmless the State of California, its officers, employees, contractors and agents from all liability, loss, cost or obligation on account of or arising out of any such injury or loss, however occurring.
4. **DAMAGE:** In the exercise of the rights herein granted, LICENSEE is responsible for any damage, destruction or loss occurring to the PREMISES or facilities of BOARD, its water contractors, lessees, LICENSEES, permittees or other members of the public. LICENSEE shall indemnify and save harmless BOARD for all such damage, destruction or loss, or at the option of BOARD, LICENSEE shall repair or replace said property to the satisfaction of BOARD.
5. **FUTURE MOVING OF INSTALLATION:** LICENSEE shall at the LICENSEE's sole cost and expense, remove, alter, relocate or reconstruct all or any part of the work herein approved immediately upon the order of BOARD to do so, and in the manner prescribed thereby, should said work or any portion thereof not conform to the provisions of this order, or should said work or any portion thereof be injurious to or damage any works necessary to any plan of BOARD or the Legislature, or should it interfere with the successful execution, functioning or operation of any such plan of flood control, or should such removal, alteration, relocation or reconstruction be necessary under or in conjunction with any present or future flood control plans for the area in which the work herein approved is to be accomplished, and in case applicant delays acting upon any such order of BOARD, BOARD may proceed to perform the required work, and the cost thereof shall be paid by LICENSEE.
6. **MAINTENANCE:** The LICENSEE shall properly maintain any encroachment placed by LICENSEE on BOARD's property.
7. **INSURANCE:** If required by Section 1, LICENSEE shall furnish to BOARD a Certificate of Insurance at the time the License is signed, stating that there is liability insurance presently in effect for LICENSEE

with bodily injury and property damage limits of not less than \$1,000,000 per occurrence. The certificate of insurance will provide:

- a. That the insurer will not cancel the insured's coverage without thirty (30) days' prior written notice to BOARD.
- b. That BOARD, its officers, agents, employees and servants are included as additional named insureds, but only insofar as the operations under this License are concerned.
- c. That BOARD will not be responsible for any premiums or assessments on the policy.
- d. That PREMISES included in this License is covered by the policy.

LICENSEE agrees that the bodily injury liability insurance herein provided for shall be in effect at all times during the term of this License. In the event said insurance coverage expires at any time or times during the term of this License, LICENSEE agrees to provide at least thirty (30) days prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of the term of the License, or for a period of not less than one (1) year. In the event LICENSEE fails to keep insurance coverage in effect at all times as herein provided, BOARD may, in addition to any other remedies it may have, terminate this License upon the occurrence of such event.

- 8. **HAZARDOUS MATERIALS:** LICENSEE shall not possess, use or dispose of any hazardous materials or waste on BOARD's property, or cause to be possessed, used or disposed, without the express written consent of BOARD.
- 9. **TERMINATION:** Either party herein reserves the right to terminate this License upon providing written notice to the other party. This License is revocable by BOARD without cause or fault.
- 10. **VACATION:** LICENSEE agrees to vacate PREMISES within twenty-four (24) hours in the event of emergency as determined by BOARD.
- 11. **TERMINATION AND RESTORATION OF THE PREMISES:** Termination of this License in any manner as to all or any part of the PREMISES, shall not relieve LICENSEE from any obligation or liability theretofore accrued hereunder, nor prejudice, or in any way affect the right of BOARD to enforce any right or remedy it may have had before such termination. Upon any such termination, LICENSEE shall within three (3) days remove all of LICENSEE's improvements and personal property from the PREMISES and restore them to a condition satisfactory to BOARD. At its option, BOARD may remove the same and restore the PREMISES, and LICENSEE agrees to reimburse BOARD for the cost thereof upon demand.
- 12. **DEFAULT, ENFORCEMENT, OR BREACH COSTS:** LICENSEE shall pay, upon demand, all costs and expenses (including attorney's fees in a reasonable amount) incurred by BOARD to enforce any of the covenants, conditions and provisions of this License, or to dispossess LICENSEE, irrespective of whether or not court action shall be brought.
- 13. **NOTIFICATION:** Any notice or demand by either party to the other in connection with this License shall be deemed to be fully given or made when written and deposited in a sealed envelope in the United States mail, registered or certified and postage prepaid, and addressed to the party to whom given at the address specified in Section 1. Either party may change its address by giving the other party written notice of its new address as herein provided. BOARD may give notice by phone to LICENSEE in emergency situations which may require LICENSEE to vacate PREMISES within twenty-four (24) hours.

SACRAMENTO AND SAN JOAQUIN DRAINAGE
DISTRICT, acting by and through the Central Valley
Flood Protection Board of the State of California

ACCEPTED:

Paul Fanni

Paul S. Brunner
Licensee EXECUTIVE DIRECTOR

Date: 2/10/11

Date: 1-14-2011

APPROVED as to Legal Form and Sufficiency:

Address Three Rivers LEVEE Improvement Authority,
1114 Yuba Street, Suite 218
MAYRSVILLE, CA. 95901

[Signature]
Legal Counsel for the Central Valley Flood
Protection Board

Date: 2/19/11

Phone: 530-749-5679

Consent of Tenant(s)

We as tenant(s) of the land described in this License do hereby consent to the execution of said License for the purposes herein set forth.

Tenant: _____

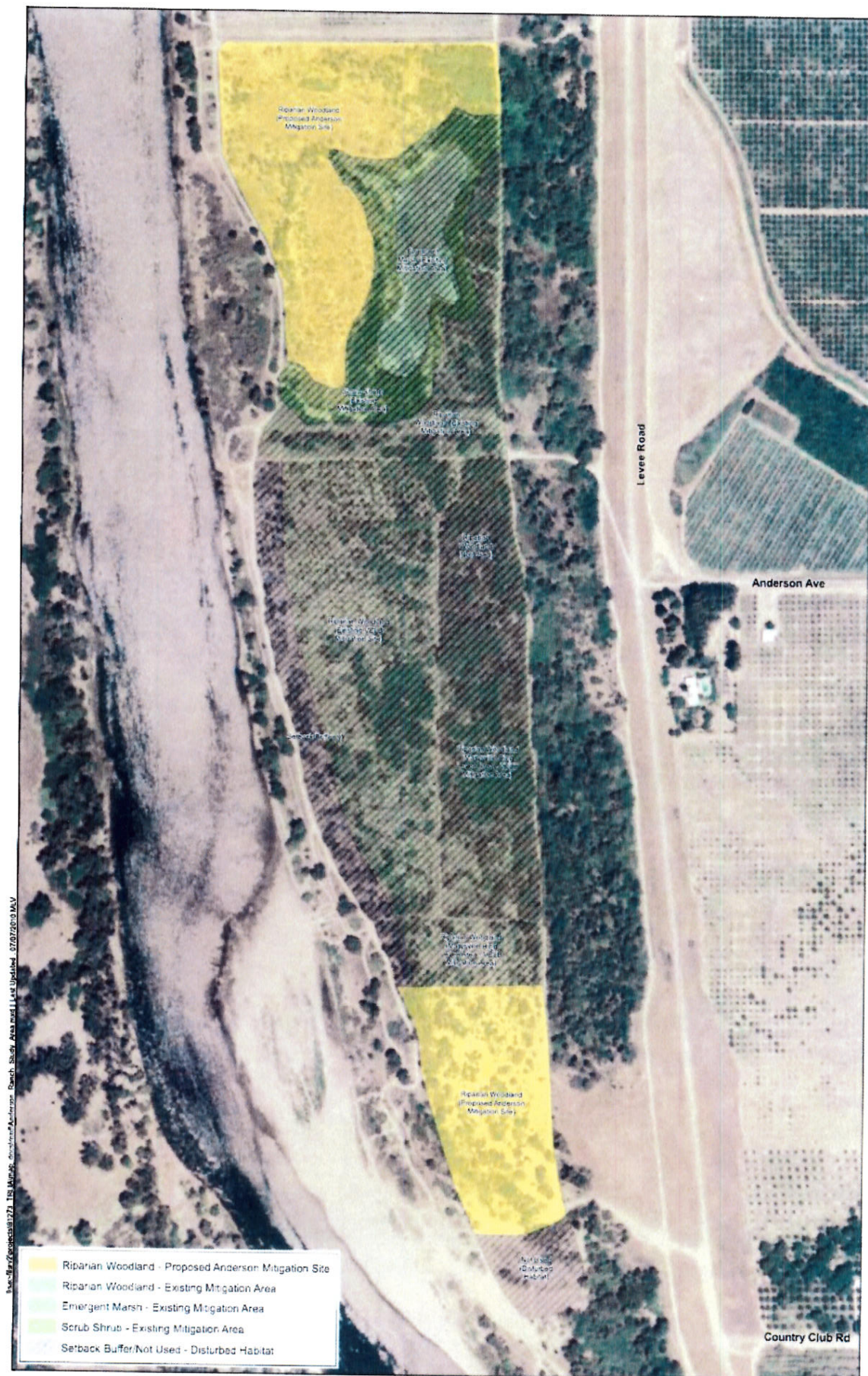
Tenant: _____

Address: _____

Address: _____

Not Applicable

Not Applicable



**Figure 3: Anderson Mitigation Site and Vicinity
Habitat Map**

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18773 BD

This Permit is issued to:

Three Rivers Levee Improvement Authority
1114 Yuba Street
Suite 218
Marysville, California 95901

Transplant an additional 228 elderberry seedlings into the Anderson Mitigation Site to meet the increased mitigation requirements for the Upper Yuba River Levee Improvement Project. The project is located at the Anderson Mitigation Site on the left bank of the Feather River approximately at River Mile 20.68 (Section 23, T14N, R3E, MDB&M, Reclamation District 784, Feather River, Yuba County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection

Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18773 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance, and in accordance with the Maintenance Agreement between Reclamation District 784 and Three Rivers Levee Improvement Authority, which is attached to this permit as Attachment F, Exhibit A and is incorporated by reference.

FIFTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

SIXTEEN: The mitigation measures approved by the CEQA lead agency and the permittee are found in its Mitigation and Monitoring Reporting Program (MMRP) adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

SEVENTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted encroachments and shall defend and hold the Central Valley Flood

Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

EIGHTEEN: The permittee shall be responsible for securing any necessary permits incidental to habitat manipulation and restoration work completed in the flood control project, and will provide any biological surveying, monitoring, and reporting needed to satisfy those permits.

NINETEEN: The permittee agrees to incur all costs for compliance with local, State, and Federal permitting and resolve conflicts between any of the terms and conditions that agencies might impose under the laws and regulations it administers and enforces.

TWENTY: The Central Valley Flood Protection Board, Department of Water Resources, and Reclamation District 784 shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

TWENTY-ONE: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-TWO: Any construction activities, other than those associated with the transplant of the elderberry shrubs and seedlings, shall not be permitted during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-THREE: The permittee shall provide supervision and inspection services acceptable to the Central Valley Flood Protection Board.

TWENTY-FOUR: Proposed vegetative rows shall be parallel to the direction of the overbank flow and shall not direct the flows toward any levee.

TWENTY-FIVE: The ground surface shall be kept clear of fallen trees, branches, and debris.

TWENTY-SIX: Cleared trees and brush (or prunings therefrom) shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SEVEN: After each period of high water, debris that accumulates at the site shall be completely removed from the floodway.

TWENTY-EIGHT: All debris generated by this project shall be disposed of outside the floodway.

TWENTY-NINE: No new wild rose, grape, blackberries, or other bushy thickets shall be propagated at this site, except for those described within this permit.

THIRTY: The work area shall be restored to the condition that existed prior to start of work.

THIRTY-ONE: Areas where plantings are lost to erosion on the floodplain shall not be replanted.

THIRTY-TWO: The landscaping, appurtenances, and maintenance practices shall conform to standards contained in Section 131 of the Central Valley Flood Protection Board's Regulations.

THIRTY-THREE: If the proposed project result(s) in an adverse hydraulic impact, the permittee shall provide appropriate mitigation measures, to be approved by the Central Valley Flood Protection Board, prior to implementation of mitigation measures.

THIRTY-FOUR: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

THIRTY-FIVE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

THIRTY-SIX: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

THIRTY-SEVEN: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

THIRTY-EIGHT: The permittee shall comply with all conditions set forth in the letter from the U.S. Army Corps of Engineers dated XXXX, which is attached to this permit as Attachment F, Exhibit B and is incorporated by reference.

THIRTY-NINE: The permittee shall comply with all conditions set forth in the project endorsement from Reclamation District 784 dated April 3, 2012, which is attached to this permit as Attachment F, Exhibit C and incorporated by reference.

FORTY: This permit shall run with the land and shall be recorded with the Yuba County Recorder's Office. The applicant is required to record this permit and send the Central Valley Flood Protection Board Chief Engineer this recorded document upon completion of the work.

**MAINTENANCE AGREEMENT
BETWEEN RECLAMATION DISTRICT 784
AND
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY
FOR THE
ANDERSON MITIGATION SITE**

This Agreement is entered into by and between Reclamation District 784, hereinafter referred to as the "District," and the Three Rivers Levee Improvement Authority, hereinafter referred to as "TRLIA", on this FOURTH day of JANUARY, 2011, in view of the following circumstances:

WHEREAS, TRLIA is constructing levee repairs to the South Levee of the Yuba River ("Project") in partnership with the Department of Water Resources as an Early Implementation Program Project ; and

WHEREAS, TRLIA is required under the Endangered Species Act to mitigate for impacts to 34 elderberry shrubs caused by the Project; and

WHEREAS, the Central Valley Flood Protection Board has granted a permit for the construction of the Project under Permit 18577; and

WHEREAS, the Anderson Mitigation Site is an existing mitigation site that was established by the Corps of Engineers and the Department of Water Resources to provide for mitigation for repair projects to the Sacramento River Flood Control Project; and

WHEREAS, the Project is a feature of the Sacramento River Flood Control Project; and

WHEREAS, the District currently maintains the Anderson Mitigation Site for other entities that created the mitigation site; and

WHEREAS, TRLIA wishes to utilize the existing Anderson Mitigation Site for elderberry shrub impacts caused by the Project, and has submitted an application for an encroachment permit from the Central Valley Flood Protection Board; and

WHEREAS, use of the existing Anderson Mitigation Site by TRLIA would add minimal additional maintenance requirements; and


WHEREAS, TRLIA and the District wish to enter into this Agreement in order to ensure long term maintenance of the transplanted elderberry shrubs.

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual covenants provided herein, and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged by TRLIA and the District, it is hereby agreed as follows:

1. Terms of Agreement. The District agrees to maintain the TRLIA transplanted elderberry shrubs and additional seedlings on the Anderson Mitigation Site in the same manner as it currently maintains other existing plantings at the Anderson Mitigation Site. The District will continue to follow the existing manual, Mitigation Site Operations and Maintenance Manual, Sacramento River Flood Control Project, Phase II, Marysville-Yuba City Area Levee Reconstruction Project, established by the Corps of Engineers.
2. Compensation. For this additional maintenance TRLIA agrees to pay the District a sum of \$5,000 annually.
3. Obligations of TRLIA. TRLIA or its agents shall perform or cause to be performed all monitoring required for the transplanted shrubs and associated seedlings.
4. Termination of Agreement. This Agreement may be terminated upon written notice of either party.
5. Amendment. This Agreement may not be modified or amended unless agreed to in writing by both parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

RECLAMATION DISTRICT 784

By 

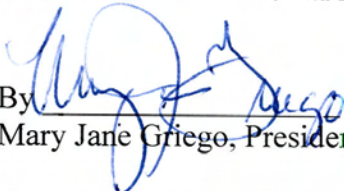
Date 1-14-11

APPROVED AS TO LEGAL FORM AND
SUFFICIENCY:

By 

Date 1/14/11

THREE RIVERS LEVEE
IMPROVEMENT AUTHORITY

By 
Mary Janie Griego, President

Date 1-14-2011

APPROVED AS TO LEGAL FORM AND
SUFFICIENCY:

By _____
Scott L. Shapiro, General Counsel

Date _____

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RECLAMATION DISTRICT 784

APPROVED AS TO LEGAL FORM AND
SUFFICIENCY:

By _____

By _____

Date _____

Date _____

THREE RIVERS LEVEE
IMPROVEMENT AUTHORITY

APPROVED AS TO LEGAL FORM AND
SUFFICIENCY:

By _____
Mary Jane Griego, President

By Andrea P. Clark for Scott Shapiro
Scott L. Shapiro, General Counsel

Date _____

Date 1-14-11

Placeholder for
Permit Application
No. 18773 USACE
208.10 Comment
Letter

State of California

DEPARTMENT OF WATER RESOURCES
CENTRAL VALLEY FLOOD PROTECTION BOARD

California Natural Resources Agency

APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD
ENCROACHMENT PERMITApplication No. _____
(For Office Use Only)

1. Description of proposed work being specific to include all items that will be covered under the issued permit.

Plant an additional 228 elderberry seedlings into an existing mitigation site (Anderson Site) in the Feather River Floodway to meet revised mitigation requirements for elderberry shrub impacts from the Upper Yuba Levee Improvement Project. See Attachment A for more details.

2. Project

Location: South of Marysville, Yuba County, in Section Section 23
(N) (E)
Township: 14N (S), Range: 3E (W), M. D. B. & M.
Latitude: 39° 02' 41.48" N Longitude: 121° 36' 23.30" W
Stream: Feather river, Levee: _____ Designated Floodway: Feather
APN: 014-290-001-000

3. Three Rivers Levee Improvement Authorityof 114 Yuba Street, Suite 218

Name of Applicant / Land Owner

Address

Marysville California 95901 530-749-7841
City State Zip Code Telephone Number
dacus@mbkengineers.com
E-mail

4. Larry Dacusof MBK Engineers

Name of Applicant's Representative

Company

Sacramento California 95815 (916) 437-7515
City State Zip Code Telephone Number
dacus@mbkengineers.com
E-mail

5. Endorsement of the proposed project from the Local Maintaining Agency (LMA):

We, the Trustees of Reclamation District 784 approve this plan, subject to the following conditions:
Name of LMA

☐ Conditions listed on back of this form☒ Conditions Attached☐ No Conditions

[Signature] 4/3/12
Trustee Date
[Signature] 4/3/12
Trustee Date

[Signature] 4/3/12
Trustee Date
[Signature] 4/3/12
Trustee Date
[Signature] 4/3/12
Trustee Date

APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD ENCROACHMENT PERMIT

6. Names and addresses of adjacent property owners sharing a common boundary with the land upon which the contents of this application apply. If additional space is required, list names and addresses on back of the application form or an attached sheet.

Name	Address	Zip Code
Three Rivers Levee Improvement Authority.	1114 Yuba Street, Suite 218, Marysville, CA	95901
Sacramento San Joaquin Drainage District	Attn: Wes Dote, DWR Real Estate Division, 1416 Ninth Street, Room 425	
	Sacramento, CA	95814

7. Has an environmental determination been made of the proposed work under the California Environmental Quality Act of 1970? ☒ Yes ☐ No ☐ Pending

If yes or pending, give the name and address of the lead agency and State Clearinghouse Number:

Three Rivers Levee Improvement Authority
915 Eighth Street, Suite 115
Marysville, CA 95901-5273
SCH No. 2010022039

8. When is the project scheduled for construction? Summer 2012

9. Please check exhibits accompanying this application.

- A. ☒ Regional and vicinity maps showing the location of the proposed work.
- B. ☒ Drawings showing plan view(s) of the proposed work to include map scale.
- C. ☐ Drawings showing the cross section dimensions and elevations (vertical datum?) of levees, berms, stream banks, flood plain,
- D. ☐ Drawings showing the profile elevations (vertical datum?) of levees, berms, flood plain, low flow, etc.
- E. ☒ A minimum of four photographs depicting the project site.

 4-11-2012
Signature of Applicant Date

Include any additional information:

Reclamation District No. 784 has the following conditions to be included on the Central Valley Flood Protection Board Encroachment Permit to transplant Elderberry Shrubs and plant Additional Associated Species into the existing Anderson Road Mitigation Site to mitigate Elderberry Impacts from the Upper Yuba Levee Improvement Project:

1. All improvements shall meet Central Valley Flood Protection Board Standards;
2. The proposed project shall not appreciably increase, as determined by the U.S. Corps of Engineers and the California Central Valley Flood Protection Board the 1-in-100 and 1-in-200 water surface elevation or the velocity on the East or West bank of the Feather River;
3. Grading or Tree Plantings shall be designed not to direct water towards the existing levee or the diversion levees. Grading shall not affect the hydraulic characteristics of the river in a negative manner;
4. A copy of the Operation and Maintenance Manual shall be provided to Reclamation District No. 784 upon completion of the work;
5. A set of As-Built Mylar Plans shall be provided to Reclamation District No. 784 upon completion of the work;
6. A copy of the final Central Valley Flood Protection Board Permit shall be provided to Reclamation District No. 784 prior to any work.
7. Reclamation District No. 784 shall be notified five (5) working days prior to any construction activities.
8. Reclamation District No. 784 shall be included in all construction status meetings.
9. Reclamation District No. 784 shall be reimbursed for all costs directly related to proposed work on the Central Valley Flood Protection Board Standards.