

Anthony J. LaRocca
202 429 8119
alarocca@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



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ENTERED
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March 19, 2020
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Public Record

March 19, 2020

PUBLIC VERSION

VIA E-FILING

Cynthia T. Brown
Chief, Section of Administration
Surface Transportation Board
Office of Proceedings
395 E Street, SW
Washington, DC 20423

**Re: STB Docket No. AB 874 (Sub-No. 1X), Sierra Northern Railway—
Abandonment Exemption—in Yolo County, California**

Dear Ms. Brown:

Enclosed for e-filing is Sierra Northern Railway's Petition for Exemption and Waiver under 49 U.S.C. § 10502. The filing fee of \$7,800 was paid using pay.gov.

Please contact me with any questions.

FILED
March 19, 2020
SURFACE
TRANSPORTATION BOARD

Respectfully submitted,

/s/ Anthony J. LaRocca

Anthony J. LaRocca
Attorney for Sierra Northern Railway

Enclosure

FEE RECEIVED
March 19, 2020
SURFACE
TRANSPORTATION BOARD

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. AB 874 (Sub-No. 1X)

SIERRA NORTHERN RAILWAY
—ABANDONMENT EXEMPTION—
IN YOLO COUNTY, CALIFORNIA

PETITION FOR EXEMPTION AND WAIVER

INTRODUCTION AND SUMMARY

Pursuant to 49 U.S.C. § 10502 and 49 C.F.R. §§ 1121.3, 1152.24(e)(5), and 1152.60, Sierra Northern Railway (“Sierra”), a Class III common carrier by railroad subject to 49 U.S.C. Subtitle IV, chapter 105, hereby petitions the Surface Transportation Board (“STB” or “Board”) for an exemption from the prior approval requirements of 49 U.S.C. §§ 10903, 10904, and 10905, and for a waiver of its rules for offers of financial assistance, public use conditions, and interim trail use and rail banking set forth in 49 C.F.R. §§ 1121.4(g), 1152.27, 1152.28, and 1152.29, to permit Sierra to abandon a segment of its rail line extending approximately 0.70 miles between approximately milepost 3.10 and approximately milepost 3.80 in Yolo County, California (the “Line”). The Line traverses U.S. Postal Service Zip Code 95691. The Line needs to be abandoned so that public officials can use the property for a flood control project that is critical to the public health and safety of the Sacramento, CA region. Sierra also requests expedited treatment so that flood control work can begin by this summer.

The 0.70-mile Line that Sierra seeks to abandon is located just north of Sacramento, along the west bank of the Sacramento River. Part of the Line sits on top of a weir (the “Sacramento Weir”) that is an essential element in Sacramento’s flood control system, which includes weirs, levees and bypasses to control periodic,

extreme flooding. After extensive study, the U.S. Army Corps of Engineers (“USACE”) concluded that flood control facilities in the area are not adequate and that “[a]n unacceptably high risk of flooding from levee failure threatens the public safety of approximately 530,000 people. . . .”¹ In 2015, the City of Sacramento concluded that of all the natural and manmade hazards facing California citizens, “flooding poses the greatest threat to the residents of Sacramento.”²

To address the extreme flooding risk facing Sacramento residents, the USACE, together with the Sacramento Area Flood Control Agency (“SAFCA”), are in the process of implementing a flood control improvement project that will require, among other things, removal of Sierra’s Line to be abandoned so that the current Sacramento Weir can be widened. Federal funding has been obtained to carry out the project.³ USACE and SAFCA need to begin work as promptly as possible, and no later than this summer.⁴ Accordingly, Sierra seeks an exemption from the Board’s rules to permit it to abandon the Line so that flood control work can begin and Sierra asks for expedited treatment of this exemption request.

In accordance with Board regulations and procedures, we have attached the following documents to this Petition for Exemption and Waiver:

- **Exhibit 1**, found at pages 14 – 16: Maps of the Line and surrounding area that meet the requirements of 49 C.F.R. § 1152.22(a)(4).
- **Exhibit 2**, found at pages 17 – 19: Draft Federal Register notice of this Petition in the form prescribed by 49 C.F.R. §§ 1152.60(c).
- **Exhibit 3**, found at pages 20 – 26: Certification of compliance with 49 C.F.R. §§ 1105.11, 1105.12 & 1152.60(d).

¹ American River Watershed Common Features General Reevaluation Report, Final EIS/EIR, USACE (Dec. 2015, revised May 2016) at ES-1 (Executive Summary included at Exhibit 8).

² Comprehensive Flood Management Plan, City of Sacramento Department of Utilities (Feb. 2015) at 1.1 (chapters 1 and 2 included at Exhibit 5). The full document is available at <https://www.cityofsacramento.org/~media/Corporate/Files/DOU/Flood-Ready/City%20of%20Sacramento%20CFMP%202015%20Final.pdf>.

³ See Bipartisan Budget Act of 2018, Pub. L. No. 115-123, 132 Stat. 64 (2018).

⁴ See letter of support from SAFCA included at Exhibit 7.

- **Exhibit 4**, found at pages 27 – 82: Excerpt from the American River Watershed Common Features General Revaluation Report, Final Report.
- **Exhibit 5**, found at pages 83 – 113: Excerpt from the Comprehensive Flood Management Plan.
- **Exhibit 6**, found at pages 114 – 120: Verified Statement of Kennan H. Beard III, Sierra’s President, describing current operations on the Line.
- **Exhibit 7**, found at pages 121 – 127: Letters of support.
- **Exhibit 8**, found at pages 128 – 267: Environmental and Historic Report, conforming to 49 C.F.R. §§ 1105.7 & 1105.8 (includes the Executive Summary from the American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement / Environmental Impact Report (“EIS/EIR”), and SAFCA’s Addenda Nos. 1 and 2 to the EIS/EIR).

BACKGROUND

1. The Line is needed for a critical flood control project.

The 0.70-mile Line to be abandoned extends from a point north of the existing Sacramento Weir and continues on an elevated alignment along the Weir. Maps of the proposed area to be abandoned are attached as **Exhibit 1**. Photographs of the relevant area of the Weir are included at **Exhibit 8**.⁵ Sierra currently operates common carrier freight service over the Line for shippers located in Woodland, CA, about 17 miles from Sacramento.⁶ Sierra also operates over the Line an excursion passenger service that is not subject to the jurisdiction of the Board.

Sierra proposes to abandon the Line because SAFCA needs to acquire the land and facilities related to the Line to implement, along with USACE, a flood control project that involves widening the Sacramento Weir (the “Flood Control

⁵ Photographs are contained in Exhibit L to the Environmental and Historic Report.

⁶ See Exhibit 1.

Project”). The SAFCA/USACE project will strengthen existing levees located along several rivers in the Sacramento region, including the American and Sacramento Rivers, and widen the Sacramento Weir so that pressure on the levees can be reduced by increased water flow through the Weir and the adjoining Bypass.⁷ SAFCA needs to acquire the property on which the Line to be abandoned is located in order to carry out this Weir expansion project.⁸ The project requires removal of the rail line so that the property can be dedicated to flood control.⁹ SAFCA has submitted a letter supporting the abandonment and describing the vital nature of the Flood Control Project, attached here as **Exhibit 7**.

The project is critical to the public health and safety of the highly urbanized Sacramento region, which is one of the most at-risk areas for flooding in the United States. Sacramento has concluded that the “City currently has the greatest flood risk in the nation,” where flood risk is defined as probability of flood times consequences.¹⁰ The region currently lacks flood protection sufficient to withstand a 200-year flood, the level of protection required by California state law. A major flood in 1986 drove home the importance of improving flood control in the area, and extensive studies following the flood led SAFCA and USACE to conclude, among other things, that the Sacramento Weir needed to be widened.

The Sacramento Weir, initially constructed in 1916-17, is a crucial component of the Sacramento area flood control regime. The Weir acts as a flood safety valve, allowing excess flood waters to spill out of the adjacent river system into the Sacramento Bypass, diverting the flood waters away from populated areas of Sacramento and West Sacramento. The Weir also reduces the pressure on the levee system below the Weir, reducing the risk of a catastrophic levee break.

The Flood Control Project will reduce the flooding risk by diverting more flood flows from the Sacramento and American Rivers into the Yolo Bypass. The

⁷ EIS/EIR at ES-7 (included as an exhibit to the Environmental and Historic Report at Exhibit 8).

⁸ Addendum No. 2 to EIS/EIR at 2 (included as an exhibit to the Environmental and Historic Report at Exhibit 8).

⁹ *Id.*

¹⁰ Exhibit 5 at 1.4.

project will also eliminate potential obstructions to flood waters passing through the bypass, away from the urban areas of Sacramento and West Sacramento.

Additionally, the project will reduce the risk of a downstream levee failure, which could have catastrophic consequences. Flooding could be up to 20 feet deep, and flood waters could rapidly inundate highly urbanized areas with little warning and minimal time for evacuations.¹¹

This vital project has long faced two obstacles: (1) a lack of sufficient project funding, and (2) Sierra's ownership and operation of the Line, which runs directly over the Weir. The first challenge has recently been met: the Flood Control Project has been authorized by Congress and has received full federal funding.¹² SAFCA and USACE have asked Sierra to help them overcome the second obstacle by abandoning the Line and conveying Sierra's interest in the Line to SAFCA. Sierra has agreed to do so, subject to obtaining the required STB authority through this proceeding.

To carry out the Flood Control Project, SAFCA/USACE must remove the existing railroad tracks from the Weir and from an area approximately 1500 feet north of the Weir and construct an extension to the existing Weir. Construction activities could last at least two years. Restoring rail operations over the Line following completion of the Flood Control Project would require the construction of a large and expensive new rail bridge. As discussed below, SAFCA/USACE have estimated that the cost of constructing a new rail bridge to permit continued rail service after flood control construction is complete would be approximately \$30 million. The revenue generated by traffic using the Line falls far short of justifying the new bridge construction.

¹¹ A historical description of flood risk facing Sacramento is set out in Chapter 2 of the Comprehensive Flood Management Plan (included at Exhibit 5).

¹² See Bipartisan Budget Act of 2018, Pub. L. No. 115-123, 132 Stat. 64 (2018).

2. The minimal traffic on the Line can be served post-abandonment by alternative means.

The Line is a low-density rail line with little traffic. The Line is part of Sierra's Woodland Branch, a Sierra rail line that extends from West Sacramento to Woodland, CA, a distance of approximately 16.4 miles. Sierra transports freight traffic over the Line for only a handful of customers, all located in Woodland. In 2019, Sierra had seven customers that used the Line for whom Sierra moved the following commodities: industrial tomato paste, limestone, polyvinyl, grain products, railway ties, calcium carbide and empty railcars (for repair). Sierra transported a total of 507 freight rail cars on the Line in 2018 for a total gross revenue of \$408,576, and 463 cars in 2019 for a total gross revenue of \$382,160.

Sierra has been in close contact with all of its customers that use the Line for rail freight movements regarding the proposed abandonment. Sierra's 2018 and 2019 shippers are identified in **Exhibit 6**. Three of those customers have industrial facilities located on Sierra's Woodland Branch in Woodland and currently receive rail service directly at those facilities. Each of those three customers has advised Sierra that it has plans to use trucks as an alternative to rail service after the abandonment. The other four customers use Sierra's facilities for storage or car repair operations that will be carried out elsewhere.

None of Sierra's customers has indicated to Sierra that it opposes the proposed abandonment. Indeed, it is widely understood in the Sacramento area that flood control measures need to be taken and that it is in the strong public interest to ensure prompt attention by public officials to flood control, including the implementation of the current plans by SAFCA/USACE to widen the Sacramento Weir. A number of Sierra's customers have submitted letters supporting the abandonment. *See* support letters attached as **Exhibit 7**.

3. There is no feasible alternative to abandoning the Line.

As explained above, the flood control project requires widening of the Sacramento Weir to include approximately 1,500 feet of Sierra's existing rail line.

Rail service would be able to resume after the Weir is extended only if a new rail bridge was constructed over the area covered by the flood control project. When the USACE and SAFCA settled on their recommended flood control plan, they estimated that the cost of a new bridge would be approximately \$30 million.¹³

The small volume of traffic using the Line clearly would not generate revenue sufficient to justify the construction of a \$30 million rail bridge. As noted previously, 2019 revenues generated by the shippers using the Line were \$382,160. Even if the total revenues generated by these shippers were used to cover the initial capital costs of the bridge construction (i.e., assuming, contrary to fact, there are no other costs of service and no financing costs), it would take nearly 100 years to pay off the construction costs. The public interest would not be advanced by such infrastructure spending, especially where alternative transportation is available for the small demand that currently exists for rail service.

Moreover, the Woodland Branch that includes the Line segment to be abandoned does not *today* generate revenues sufficient to cover operating costs, let alone sufficient to cover the additional costs to construct a new rail bridge. As explained by Kennan H. Beard III, Sierra's President, Sierra incurs a significant operating deficit on the Woodland Branch today.¹⁴

Construction of a new rail bridge would also complicate and potentially frustrate the flood control plans of USACE/SAFCA. If construction of a new bridge were carried out while work was being done by USACE/SAFCA on the Weir project, the bridge construction could interfere with and potentially delay the work being

¹³ See American River Watershed Common Features General Reevaluation Report, Final Report 2015 (chapter 4 included at Exhibit 4) at Table 4-13. Bridge construction was estimated at \$25,798,000 plus an allocated portion of Planning, Engineering, Design of \$3,073,698 and an allocated portion of Construction Management of \$1,538,373.

¹⁴ Notwithstanding the current operating deficit on the Woodland Branch, Sierra does not now seek to abandon the entire Woodland Branch. For several years, Sierra has been considering a possible change to the configuration of rail lines in the Woodland and Sacramento area, including additional track construction, that would continue to use portions of the Woodland Branch as part of the national rail network. See, e.g., Tom Sakash, "Making Tracks: Plan to Take the Train Out of Town," Davis Enterprise (Apr. 7, 2013), available at <https://www.davisenterprise.com/local-news/sunday-best/plan-to-take-the-train-out-of-town-and-the-tracks-with-it/>. Sierra is not seeking abandonment authority for the entire Woodland Branch until it has fully assessed alternative uses.

done on the flood control project. In addition, the risk of damage caused by a flood would be reduced by eliminating potential obstructions to flood waters flowing into the Bypass such as a new rail bridge. Also, elimination of the rail facilities altogether over the Weir and its extension would significantly reduce operations and maintenance costs for public officials responsible for the flood control infrastructure in the area.

PETITION AND WAIVER REQUESTS

As discussed in further detail below, Sierra requests that the Board invoke Section 10502(a) and exempt Sierra's proposed abandonment from the otherwise applicable requirements of 49 U.S.C. §§ 10903, 10904, and 10905. Furthermore, Sierra requests that the Board waive the Board's rules regarding offers of financial assistance, public use conditions, and interim trail use and rail banking, set forth in 49 C.F.R. §§ 1121.4(g), 1152.27, 1152.28, and 1152.29.

Under 49 U.S.C. § 10502(a), the Board, to the maximum extent consistent with the statute, must exempt a transaction whenever the Board finds that the application in whole or in part of the statute: (1) is not necessary to carry out the transportation policy of 49 U.S.C. § 10101 (the "rail transportation policy" or "RTP"); and (2) either (A) the transaction or service is of limited scope; or (B) the application in whole or in part of the provision is not needed to protect shippers from the abuse of market power. Additionally, under 49 C.F.R. § 1152.24(e)(5), an applicant seeking Board authority for an abandonment may petition the Board to waive specific regulations listed in 49 C.F.R. Part 1152, Subpart C.

1. The Board should exempt the proposed abandonment from Section 10903.

Pursuant to 49 U.S.C. § 10502(a), Sierra requests that the Board exempt the proposed abandonment from the prior approval provisions of 49 U.S.C. § 10903. Under Section 10903(d), no rail carrier may abandon a line of railroad unless the Board finds that the present or future public convenience and necessity require or

permit the abandonment or discontinuance. Section 10903(a) requires rail carriers to file an application seeking abandonment, and the Board's rules, 49 C.F.R. Part 1152, prescribe detailed requirements for such applications. An exemption from the detailed and burdensome application requirements of Section 10903 and 49 C.F.R. Part 1152 is appropriate here.

Sierra clearly meets the first prong of the exemption standard under 49 U.S.C. § 10502(a)(1). Requiring Sierra to submit a complete abandonment application under the prior approval requirements of Section 10903 is not necessary to carry out the national rail transportation policy. The scope of the proposed abandonment is narrow, the justification for the abandonment is straight-forward, and the public interest is clearly in favor of abandonment. In addition, a detailed or complex economic analysis is not necessary to assess the need for the proposed abandonment.

Indeed, it is clear that granting the requested exemption would further the RTP. Allowing Sierra to abandon the Line through this exemption process, and thereby allowing SAFCA to promptly implement the Flood Control Project, would expedite regulatory decisions, reduce regulatory barriers to exit from the industry, contribute to the public health and safety, and provide for the expeditious handling and resolution of proceedings, in accordance with the RTPs set forth at 49 U.S.C. §§ 10101(2), (7), (8), and (15), respectively. Furthermore, Sierra's abandonment of the Line would ensure the continuation of a sound rail transportation system to meet the needs of the public. 49 U.S.C. § 10101(4). All of Sierra's shippers have transportation alternatives that are adequate to meet their needs.

In addition, there is no practical alternative to the proposed abandonment. As discussed above, the estimated \$30 million construction of a new rail bridge over the Weir following completion of the Flood Control Project would not be justified by the small volume of rail traffic that uses the Line (463 cars in 2019 for a total gross revenue of \$382,160). Any new rail bridge also may interfere with future flood control efforts. Therefore, Sierra has clearly established that "keeping the line in

service . . . would impose a burden on it that outweighs the harm that would befall the shipping public, and the adverse impacts on rural and community development, if the rail line were abandoned.” *CSX Transp., Inc.—Aband. Exemption—In White Cty., Ind.*, AB 55 (Sub-No. 712X), slip op. at 4 (STB served Sept. 19, 2014) (quotations and citations omitted).

Sierra also easily meets the second prong of the exemption standard under 49 U.S.C. § 10502(a)(2). Sierra’s abandonment of the Line, approximately 0.70 miles in length, is clearly of limited scope. 49 U.S.C. § 10502(a)(2)(A). The proposed abandonment affects a single rail line with very little traffic. The Line currently handles traffic from a small group of shippers located in a discrete and geographically limited area north of Sacramento. Further, application of Section 10903 is not necessary to protect shippers from the abuse of market power. *Id.* § 10502(a)(2)(B). Sierra does not have market power over transportation provided over the Line, given the ready availability of the alternative transportation options for Sierra’s customers, as discussed above. Moreover, as discussed above, all shippers that use the Line will continue to be served post-abandonment by alternative means. See support letters attached as **Exhibit 7**.

2. The Board should exempt the proposed abandonment from Sections 10904 and 10905, and waive related Board rules.

Pursuant to 49 U.S.C. § 10502(a), Sierra also requests that the Board exempt the proposed abandonment from the provisions of 49 U.S.C. §§ 10904 and 10905. In addition, pursuant to 49 C.F.R. § 1152.24(e)(5), Sierra requests that the Board waive its rules for offers of financial assistance, public use conditions, and interim trail use and rail banking set forth in 49 C.F.R. §§ 1121.4(g), 1152.27, 1152.28, and 1152.29.

Under 49 U.S.C. § 10904 and 49 C.F.R. § 1152.27, a financially responsible person may offer to purchase, or subsidize continued rail operations over, a rail line sought to be abandoned, often described as the offer of financial assistance (“OFA”) process. Under 49 U.S.C. § 10905, if the Board finds that the rail properties

involved in an authorized abandonment are “appropriate for use for public purposes” and not required for continued rail operations, the Board may impose a “public use” condition on the Board’s approval of the abandonment that would limit the conveyance of the rail properties for up to 180 days, unless the properties have first been offered, on reasonable terms, for sale for public purposes. The Board’s rules, 49 C.F.R. §§ 1121.4(g) & 1152.28, set forth a process for interested persons to seek the imposition of public use conditions pursuant to Section 10905.

Additionally, under 16 U.S.C. § 1247(d) and 49 C.F.R. §§ 1121.4(g) & 1152.29, certain qualified persons interested in acquiring or using the right-of-way of a rail line proposed to be abandoned for interim trail use and rail banking may petition the Board to establish interim trail use over the rail line sought to be abandoned.

An exemption from these requirements is appropriate and necessary given the rationale for the proposed abandonment. As explained above, Sierra will convey its property interest in the Line to SAFCA soon after consummating the abandonment, and SAFCA will use that property to implement the Flood Control Project. Accordingly, the Line will in fact be used for public purposes after the abandonment. In addition, Sierra will not entertain interim trail use proposals for the Line which would be inconsistent with SAFCA’s intended use of the Line for flood control purposes. Therefore, subjecting this abandonment transaction to conditions for offers of financial assistance, public use, or trail use negotiation would defeat the purpose of this Petition.

Indeed, the Board has granted exemptions from Section 10904 and 10905 for abandonment transactions when the right-of-way is needed for a valid public purpose and there is no overriding need for continued rail service. *See, e.g., Wisc. Central Ltd.—Abandonment Exemption—In Lake County, Ill.*, AB 303 (Sub-No. 46X) (STB served June 25, 2015) (citation omitted); *BNSF Ry. Co.—Abandonment Exemption—In Oklahoma County, OK, et al*, AB-6 (Sub-No. 430X), *et al*, slip op. at 11-12 (STB served May 20, 2009).

Just such a situation exists here. Sierra's abandonment of the Line and Sierra's plans to convey its property interest in the Line to SAFCA are for a valid public purpose – implementation of the Flood Control Project. Likewise, there is no overriding need for continued rail service. All of the shippers using the Line have transportation alternatives that will serve their needs.

Additionally, applying the provisions of Section 10904 and 10905, and the related Board rules, is not necessary to carry out the RTP in relation to the proposed abandonment. Allowing the abandonment exemption to become effective expeditiously, without first being subject to the OFA, public use, and interim trail use and rail banking provisions, will minimize the need for Federal regulatory control over the rail transportation system, expedite regulatory decisions, and reduce regulatory barriers to exit. *See* 49 U.S.C. §§ 10101(2) & (7). As established above, the abandonment is of limited scope, and regulation of the abandonment is not necessary to protect shippers from an abuse of market power.

LABOR PROTECTIVE CONDITIONS

The appropriate level of employee protection for the Board to impose on this abandonment is that established in *Oregon Short Line R.R. Co.—Abandonment—Goshen*, 360 I.C.C. 91 (1979).

REQUEST FOR EXPEDITED TREATMENT

Sierra requests expedited treatment of its exemption request. The flood control project in the Sacramento area consists of several interrelated parts, and the entire project must be completed by 2024. Construction on the Weir is expected to begin as soon as this summer, if the STB acts by then. As noted in the attached letter of support from SAFCA, “expedited consideration of the abandonment petition would go a long way towards keeping the broader [flood control project] on schedule.”

CONCLUSION

To allow for a flood control project that is critical to the public health and safety of the Sacramento, CA region and for the other reasons set forth herein, Sierra requests that the Board (1) exempt Sierra's proposed abandonment of the Line from the otherwise applicable requirements of 49 U.S.C. §§ 10903, 10904, and 10905, (2) waive the Board's rules regarding offers of financial assistance, public use conditions, and interim trail use and rail banking, set forth in 49 C.F.R. §§ 1121.4(g), 1152.27, 1152.28, and 1152.29, and (3) give expedited treatment to this Petition.

Respectfully submitted,

/s/ Anthony J. LaRocca

Anthony J. LaRocca
alarocca@steptoe.com
Peter W. Denton
pdenton@steptoe.com
Sally Mordi
smordi@steptoe.com
Steptoe & Johnson LLP
1330 Connecticut Ave, NW
Washington, DC 20036
(202) 429-3000

*Attorneys for Sierra Northern
Railway*

Dated: March 19, 2020

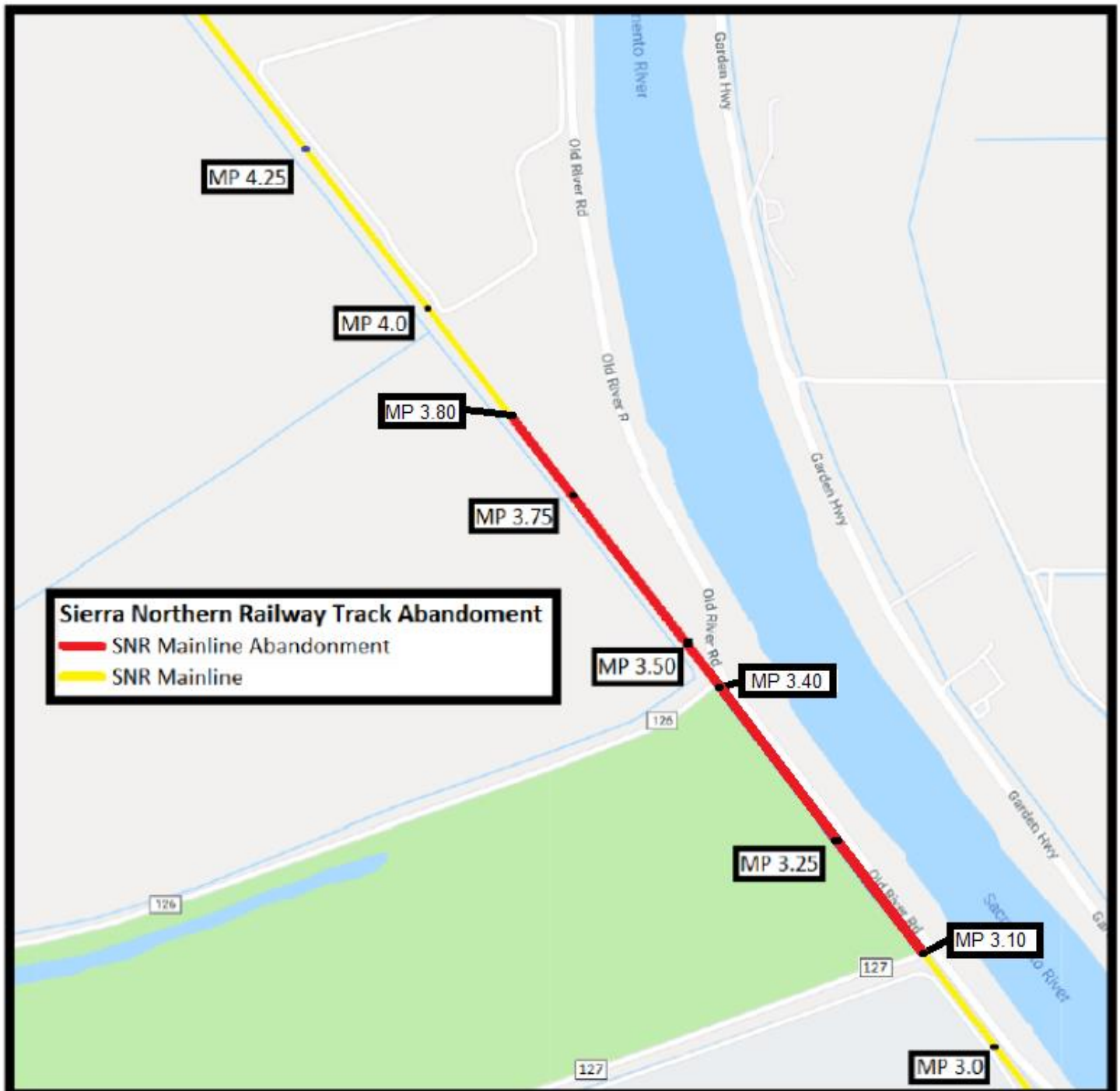
EXHIBIT 1
TO THE PETITION FOR EXEMPTION AND WAIVER
MAPS



SIERRA NORTHERN RAILWAY

341 Industrial Way
Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



SNR SAFCA Track Abandonment

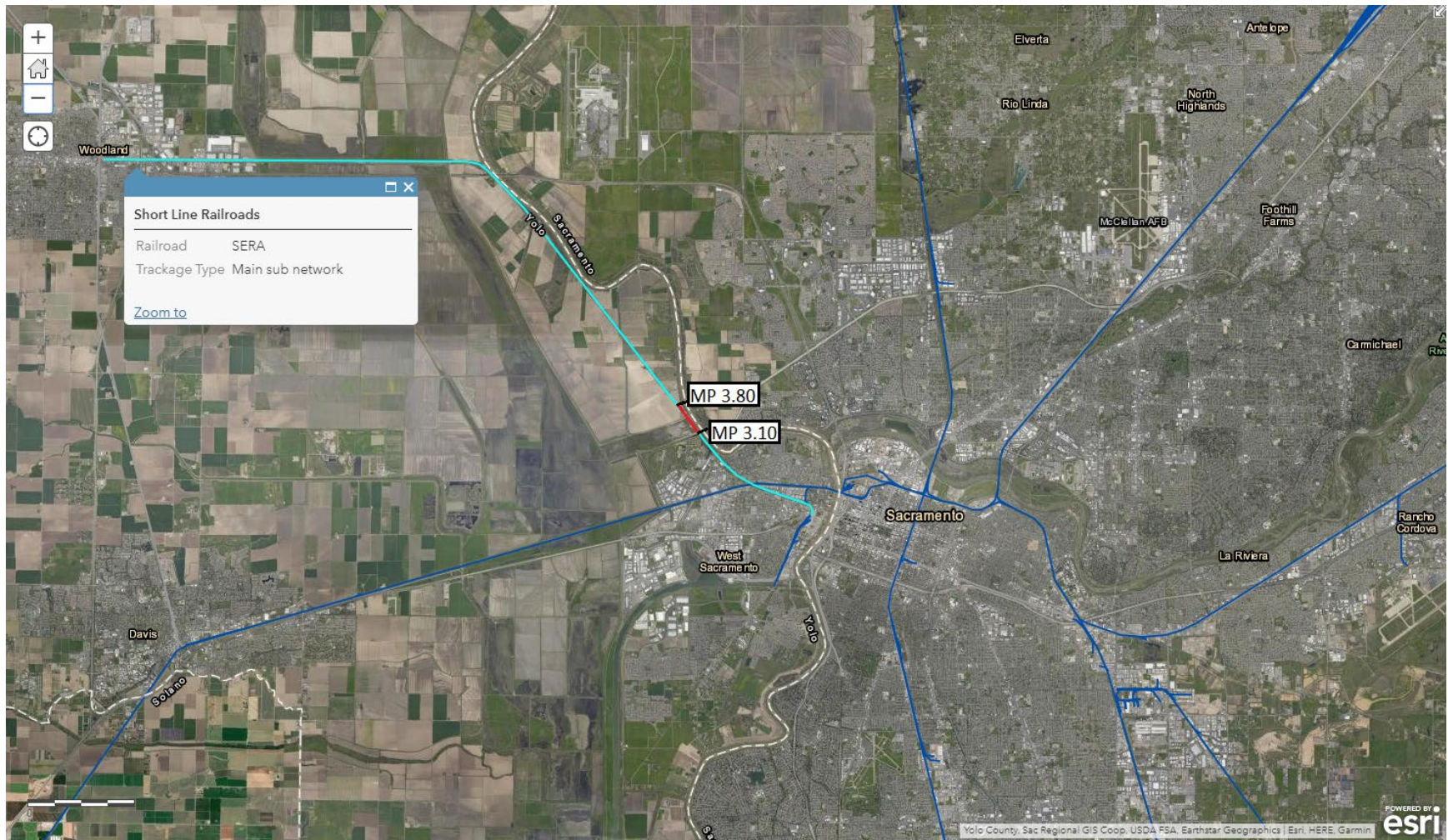


EXHIBIT 2
TO THE PETITION FOR EXEMPTION AND WAIVER
DRAFT FEDERAL REGISTER NOTICE

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. AB 874 (Sub-No. 1X)

SIERRA NORTHERN RAILWAY
—ABANDONMENT EXEMPTION—
IN YOLO COUNTY, CALIFORNIA

Notice of Petition for Exemption To Abandon Service

On March 19, 2020, Sierra Northern Railway (“Sierra”) filed with the Surface Transportation Board, Washington, D.C. 20423, a petition for exemption for the abandonment of approximately 0.70 miles of rail line between approximately milepost 3.10 and approximately milepost 3.80, which traverses through United States Postal Service ZIP Code 95691, in Yolo County, California (the “Line”).

The line does not contain federally granted rights-of-way. Any documentation in the railroad's possession will be made available promptly to those requesting it.

The interests of railroad employees will be protected by the conditions set forth in *Oregon Short Line R. Co.—Abandonment—Goshen*, 360 I.C.C. 91 (1979).

Any offer of financial assistance will be due no later than 10 days after service of a decision granting the petition for exemption.

All interested persons should be aware that following abandonment of rail service and salvage of the line, the line may be suitable for other public use, including interim trail use. Any request for a public use condition and any request for trail use/rail banking will be due no later than 20 days after notice of the filing of the petition for exemption is published in the Federal Register.

Persons seeking further information concerning abandonment procedures may contact the Surface Transportation Board or refer to the full abandonment regulations at 49 CFR Part 1152. Questions concerning environmental issues may be directed to the Board's Office of Environmental Analysis.

An environmental assessment (EA) (or environmental impact statement (EIS), if necessary) prepared by the Office of Environmental Analysis will be served upon all parties of record and upon any agencies or other persons who commented during its preparation. Any other persons who would like to obtain a copy of the EA (or EIS) may contact the Office of Environmental Analysis. EAs in these abandonment proceedings normally will be made available within 60 days of the filing of the petition. The deadline for submission of comments on the EA will generally be within 30 days of its service.

EXHIBIT 3
TO THE PETITION FOR EXEMPTION AND WAIVER
CERTIFICATION OF COMPLIANCE WITH
49 C.F.R. §§ 1105.11, 1105.12 & 1152.60(d)

CERTIFICATE OF SERVICE ENVIRONMENTAL AND HISTORIC REPORTS

The undersigned hereby certifies that, pursuant to the requirements of 49 C.F.R. §§ 1105.7 and 1105.8, the transmittal letter required by 49 C.F.R. § 1105.11 and copies of the Combined Environmental and Historic Report in Docket No. AB 874 (Sub-No. 1X) were sent via first class mail on February 5, 2020 to the following parties:

Planning Commission Yolo County, Department of Community Services 292 W. Beamer Street Woodland, CA 95695	Yolo County Board of Supervisors 625 Court Street, Room 204 Woodland, CA 95695
Carlos Suarez State Conservationist Richard E. Lyng USDA Service Center 430 G St., #4164 Davis, CA 95616-4164	U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, California 95825-1846
U.S. Department of the Interior Bureau of Land Management California State Office 2800 Cottage Way, Suite W1623 Sacramento, CA 95825	Stan Austin, Regional Director National Park Service Pacific West Region 333 Bush Street, Suite 500 San Francisco, CA 94104-2828
US EPA Pacific Southwest, Region 9 75 Hawthorne St. San Francisco, CA 94105	USACE Sacramento District 1325 J Street – Room 1513 Sacramento, CA 95814
Julianne Polanco, State Historic Preservation Officer California State Parks Office of Historic Preservation 1725 23rd Street, Suite 100 Sacramento, CA 95816	Communications and Outreach Branch, NOAA, N/NGS12 National Geodetic Survey, SSMC3 #9340 1315 East-West Highway Silver Spring, MD 20910-3282
Central Valley Regional Water Quality Control Board 11020 Sun Center Drive, Suite 200 Rancho Cordova, CA 95670	California State Clearinghouse Office of Planning and Research P.O. Box 3044 Sacramento, CA 95812-3044
California Environmental Protection Agency 1001 I Street P.O. Box 2815 Sacramento, CA 95812-2815	

/s/ Sally Mordi
Sally Mordi

Dated March 19, 2020

**CERTIFICATE OF SERVICE
PETITION FOR EXEMPTION AND WAIVER**

Pursuant to 49 C.F.R. § 1152.60(d), the undersigned hereby certifies that the Petition for Exemption and Waiver in Docket No. AB 874 (Sub-No. 1X) was mailed via first class mail on March 19, 2020 to the following parties:

State Public Service Commission

California Public Utilities Commission
Los Angeles Office
320 West 4th Street, Ste. 500
Los Angeles, CA 90013

Military Traffic Management Command

U.S. Department of Defense
Military Surface Deployment and Distribution Command
Transportation Engineering Agency
1 Soldier Way
Bldg 1900W
Scott AFB, IL 62225

National Park Service

National Park Service
Conservation and Outdoor Recreation Division Office
1849 C Street NW
Washington, DC 20240

Stan Austin, Regional Director
National Park Service
Pacific West Region
333 Bush Street, Suite 500
San Francisco, CA 94104-2828

U.S. Department of Agriculture

Vicki Christiansen
Chief of the Forest Service
U.S. Department of Agriculture
Sidney R. Yates Federal Building
201 14th Street SW
Washington, DC 20024

/s/ Sally Mordi
Sally Mordi

Dated: March 19, 2020

CERTIFICATE OF PUBLICATION

The undersigned hereby certifies that notice of the proposed abandonment in Docket No. AB 874 (Sub-No. 1X) was published on March 13, 2020, in the *Davis Enterprise*, a newspaper of general circulation in Yolo County, California, as required by 49 C.F.R. § 1105.12.

/s/ Sally Mordi
Sally Mordi

Dated: March 19, 2020

THE DAVIS enterprise

PROOF OF PUBLICATION
(2015.5 C.C.P.)

Steptoe & Johnson LLP
Attn: Sally Mordi
1330 Connecticut Ave. NW
Washington, DC 20036

STATE OF CALIFORNIA
County of Yolo

I am a citizen of the United States and a resident of the County aforesaid; I'm over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am principal clerk of the printer at the Davis Enterprise, 315 G Street, a newspaper of general circulation, printed and published Monday, Wednesday, and Friday, in the City of Davis, County of Yolo, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court to the County of Yolo, State of California, under the date of July 14, 1952, Case Number 12680; that the notice, of which the annexed is a printed copy (set in type no smaller than non-pareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

March 13

All in the year **2020**.

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Davis, California, this **13th day of March, 2020**



Shawn Collins
Legal Advertising Clerk

Proof of Publication PUBLIC NOTICE #771

PUBLIC NOTICE

Notice of Intent To Abandon Rail Service

Sierra Northern Railway gives notice that on or after March 13, 2020, it intends to file with the Surface Transportation Board, Washington, DC, a petition for exemption under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10903, et seq., permitting the abandonment of an approximately 0.70 mile line of railroad between approximately milepost 3.10 and approximately milepost 3.80, which traverses through United States Postal Service ZIP Code 95691 in Yolo County, California. The proceeding will be docketed as No. AB 874 (Sub-No. 1X).

The Board's Office of Environmental Analysis (OEA) will generally prepare an Environmental Assessment (EA), which will normally be available 60 days after the filing of the petition for abandonment exemption. Comments on environmental and energy matters should be filed no later than 30 days after the EA becomes available to the public and will be addressed in a Board decision. Interested persons may obtain a copy of the EA or make inquiries regarding environmental matters by writing to OEA, Surface Transportation Board, Washington, DC or by calling OEA at (202) 245-0291.

Unless the Board determines otherwise, appropriate offers of financial assistance to continue rail service and requests for environmental conditions, public use conditions, or rail banking/trails use can be filed with the Board. An original and 10 copies of any pleading that raises matters other than environmental issues (such as trails use, public use, and offers of financial assistance) must be filed directly with the Board's Office of Proceedings, Washington, DC [See 49 CFR 1104.1(a) and 1104.3(a)], and one copy must be served on applicants' representative [See 49 CFR 1104.12(a)]. Questions regarding offers of financial assistance, public use or trails use may be directed to the Board's Office of Public Assistance, Governmental Affairs, and Compliance at (202) 245-0238. Copies of any comments or requests for conditions should be served on the applicant's representative: Sally Mordi, Steptoe & Johnson LLP, 1330 Connecticut Ave. NW, Washington, DC 20036; phone: (202) 429-6287.

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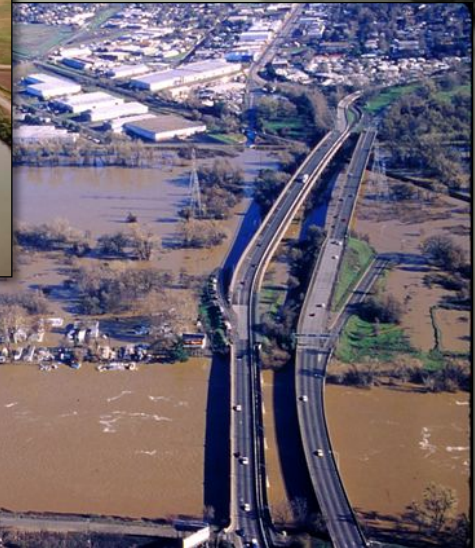
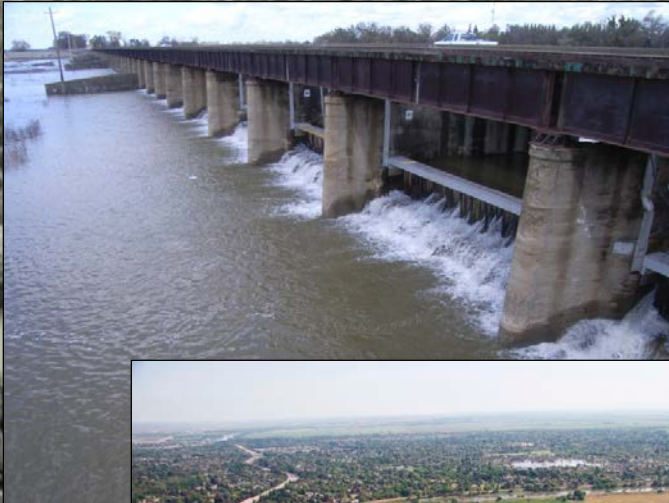
EXHIBIT 4
TO THE PETITION FOR EXEMPTION AND WAIVER
EXCERPT FROM THE AMERICAN RIVER WATERSHED COMMON
FEATURES GENERAL REVALUATION REPORT, FINAL REPORT

American River Watershed

Common Features General Reevaluation Report

Final Report

December 2015



4 - THE RECOMMENDED PLAN

This chapter provides details on the Recommended Plan and its implementation requirements. The chapter integrates the revaluated portions of the Common Features Project with the previously authorized and constructed portions of the project.

4.1 FEATURES AND DESCRIPTION OF THE RECOMMENDED PLAN

The features included in the 1996 and 1999 ARCF authorizations, as well as the Natomas features authorized by WRRDA 2014 are all part of the future without project condition. The Recommended Plan includes additional features to reduce flood risk in the ARCF study area. The principal features of this plan are:

1. Sacramento River: Construction of about 9 miles of slurry cutoff walls to address levee seepage and stability problems and about 10 miles of rock bank protection to address erosion problems along the Sacramento River east levee, as well as about 2.5 miles of geotextile stabilized slope and 2 miles of slope flattening to address levee stability and less than 1 mile of levee raise.
2. American River: Construction of rock bank protection and launchable rock trenches to address erosion problems along 4 miles of the right (north) bank and 7 miles of the left (south) bank of the American River.
3. Eastside Tributaries: Construction of about 4 miles of slurry cutoff walls to address levee seepage and stability problems along the NEMDC and Arcade Creek and 4 miles of levee raises to address potential overtopping of floodwaters along the Arcade Creek levees. The recommendation also includes about 1 mile of levee raise and extension along Magpie Creek along with 80 acres of floodplain preservation.
4. Sacramento Bypass: Widen the Sacramento Weir and Bypass by 1,500 feet to reduce the water surface elevation in the Sacramento River and allow more water to flow into the Bypass system. This would include the construction of a new 2 mile long setback levee. The existing Sacramento Weir and Bypass are shown in Figure 4-1 below.



Figure 4-1: Sacramento River overflowing in to the Sacramento Bypass.

Table 4-1 summarizes the recommended levee improvements by waterway. A more detailed discussion of the recommendations for each waterway is included in the subsequent sections below.

Table 4-1: Recommended Plan Proposed Improvement Measures by Waterway.

	Sacramento River	American River	East Side Tributaries¹
Seepage Measures	Cutoff Wall	<i>WRDA 96/99²</i>	Cutoff Wall
Stability Measures	Cutoff Wall, Geotextile, and Slope Flattening	<i>WRDA 96/99</i>	Cutoff Wall and Geotextile
Erosion Protection Measures	Bank Protection, Launchable Rock Trench	Bank Protection, Launchable Rock Trench	---
Overtopping Measures	Levee Raise and Sacramento Weir and Bypass Widening	<i>WRDA 96/99</i>	Floodwall/Levee Raise

Notes: ¹ East Side Tributaries include NEMDC, Arcade Creek, and Magpie Creek

²Seepage, Stability and Overtopping issues along the American River have been addressed by the work authorized in WRDA 1996 and WRDA 1999.

The features of the Recommended Plan are displayed in Figure 4-2.

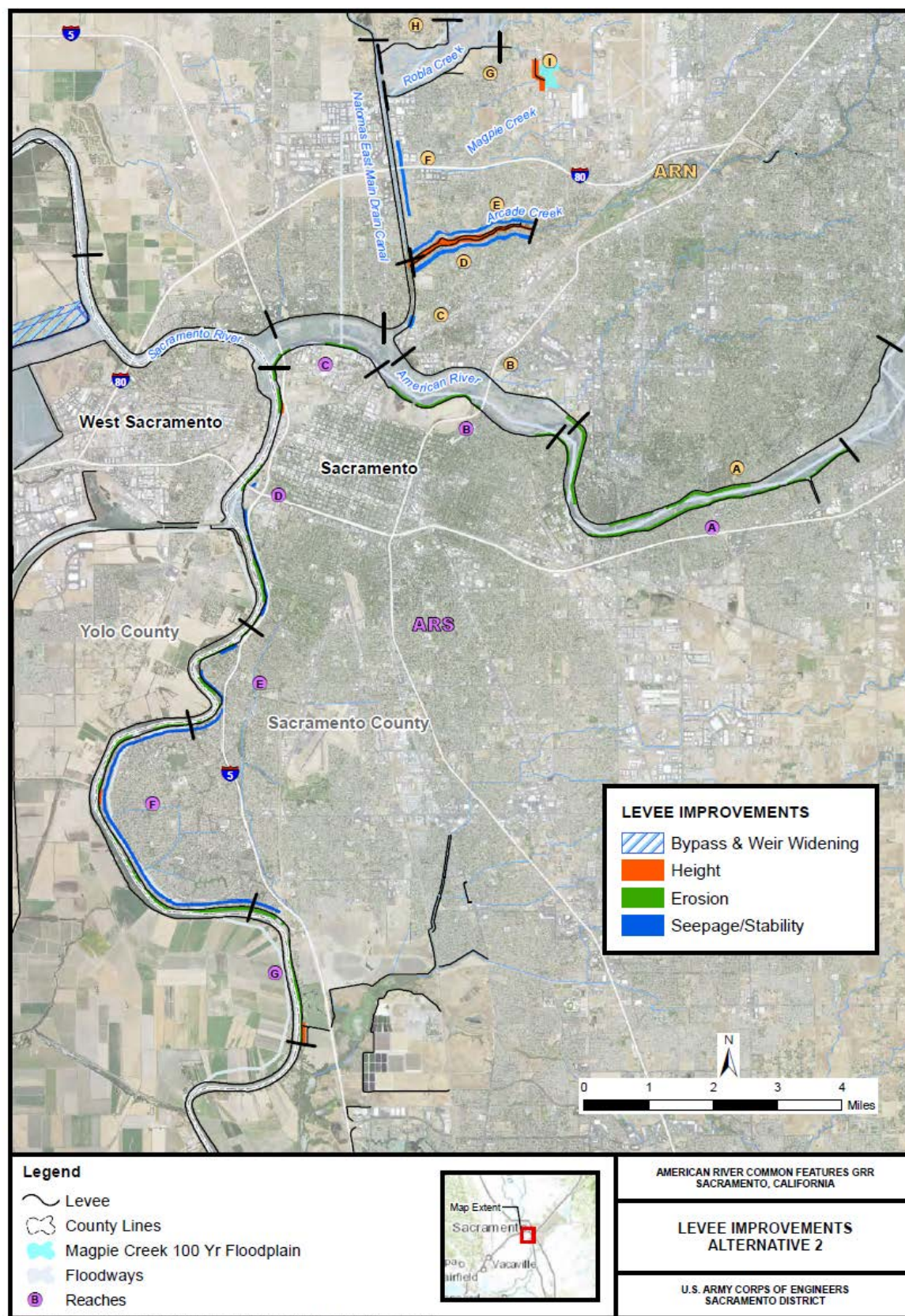


Figure 4-2: Recommended Plan Recommended Features.

4.1.1 Sacramento River

Levees along the Sacramento River require improvements to address seepage, slope stability, and erosion. In addition, a levee segment almost 1 mile long requires a raise. The features proposed for the Sacramento River levees include: (1) cutoff walls, (2) levee geometry measures, and (3) bank protection. These measures are described in detail in the subsections below.

Cutoff Walls

To address seepage concerns, a cutoff wall will be constructed through the levee crown. The cutoff wall would be installed by one of two methods: (1) conventional open trench cutoff walls, or (2) deep soil mixing (DSM) cutoff walls. The method of cutoff wall selected for each reach would depend on the depth of the cutoff wall needed to address the seepage. The open trench method can be used to install a cutoff wall to a depth of approximately 80 feet. For cutoff walls of greater depth, the DSM method would be utilized.

Levee Geometry

Where the existing levee cross section does not meet the levee design requirements, (as discussed in Section 4.2) slope flattening, crown widening, and/or a levee raise is required. This improvement measure addresses problems with slope stability, geometry, and overtopping. The levee crown would be widened to 20 feet and 2:1 landside and waterside slopes would be established. The existing levee centerline would be shifted landward, where necessary in order to meet the Corps' standard levee footprint requirements. The levee crown patrol road would be re-established. It is estimated that about 2 miles of slope flattening would be required in scattered locations along the Sacramento River. In the lower reach of the Sacramento River, near the town of Freeport, the steepness of the levee slope has created a slope stability problem. To address this problem, approximately 2.5 miles of levee would be partially degraded and reconstructed with a geosynthetic material, to reinforce the levee slope within the existing levee footprint where possible.

Bank Protection

Bank protection on the Sacramento River would be addressed via either conventional bank protection or the launchable rock trench method. The conventional bank protection measure for the Sacramento River consists of placing rock protection on the bank to prevent erosion. This measure entails filling the eroded portion of the bank, when necessary, and installing revetment along the waterside levee slope and streambank from streambed to a height determined by site-specific analysis. After the erosion protection work has been completed, a small planting berm would be constructed in the rock when feasible to allow for some revegetation of the site.

Launchable Rock Trench

This measure includes construction of a launchable rock filled trench, designed to deploy once erosion has removed the bank material beneath it. Figure 4-9 shows a typical cross section of launchable rock trench. All launchable rock trenches would be constructed outside of the natural river channel. All disturbed areas would be reseeded with native grasses and small shrubs where appropriate. Small trees could be permitted on the berm if planted outside the specified vegetation free zone required by ETL 1110-2-583.

Levee Safety Compliance on the Sacramento River

In an effort to modernize the levee system to meet current engineering standards, vegetation and encroachment issues (including landside levee access) in the study area will be resolved through a combination of construction actions associated with implementation of the recommended plan and formal agreements (such as a Systemwide Improvement Framework known as a SWIF) which allow specific vegetation and/or encroachments to remain in place permanently or defer their resolution to some future date. In the case of construction associated with the recommended plan, vegetation and encroachment removal would only occur within the construction footprint. Outside of the construction footprint, the non-Federal sponsors will apply for a SWIF separately from this project to ultimately bring levees into compliance with the ETL 1110-2-583.¹ In the case of a formal agreement, the integrated use of a SWIF and a variance from vegetation standards would both be required to ultimately assure compliance with the ETL.

A variance to ETL 1110-2-583 would be sought to allow vegetation to remain on the lower half of the waterside slope along the Sacramento River and NEMDC, Arcade Creek, and Magpie Creek. If granted, the variance would allow for vegetation to remain on the lower waterside slope and within the waterside 15 foot vegetation-free zone. The variance requires the Corps to show that the safety, structural integrity, and functionality of the levee would be retained. An evaluation of underseepage and waterside embankment slope stability was completed for this study.

This analysis was completed for the section/index point at levee mile (LM) 5.92, on the Sacramento River which was chosen for the variance analyses because it was considered to be representative of the most critical channel and levee geometry, underseepage and slope stability conditions, and vegetation conditions. The cross-section geometry of the index point incorporated tree fall and scour by using a maximum depth of scour for cottonwoods as approximately 11.0 feet; the associated soil removed was projected at a 2:1 slope from the base of the scour toward both the landside, and waterside slopes. The base scour width was equal to the maximum potential diameter at breast height (dbh) of cottonwoods (12.0 feet) projected horizontally at a depth of 11.0 feet below the existing ground profile. The results show that the tree fall and scour did not significantly affect levee performance and that the levee meets

¹ Section 3013 of WRRDA 2014 (Pub. L. No. 113-121) contains a requirement to conduct a review of current Federal policy relating to levee vegetation that may affect the guidelines presented in ETL 1110-2-583.

Corps seepage and slope stability criteria considering the seepage and stability improvement measures are in place (“with project” conditions). Therefore, it is a reasonable conclusion that with a Variance to allow vegetation to remain as stated above, the safety, structural integrity, and functionality of the Sacramento River levee and levees along the tributaries would be retained.

The SWIF Policy was released by the Corps in November 2011, providing with guidance to local maintaining agencies for obtaining a SWIF. The intent of the SWIF is to collaboratively work with resource agencies and levee sponsors to transition existing levees to Corps standards while maintaining PL 84-99 rehabilitation assistance and protecting sensitive environmental resources. The SWIF is a two-step process completed by the applicant that is composed of a Letter of Intent, which is followed by submission of a SWIF plan. The SWIF process allows eligible local sponsors to implement levee improvements in a prioritized “worst first” way to optimize the achievement of risk reduction. The Corps acknowledges that implementing system-wide improvements will need to be done within a collaborative intergovernmental framework and that it will take time to develop and implement improvements in complex situations. Challenges include ensuring that both environmental and levee safety imperatives are adequately served.

The construction footprint for the majority of the levee improvements along the Sacramento River will be confined to the top half of the levee and areas along the waterside bank where erosion protection is required. This is displayed in Figure 4-3 below. Vegetation and encroachments within this footprint will be removed during construction; however, the vegetation on the waterside of the levee would largely remain in place and the rock erosion protection would be placed around the existing vegetation. For levee segments along the Sacramento River where levee raises are required, the construction footprint would extend to the landside levee toe and a certain distance beyond that to allow for construction access. Vegetation and encroachments on the landside of the levee in these areas would be removed by the non-Federal sponsors as part of construction of the levee raise.

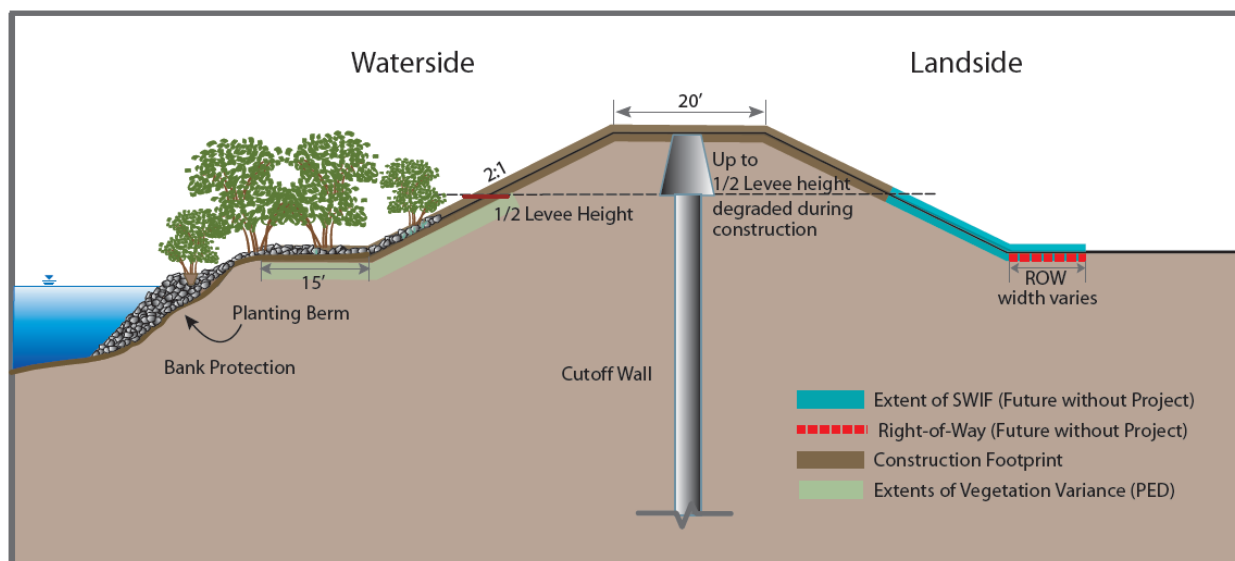


Figure 4-3: Recommended Plan Levee Safety Compliance for Segments with No Recommended Levee Raise.

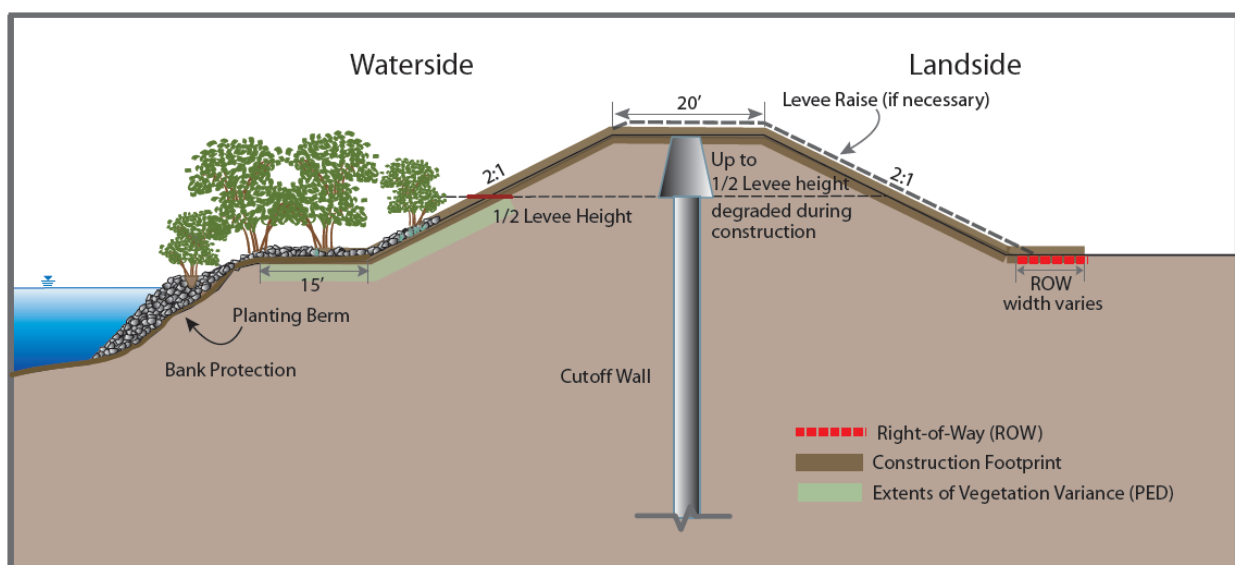


Figure 4-4: Recommended Plan Levee Safety Compliance for Segments with Recommended Levee Raise.

4.1.2 American River

Levees along the American River require improvements to address erosion. The rationale used to determine where erosion protection was required involved consideration of several factors. The most important factors included: 1) the velocity computed by the hydraulic modeling (Ayres 2004) for a discharge of 160,000 cfs, 2) the erodibility of the material near the levee prism, and 3) the past performance of the levee segment with respect to erosion. The proposed measures for these levees

consist of waterside armoring to prevent erosion of the river bank and levee, which could potentially undermine the levee foundation. Figure 4-5 identifies the reaches where erosion protection measures would be required. It also displays areas where levee erosion has been repaired with rock erosion protection measures. There are two measures proposed for the American River levees: (1) bank protection, and (2) launchable rock trench. Both of these measures are described in detail in the subsections below.

An initial assessment with regards to the method of bank stabilization has been made for this document. During detailed design, the Corps will coordinate closely with the county, state, and federal agencies responsible for managing the resources of the parkway in selecting which method of bank stabilization should be deployed. In carrying out this effort, the Corps will coordinate through the formal and informal processes that have been created to facilitate management of the parkway in application of the above criteria. Where erosion protection is needed to meet established flood risk reduction objectives, the selection of the method of protection will be based on a determination of which method would do the most to protect valuable parkway land, fish and wildlife resources, and recreational facilities considering both the short term impacts of construction and the long term effects of any mitigation measures included in the design of the project.

Where multiple erosion protection methods were possible, the cost estimates and environmental impacts used the more conservative erosion protection feature for evaluation (typically launchable rock trench). During detailed design, the type of erosion protection method will be further evaluated in terms of costs and environmental effects to determine which method is appropriate at a specific location.

Bank Protection

This measure consists of placing rock revetment on the river's bank, and in some locations on the levee slope, to prevent erosion. This measure entails installing revetment along the waterside levee slope and streambank based on site-specific analysis. Figures 4-6, 4-7, and 4-8 show a time lapse sequence of a site on the American River where bank protection has been constructed. Figure 4-8 shows a typical cross section of bank protection. In most cases large vegetation would be permitted to remain at these sites. After the erosion protection work has been completed, a small planting berm would be constructed in the rock where feasible to allow for revegetation of the site.

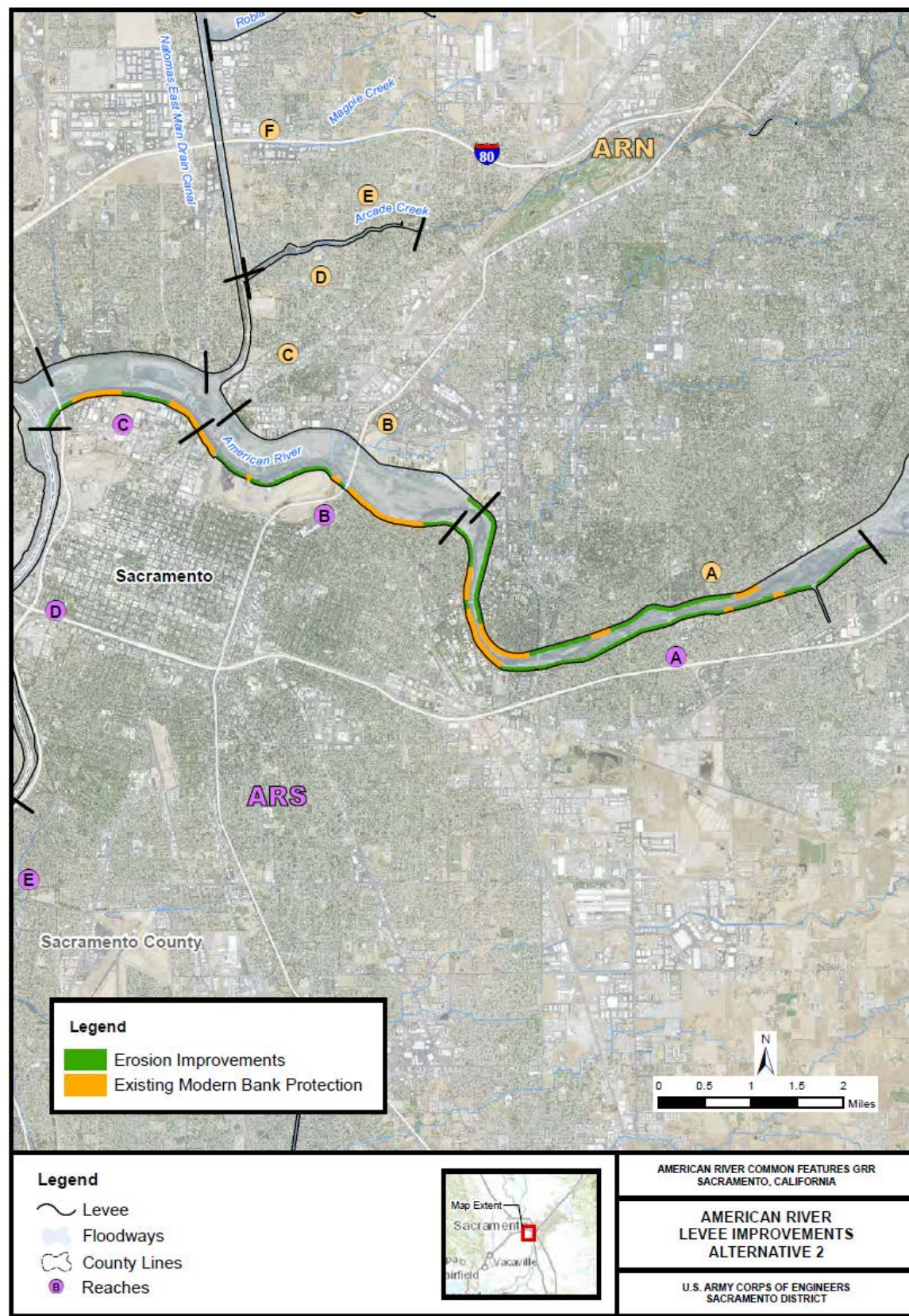


Figure 4-5: Recommended Plan Recommended Features along the American River.



Figure 4-6: American River Levee near California State University, Sacramento, 2001.



Figure 4-7: American River Levee near California State University, Sacramento, 2005.



Figure 4-8: American River Levee near California State University, Sacramento, 2010.

Launchable Rock Trench

This measure includes construction of a launchable rock filled trench, designed to deploy once erosion has removed the bank material beneath it. Figure 4-9 shows a typical cross section of launchable rock trench. All launchable rock trenches would be constructed outside of the natural river channel. All disturbed areas would be reseeded with native grasses and small shrubs where appropriate. Small trees could be permitted on the berm if planted outside the specified vegetation free zone as required by ETL 1110-2-583.

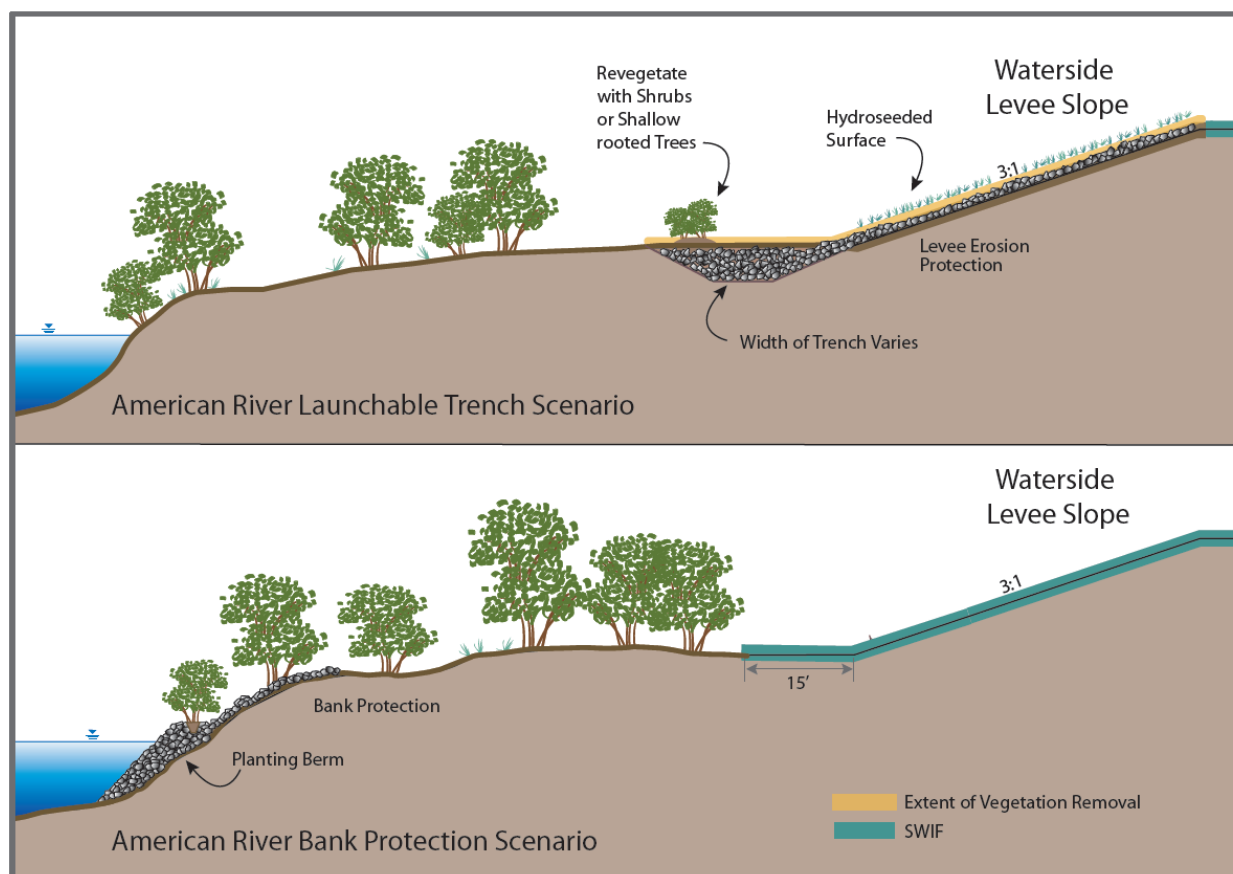


Figure 4-9: Bank Protection and Launchable Rock Trench Typical Design.

Levee Safety Compliance on the American River

Consistency with levee safety criteria for vegetation, access and encroachments will be limited, as with the other study reaches, to the construction footprint. The construction footprints of the erosion protection features on the American River are limited to the waterside levee slope or the actual river bank. As shown in Figure 4-9, all other vegetation, access and encroachments issues outside of the construction footprint would be brought into compliance with Levee Safety Policy through the use of a SWIF by the local maintaining agency, the American River Flood Control District (ARFCD).

4.1.3 East Side Tributaries

Natomas East Main Drain Canal (NEMDC)

The east levee of the NEMDC requires improvements to address seepage and stability at locations where historic creeks had intersected the current levee alignment. A conventional open trench cutoff wall would be constructed at these locations to address the seepage and stability problems. The total length of this cutoff wall would be about 1.5 miles. The cutoff walls would be constructed as described for the Sacramento River levee in Section 4.1.3.3 above.

Arcade Creek

The Arcade Creek levees require improvements to address seepage, slope stability, and overtopping when the event exceeds the current design. A cutoff wall would be constructed to address seepage for about half of the total length of the creek equaling about 1.3 miles on both the north and south banks. There is a ditch adjacent to the north levee at the landside toe which provides a shortened seepage path, and could affect the stability of the levee. The ditch would be replaced with a conduit or box culvert for about 0.5 mile and then backfilled. This would lengthen the seepage path and improve the stability of the levee. The Arcade Creek south levee has a slope stability problem in some areas due to the steepness of the levee slope. To address this problem, the levee would be partially degraded and reconstructed with a geosynthetic material to reinforce the levee slope.

The Arcade Creek levees upstream of Norwood Avenue have existing floodwalls, however there remains a height issue in this reach. A 1 to 4-foot floodwall and levee raise for about 2 miles on both the north and the south banks would allow the levees to pass flood events greater than the current design level. Constructing the floodwall raise would require doweling into the existing concrete floodwall and adding reinforced concrete to the floodwall section. Construction of the levee raise would be consistent with the description for the Sacramento River levee raises.

In addition to the measures discussed above, in areas where the current levee geometry does not meet current Corps standards, measures would be implemented to bring these levees into compliance. These measures include widening the crown to 12 feet, when necessary, and flattening slopes that are steeper than 2:1.

Magpie Creek Diversion Canal

The existing left bank levee of the Magpie Creek Diversion Canal would be raised for a distance of approximately 2,100 feet. A new levee would be constructed along the west side of Raley Boulevard south from the bridge down to Santa Ana Avenue for a distance of approximately 1,000 feet.

In addition, a culvert would be constructed under the Sacramento Northern Railway Bike Trail embankment. A new channel would be excavated upstream and downstream from the culvert, connecting the culvert with Robla Creek. The new channel would be slightly above the existing channel invert to allow low flows to continue through the existing bridge. Stone protection would be placed in the bed and sides of the new channel to minimize erosion. The culvert would meter the flow to reduce the chance of flood waters overtopping the levees downstream. This feature would increase the area of floodplain inundation upstream of the culvert. The project would include acquisition of flowage easements for this floodplain. A takings analysis has been conducted which determined acquisition of flowage easements is warranted.

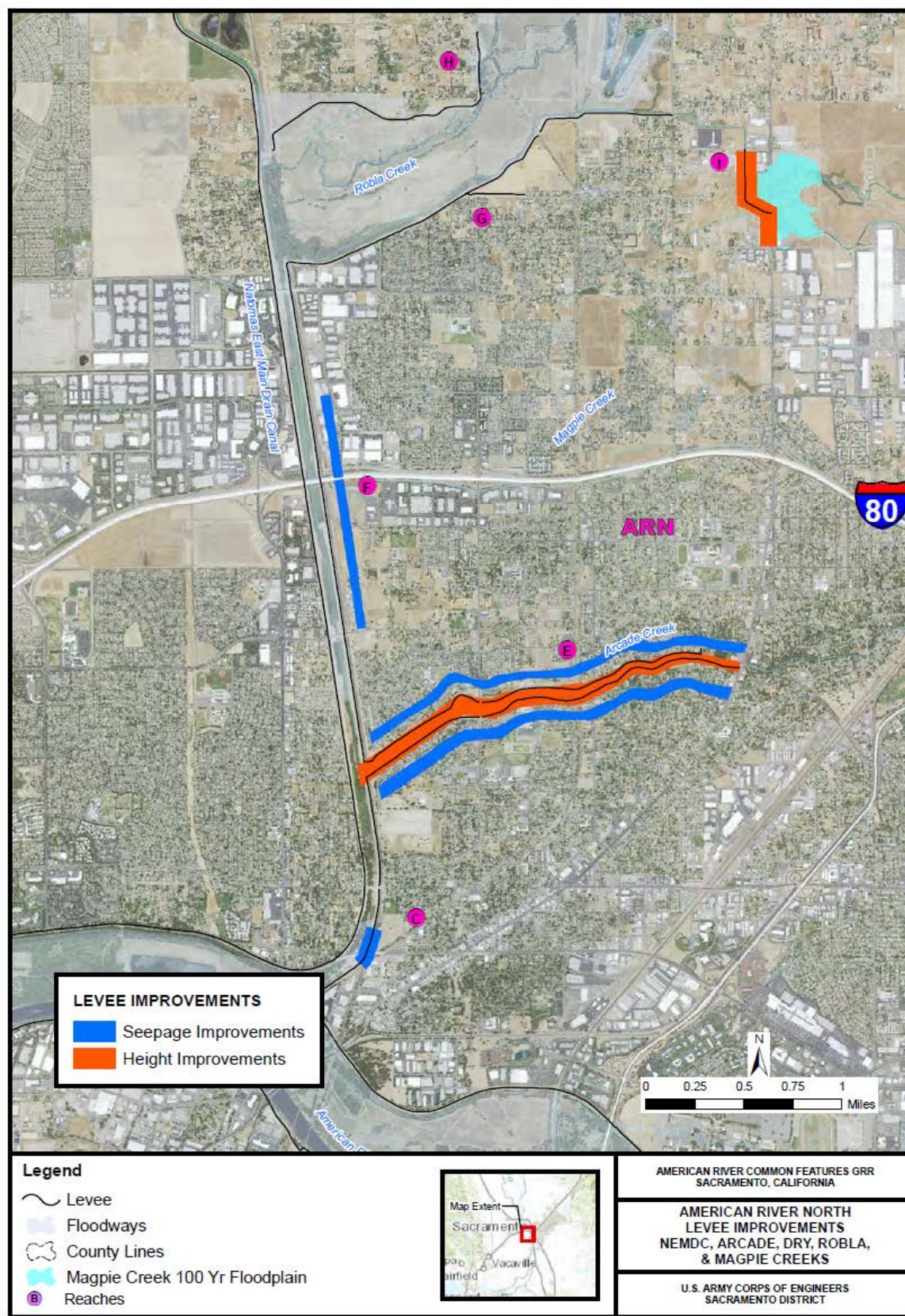


Figure 4-10: Recommended Plan Features for NEMDC, Arcade, and Magpie Creek Tributaries.

Levee Safety Compliance for the Tributaries

The construction footprint for the levee improvements along the Tributaries will be confined to the top half of the levee. This is displayed in Figure 4-11 below. Vegetation and encroachments within this footprint will be removed during construction. A vegetation variance is assumed to be in place for the lower half of the waterside levee slope.

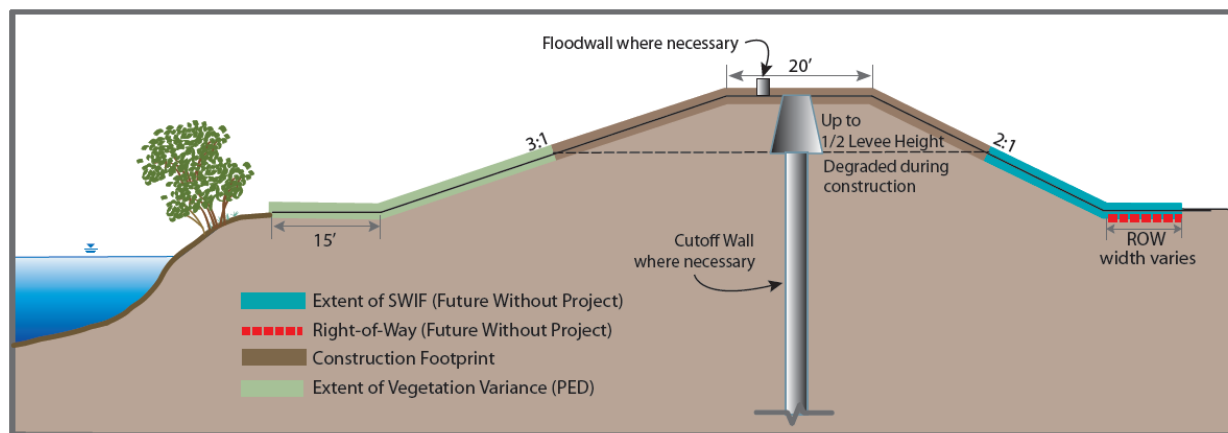


Figure 4-11: Levee Safety Compliance on the NEMDC, Arcade, and Dry/Robla Creeks.

4.1.4 Sacramento Weir and Bypass

The Sacramento Weir and Bypass would be expanded to roughly twice their current width to accommodate increased bypass flows. The existing north levee of the Sacramento Bypass would be degraded and a new 2 mile long levee would be constructed approximately 1,500 feet to the north. Various widths were analyzed and 1,500 feet was found to be optimal in terms of the amount of water surface elevation reduction in the Sacramento River. The new north levee of the bypass would be designed to be consistent with the existing Sacramento Bypass north levee, however, the slopes would be flattened to 3:1 and it would also include a 300-foot-wide seepage berm on the landside with a system of relief wells. An abandoned landfill associated with farming activities is located at the western end of the landside of the existing north levee. The site is approximately 17 acres and is under continued investigation by the California Integrated Waste Management Board for clean up. This site would be remediated by the non-Federal sponsors prior to construction.

The existing Sacramento Weir would be expanded to match the wider bypass. At this time, it is not known whether the new segment of weir would be constructed consistent with the existing weir design, or whether it would be designed to be a gravity-type weir. The existing 1916 weir design concept was used for cost estimating purposes and was deemed acceptable for project feasibility phase purposes. The possibility of changes to the weir design was considered within the cost risk analysis and is therefore contained within the contingencies.



Figure 4-12: Proposed Sacramento Weir and Bypass Expansion.

4.2 DESIGN AND CONSTRUCTION CONSIDERATIONS

4.2.1 Design Consideration

The project development team (PDT), including the non-Federal sponsors, employed a design approach focused on developing recommendations for levee improvements that would comply with USACE design criteria while at the same time, identifying options supported by the non-Federal sponsors and stakeholders. These recommendations meet the State of California levee design criteria as well. The focus was on improving the existing legacy levee system and identifying methods to address the greatest risk factors. It is acknowledged that these design recommendations will be refined during PED.

The top half of the levee would be removed during construction to provide an adequate platform width for the machinery needed for installation of the anticipated cutoff wall. This method of degrading the levee by half its height prevents the fracturing of the levee embankment during construction and also improves public and worker safety. Degrading the top half of the levee will also allow for this material to be replaced with better material for levee construction compared to the existing levee material. This new material will be applied and compacted according to modern engineering specifications.

Utility encroachments and penetrations within the construction footprint will be brought into compliance with applicable Corps policy or removed depending on the type and location. Utility replacements would occur via one of two methods: (1) a surface line over the levee prism, or (2) a through-levee line equipped with positive closure devices. Private encroachments within the construction footprint shall be removed by the non-Federal sponsors or property owner prior to construction.

During construction of levee improvements, the cross section geometry would be modified to meet Corps and State standards² within the construction footprint. The standard levee footprint consists of:

- A 20 foot crown width for the Sacramento and American Rivers, or
- A 12-foot crown width for NEMDC, Arcade, and Magpie Creeks, and
- Either 2:1 or 3:1 landside and waterside slopes (depending on the channel, past performance, and engineering analysis).

Landside levee toe access is needed during construction and all existing access points and routes would be used. In certain areas where levee raises are recommended, additional landside levee access would be acquired.

4.2.2 Construction Schedule and Project Implementation

Construction of the Recommended Plan is estimated to take approximately 10 years. The construction reaches have been prioritized based on a variety of factors, including the condition of the levee, the potential damages that would occur due to levee failure, and construction feasibility considerations, such as the availability of equipment at any given time. The tentative construction sequence is shown in Table 4-2.

Standard practice for USACE civil works projects is to reflect an optimal design and construction schedule and assume that funding would be provided in time to support the schedule. The duration was determined based on a variety of factors including construction rates, air emissions, property acquisitions, and resource capacity to execute the design and construction of the features. The cost risk contingencies also considered the possibility of competition between flood risk projects in the same area.

² State Urban Levee Design Criteria (ULDC) is generally consistent with USACE Levee criteria. Any refinements would be conducted during PED. If the State is requesting a standard more stringent than what USACE is recommending, this would be a non-Federal expense.

To the extent that erosion occurs within the study area prior to implementation of bank protection within that area, repairs of these erosion sites may occur as part of the Sacramento River Bank Protection (Sac Bank) Project if determined to meet that project's criteria. For that to happen, the erosion sites would have to be determined to be within the Sac Bank authorization, be economically justified, be ranked on the prioritization list such that construction would occur, and funded accordingly.

Table 4-2: Tentative Construction Sequence for the Recommended Plan.

PRIORITY	WATERWAY	REACH	YEAR OF PROJECT CONSTRUCTION									
			1	2	3	4	5	6	7	8	9	10
1	Sacramento River	ARS F										
2	Sacramento River	ARS E										
3	American River	ARS A										
4	Sacramento River	ARS G										
5	Sacramento River	ARS D										
6	American River	ARS B										
7	American River	ARN A										
8	American River	ARS C										
9	American River	ARN B										
10	Sacramento Weir & Bypass	SBW										
11	Arcade Creek	ARN D										
12	NEMDC	ARN F										
13	Arcade Creek	ARN E										
14	NEMDC	ARN C										
15	Magpie Creek	ARN I										

As shown in the table above, the study reaches have been prioritized for construction based on a number of criteria which mainly focus on the condition of the levee in those areas and the associated consequences of a levee failure. This approach was a strategy to address the greatest risk drivers first. The greatest risk in the study area is the potential for a geotechnical levee failure along the Sacramento River from a relatively frequent event. Therefore these reaches are shown as a high priority in the construction schedule. Erosion along either the Sacramento or American Rivers also constitutes a significant risk and this is reflected in the reach prioritization as well.

4.2.3 Levee Accreditation

The Engineer Circular 1110-2-6067 serves as guidance for USACE to provide the necessary Risk and Uncertainty (R&U) rationale to certify/accredit levees for FEMA. FEMA certification was not determined at this time. The local sponsors have an interest in having the repaired levees brought up to the minimum requirements needed for FEMA accreditation. By traditional FEMA methodology (Title 44 CFR Section 65.10), it is likely that the local sponsors could achieve FEMA Certification in the study area using this proposed project, recent projects (Natomas PAC) and the local partners' ongoing efforts under the

Natomas Levee Improvement Program (NLIP). This would likely be completed by ensuring that there are three feet of freeboard above the 100-yr event for all the levees in the project area.

Urban Levee Design Criteria (ULDC) is a state standard established by the State of California Department of Water Resources. The ULDC requires urban levees to have at least three feet of freeboard above the mean 200-Year event or a combination of freeboard (2-3 feet) and assurance (90%-95%) to contain the mean 200-Year event.

4.2.4 Borrow Material

It is estimated that a maximum of 1 million cubic yards of borrow material could be needed to construct the project. Because this project is in the preliminary stages of design, detailed studies of borrow needs have not been completed. To identify potential locations for borrow material, soil maps and land use maps were obtained for a 20-mile radius surrounding the project area. Borrow sites would be lands that are the least environmentally damaging. The criteria used to determine potential locations were based on current land use patterns, soil types from U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), and Corps' criteria for material specifications. The data from land use maps and NRCS has not been field verified, therefore, to ensure that sufficient borrow material would be available for construction the Corps looked at all locations within the 20 miles radius for 20 times the needed material. This would allow for sites that do not meet specifications or are not available for extraction of material.

4.2.5 Interior Drainage

The modifications to existing interior drainage facilities have been limited to bringing the facilities in compliance with Corps criteria for penetrations through levees (upgrading discharge lines, pumps, etc. to raise the drainage over the top of levee). An assessment of the capacity of existing facilities to address the residual flooding from interior runoff was accomplished for the GRR and will be refined during the design phase, at which time, justified interior drainage facilities will be identified in accordance with the specific USACE guidance. Additional information is located in Section 7.5 of the Hydraulic Appendix.

4.3 ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

The effects to the environment have been considered throughout the planning phase of the project and opportunities have been evaluated to reduce effects to resources within the project area. A vegetation variance will be sought for the project, which will allow vegetation to stay on the lower half of the waterside levee slope. The waterside vegetation is valuable Shaded Riverine Aquatic Habitat (SRA) habitat for many State and Federally listed fish species, and provides habitat for the Federally threatened Western yellow-billed cuckoo and the State-listed Swainson's hawk. Although mitigation for State listed species is not necessarily required for a Federal project, these impacts also affect Federally

listed species and would be required under Section 7 Endangered Species Act (ESA) consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). During the design phase of the project opportunities will be taken to choose a design that will minimize effects to the American River Parkway where feasible. The Parkway provides habitat for the Federally threatened valley elderberry longhorn beetle and Western yellow-billed cuckoo.

Additionally, in order to avoid jeopardizing the Federally listed green sturgeon, a number of additional measures have been incorporated in the project per the terms of the NMFS Biological Opinion to include modeling, monitoring, and mitigation for this species. The details of this effort are included in the NMFS Biological Opinion in Appendix J of the EIS/EIR, and in the Mitigation and Monitoring Plan in Appendix I of the EIS/EIR.

Table 4-3 lists the habitat impacts of the Recommended Plan and the proposed mitigation for those effects. The construction feature that provided the more conservative environmental effects was used for estimating mitigation. Due to the spatial loss of on-site habitat associated with off-site mitigation, and the temporal loss of habitat associated with on-site mitigation as the new habitat is establishing, the ecological value associated with the mitigation proposed was reduced below the level of the existing habitat that would be impacted by project construction. This reduction would be offset by mitigating additional acreages at the levels established by USFWS and NMFS in the Coordination Act Report and Biological Opinions for the project (Appendix A and Appendix J of the EIS/EIR, respectively).

During detailed design, efforts will be made to further reduce effects from what is projected in Table 4-3. A Cost Effectiveness Incremental Cost Analysis (CE/ICA) was conducted on the habitat mitigation features. Additional information on environmental effects and mitigation is located in Sections 3.6 to 3.8 in the accompanying EIS/EIR. The Habitat Mitigation and Monitoring Plan, including adaptive management planning, and the CE/ICA are included as Appendix I to the EIS/EIR. The Habitat Mitigation and Monitoring Plan focused specifically on habitat mitigation (i.e., habitat creation elements) and doesn't include other commitments in the NMFS Biological Opinion, including preconstruction modeling, fish monitoring, and fish passage at the Sacramento Weir. Additionally, in the HMMP there was no contingency included.

Table 4-3: Environmental Effects of and Proposed Mitigation for the Recommended Plan^{1,2}.

Habitat Type	Potential Impacts	Duration of Impact	Mitigation (Acres/Linear Feet)	Cost ³
Giant Garter Snake Aquatic	15 Acres	Permanent	45 Acres	\$2,250,000
Giant Garter Snake Uplands	30 Acres 75 Acres	Permanent Temporary	90 Acres 75 Acres	\$4,500,000 N/A ⁵
Western Yellow-billed Cuckoo Riparian	150 acres	Permanent	Restore 300 acres	\$16,566,000
Shaded Riverine Aquatic Habitat (ESA Fish Species)	82,325 LF	Single Construction Season	Up to 82,325 LF self-mitigating with on-site planting ⁴	
Elderberry Shrubs	3,292 stems	Permanent	70 Acres \$85,000 per acre	\$6,026,000
Vernal Pools	0.25 acre	Permanent	1 acre	\$275,000
Green Sturgeon	20 Acres	Permanent	Restore Acres and conduct Habitat Monitoring	\$16,259,000
Delta Smelt Spawning Habitat	32 acres	Permanent	32 acres	\$4,160,000
Shallow Water Habitat (Delta Smelt)	14 acres	Permanent	42 acres	\$5,460,000
Oak Woodland	2 acres	Permanent	4 acres	\$200,000
Wetlands	0.4 acres	Permanent	1 acre	\$130,000
Sub-Total				\$55,826,000
Contingency				\$15,631,000
Total				\$71,457,000

Notes:

¹ Assumes variance from USACE's Levee Safety Policy is granted for Sacramento River and Compliance for American River will be completed under a SWIF

² Based on October 2015 price levels

³ Costs shown are estimated costs. Environmental costs displayed in follow on tables reflects an additional cost for price escalation of 0.4% published in October 2015.

⁴ SRA habitat mitigation is provided as a separate construction cost, since it is a feature of the bank protection designs and would be included as a part of the construction contract. The cost is displayed under the Fish and Wildlife Facilities account as "Construction" costs and is estimated to be approximately \$231 per linear foot.

⁵ 75 acres of temporary effects to GGS upland habitat from the relocation of the Sacramento Bypass levee toe drain would consist of standard site restoration erosion control features required by the SWPPP such as hydroseeding. This is contained within construction costs and is not a mitigation cost.

4.4 REAL ESTATE REQUIREMENTS

The Real Estate Appendix discusses, by reach, the real estate interests to support the construction, operation, and maintenance of the Recommended Plan. The real estate interests include the estates, number of ownerships, and estimated land values. The baseline cost estimates include a gross appraisal and the Federal and non-Federal costs associated with acquiring the lands for the project. The non-Federal administrative costs include right of way planning and management, securing rights of entry for engineering and environmental studies, surveying existing roadways for plats and legal descriptions, right of way field staking, appraisal services, independent appraisal review, acquisition services, relocation assistance, title and escrow support, and condemnation support. The Federal administrative costs include feasibility-level estimated costs associated with the areas and estates that are required for the construction, operation and maintenance for the project. Several of the features included in the plan alter the footprint of the existing Federal flood management system: a new setback levee would be constructed for the Sacramento Bypass and a new segment of the Sacramento Weir would be built.

Other land requirements for the project include temporary borrow areas, temporary construction areas, temporary staging areas, and permanent mitigation sites. The non-Federal sponsors will acquire adjacent land for relocation of infrastructure from the flood control corridor and planned improvements outside the flood control corridor, with appropriate easements provided to utility owners upon completion of the work. To meet its project footprint needs, the non-Federal sponsors must acquire fee title to fish and wildlife mitigation lands, permanent easements for levees, walls, and other permanent structures, flowage areas, waterway improvements, and right-of-way relocation of public highways and public utilities. Permits or temporary easements for excavated material or borrow areas are required during construction and adequate access thereto.

Finally, the plan requires relocations of many government owned utilities (City, County, Sacramento Municipal Utility District (SMUD)) in the study area. This project has received a waiver letter from the Assistant Secretary of the Army (ASA), dated 14 July 1998, relating to a cost sharing issue associated with utility relocations required for construction of the American River Common Features Project in Sacramento, California. Generally, USACE treats relocations as creditable items of non-Federal work and includes such costs in total project costs. The exception is when the sponsor has the authority to compel relocations at no cost to the sponsor.

Requiring the State to revoke permits issued to SAFCA's member agencies would recognize neither the highly interrelated sponsorship of the project that includes the State and SAFCA, nor equitably reflect the joint contributions these entities are making to project financing. The ASA determined that the removal and replacement of a utility, or other public facility, owned by the State of California, or a political subdivision thereof, and which delivers public services, should be treated as a relocation where such work is required as a direct result of the construction of the project. The Corps will include the costs incurred by the non-Federal sponsors in performing these relocations as part of shared total project costs and credit the non-Federal sponsors for such costs. Other relocations include a number of residential and nonresidential structures to accommodate the expanded project footprint along the

Sacramento River east levee. Privately owned infrastructure items need to be included in the lands category as a damage or severance cost, not a facility relocation for project cost sharing purposes. Table 4-4 lists the Real Estate costs for the Recommended Plan.

Table 4-4: Real Estate Costs for the Recommended Plan¹.

MII Account²	Category	Costs³
01 – Lands and Damages		
	Non-Federal Administrative Costs	\$25,658,600
	Non-Federal Lands	\$60,458,400
	Subtotal Non Fed Lands and Damages	\$86,117,000
	Federal Administrative Costs	\$9,216,000
	Subtotal Federal and Non-Federal Lands and Damages	\$95,333,000
02 – Utility/Facility Relocations		\$157,201,000
	Total Real Estate Costs (01 and 02 Accounts)⁴	\$252,534,000

Notes:

¹ Based on October 2014 price levels

² MII is the software program and associated format used by USACE in developing cost estimates. Costs are divided into various categories identified as “accounts.” Detailed costs estimates are presented in Appendix C, Attachment D, Cost Engineering.

³ Costs shown are estimated costs. Real estate costs displayed in follow on tables reflects an additional cost for price escalation of 0.6% published in October 2015.

⁴ The total first cost presented here is the project first cost column from the Certified Cost TPCS.

4.5 OPERATIONS, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R) CONSIDERATIONS

The Standard Operation and Maintenance Manual, Sacramento River Flood Control Project, approved April 1948, and supplements, will be supplemented for the work completed along the Sacramento River east levee and the American River north and south levees. Updated operation and maintenance manuals will be required as well for work completed along the NEMDC, Arcade and Magpie Creeks. The value of continued OMRR&R is considerable and the lack or partial completion of these activities could lead to additional increased risks over time.

4.5.1 Agencies and Organizations

The non-Federal sponsors will have ultimately responsibility for the OMRR&R of the recommended project. However, it is anticipated that in the non-Federal sponsors will contract with local maintaining agencies and organizations to perform certain maintenance activities. Table 4-5 below lists these maintaining agencies and the affiliated study reaches.

The City of Sacramento

The City of Sacramento (City) maintains the levee along the Sacramento River from the I Street Bridge to Sutterville Road. The City also ensures that the interior drainage systems work efficiently, monitors floodgates and maintains drainage canals and basins. In an emergency, the City installs floodgates and operates and monitors the flood management system.

American River Flood Control District (ARFCD).

The mission of the American River Flood Control District is to operate and maintain a total of 40 miles of levee along the American River and portions of NEMDC, Robla Creek, Arcade Creek, Dry Creek, and Magpie Creek. ARFCD also maintains the short stretch of the Sacramento River levee upstream of the I Street Bridge. The lands acquired by SAFCA and the State of California for levee improvements along NEMDC, Robla Creek, Arcade Creek, Dry Creek, and Magpie Creek would be conveyed to ARFCD in fee title.

By agreement with the State, ARFCD would operate and maintain the constructed facilities in accordance with the operation and maintenance requirements of the SRFCP. Typical flood control and drainage canal operation and maintenance activities would include mowing established grasslands along levee slopes, berms, and access areas; managing drainage canal bank vegetation, including noxious and invasive weeds; periodically removing sediment from the drainage canals; and maintaining and repairing levee and canal patrol roads. These efforts would be carried out under a long-term management agreement between the State and ARFCD.

California Department of Water Resources – Maintenance Area 9 (DWR-MA 9)

Maintenance Areas are formed for the purpose of providing maintenance when local agencies fail in their responsibilities. The maintenance work is provided by the State of California Department of Water Resources (DWR). The authorized services include levee maintenance, flood patrolling, and emergency repairs. Maintenance Area 9 is located on the east bank of the Sacramento River between Sutterville Road and Snodgrass Slough. DWR also provides maintenance on the existing Sacramento Weir and Bypass levees and would be the maintaining agency for the widened Sacramento Weir and Bypass. Table 4-6 displays maintaining agencies by study reach.

Table 4-5: Maintaining Agencies for Study Reaches.

Basins	Maintaining Agency	Reach Description
ARN	ARFCD	Right Bank American River
	ARFCD	Tributaries
ARS	ARFCD	Left Bank American River
	ARFCD	Sacramento River from confluence to I Street Bridge
	City of Sacramento	Sacramento River from I Street Bridge to Sutterville Road
	DWR-MA 9	Sutterville Road to Freeport
	DWR-MA 9	Widened Sacramento Weir and Bypass

4.5.2 Monitoring and Adaptive Management

Overall, after implementation of mitigation components, the mitigation sites would be monitored throughout the year, depending on the type of habitat, and as developed in negotiation with the appropriate resource agencies. USACE would be responsible for providing success monitoring, which, as required for ESA mitigation by the appropriate resource agencies, would be conducted by a qualified ecologist, botanist, or biologist. The monitor would be objective and independent from the installation contractor responsible for maintenance of the site. A mitigation and monitoring plan, including adaptive management planning, was developed and is included as Appendix I of the EIS/EIR. The plan is expected to be updated throughout the PED phase of the project in coordination with the USACE Engineer Research and Development Center (ERDC), NMFS, and USFWS.

All habitat types and mitigation sites would receive quantitative and qualitative monitoring. Quantitative monitoring would be performed in accordance with the performance criteria). Qualitative monitoring would provide an opportunity to document general plant health, overall plant community composition, hydrologic conditions, damage to the site, infestation of weeds, signs of excessive herbivory, signs of wildlife use, erosion problems, and signs of human disturbance and vandalism. These criteria would be assessed and noted for use in adaptive management of the mitigation sites, but they would not be used to determine project success. In addition, a complete list of all wildlife species encountered would be compiled for each mitigation site during each monitoring visit. Particular attention would be given to looking for evidence of listed species at the mitigation sites, including giant garter snake, valley elderberry longhorn beetle exit holes, Western yellow-billed cuckoo, salmonid and sturgeon presence, and Swainson's hawk nests.

USACE would prepare an annual report in conjunction with the resource managers that would be submitted to the USFWS, CDFW, NMFS, and the Central Valley RWQCB by December 31 of each year during the success monitoring period. Monitoring will continue until the Division Engineer determines that ecological success criteria have been met, which is expected to occur within 3-10 years, and after the District Engineer has consulted with appropriate Federal and State agencies. The report would assess the attainment of or progress toward meeting the success criteria for the mitigation sites.

4.5.3 Post Earthquake Remediation Strategies

A seismic evaluation was conducted as part of the ARCF GRR (USACE, 2010). For the Study Area, liquefaction analyses and seismic vulnerability analyses were performed for the most critical cross-section in each reach. Based on the seismic vulnerability analyses, the majority of reaches within the Study Area were classified as “Very Likely Compromised” with respect to post-seismic flood protection ability. As part of DWR’s ULE Project, URS also performed a seismic evaluation. The ULE study provides results of seismic vulnerability evaluations, including liquefaction potential analysis and post-seismic vulnerability analyses. Based on the ULE seismic evaluations, the levees were identified as having “low to medium seismic vulnerability”.

Therefore, for purposes of this study, it is assumed that if liquefaction of a segment of levee occurs as a result of an earthquake during the life of the project, agencies will perform the necessary inspections of the infrastructure for visible signs of damage. If there was a change in the structure’s ability to perform as intended, an emergency flood fight would be initiated by state and local agencies. If the flood fight in the area exceeded the state’s ability to respond, then PL 84-99 flood fight assistance could be requested through a governor’s letter. Following the flood event, if necessary the request for PL 84-99 rehabilitation assistance could be requested/sought to address the areas with damage.

4.5.4 OMRR&R Costs

The Sacramento District developed operation, maintenance, repair, replacement and rehabilitation (OMRR&R) costs associated with the project features. The costs were developed with input and review from two of the local maintaining agencies (LMA). Specifically, several meetings and conversations between the District, the Department of Water Resource’s Maintenance Area 9 (MA-9), and American River Flood Control District (ARFCD) staff resulted in a mutual understanding of the increased efforts and impact on costs. The increased efforts include additional mowing, rodent control, and vegetation management. Some of the OMRR&R costs were developed quantitatively, however, many of the costs were developed using qualitative judgment to determine the increase in cost beyond what is currently included in the existing O&M Manual. These costs are listed in Table 4-6 below.

Table 4-6: Annual Increase in OMRR&R Costs¹.

Maintaining Agency for Existing Feature	Existing OMRR&R Features	Existing OMRR&R Costs	Maintaining Agency for Recommended Feature	Description of New Recommended Feature	Increased Cost
MA-9	Sacramento Bypass	\$250,000	MA-9	Weir Widening	\$56,200
				North Bypass Levee	\$137,400
				Bypass Channel	\$15,000
	Levee Maintenance	\$1,755,000		Levee Maintenance	49,400
City of Sacramento, ARFCD	Access Roads, Levee Main.	\$884,700	City of Sacramento, ARFCD	Levee Maintenance	\$236,000
Total		\$2,889,700			\$494,000

¹ Based on October 2014 price levels

4.6 SAFETY ASSURANCE REVIEW

Section 2035 of WRDA 2007 requires that flood damage reduction projects be reviewed by independent experts, where appropriate, to ensure public health, safety, and welfare. In determining whether such a safety assurance review is necessary the following factors must be considered:

- The failure of the project would pose a significant threat to human life;
- The project involves the use of innovative materials or techniques;
- The project design lacks redundancy; or
- The project has unique construction sequencing or a reduced or overlapping design construction schedule.

Safety assurance reviews must include participation by independent experts selected from among individuals who are distinguished experts in engineering, hydrology, or other appropriate disciplines, and who have not been involved in the design of the project, have no conflict of interest, and do not carry out or advocate for or against Federal water resources projects. The purpose of a review is to provide information on the adequacy, appropriateness, and acceptability of the design and construction activities so as to assure public health, safety, and welfare. The reviews should focus on whether the assumptions made for the hazards remain valid as additional knowledge is gained and the state of the art evolves. In addition, the review panel should advise whether project features adequately address redundancy, robustness, and resiliency, and whether the findings during construction reflect the assumptions made during design. Additional reviews should be completed periodically, on a regular schedule, until construction activities are completed.

Because failure of the proposed levee improvements around the Sacramento area would pose a significant threat to human life, independent review of the design and construction activities based on the Safety Assurance Review standards referenced above will be required.

4.7 RESIDUAL RISK

Residual Risk is the risk of inundation in the study area after implementation of the Recommended Plan. This section includes a discussion on the nature of residual risk in the study area, including levee superiority assumptions and an analysis of the post flood occupation of the study area. It also includes a discussion of measures included in the Recommended Plan to address residual risk along with additional actions by the non-Federal sponsors to address residual risk beyond the scope of this GRR.

4.7.1 Nature of the Residual Risk in the Study Area

The Chief's Report recommending authorization of the American River Common Features Project acknowledged that the implementation of those features would leave significant residual risk in the Sacramento area. The following is from the Chief's Report (House Doc. 105-151):

"I must emphasize, however, that implementation of the common elements should not be viewed as a permanent solution addressing all flood damage reduction issues in the Sacramento area. Construction of the common elements leaves relatively short flood warning times, significant depths and durations of flooding in the area, in the event levees are overtopped, problems with safe egress during a flood event and significant residual risk, both in term of monetary damages and hazards to human life...I will make further recommendations concerning implementation of a more comprehensive plan for the American River."

While the implementation of the Folsom Dam Modifications and the Folsom Dam Raise Project will add significantly to the ability to manage releases from Folsom Dam, there still remains a chance that an unprecedented flood could overwhelm the ability of the dam to prevent flooding downstream. The dam modifications have given dam operators the ability to release amounts of water necessary to save the dam. However, releases of this magnitude would cause massive flooding in Sacramento. It is also important to note that as the population of the urbanized area continues to grow through infill and redevelopment, the consequences of a levee failure would continue to increase. It is of the utmost importance that public education efforts emphasize the residual risk inherent in any system of flood risk management. In order to continue to reduce the residual risk, the Recommended Plan includes continuation of non-structural measures by the sponsors as items of local cooperation, consisting of updating and adhering to the floodplain management plan, annual publication of residual risks to residents in the floodplain, updates and improvements to local building codes, and participation in the Federal flood insurance program. As part of the Recommended Plan, the sponsors would also be required to provide floodplain information to regulatory agencies.

Analysis indicates that there is still some chance of levee poor performance below the top of levee. Table 4-7 displays the probability of poor performance at various feet below the top of the levee at index points within the study area.

Table 4-7: Residual Risk at Index Points in the Study Area¹.

ARS Basin – American River		ARS Basin – Sacramento River		ARN Basin – American River		ARN Basin – Tributaries	
Feet Below TOL	Chance of Poor Performance	Feet Below TOL	Chance of Poor Performance	Feet Below TOL	Chance of Poor Performance	Feet Below TOL	Chance of Poor Performance
9.3	4%			6.7	3%	9.3	2%
4.7	8%	9.8	3%	4.8	6%	6.1	4%
3	13%	3	6%	3	12%	3	6%
0	17%	0	9%	0	16%	0	10%

Note: ¹ Economic Damages associated with the Residual Risk are displayed in Appendix E (Economics) of the GRR.

Rivers in the study area can rise from low flow levels to damaging floods within one to three days. If a levee failure were to occur, the flood depths would range from several inches along the eastern limits of the floodplain near high ground, to more than 20 feet in areas immediately adjacent to the levees. The duration of the flooding is likely to be weeks after the water levels in the river have receded. Large amounts of pumping would be required since the water level in the rivers would be higher than the land behind the levees. The average expected residential and public displacement times as a result of flooding would range from weeks in areas of shallow flooding to much longer periods in areas of deep flooding where substantial damage to infrastructure and individual structures would be expected.

4.7.2 Levee Superiority

Superiority is the levee design approach that identifies an initial overtopping location in the least hazardous location of a levee reach. This can be achieved by specifically setting the top of levee lower in the chosen overtopping location.

According to ETL 1110-2-299, “Overtopping of Flood Control Levees and Floodwalls,” two design types can be used to control initial overtopping. The first is the use of different levee heights relative to the design water surface from reach to reach to force overtopping in a desired location. The second design uses notches, openings, or weirs in the structure. The inverts for these features are at or above a design water surface elevation but below the neighboring top of levee. Examples are railroad or road crossings of levees and rock weirs.

For this study, the second option (the use of the weirs as described in ETL 1110-2-299) was applied. The two weirs on the Sacramento River in the project area, Fremont Weir and the Sacramento Weir, divert high flows away from Sacramento into the Yolo Bypass. The two weirs are the only designed flood relief

structures in the system. The levees in the project area have not been designed for overtopping, but there are incidental low areas that will likely overtop first.

4.7.3 Post-Flood Reoccupation of Sacramento

The levees surrounding Sacramento vary from approximately 10 feet tall to approximately 25 feet tall. A levee failure, depending on the location, could potentially inundate the majority of the basin where the levee failure occurred. Conditions in the impacted basin(s), if this were to occur, would be very similar to conditions in New Orleans after Hurricane Katrina.

Considerable infrastructure is required to support the population in the study area. Key infrastructure within the project area includes the California State Capitol and State offices, hospitals, many power transmission lines, water supply lines, sewage lines, interior drainage canals and pump stations, phone lines, and roadways. (See Chapter 2 for additional infrastructure information) In addition to the infrastructure flooding in the event of a levee failure, there are approximately 120,000 residential dwellings that would be inundated, in many cases with up to 25 feet of flooding.

In the event of significant flooding of the basin, numerous actions would have to be completed prior to reoccupation of the basin. Probably the most significant action would be reestablishment of interior drainage infrastructure. Interior drainage for the American River North and American River South Basins is accomplished by pump stations and canals. The affected pump stations would be inundated should a levee failure occur. Because of this, these pumps would not be available to dewater the basin during and immediately after the levee failure. Additionally, because the pump motors would likely be inundated for a considerable amount of time, the motors would have to either require a considerable amount of work, or would have to be completely replaced in order to restore interior drainage capability. Additionally, power to the pump stations will likely have been interrupted. In this case, generating capacity would have to be provided to operate the pumps until the power grid was reestablished. Due to these circumstances, the basin(s) will likely be under water for a considerable period of time, most likely multiple weeks or months. New, larger pumps would be brought in to dewater the basin, similar to what occurred in New Orleans following Hurricane Katrina.

After the basin has been dewatered, considerable additional work will be necessary prior to reoccupation of the basin. Water supply infrastructure, wastewater transport facilities, and power supply infrastructure will have been inundated for a considerable period of time. Once the water is removed, repair must be done to these facilities, including cleaning and disinfecting, prior to being usable. Roadways may be usable sometime after dewatering; however, considerable repair of these roadways would likely be necessary. Other infrastructure, such as phone lines and fiber optic lines, may need to be completely replaced after a flood.

Dwellings will be uninhabitable for some time after a flood. In many cases, the homes will be completely submerged. For these cases, houses will have to be completely removed and a new structure built.

Buildings damaged by flooding can become contaminated with mold and fungi if they do not dry out quickly enough. These molds and fungi can pose serious health risks. When a house can be salvaged, building materials inside of the structure that could harbor mold and fungi would have to be removed, including sheet rock and insulation. Because of the lack of contractors available to do this type of work, the duration period for rebuilding or repairing homes could be years.

4.7.4 Recommended Plan Actions to Reduce the Residual Risk in the Study Area

The Recommended Plan would substantially lessen the probability of a flood event in the study area due to levee failure; however, there will be a remaining chance of levee overtopping from a flood that exceeds the design event.

There are two types of residual risk that have been analyzed as part of this GRR: the residual risk associated with the recommended project features and the residual risk from physical conditions not related to the recommended project features. Figures 4-13 and 4-14 display the residual risk remaining in the study area after construction of the project features. The 1/100, 1/200 and 1/500 ACE events are displayed. These figures show the percent chance of a hypothetical levee failure and the resulting floodplain for the stated flood event. The second type of residual risk is related to the flanking of the American River levees for events larger than the 1/200 ACE. The Expected Annual Damages associated with this flanking are \$29 million for the ARN Basin and \$22 million for the ARS Basin. Figure 4-16 shows the resulting floodplains from this flanking by floodwaters in the 1/500 ACE event. When considering both of these types of residual risk, the average annual residual damages in the Study Area are presently estimated to be \$112 million per year.

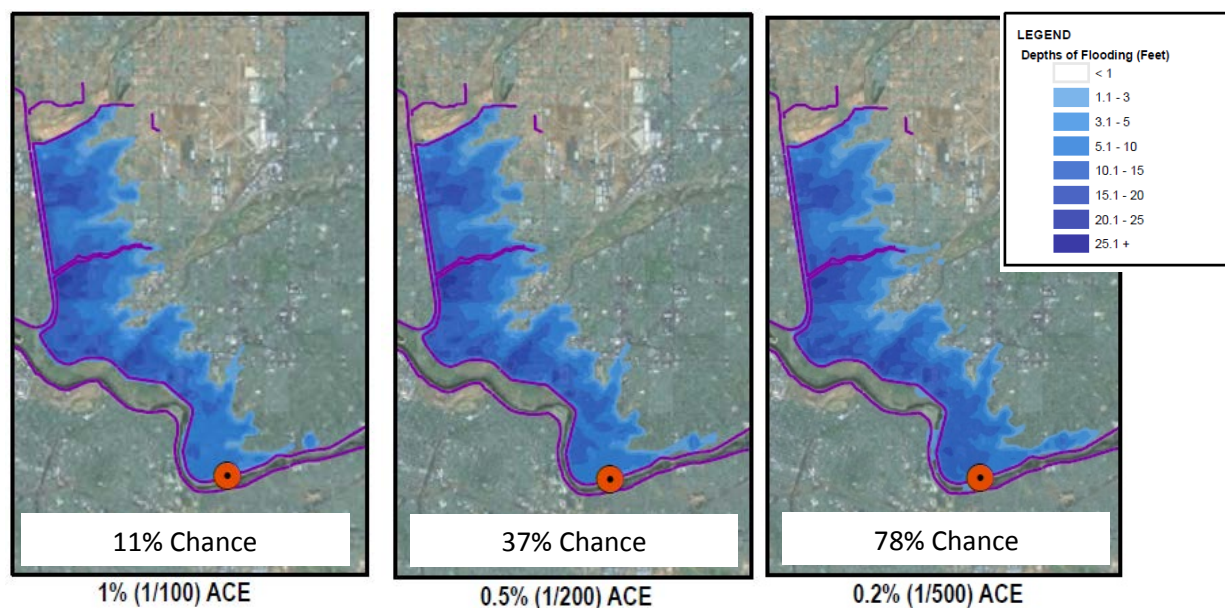


Figure 4-13: Residual Risk for the American River North Basin.

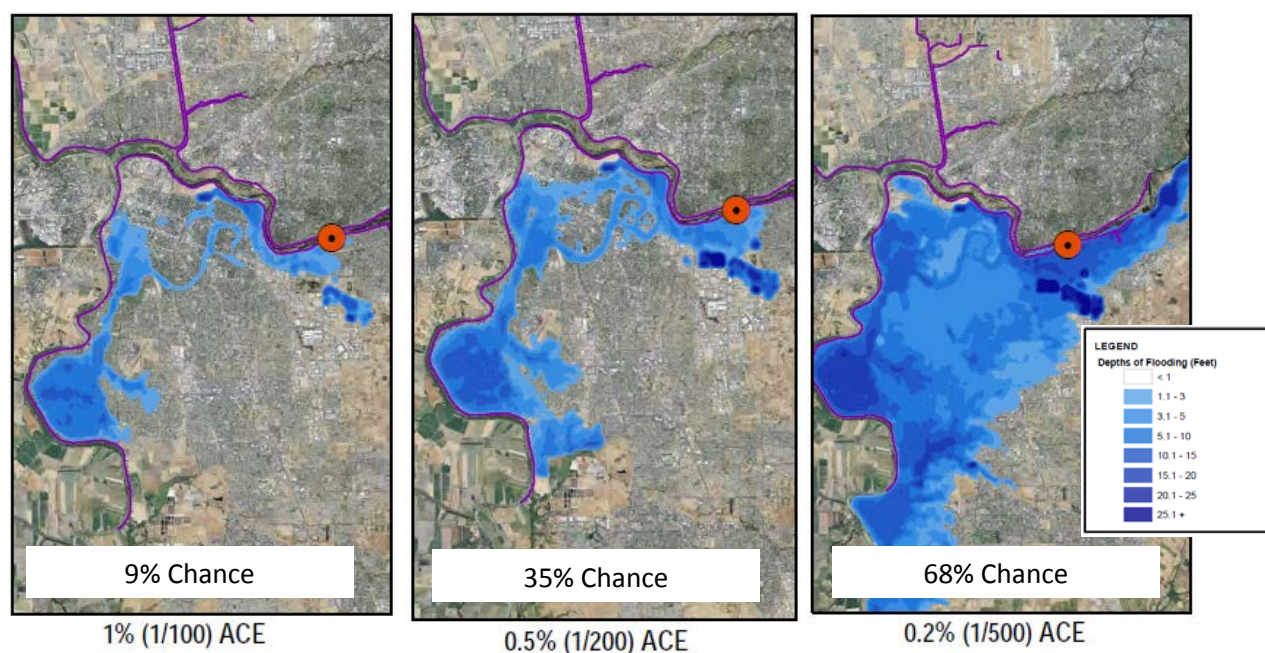


Figure 4-14: Residual Risk for the American River South Basin.

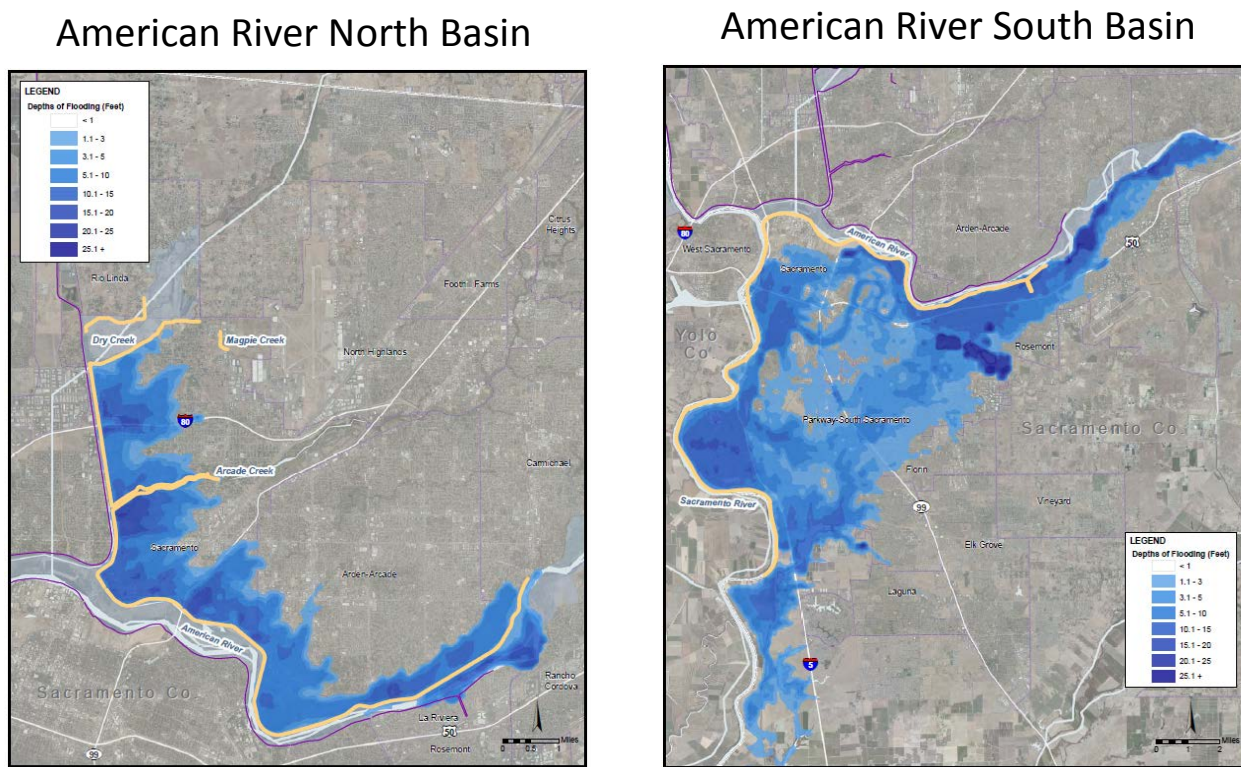


Figure 4-15: Residual Risk of Upstream Flanking of American River Levees for the 0.2% (1/500) ACE.

4.7.5 Additional Actions to Reduce the Residual Risk in the Study Area

The following sections discuss further actions being taken to address residual risk by the non-Federal sponsors and other local agencies that are outside the scope of this GRR.

Senate Bill 5

The California State Senate, in 2007, approved Senate Bill 5. There are various components included in Senate Bill 5. One element is the identification of the 100- and 200-year floodplains in the Sacramento and San Joaquin valleys. One additional feature establishes a standard for urban areas to have a 200-year level of protection, as defined by the State of California's methodologies. Even though it is not specifically stated, the intent of these features is to provide a higher level of flood protection for urban areas than for non-urban areas, thereby giving superiority to urban areas. The CVFPP was completed in 2012 and established urban and non-urban standard levels of protection as 200-year and 100-year, respectively.

SAFCA Development Impact Fee

The Recommended Plan would substantially lessen the probability of an uncontrolled flood in the basin due to levee failure. Nevertheless, with this protection in place, the consequences of a flood would increase over time as planned new development occurs in the Sacramento area in accordance with the Sacramento Area Council of Government's regional blueprint. To address residual risk, the SAFCA Board adopted a development fee program on May 15, 2008 that applies to new structures placed in the 200-year floodplain of SAFCA's capital assessment district. The objective of this program is to continue to reduce the risk of an uncontrolled flood as new development proceeds in the floodplain. The revenue generated by the fee program will be used to finance a program that will consist of the following measures, discussed in detail below: waterside levee strengthening; landside levee strengthening; and improved system operations.

Waterside Levee Strengthening

This action will consist of a long-term program of waterside bank and levee protection improvements along the Lower American and Sacramento Rivers designed to arrest retreat of the upper bank, preserve waterside berm width, and reduce the potential for destabilization of the adjacent levee foundation due to erosion or ground shaking. In addition, this action will minimize the long-term loss of mature trees and vegetation located along the affected berms and will provide opportunities for expansion of the Central Valley's remnant riparian forest while enhancing the public safety purposes of the levee system.

Landside Levee Strengthening

This action will focus on improvements to the crown and landside slope of critical segments of the levee system along the NCC and the Lower American and Sacramento rivers to increase the resistance of these levees to overtopping and extended elevated river stages. These improvements will involve hardening the crown and landside slope of portions of the NCC south levee in Natomas and American River north and south levees between Howe Avenue and Watt Avenue.

Improved System Operations

These actions will focus on opportunities to improve the operation of the Sacramento River Flood Control Project to reduce water surface elevations in the Lower American and Sacramento rivers and in the drainage channels around the Natomas Basin. These opportunities may include implementing weather forecast based operations at Folsom Dam and Reservoir and improving the conveyance capacity of the Yolo and Sacramento Bypass systems. It is assumed that SAFCA's development fee revenue will constitute only a portion of the revenue devoted to this measure, with the balance coming from the State and Federal governments as part of a State of California CVFPP.

4.8 FLOOD WARNING AND EVACUATION PLANS

Both Sacramento County and the City of Sacramento have websites containing links to information regarding flood preparation, notification, and evacuation. The information for Sacramento County, including a link to the Floodplain Management Plan, is located at:

<http://www.stormready.saccounty.net/Pages/Home.aspx>. Additional information on preparing for a flood can be found at: <http://www.sacramentoready.org/Emergencies/Pages/Floods-and-Rain.aspx>.

The information for the city of Sacramento is located at:

<http://portal.cityofsacramento.org/Utilities/Education/Flood-Ready/Your-Flood-Prep>.

4.8.1 Flood Warning System

Sacramento County and the City of Sacramento have developed a comprehensive flood warning system and evacuation plan. The County of Sacramento, Department of Water Resources has developed an Automated Local Evaluation in Real Time (ALERT) system website that provides Sacramento County Rainfall and Stream Level Information. This system consists of stream level gauges, rainfall gauges, and weather sensors. Gauging stations collect rainfall and stream level data and provide website updates every 15 minutes. Local meteorologists and television stations utilize the ALERT website to keep residents informed. During a serious county wide flood emergency, Sacramento County will post alerts on both local radio and television stations. The ALERT system also provides links to National Weather Service websites that provide both weather and stream flow information.

The stream level gauge system includes a total of 50 stream level gauges spread over 8 stream or river groups. Information on the website indicates the current stream level, channel bottom, monitor stage, and flood stage.

A total of 61 rainfall gauges spread over 8 stream/river groups or areas provide current rainfall totals in durations including 30 minutes, one, three, six, twelve and twenty four hours, and five and ten days. The current rainfall totals report is updated every 15 minutes.

4.8.2 Evacuation Plan

The City and County monitor weather conditions and stream levels to determine the level of severity and evacuation triggers of potential flood events. Streams and locations that are monitored by the County to determine the level of emergency activation include the Sacramento River at the I Street Bridge, the American River at the H Street Bridge, Morrison Creek at Mack Road, Natomas East Main Drainage Canal at Arcade Creek, Arcade Creek at East Main Drainage Canal, and the Cosumnes River. The levels of emergency evacuation identified by the County ranging from less severe to most severe include: Situational Assessment, Low-Level Emergency, Medium-Level Emergency, and High-Level Emergency.

The following table indicates the activation triggers for the Sacramento River at the I Street Bridge and the American River at the H Street Bridge.

Table 4-8: Emergency Activation Triggers.

Location	Sacramento River at I Street Bridge	American River at H Street Bridge
Situational Assessment	River is rising and significant precipitation and/or Sierra snow melt is expected	River is rising and significant precipitation and/or Sierra snow melt is expected
Low-Level Emergency	I Street gauge is 19-24 feet and rising	H Street gauge is up to 30-39 feet and rising
Medium-Level Emergency	I Street gauge is up to 27 feet	H Street gauge is up to 41 feet
High-Level Emergency	I Street gauge is up to 31 feet; levee overtopping and flooding	H Street gauge is up to 42 feet; levee overtopping and flooding

4.8.3 Public Alert and Warning

The county has established a Public Alert and Warning System to increase public awareness of an impending threat and to provide clear instructions should an emergency situation require evacuations. The actual verbal or written messages that will be given are the responsibility of the Public Information Officer, the Joint Information Center, and the Emergency Operations Center.

4.8.4 Evacuation Routes

Emergency evacuation routes have been established throughout the county. Evacuation areas, evacuation routes, and rescue areas have been established for five levee breach locations in the American River North Basin, and eight levee breach locations in the American River South Basin. Evacuation route inundation times are color coded on the various levee breach location maps and vary depending on the location of the levee breach.

4.8.5 Mass Care and Shelter Management

A Mass Care and Shelter Management System has been established by the County to provide shelter, food, emergency first aid, disaster welfare information, and bulk distribution of emergency relief items in the event of an evacuation. Approximately 88 sites, including schools, churches and community centers have been identified throughout the County as Mass Care Shelters. Operation of the various shelters is dependent on where a levee break occurs and the associated flooding scenario.

4.8.6 Hypothetical Flood Depth and Rescue and Evacuation Area Maps

Hypothetical flood depth and rescue and evacuation area maps have been developed by the City/County of Sacramento for five different levee breach locations in the Natomas Basin, five levee breach locations in the American River North basin, and eight levee breach locations in the American River South basin as part of the Flood Emergency Evacuation Plan. The hypothetical flood depth maps depict both the maximum flood depths and the elapsed time from levee failure until an area is inundated with floodwaters to a depth of 1 foot for a total of 18 different levee failure locations on the levees surrounding Sacramento. Depending on the levee failure location the elapsed time to get to 1 foot flood depths can range from 6 minutes to over 240 hours.

4.9 HYDRAULIC EFFECTS EVALUATION

Widening the Sacramento Weir and Bypass will allow more flow from the Sacramento and American Rivers to be released into the Yolo Bypass which will reduce the water surface elevation in the river adjacent to the city of Sacramento. The purpose of this section is to provide a framework which examines the effects of this change in flow from both an incremental project standpoint and a cumulative perspective that takes into account the effects of the ongoing work at Folsom Dam.

4.9.1 Existing and Future Without Project Condition Assumptions

The future without project condition assumptions include construction and operation of all previously authorized work on the American River as part of the WRDA 1996 and 1999 Common Features authorizations, levee repairs as described in the Natomas PACR authorized in WRRDA 2014, the new JFP spillway under construction at Folsom Dam, and the future planned raise of Folsom Dam.

The existing condition for ARCF is different than the future without project condition. The existing condition describes the existing releases from Folsom Dam and is used to assess the overall effects of the combined Common Features and Folsom Dam improvements (spillway and raise) for a cumulative effects assessment. The existing condition assumes the Bureau of Reclamation and SAFCA reservoir operation agreement is in place which allows for greater flood storage in the reservoir beyond what the original operations manual designated.

The major hydrologic/hydraulic difference between the existing as compared to both the future without project condition and the with-project condition is that the peak flow on the American River is higher for frequent events but lower for less frequent events due to Folsom Dam routing changes. Table 4-9 displays the different flow releases from Folsom Dam for the Existing and the Future Without Project (with JFP and dam raise in place).

Table 4-9: Comparison of Existing and Future Without Project Flow Releases from Folsom Dam.

Frequency (Years)	Existing (Existing Releases, cfs)	Future Without Project (with JFP, cfs)
2	30,000	26,000
10	43,000	72,000
25	100,000	115,000
50	115,000	115,000
100	145,000	115,000
200	320,000	160,000
500	520,000	530,000

4.9.2 Discussion of Flow Changes

If the expanded Sacramento Weir were to be operated as the existing weir is operated, the Recommended Plan would result in a diversion of flows from the Sacramento River to the Yolo Bypass that would slightly raise water surface elevations in the Yolo Bypass during frequent events (10 year) compared to both the existing and future without project conditions. To avoid potential effects to the Yolo Bypass, the widened portion of the Sacramento Weir will only be operated when the release from Folsom Dam is increased to above 115,000 cfs. As a result of the increased flood storage space and anticipatory releases at Folsom Dam, this translates into a reduction of flows into the Yolo Bypass with the Recommended Plan in place compared to the existing conditions. See Table 4-10 for a comparison of the flows at various locations for the Existing, Future Without Project, and with the Recommended Plan.

Table 4-10: Comparison of 10, 100, and 200 Year Frequency Flows under Various Conditions.

10 year event	Existing	Future Without Project	Alt. 2 (Recommended Plan)
American River	43,000cfs	72,000cfs	72,000cfs
Sacramento Bypass	50,000cfs	66,000cfs	66,000cfs
Yolo Bypass below Sac Bypass	270,000cfs	296,000cfs	296,000cfs
100 year event	Existing	Future Without Project	Alt. 2 (Recommended Plan)
American River	145,000cfs	115,000cfs	115,000cfs
Sacramento Bypass	131,000cfs	115,000cfs	115,000cfs
Yolo Bypass below Sac Bypass	555,000cfs	535,000cfs	535,000cfs
200 year event	Existing	Future Without Project	Alt. 2 (Recommended Plan)
American River	320,000cfs	160,000cfs	160,000cfs
Sacramento Bypass	183,000cfs	149,000cfs	164,000cfs
Yolo Bypass below Sac Bypass	656,000cfs	631,000cfs	643,000cfs

4.9.3 Conclusion

The widening of the Sacramento Weir and Bypass diverts flood flows from the Sacramento and American River into the Yolo Bypass. The widened portion of the weir will only be operated when flood releases from Folsom Dam are above the existing objective release of 115,000 cfs which would occur during flood events greater than 1/100 ACE event. Therefore, for events up to the 1/100 ACE event, there would be no change in flow conditions in the Sacramento and Yolo Bypasses. For flood events greater than 1/100 ACE event when releases from Folsom Dam would go above 115,000 cfs (such as a 1/200 ACE event in which the Folsom release goes up to 160,000 cfs), because of the additional flood storage provided by anticipated operation and physical improvements to Folsom Dam coupled with the widened Sacramento Weir and Bypass, the net effect would be to slightly decrease the peak compared to the existing peak flow in the Yolo Bypass.

4.10 ENVIRONMENTAL SUMMARY

The Sacramento District published a notice of intent (NOI) to prepare the ARCF GRR EIS in the Federal Register (Vol. 73, No. 41) on February 29, 2008. A series of public scoping meetings were held in March 2008 to present information to the public and to receive public comments on the scope of the EIS. There is no mandated time limit to receive written comments in response to the NOI under NEPA. The Appendix F of the EIS contains the NOI, the one comment letter received in 2008, and copies of the posters for the March 2008 scoping meetings.

The draft GRR and EIS/EIR was circulated for a 45 day public review period, beginning in March 2015, to Federal, State, and local agencies, organizations, and individuals who have an interest in the project. A notice of availability of the draft EIS/EIR was published in the Federal Register when the document was released for public review. Public workshops were held during the review period to provide additional opportunities for comments on the draft document. All comments received during the public review

period were considered and incorporated into the final EIS/EIR, as appropriate. Appendix F includes the public comments received and the Sacramento District's response to those comments.

A biological assessment has been prepared and coordinated with the resource agencies. USACE has consulted, pursuant to Section 7 of the Endangered Species Act, with NMFS and USFWS. Biological opinions (BO) have been issued by USFWS and NMFS and are included as Appendix J to the EIS/EIR.

This project has been coordinated with USFWS under the Fish and Wildlife Coordination Act. The Fish and Wildlife Coordination Act Report (CAR) is included as Appendix A of the EIS. Mitigation recommended in the CAR and pursuant to the BOs is included in Table 4-10 which displays the potential effects and mitigation proposed for the Recommended Plan. This mitigation reflects what is in the BOs and has been coordinated with USFWS, NMFS, and the California Department of Fish and Wildlife (CDFW).

In accordance with 36 CFR § 800, the regulations implementing Section 106 of the NHPA, USACE has determined that the ARCF GRR will likely result in adverse effects to historic properties. In order to take into account the effects of the proposed undertaking on historic properties, USACE has executed a Programmatic Agreement (PA). USACE has consulted with interested parties, the SHPO, the ACHP, DWR, the CVFPP, SAFCA, and American Indian tribes and individuals in the development of the PA. The PA was sent to potentially interested Native Americans, requesting their comments and interest in signing the PA as concurring parties. All comments from all parties were considered in the development of the PA. The PA was executed by signature from USACE and the SHPO on September 10, 2015; as a result, USACE is in compliance with Section 106. The PA is included in Appendix C of the EIS.

A Section 401 Water Quality Certification would be obtained from the Regional Water Quality Control Board (RWQCB) during PED. Detailed, site-specific design is needed in order to conduct this consultation, and the current feasibility-level design on the ARCF study does not provide enough detail for this consultation. The Best Management Practices (BMPs) proposed should be sufficient to mitigate for potential water quality impacts, as they are consistent with what has been implemented on other local construction projects with similar potential effects as the proposed project, including the Sacramento River Bank Protection Project. The recommended plan includes costs for the expected required BMPs. The draft report was provided to the RWQCB for review. The comment letter received from the RWQCB concurred that a Section 401 certification was required prior to construction; however, no concerns regarding the proposed alternatives were indicated in the letter. As a result, obtaining a Section 401 certification in PED is considered feasible and low risk.

The Recommended Plan would also have a significant effect on Transportation and Circulation. In order to mitigate for this effect, a Traffic Control and Road Management Plan would be prepared and other BMPs listed in Section 3.10.6 of the EIS/EIR, would be implemented.

The temporary closure of recreation facilities in the American River Parkway during construction, including bike trail, walking trails, and boat launches would constitute a significant effect to recreational

resources. The possible closure of the Sacramento Bypass for construction during portions of hunting season would also be a significant effect. In order to mitigate for this effect, notification and coordination with recreation users and bike groups would be conducted. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites would be put in place.

The loss of vegetation and construction activities would disrupt the existing visual conditions in the Parkway and along the Sacramento River and is considered a significant effect on the visual and aesthetic resources in the study area. Trees would be planted after construction is completed on planting berms and on top of launchable rock trenches; however there would still be a temporal loss of vegetation. Disturbed areas would be reseeded with native grasses.

A summary of the environmental effects and the associated mitigation measures are listed in Table 4-11.

Table 4-11: Summary of Environmental Effects and Mitigation Measures.

Potential Effects	Mitigation Measure	Effects with Mitigation
Land Use		
Acquisition of properties for levee easements along the Sacramento River and Arcade Creek. Conversion of agricultural lands to floodway.	Federal Relocation Assistance Act compliance.	Significant
Hydrology and Hydraulics		
No effect.	Not applicable.	Not applicable.
Water Quality		
Potential impacts include increased turbidity during bank protection construction, runoff of exposed soils, and cement, slurry, or fuel spills during construction.	Preparation of a Stormwater Pollution Protection Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan. Implementation of BMPs listed in Section 3.5.6 of the EIS/EIR.	Less than significant with mitigation.
Vegetation and Wildlife		
Construction of levee improvements and vegetation removal would result in significant loss of vegetation and wildlife habitat on the landside of the Sacramento River levees, in the American River Parkway, and along Arcade Creek. Construction of the Sacramento Weir extension would require the removal of riparian vegetation.	When possible, compensation would be planted on planting berms, on top of launchable rock trenches, on other lands within the Parkway, or within the Sacramento Bypass. Additional mitigation sites are identified in Section 3.6.6 of the EIS/EIR.	Significant.

Fisheries		
Indirect effects to fish habitat from the removal of vegetation from the levee slopes. Direct effects from the placement of rock at bank protection sites, causing an increase in turbidity. Widening the Sacramento Bypass creates floodplain, which could provide a benefit to fish species.	Vegetation variance would allow waterside vegetation to remain on the Sacramento River. Bank protection sites and launchable rock trenches would be revegetated following construction. BMPs would be implemented to address turbidity, and are discussed in Section 3.5.6 of the EIS/EIR	Less than significant with mitigation.
Special Status Species		
Direct affects to GGS, fish species, and Swainson's Hawks during construction. Indirect effects due to loss of habitat. Vegetation variance for the waterside levee slopes would significantly limit the effects to endangered fish species.	Replace habitat for species either on-site or in close proximity to lost habitat. Implement BMPs discussed in Section 3.5.6 of the EIS/EIR during construction to prevent mortality.	Less than significant with mitigation
Cultural Resources		
Adverse effects to historic properties from construction of levee improvements and the bypass widening.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Significant.
Transportation and Circulation		
Increased traffic on public roadways.	Preparation of a Traffic Control and Road Management Plan and other BMPs listed in Section 3.10.6 of the EIS/EIR.	Significant.
Air Quality		
Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.11.6 of the EIS/EIR.	Less than significant with mitigation.
Climate Change		
Increased greenhouse gas emissions from construction equipment, haul trucks, and barges.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.12.6 of the EIS/EIR.	Less than significant with mitigation.
Noise		
Increased noise in proximity to sensitive receptors due to construction activities.	Coordination with local residents, compliance with noise ordinances, and other BMPs, as listed in Section 3.13.6 of the EIS/EIR.	Less than significant with mitigation.
Recreation		
Temporary closure of recreation facilities in the American River Parkway during construction, including bike trail, walking trails, and boat launches. Possible closure	Notification and coordination with recreation users and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites.	Significant.

of the Sacramento Bypass during portions of hunting season.		
Aesthetics and Visual Resources		
Vegetation loss and construction activities would disrupt the existing visual conditions in the Parkway and along the Sacramento River.	Trees would be planted after construction is completed on planting berms and on top of launchable rock trenches; however there would still be a temporal loss of vegetation. Disturbed areas would be reseeded with native grasses.	Significant.
Public Utilities and Services		
Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Notification of potential interruptions would be provided to the appropriate agencies and to landowners.	Less than significant.
Hazardous, Toxic, and Radiological Wastes		
No effect from construction activities. HTRW sites encountered would be removed and properly disposed of prior to construction, including the Old Bryte Landfill.	Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Less than significant with mitigation.
Socioeconomics, Population, and Environmental Justice		
Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for flood control easements.	Federal Relocation Act compliance.	Less than significant.

4.11 EXECUTIVE ORDER 11988

Executive Order (EO) 11988 requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." The Water Resources Council Floodplain Management Guidelines for implementation of EO 11988, as referenced in the Corps' ER 1165-2-26, require an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The eight steps reflect the decision-making process required in Section 2(a) of the Order. The eight steps and responses to them are summarized below.

1. Determine if the proposed action is in the base flood plain.

The levees along the American River and Sacramento River as well as the Sacramento Weir and Bypass are in the base flood plain.

2. *If the action is in the base flood plain, identify and evaluate practicable alternatives to the action or to location of the action in the base flood plain.*

The poor performance of the exiting levee systems in the study area highlights the need to address the flood risk with a worst first strategy. The most efficient and effective means of reducing this risk is to improve the levees. Any upstream or larger regional improvements to the flood management system do not reduce the water surface elevations to the point where these levee improvements are not needed. Therefore, there are not any practicable alternatives but to improve the existing levees.

3. *If the action must be in the flood plain, advise the general public in the affected area and obtain their views and comments.*

The draft GRR and EIS/EIR documents were circulated for public review and public meetings were held during the comment period. Required notices have been mailed to affected property owners throughout the ARCF GRR environmental review process, soliciting input on the content of the environmental documents and noticing various public meetings. Additionally, notices have also been posted in the largest local newspaper, The Sacramento Bee, announcing various public meetings. USACE, the State of California and SAFCA have also participated in numerous stakeholder meetings to discuss project-related concerns. Public comments received on the NOI/NOP were considered and addressed, where appropriate in the draft EIS/EIR; public comments received on the draft EIS/EIR have been addressed in the final EIS/EIR; and public comments received on the final EIS/EIR will be addressed in the record of decision (ROD).

4. *Identify beneficial and adverse impacts due to the action and any expected losses of natural and beneficial flood plain values. Where actions proposed to be located outside the base flood plain will affect the base flood plain, impacts resulting from these actions should also be identified.*

The Recommended Plan proposes to widen the Sacramento Weir and Bypass which would reconnect about 300 acres of the floodplain to seasonal inundation thereby improving natural floodplain values. In addition, the Recommended Plan reduces the water surface elevation in the river adjacent to two urban areas, increases the regional flexibility of the flood management system, and provides benefits to downstream communities in the form of reduced water surface elevations in the Sacramento River. The Recommended Plan would cause adverse effects to Vegetation and Wildlife, Cultural Resources, Transportation, Recreation and Aesthetic and Visual resources; however, on balance, due to the expanded connection of the river to its floodplain through the widened Sacramento Weir and Bypass, other floodplain values are increased and therefore there is no net loss.

5. *If the action is likely to induce development in the base flood plain, determine if a practicable non-flood plain alternative for the development exists.*

The most effective and efficient method of reducing flood risk in the ARN and ARS Basins is to improve the levees that provide the first line of defense against flooding in the basins. Therefore, a practicable non-floodplain alternative does not exist.

Within the project area, population growth and urban development are driven by local, regional, and national economic conditions. Local land use decisions are within the jurisdiction of the City and County of Sacramento. Both of these agencies have adopted a general plan consistent with State law. These general plans provide an overall framework for growth and development within the jurisdiction of each agency, including the project area.

The American River North and American River South basins are fully urbanized. The City of Sacramento General Plan identifies areas that will be preserved and enhanced to maintain their current character, as well as areas that will improve and evolve, undergoing significant change through infill, reuse and redevelopment. There are several areas identified in the City of Sacramento General Plan that are identified as growth areas and envisioned to undergo significant changes as a result of major development and redevelopment. These include the River District and the Railyards.

The 773-acre River District Area proposes development of a transit-oriented mixed use urban environment that would include 8,144 dwelling units, 3.956 million square feet of office, 854,000 square feet of retail/wholesale, 1.463 million square feet light industrial, and 3,044 hotel units. The vision for the River District is that of an eclectic mix of uses that will evolve from a primarily light-industrial, low-intensity commercial district, to that of a series of distinctive walkable neighborhoods within a district that is contiguous to the American River and serves as the northern gateway into the Central City.

The 224-acre Railyards Area proposes development of a transit oriented mixed use urban environment that would include between 10,000 and 12,100 dwelling units, 2.3 million square feet of office, 1.3 million square feet of retail, 1,100 hotel rooms, and 46 acres of open space. The goal is to integrate and connect the Railyards area with the downtown business and government center with pedestrian and bicycle facilities, roadways, and public transportation routes.

Regional infrastructure planning reflects these growth plans. In December 2004, the Sacramento Area Council of Governments (SACOG), representing the Counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba and their 22 constituent cities, adopted the “Preferred Blueprint Scenario” to guide land use and transportation choices over the next 50 years as the region’s population grows from its current population of 2 million to include more than 3.8 million people. The Blueprint project was initiated in 2002 to study future land use patterns and their potential effects on the region’s transportation system, air quality, housing, open space, and other resources.

The study found that continuing the recent practice of building large-lot, low-density housing would consume another 660 square miles of undeveloped land. Residents would face longer commutes, more vehicle trips, dirtier air, and a growing disconnect between where they live and where they work.

Through a series of Blueprint workshops at the neighborhood, city, county, and regional level, more than 5,000 residents, elected officials, business leaders, and environmental interests helped craft an alternative vision that integrates smart growth concepts such as higher-density, mixed-use developments and reinvestment in existing developed areas. The Preferred Blueprint Scenario assumes certain levels and locations of both “reinvestment” (i.e., additional development on already-built parcels) and greenfield development (i.e., large-scale development on vacant land). An analysis of this scenario showed that following smart growth principles would shorten future commute times, reduce traffic congestion, lessen dependence on automobiles, and provide for housing choices that more closely align with the needs of an aging population. The Preferred Blueprint Scenario will become part of SACOG’s long-range transportation plan for the six-county region. It also will serve as a framework to guide local government in growth and transportation planning through 2050.

Using the above information, combined with an evaluation of residual flood damage, it was concluded that there is substantial evidence that the Recommended Plan as a whole would accommodate anticipated growth in the project area in a manner that would be consistent with adopted local and regional growth management plans and with the State’s emerging State Plan of Flood Control. There is substantial evidence that the Recommended Plan would accommodate planned regional growth in a manner that would be consistent with emerging smart growth principles. Thus, the project, while accommodating planned regional growth, is not growth inducing itself and is compliant with EO 11988.

6. *As part of the planning process under the Principles and Guidelines, determine viable methods to minimize any adverse impacts of the action including any likely induced development for which there is no practicable alternative and methods to restore and preserve the natural and beneficial flood plain values. This should include reevaluation of the “no action” alternative.*

Mitigation measures are identified and will be implemented as part of the project to minimize the project’s potentially adverse impacts. The project includes the creation of natural habitat that would serve ecological functions associated with natural floodplains. The No-Action Alternative would not restrict growth in the base floodplain in the short term. The 400,000 people living and working in the American River North and American River South Basins would remain at risk of flooding. However, the State of California’s Senate Bill (SB) 5 stipulates that development in urban areas will be restricted if the localities have not made meaningful progress toward achieving a 200 year level of performance (per State of California standards) by 2025. Therefore, the No-Action Alternative would restrict growth in the base floodplain in the long term.

7. *If the final determination is made that no practicable alternative exists to locating the action in the flood plain, advise the general public in the affected area of the findings.*

The public has been advised of the recommendations contained in the GRR during the public comment period for the draft report. Public meetings were held during these time period.

8. *Recommend the plan most responsive to the planning objectives established by the study and consistent with the requirements of the Executive Order.*

The objective of the study is to reduce flood risk and its associated consequences on the public health, safety, and property in the study area. In order to achieve this objective, the study recommends improvements to the ARS and ARN basin levees. These two basins are essentially built-out; however, infill development is ongoing. There are no development restrictions in these basins and so this infill development would occur even without implementation of this recommended plan. Therefore, the project does not trigger or induce development that would not otherwise occur. The Recommended Plan recommendations are consistent with the requirements of the Executive Order since there is no practicable alternative to improving the levees which are the first line of defense for reducing the risk of flooding in the established urban area. The consistency of these recommendations is further demonstrated by the reduction in the probability of flooding in the study area and the associated societal, economic and environmental hazards posed by flooding. The Recommended Plan would reduce the risk associated with floods thereby minimizing the impacts of floods on human safety, health, and welfare. The Recommended Plan also recommends widening the Sacramento Weir and Bypass which would assist in the restoration and preservation of the natural and beneficial values of the base floodplain.

4.12 ENVIRONMENTAL OPERATING PRINCIPLES

The Recommended Plan supports each of the seven USACE Environmental Operating Principles (EOPs). The re-energized Environmental Operating Principles are:

1. Foster sustainability as a way of life throughout the organization.
2. Proactively consider environmental consequences of all Corps activities and act accordingly.
3. Create mutually supporting economic and environmentally sustainable solutions.
4. Continue to meet our corporate responsibility and accountability under the law for activities undertaken by the Corps, which may impact human and natural environments.
5. Consider the environment in employing a risk management and systems approach throughout the life cycles of projects and programs.
6. Leverage scientific, economic and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner.
7. Employ an open, transparent process that respects views of individuals and groups interested in Corps activities.

The environmental operating principles are met in the following ways:

Environmental balance and sustainability (EOP 1, 2, 3 &4)

- Project avoids or minimizes environmental impacts while maximizing future safety and economic benefits to the community

Planning with the environment (EOP 1, 2, 4, and 5)

- Worked with resource agencies during planning phase to minimize impacts to the environment.
- The recommended plan allows for expanded floodplain flooding in widened bypass area.

Integrate scientific, economic and social knowledge base (EOP 6)

- Sought advice from panel of experts on the status and likelihood of erosion on the American River.

Seeks Public input and Comment (Win-win solutions) (EOP 7)

- Held stakeholder meetings and public workshops throughout the process
- Worked with local groups to achieve a balance of project goals and public concerns

4.13 USACE CAMPAIGN PLAN

The mission of the U.S. Army Corps of Engineers is to provide vital public engineering services in peace and war to strengthen the Nation's security, energize the economy and reduce risks from disasters. In order to meet this mission, the agency has developed the USACE Campaign Plan (FY13-18) as a component of the corporate strategic management process to establish priorities, focus on the transformation initiatives, measure and guide progress and adapt to the needs of the future. The goals and supporting objectives of the Campaign Plan are:

Goal 1 – Support National Security

Objective 1a – Support Combatant Commands and other U.S. government agencies

Objective 1b – Partner with Installation Management Communities

Objective 1c – Achieve National/Army energy security and sustainability goals

Objective 1d – Support the Engineer Regiment

Goal 2 - Transform Civil Works

Objective 2a – Modernize the Civil Works project planning program and process

Objective 2b – Enhance Civil Works budget development with a systems Watershed –Informed approach

Objective 2c – Deliver quality solutions and services

Objective 2d – Deliver reliable, resilient and sustainable infrastructure systems

Goal 3 - Reduce Disaster Risk

Objective 3a – Enhance interagency disaster response and risk reduction capabilities

Objective 3b - Enhance interagency disaster recovery capabilities

Objective 3c - Enhance interagency disaster mitigation capabilities

Objective 3d – Strengthen Domestic Interagency Support

Goal 4 - Prepare for Tomorrow

Objective 4a – Maintain and advance DoD and Army critical enabling technologies

Objective 4b – Build trust and understanding with strategic engagement, communication, and cyber-security

Objective 4c – Streamline USACE business, acquisition and governance processes

Objective 4d – Build ready and resilient people and teams through talent management / leader development

The American River Common Features GRR has been responsive to these goals and objectives by:

Deliver reliable, resilient and sustainable infrastructure systems:

- Designing a project which avoids or minimizes environmental impacts while maximizing future safety and economic benefits to the community
- The Recommended Plan allows for expanded floodplain flooding in the widened bypass area.

Deliver quality solutions and services:

- Coordinated with study sponsors and vertical team to identify a path forward on compliance with ETL 1110-2-583, *Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures*.

Build trust and understanding with strategic engagement, communication, and cyber-security:

- The Feasibility Study team organized and participated in stakeholder meetings and public workshops throughout the process and worked with local groups to achieve a balance of project goals and public concerns.

Build ready and resilient people and teams through talent management / leader development:

- The study successfully employed the use of District Quality Control (DQC), Agency Technical Review (ATR), Risk Analysis, and Independent External Peer Review (IEPR) to assist in the review of the development of a technically sound recommendation of Federal Interest.

4.14 PLAN ECONOMICS AND COST SHARING

The project first cost, estimated on the basis of October 2015 price levels, amounts to \$1,565,750,000. Table 4-12 displays each cost by project feature. Estimated average annual costs were based on a 3.125% discount rate, a period of analysis of 50 years, and construction ending in 2030.

Table 4-12: Estimated First Costs of the Recommended Plan¹ (\$1,000s).

MCACES Account ²	Description	Total First Cost ⁹
01	Lands and Damages ³	\$95,862
02	Relocations ⁴	\$158,437
06	Fish and Wildlife	\$96,220
08	Roads, Railroads, & Bridges	\$25,798
11	Levees and Floodwalls	\$465,656
15	Floodway Control & Diversion Structure	\$54,401
16	Bank Stabilization	\$381,220
18	Cultural Resource Compliance Contingency ⁵	\$8,237
30	Planning, Engineering, Design ⁶	\$186,551
31	Construction Management ⁷	\$93,368
	Total First Cost⁸	\$1,565,750

Notes:

¹Based on October 2015 price levels, 3.125% discount rate, and a 50-year period of analysis.

²Micro Computer-Aided Cost Engineering System, 2nd Generation (MII) is the software program and associated format used by USACE in developing cost estimates. Costs are divided into various categories identified as “accounts.” Total Project Cost Summaries are presented in Appendix C, Attachment D, Cost Engineering.

³Real Estate land costs, which include no damages.

⁴Relocations include relocating affected roads, railroads (at cutoff wall and utility crossings) and utilities.

⁵Contingency costs for cultural resource compliance is specifically for data recovery as needed.

⁶16 percent of 02, 11, and 18 accounts.

⁷9 percent of 02, 11, and 18 accounts.

⁸ Numbers reported may be slightly different than those presented in the appendices due to rounding.

The estimated total project first cost for the Recommended Plan is **\$1,565,750,000** (October 2015 price levels). The Federal portion of the estimated first cost is **\$876,478,000** and is based on the cost sharing percentages established by the NED Plan. A summary of the cost sharing responsibilities is presented in Table 4-13 which displays the 65% Federal and 35% non-Federal cost share in accordance with WRDA 1986 as well as the costs attributable to the LPP increment and the resulting cost share.

Table 4-13: Summary of Cost Sharing Responsibilities for the Recommended Plan ¹ (in \$1,000s).

MCACES Account	Item	Federal ²	Non-Federal	Total
NED (Alternative 1)				
01	Lands and Damages (LERRDs) ³	\$8,799	\$119,160	\$127,958
02	Relocations (LERRDs)	\$0	\$130,062	\$130,062
06	Fish and Wildlife	\$86,013	\$0	\$86,013
11	Levees and Floodwalls	\$380,836	\$0	\$380,836
16	Bank Stabilization	\$378,242	\$0	\$378,242
30	Planning, Engineering, Design ⁴	\$155,611	\$0	\$155,611
31	Construction Management	\$77,033	\$0	\$77,033
	Subtotal	\$1,086,534	\$249,222	\$1,335,755
	Non-Fed 5% Cash Contribution	-\$66,788	\$66,788	
	Non-Fed Cash Contribution	-\$151,505	\$151,505	
	Subtotal (NED Plan Cost Sharing)	\$868,241	\$467,514	\$1,335,755
	Percentage	65%	35%	
18	Cultural Resource Compliance Contingency ⁵	\$8,237	\$0	\$8,237
	Total (NED Plan Cost Sharing)	\$876,478	\$467,514	\$1,343,992
Recommended Plan /LPP (Alternative 2)				
01	Lands and Damages (LERRDs) ³	\$8,975	\$86,887	\$95,862
02	Relocations (LERRDs)	\$0	\$158,437	\$158,437
06	Fish and Wildlife	\$96,220	\$0	\$96,220
08	Roads, Railroads, & Bridges	\$25,798	\$0	\$25,798
11	Levees and Floodwalls	\$465,656	\$0	\$465,656
15	Floodway Control & Diversion Structure	\$54,401	\$0	\$54,401
16	Bank Stabilization	\$381,220	\$0	\$381,220
30	Planning, Engineering, Design ⁴	\$186,551	\$0	\$186,551
31	Construction Management	\$93,368	\$0	\$93,368
	Subtotal	\$1,312,189	\$245,324	\$1,557,513
	Non-Fed 5% Cash Contribution	-\$77,876	\$77,876	
	Non-Fed Cash Contribution	-\$221,930	\$221,930	
	Non-Fed Cash Contribution for LPP	-\$144,142	\$144,142	
	Subtotal (NED Plan Cost Sharing)	\$868,241	\$689,272	\$1,557,513
	Percentage	55.7%	44.3%	
18	Cultural Resource Compliance Contingency ⁵	\$8,237	\$0	\$8,237
	Total (NED Plan Cost Sharing)	\$876,478	\$689,272	\$1,565,750

Notes: ¹ Based on October 2015 price levels, 3.125% discount rate, and a 50-year period of analysis.

² Federal Project First Costs are based on 65% of the NED Plan of \$1,343,992,000.

³ Non-Federal interests must provide all LERRDs and a minimum cash contribution of 5% of the total project cost. LERRDs include Lands, Easements, Rights-of-way, Relocations, and Disposal sites.

⁴ Planning, Engineering, and Design. Includes supplemental environmental compliance work.

⁵ Cultural Resource Compliance Contingency includes data recovery activities, if necessary.

The economic costs and benefits of the recommended plan are shown in Table 4-14.

Table 4-14. Economic Costs and Benefits of the Recommended Plan

Description	Cost (in \$1,000s)
Investment Cost	
Recommended Plan First Cost ²	\$1,557,513
Interest During Construction	\$309,230
Total Investment Cost	\$1,866,743
Annual Cost	
Interest and Amortization	\$74,283
OMRR&R ³	\$494
Total Annual Costs	\$74,777
Annual Benefits	\$344,695
Net Annual Benefits	\$269,918
Benefit-Cost Ratio	4.6

¹ Based on October 2015 price levels, 3.125 percent discount rate, and a 50-year period of analysis. See Economic Appendix regarding economic uncertainty.

² Does not include Cultural Resources Data Recovery

³ Operation, Maintenance, Repair, Replacement, and Rehabilitation.

4.15 VIEWS OF NON-FEDERAL SPONSORS AND OTHER AGENCIES

The non-Federal sponsors support the Recommended Plan. Throughout development of this GRR, there has been significant coordination with the State of California and SAFCA.

The Recommended Plan is a consistent and fundamental piece of the Lower Sacramento/Delta North Regional Flood Management Plan (RFMP), a non-Federal initiative by the State of California and local agencies that includes a concept for the expansion of the Fremont and Sacramento Weirs and the widening of the Sacramento and Yolo Bypasses. The Recommended Plan provides for Federal involvement in a critical piece of this plan by widening the Sacramento Weir and Bypass.

4.16 FINAL DOCUMENT APPROVAL

The Project Delivery Team (PDT) has responded to the comments on the Draft GRR & EIS/EIR and appendices received during concurrent Public Review, Agency Technical Review (ATR), Independent External Peer Review (IEPR) and HQUSACE Policy Review and revised the documents as appropriate. The Final GRR & EIS/EIR and Appendices were transmitted to the South Pacific Division (SPD) for endorsement and then forwarded to HQUSACE. A Civil Works Review Board (CWRB) was held on 8 December 2015 and the final GRR & EIS/EIR and appendices, along with the proposed Report of the Chief of Engineers were approved for release for State and Agency review. After State and Agency review, comments are incorporated in to the documents as appropriate and a Final Chief's Report will be signed

by the Chief of Engineers. The Chief's Report will then be sent to the chairpersons of the Senate Committee on Environment and Public Works and the House of Representative Committee on Transportation and Infrastructure. The Chief's Report, along with the GRR and the EIS/EIR and appendices, will then be sent to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review and approval. After approval by the ASA(CW), the documents will be sent to the Office of Management and Budget (OMB) for review.

4.17 POTENTIAL ADDITIONAL STUDIES

As mentioned in Chapter 1, this study would only partially address the American River Watershed authorization and is therefore called an "interim General Reevaluation Report" which indicates that the study is addressing the water resource issues of a specific area within the authority, rather than the entire area authorized for study. This GRR is not intended to be a complete resolution of all issues in the watershed that may require study and future studies may address further issues. Additional studies to address other water resource issues within the American River Watershed could be initiated if funding is appropriated by Congress.

EXHIBIT 5
TO THE PETITION FOR EXEMPTION AND WAIVER
EXCERPT FROM THE
COMPREHENSIVE FLOOD MANAGEMENT PLAN



Comprehensive Flood Management Plan

City of Sacramento Department of Utilities



Prepared by:
Amec Foster Wheeler
Environment & Infrastructure, Inc.
1002 Walnut Street, Suite 200
Boulder CO 80302



1 INTRODUCTION

1.1 Background

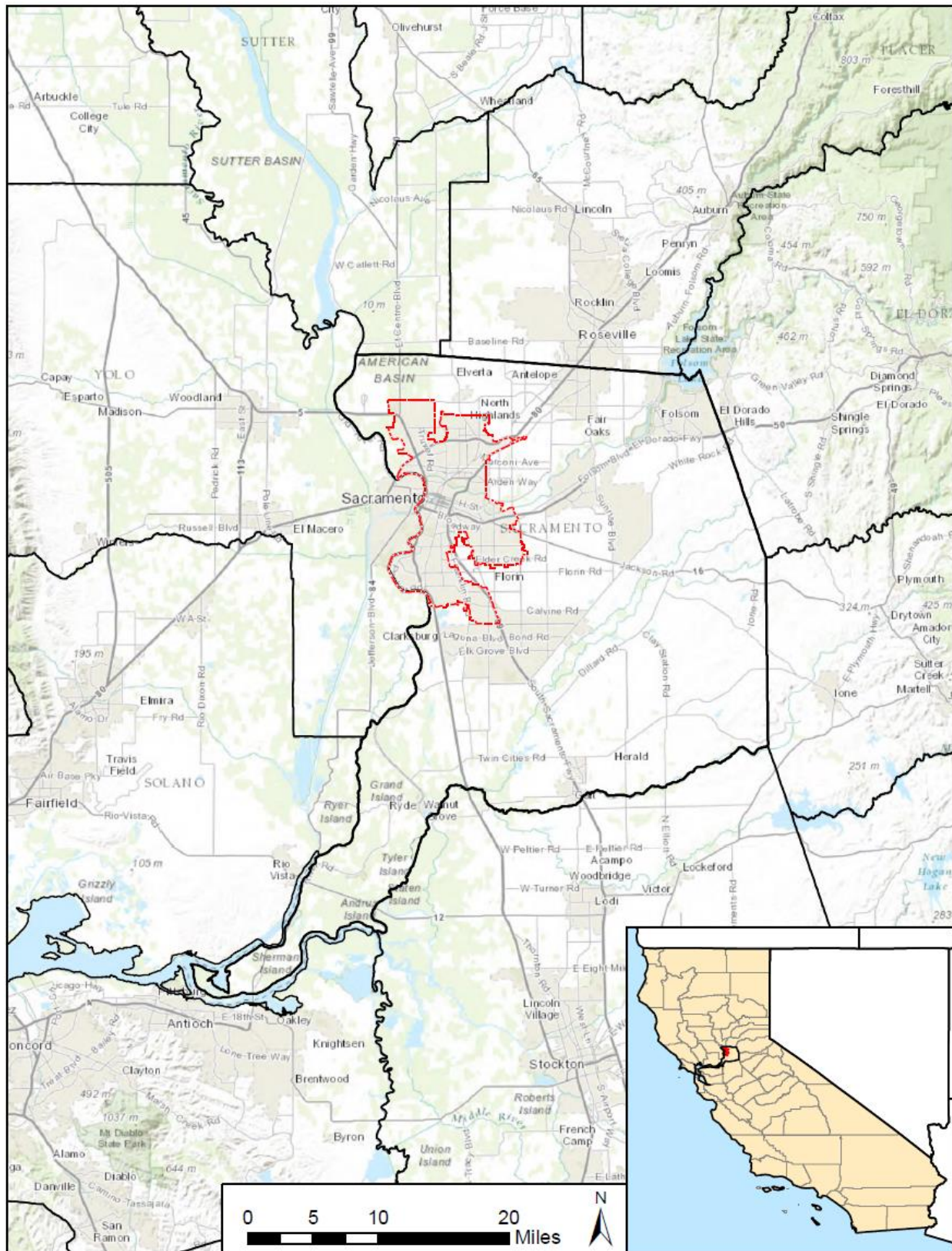
The City of Sacramento (City) is located in the heart of California's Central Valley at the confluence of the Sacramento and American rivers (see Figure 1.1). The Central Valley is a flat alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. The northern part is the Sacramento Valley drained by the Sacramento River, and the southern part is the San Joaquin Valley drained by the San Joaquin River. It is surrounded by the Sierra Nevada Mountains to the east, the Tehachapi Mountains to the south, Coastal Range to the west, and Cascade Range to the north. The topography of the area is relatively flat. There is a gradual slope rising from elevations as low as sea level in the southwestern portion of the Valley up to approximately 75 feet above sea level in the northeastern portion.

Sacramento is the cultural and economic center of its six-county metropolitan area (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties) and the largest city in the Central Valley. The regional location of Sacramento is roughly halfway between San Francisco to the west and Lake Tahoe to the east. Sacramento covers a total area of approximately 99 square miles and is the seventh most populous city in California with a 2010 Census Bureau population of 466,488. Sacramento has a Mediterranean climate that is characterized by mild winters and dry, hot summers. Rain typically falls between November and March, with the rainy season tapering off almost completely by the end of April. Average daily high temperatures range from the 50s in December and January to the 90s in July (with many days of over 100° Fahrenheit).

The City, like other urban areas, faces risks to life and property from many natural and man-made hazards, including: fire, earthquake, terrorism, toxic spills, wind, drought, wildfire, and flood. Most notably, of all these risks, flooding poses the greatest threat to the residents of Sacramento.

Given the City's high flood risk and vulnerability, this Comprehensive Flood Management Plan (CFMP) is being developed and implemented by City government to guide the City's flood risk reduction and mitigation efforts. This CFMP, initiated by the City's Department of Utilities (DOU), will serve as the City's strategic plan to reduce flood risk over the next five years (2015-2020).

Figure 1.1. City of Sacramento Location



1.1.1 Relation to the City of Sacramento 2035 General Plan

It is anticipated that by the year 2035, Sacramento will have added 200,000 individuals; 140,000 jobs; and 100,000 residential units. The City has historically relied on greenfield development to meet the housing, retail, and service needs generated by growth. The City's 2035 General Plan, adopted in March 2009, takes a different approach and focuses growth inward, encouraging infill development.

The 2035 General Plan also reflects the City's commitment to the protection of life and property from the risks of natural and man-made hazards. This commitment is based on the premise that a safe environment enhances residents' quality of life, contributes to a city's livability, and is important for attracting and retaining businesses needed to sustain a thriving economy. Flood management is primarily referenced in the Resource Constraints Element of the General Plan, which addresses interagency coordination, funding for 200-year flood protection, maintenance of facilities, levee setbacks, and new development.

Additional flood-related policies in the 2035 General Plan address response and disaster preparedness for potential emergencies in the Public Health and Safety Element and the Mobility Element. The Utilities Element calls for the implementation of master planning programs, including identifying facility and infrastructure needs for flood management.

The 2035 General Plan was updated in February 2015 to include policies and maps to address flood risks and higher standards for flood protection. Policies proposed include levee requirements, new development evaluations, and flood management planning efforts, all resulting in a minimum flood protection standard of a 200-year event.

1.2 Understanding Flood Risk

Flooding is the rising and overflowing of a body of water onto normally dry land. Floods are among the most costly natural disasters in terms of human hardship and economic loss nationwide. Floods can cause substantial damage to structures, landscapes, and utilities and create significant life safety issues.

The City of Sacramento is susceptible to various types of flood events: riverine, flash, and localized stormwater flooding; and levee and dam failure flooding. Regardless of the type of flood, the cause is most often the result of severe weather patterns and excessive rainfall, either in the flood area or upstream reach. Flooding is the most significant natural hazard that the City faces.

1.2.1 Flood Risk

As measured by the risk of flooding and the value of at-risk assets in the floodplain, the City currently has the greatest flood risk in the nation. The definition of flood risk can be stated as:

$$\text{Flood Risk} = \text{Probability of Flood} \times \text{Consequences}$$

Therefore, effective flood risk reduction works at reducing both the probability *and* the consequences of flood. Flood risk reduction can be accomplished through implementation of a range of structural (through levee improvements and maintenance, internal drainage improvement, etc.) and non-structural tools (e.g., land use planning, public outreach and preparedness activities, etc.).

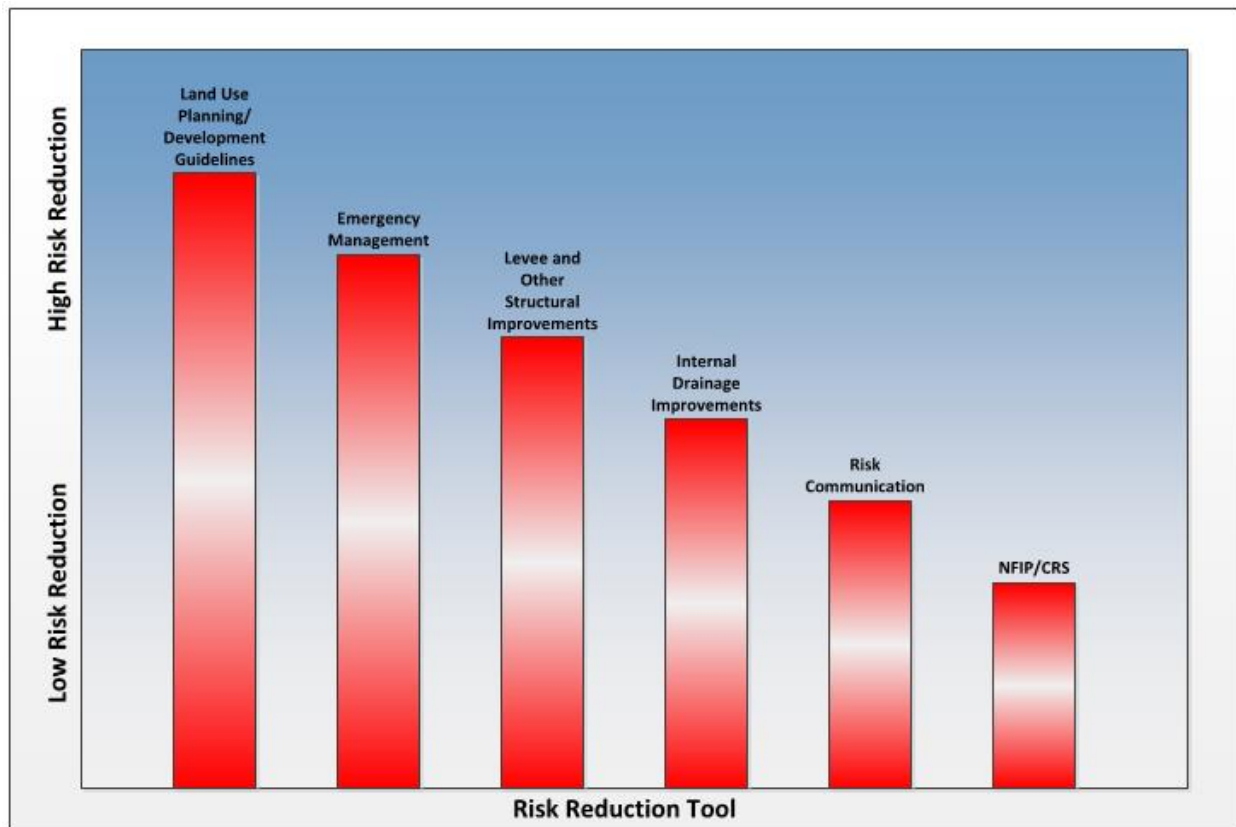
There is often a temptation to focus all risk reduction activities and resources on structural protection (e.g., levees, dams, flood gates, etc.) as over 1,100 miles of levees protect more than two-thirds of the City. However, since levees can be overtopped or fail due to a variety of circumstances, flood risk cannot be completely eliminated by structural flood control projects alone. While the City continues to partner with others such as the US Army Corps of Engineers (USACE) and the Sacramento Area Flood Control Agency (SAFCA) on levee improvements and other structural projects, further risk reduction within the City can be achieved through other, non-structural measures. Thus, flood risk reduction is best achieved by employing a suite of risk reduction tools, with each one adding to the overall reduction in flood risk.

1.2.2 The Six Risk Reduction Tools

Figure 1.2 shows six risk reduction tools utilized by the City to reduce flood risk:

- Land Use Planning and Development Guidelines
- Emergency Management
- Levee and Other Structural Improvements
- Internal Drainage Improvements
- Risk Communication (Public Education and Awareness)
- National Flood Insurance Program (NFIP)/Community Rating System (CRS)

Figure 1.2. Flood Risk Reduction Tools



Source: DOU 2014

For each of the six risk reduction tools, the City has identified a number of critical questions related to flood risk reduction:

1. Land Use Planning and Development Guidelines:

- Since flood risk reduction begins with planning, what kind of development will the City allow in areas protected by levees?
- How will the City plan this development?
- What kind of buffer will be required adjacent to levees?
- What special restrictions or requirements will the City place on development in areas protected by levees?
- What ordinances need to be drafted or modified?
- What does the City need to do to ensure that codes and ordinances are implemented and followed?

2. *Emergency Management:*

- How can the City assist its citizens in preparing for, responding to (including possible evacuations), and recovering from a serious flood event?
- What does the City need to do to be prepared to respond successfully and recover quickly from a serious flood event?
- How best can the City define and identify critical facilities and include them in the emergency strategy?

3. *Levees and Other Structural Improvements:*

- How will the City work with SAFCA and other local, state and federal agencies to ensure that the flood control system protecting our citizens is properly operated and maintained?
- How will these agencies work together to make sure that improvements to the system are continually being made?

4. *Internal Drainage Improvements:*

- What will the City do over the next five years to reduce flood risk through effective operation and maintenance of the City's internal storm drain system?
- How will the City make improvements to the system?

5. *Risk Communication (Public Education and Awareness):*

- What does the City need to do to effectively communicate flood risk to the citizens so that they are motivated to take all necessary steps and use all available tools to reduce their flood risk?
- How can staff effectively communicate risk to the City Manager and City Council so that they will fully support the implementation of this CFMP?

6. *National Flood Insurance Program (NFIP)/Community Rating System (CRS):*

- What does the City need to do to maximize the flood risk reduction offered by these federal programs?
- How do we get more residents to take advantage low cost flood insurance?
- How can the City achieve the lowest level possible rating in the CRS program?

1.3 CFMP Purpose and Overview

The City developed its first CFMP in 1996, but this initial flood management plan was only partially implemented, and many of its components are outdated and in need of revision. By necessity, the focus of this first plan was more educational than strategic. This revised CFMP will be more strategic in nature.

1.3.1 2015-2020 CFMP: Plan Purpose

This City of Sacramento CFMP establishes a strategic, comprehensive management approach to reducing flood risk through the implementation of six risk reduction tools utilized by the City. It is the intent of this CFMP to communicate these tools to City staff, the community, and other key stakeholders to better facilitate an integrated, unified approach by the City to flood risk reduction.

This CFMP will guide the City's flood risk reduction and mitigation efforts from the current year (2015) through 2020. As a comprehensive management document, the plan includes a detailed description of each risk reduction tool and includes implementation strategies with goals, schedules, specified responsibilities, and accountability for City departments, and potential funding sources (where appropriate). While both City government officials and Sacramento residents must understand that flood risk cannot be totally eliminated, the CFMP will guide the City's ongoing efforts to reduce the overall flood risk to the community. The intent of this CFMP is not to quantify the flood risk reduction specific to each of the tools, but to demonstrate that by using all of the tools, flood risk can be reduced for the City.

1.3.2 2015-2020 CFMP: Plan Overview

This CFMP provides an overview of flood history in Sacramento and addresses how, using a number of flood risk reduction tools, the City proposes to: (1) reduce the frequency of damaging floods; (2) respond to future flood disasters through emergency management activities; and (3) minimize risk from flooding through adherence to land use planning and development guidelines, improvement of levees and other structures, and promotion of public education and awareness that among other things, encourages residents to purchase flood insurance.

Specifically, this plan document outlines how the City will utilize all six risk reduction tools and associated implementation strategies, each of which are discussed in detail in subsequent chapters of the plan. This 2015-2020 CFMP is organized into eight chapters as described below:

Chapter 1: Introduction

Chapter 1 provides an introduction to this CFMP update which includes:

- Background

-
- Relation to the City’s 2035 General Plan
 - Understanding Flood Risk and Risk Reduction Tools
 - CFMP Purpose and Overview
 - Staff Roles and Responsibilities
 - CFMP Update Process

Chapter 2: Historical Perspective

This Chapter provides a historical perspective of flooding in the City and surrounding area. A summary of past flood efforts is provided. Current conditions are also outlined.

Chapters 3-8: The Six Risk Reduction Tools

Chapters 3 through 8 in the CFMP each discuss one of the six risk-reduction tools and all include: 1) a brief Introduction and Background of the chapter’s contents and the risk reduction tool being discussed; 2) the Current Implementation Status of the tool and how it is being used to reduce flood risk today; and 3) Implementation Strategies and Actions Items for 2015-2020 and beyond, which outline the action items identified for implementation to reduce flood risk in the City of Sacramento as part of this CFMP.

The implementation strategies and action items for each risk reduction tool also includes an implementation schedule. The implementation schedule is broken down by three implementation timeframes: short term (1-3 years), mid-term (3-5 years), and long term (greater than 5 years). The chapters detailing the six risk reduction tools are:

- Chapter 3: Land Use Planning and Development Guidelines
- Chapter 4: Emergency Management
- Chapter 5: Levee and other Structural Improvements
- Chapter 6: Internal Drainage Improvements
- Chapter 7: Risk Communication/Program for Public Information (PPI)
- Chapter 8: NFIP/CRS

Appendix A: Summary Implementation Plan

A Summary Implementation Plan organized by risk reduction tool is included in Appendix A. This includes a summary table that details a list of implementation strategies, responsible parties, potential funding, and implementation schedule. Complete implementation action items for each risk reduction tool from each chapter are also included in this Appendix.

Appendix B: Risk Communication (PPI) Planning Process Documentation

Appendix B includes documentation supporting the planning process as part of the PPI. PPI meeting invitations, sign-in sheets, and agendas are included here.

1.3.3 City Staff Department Roles and Responsibilities

The 2015-2020 CFMP is a City-wide document that affects most City departments and many City staff. The departments responsible for its implementation include:

- DOU, Field Services Division
- DOU, Engineering Services
- Department of Transportation
- Office of Emergency Services
- Community Development Department (CDD), Long Range and Short Range Planning
- Police Department
- Fire Department

In order for this 2015-2020 CFMP to be implemented effectively, input and consensus will be needed from all responsible City departments. In addition, one City staff position will be identified as being ultimately responsible for overall plan implementation and reporting. The head of the Floodplain Management Section, housed in the DOU, will assume that position, and he or she will be responsible for holding all departments involved with the CFMP accountable for their multiple implementation tasks and timeframes.

1.3.4 CFMP Update Process

Once complete, the City of Sacramento will be responsible for CFMP implementation and maintenance. The status of implementation actions identified in this CFMP will be updated on an annual basis as part of the Annual Progress Report prepared in accordance with the implementation requirements of the Sacramento County Local Hazard Mitigation Plan (LHMP) Update, of which the City is a primary partner and participating jurisdiction and as also required by the NFIP's CRS program. It is further intended that the update schedule for this CFMP be aligned with future five-year updates of the LHMP. Thus, this CFMP will be formally reviewed and revised as a strategic plan every five years.

2 HISTORICAL PERSPECTIVE

2.1 Introduction and Background

Flooding and the threat of a flood emergency have historically been linked to the Sacramento area and the Central Valley. The City has always been susceptible to major flood events because of its location at the confluence of two great waterways: the Sacramento and American rivers. The City has been flooded periodically during major storms that traditionally occur in December, January, and February.

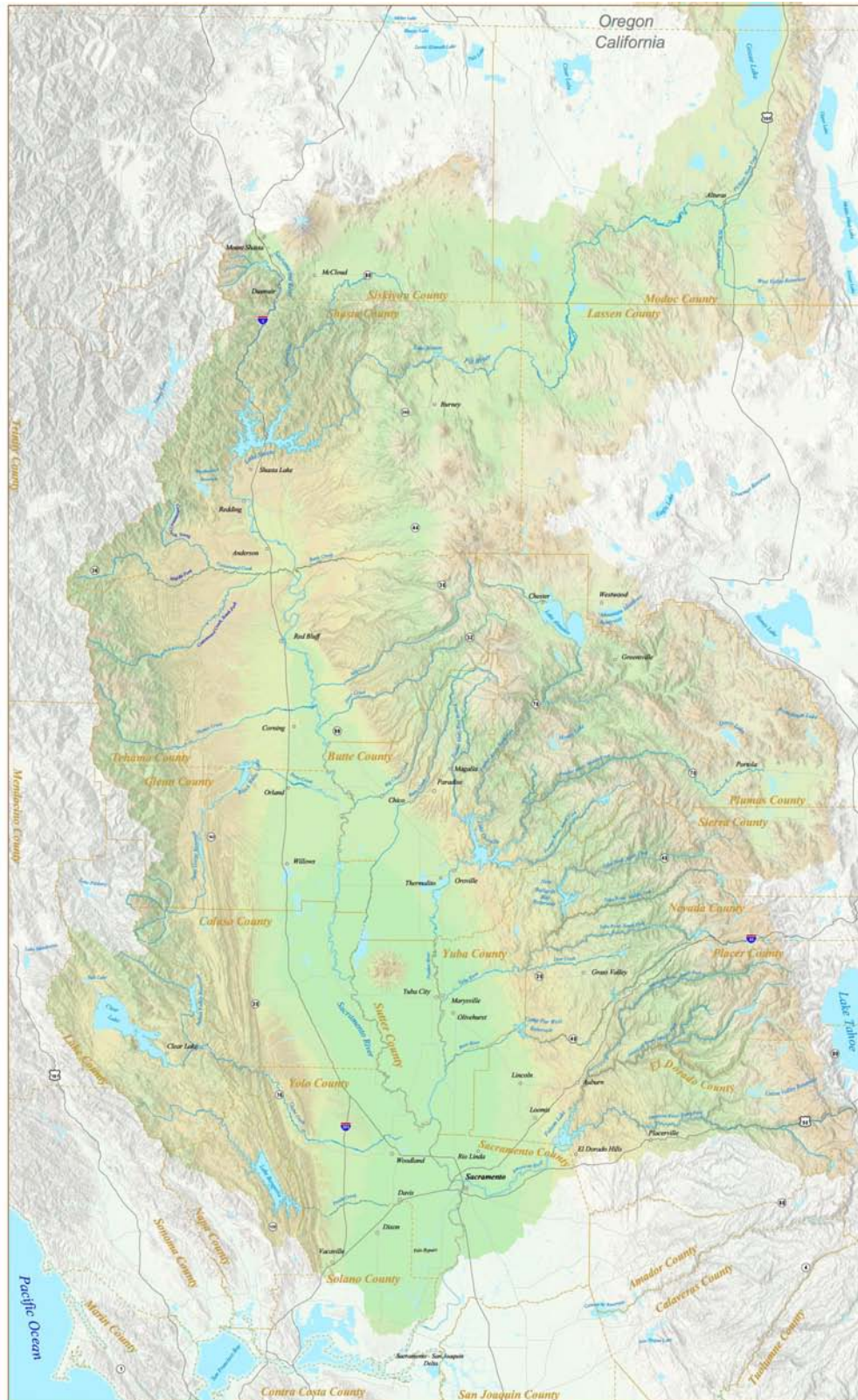
In the Sierra Nevada Mountains, small creeks and high streams are fed by underground springs, storm run-off, and melting snow. Descending from the upper watershed, these creeks and streams form large rivers such as the Sacramento, American, Feather, Yuba, San Joaquin, Mokelumne, and Cosumnes. These waterways are characterized by: (1) small river beds conveying normal flow from the mountains; and (2) wide overbank floodplains carrying flood flows caused by heavy mountain rainfall. The Sacramento River Watershed, which includes the American River, encompasses some 27,000 square miles and drains most of Northern California (see Figure 2.1).

In the City of Sacramento, much of the flood damage occurs in the floodplains of the Sacramento River and the American River. Six small tributaries of the Sacramento River pass through and provide drainage for the City of Sacramento. These tributaries are Dry Creek, Magpie Creek, and Arcade Creek in the northern portion of the City (north of the American River), and Morrison Creek, Elder Creek, Florin Creek, Unionhouse Creek, and Laguna Creek in the southern portion of the City (south of the American River). Additional natural drainages within the City include Chicken Ranch and Strong Ranch sloughs, Florin Creek, and Rio Linda Creek. Man-made drainage canals that provide drainage for a large portion of the urbanized area that is not served by the City's combined sewer system or the storm drainage collection system include the Natomas East Main Drain Canal and the East, West, and Main Drainage canals. These waterways and drainages are shown in Figure 6.1 and discussed in greater detail in Chapter 6.

2.1.1 Growth, Development, and Flooding

By the 1840s, settlers slowly began to move westward across the Great Plains from crowded cities in the eastern United States. Many wagon trains of Americans looking for fresh land to farm and new homes in California came through John Sutter's Fort near Sacramento. However, the boom to growth and development in the Central Valley really began with the discovery of gold in 1849 at Sutter's Mill, just east of Sacramento in the Sierra foothills.

Figure 2.1. Sacramento River Watershed



Source: caringforourwatersheds.com, retrieved 11/14/2014

The gold mining era reached its peak several decades later, coming to a close in the late 1800s. By then, however, the dredge tailings – sands and gravels produced by hydraulic mining activity – had clogged many of the Valley’s waterways; damaged farms, fields and orchards; and exacerbated the area’s frequent flooding. In 1884, the farmers filed a lawsuit against the mine owners to make them stop dumping debris in rivers and streams. A new federal law known as the Sawyer Decision, considered by many the first environmental protection legislation, virtually outlawed destructive hydraulic mining.

At the same time, farmers who now relied on the fertile Valley soil to grow crops for themselves and for export worldwide recognized the need to devise ways of controlling the rivers from flooding their banks and destroying local houses and farms. In an independent fashion, area farmers built a piecemeal flood control system of levees, embankments, and channels to protect themselves from the frequent river inundations. However, this early patchwork of predominately levee improvements provided little protection for the larger flood events of the late 1800s.

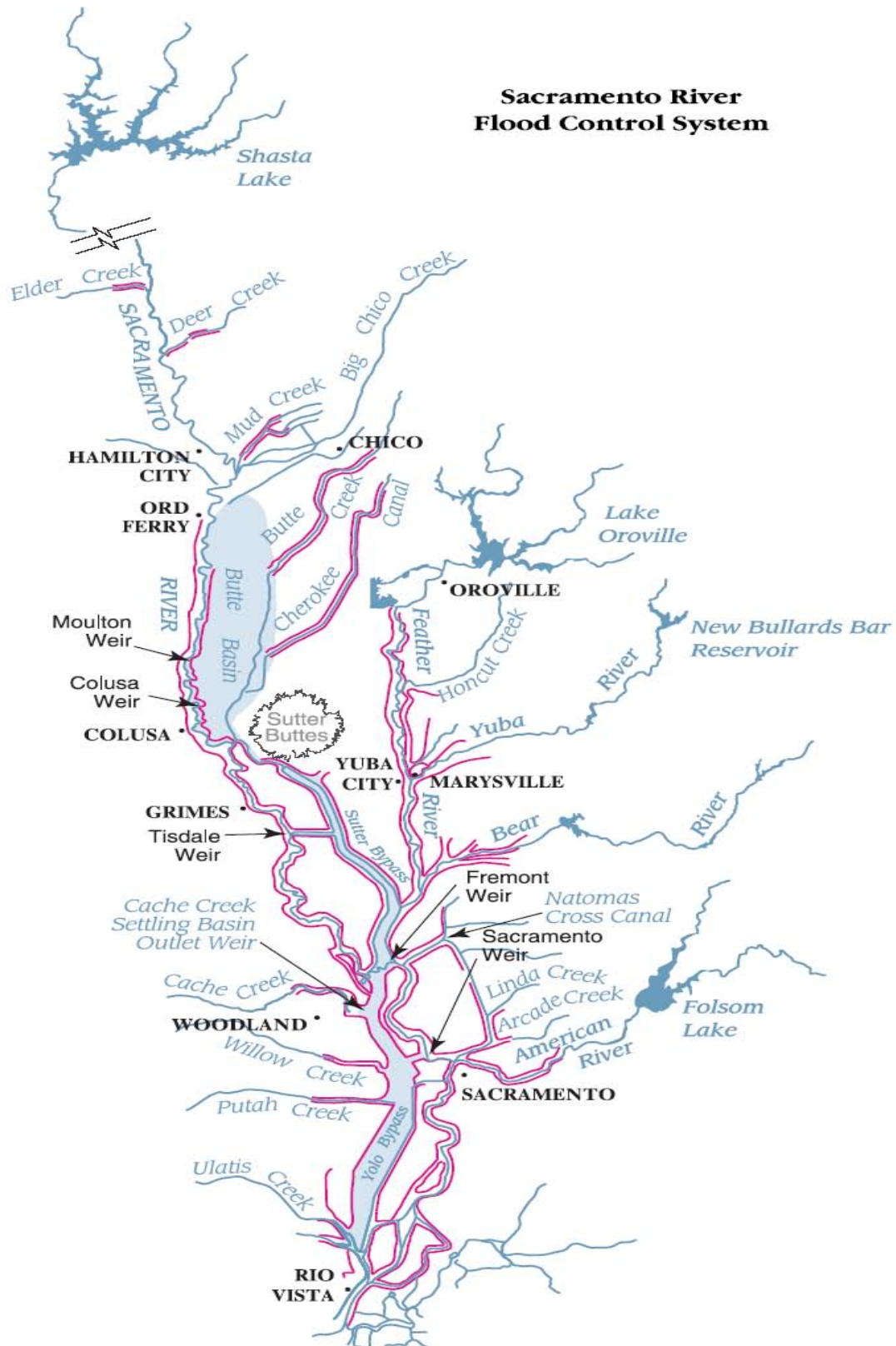
2.1.2 Official Flood Control Efforts

A coordinated effort to control flooding in the Valley did not come about until the State of California and the federal government became involved in the early 1900s. Joint efforts by the California Reclamation Board (now the California Central Valley Flood Protection Board) and the USACE culminated in 1917 with authorization from the U.S. Congress for the Sacramento River Flood Control Project (SRFCP). The original project envisioned systematic construction of levees along the river channels, paralleled by large, leveed overflow channels connected to the rivers through a series of weirs and by-pass channels. Together, the new system would safely convey flows in excess of river channel capacity to the Sacramento-San Joaquin River Delta.

The Central Valley Project, a later companion to the SRFCP, established a series of multipurpose dams and reservoirs in the Sierra foothills to augment the existing flood control system. Folsom Dam and Reservoir, a prominent feature of the project in the Sacramento area, regulates run-off for some 1,860 square miles of drainage area of the American River.

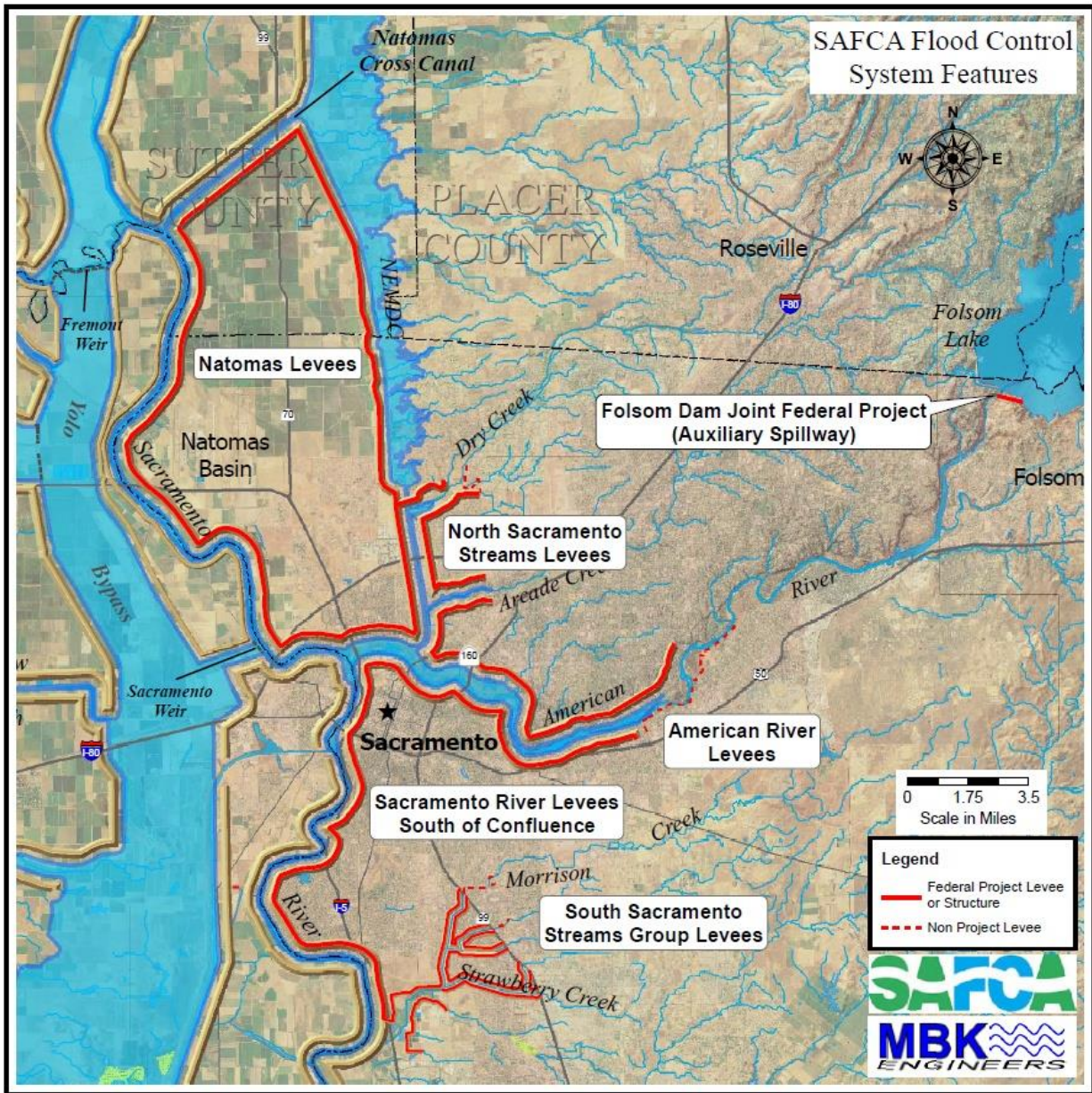
The original congressional approval for the project was followed by subsequent reauthorizations in 1928, 1937, 1941, 1944, and 1950, which increased the federal government’s involvement and expanded the Sacramento River Area Flood Control System, as it is now called. Today, the flood control system is essentially complete as originally planned. Figures 2.2 and 2.3 show the current flood control system from a regional and more local perspective. The responsibility for operating and maintaining the system locally is divided between the City of Sacramento, American River Flood Control District (ARFCD), Reclamation District 1000 (RD 1000), and California Department of Water Resources (DWR).

Figure 2.2. Sacramento River Flood Control System Regional Perspective



Source: DWR, November 2003

Figure 2.3. Sacramento Flood Control System Local Perspective



Source: SAFCA, MBK Engineers

While this comprehensive flood control system of dams, levees, overflow weirs and flood bypasses plays a critical role in protecting the City from serious flood damage, it does not eliminate the flood risk entirely. Figure 7.2 in Chapter 7 illustrates potential flood depths within the City assuming no levees.

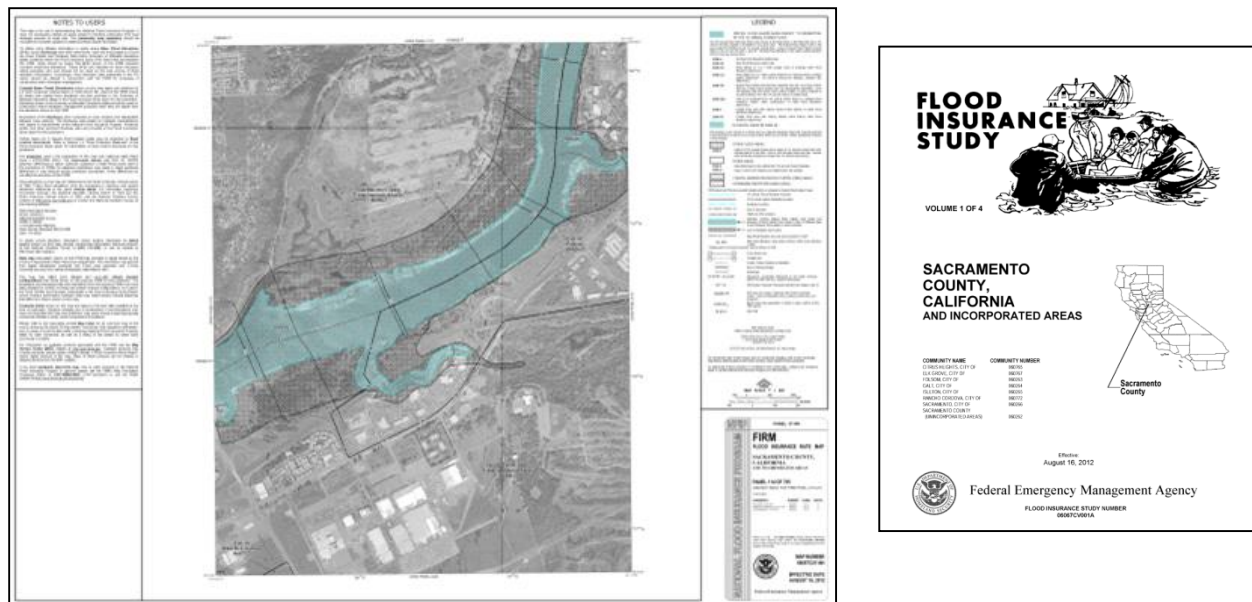
2.1.3 City of Sacramento Floodplains and Floodplain Mapping

In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories. Most areas of flood hazard are commonly

identified on Flood Insurance Rate Maps (FIRMs).

- DFIRMs identify risk in a community. It is the official map of a community on which FEMA has delineated the SFHAs, BFEs, and the risk premium zones applicable to the community. The current DFIRMs for the City of Sacramento became effective on August 16, 2012. Effective May 12, 2014, a large portion of property within the South Sacramento Streams Group was remapped by FEMA.
- Flood Insurance Studies (FISs) are a compilation and presentation of flood risk data for specific watercourses, lakes, and coastal flood hazard areas within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS. The FIS report contains detailed flood elevation data in flood profiles and data tables. The current FIS for the City of Sacramento also became effective on August 16, 2012.

Figure 2.4. FEMA Regulatory Products



Source: FEMA

FEMA Non-Regulatory Products

FEMA began a new initiative in 2010, the Risk Mapping, Assessment, and Planning (Risk MAP) program. The program takes a watershed-based approach to flood studies, which creates a more accurate, holistic picture of the flood risk. The Risk MAP program provides communities with additional non-regulatory products (flood information and tools) to enhance their mitigation plans and take action to better protect their citizens. The non-regulatory products include the following:

- Flood Risk Database
 - Changes Since Last FIRM (CSLF)
 - Flood Depth and Analysis Grids

-
- Flood Risk Assessment
 - Areas of Mitigation Interest
 - Flood Risk Report
 - Flood Risk Map

Non-regulatory products have not been prepared for the City of Sacramento at this time
Flood hazard mapping information for the City of Sacramento is

Flood hazard mapping information for the City of Sacramento, as defined below, is available on the City's website:

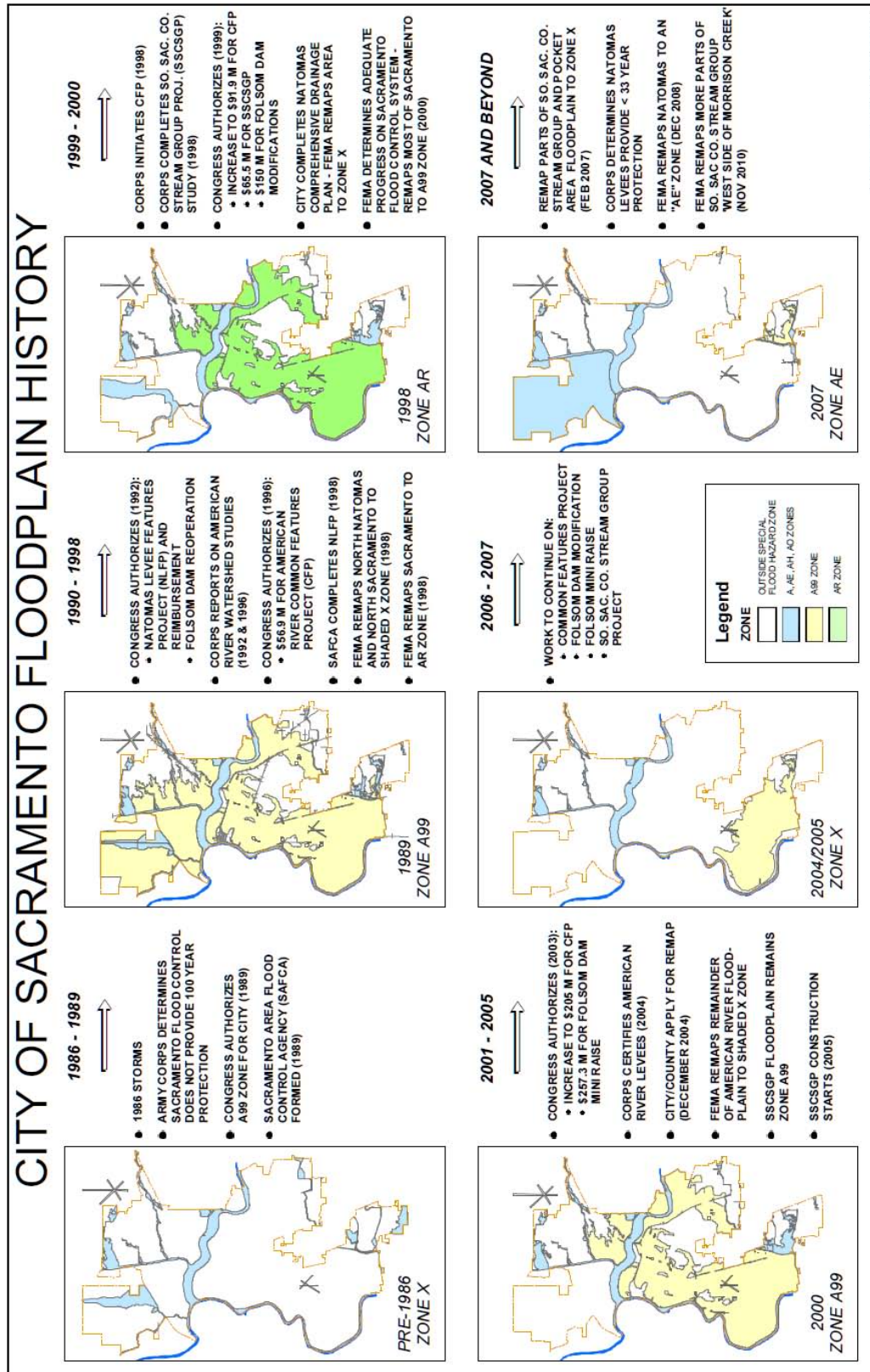
- <http://portal.cityofsacramento.org/Utilities/Education/Flood-Ready/Maps>

The City has had many changes to its designated floodplain since joining the NFIP, administered by Federal Emergency Management Agency (FEMA), on September 15, 1978. Figure 2.5 provides an historical perspective of the City's floodplains and Flood Insurance Rate Maps (FIRM) and Figure 2.6 provides the current Digital Flood Insurance Rate Map (DFIRM) for the City.

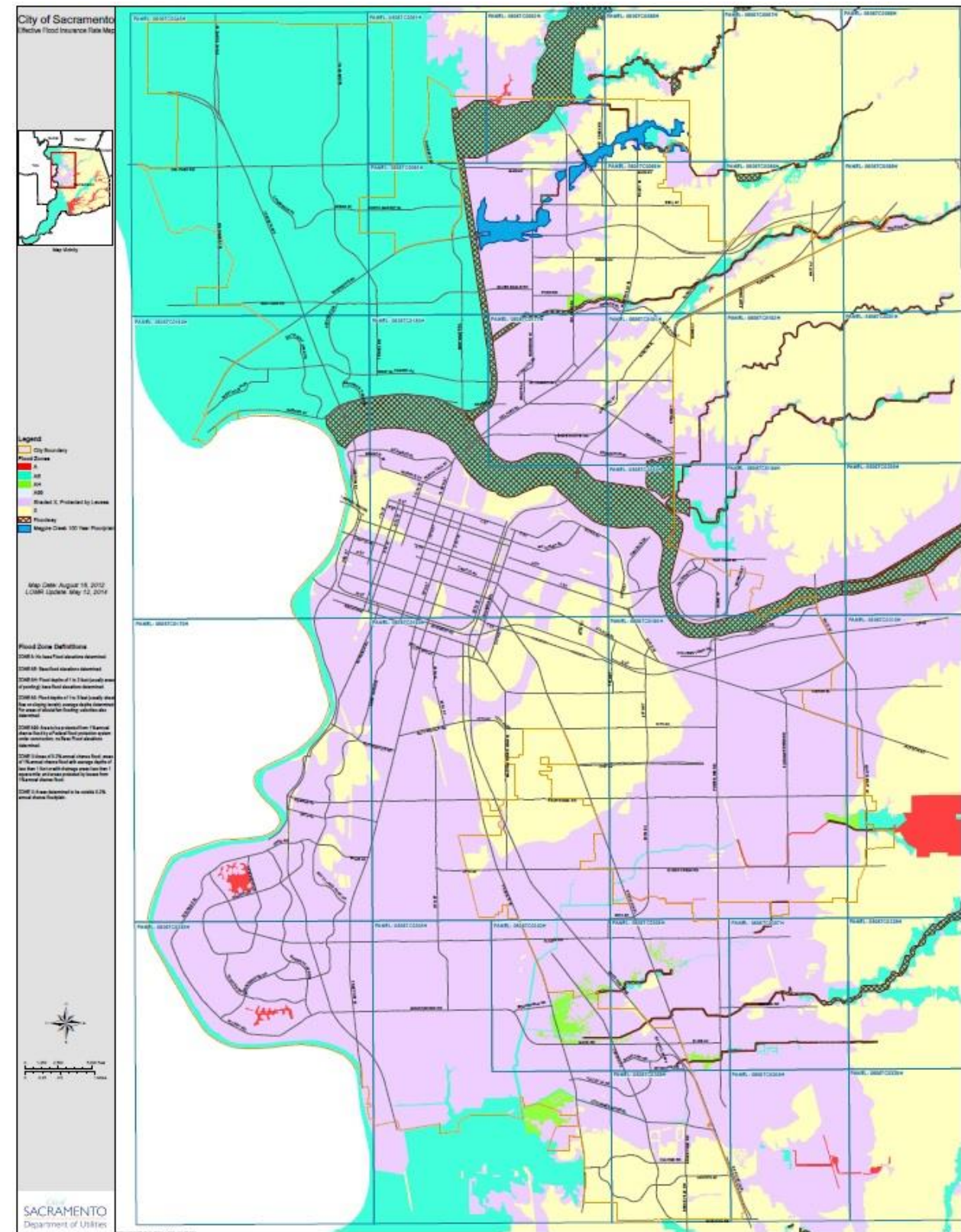
Based on the current FIRM for the City and analysis conducted for the Sacramento County Local Hazard Mitigation Plan Update (2011), over 28,000 parcels totaling in excess of \$10B are located in the Special Flood Hazard Area (SFHA). The SFHA, also known as the 100-year floodplain, is the area expected to be inundated from a flood that has a 1% chance of being equaled or exceeded in any given year. There are over 8,000 parcels valued at over \$868 million located in the 0.2% annual chance, or 500-year, floodplain and over 68,000 parcels valued in excess of \$14 billion that are located in an area protected by a levee from the 1% annual chance flood. There are over 118,000, 35,000, and 229,000 people that reside respectively in the 1%, 0.2% and areas protected by a levee within the City of Sacramento. A comprehensive analysis of the risk and vulnerability of the City to various flood events is included in the Sacramento County Local Hazard Mitigation Plan Update (2011).

In addition to those 1% and 0.2% annual chance floodplains regulated under the NFIP, recent California legislation resulting from Senate Bill 5 (SB 5, 2007), later amended to SB 1278, requires cities and counties within the Sacramento-San Joaquin Valley to address new flood protection standards of the 200-year (0.5% chance of being equaled or exceeded in any given year) flood when considering development. This recent legislation (SB 5 and Assembly Bill AB 162) is intended to improve local land use decisions by strengthening the link between land use and flood management. These standards, discussed in more detail in Chapter 3, will become effective over the next several years. Figure 2.6 presents the 200-year floodplain for the City of Sacramento.

Figure 2.5. City of Sacramento Floodplain History

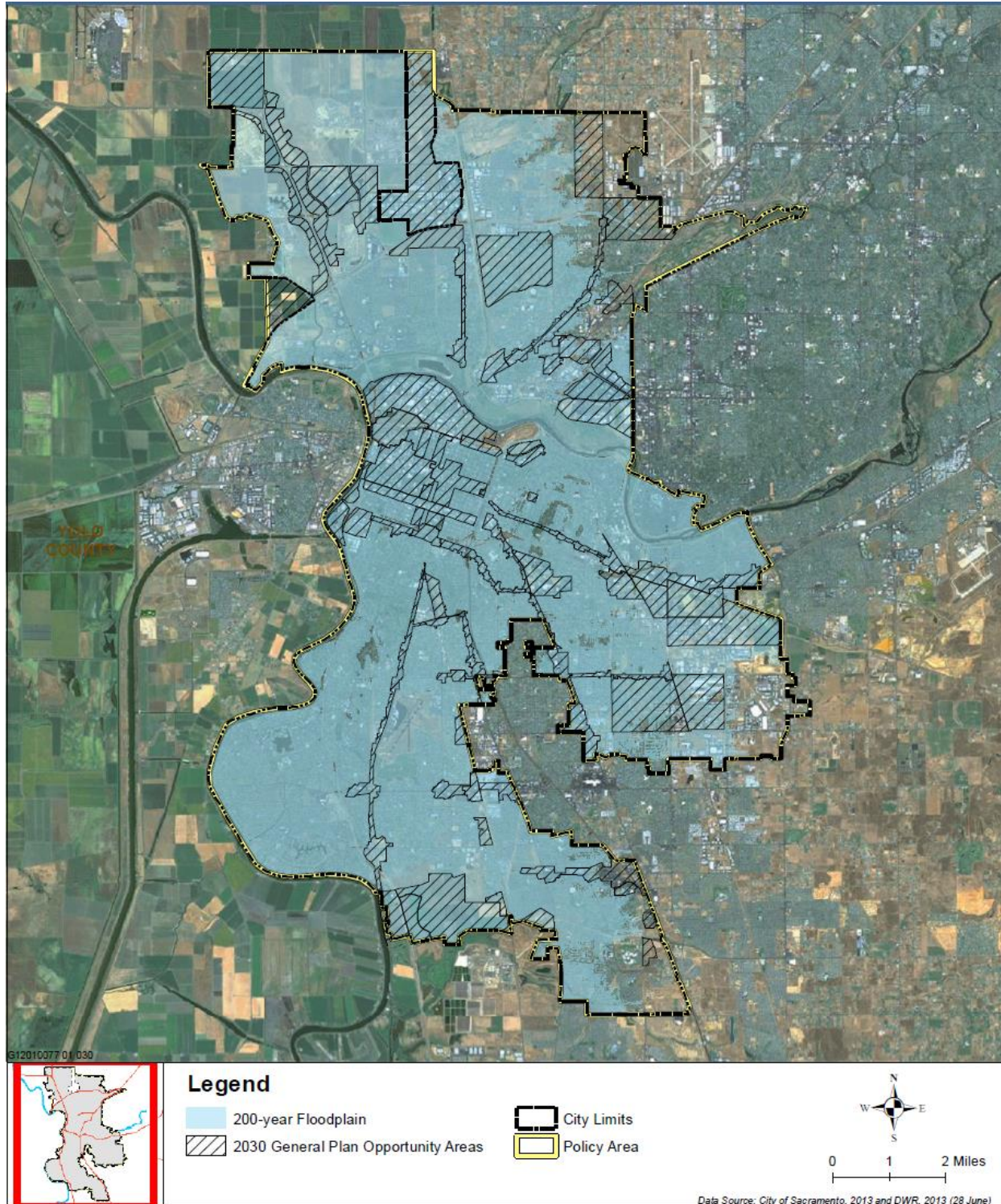


Source: City of Sacramento



Source: FEMA

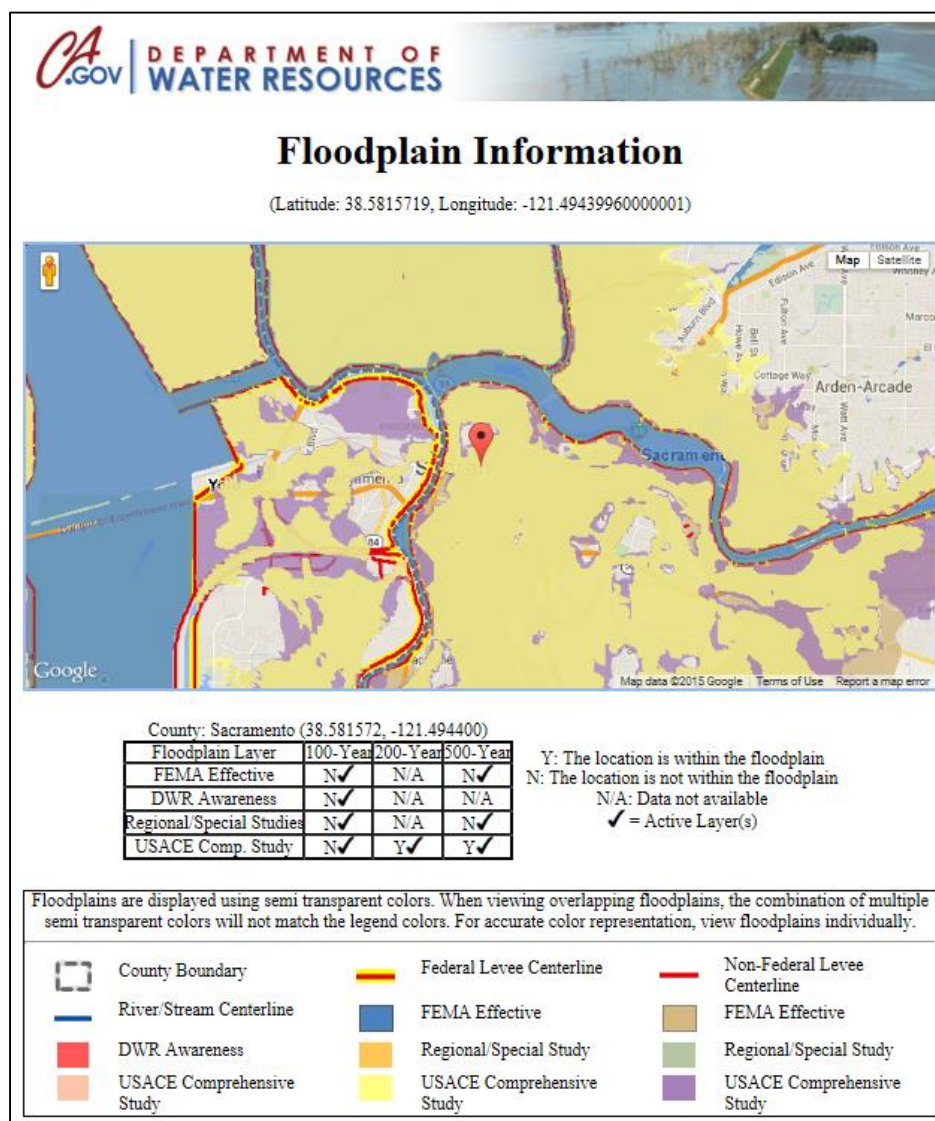
Figure 2.7. City of Sacramento 200-Year Floodplain



Source: City of Sacramento 2035 General Plan

As part of the SB 1278 initiative, the DWR developed preliminary maps for floodplains located within the Sacramento-San Joaquin Valley watershed. These maps were developed to better reflect the most accurate information about the flooding potential in a community and were designed to provide a better understanding of the true risk of flooding to public safety and property. These DWR Best Available Maps (BAM), have no regulatory status for floodplain development and do not replace the existing FEMA regulatory floodplain maps (i.e., FIRMs and DFIRMs) and therefore do not make any changes in federal flood insurance requirements for homes and businesses. The maps are being used by Cities and governments to identify areas that warrant further study and to help make informed floodplain management and land use decisions. A sample BAM from the DWR website for the City is presented in Figure 2.8.

Figure 2.8. Sample of BAM Data for the City of Sacramento

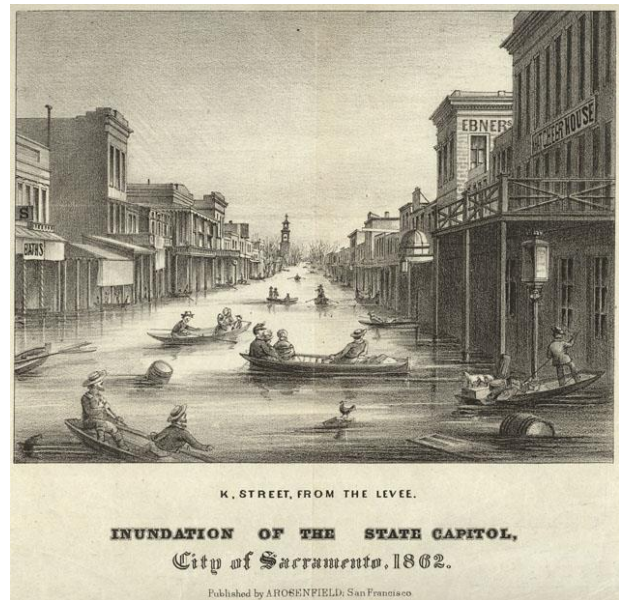


Source: <http://gis.bam.water.ca.gov/bam/>

2.2 History of Major Flooding

Historically, the City of Sacramento has always been vulnerable to flooding because of its relatively flat terrain and number of watercourses that traverse the City and surrounding County area. Flooding frequently occurred before a flood control system existed. Early residents of downtown Sacramento were forced to build on top of the original town level to avoid floods.

Flooding can occur in the City of Sacramento anytime from October through April. Flooding generally results from prolonged heavy rainfall and is characterized by high peak flows of moderate duration and by a large volume of runoff. Flooding can be more severe when antecedent rainfall has resulted in saturated ground conditions. Several areas of the City are subject to flooding by the overtopping of rivers and creeks, levee and dam failures, and the failure of urban drainage systems that cannot accommodate large volumes of water during severe rainstorms.



SAFCA has concluded that Sacramento faces an unacceptably high risk of flooding for two primary reasons:

1. The cores of today's levees are often the levees built by farmers and settlers as much as 150 years ago. Early levees were not constructed to current engineering standards, and little care was given to the suitability of foundation soils. These remnants of the past make today's levees unreliable. It was believed prior to 1986 that the levees containing the Sacramento River and the American River were of sufficient height and stability to protect the county from 100-year or greater storms. The storms that occurred in February 1986 demonstrated that those levees are not always sufficient.

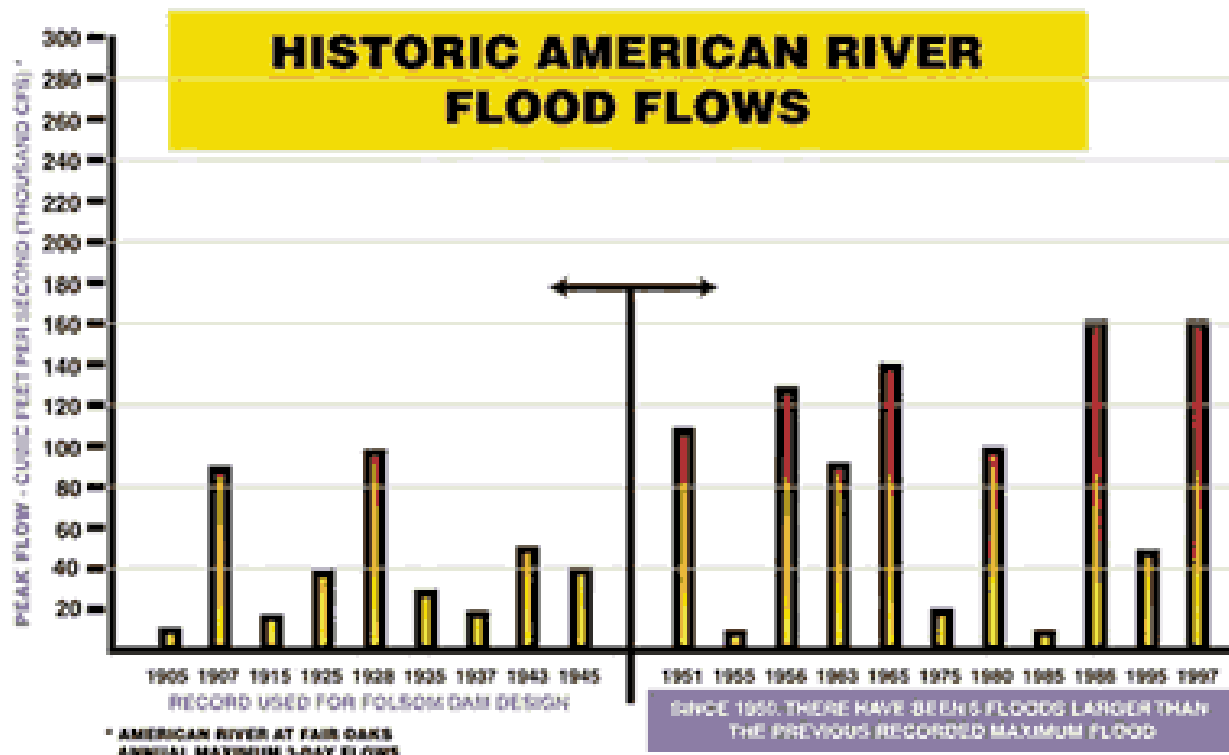
To address this issue, levee improvements to strengthen levees and to make them less susceptible to seepage-induced failures are a major portion of SAFCA's efforts to reduce the risk of flooding in Sacramento. An overview of these ongoing levee improvements is included in Chapter 5 of this CFMP.

2. The quantity of water flowing out of the Sierra Nevada Mountains during large floods appears to be increasing. Folsom Dam was designed to reduce flood flows in the American River to a flow rate that could be safely carried by downstream levees. Construction on Folsom Dam began in 1950. The first storm that occurred after

beginning the construction of Folsom Dam was larger than any occurring in the prior 45 years. Since that 1951 storm, Sacramento has experienced four more “record floods” each somewhat larger than the previous. A comparative analysis run on the two periods (1905 to 1950 and 1950 to 2000) shows that a storm with one chance in 500 of occurring in any year based on the earlier period is approximately the same size as a storm with one chance in 50 of occurring using the entire 95-year period.

The graphic below shows the relative size of large floods over the past 100 years.

Figure 2.9. Historic American River Flood Flows



Source: SAFCA

Sacramento experienced great floods in 1850, 1852, 1862, 1911, 1913, 1951, 1956, 1963, 1964, 1986, 1995, 1997, and 2005. Record breaking flood events are detailed further below:

1850 Flood - During the night of January 7, 1850, a great storm swept in from the west. Almost overnight the water posed a grave threat to life and property. Within two days of the storms beginnings, downpours that reached an inch an hour, had transformed the rivers into raging torrents. There was no levee protecting the new city which started right at the river banks. Within hours, the entire community, for a mile back from the river, was deep under rushing waters. Houses were toppled; businessmen watched as thousands of dollars in inventory was washed out their doors; and a small steamboat navigated the town's streets to deliver goods. Very few homes escaped having water on the first floors. Many were swept from their underpinnings.

Figure 2.10. Sketch of the City of Sacramento during the Flood of 1850



Source: California State Library

1852-53 Flood – In December of 1852, the Sacramento Valley was again inundated, even more deeply than they had in the high water of 1850. On March 29, 1853, the Sacramento River rose twelve feet within twenty-four hours. When the water finally broke through the levees, it was at a point south of the city, toward Sutterville. The out rush of waters on the flatlands were sweeping and violent. By April 2, 1853, the water had backed up into the city. Again the City was under water. Sacramento was a city submerged. The City was a lake, boats were in the streets and the water didn't drain away for two months. The City had levees along both the Sacramento and American Rivers. Although levees served to prevent the rivers from invading the growing city, they also served to trap storm and refuse water that would otherwise drain directly into those rivers.

1861-1862 Flood – Sacramento had enjoyed eight winters of the rivers staying in-bank. The City had prospered and became the State capital. On December 9, 1861, at 8:00 A.M., the American River suddenly went over the levee at Smith's Gardens, about 31st & B Streets, in the northeastern part of the City. The water took its old channel, rushed through the slough west of the Fort and over its banks in less than 30 minutes, the low lots between O & R Streets were overflowed two to three feet deep. The R Street levee stopped its flow, causing it to back up into the City. By 9 A.M., the entire City, south of J Street, was inundated. By 11:30 A.M., only J, K and the levee streets (1, R, and Front) were above water. Within an hour and a half, J and K Streets were under water.

1951 Record Flood – Just after ground is broken on Folsom Dam, the American River watershed experiences the first of five record storms.

Figure 2.11. January 1862 K Street Flooding



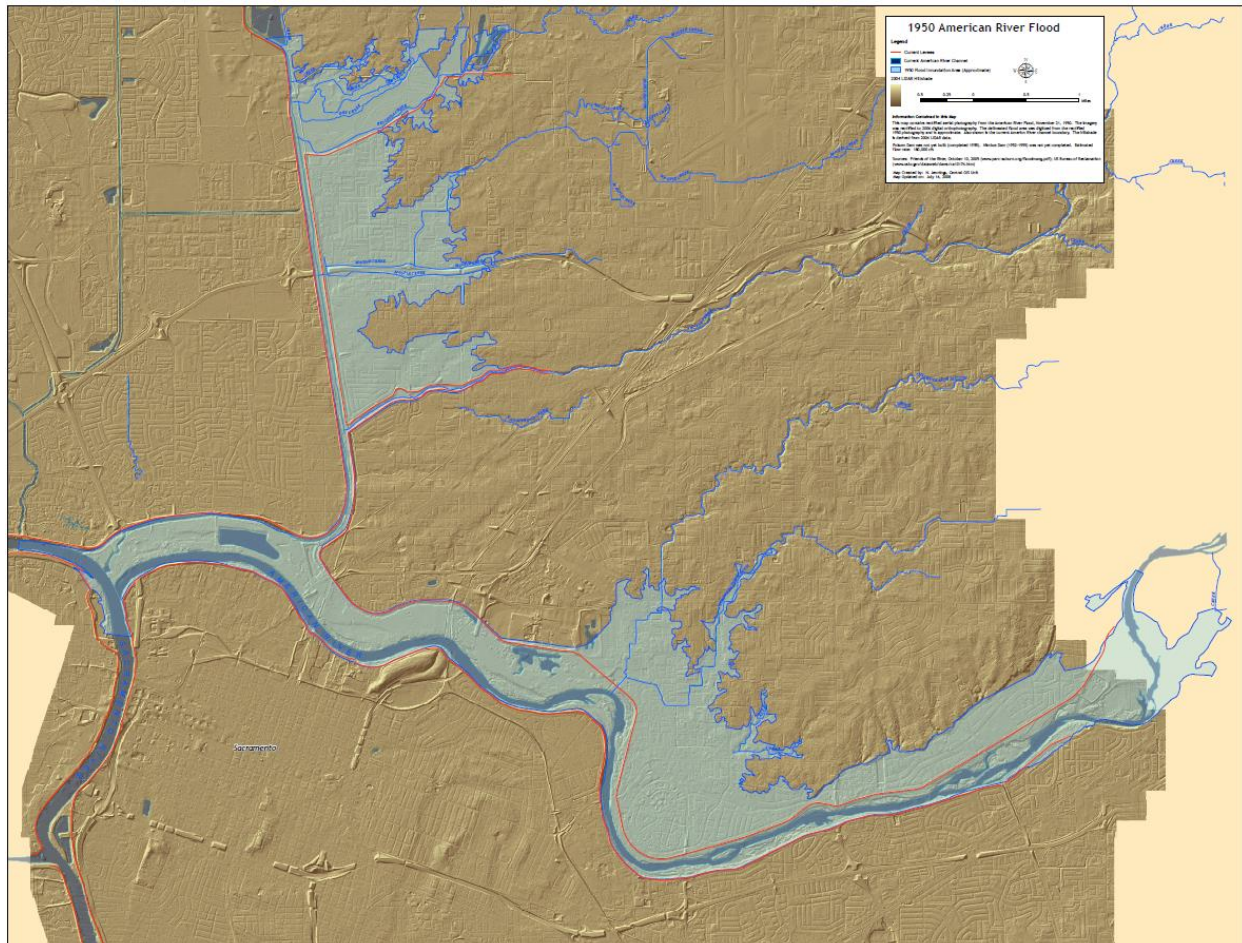
Source: Drainage and Flood Control, 152 Years.

Figure 2.12. 1950 Flood – H Street Bridge



Source: SAFCA

Figure 2.13. 1950 Flood Coverage



Source; Friends of the River, October 10, 2005 (www.parc-auburn.org/floodmang.pdf); US Bureau of Reclamation (www.usbr.gov/dataweb/dams/ca10174.htm)

1956 Record Flood – Though engineers had been predicting it would take a year to fill the nearly completed upstream Folsom Dam, the second record storm filled the dam in a week and Sacramento is saved from flooding.

1964 Record Flood – the 3rd record flood in less than 15 years. Engineers concluded that Folsom Dam was only designed to handle a 120-year storm, not a 500-year storm.

Figure 2.14. Flooding on Franklin Boulevard in 1964



Source: Drainage and Flood Control, 152 Years.

1986 Record Flood: In February 1986, major storms in northern California caused record flood flows in the American River basin. Overflows from Folsom Reservoir, together with high flows in the Sacramento River, caused water levels to rise above the safety margin on levees protecting the Sacramento area. A series of tropical storms roared through the State that month. Ten inches of rain fell in 11 days. The levee overtopped in a low spot of Strawberry Manor, flooding approximately 500 homes. Outflows from Folsom Reservoir, together with high flows in the Sacramento River, caused water levels to rise above the safety margin on levees protecting the Sacramento area. The storm brought large flood flows into Folsom Reservoir with a maximum six-day record inflow of 1.14 million acre-feet, exceeding the six-day design inflow of 987,000 acre-feet. To relieve the pressure on the dam, 115,000 cubic feet per second (cfs), the design capacity of the levees downstream, was released from the reservoir for two days. As the rain continued, officials boosted those releases to 130,000 cfs for 24 hours. Officials considered increasing releases to 150,000 cfs, but the rain let up, and disaster was averted. At that point, it was estimated by flood officials that three more hours of rainfall would have overwhelmed the system, flooding thousands of homes. Runoff in the American River quickly filled the temporary diversion dam built at the Auburn Dam site, approximately ten years earlier, causing it to burst, and sending 100,000 acre feet of water rushing into Folsom Reservoir. Folsom Dam was downgraded to about a 60-year storm. The USACE determined that a majority of the City did not have 100-year level of flood protection.

Figure 2.15. 1986 Flood – H Street Bridge



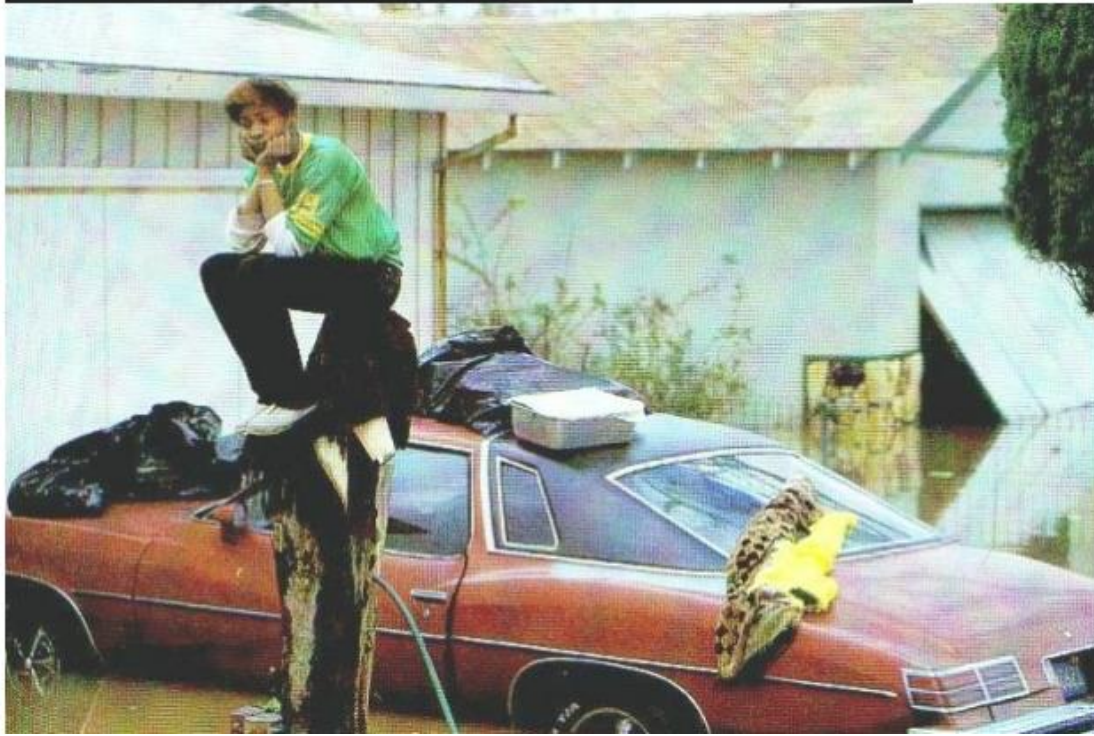
Source: SAFCA

Figure 2.16. Aerial View of 1986 Flood



Source: SAFCA

Figure 2.17. 1986 Flood



Source: SAFCA

1997 Record Flood: The fifth record flood in 46 years occurs over the New Year's holiday. Unprecedented flows from rain and melted snow surge into the Feather and the San Joaquin. Sacramento is spared when the fury of the storm hits 40 miles north in the Feather River. Levee failures flood Olivehurst, Adboga, Wilton, Manteca, and Modesto. By the end of January 1997, 48 counties were declared disaster areas and 290 square miles of property, valued at about \$2 billion, including homes, farmlands, bridges, roads and flood management infrastructures were damaged. Nine people were killed and 120,000 people were evacuated from their homes.

Other large flood events will certainly occur in the future, leaving the City vulnerable to additional, potentially catastrophic flooding. Further localized flooding problems both in and outside of the natural floodplains are likely to continue as drainage channels are altered and confined with new development.

Figure 2.18. Tower Bridge – Jan 2003



Source: SAFCA

Figure 2.19. December 30, 2005 Pomegranate Ave along Florin Creek in south Sacramento



Source: SAFCA

EXHIBIT 6
TO THE PETITION FOR EXEMPTION AND WAIVER
VERIFIED STATEMENT OF KENNAN H. BEARD III,
SIERRA'S PRESIDENT

**VERIFIED STATEMENT OF KENNAN H. BEARD III,
SIERRA'S PRESIDENT**

My name is Kennan H. Beard III, and I am employed by Sierra Northern Railway ("Sierra") in the capacity of President. I have been employed by Sierra since November 2014 and have occupied my present position since November 2014. The responsibilities of my present position include overseeing the activities and operations of the entire company. I am submitting this Verified Statement to describe Sierra's current operations over the Line to be abandoned.

The 0.70 mile Line segment at issue extends from a point north of the existing Sacramento Weir and continues on an elevated alignment along the Weir. The Weir is a critical element in Sacramento's flood control system, and the U.S. Army Corps of Engineers ("USACE") and the Sacramento Area Flood Control Agency ("SAFCA") have concluded that they need the property to improve flood control infrastructure protecting over half a million people in the Sacramento area.

Sierra currently runs freight trains over the Line for customers located in Woodland, California. Sierra also runs a passenger excursion service over the Line. In 2019, Sierra had three customers for whom we moved freight over the Line to industrial facilities in Woodland. Sierra had four customers located in Woodland that used Sierra's facilities for storage or car repair operations. The commodities that Sierra handled for these customers in 2019 were: industrial tomato paste, limestone, polyvinyl, grain products, railway ties, calcium carbide, concrete burial vaults, and empty railcars (for repair).

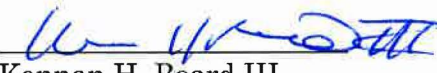
Attached to this Verified Statement is a table identifying each of Sierra's 2019 customers. Sierra has been in contact with each of these customers to ensure that they will have transportation alternatives post-abandonment. We have been informed by each customer that they have viable transportation alternatives, which are described on the table.

Moreover, even were it not for USACE/SAFCA's urgent need for the Line for flood control purposes, Sierra's customers do not generate sufficient revenue to cover the costs of the service they are now receiving. Sierra transported a total of 507 freight rail cars on the Line in 2018 for a total gross revenue of \$408,576, and 463 cars in 2019 for a total gross revenue of \$382,160. This small volume of traffic has not generated revenues sufficient to cover the costs of operating the Woodland branch, of which the Line segment at issue here is a part. The attached spreadsheet shows that the operating costs of serving Sierra's Woodland customers are almost three times greater than the income from operations. These costs do not include any opportunity costs associated with the value of property used to provide service.

Verification

I, Kennan H. Beard III, verify under penalty of perjury that I am the President of Sierra Northern Railway, that I have read the foregoing document and know its contents, and that the same is true and correct to the best of my knowledge and belief.

Executed on March 18, 2020.


Kennan H. Beard III

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EXHIBIT 7
TO THE PETITION FOR EXEMPTION AND WAIVER
LETTERS OF SUPPORT



Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W., Room 1034
Washington, DC 20423-0001

March 3, 2020

RE: DOCKET NO. AB 874 (Sub-No. 1X)
SIERRA NORTHERN RAILWAY - ABANDONMENT EXEMPTION –
IN YOLO COUNTY, CA

Dear Ms. Brown:

On behalf of the Sacramento Area Flood Control Agency (SAFCA), I am writing to express support for the Sierra Northern Railway's Petition for Abandonment in Docket No. AB 874 (Sub-No. 1X).

On January 16, 2020, the SAFCA Board of Directors adopted Resolution No. 2020-006 supporting the proposed abandonment, because it will facilitate expedited completion of critical flood control improvements in the Sacramento area. The SAFCA resolution, which is attached to this letter, summarizes the plan to build critical flood protection infrastructure in the Sacramento area and the importance of the proposed abandonment to timely delivery of the flood protection improvements.

Sacramento is one of the most at-risk urban flood areas in the United States. To address this problem, the United States Army Corps of Engineers (USACE) has \$4.4 billion program of flood risk reduction projects currently under construction. One of the key projects in this program is the widening of the Sacramento Bypass and Weir, which will divert flood waters away from over half a million people and \$70 billion in damageable property in the Sacramento area.

The widening of the Sacramento Bypass and Weir will require the removal of Sierra Northern Railway tracks, including a railroad bridge and embankment, all as described in the Petition. Restoration of the bridge after completion of the widening project would cost approximately \$30 million, and permanently decrease the effectiveness, and increase the operations and maintenance costs, of the new Bypass and Weir. Thus, the proposed abandonment would provide the safest and most cost effective solution to construction, function, operation and maintenance of critical flood infrastructure necessary to protect Sacramento.

In recognition of the importance of the USACE program, in 2018 Congress provided over of \$1.5 billion of emergency supplemental appropriations to expedite its completion by 2024. Expedited consideration of the abandonment petition would go a long way towards keeping the broader USACE program on schedule.

Therefore, the Sacramento Area Flood Control Agency Board of Directors respectfully request that the STB the grant the petition for abandonment on an expedited basis.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Jason D. Campbell', with a stylized, flowing script.

Jason D. Campbell
Deputy Executive Director

RESOLUTION NO. 2020-006

Adopted by the Sacramento Area Flood Control Agency

**SUPPORTING SIERRA NORTHERN RAILWAY PETITION TO THE
SURFACE TRANSPORTATION BOARD IN REGARDS TO THE
REAL ESTATE TRANSACTION AGREEMENT**

WHEREAS, Sacramento is recognized as one of the most at-risk urban areas from riverine flooding in the country; and

WHEREAS, Sacramento has over half a million people, 147,000 structures, and \$70 billion in damageable property at risk in deep floodplains; and

WHEREAS, the U.S. Army Corps of Engineers (USACE), in a document to Congress, estimated there could be 1,800 deaths should a flood event occur in Sacramento; and

WHEREAS, the USACE, the California State Department of Water Resources, the Central Valley Flood Protection Board and Sacramento Area Flood Control Agency (SAFCA), are partnering to reduce the risk of flooding in the Sacramento area; and

WHEREAS, currently there are \$4.4 billion in Federal flood risk reduction projects under construction in the Sacramento area; and

WHEREAS, in 2018, Congress provided \$1,565,750,000 through emergency supplemental appropriations to complete the features of the American River Watershed, Common Features 2016 Project by 2024; and

WHEREAS, one of the components the American River Watershed, Common Features 2016 Project is to widen the Sacramento Weir and Bypass, allowing more flood flows to be diverted into the bypass system that moves the water safely past the urban areas; and

WHEREAS, under Federal law, SAFCA, as a non-Federal cost-share partner is responsible for providing to the USACE any lands required for construction of the Project, including relocating or removing obstacles on those properties in the way of construction; and

WHEREAS, a portion of the Sierra Northern Railway corridor is in the Project area needed for the widening the Sacramento Weir and Bypass; and

WHEREAS, Sierra Northern Railway and SAFCA entered into a mutual agreement that addresses the Project's real estate needs, fairly compensates the Railroad and minimizes the impacts on the Federal flood control Project; and

WHEREAS, The agreement includes Sierra Northern Railway petitioning the Surface Transportation Board to abandon a portion of the railroad corridor and selling the land, in fee, to SAFCA for the use in the Federal Project to construct the new weir and widened bypass; and

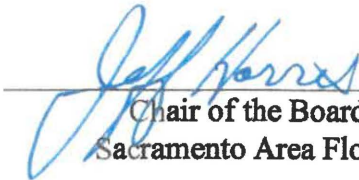
WHEREAS, Sierra Northern Railway anticipates filing a Petition for Exemption with the Surface Transportation Board in the near future seeking authority to abandon a portion of the tracks.

NOW, THEREFORE, BE IT RESOLVED BY THE SACRAMENTO AREA FLOOD CONTROL AGENCY BOARD OF DIRECTORS THAT:

1. The Sacramento Area Flood Control Board of Directors fully supports the Petition of Exemption filed by the Sierra Northern Railway with the Surface Transportation Board seeking authority to abandon a portion of its tracks.
2. The Sacramento Area Flood Control Agency Board of Directors requests the Surface Transportation Board consider the critically important public safety Project for more than 500,000 citizens as it makes its decision regarding the abandonment.
3. The Sacramento Area Flood Control Agency Board of Directors would like to thank the Surface Transportation Board for its efforts to address this issue.

ON A MOTION BY Director Conant, seconded by Director Avdis, the foregoing resolution was passed and adopted by the Board of Directors of the Sacramento Area Flood Control Agency, this 16th day of January 2020, by the following vote, to wit:

AYES: Directors: Avdis, Burns, Conant, Frost, Harris, Holloway, Jennings, Kennedy, Nottoli, Peters, Serna, and Shah
NOES: Directors: None
ABSTAIN: Directors: None
RECUSE: Directors: None
ABSENT: Directors: Ashby


Chair of the Board of Directors of the
Sacramento Area Flood Control Agency

(SEAL)

ATTEST:


Clerk of the Board of Directors

Prime Conduit Inc

January 9, 2020

Cynthia T. Brown
Chief, Section of Administration
Surface Transportation Board
Office of Proceedings
395 E Street, SW
Washington, DC 20423

Dear Ms. Brown:

Prime Conduit understands that Sierra Northern Railway ("Sierra") is seeking Surface Transportation Board authority to abandon approximately 0.70 miles of its rail line in Yolo County, California, including its rail line over the Sacramento Weir, to enable the U.S. Army Corps of Engineers and the Sacramento Area Flood Control Agency to improve regional flood control infrastructure. Sierra currently provides rail transportation services for Prime Conduit at Woodland CA using the rail line that Sierra seeks to abandon.

Prime Conduit and Sierra have been working together to arrange for alternative transportation options to replace Sierra's existing rail transportation service, including the use truck service, and use of Sierra's transload operations in West Sacramento, California. Given these circumstances, Prime Conduit supports the proposed abandonment.

Sincerely,



Dan Gastineau

Plant Manager

Prime Conduit

Woodland, CA 95776



January 13, 2020

Cynthia T. Brown
Chief, Section of Administration
Surface Transportation Board
Office of Proceedings
395 E Street, SW
Washington, DC 20423

Dear Ms. Brown:

Adams Grain understands that Sierra Northern Railway ("Sierra") is seeking Surface Transportation Board authority to abandon approximately 0.70 miles of its rail line in Yolo County, California, including its rail line over the Sacramento Weir, to enable the U.S. Army Corps of Engineers and the Sacramento Area Flood Control Agency to improve regional flood control infrastructure. Sierra currently provides rail transportation services for Adams Grain at Woodland CA using the rail line that Sierra seeks to abandon.

Adams Grain and Sierra are working together to arrange for alternative transportation options to replace Sierra's existing rail transportation service, including truck service, relocating of Adams Grain to Sierra transload operations near West Sacramento, California. Given these current circumstances, Adams Grain supports the proposed abandonment.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Balukoff", with a stylized, cursive script.

Brian Balukoff

EXHIBIT 8
TO THE PETITION FOR EXEMPTION AND WAIVER
ENVIRONMENTAL AND HISTORIC REPORT

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. AB 874 (Sub-No. 1X)

SIERRA NORTHERN RAILWAY
—ABANDONMENT EXEMPTION—
IN YOLO COUNTY, CALIFORNIA

ENVIRONMENTAL REPORT
49 C.F.R. § 1105.7(e)

- (1) **Proposed action and alternatives.** *Describe the proposed action, including commodities transported, the planned disposition (if any) of any rail line and other structures that may be involved, and any possible changes in current operations or maintenance practices. Also describe any reasonable alternatives to the proposed action. Include a readable, detailed map and drawings clearly delineating the project.*

Sierra Northern Railway (“Sierra”) proposes to abandon approximately 0.70 miles of rail line between approximately milepost 3.10 and approximately milepost 3.80 in Yolo County, California (the “Line”). Maps of the proposed area are attached as **Exhibit A**. The Line extends from a point north of the existing Sacramento Weir and continues on an elevated alignment along the Weir, over which Sierra currently operates common carrier freight service, along with excursion passenger service not subject to the jurisdiction of the Surface Transportation Board (“STB” or the “Board”). Photographs of the relevant area are provided in **Exhibit L**.

Sierra proposes to abandon the Line because the Sacramento Area Flood Control Agency (“SAFCA”) needs to acquire the land and facilities related to the Line to implement, along with the U.S. Army Corps of Engineers (“USACE”), a flood control project that involves widening the Sacramento Weir. The flood control project is critical to the public health and safety of the highly urbanized Sacramento region, which is one of the most at-risk areas for flooding in the United States,

second only to New Orleans.¹ The region currently lacks flood protection sufficient to withstand a 200-year flood, the level of protection required by California state law.² A major flood in 1986 drove home the critical importance of improving flood control in the area, and extensive studies following the flood led SAFCA and USACE to conclude, among other things, that the Sacramento Weir needed to be widened.

The Sacramento Weir, initially constructed in 1916-17, is a critical component of the Sacramento area flood control regime. The Weir acts as a flood safety valve, allowing excess flood waters to spill out of the adjacent river system into the Sacramento Bypass, diverting the flood waters away from populated areas of Sacramento and West Sacramento. The Weir also reduces the pressure on the levee system below the Weir, reducing the risk of a catastrophic levee break.

Widening the Weir will reduce the flooding risk by diverting more flood flows from the Sacramento and American Rivers into the Yolo Bypass. The Project will also eliminate potential obstructions to flood waters passing through the bypass, away from the urban areas of Sacramento and West Sacramento. Additionally, the Project will reduce the risk of a downstream levee failure, which could have catastrophic consequences. Flooding could be up to 20 feet deep, and flood waters could rapidly inundate highly urbanized areas with little warning and minimal time for evacuations. Furthermore, as the capital of California, Sacramento is the center of state government and is home to many essential statewide services. The Sacramento area is also at the crossroads of four major highway/interstate systems that would be impassable in the event of a flood. Thus, the Project will reduce the risk of flooding in the region, which could be devastating at local, regional, state, and national levels.³

¹ See generally Comprehensive Flood Management Plan, City of Sacramento Department of Utilities (Feb. 2015), available at <https://www.cityofsacramento.org/~media/Corporate/Files/DOU/Flood-Ready/City%20of%20Sacramento%20CFMP%202015%20Final.pdf>; California Department of Water Resources website, available at <https://water.ca.gov/Programs/Flood-Management/Community-Resources/Flood-Risk>.

² See Dale Kasler, "Sacramento Receives \$1.8 billion for flood protection from federal government," The Sacramento Bee (July 5, 2018), available at <https://www.sacbee.com/latest-news/article214400254.html>.

³ See Exhibit B at ES-4 – ES-5.

This vital project has long faced two obstacles: (1) a lack of sufficient project funding, and (2) Sierra's ownership and operation of the Line, which runs directly over the Weir. The first challenge has recently been met: the project has been authorized by Congress and has received full federal funding. SAFCA and USACE have asked Sierra to help them overcome the second obstacle by abandoning the Line, and Sierra has agreed to do so, subject to obtaining the required STB authority through this proceeding.

To carry out the project, SAFCA/USACE must remove the existing railroad tracks from the Weir and from an area approximately 1500 feet north of the Weir and construct an extension to the existing Weir. Rail operations would have to be discontinued during construction, which could last at least two years. Restoring rail operations following completion of the project would require the construction of a large and expensive new rail bridge. In addition to the possible interference of any such bridge with future flood control efforts, the construction of a new rail bridge would not be justified. Given the small volume of rail traffic using the Line (described further below), the ready availability of alternatives to rail transportation for Sierra's customers, the exorbitant costs of designing, constructing, and maintaining a new rail bridge, the environmental disruption caused by the construction of such a massive bridge, the minimal environmental detriment caused by additional trucking, and the extensive flood control and environmental benefits provided to the entire region, the only feasible option is for Sierra to abandon the Line.

Following Sierra's consummation of the proposed abandonment, Sierra will convey its interest in the Line to SAFCA. After the conveyance, SAFCA will need to remove the railroad tracks in connection with the construction of the flood control project, in accordance with the separate environmental review discussed below. Sierra may participate in the removal of the track, but that work would be done on behalf of SAFCA. The environmental consequences of the proposed abandonment

will be limited to the environmental effects of the change in transportation by Sierra's current customers, which, as described below, will be minimal.

While the scope of the Board's environmental analysis of Sierra's abandonment does not extend to the work that SAFCA/USACE will conduct post-abandonment, Sierra notes that SAFCA/USACE have already conducted extensive environmental review of their flood control plans, including their plans for removing the track and widening the Weir after Sierra abandons the Line.⁴ In December 2015, the USACE, SAFCA, and the Central Valley Flood Protection Board cooperated in preparing a Final Environmental Impact Statement / Environmental Impact Report ("EIS/EIR") that evaluates the potential environmental impacts of the Project and alternatives.⁵ The executive summary from the EIS/EIR is attached as **Exhibit B**. The full EIS/EIR, as revised in May 2016, is available online at http://www.safca.org/protection/Environmental_Public_Review.html. In 2019, SAFCA prepared two addendums to the EIS/EIR. SAFCA's first addendum clarifies the description of real property, including property owned by Sierra, that will be acquired in order to widen the Sacramento Weir. The first addendum is attached as **Exhibit C**. SAFCA's second addendum modifies the description of the Project in the EIS/EIR to include the proposed abandonment and removal of tracks. The second addendum is attached as **Exhibit D**.

- (2) **Transportation system.** *Describe the effects of the proposed action on regional or local transportation systems and patterns. Estimate the amount of traffic (passenger or freight) that will be diverted to other transportation systems or modes as a result of the proposed action.*

The Line is a low-density rail line with little traffic. The Line is part of the Woodland branch, a Sierra rail line that extends from West Sacramento to

⁴ Sierra is providing information about the project as background for convenience of the Surface Transportation Board ("Board"). The Board's review is limited to the consequences of the abandonment, and does not extend to post-abandonment activities to be carried out by a future owner of the land.

⁵ The Project is identified in the EIS/EIR as "Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass." The agencies identified the Project as the "Recommended Plan" in the EIS/EIR.

Woodland, CA, a distance of approximately 16.4 miles. Sierra transports freight traffic over the Line for only a handful of customers, all located in Woodland. In 2019, Sierra had seven customers that used the Line for whom Sierra moved the following commodities: industrial tomato paste, limestone, polyvinyl, grain products, railway ties, calcium carbide and empty railcars (for repair). In 2018, Sierra transported a total of 507 freight rail cars on the Line, and 463 cars in 2019. The shipments of two of Sierra's customers, whose 2019 traffic amounted to 311 rail cars, will be diverted to truck. For the remaining existing rail traffic over the Line, the proposed abandonment would not generate any additional truck movements. Those customers either already transload their products to truck and will simply move that transload location within the Sacramento region, or will ship by rail to a different location.

The number of rail cars diverted to new truck movements would have been 390 in 2018 and 311 in 2019. Using the 2019 figure and a rail-to-truck conversion factor of four trucks per railcar, Sierra estimates that the proposed abandonment would generate an estimated 1,244 new trucks per year, or about 3.4 new truck movements per day.⁶ Given the extensive local road network, an additional 3.4 trucks per day would have a minor effect on regional or local transportation systems and patterns.

Additionally, Sierra's affiliate operates excursion trains over the Line approximately three days per week. The Board does not have jurisdiction over these operations. As a result of the proposed abandonment, the excursion trains would begin from a new location north of the Weir, and travel a shorter distance. The proposed abandonment would not result in a diversion of traffic from excursion trains to other transportation systems.

⁶ In SAFCA's second addendum to the EIS / EIR, SAFCA estimates that, if freight traffic is diverted to on-road trucks, up to 7 trucks per day could be required to transport the freight. See Exhibit D at 4.

(3) Land use.

- (i) *Based on consultation with local and/or regional planning agencies and/or a review of the official planning documents prepared by such agencies, state whether the proposed action is consistent with existing land use plans. Describe any inconsistencies.*

The abandonment is required to allow SAFCA and USACE to proceed with existing land use plans to improve the flood control infrastructure for the Sacramento region, as detailed above. On November 15, 2019, Sierra sent letters to the Yolo County Planning Commission and the Yolo County Board of Supervisors regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received any replies from these agencies. Correspondence with these agencies is attached as **Exhibit E**.

- (ii) *Based on consultation with the U.S. Soil Conservation Service, state the effect of the proposed action on any prime agricultural land.*

The proposed abandonment will have no adverse effect on prime agricultural land. The scope of the proposed action is limited to Sierra's abandonment of the Line and Sierra's conveyance of the related land and facilities to SAFCA. On November 15, 2019, Sierra sent a letter to the Richard E. Lyng Service Center of the U.S. Department of Agriculture's Natural Resources Conservation Service ("NRCS") regarding the proposed abandonment. As of the date of this Environmental Report, the NRCS has not responded to Sierra's inquiry. Correspondence with the NRCS is attached as **Exhibit F**.

- (iii) *If the action affects land or water uses within a designated coastal zone, include the coastal zone information required by §1105.9.*

The proposed abandonment will not affect land or water uses within a designated coastal zone.

- (iv) *If the proposed action is an abandonment, state whether or not the right-of-way is suitable for alternative public use under 49 U.S.C. § 10905 and explain why.*

The Line's right-of-way is suitable for alternative public use. The entire purpose for the abandonment is to allow SAFCA and USACE to implement regional flood control protection work using the Line's right-of-way that will provide far-reaching public benefits. On November 15, 2019, Sierra sent letters to the Yolo County Planning Commission and the Yolo County Board of Supervisors regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received any replies from these agencies. Correspondence with these agencies is attached as **Exhibit E**.

(4) Energy.

- (i) *Describe the effect of the proposed action on transportation of energy resources.*

The proposed abandonment will have no effect on transportation of energy resources.

- (ii) *Describe the effect of the proposed action on recyclable commodities.*

The proposed abandonment will have no effect on the movement or recovery of recyclable commodities.

- (iii) *State whether the proposed action will result in an increase or decrease in overall energy efficiency and explain why.*

As discussed in item (2) above, Sierra estimates that the proposed abandonment would generate approximately 3.4 new truck movements per day. This will not result in a significant increase in fuel consumption.

- (iv) *If the proposed action will cause diversions from rail to motor carriage of more than:*

- (A) *1,000 rail carloads a year; or*

- (B) *An average of 50 rail carloads per mile per year for any part of the affected line, quantify the resulting net change in energy*

consumption and show the data and methodology used to arrive at the figure given.

The proposed abandonment will not cause diversions from rail to motor carriage of more than: (A) 1,000 rail carloads a year; or (B) an average of 50 rail carloads per mile per year for any part of the Line.

(5) Air.

(i) If the proposed action will result in either:

- (A) An increase in rail traffic of at least 100 percent (measured in gross ton miles annually) or an increase of at least eight trains a day on any segment of rail line affected by the proposal, or*
- (B) An increase in rail yard activity of at least 100 percent (measured by carload activity), or*
- (C) An average increase in truck traffic of more than 10 percent of the average daily traffic or 50 vehicles a day on any affected road segment, quantify the anticipated effect on air emissions.*

The proposed abandonment will not result in an increase in rail traffic of at least 100 percent or an increase of at least eight trains a day on any segment of rail line affected by the proposal; or an increase in rail yard activity of at least 100 percent. As discussed in item (2) above, Sierra estimates that the proposed abandonment would generate approximately 3.4 new truck movements per day, which is below the threshold identified in item (5)(i)(C).

(ii) If the proposed action affects a class I or nonattainment area under the Clean Air Act, and will result in either:

- (A) An increase in rail traffic of at least 50 percent (measured in gross ton miles annually) or an increase of at least three trains a day on any segment of rail line,*
- (B) An increase in rail yard activity of at least 20 percent (measured by carload activity), or*
- (C) An average increase in truck traffic of more than 10 percent of the average daily traffic or 50 vehicles a day on a given road segment, then state whether any expected increased emissions are*

within the parameters established by the State Implementation Plan.

The proposed abandonment will not affect a class I or nonattainment area under the Clean Air Act and result in an increase in rail traffic of at least 50 percent or an increase of at least three trains a day on any segment of rail line; or an increase in rail yard activity of at least 20 percent. As discussed in item (2) above, Sierra estimates that the proposed abandonment would generate approximately 3.4 new truck movements per day, which is below the threshold identified in item (5)(ii)(C).

- (iii) If transportation of ozone depleting materials (such as nitrogen oxide and freon) is contemplated, identify: the materials and quantity; the frequency of service; safety practices (including any speed restrictions); the applicant's safety record (to the extent available) on derailments, accidents and spills; contingency plans to deal with accidental spills; and the likelihood of an accidental release of ozone depleting materials in the event of a collision or derailment.*

The proposed abandonment will not affect the transportation of ozone depleting materials.

(6) Noise. *If any of the thresholds identified in item (5)(i) of this section are surpassed, state whether the proposed action will cause:*

- (i) An incremental increase in noise levels of three decibels Ldn or more; or*
- (ii) An increase to a noise level of 65 decibels Ldn or greater. If so, identify sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) in the project area, and quantify the noise increase for these receptors if the thresholds are surpassed.*

None of the thresholds identified in item (5)(i) will be surpassed as a result of the proposed abandonment. Thus, this provision is not applicable.

(7) Safety.

- (i) Describe any effects of the proposed action on public health and safety (including vehicle delay time at railroad grade crossings).*

The proposed abandonment will not have an adverse effect on public health and safety. In fact, the purpose of the abandonment is to improve public health and safety by allowing SAFCA/USACE to implement new flood control measures. Moreover, the scope of the proposed action is limited to Sierra's abandonment of the Line and Sierra's conveyance of the related land and facilities to SAFCA. On November 15, 2019, Sierra sent letters to Yolo County Planning Commission and the Yolo County Board of Supervisors regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received any replies from these agencies. Correspondence with these agencies is attached as **Exhibit E**.

- (ii) *If hazardous materials are expected to be transported, identify: the materials and quantity; the frequency of service; whether chemicals are being transported that, if mixed, could react to form more hazardous compounds; safety practices (including any speed restrictions); the applicant's safety record (to the extent available) on derailments, accidents and hazardous spills; the contingency plans to deal with accidental spills; and the likelihood of an accidental release of hazardous materials.*

On behalf of one of Sierra's customers, Sierra currently transports calcium carbide by rail from Sacramento to property that Sierra owns in Woodland, for storage. This calcium carbide is then later trucked back to Sacramento. In each of 2018 and 2019, 12 freight cars containing calcium carbide were transported on the Line. The proposed abandonment will simply move the storage facility to West Sacramento, thereby reducing the length of the inbound rail movements and outbound truck movements of calcium carbide on behalf of the customer.

- (iii) *If there are any known hazardous waste sites or sites where there have been known hazardous materials spills on the right-of-way, identify the location of those sites and the types of hazardous materials involved.*

Sierra is not aware of any hazardous waste sites on the Line or sites where there have been hazardous materials spills on the Line's right-of-way.

(8) Biological resources.

- (i) *Based on consultation with the U.S. Fish and Wildlife Service, state whether the proposed action is likely to adversely affect endangered or threatened species or areas designated as a critical habitat, and if so, describe the effects.*

The proposed abandonment will not have an adverse effect on endangered or threatened species or areas designated as a critical habitat. The scope of the proposed action is limited to Sierra's abandonment of the Line and Sierra's conveyance of the land and facilities to SAFCA. On November 15, 2019, Sierra sent a letter to the U.S. Fish and Wildlife Service ("USFWS") regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received a reply. Correspondence with USFWS is attached as **Exhibit G**.

- (ii) *State whether wildlife sanctuaries or refuges, National or State parks or forests will be affected, and describe any effects.*

No wildlife sanctuaries or refuges, National or State parks or forests will be affected by the proposed abandonment. The scope of the proposed action is limited to Sierra's abandonment of the Line and Sierra's conveyance of the land and facilities to SAFCA. On November 15, 2019, Sierra sent letters to the California State Office of the Bureau of Land Management and to the Pacific West Regional Office of the National Park Service regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received any replies from either agency. Correspondence with these agencies is attached as **Exhibit H**.

(9) Water.

- (i) *Based on consultation with State water quality officials, state whether the proposed action is consistent with applicable Federal, State or local water quality standards. Describe any inconsistencies.*

The proposed abandonment is consistent with applicable water quality standards. The scope of the proposed action is limited to Sierra's abandonment of the Line and Sierra's conveyance of the land and facilities to SAFCA. On November 15, 2019, Sierra sent letters to the California Department of Water Resources and

Region 9 of the U.S. Environmental Protection Agency (“EPA”) regarding the proposed abandonment. We received a response from the California Department of Water Resources, advising us to consult with the Central Valley Regional Water Quality Control Board. Sierra sent a letter to the Central Valley Regional Water Quality Control Board on November 25, 2019. As of the date of this Environmental Report, Sierra has not received replies from EPA or the Central Valley Regional Water Quality Control Board. Correspondence with these agencies is attached as **Exhibit I**.

- (ii) *Based on consultation with the U.S. Army Corps of Engineers, state whether permits under section 404 of the Clean Water Act (33 U.S.C. 1344) are required for the proposed action and whether any designated wetlands or 100-year flood plains will be affected. Describe the effects.*

The proposed abandonment will not require any permits under Section 404 of the Clean Water Act, and no designated wetlands or 100-year flood plains will be adversely affected. The scope of the proposed action is limited to Sierra’s abandonment of the Line and Sierra’s conveyance of the land and facilities to SAFCA. On November 15, 2019, Sierra sent a letter to the Sacramento District of the USACE regarding the proposed abandonment. As of the date of this Environmental Report, Sierra has not received a reply. Correspondence with the USACE is attached as **Exhibit J**.

- (iii) *State whether permits under section 402 of the Clean Water Act (33 U.S.C. 1342) are required for the proposed action. (Applicants should contact the U.S. Environmental Protection Agency or the state environmental protection or equivalent agency if they are unsure whether such permits are required.)*

The proposed abandonment will not require permits under Section 402 of the Clean Water Act. The scope of the proposed action is limited to Sierra’s abandonment of the Line and Sierra’s conveyance of the land and facilities to SAFCA. On November 15, 2019, Sierra sent letters to the California Department of Water Resources and Region 9 of the EPA regarding the proposed abandonment.

Sierra received a response from the California Department of Water Resources, advising Sierra to consult with the Central Valley Regional Water Quality Control Board. Sierra sent a letter to the Central Valley Regional Water Quality Control Board on November 25, 2019. As of the date of this Environmental Report, we have not received replies from EPA or the Central Valley Regional Water Quality Control Board. Correspondence with these agencies is attached as **Exhibit I**.

(10) Proposed Mitigation. *Describe any actions that are proposed to mitigate adverse environmental impacts, indicating why the proposed mitigation is appropriate.*

Because no adverse environmental impacts will result from the proposed abandonment, no mitigation is necessary. Sierra will consult, as required, with any recipients of this Environmental Report regarding appropriate mitigation actions and will comply with any mitigation actions required by the Board.

HISTORIC REPORT

49 C.F.R. § 1105.8(d)

§ 1105.7(e)(1) **Proposed action and alternatives.** *Describe the proposed action, including commodities transported, the planned disposition (if any) of any rail line and other structures that may be involved, and any possible changes in current operations or maintenance practices. Also describe any reasonable alternatives to the proposed action. Include a readable, detailed map and drawings clearly delineating the project.*

Sierra Northern Railway (“Sierra”) proposes to abandon approximately 0.70 miles of rail line between approximately milepost 3.10 and approximately milepost 3.80 in Yolo County, California (the “Line”). Maps of the proposed area are attached as **Exhibit A**. The Line extends from a point north of the existing Sacramento Weir and continues on an elevated alignment along the Weir, over which Sierra currently operates common carrier freight service, along with excursion passenger service not subject to the jurisdiction of the Surface Transportation Board (“STB” or the “Board”). Photographs of the relevant area are provided in **Exhibit L**.

Sierra proposes to abandon the Line because the Sacramento Area Flood Control Agency (“SAFCA”) needs to acquire the land and facilities related to the Line to implement, along with the U.S. Army Corps of Engineers (“USACE”), a flood control project that involves widening the Sacramento Weir. The flood control project is critical to the public health and safety of the highly urbanized Sacramento region, which is one of the most at-risk areas for flooding in the United States, second only to New Orleans.⁷ The region currently lacks flood protection sufficient to withstand a 200-year flood, the level of protection required by California state law.⁸ A major flood in 1986 drove home the critical importance of improving flood control in the area, and extensive studies following the flood led SAFCA and

⁷ See generally Comprehensive Flood Management Plan, City of Sacramento Department of Utilities (Feb. 2015), available at <https://www.cityofsacramento.org/~media/Corporate/Files/DOU/Flood-Ready/City%20of%20Sacramento%20CFMP%202015%20Final.pdf>; California Department of Water Resources website, available at <https://water.ca.gov/Programs/Flood-Management/Community-Resources/Flood-Risk>.

⁸ See Dale Kasler, “Sacramento Receives \$1.8 billion for flood protection from federal government,” The Sacramento Bee (July 5, 2018), available at <https://www.sacbee.com/latest-news/article214400254.html>.

USACE to conclude, among other things, that the Sacramento Weir needed to be widened.

The Sacramento Weir, initially constructed in 1916-17, is a critical component of the Sacramento area flood control regime. The Weir acts as a flood safety valve, allowing excess flood waters to spill out of the adjacent river system into the Sacramento Bypass, diverting the flood waters away from populated areas of Sacramento and West Sacramento. The Weir also reduces the pressure on the levee system below the Weir, reducing the risk of a catastrophic levee break.

Widening the Weir will reduce the flooding risk by diverting more flood flows from the Sacramento and American Rivers into the Yolo Bypass. The Project will also eliminate potential obstructions to flood waters passing through the bypass, away from the urban areas of Sacramento and West Sacramento. Additionally, the Project will reduce the risk of a downstream levee failure, which could have catastrophic consequences. Flooding could be up to 20 feet deep, and flood waters could rapidly inundate highly urbanized areas with little warning and minimal time for evacuations. Furthermore, as the capital of California, Sacramento is the center of state government and is home to many essential statewide services. The Sacramento area is also at the crossroads of four major highway/interstate systems that would be impassable in the event of a flood. Thus, the Project will reduce the risk of flooding in the region, which could be devastating at local, regional, state, and national levels.⁹

This vital project has long faced two obstacles: (1) a lack of sufficient project funding, and (2) Sierra's ownership and operation of the Line, which runs directly over the Weir. The first challenge has recently been met: the project has been authorized by Congress and has received full federal funding. SAFCA and USACE have asked Sierra to help them overcome the second obstacle by abandoning the Line, and Sierra has agreed to do so, subject to obtaining the required STB authority through this proceeding.

⁹ See Exhibit B at ES-4 – ES-5.

To carry out the project, SAFCA/USACE must remove the existing railroad tracks from the Weir and from an area approximately 1500 feet north of the Weir and construct an extension to the existing Weir. Rail operations would have to be discontinued during construction, which could last at least two years. Restoring rail operations following completion of the project would require the construction of a large and expensive new rail bridge. In addition to the possible interference of any such bridge with future flood control efforts, the construction of a new rail bridge would not be justified. Given the small volume of rail traffic using the Line (described further below), the ready availability of alternatives to rail transportation for Sierra's customers, the exorbitant costs of designing, constructing, and maintaining a new rail bridge, the environmental disruption caused by the construction of such a massive bridge, the minimal environmental detriment caused by additional trucking, and the extensive flood control and environmental benefits provided to the entire region, the only feasible option is for Sierra to abandon the Line.

Following Sierra's consummation of the proposed abandonment, Sierra will convey its interest in the Line to SAFCA. After the conveyance, SAFCA will need to remove the railroad tracks in connection with the construction of the flood control project, in accordance with the separate environmental review discussed below. Sierra may participate in the removal of track, but that work would be done on behalf of SAFCA. The environmental consequences of the proposed abandonment will be limited to the environmental effects of the change in transportation by Sierra's current customers, which, as described below, will be minimal.

While the scope of the Board's environmental analysis of Sierra's abandonment does not extend to the work that SAFCA/USACE will conduct post-abandonment, Sierra notes that SAFCA/USACE have already conducted extensive environmental review of their flood control plans, including their plans for removing

the track and widening the Weir after Sierra abandons the Line.¹⁰ In December 2015, the USACE, SAFCA, and the Central Valley Flood Protection Board cooperated in preparing a Final Environmental Impact Statement / Environmental Impact Report (“EIS/EIR”) that evaluates the potential environmental impacts of the Project and alternatives.¹¹ The executive summary from the EIS/EIR is attached as **Exhibit B**. The full EIS/EIR, as revised in May 2016, is available online at http://www.safca.org/protection/Environmental_Public_Review.html. In 2019, SAFCA prepared two addendums to the EIS/EIR. SAFCA’s first addendum clarifies the description of real property, including property owned by Sierra, that will be acquired in order to widen the Sacramento Weir. The first addendum is attached as **Exhibit C**. SAFCA’s second addendum modifies the description of the Project in the EIS/EIR to include the proposed abandonment and removal of tracks. The second addendum is attached as **Exhibit D**.

- (1) *A U.S.G.S. topographic map (or an alternate map drawn to scale and sufficiently detailed to show buildings and other structures in the vicinity of the proposed action) showing the location of the proposed action, and the locations and approximate dimensions of railroad structures that are 50 years old or older and are part of the proposed action.*

The required topographic map is attached to this Historic Report as **Exhibit A**.

- (2) *A written description of the right-of-way (including approximate widths, to the extent known), and the topography and urban and/or rural characteristics of the surrounding area.*

Sierra owns certain railroad right-of-way/railroad corridor property from the south end of the existing Sacramento Weir, across the weir, and running 2,000 feet north. This property includes the Line. The Line extends approximately 0.70 miles

¹⁰ Sierra is providing information about the project as background for convenience of the Surface Transportation Board (“Board”). The Board’s review is limited to the consequences of the abandonment, and does not extend to post-abandonment activities to be carried out by a future owner of the land.

¹¹ The Project is identified in the EIS/EIR as “Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass.” The agencies identified the Project as the “Recommended Plan” in the EIS/EIR.

in Yolo County, California, beginning at approximately milepost 3.10 to approximately milepost 3.80. The Line is adjacent to a road and the Sacramento River. The terrain of the adjoining land is rural, and there is vegetation growing along the Line. The Line is less than five miles away from highly urbanized areas, including Sacramento.

- (3) *Good quality photographs (actual photographic prints, not photocopies) of railroad structures on the property that are 50 years old or older and of the immediately surrounding area.*

Photographs of the relevant area of the Sacramento Weir are provided in **Exhibit L.**

- (4) *The date(s) of construction of the structure(s), and the date(s) and extent of any major alterations, to the extent such information is known.*

In 1912, the Sacramento & Woodland Railway (“S&WRR”), a subsidiary of Northern Electric Railway, constructed a rail line from Sacramento to Woodland in order to link the farming community of Woodland with the developing city of Sacramento. *See Sacramento & Woodland R.R. Co. v. S. P. Co.*, R.R. Comm’n of Calif. Reports, Vol. 1 at 146-48 (May 30, 1912). The Woodland branch was mostly electrified by third rail, and it used overhead power in Woodland. The Line consists of a segment of the Woodland branch that was rerouted along the Sacramento Weir in 1916-17, when the Weir was constructed. In the 1960s, the electrified third rail was removed and the alignment switched to diesel.

- (5) *A brief narrative history of carrier operations in the area, and an explanation of what, if any, changes are contemplated as a result of the proposed action.*

As a result of the proposed action, Sierra would abandon and cease operating over the Line. As discussed in item (4) above, S&WRR constructed the Woodland branch in 1912. At one point the Woodland branch operated eight round trip trains per day from Woodland to Sacramento. The Line, which is a portion of the Woodland branch, was constructed when the Woodland branch alignment was

rerouted along the Sacramento Weir in 1916-17. The corporate history of the Line's ownership since that time is as follows:

- In 1918, Sacramento Northern Railroad (“SNRR”) acquired the S&WRR lines. *See N. Elec. Ry. Co., et al*, R.R. Comm’n of Calif. Reports, Vol. 16 at 369-71 (Dec. 27, 1918).
- In 1925, Western Pacific Railroad (“WP”) acquired control of SNRR. *See Proposed Control of S.N. by W.P.R.R.*, 99 I.C.C. 382 (1925).
- In 1928, another WP subsidiary, Sacramento Northern Railway (“SNRY”), acquired the railroad lines of SNRR, including the Woodland branch. *See Acquisition by Sacramento N. Ry.*, 145 I.C.C. 533 (1928).
- In 1982, Union Pacific Railroad (“UPRR”) acquired control of WP and its subsidiary SNRY. *See UP—Control—MP/WP*, 366 I.C.C. 462 (1982).
- In 1987, UPRR merged SNRY into WP. *See Union Pac. R.R. Co.—Merger Exemption—Pac. Subsidiary, Inc., The W. Pac. R.R. Co., Tidewater S. Ry. Co. & Sacramento N. Ry.*, FD 31040 (ICC served July 2, 1987).
- In 1992, Yolo Shortline Railroad (“YSLR”) purchased the Woodland branch from UPRR. *See Yolo Shortline R.R. Co.—Purchase & Trackage Rights Exemption—Union Pac. R.R. Co.*, FD 32107 (ICC served Aug. 11, 1992).
- In 2003, Sierra Northern Railroad Company (“SNRC”) acquired control of YSLR. *See Sierra R.R. Co.—Acquisition of Control Exemption—Yolo Shortline R.R. Co.*, FD 34351 (STB served June 11, 2003).
- Later in 2003, SNRC renamed YSLR as Sierra. *See Sierra R.R. Co. & Sierra N. Ry. v. Sacramento Valley R.R. Co., LLC, et al*, NOR 42133, slip op. at 2 n.2 (STB served Nov. 28, 2012).

- (6) *A brief summary of documents in the carrier's possession, such as engineering drawings, that might be useful in documenting a structure that is found to be historic.*

Documents in Sierra's possession concerning this abandonment may include alignment maps showing the right-of-way and/or station maps. These documents can be supplied upon request, if they are available.

- (7) *An opinion (based on readily available information in the railroad's possession) as to whether the site and/or structures meet the criteria for listing on the National Register of Historic Places (36 CFR 60.4), and whether there is a likelihood of archeological resources or any other previously unknown historic properties in the project area, and the basis for these opinions (including any consultations with the State Historic Preservation Office, local historical societies or universities).*

On November 15, 2019, Sierra sent letters to the Office of Historic Preservation of California State Parks ("State Historic Preservation Office"), and the Communications and Outreach Branch, NOAA, N/NGS12, National Geodetic Survey, SSMC3 #9340 ("National Geodetic Survey") regarding the proposed abandonment. Sierra received a response from the State Historic Preservation Office on December 10, 2019, directing Sierra to complete various actions, including providing a written report with photo documentation and the results of identification efforts and making a finding of effect, in order for the State Historic Preservation Office to issue written comments. On November 25, 2019, Sierra received an email from the National Geodetic Survey acknowledging our request and providing a request summary. Sierra sent a response to the State Historic Preservation Office on January 23, 2020, providing documents regarding the environmental and historic review that was conducted for the SAFCA/USACE project and the historic inventory and evaluation that was conducted by GEI Consultants, Inc. ("GEI") on behalf of SAFCA. Correspondence with these agencies is attached as **Exhibit K**.

GEI prepared a memorandum on behalf of SAFCA to inventory and evaluate the Line for National Register of Historic Places ("NRHP") and California Register

of Historical Resources (“CRHR”) significance. GEI determined that the evaluated railroad segment “lacks integrity of design, materials, and workmanship to its period of historic significance.”¹² Thus, GEI concluded that, due to a lack of integrity, the evaluated railroad segment “does not appear to meet NRHP or CRHR criteria.”¹³ The GEI memorandum is attached as **Exhibit L**.

- (8) *A description (based on readily available information in the railroad’s possession) of any known prior subsurface ground disturbance or fill, environmental conditions (naturally occurring or manmade) that might affect the archeological recovery of resources (such as swampy conditions or the presence of toxic wastes), and the surrounding terrain.*

The Line was disturbed during original construction by cuts and fill, and any archaeological resources that may have been located in the proposed abandonment area would have been affected at that time. Environmental conditions related to the high flooding risk in the Sacramento area might affect the archeological recovery of resources. The surrounding terrain consists of a weir and flood bypass areas.

- (9) *Within 30 days of receipt of the historic report, the State Historic Preservation Officer may request the following additional information regarding specified nonrailroad owned properties or groups of properties immediately adjacent to the railroad right-of-way: photographs of specified properties that can be readily seen from the railroad right-of-way (or other public rights-of-way adjacent to the property) and a written description of any previously discovered archeological sites, identifying the location and type of the site (i.e., prehistoric or native American).*

If any additional information is requested, Sierra will promptly supply the necessary information.

¹² Exhibit L at 6.

¹³ *Id.*

EXHIBIT A

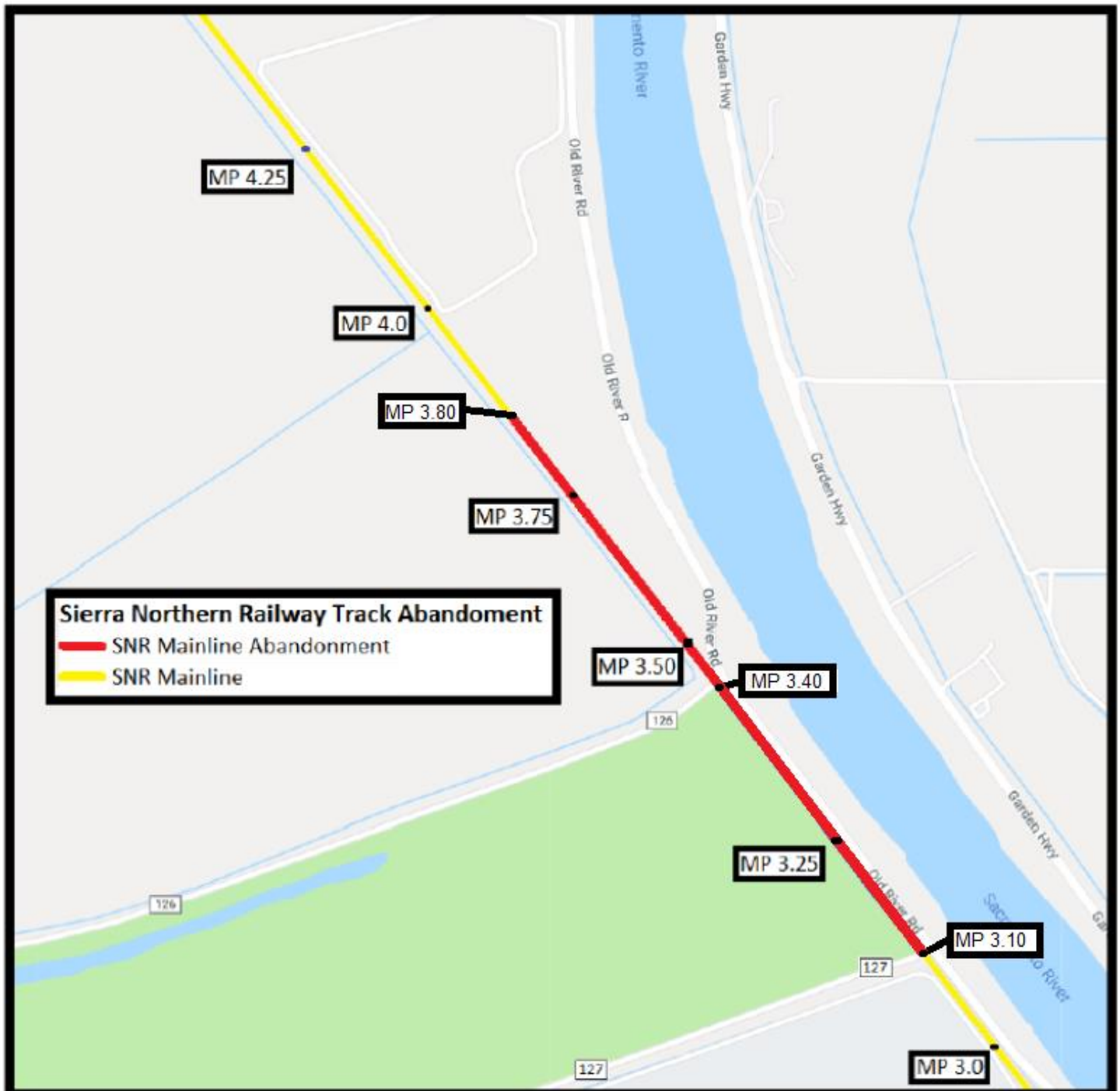
Maps of the proposed abandonment:



SIERRA NORTHERN RAILWAY

341 Industrial Way
Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



Aerial Map of Track Abandonment Area



EXHIBIT B

Executive summary from the American River Watershed Common Features
General Reevaluation Report, Final Environmental Impact Statement /
Environmental Impact Report:

American River Watershed

Common Features

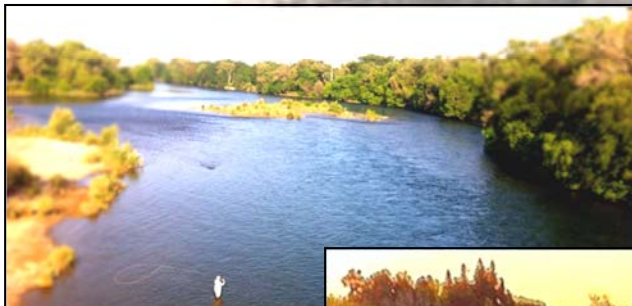
General Reevaluation Report

Final

Environmental Impact Statement

Environmental Impact Report

December 2015
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EXECUTIVE SUMMARY

ES.1 Introduction

This environmental impact statement/environmental impact report (EIS/EIR) has been prepared by the U.S. Army Corps of Engineers (Corps), Sacramento District and the Central Valley Flood Protection Board (CVFPB) in accordance with the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), respectively. The Corps is the Federal lead agency for NEPA, and the CVFPB is the California lead agency for CEQA.

The purpose of the American River Common Features (ARCF) General Reevaluation Report (GRR) project is to reduce the overall flood risk within the study area. The study area includes the city of Sacramento and surrounding areas. An unacceptably high risk of flooding from levee failure threatens the public safety of approximately 530,000 people, as well as property and critical infrastructure throughout the study area. Additionally, the State Capitol and many state agencies reside within the study area. Historic flooding events have caused loss of life and extensive economic damages. Approximately 83,000 structures throughout the study area are at risk of flooding in a 100-year event (1% annual change of flooding). This EIS/EIR evaluates the potential significant environmental impacts of the alternatives discussed in the ARCF GRR. If the ARCF GRR is authorized by Congress, the Corps would begin construction to implement the project.

ES.2 Purpose and Intended Uses of this EIS/EIR

The purpose of this EIS/EIR is to evaluate the potential significant environmental impacts of the alternatives proposed in the GRR. This EIS/EIR will be used to support Congressional approval of the ARCF GRR. The CVFPB will consider whether or not to certify the EIR and approve the ARCF GRR in early 2016. This decision will be based on numerous factors, including the potential environmental impacts and mitigation measures addressed in this EIS/EIR, permitting requirements, Federal and state authorizations, funding and financing mechanisms, and implementation schedule.

This EIS/EIR will also be used by CEQA lead and responsible agencies, such as the CVFPB and Central Valley Regional Water Quality Control Board (RWQCB), Sacramento Area Flood Control Agency (SAFCA), and trustee agencies, such as the California Department of Fish and Wildlife (CDFW) and the California State Lands Commission (CSLC), to ensure that they have met the requirements of CEQA before deciding whether to issue discretionary permits or leases over which they have authority. It may also be used by other state, regional, and local agencies, which may have an interest in resources that could be affected by the project.

ES.3 Study Area

The proposed project is located in and around the city of Sacramento, California. Sacramento is the state capital of California, located at the confluence of the Sacramento and American Rivers in the northern portion of California's Central Valley. The Sacramento Metropolitan area, is the fourth largest in California, and includes seven counties and seven incorporated cities.

The ARFC Project area includes: (1) approximately 12 miles of the north and south banks of the American River immediately upstream from the confluence with the Sacramento River; (2) the east bank of the Natomas East Main Drainage Canal (NEMDC), Arcade Creek, and the Magpie Creek Diversion Channel (collectively referred to as the East Side Tributaries); (3) the east bank of the Sacramento River downstream from the American River to Freeport, where the levee ties into Beach Lake Levee, the southern defense for Sacramento; and (4) the Sacramento Weir and Bypass, located along the north edge of the city of West Sacramento (Plate 2).

ES.4 Project Background

Following the 1986 flood, Congress directed the Corps to investigate additional means to reduce flood risk to the city of Sacramento. The Corps completed this investigation in 1991, recommending a concrete gravity flood detention dam at the Auburn Dam site and levee improvements downstream of Folsom Dam. Congress directed the Corps to conduct supplemental analysis of the flood management options considered in the 1991 study. The resulting *Supplemental Information Report, American River Watershed Project, California* (March 1996) recommended a similar combination of a gravity flood detention dam at the Auburn Dam site with downstream levee work. It considered, but did not advance, plans for Folsom Dam improvements and a stepped release plan for Folsom Dam accompanied by downstream levee improvements. Congress recognized that levee improvements were "common" to all candidate plans in the report and that there was a Federal interest in participating in these "common features". Thus, the ARCF Project was authorized in the Water Resources Development Act of 1996, Pub. L. No. 104-303, § 101(a)(1), 110 Stat. 3658, 3662-3663 (1996) (WRDA 1996), and the decision on Auburn Dam was deferred. Major construction components for the ARFC Project in the WRDA 1996 authorization included construction of seepage remediation along approximately 22 miles of American River levees, and levee strengthening and the raising of 12 miles of the Sacramento River levee in the Natomas Basin. Meanwhile, improvements to other levees adjacent to the Natomas Basin were authorized in the Department of Defense Appropriations Act of 1993, Pub. L. No. 102-396, § 9159, 106 Stat. 1876, 1944-46 (1992). SAFCA constructed these latter improvements between 1995 and 1998.

Under the Water Resources Development Act of 1999, Pub. L. No. 106-53, § 366, 113 Stat. 269, 319-320 (1999) (WRDA 1999), Congress authorized improvements to Folsom Dam to control a 200-year flood event with a peak release of 160,000 cfs. WRDA 1999 also authorized the Folsom Dam Modification Project to modify the existing outlets to allow for higher releases earlier in flood events. At the same time, Congress also directed the Corps to review additional modifications to the flood storage of Folsom Dam, indicating that Congress was

looking at maximizing the use of Folsom Dam to reduce flood risk prior to consideration of any additional upstream storage on the American River. The Folsom Dam Raise Project was subsequently authorized by Congress in 2004.

The ARCF Project was modified by WRDA 1999 to include improvements to safely convey an emergency release of 160,000 cubic feet per second (cfs) from Folsom Dam. These improvements included construction of seepage remediation and levee raises along four stretches of the American River, and construction of levee strengthening and raising of 5.5 miles of the Natomas Cross Canal levee in Natomas. Additional construction components for both WRDA 1996 and WRDA 1999 were authorized and have been constructed by the Corps. However, the Natomas Basin features authorized in WRDA 1996 and WRDA 1999 were deferred and later analyzed in the Natomas Post Authorization Change Report (PACR). The Natomas PACR was authorized in the Water Resources Reform and Development Act (WRRDA) of 2014, Pub. L. No. 113-121, § 7002, 128 Stat. 1193, 1366 (2014).

Following the flood of 1986, significant seepage was experienced on the Sacramento River from Verona (upstream end of Natomas) at river mile (RM) 79 to Freeport at RM 45.5 and on both the north and south bank of the American River. Seepage on the Sacramento River was so extensive that soon after the 1986 flood event, Congress funded levee improvements as part of the Sacramento Urban Levee Improvement Project (Sac Urban). The Sac Urban Project constructed shallow seepage cutoff walls from Powerline Road in Natomas at approximately RM 64 down to Freeport. At the time, seepage through the levees was considered to be the only significant seepage problem affecting the levees in the Sacramento area.

After construction of the Sac Urban project, the Sacramento Valley experienced a flood event in 1997. The seepage from this event led to a geotechnical evaluation of levees in the vicinity of the city of Sacramento which showed that deep underseepage was of concern. Considerable seepage occurred on the Sacramento River as well as on the American River. Seepage on the American River was expected because levee improvements had yet to be constructed. However, the occurrence of significant seepage on the Sacramento River in the reach where levees had been improved as part of the Sac Urban project confirmed that deep underseepage was a significant concern in this area, a conclusion later confirmed by the Levee Seepage Task Force in 2003.

Following the recognition of deep underseepage as a major concern, recommendations to address seepage on the American River needed to be redesigned to address both through- and deep underseepage. The redesign led to considerable cost increases over what was originally authorized by Congress. The WRDA 1996 authorized cost of \$56 million increased to \$91.9 million under WRDA 1999, and to \$205 million under the Energy and Water Development Appropriations Act of 2004, Pub. L. No. 108-137, § 129, 117 Stat. 1827, 1839 (2003).

Because of the considerable cost increase of levee improvements to address seepage on the American River, all funds appropriated by Congress for the project in the late 1990s and the early part of the 2000s were used for construction activities on the American River instead of for design efforts in the Natomas Basin. Combining this with the recognition that all work in the Natomas Basin would also require significantly more

effort than was anticipated at the time of authorization, it was decided in 2002 that a reevaluation study would be required for at least the Natomas portion of the ARCF Project. Congress was notified in 2004 that additional authorized cost increases would be required for study, design, and construction of levee improvements in the Natomas Basin.

While the reevaluation study was beginning for the ARCF Project, the Folsom Dam PACR was being completed by the Sacramento District. The results of this study, and of the follow-on Economic Reevaluation Report for Folsom Dam improvements, showed that additional levee improvements were needed on the American River and on the Sacramento River below the confluence in order to truly capture the benefits of the Folsom Dam projects. The levee problems identified in these reports consisted primarily of the potential for erosion on the American River and seepage, stability, erosion, and height concerns on the Sacramento River below the confluence with the American River. Because of this, additional reevaluation needed to include the two remaining basins comprising the city of Sacramento: American River North and American River South.

In December 2010, the Natomas PACR and Interim GRR were completed, which focused on the problems associated with the existing levees in the Natomas Basin. The Natomas PACR and Interim GRR recommended improving levee performance by addressing seepage and stability problems, but did not address measures to raise the height of the levees. The recommendations in the Natomas PACR and Interim GRR were authorized in WRRDA 2014. The Natomas PACR and Interim GRR were accompanied by an EIS/EIR produced in compliance with NEPA and CEQA. The Natomas EIS/EIR evaluated the entire project, including levee raises. This was done so that the non-Federal partner (CVFPB and SAFCA) could move forward with implementation of the project in the event of no Federal authorization.

To date CVFPB and SAFCA have constructed levee improvements on the Natomas Cross Canal and the Sacramento River from the Natomas Cross Canal down to RM 66 (Phase 1 – Phase 4a). The Phase 4b project, which was the area covered in the Natomas PACR, Interim GRR, and the Phase 4b EIS/EIR, is currently in the design phase.

ES.5 Need for Action

The purpose of the ARCF GRR is to reduce the flood risk in the greater Sacramento area. The Sacramento Metropolitan area is one of the most at risk areas for flooding in the United States. There is a high probability that flows in either the American or Sacramento Rivers will stress the network of levees protecting the study area to the point that levees could fail. The consequences of such a levee failure would be catastrophic since the inundated area is highly urbanized and the flooding could be up to 20 feet deep.

NEPA evaluation is required when a major Federal action is under consideration and may have significant impacts on the quality of natural and human environment. The Corps has determined that the proposed project may have significant affects on the environment and, therefore, an EIS is required. The EIS/EIR is intended to evaluate the potential significant environmental impacts of the alternatives presented in the GRR.

The Sacramento metropolitan area has a high probability of flooding due to its location at the confluence and within the floodplain of two major rivers. Both of these rivers have large watersheds with very high potential runoff which has overwhelmed the existing flood management system in the past. The existing levee system was designed and built many years ago, before modern construction methods were employed. These levees were constructed close to the river to increase velocities which would flush out hydraulic mining debris. This debris is essentially gone now and the high velocities associated with flood flows are eroding the levees, which are critical components of the flood management system needed to reduce the flood risk in the study area.

In addition to the high probability of flooding, the consequences of flooding in the study area would be catastrophic. The flooding would rapidly inundate a highly urbanized area with minimal warning or evacuation time. As the Capital of California, the Sacramento metropolitan area is the center of State government and many essential statewide services are located here. The study area is also at the crossroads of four major highway/interstate systems that would be impassable should a flood occur. The effects of flooding within the study area would be felt not only at the local level, but at the regional, State, and National level as well.

Under CEQA, the CVFPB's objectives for the project are as follows:

- Reduce the chance of flooding and damages, once flooding occurs, and improve public safety, preparedness, and emergency response.
- Reduce maintenance and repair requirements by modifying the flood management systems in ways that are compatible with natural processes.
- Integrate the recovery and restoration of key physical processes, self-sustaining ecological functions, native habitats, and species.
- Ensure that technically feasible and cost-effective solutions are implemented to maximize the flood risk reduction benefits given the practical limitations of applicable funding sources.

ES.6 Alternatives

ES.6.1 No Action Alternative

The No Action Alternative, under NEPA, is the expected future without-project condition. Under CEQA, the No Action Alternative is the existing condition at the time the notice of preparation was published (February 28, 2008) as modified by what would reasonably be expected to occur in the foreseeable future if the project were not approved. The No Action Alternative assumes that no work would be completed by the Corps and the study area would continue to be at a very high risk of levee failure and subsequent flooding of the Sacramento Metropolitan area. This area includes the California State Capitol and many other State and Federal Agencies.

ES.6.2 Alternative 1 – Improve Levees

Alternative 1 involves the construction of fix-in-place levee remediation measures to address seepage, slope stability, erosion, and overtopping concerns identified for the American and Sacramento River, NEMDC, Arcade, Dry/Robla, and Magpie Creek levees. A vegetation variance would be sought to allow for vegetation to remain on the lower portion of the waterside levee slope. A complete summary of the measures proposed under Alternative 1 is shown on Table ES-1 below.

Table ES-1. Proposed Measures for the ARCF Project.

Waterway/Location	Extent of Action	Proposed Measures
American River	North and south levees from the Sacramento River upstream for approximately 12 miles.	Construct bank protection or launchable rock trenches
Sacramento River	East levee from the American River to the North Beach Lake levee.	Install cutoff walls Construct bank protection Construct levee raise (Alternative 1 – 7 miles Alternative 2 – 1 mile) Construct geotextile reinforced soil embankment levee near the town of Freeport
NEMDC	East levee from Dry Creek/Robla Creek to the American River.	Install cutoff walls Construct floodwalls
Arcade Creek	North and south levees from NEMDC to Marysville Boulevard.	Install cutoff walls Raise floodwalls Construct geotextile reinforced soil embankment levee in steep areas on the south levee
Magpie Creek Diversion Canal	Downstream of Raley Boulevard	Raise levees
Magpie Creek area	West side of Raley Boulevard	Construct new levee Install floodgates at two properties
Magpie Creek area	East of Raley Boulevard	Acquire property to create a flood detention basin
Sacramento Weir and Bypass (Alternative 2 only)	North bypass levee to 1,500 feet north.	Widen the Sacramento Weir and Bypass by approximately 1,500 feet Construct a new section of weir and levee remove the existing Sacramento Bypass north levee

ES.6.3 Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)

Alternative 2 would include all of the levee improvements discussed in Alternative 1, except levee raises along the Sacramento River would be included to a lesser extent. Instead of the full extent of levee raises, the Sacramento Weir and Bypass would be widened to divert more flows into the Yolo Bypass. The levees along the American River, NEMDC, Arcade Creek, and Magpie Creek, would be improved to address identified seepage, stability, erosion, and height concerns. The levees along the Sacramento River would be improved to address identified seepage, stability, and erosion concerns. A small amount of levee raising would still be required on the Sacramento River. Due to environmental, real estate, and hydraulic constraints within the study area, the majority of the levees would be fixed in place. A complete summary of the proposed measures is shown on Table ES-1.

ES.7 Environmental Effects and Mitigation Measures

The effects to the human and natural environment have been considered throughout the planning phase of the study and opportunities have been evaluated to reduce effects to resources within the project area. A vegetation variance will be sought for the Sacramento River reach of the project which will allow vegetation to remain on the lower one third of the waterside levee slope. The waterside vegetation on the Sacramento River is valuable Shaded Riverine Aquatic (SRA) habitat for many State- and Federally listed fish species and State-listed Swainson's hawk. Because the ARCF GRR alternatives would affect Federally listed fish species, consultation under Section 7 of the Endangered Species Act (ESA) is required with the National Marine Fisheries Service (NMFS). Additionally, during the next phase of the project, design refinements will minimize effects to the American River Parkway where feasible.

A summary of the environmental commitments coordinated with the U.S. Fish and Wildlife Service (USFWS), NMFS, and CDFW, is included in the following paragraph. In addition, Table ES-2 at the end of this section includes a full summary of the expected environmental effects that could result from implementation of the proposed alternatives, and the measures proposed to avoid, minimize, or mitigate for those effects.

A biological assessment was prepared and transmitted to USFWS and NMFS on April 3, 2015 (Appendix G). Consultation pursuant to Section 7 of the Endangered Species Act (ESA) has been on-going as part of the ARCF GRR study phase. The Biological Opinion from NMFS was received on September 9, 2015. The Biological Opinion from USFWS was received on September 11, 2015. With receipt of these opinions from the services, and implementation of the enclosed reasonable and prudent measures and terms and conditions, the ARCF GRR is in full compliance with the Federal ESA.

This project was coordinated with USFWS under the Fish and Wildlife Coordination Act (the Fish and Wildlife Coordination Act Report (CAR) is included as Appendix A). Mitigation recommended in the CAR for the Tentatively Selected Plan is included in Table ES-2, which displays the potential impacts and mitigation proposed for each alternative. This mitigation reflects the recommendations presented in the CAR, and has been coordinated with USFWS, NMFS, and CDFW. Section 4.7 of the EIS/EIR includes the recommendations from the CAR and the Corps' response to those recommendations.

A significant and unavoidable impact is one that would result in a substantial or potentially substantial adverse effect on the environment and that could not be reduced to a less-than-significant level even with implementation of applicable feasible mitigation.

Table ES-2. Environmental Impacts and Proposed Mitigation/Compensation for the ARCF GRR.

Habitat Type	Alternative 1 Impacts	Alternative 2 Impacts	Duration of Impact	Mitigation Alternative 1	Mitigation Alternative 2
GGs Uplands	None	30 acres	Permanent	None	90 acres
GGs Aquatic	None	15 acres	Permanent	None	45 acres
Riparian	184 acres	150 acres	Permanent	368 acres	300 acres
SRA habitat (ESA fish species)	80,825 LF	82,325 LF	Single Construction Season	80,825 LF Self Mitigating with on-site planting ²	82,325 LF Self Mitigating with on-site planting
Elderberry Shrubs	3,250 stems	3,250 stems	Permanent	70 acres	70 acres
Vernal Pools	0.25 acre	0.25 acre	Permanent	1 acre	1 acre
Delta Smelt Spawning	32 acres	32 acres	Permanent	32 acres	32 acres
Delta Smelt Shallow Water Habitat	14 acres	14 acres	Permanent	42 acres	42 acres
Green Sturgeon Benthic	20 acres	20 acres	Permanent	20 acres	20 acres
Oak Woodland	2 acres	2 acres	Permanent	4 acres	4 acres
Wetlands	0.4 acres	0.4 acres	Permanent	1 acre	1 acres

Notes: ¹ Assumes vegetation variance is granted for Sacramento River waterside levee compliance and a SWIF for the landside

ES.8 Cumulative Impacts

Cumulative impacts associated with the proposed alternatives are summarized in Table ES-4 below.

ES.9 Areas of Controversy

Based on the comments received during the public scoping period and the history of the NEPA and CEQA processes undertaken by the Corps, CVFPB, and SAFCA, the major areas of public controversy associated with the project area:

- Temporary construction related effects on residents and businesses adjacent to the project levees.
- Construction related impacts on biological resources.
- Vegetation and tree removal.
- Effects to cultural resources and resources significant to Native American tribes.
- Impacts to recreation facilities.
- Impacts to endangered species and their habitat.
- Conversion of private property to flood risk management features.

ES.10 Public Involvement

The Corps published the notice of intent (NOI) to prepare the ARCF GRR EIS in the Federal Register (Vol. 73, No. 41) on February 29, 2008. A series of public scoping meetings were held in March 2008 to present information to the public and to receive public comments on the scope of the EIS. There is no mandated time limit to receive written comments in response to the NOI under NEPA. Appendix F contains the NOI, the one comment letter received in 2008, and copies of the posters for the March 2008 scoping meetings.

The Central Valley Flood Protection Board published the notice of preparation (NOP) to prepare the ARCF GRR EIR with the State of California Clearinghouse on February 27, 2008. The public comment period extended for 30 days until March 28, 2008. A copy of the NOP is included in Appendix F.

The draft GRR and EIS/EIR were circulated for public review beginning on March 13, 2015. The notice of availability (NOA) was published in the Federal Register on March 13, 2015. The draft GRR and EIS/EIR were made available both on the Sacramento District, Corps of Engineers website as well as the website for the Central Valley Flood Protection Board. Hard copies of the draft GRR and EIS/EIR were provided to area libraries. Letters and/or DVD copies of the GRR and EIS/EIR were sent to interested parties, local residents, and to the agencies and elected officials listed in Section 6.4 of the EIS/EIR. Public workshops were held during the review period to provide additional opportunities for comments on the draft documents. All comments received during the public review period were considered and incorporated into the final GRR and EIS/EIR as appropriate. The meeting locations, dates and times were as follows:

- April 8, Hagginwood Community Center—3270 Marysville Blvd, Sacramento (5-7 p.m.).
- April 9, Elk's Lodge— 6446 Riverside Boulevard, Sacramento (5-7 p.m.).
- April 15, Library Galleria—828 I Street, Sacramento (3-5 p.m.).
- April 17, Arden-Dimick Library— 891 Watt Ave., Sacramento (5-7 p.m.).

A total of 137 people attended the four meetings. At the meetings, comments were solicited through the use of court reporters. Additionally, comments could be submitted through mail or electronic mail. Oral and written comments were made throughout the series of meetings by local, State, and Federal agencies, community organizations, and individuals.

Public comments on the draft documents focused in part on: 1) access to recreational features during and after construction; 2) design, placement, and justification for rock erosion protection along the American and Sacramento Rivers; 3) effects to vegetation as a result of the alternatives; 4) clear presentation of the anticipated level of the performance of the project; and 5) coordination with stakeholders in future phases of the project. The comments and the responses to them are summarized in the Public Involvement Appendix (Appendix F).

The final GRR and EIS/EIR were circulated for public review beginning on January 22, 2016. The notice of availability (NOA) was published in the Federal Register on January 22, 2016. The final GRR and EIS/EIR were made available both on the Sacramento District, Corps of Engineers website. Hard copies of the final GRR and EIS/EIR were provided to area libraries. Letters and/or DVD or hard copies of the GRR and EIS/EIR were sent to interested parties, local residents, and to the agencies and elected officials listed in Section 6.4 of the EIS/EIR. All comments received during the public review period were considered and incorporated into the final GRR and EIS/EIR, as appropriate.

Public comments on the final documents focused in part on: 1) access to recreational features during and after construction; 2) design, placement, and justification for rock erosion protection along the American and Sacramento Rivers; 3) effects to vegetation as a result of the alternatives; and 4) coordination with stakeholders in future phases of the project. The comments and the responses to them are summarized in the Public Involvement Appendix (Appendix F)

After considering any additional comments received during public review of the final EIS/EIR, the Corps will sign a Record of Decision (ROD) for the project. The ROD is a written, public record explaining why the Corps chose a particular course of action. The selected action and any practicable mitigation measures will be identified in the ROD. The proposed action cannot be initiated before the ROD is signed. In addition, project construction is also contingent on congressional authorization and appropriation of funds.

ES.11 Recommended Plan

Alternative 2, Improve Levees and Widen the Sacramento Weir and Bypass has been identified as the Recommended Plan. This alternative would include widening the Sacramento Weir and Bypass to divert more flows into the Yolo Bypass and alleviate the need for most of the raises along the Sacramento River downstream of the Sacramento Bypass. This alternative would also include the levee improvements identified in Alternative 1, namely the construction of levee improvement measures to address seepage, stability, and erosion, identified for the Sacramento River, NEMDC, Arcade Creek, and Magpie Creek. Alternative 2 would also include erosion measures for specific locations along the American River.

The Recommended Plan has been identified as the Environmentally Preferable Alternative under NEPA and the Environmentally Superior Alternative under CEQA. The Recommended Plan is also the Least Environmentally Damaging Practicable Alternative under Section 404 of the Clean Water Act as it results in less riparian habitat removal along the Sacramento River and therefore less impacts to the aquatic ecosystem. Additionally, habitat could be created in the expanded Sacramento Bypass. The exact location and amount of habitat to be created in the expanded Bypass would be evaluated during the design phase of the project.

Table ES.3 Summary of Environmental Effects and Mitigation Measures.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Land Use			
Effect	Inconsistent with local land use policies to protect existing urban area.	Acquisition of properties for levee easements along the Sacramento River and Arcade Creek.	Acquisition of properties for levee easements along the Sacramento River and Magpie Creek. Conversion of agricultural lands to floodway.
Significance	Significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	None required.	Federal Relocation Act compliance. Payment of Sacramento County Habitat Restoration Program fees in the American River Parkway.	Federal Relocation Act compliance. Payment of Sacramento County Habitat Restoration Program fees in the American River Parkway.
Hydrology and Hydraulics			
Effect	Emergency repairs during a flood event could result in the loss of channel capacity and alternation of current geomorphic processes.	No effect.	Reduce water surface elevation in the Sacramento River downstream of the confluence of the American River without significantly increasing water surface elevation in the Yolo Bypass downstream of the confluence of the Sacramento Bypass.
Significance	Significant.	Not applicable.	Less than significant.
Mitigation	None possible.	Not applicable.	None required.
Water Quality			
Effect	In a flood event, there is high risk of contaminants entering the water from utilities, stored chemicals, septic systems, and flooded vehicles. In addition, flood flows would increase bank erosion, increasing turbidity in the waterways.	Potential impacts include increased turbidity during bank protection construction, runoff of exposed soils, and cement, slurry, or fuel spills during construction.	Potential impacts include increased turbidity during bank protection construction, runoff of exposed soils, and cement, slurry, or fuel spills during construction.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Significance	Significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	None possible.	Preparation of a Stormwater Pollution. Protection Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan. Implementation of BMPs listed in Section 3.5.6.	Preparation of a Stormwater Pollution. Protection Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan. Implementation of BMPs listed in Section 3.5.6.
Vegetation and Wildlife			
Effect	Erosion during a flood event could cause significant vegetation loss and wildlife habitat loss. Flood fighting activities could prevent future vegetation growth on river banks.	Construction of levee improvements and vegetation removal would result in significant loss of vegetation and wildlife habitat on the landside of the Sacramento River levees, in the American River Parkway, and along Arcade Creek.	Construction of levee improvements and vegetation removal would result in significant loss of vegetation and wildlife habitat on the landside of the Sacramento River levees, in the American River Parkway, and along Arcade Creek. Construction of the Sacramento Weir extension would require the removal of riparian vegetation. Widening of the Sacramento Weir and Bypass would result in a reduced affect to landside vegetation.
Significance	Significant.	Significant short term impacts. Long term effects are less than significant with mitigation.	Significant short term impacts. Long term effects are less than significant with mitigation.
Mitigation	Compensation would likely occur after the fact, but there would still be significant direct impacts due to the temporal loss of vegetation.	When possible, in-kind compensation would be planted on planting berms, on top of launchable rock trenches, or on other lands within the Parkway. Additional mitigation sites are identified in Section 3.6.6.	When possible, in-kind compensation would be planted on planting berms, on top of launchable rock trenches, or on other lands within the Parkway. A hydraulic evaluation will be conducted to determine whether mitigation could occur in the Sacramento Bypass. Additional mitigation sites are identified in Section 3.6.6.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Fisheries			
Effect	Flood fighting could prevent growth of vegetation on levee slopes, and increase turbidity, thus impacting migration, spawning, or rearing habitat.	Indirect effects to fish habitat from the removal of vegetation from the levee slopes. Direct effects from the placement of rock at bank protection sites, causing an increase in turbidity.	Indirect effects to fish habitat from the removal of vegetation from the levee slopes. Direct effects from the placement of rock at bank protection sites, causing an increase in turbidity. Widening the Sacramento Bypass creates floodplain, which could provide a benefit to fish species.
Significance	Significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	Compensation would likely occur after the fact, but there would still be significant direct impacts due to the temporal loss of vegetation.	Vegetation variance would allow waterside vegetation to remain on the lower one-third of the waterside slope along the Sacramento River. Bank protection sites and launchable rock trenches would be revegetated following construction. BMPs would be implemented to address turbidity, and are discussed in Section 3.5.6.	Vegetation variance would allow waterside vegetation to remain on the Sacramento River. Bank protection sites and launchable rock trenches would be revegetated following construction. BMPs would be implemented to address turbidity, and are discussed in Section 3.5.6.
Special Status Species			
Effect	Flood event or flood fight could cause loss of habitat and fatality to species.	Direct effects to Giant Garter Snake (GGS), valley elderberry longhorn beetle, salmonids, green sturgeon, Delta smelt, Western yellow-billed cuckoo, vernal pool crustaceans, and Swainson's Hawks during construction. Indirect effects due to loss of habitat and temporal effects while habitat mitigation establishes. Vegetation Variance for the waterside levee slopes would significantly limit the effects to endangered fish species.	Direct effects to Giant Garter Snake (GGS), valley elderberry longhorn beetle, salmonids, green sturgeon, Delta smelt, Western yellow-billed cuckoo, vernal pool crustaceans, and Swainson's Hawks during construction. Indirect effects due to loss of habitat and temporal effects while habitat mitigation establishes. Vegetation Variance for the waterside levee slopes would significantly limit the effects to endangered fish species. Effects to listed

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
			fish species due to increased stranding potential at the Sacramento Bypass.
Significance	Significant.	Less than Significant with mitigation	Less than Significant with mitigation
Mitigation	None proposed.	Mitigation per the terms of the Biological Opinions (Appendix J). Replace habitat for species either on-site or in close proximity to lost habitat. Implement BMPs discussed in Section 3.5.6 and conservation measures in the BOs during construction to prevent mortality. Implement green sturgeon modeling and monitoring to improve effects assessment, minimize construction impacts, and mitigate for lost benthic habitat per the terms of the BOs.	Mitigation per the terms of the Biological Opinions (Appendix J). Replace habitat for species either on-site or in close proximity to lost habitat. Implement BMPs discussed in Section 3.5.6 and conservation measures in the BOs during construction to prevent mortality. Implement green sturgeon modeling and monitoring to improve effects assessment, minimize construction impacts, and mitigate for lost benthic habitat per the terms of the BOs. Implement fish passage at the Sacramento Bypass, and grade the widened Sacramento Bypass to reduce stranding potential.
Cultural Resources			
Effect	Damage to historic and prehistoric resources during a flood event.	Adverse effects to historic properties from construction of levee improvements.	Adverse effects to historic properties from construction of levee improvements and the bypass widening.
Significance	Potentially significant.	Adverse effects resolved with mitigation under NHPA and reduced to less than significant with mitigation under NEPA. Potentially significant and unavoidable under CEQA.	Adverse effects resolved with mitigation under NHPA and reduced to less than significant with mitigation under NEPA. Potentially significant and unavoidable under CEQA.
Mitigation	None possible.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Transportation and Circulation			
Effect	Potential for flooded roadways in a flood event. Damage to roadways from flooding and clean-up. Flood clean-up would create large volumes of truck traffic to remove flood debris.	Increased traffic on public roadways.	Increased traffic on public roadways.
Significance	Significant.	Significant.	Significant.
Mitigation	None possible.	Preparation of a Traffic Control and Road Management Plan and other BMPs listed in Section 3.10.6.	Preparation of a Traffic Control and Road Management Plan and other BMPs listed in Section 3.10.6.
Air Quality			
Effect	Increased emissions during flood fighting activities without BMPs in place. Increased emissions during clean-up and reconstruction of the urban area including; homes, businesses, public facilities.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.
Significance	Significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	None possible.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.11.6.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.11.6.
Climate Change			
Effect	Increased GHG emissions during flood fighting activities without BMPs in place. Increased GHG emissions caused by clean-up efforts from a flood event.	Increased GHG emissions from construction equipment, haul trucks, and barges.	Increased GHG emissions from construction equipment, haul trucks, and barges.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Significance	Significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	None possible.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.12.6.	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.12.6.
Noise			
Effect	Increased noise during flood fighting.	Increased noise in proximity to sensitive receptors due to construction activities.	Increased noise in proximity to sensitive receptors due to construction activities.
Significance	Less than significant.	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	Not applicable.	Coordination with local residents, compliance with noise ordinances, and other BMPs, as listed in Section 3.13.6.	Coordination with local residents, compliance with noise ordinances, and other BMPs, as listed in Section 3.13.6.
Recreation			
Effect	Damage to recreation facilities, particularly in the Parkway, would be impacted by flooding and potentially loss due to erosion.	Temporary closure of recreation facilities in the American River Parkway during construction, including bike trail, walking trails, and boat launches.	Temporary closure of recreation facilities in the American River Parkway during construction, including bike trail, walking trails, and boat launches. Possible closure of the Sacramento Bypass during portions of hunting season.
Significance	Significant.	Significant.	Significant.
Mitigation	None possible.	Notification and coordination with recreation users and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites.	Notification and coordination with recreation users and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites.
Aesthetics and Visual Resources			
Effect	A flood event would damage the visual character in the study area.	Vegetation loss and construction activities would disrupt the existing visual conditions in the Parkway and along the Sacramento River.	Vegetation loss and construction activities would disrupt the existing visual conditions in the Parkway and along the Sacramento River.
Significance	Significant.	Significant.	Significant.

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
Mitigation	None possible.	Trees would be planted after construction is completed on planting berms and on top of launchable rock trenches, however there would still be a temporal loss of vegetation. Disturbed areas would be reseeded with native grasses.	Trees would be planted after construction is completed on planting berms and on top of launchable rock trenches, however there would still be a temporal loss of vegetation. Disturbed areas would be reseeded with native grasses.
Public Utilities and Services			
Effect	In a flood event there could be significant damage to utility systems. Debris from flooded homes and properties could overwhelm solid waste disposal facilities.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.
Significance	Significant.	Less than significant.	Less than significant.
Mitigation	None possible.	Notification of potential interruptions would be provided to the appropriate agencies and to landowners.	Notification of potential interruptions would be provided to the appropriate agencies and to landowners.
Hazardous, Toxic, and Radiological Wastes			
Effect	Flooding could release potential household chemicals and cause damage to sewage treatment plants.	No effect from construction activities. HTRW sites encountered would be removed and properly disposed of prior to construction.	No effect from construction activities. HTRW sites encountered would be removed and properly disposed of prior to construction, including the Old Bryte Landfill.
Significance	Significant	Less than significant with mitigation.	Less than significant with mitigation.
Mitigation	None Possible.	Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.
Socioeconomics, Population, and Environmental Justice			
Effect	Flooding of residential areas and displacement of populations during a flood event. Flooding of the State	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for levee	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for levee

	No Action Alternative	Alternative 1 – Improve Levees	Alternative 2 – Improve Levees and Widen the Sacramento Weir and Bypass (Recommended Plan)
	Capitol’s government centers also possible.	easements.	easements.
Significance	Significant.	Less than significant.	Less than significant.
Mitigation	None possible.	Federal Relocation Act compliance.	Federal Relocation Act compliance.

Table ES-4. Summary of Potential Cumulative Effects and Mitigation

Resource	Effect	Significance	Mitigation
Water Quality	Regional water quality could be diminished by construction of multiple projects at the same time.	Less than significant.	Implementation of Best Management Practice (BMP’S) on all active construction projects would reduce the risk of effects to water quality.
Vegetation and Wildlife	Multiple projects could impact vegetation and wildlife through the removal of vegetation and wildlife habitat during construction.	Significant.	All projects would implement their own mitigation measures, however, the temporal loss of vegetation and wildlife habitat would remain a significant effect until the time when compensatory planting have fully matured.
Fisheries	Multiple projects could affect fish habitat through construction of bank protection sites and the removal of vegetation to comply with the Engineering Technical Letter (ETL) 1110-2-583.	Less than significant with mitigation.	While there would be a short-term effect to vegetation, any projects removing vegetation would be required to provide compensatory plantings, including planting berms in the bank protection sites, when feasible. In addition, some projects, such as the Folsom Dam Water Control Manual Update, could potentially benefit fish migration and spawning. Overall, these projects should provide a cumulative net benefit to fish species.
Special Status Species	Multiple projects could affect endangered species through	Significant.	All projects would implement their own mitigation measures, however, the

Resource	Effect	Significance	Mitigation
	construction occurring at the same time. Additionally, if multiple projects remove habitat at the same time the temporal loss could be larger due to duration a greater area would take to establish and provide similar value to that removed.		temporal loss of habitat would remain a significant effect until the time when compensatory planting have fully matured. There is potential for the multiple projects to combine mitigation in a single location which could provide cost savings and higher value habitat for listed species.
Cultural Resources	Multiple projects would likely impact cultural resources in a manner consistent with the ARCF project.	Significant.	Each project would be expected to implement mitigation, such as preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans. Resolution of all adverse effects across multiple projects is unlikely considering the nature of finite cultural resources that may be lost or damaged by the implementation of these projects. Although mitigation would minimize these impacts, there is still likely a significant cumulative effect to cultural resources.
Transportation and Circulation	None of the related projects are anticipated to be in close enough proximity to the ARCF construction sites to cause a cumulative effect.	No effect.	None required.
Air Quality	Construction of multiple projects at the same time that result in emissions of criteria pollutants would cause a regional cumulative effect.	Significant.	Each project would be coordinating with the local air quality management district to ensure that project emissions comply with Federal, State, and local thresholds. The Corps would ensure that construction sites in close proximity, such as ARCF and West Sacramento, would not be

Resource	Effect	Significance	Mitigation
			constructing adjacent sites at the same time.
Climate Change	Construction of multiple projects at once could result in cumulative GHG emissions above the reporting requirements.	Less than significant with mitigation.	Each project would be required to implement mitigation measures to reduce GHG emissions to less than significant. In addition, flood risk management projects would reduce potential future emissions from flood fighting and emergency activities.
Noise	None of the related projects are anticipated to be in close enough proximity to the ARCF construction sites to cause a cumulative effect.	No effect.	None required.
Recreation	None of the related projects are anticipated to be in close enough proximity to the ARCF construction sites to cause a cumulative effect.	No effect.	None required.
Visual Resources	Construction of multiple projects along the waterways in the Sacramento region would result in a cumulative impact to visual resources due to the removal of vegetation along these waterways and disturbance from construction activities.	Significant.	Each project would implement mitigation measures to assist with the revegetation in the region. Disturbed areas would be reseeded with native grasses following construction. Regardless, there would be a short-term significant effect.

EXHIBIT C

Addendum No. 1 to the Environmental Impact Statement/Environmental
Impact Report on the American River Watershed Common Features Project/General
Reevaluation Report:

**ADDENDUM NO. 1 TO THE ENVIRONMENTAL IMPACT STATEMENT/
ENVIRONMENTAL IMPACT REPORT ON THE AMERICAN RIVER WATERSHED
COMMON FEATURES PROJECT/GENERAL REEVALUATION REPORT**

I. INTRODUCTION

This Addendum No. 1 to the Final Environmental Impact Statement/Environmental Impact Report for the American River Watershed Common Features Project/General Reevaluation Report (“ARCF-GRR”) (State Clearinghouse No. 2005072046) (USACE/CVFPB 2016) clarifies the description of the property to be acquired in order to extend the Sacramento Weir and Bypass, which is part of the approved ARCF-GRR project (“Project”).

**II. SUMMARY OF PREVIOUS ENVIRONMENTAL REVIEW PROCESS
(AMERICAN RIVER WATERSHED COMMON FEATURES PROJECT/
GENERAL REEVALUATION REPORT FINAL EIS/EIR)**

The U.S. Army Corps of Engineers (USACE), Sacramento District, as lead agency under the National Environmental Policy Act (NEPA), and the Central Valley Flood Protection Board (CVFPB), as lead agency under the California Environmental Quality Act (CEQA),¹ prepared a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the American River Watershed Common Features Project/General Reevaluation Report (State Clearinghouse No. 2005072046), which was certified by the CVFPB on April 22, 2016. The December 2015 Final EIS/EIR was revised in May 2016 prior to issuance of a Record of Decision by the USACE approving the Project, which was analyzed as Alternative 2 (Improve Levees and Widen the Sacramento Weir and Bypass [Recommended Plan]) in the EIS/EIR. The Sacramento Area Flood Control Agency (SAFCA) was a cooperating agency for the EIS/EIR under NEPA and is a responsible agency under CEQA.

The Final EIS/EIR is available at SAFCA’s offices at 1007 7th Street, 7th Floor, Sacramento, CA 95814, and online at SAFCA’s Website:
(http://www.safca.org/protection/Environmental_Public_Review.html).

The following is a list of relevant documents, incorporated herein by reference, consisting of previously analyzed and publicly circulated or generally available information:

February 2007. *Final Environmental Impact Report on Local Funding Mechanisms for Comprehensive Flood Control Improvements for the Sacramento Area*. State Clearinghouse No. 2006072098. Prepared by EDAW-AECOM for the Sacramento Area Flood Control Agency (Local Funding EIR). (http://www.safca.org/protection/Environmental_Public_Review.html)

December 2015 (revised May 2016). *American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report*.

¹ CEQA is found at California Public Resources Code [PRC], Sections 21000 et seq., and the State CEQA Guidelines are found at California Code of Regulations [CCR], Title 14, Section 15000 et seq.

State Clearinghouse No. 2005072046. Prepared by USACE/CVFPB. (ARCF GRR EIS/EIR; ARCF 2016). (http://www.safca.org/protection/Environmental_Public_Review.html)

April 2016. *Final Subsequent Program Environmental Impact Report Updated Local Funding Mechanisms for Sacramento Area Flood Control Improvements*. State Clearinghouse No. 2006072098. Prepared by GEI for Sacramento Area Flood Control Agency. (Updated Local Funding SEIR). (http://www.safca.org/protection/Environmental_Public_Review.html)

III. CLARIFICATION OF PROJECT DESCRIPTION – NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT ENVIRONMENTAL IMPACTS

A. DESCRIPTION OF THE PROJECT IN THE EIS/EIR AND GENERAL REEVALUATION REPORT

As more fully described in the EIS/EIR, the Project involves the construction of fix-in-place levee remediation measures to address seepage, slope stability, erosion, and overtopping concerns identified for the American and Sacramento River, NEMDC, Arcade, Dry/Robla, and Magpie Creek levees. The Project also involves widening the Sacramento Weir and Bypass to divert more flows into the Yolo Bypass. EIS/EIR p. 45. The existing north levee of the Sacramento Bypass will be degraded and a new levee constructed approximately 1,500 feet to the north. A new weir would be extended north of the existing Sacramento Weir without impacting the existing structure. The new weir will be extended approximately 1,500 feet and include a seepage cutoff wall below. EIS/EIR pp. 47-48.

The overall construction footprint for the Sacramento Weir and Bypass Expansion portions of the Project is approximately 427.7 acres. EIS/EIR p. 78. Of the area that will be impacted by the Sacramento Weir and Bypass Expansion, the existing land use of 5.1 acres is identified as “Railroad.” [EIS/EIR p. 78, Table 8] As further described in the EIS/EIR, this property consists of “[a] portion of the existing Yolo Shortline Railroad² and its apparent right-of-way, which in this area includes an elevated dirt platform (berm) for railroad uses.” EIS/EIR p. 79. “Construction of the proposed weir extension . . . would directly impact a segment of an existing railroad (Yolo Shortline Railroad).” EIS/EIR p. 80. 2.8 acres of this railroad property is within the footprint of the new extended Bypass. EIS/EIR p. 78.

The EIS/EIR discloses that property will need to be acquired for the Project, and that all property acquisitions will be conducted in compliance with Federal and State relocation law. EIS/EIR p. 80. The Real Estate Plan for the Project, which is Appendix D to the American River Watershed Common Features General Reevaluation Report (GRR), identifies the real estate costs for the Project (Alternative 2 in the EIS/EIR). GRR, Appendix D, p. 33. The property involved in the Sacramento Weir widening and extension is shown in Figure 4 of the Real Estate Plan (labeled “Aerial View of Sacramento Weir”). GRR, Appendix D, p. 16. In addition, a levee easement and flowage easement over 2.8 acres of property owned by the Sierra Northern Railroad needs to be

² The EIS/EIR refers to the Sierra Northern Railroad throughout as the “Yolo Shortline Railroad.”

acquired. GRR, Appendix D, pp. 24-25. The acquisition schedule for the Sacramento Bypass Widening as a whole is between 2018 and 2024. GRR, Appendix D, p. 36.

This addendum clarifies the description of real property, including the Sierra Northern Railroad property, that will be acquired for the Sacramento Weir and Bypass extension.

B. PROJECT DESCRIPTION CLARIFICATION

The property that would be acquired, including the Sierra Northern Railway property, consists of the parcels listed in the table attached hereto as Exhibit A and shown on the map attached hereto as Exhibit B, all of which are within the footprint of the Project analyzed in the EIS/EIR.

The information in Exhibit A clarifies the sizes and ownership of the properties that would be acquired and that some of the estates to be acquired are now fee title, not easements. Exhibit B clarifies the precise location of the properties that would be acquired, all of which are within the previously analyzed Project footprint (see GRR, Appendix D, p. 18). These clarifications do not involve changes in the Project or new information of substantial importance regarding new significant environmental effects and would not result in a substantial increase in the severity of significant environmental effects evaluated in the prior EIS/EIR. Therefore, this clarification would not result in any new significant or potentially significant environmental effects; substantially increase the intensity or severity of previously identified effects; result in mitigation measures or alternatives previously found to be infeasible becoming feasible; or result in availability/implementation of mitigation measures or alternatives that are considerably different from those analyzed in the prior EIR that would substantially reduce one or more significant or potentially significant effects on the physical environment.

IV. CONCLUSION REGARDING PREPARATION OF AN ADDENDUM TO THE EIS/EIR

State CEQA Guidelines Section 15164 states that a lead agency may prepare an Addendum to a certified EIR if some changes or additions are necessary, but none of the conditions described in Sections 15162 or 15163 calling for the preparation of a subsequent or supplemental EIR have occurred.

As described in the preceding sections, the clarifications to the project descriptions, as described in this Addendum, would not result in any of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a Subsequent EIR or Supplemental EIR. In summary, the proposed clarifications to the project description would not:

- result in any new significant or potentially significant environmental effects,
- substantially increase the intensity or severity of previously identified effects,
- result in mitigation measures or alternatives previously found to be infeasible becoming feasible, or

- result in availability/implementation of mitigation measures or alternatives that are considerably different from those analyzed in the prior EIR that would substantially reduce one or more significant or potentially significant effects on the physical environment.

These conclusions confirm that a subsequent or supplemental EIR is not required, and this Addendum to the prior EIS/EIR pursuant to State CEQA Guidelines Section 15164 is appropriate to evaluate and document the clarifications to the project description. No changes are needed to the certified EIR or the adopted MMRP for the project.

V. REFERENCES

December 2015 (revised May 2016). *American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report*. State Clearinghouse No. 2005072046. Prepared by USACE/CVFPB. (ARCF GRR EIS/EIR; ARCF 2016).

December 2015. *American River Watershed Common Features General Reevaluation Report*. Prepared by USACE.

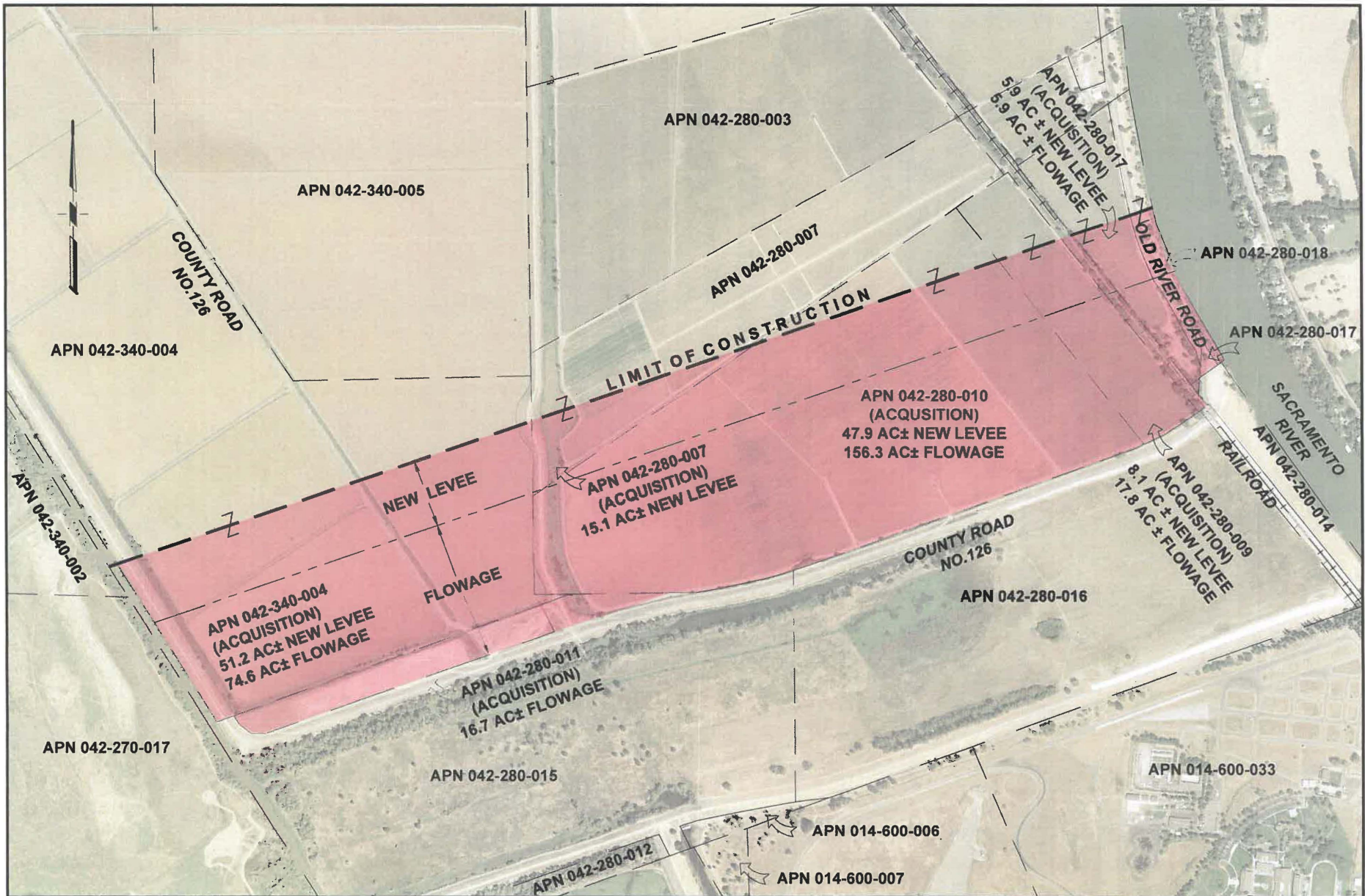
December 2015. *American River Watershed Common Features General Reevaluation Report. Appendix D Real Estate Plan*. Prepared by USACE.

EXHIBIT A

Sacramento Bypass Setback Levee Property Acquisition

Feature	USACE GRR, App. D (2016)			SAFCA EIS/EIR Addendum 1 (2019)			
	10 Ownerships	Estate	Acres	Parcel	Estate	Total Area, acres	Acquisition Area, acres
Bypass Flowage Area	4 Private parcels	Flowage Easement	123.46				
	1 Sponsor owned parcel	Flowage Easement	133.76				
	1 Railroad owned parcel	Flowage Easement	2.8				
				Railroad	Flowage Easement or Fee Title	2.8	2.8
				042-340-004	Fee Title	592	74.6
				042-280-011	Fee Title	16.7	16.7
				042-280-007	Fee Title	219	156.3
				042-280-009	Fee Title	34.5	17.8
				042-280-017	Fee Title	26.5	5.9
Total - Bypass Flowage Area			260.02				274.1
New Levee	4 Private parcels	Flood Protection Levee Easement	107.86				
	1 Sponsor owned parcel, 1 County parcel	Flood Protection Levee Easement	1.63				
				042-340-004	Fee Title	592	51.2
				042-280-007	Fee Title	93.2	15.1
				042-280-007	Fee Title	219	47.9
				042-280-009	Fee Title	34.5	8.1
				042-280-017	Fee Title	26.5	5.9
Total - New Levee			109.49				128.2
Grand Total			369.51				402.3

EXHIBIT B



PSOMAS

1075 Creekside Ridge Drive, Suite 200
Roseville, CA 95678
(916) 788-8122 (916) 788-0600 (FAX)

EXHIBIT FOR:

SACRAMENTO AREA FLOOD CONTROL AGENCY SACRAMENTO BY-PASS

SACRAMENTO COUNTY

DATE: 04/11/2019

SCALE: 1" = 1200'

PROJECT NUMBER 6SAF021500

SHEET

1

OF

1

CALIFORNIA

EXHIBIT D

Addendum No. 2 to the Environmental Impact Statement/Environmental
Impact Report on the American River Watershed Common Features Project/General
Reevaluation Report:

**ADDENDUM NO. 2 TO THE ENVIRONMENTAL IMPACT STATEMENT/
ENVIRONMENTAL IMPACT REPORT ON THE AMERICAN RIVER WATERSHED
COMMON FEATURES PROJECT/GENERAL REEVALUATION REPORT**

I. INTRODUCTION

This Addendum No. 2 to the Final Environmental Impact Statement/Environmental Impact Report for the American River Watershed Common Features Project/General Reevaluation Report ("ARCF-GRR" or "Project") (State Clearinghouse No. 2005072046) (USACE/CVFPB 2016) describes minor modifications and refinements to the Project in order to extend the Sacramento Weir and Bypass, which is part of the approved ARCF-GRR.

II. SUMMARY OF PREVIOUS ENVIRONMENTAL REVIEW PROCESS (AMERICAN RIVER WATERSHED COMMON FEATURES PROJECT/GENERAL REEVALUATION REPORT FINAL EIS/EIR)

The U.S. Army Corps of Engineers (USACE), Sacramento District, as lead agency under the National Environmental Policy Act (NEPA),¹ and the Central Valley Flood Protection Board (CVFPB), as lead agency under the California Environmental Quality Act (CEQA),² prepared a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the ARCF-GRR, which was certified by the CVFPB on April 22, 2016. The December 2015 Final EIS/EIR was revised in May 2016 prior to issuance of a Record of Decision by the USACE approving the Project, which was analyzed as Alternative 2 (Improve Levees and Widen the Sacramento Weir and Bypass [Recommended Plan]) in the EIS/EIR. The Sacramento Area Flood Control Agency (SAFCA) was a cooperating agency for the EIS/EIR under NEPA and is a responsible agency under CEQA.

The Final EIS/EIR is available at SAFCA's offices at 1007 7th Street, 7th Floor, Sacramento, CA 95814, and online at SAFCA's Website:

(http://www.safca.org/protection/Environmental_Public_Review.html).

The following is a list of relevant documents, incorporated herein by reference, consisting of previously analyzed and publicly circulated or generally available information:

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December 2015 (revised May 2016). *American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report*. State Clearinghouse No. 2005072046. Prepared by USACE/CVFPB. (ARCF GRR EIS/EIR; ARCF 2016). (http://www.safca.org/protection/Environmental_Public_Review.html)

April 2016. *Final Subsequent Program Environmental Impact Report Updated Local Funding Mechanisms for Sacramento Area Flood Control Improvements*. State Clearinghouse No.

¹ NEPA is found at 42 U.S.C. § 4321 et seq

² CEQA is found at California Public Resources Code, Sections 21000 et seq., and the State CEQA Guidelines are found at California Code of Regulations, Title 14, Section 15000 et seq.

2006072098. Prepared by GEI, Consultants, Inc. (GEI) for Sacramento Area Flood Control Agency. (Updated Local Funding SEIR).
(http://www.safca.org/protection/Environmental_Public_Review.html)

III. PROPOSED MODIFICATIONS AND REFINEMENTS TO THE PROJECT DESCRIPTION - NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT ENVIRONMENTAL IMPACTS

A. DESCRIPTION OF THE PROJECT IN THE EIS/EIR

As more fully described in the EIS/EIR, the Project involves the construction of fix-in-place levee remediation measures to address seepage, slope stability, erosion, and overtopping concerns identified for the American and Sacramento River, Natomas East Main Drainage Canal, Arcade Creek, Dry/Robla Creek, and Magpie Creek levees. The Project also involves widening the Sacramento Weir and Bypass to divert more flow into the Yolo Bypass (EIS/EIR p. 45). The existing north levee of the Sacramento Bypass would be degraded and a new levee constructed approximately 1,500 feet to the north. A new weir would be constructed north of the existing Sacramento Weir, without impacting the existing structure. The new weir would extend approximately 1,500 feet and include a seepage cutoff wall below (EIS/EIR pp. 47-48).

The overall construction footprint for the Sacramento Weir and Bypass Expansion portions of the Project is approximately 427.7 acres (EIS/EIR p. 78). Of the area that would be impacted by the Sacramento Weir and Bypass Expansion, 5.1 acres of existing land use is identified as "Railroad" (EIS/EIR p. 78, Table 8). As further described in the EIS/EIR, this property consists of "[a] portion of the existing Yolo Shortline Railroad³ and its apparent right-of-way, which in this area includes an elevated dirt platform (berm) for railroad uses" (EIS/EIR p. 79). Construction of the proposed weir extension "...would directly impact a segment of an existing railroad (Yolo Shortline Railroad)," and "[t]he affected portions of the roadways would be relocated and the affected railroad segment would be rebuilt as part of the project" (EIS/EIR p. 80).

This Addendum modifies the description of the Project to abandon and remove an approximately 1-mile-long portion of the Sierra Northern Railway that crosses the project site (described in this Addendum as the Railroad Corridor).

B. PROPOSED MODIFICATIONS AND REFINEMENTS TO THE PROJECT DESCRIPTION

SAFCA would purchase fee title of the Railroad Corridor property from the southerly line of the San Joaquin Drainage District property (Sacramento Bypass) to a point approximately 4,290 feet north, along the centerline of the Railroad Corridor property (see Exhibit B). After purchase of the Railroad Corridor, Sierra Northern Railway will apply to the Federal Surface Transportation Board to abandon the line, and SAFCA will remove the railroad tracks, thereby eliminating the need to construct a railroad bridge and replace the tracks.

³ The EIS/EIR refers to the Sierra Northern Railway throughout by its former name, the "Yolo Shortline Railroad."

C. ANALYSIS OF IMPACTS RESULTING FROM THE PROPOSED MODIFICATIONS AND REFINEMENTS

This section of the Addendum analyzes the potential effects on the physical environment from implementing the proposed minor modifications and refinements to the Project. This analysis has been prepared to determine whether any of the conditions in State CEQA Guidelines Section 15162 would occur as a result of the proposed minor modifications and refinements to the project description.

The minor project description modifications and refinements described in Section III-B, above, would not cause any new significant or potentially significant impacts or a substantial increase in the severity of the impacts analyzed and disclosed in the EIS/EIR for the following topic areas, because the activities associated with the proposed minor modifications and refinements would result in no increase or a negligible increase in the impacts identified in the EIS/EIR:

- Geological Resources
- Land Use
- Hydrology and Hydraulics
- Water Quality and Groundwater Resources
- Vegetation and Wildlife
- Fisheries
- Special Status Species
- Noise
- Visual Resources
- Public Utilities and Service Systems
- Hazardous Wastes and Materials
- Socioeconomic, Population, and Environmental Justice

The following topic areas may be affected by the proposed minor modifications and refinements to the Project and, therefore, are analyzed below:

- Cultural Resources
- Air Quality
- Climate Change
- Recreation
- Transportation and Circulation

i. Cultural Resources

GEI inventoried and evaluated the affected segment of the Sierra Northern Railway for eligibility to be listed on the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR)(see Exhibit C). GEI's inventory and evaluation found that the segment to be abandoned and removed would not be eligible for listing on the NRHP or CRHR due to a lack of integrity. Because this segment does not appear to be a Historic Property for the purposes of Section 106 of the National Historic Preservation Act and is not a historic resource under CEQA, the abandonment and removal of the Railroad Corridor would not result in new or substantially more severe impacts to cultural resources beyond those described and disclosed in the EIS/EIR.

ii. Transportation and Circulation

In 2018, 507 freight cars were transported on the Sierra Northern Railway between Woodland and the Port of Sacramento in West Sacramento, using a 1952 GP-7 Tier 0 locomotive. The proposed minor modifications and refinements would remove a portion of this route, and the freight would need to be transported via a different railway that connects Woodland and West Sacramento via Davis or by on-road trucks. If on-road trucks are used, up to approximately 4-5 trucks could be required to transport the freight carried by each freight car, resulting in up to 2,535 truck trips per year or approximately 7 per day. An additional 7 trucks per day would not significantly affect traffic operations between Woodland and West Sacramento, and would not result in new or substantially more severe impacts to transportation and circulation beyond those described and disclosed in the EIS/EIR.

iii. Air Quality and Climate Change

As described in Section III-C-ii, “Transportation and Circulation,” approximately 507 freight cars were hauled between Woodland and West Sacramento along the Railroad Corridor in 2018, using a 1952 GP-7 Tier 0 locomotive. The proposed minor modifications and refinements would replace these trips with either 7 truck trips per day, or with equivalent trips on a freight train between Woodland and West Sacramento via Davis. The alternative freight alignment would use a Tier 3 Railpower Ultra Low Emission Diesel engine. Tier 3 emissions standards are more than 30 percent lower than Tier 0 standards for NO_x, and 75 percent lower for PM₁₀ (USEPA 2009), so use of the Tier 3 engine would reduce air emissions compared to existing conditions.

Regardless of whether the small amount of freight traffic that currently uses the Railroad Corridor would be replaced with on-road truck trips or with trips on a train with a more efficient freight locomotive, effects on air emissions, including greenhouse gases, would be less than significant, and could be beneficial. Therefore, the proposed minor modifications and refinements would not result in new or substantially more severe impacts to air quality or climate change beyond those described and disclosed in the EIS/EIR.

iv. Recreation

The proposed minor modifications and refinements would close the Railroad Corridor. Excursion trains currently operate on the Railroad Corridor approximately three days per week, traveling between the Bryte area of West Sacramento and Woodland. Implementing the proposed minor modifications and refinements would shorten the distance traveled by these excursion trains by approximately 1.5 miles and change the location where excursion tours would begin, but it would not otherwise affect the excursion train operations. Therefore, the proposed minor modifications and refinements would not result in new or substantially more severe impacts to recreation beyond those described and disclosed in the EIS/EIR.

D. CONCLUSION REGARDING PREPARATION OF AN ADDENDUM TO THE EIS/EIR

State CEQA Guidelines Section 15164 states that a lead agency may prepare an Addendum to a certified EIR if some changes or additions are necessary, but none of the conditions described in Sections 15162 or 15163 calling for the preparation of a subsequent or supplemental EIR have occurred.

As described in the preceding sections, the minor modifications and refinements described in this Addendum would not result in any of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a Subsequent EIR or Supplemental EIR. In summary, the proposed minor modifications and refinements to the project description would not:

- result in any new significant or potentially significant environmental effects,
- substantially increase the severity of previously identified effects,
- result in mitigation measures or alternatives previously found to be infeasible becoming feasible, or
- result in availability/implementation of mitigation measures or alternatives that are considerably different from those analyzed in the EIS/EIR that would substantially reduce one or more significant or potentially significant effects on the physical environment.

These conclusions confirm that a subsequent or supplemental EIR is not required, and this Addendum to the EIS/EIR pursuant to State CEQA Guidelines Section 15164 is appropriate to evaluate and document the proposed minor modifications and refinements to the Project. No changes are needed to the certified EIR or the adopted Mitigation Monitoring and Reporting Plan for the Project.

IV. REFERENCES

December 2015 (revised May 2016). *American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report*. State Clearinghouse No. 2005072046. Prepared by USACE/CVFPB. (ARCF GRR EIS/EIR; ARCF 2016).

December 2015. *American River Watershed Common Features General Reevaluation Report*. Prepared by USACE.

April 2009. *Emission Factors for Locomotives*. United States Environmental Protection Agency Office of Transportation and Air Quality, EPA-420-F-09-025.

1159277.2

EXHIBIT E

Correspondence with the Yolo County Planning Commission and the Yolo
County Board of Supervisors:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

Planning Commission
Yolo County, Department of Community Services
292 W. Beamer Street
Woodland, CA 95695

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

Sierra Northern Railway (“Sierra”) anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board (“STB”) authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

We are advising you of the proposed abandonment so that you may assist us in determining whether the proposed action is consistent with existing land use plans. If applicable, please describe any inconsistencies.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

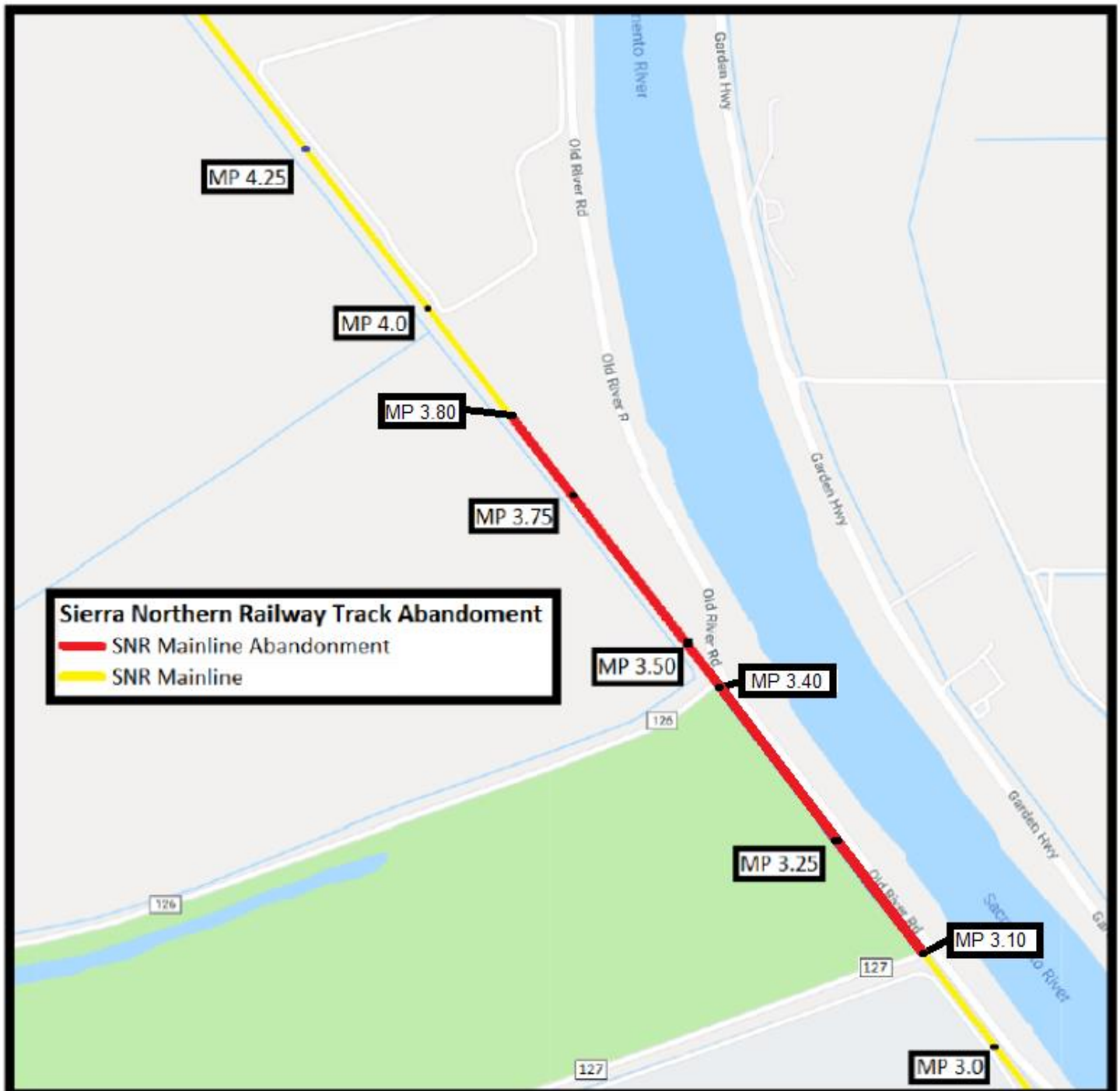
Enclosure as stated



SIERRA NORTHERN RAILWAY

341 Industrial Way
Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
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January 28, 2020

Planning Commission
Yolo County, Department of Community Services
292 W. Beamer Street
Woodland, CA 95695

Re: STB Docket No. AB 874 (Sub-No. 1X); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

Sally Mordi*
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smordi@steptoe.com

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1330 Connecticut Avenue, NW
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www.steptoe.com

November 15, 2019

Yolo County Board of Supervisors
625 Court Street, Room 204
Woodland, CA 95695

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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Sincerely,

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Sally Mordi
Attorney for Sierra Northern Railway

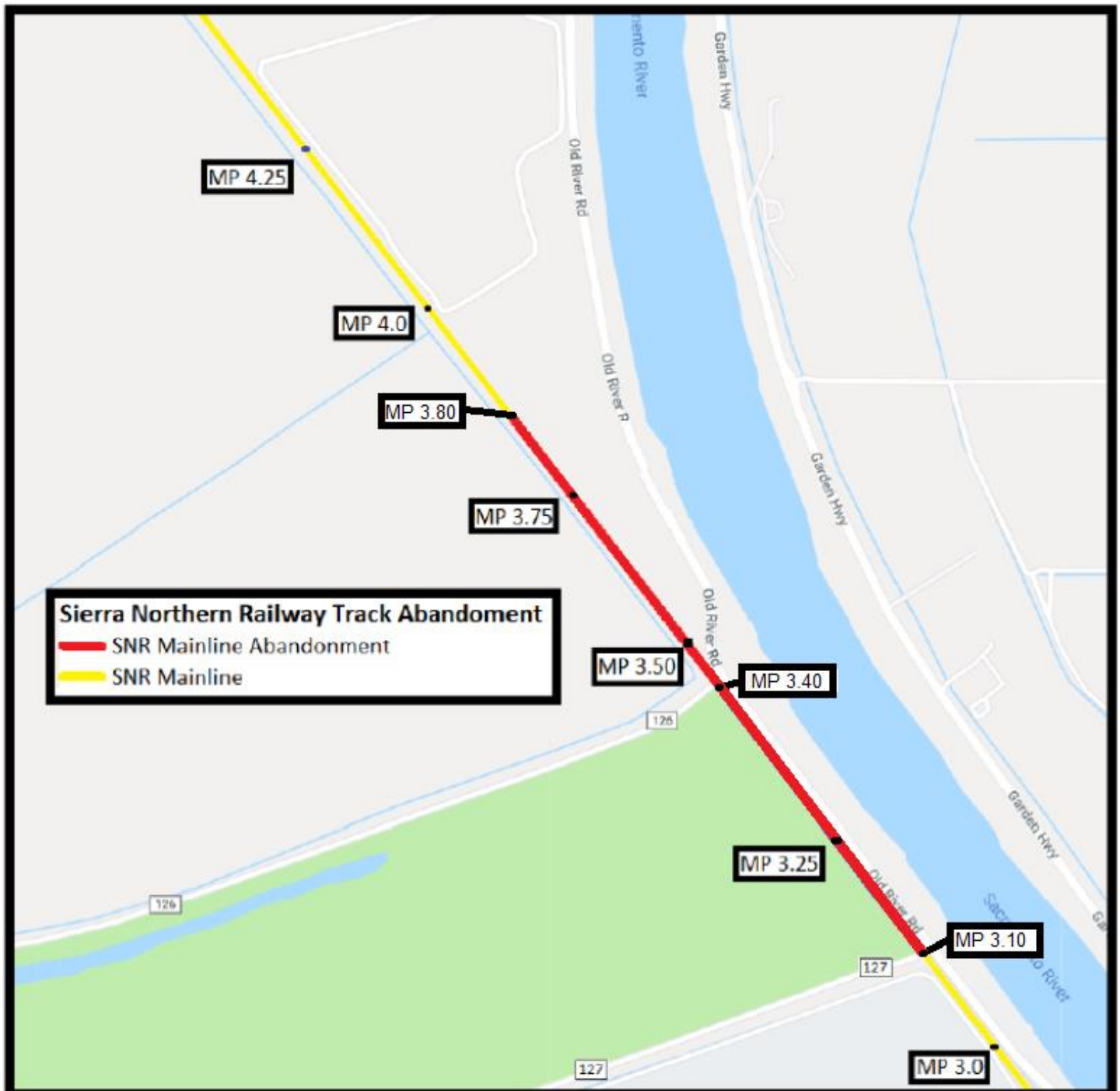
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smordi@steptoe.com

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1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com

January 28, 2020

Yolo County Board of Supervisors
625 Court Street, Room 204
Woodland, CA 95695

***Re: STB Docket No. AB 874 (Sub-No. 1X); Sierra Northern Railway—Abandonment
Exemption—in Yolo County, California***

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You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT F

Correspondence with the Richard E. Lyng Service Center of the U.S.

Department of Agriculture's Natural Resources Conservation Service:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

Carlos Suarez
State Conservationist
Richard E. Lyng USDA Service Center
430 G St., #4164
Davis, CA 95616-4164

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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We are advising you of the proposed abandonment so that you may assist us in determining whether the proposed abandonment will have any effect on prime agricultural lands.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

Sincerely,

A handwritten signature in black ink that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

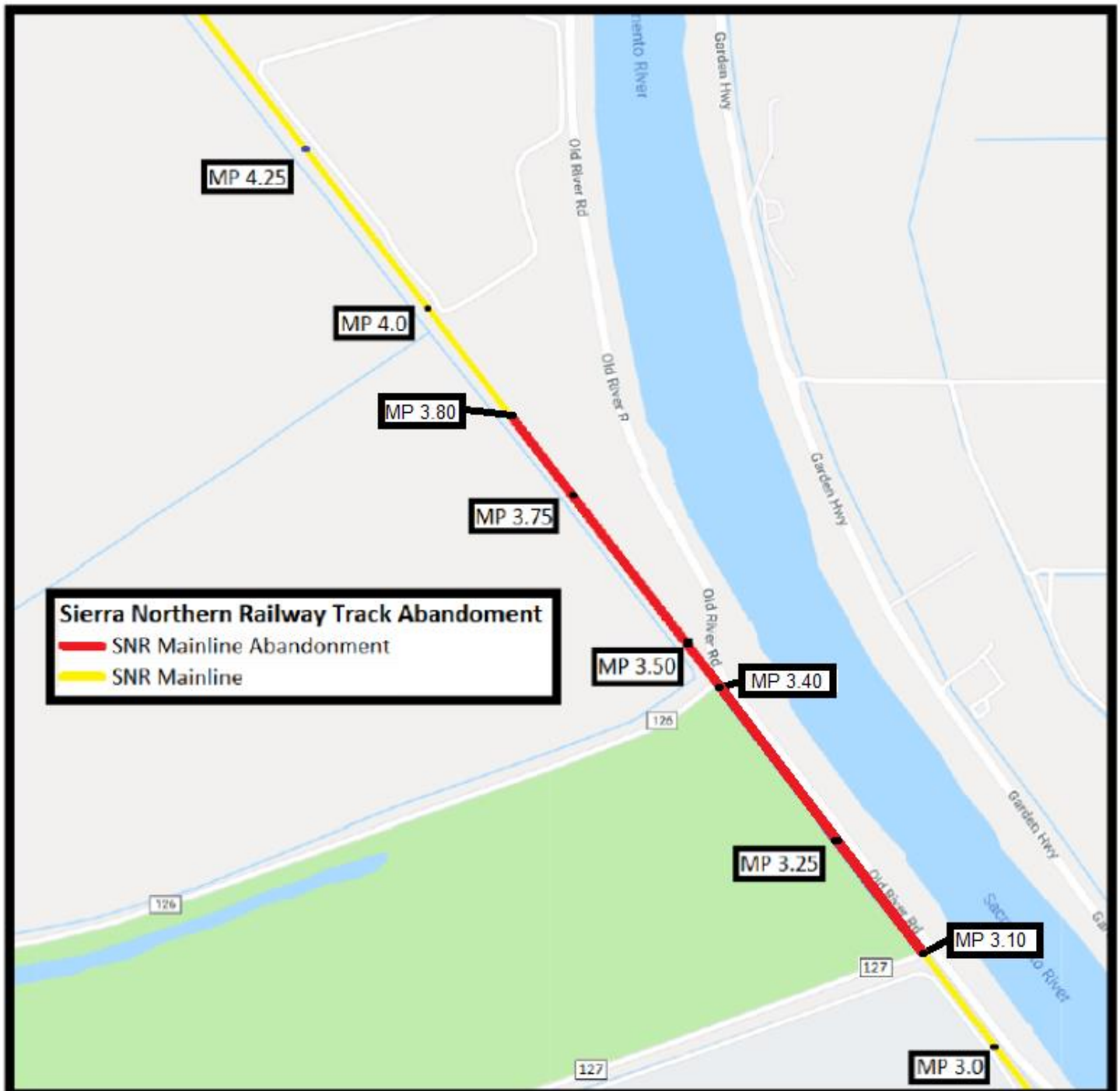
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Woodland, CA 9576
Tel: 530-666-9646
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SNR SAFCA Track Abandonment



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January 28, 2020

Carlos Suarez
State Conservationist
Richard E. Lyng USDA Service Center
430 G St., #4164
Davis, CA 95616-4164

Re: STB Docket No. AB 874 (Sub-No. IX); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT G

Correspondence with the Sacramento Fish and Wildlife Office of the U.S.

Fish and Wildlife Service:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

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

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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We are advising you of the proposed abandonment so that you may assist us in determining: (1) whether the proposed abandonment is likely to adversely affect endangered or threatened species or areas designated as a critical habitat, and (2) if so, what effects the proposed abandonment may have on the same.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

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Sally Mordi
Attorney for Sierra Northern Railway

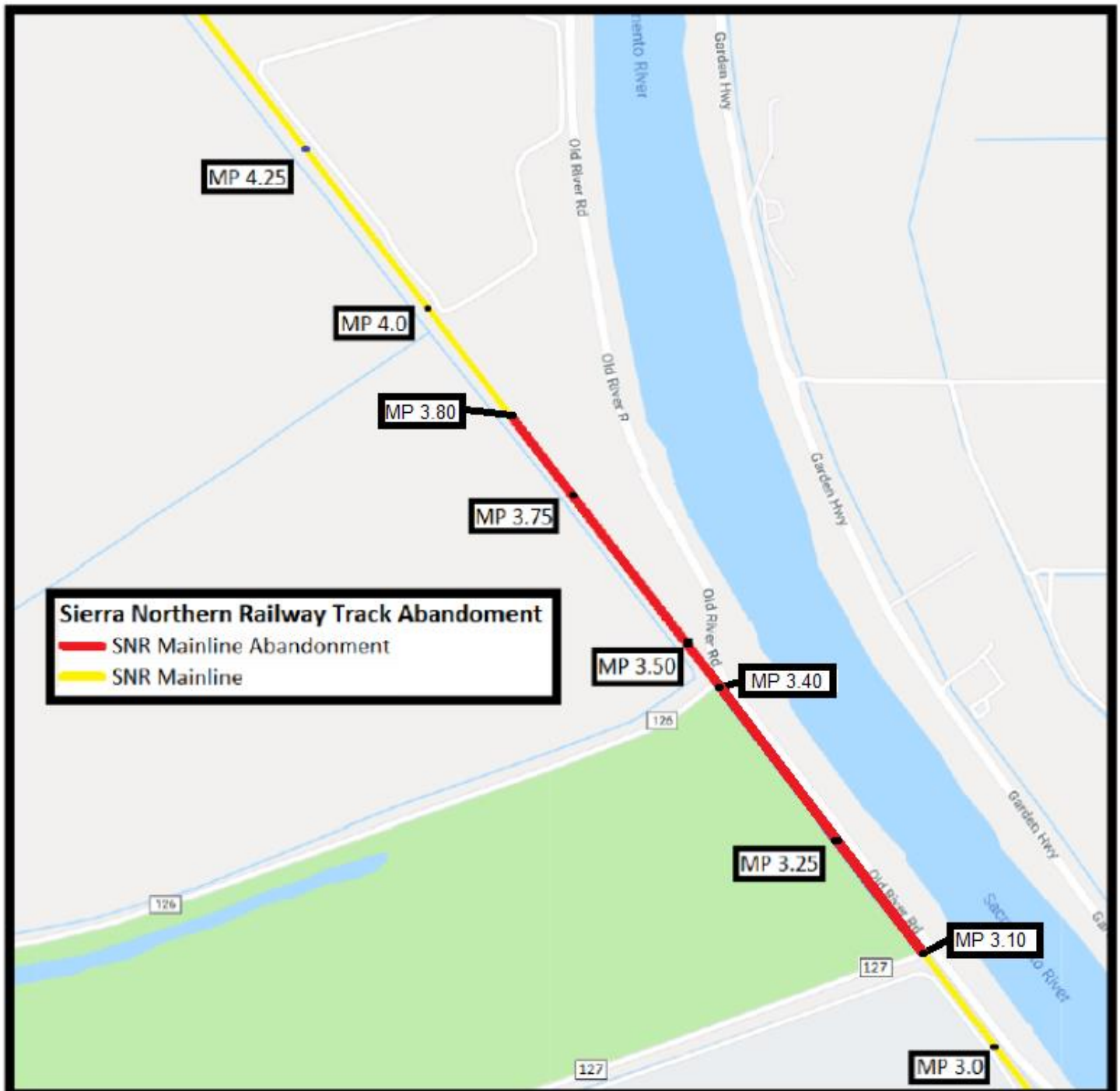
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Woodland, CA 9576
Tel: 530-666-9646
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SNR SAFCA Track Abandonment



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202 429 6287
smordi@steptoe.com

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1330 Connecticut Avenue, NW
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202 429 3000 main
www.steptoelaw.com



January 28, 2020

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
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Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT H

Correspondence with the California State Office of the Bureau of Land
Management and the Pacific West Regional Office of the National Park Service:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

U.S. Department of the Interior
Bureau of Land Management
California State Office
2800 Cottage Way, Suite W1623
Sacramento, CA 95825

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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We are advising you of the proposed abandonment so that you may assist us in determining: (1) whether or not there are any endangered or threatened species, wildlife sanctuaries or refuges, or areas designated as critical habitat adjacent to or near the line, and (2) if so, what effects the proposed action may have on the same.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

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Sally Mordi
Attorney for Sierra Northern Railway

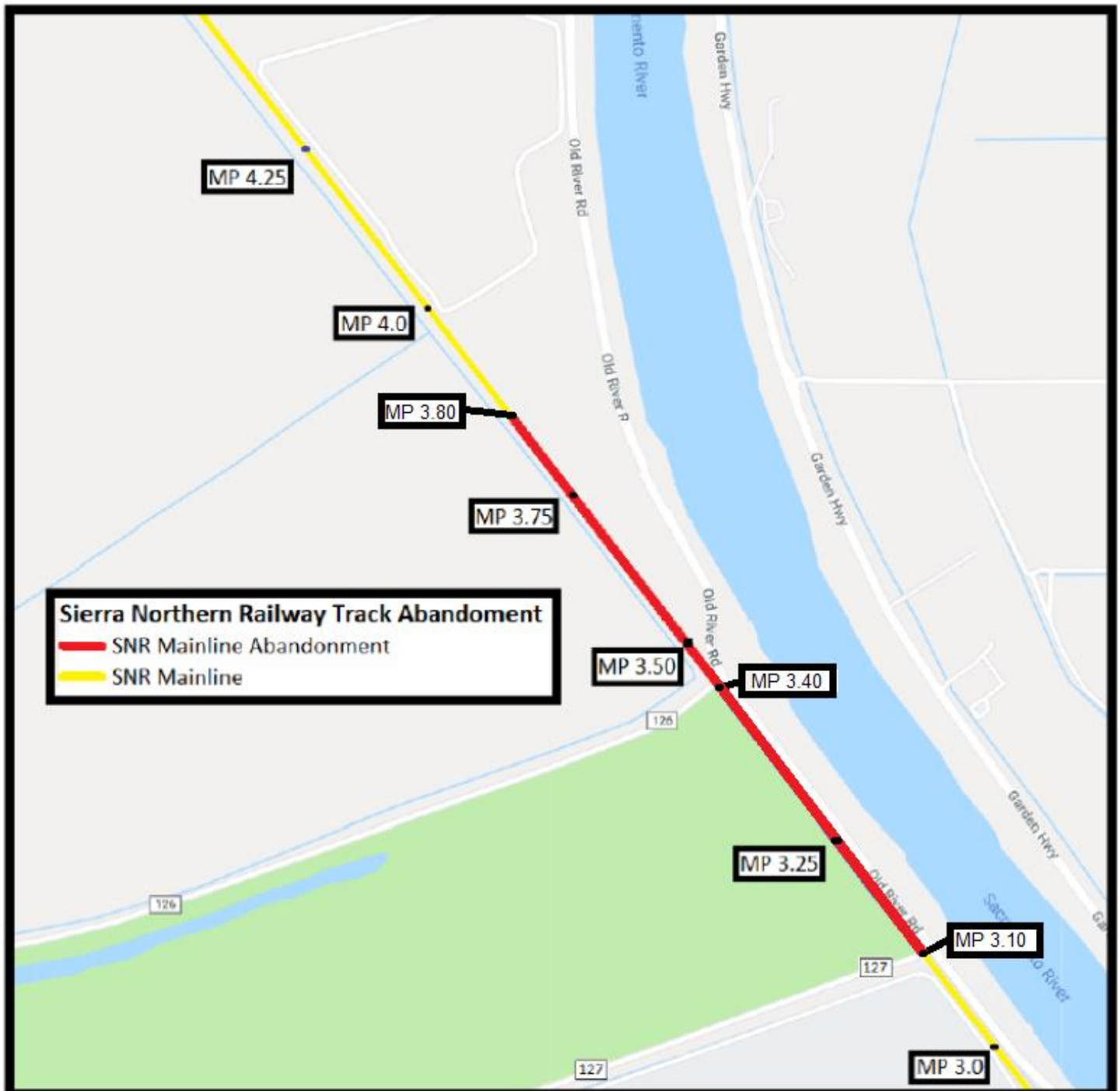
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Woodland, CA 9576
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SNR SAFCA Track Abandonment



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202 429 6287
smordi@steptoe.com

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1330 Connecticut Avenue, NW
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January 28, 2020

U.S. Department of the Interior
Bureau of Land Management
California State Office
2800 Cottage Way, Suite W1623
Sacramento, CA 95825

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Sally Mordi
Attorney for Sierra Northern Railway

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1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

Stan Austin, Regional Director
National Park Service
Pacific West Region
333 Bush Street, Suite 500
San Francisco, CA 94104-2828

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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Sally Mordi
Attorney for Sierra Northern Railway

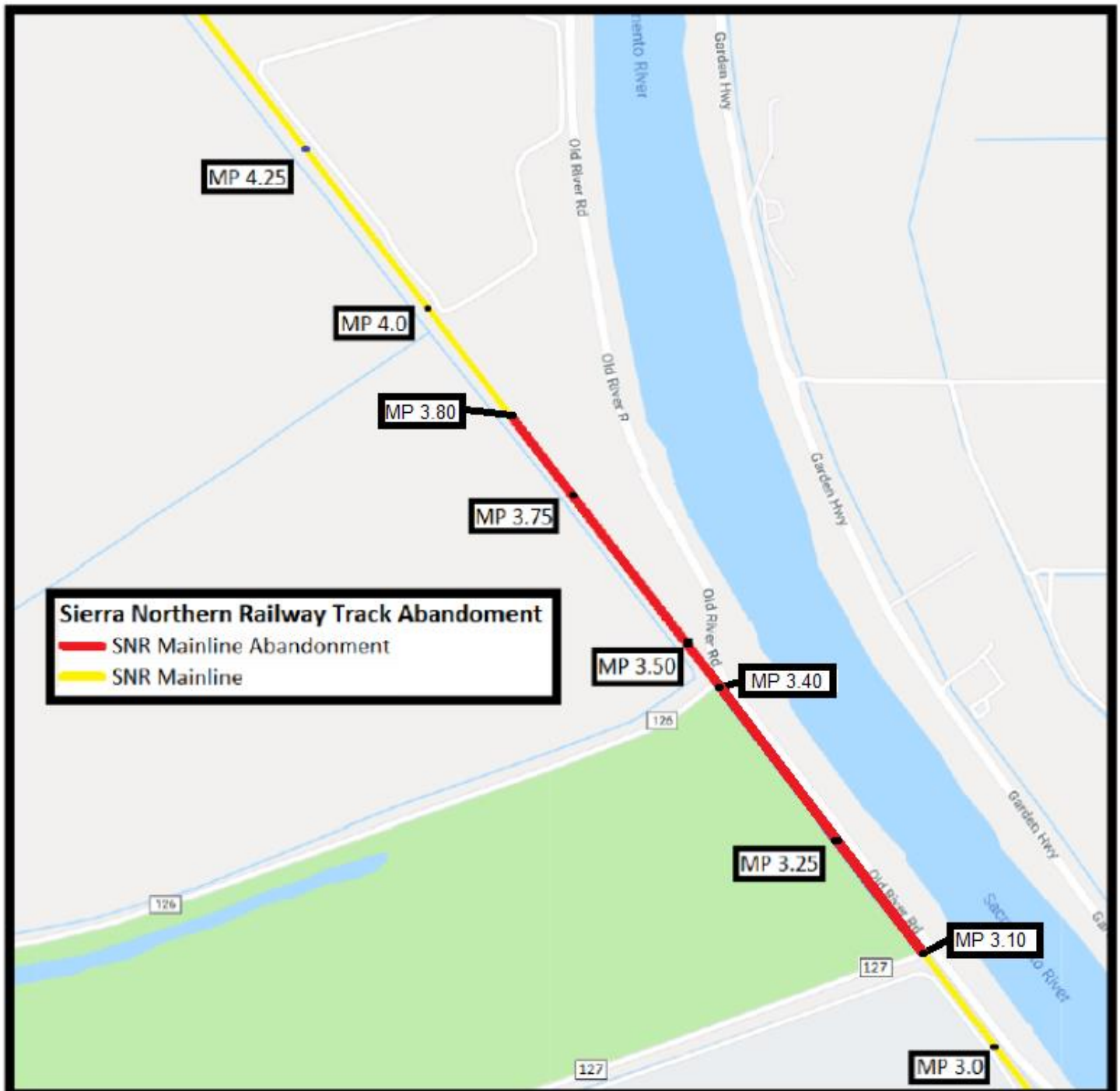
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SNR SAFCA Track Abandonment



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January 28, 2020

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Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT I

Correspondence with the California Department of Water Resources, Region
9 of the U.S. Environmental Protection Agency and the Central Valley Regional
Water Quality Control Board:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoelaw.com



November 15, 2019

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

***Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment
Exemption—in Yolo County, California***

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- (1) whether the proposed action is consistent with applicable Federal, State or local water quality standards. If applicable, please describe any inconsistencies; and
- (2) whether permits under Section 402 of the Clean Water Act (33 U.S.C. 1342) or permits under the National Pollutant Discharge Elimination System ("NPDES") are required for the proposed action.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

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Attorney for Sierra Northern Railway

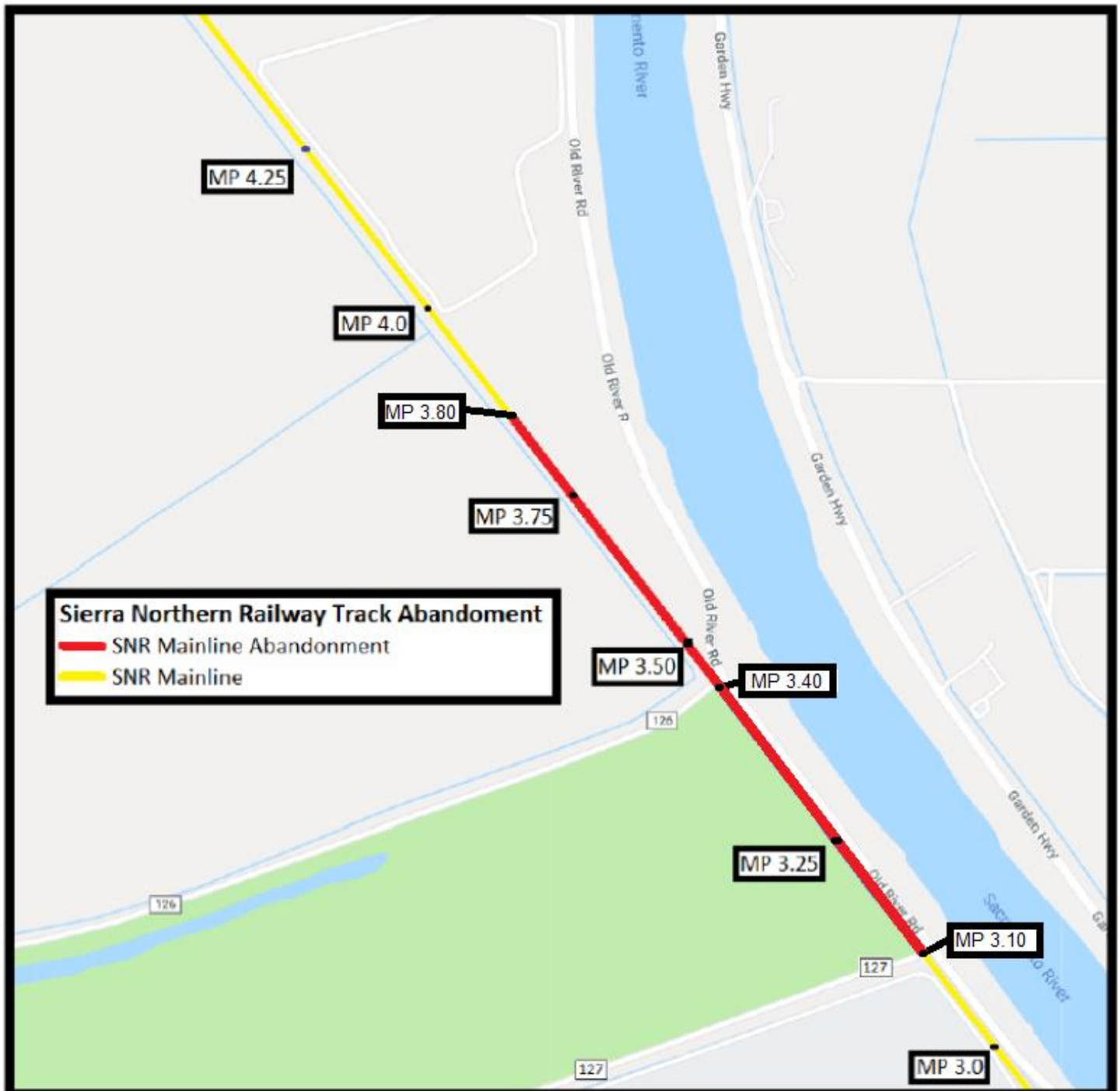
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Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



Mordi, Sally

From: Young, Ryan@DWR <Ryan.Young@water.ca.gov>
Sent: Monday, November 25, 2019 1:28 PM
To: Mordi, Sally
Subject: RE: RESPONSE NEEDED - Railroad abandonment Sac Weir Expansion

Sally,

The "Central Valley Regional Water Quality Control Board" is the ultimate contact you should reach out to.

Ryan Young, P.E.
Flood Projects Office
Department of Water Resources
Office: 916.574.1487 Mobile: 916.717.2194

From: Young, Ryan@DWR
Sent: Monday, November 25, 2019 9:38 AM
To: smordi@steptoe.com
Cc: Wilbur Huang (Wilbur.Huang@water.ca.gov) <Wilbur.Huang@water.ca.gov>; David Martasian (David.Martasian@water.ca.gov) <David.Martasian@water.ca.gov>; Miles Claret (Miles.Claret@water.ca.gov) <Miles.Claret@water.ca.gov>; James Herink (James.Herink@water.ca.gov) <James.Herink@water.ca.gov>; Bernardy, Todd@DWR <Todd.Bernardy@water.ca.gov>; Corey Lasso (Corey.Lasso@water.ca.gov) <Corey.Lasso@water.ca.gov>
Subject: RE: RESPONSE NEEDED - Railroad abandonment Sac Weir Expansion

Sally,

Per our conversation, the questions proposed in the attached letter should be requested from the California State Water Resources Control Board. These are regulatory questions of which we have no jurisdiction. If you have any other questions please don't hesitate to call me back.

Thanks!

Ryan Young, P.E.
Flood Projects Office
Department of Water Resources
Office: 916.574.1487 Mobile: 916.717.2194

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoelaw.com



November 15, 2019

US EPA Pacific Southwest, Region 9
75 Hawthorne St.
San Francisco, CA 94105

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

Sierra Northern Railway (“Sierra”) anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board (“STB”) authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

We are advising you of the proposed abandonment so that you may assist us in determining:

- (1) whether the proposed action is consistent with applicable Federal, State or local water quality standards. If applicable, please describe any inconsistencies; and
- (2) whether permits under Section 402 of the Clean Water Act (33 U.S.C. 1342) or permits under the National Pollutant Discharge Elimination System (“NPDES”) are required for the proposed action.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

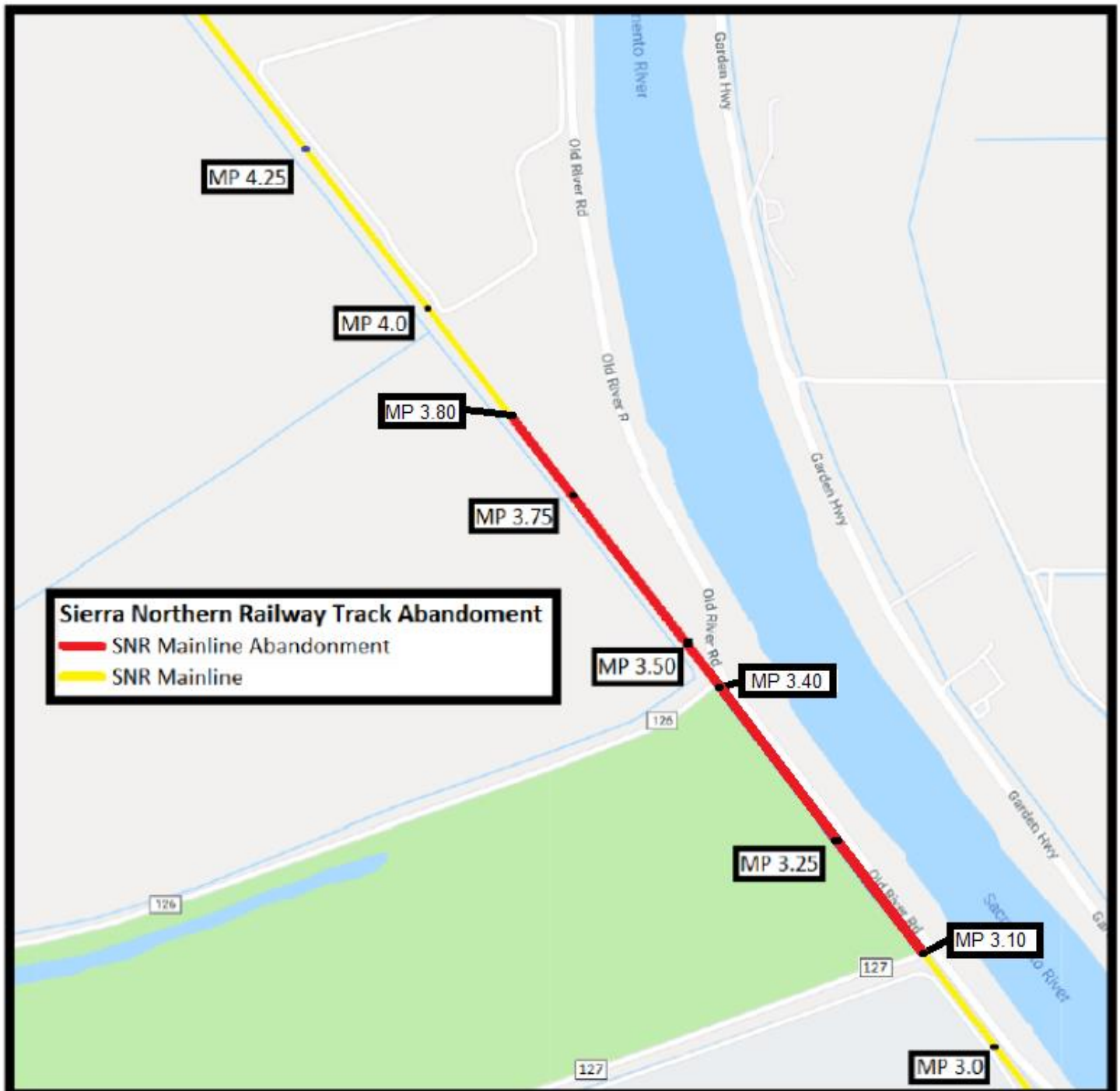
Enclosure as stated



SIERRA NORTHERN RAILWAY

341 Industrial Way
Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



January 28, 2020

US EPA Pacific Southwest, Region 9
75 Hawthorne St.
San Francisco, CA 94105

Re: STB Docket No. AB 874 (Sub-No. 1X); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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In that prior letter, we stated that Sierra will not perform any salvage activities in connection with this abandonment. To avoid any confusion, we are writing to clarify that Sierra may perform salvage activities, but any such activities would be post-abandonment and would be on behalf of the Sacramento Area Flood Control Agency (“SAFCA”) in support of SAFCA’s flood control plans.

You may contact me by email or telephone with any questions or concerns.

Sincerely,

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Sally Mordi
Attorney for Sierra Northern Railway

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1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoelaw.com



November 25, 2019

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

Sierra Northern Railway ("Sierra") anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board ("STB") authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

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- (1) whether the proposed action is consistent with applicable Federal, State or local water quality standards. If applicable, please describe any inconsistencies; and
- (2) whether permits under Section 402 of the Clean Water Act (33 U.S.C. 1342) or permits under the National Pollutant Discharge Elimination System ("NPDES") are required for the proposed action.

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Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

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Attorney for Sierra Northern Railway

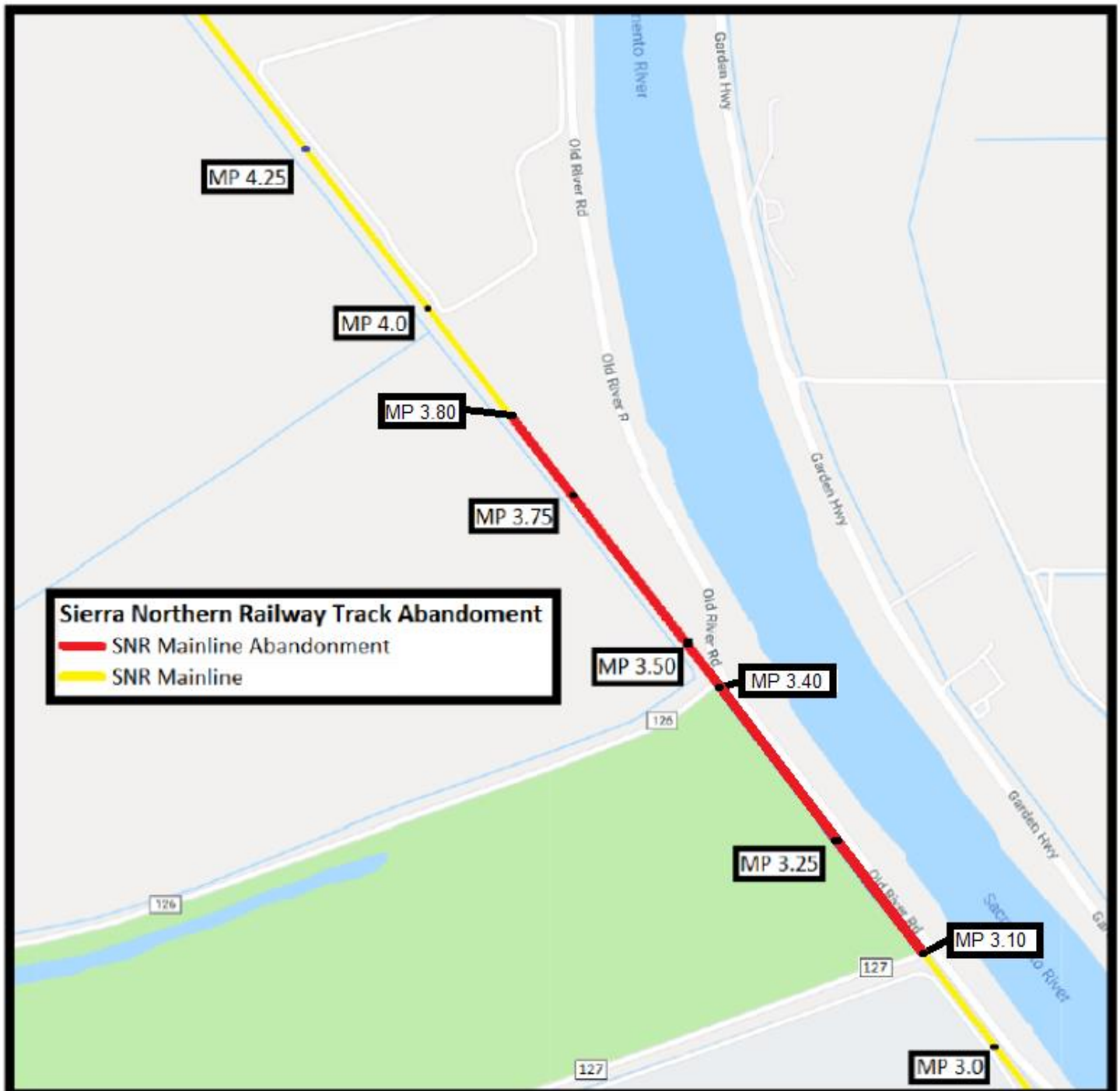
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1330 Connecticut Avenue, NW
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January 28, 2020

Central Valley Regional Water Quality Control Board
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Rancho Cordova, CA 95670

***Re: STB Docket No. AB 874 (Sub-No. 1X); Sierra Northern Railway—Abandonment
Exemption—in Yolo County, California***

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You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Sally Mordi". The signature is written in a cursive, slightly stylized font.

Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT J

Correspondence with the Sacramento District of the U.S. Army Corps of
Engineers:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.



1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com

November 15, 2019

USACE Sacramento District
1325 J Street -- Room 1513
Sacramento, CA 95814

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

Sierra Northern Railway ("Sierra") anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board ("STB") authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

We are advising you of the proposed abandonment so that you may assist us in determining: (1) whether permits under section 404 of the Clean Water Act (33 U.S.C. 1344) are required for the proposed action and whether any designated wetlands or 100-year flood plains will be affected; and (2) if so, what effects the proposed action may have on the same.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

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Sally Mordi
Attorney for Sierra Northern Railway

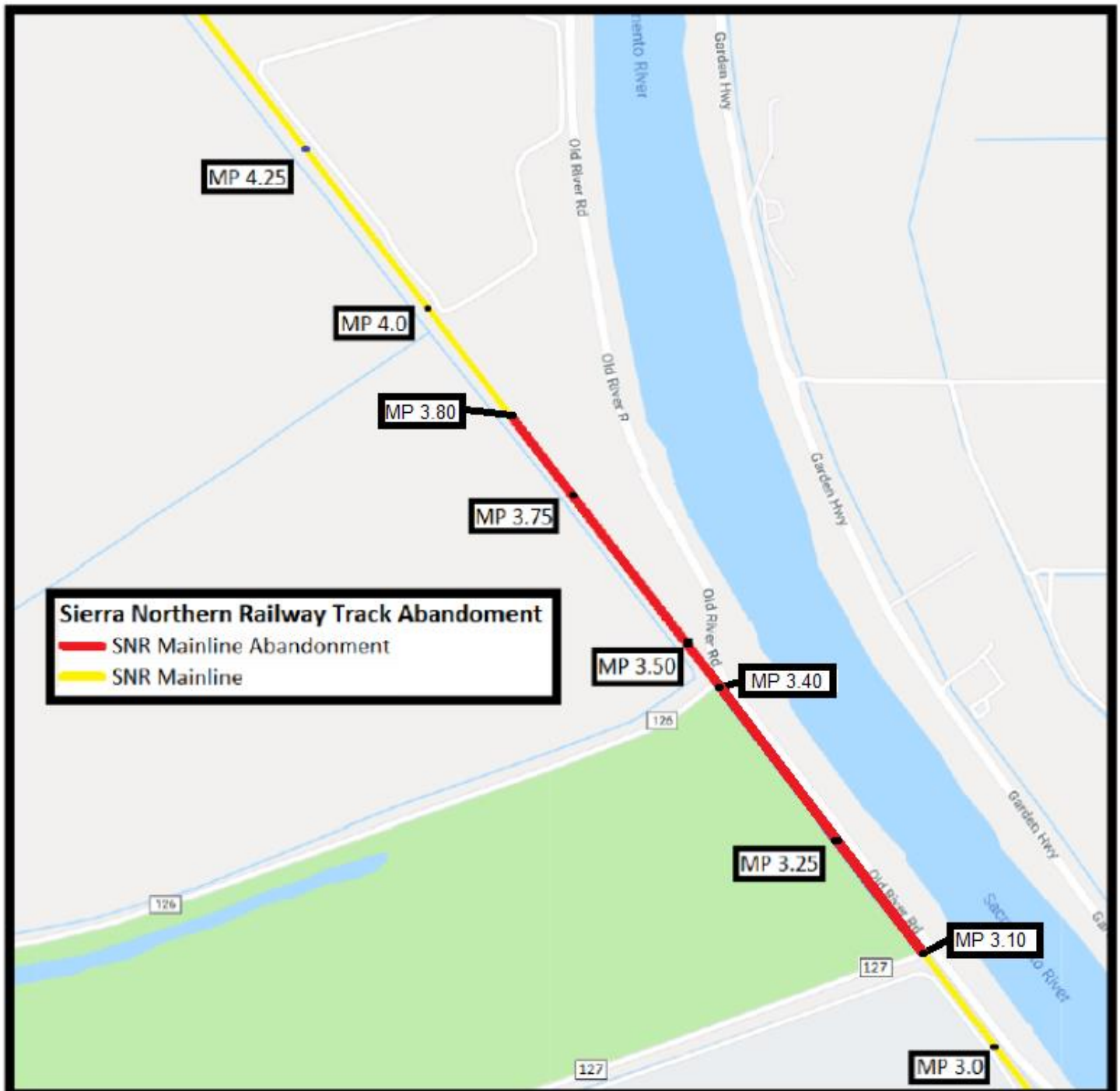
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SNR SAFCA Track Abandonment



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1330 Connecticut Avenue, NW
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January 28, 2020

USACE Sacramento District
1325 J Street -- Room 1513
Sacramento, CA 95814

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You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT K

Correspondence with the Office of Historic Preservation of California State Parks and the Communications and Outreach Branch, NOAA, N/NGS12, National Geodetic Survey, SSMC3 #9340:

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



November 15, 2019

Julianne Polanco, State Historic Preservation Officer
California State Parks
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

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We are advising you of the proposed abandonment so that you may assist us in determining: (1) whether the site and/or structures meet the criteria for listing on the National Register of Historic Places (36 CFR 60.4); and (2) whether there is a likelihood of archeological resources or any other previously unknown historic properties in the project area.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

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Attorney for Sierra Northern Railway

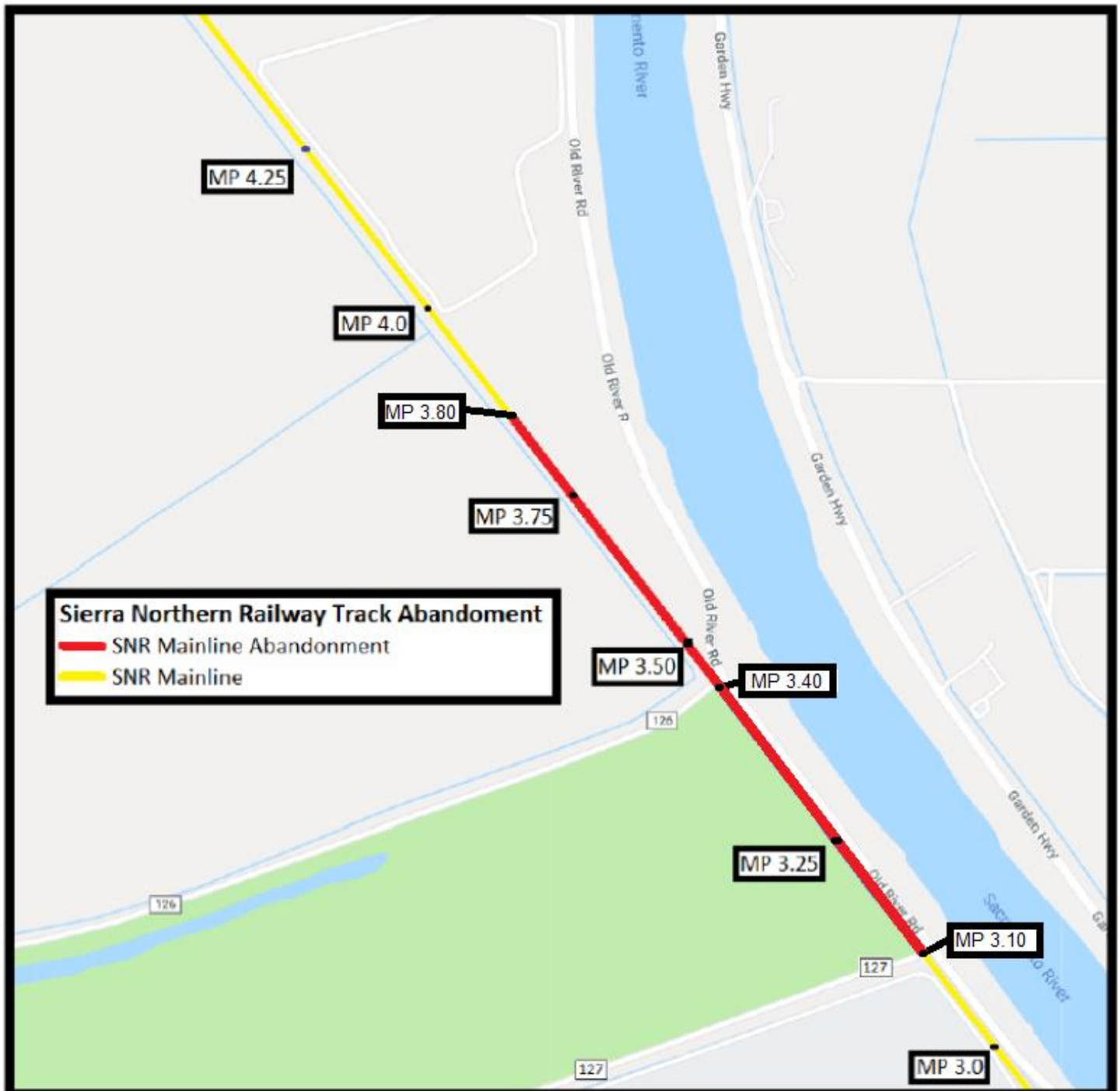
Enclosure as stated



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SNR SAFCA Track Abandonment





**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

December 6, 2019

Reply In Reference To: STB_2019_0610_001

Sally Mordi
Attorney
Sierra Northern Railway
1330 Connecticut Ave., NW
Washington, DC 20036-1795

RE: STB Docket No. AB 874 (Sub-No. 1) Sierra Northern Railway Abandonment
Exemption – Yolo County, California

Dear Ms. Mordi:

OHP is in receipt of your November 15, 2019 letter, which includes a map for the Sierra Northern Railway Track Abandonment between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

You are seeking my comments, on behalf of the Surface Transportation Board (STB), in determining:

1. Whether the site and/or structures meet the criteria for listing on the National Register of Historic Places (36 CFR 60.4), and
2. Whether there is a likelihood of archaeological resources or any other previously unknown historic properties in the project area.

Please note the following. A Professional meeting the Qualifications of the Secretary of the Interior, on behalf of Sierra Northern Railway Company must conduct the identification of historic properties in the Section 106 process.

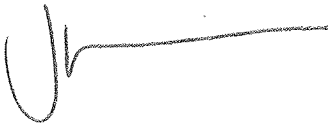
Generally, at minimum a site survey and a records search conducted at the appropriate Information Center (IC) should provide the basics for the identification of historic properties pursuant to 36 CFR Part 800.4. Depending on the results, an evaluation of potential historic properties applying the criteria of the NRHP might become necessary.

Please contact the CHRIS Information Center (IC) for Yolo County at (707)588-8455.

Upon completion of the identification efforts pursuant to 36 CFR Part 800.4 please provide a written Report with adequate photo documentation and the results of a records search and other identification efforts to my office and make a finding of effect. OHP will issue written comments upon receipt of the required documentation.

If you have any other questions, please contact Michelle C. Messinger of my staff at (916) 445-7005 or through e-mail at Michelle.Messinger@parks.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Julianne', followed by a long horizontal line extending to the right.

Julianne Polanco
State Historic Preservation Officer

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

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Washington, DC 20036-1795
202 429 3000 main
www.steptoelaw.com



January 23, 2020

VIA EMAIL AND FEDEX

Michelle C. Messinger
Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Re: **STB_2019_0610_001, STB Docket No. AB 874 (Sub-No. 1X)**

Dear Ms. Messinger,

I am writing to reply to the attached letter dated December 6, 2019 from Julianne Polanco.

We represent Sierra Northern Railway (“Sierra”) in an abandonment proceeding before the Surface Transportation Board (STB Docket No. AB 874 (Sub-No. 1X)). Sierra is seeking to abandon approximately 0.70 miles of track between approximately milepost 3.10 and approximately milepost 3.80 in Yolo County, California (the “Line”).

Sierra proposes to abandon the Line because the land and facilities related to the Line are needed by state and federal authorities to improve the existing flood control regime in the Sacramento, California area – one of the most at-risk areas for flooding in the United States. The Sacramento Area Flood Control Agency (“SAFCA”) and the U.S. Army Corps of Engineers (“USACE”) have developed and are beginning to implement a project that includes, among other elements, the necessary widening of the Sacramento Weir. The project has been authorized by Congress and has received full federal funding. The project will require Sierra to abandon the Line.

An environmental and historic review was conducted for the SAFCA/USACE project. In December 2015, the agencies released a Final Environmental Impact Statement / Environmental Impact Report (“EIS / EIR”), available online at http://www.safca.org/protection/NR_Documents/CEQA_ARCF_GRR_Final.EIS.EIR_2016_05_00.pdf. The EIS / EIR discusses the project’s compliance with the National Historic Preservation Act (“NHPA”) on page 412 of the PDF, and includes a “Cultural Resources Appendix” beginning on page 583. This appendix includes a Programmatic Agreement, signed by the

Ms. Michelle C. Messinger
January 23, 2020
Page 2

California State Historic Preservation Officer (Julianne Polanco), and the Sacramento District of the USACE. *See* EIS / EIR at 584. The Programmatic Agreement states that execution of the agreement evidences that the USACE “has taken into account the effects of the undertaking on Historic Properties, and that the Corps has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations for all aspects of the undertaking.” *Id.* at 600-01.

In 2019, SAFCA prepared two addendums to the EIS / EIR. SAFCA’s second addendum modified the description of the project in the EIS / EIR to include the proposed abandonment. The addendum is available online at http://www.safca.org/protection/NR_Documents/CEQA_ARCF_GRR_Final.EIS.EIR_2016_05_00_Addendum-2_Weir.pdf. On page 3 of the addendum, SAFCA states that GEI Consultants, Inc. (“GEI”) inventoried and evaluated the Line for eligibility to be listed on the National Register of Historic Places (“NRHP”) and California Register of Historical Resources (“CRHR”). GEI prepared the attached memorandum regarding its findings. On page 6 of the memorandum, GEI states its determination that the evaluated railroad segment “lacks integrity of design, materials, and workmanship to its period of historic significance.” Thus, GEI concluded that, due to a lack of integrity, the evaluated railroad segment “does not appear to meet NRHP or CRHR criteria.”

We trust that the provided documents are sufficient to meet the needs addressed in your letter. We would appreciate receipt of any written comments that the Office of Historic Preservation may have based on these documents.

Please call me directly with any questions.

Sincerely,



Sally Mordi
Attorney for Sierra Northern Railway

Enclosures as stated

Cc: Julianne Polanco, State Historic Preservation Officer
Anthony J. LaRocca, Steptoe & Johnson LLP
Peter W. Denton, Steptoe & Johnson LLP



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
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calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

December 6, 2019

Reply In Reference To: STB_2019_0610_001

Sally Mordi
Attorney
Sierra Northern Railway
1330 Connecticut Ave., NW
Washington, DC 20036-1795

RE: STB Docket No. AB 874 (Sub-No. 1) Sierra Northern Railway Abandonment
Exemption – Yolo County, California

Dear Ms. Mordi:

OHP is in receipt of your November 15, 2019 letter, which includes a map for the Sierra Northern Railway Track Abandonment between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

You are seeking my comments, on behalf of the Surface Transportation Board (STB), in determining:

1. Whether the site and/or structures meet the criteria for listing on the National Register of Historic Places (36 CFR 60.4), and
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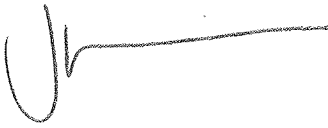
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Julianne Polanco
State Historic Preservation Officer

Memo



To: Jason Campbell
From: Madeline Bowen
cc: Drew Sutton
Date: September 5, 2019
Re: NRHP/CRHR Inventory and Evaluation of Sierra Northern Railway segment
Yolo County, California

GEI Consultants, Inc. (GEI) has prepared this memorandum on behalf of Sacramento Area Flood Control Agency (SAFCA) to inventory and evaluate a segment of the Sierra Northern Railway in Yolo County for National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) significance. Inventory efforts included archival research at local repositories and a field survey of the railroad segment. This technical memo describes the methods and results of the cultural resources investigation.

METHODOLOGY

Archival Research

GEI's architectural historian Madeline Bowen, M.A., who meets the Secretary of the Interior's Professional Qualifications Standards in history, conducted archival research at the California State Library, California Room and the California State Railroad Museum, Sacramento. This research was used to develop an appropriate historic context in which to evaluate the railroad segment.

Field Inventory

On August 28, 2019, GEI architectural historian Madeline Bowen conducted a site visit of a segment of the Sierra Northern Railroad located in the vicinity of the Sacramento Weir. The segment was recorded through written notes and digital photography. Information gathered as part of this field effort was recorded on a Department of Parks and Recreation (DPR) 523 form attached to this memo.

Historic Context

The railroad alignment assessed in this memo is part of the Sierra Northern Railway (SERA) which is based in Woodland, CA. Parts of the route have been abandoned and others are currently used for freight operations as well as track maintenance for the Sierra Railroad

Company, SERA's parent company. SERA extends 17 miles from West Sacramento and the Port of Sacramento to Woodland. The rail line has interchanges with the Burlington Northern Santa Fe Railway and the Union Pacific Railroad (UPRR).

SERA originally started with the Sierra Railway Company of California which incorporated in 1897. The narrow-gauge railroad was established as a cargo line and it eventually added passenger service. Sierra Railroad Company purchased the rail line in 1937 and continued to operate it as a passenger and cargo line until the 1960s. In 2003, the Sierra Railroad merged with the Yolo Shortline Railroad (YSLR) to become SERA (Pacific Historian 1973: 48-49; Robertson 1998: 234).

YSLR was incorporated in August 1989 and operated from 1991 to 1995. Its main line extended from Clarksburg to West Sacramento and then Woodland. The Oakland Antioch and Eastern Railway (OA&E) constructed the portion of the alignment extending to Clarksburg and then south circa 1913. The line operated both freight and passenger service. The Sacramento & Woodland Railway (S&WRR), a subsidiary of Northern Electric Railway, constructed the Sacramento to Woodland branch in 1912 to link the Yolo County farming community with the developing city of Sacramento. The alignment was rerouted along the Sacramento Weir in 1916-7 when that structure was built. At one point the Woodland branch operated eight round trip trains from Woodland to Sacramento. The line was mostly electrified by third rail, and used overhead power in Woodland.

Sacramento Northern Railroad (SNRR) acquired the OA&E and S&WRR lines in 1918 and in 1925 SNRR sold the alignment to Western Pacific Railroad who in 1928 merged the lines into the Sacramento Northern Railway (SN), an electric interurban railway company. SN operated a sprawling network of interurban rail connecting the Sacramento Valley and the northern part of the state with the Bay Area. The Great Depression and the rise in automobile use brought financial burden to the rail company causing it to slowly phase out interurban passenger service on the Woodland Branch, which ended its passenger route in 1940 after the State Railroad Commission found electric railways to be unsafe. SN used the lines for freight hauling as late as the 1960s when the former electrified alignment completely switched to diesel. At that time SN pulled out the third rail and removed or abandoned other segments of the interurban alignment. Rail transportation in general suffered during this time as trucking gained increasing support in the world of commerce and shipping. UPRR acquired SN in 1988 and one year later YSLR incorporated and purchased the 11-mile Clarksburg branch from UPRR followed by the Woodland branch in 1990. YSLR (later SERA) operated excursion trains on both lines for many years, but eventually abandoned and removed portions of the Clarksburg alignment. Parts of the Woodland branch continue to operate as a passenger line running from the Broderick area of West Sacramento to Woodland (Robertson 1998: 193, 195; Walker: 1997: 16; Kalmbach 2000: 368-370).

REGULATORY CONTEXT

National Historic Preservation Act Section 106

Section 106 of the National Historic Preservation Act (NHPA) requires that Federal agencies consider the effects of their actions on properties that are listed in the NRHP, or that may be

eligible for such listing. To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, locations of sacred importance to Native Americans, historical, and built environment properties) must be inventoried and evaluated.

NRHP Evaluation Criteria

The NRHP is the nation's master inventory of known historic resources administered by the National Park Service (NPS). The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The NRHP criteria and associated definitions are outlined in the National Register Bulletin *How to Apply the National Register Criteria for Evaluation* (U.S. Department of the Interior, NPS 1997). The following is a summary of that bulletin.

Properties (structures, sites, buildings, districts, and objects) more than 50 years of age can be listed in the NRHP provided they meet one of the evaluation criteria described below; however, properties less than 50 years of age that are of exceptional significance or are contributors to a district, that also meet the evaluation criteria, can be included in the NRHP.

The NRHP uses four criteria under which a property can be considered significant for listing.

- A Properties associated with events that have made a significant contribution to the broad patterns
- B Properties associated with the lives of persons significant in our past
- C Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- D Properties that have yielded or may likely yield information important in prehistory or history

Properties can be listed individually or as contributors to an Historic District. In addition to meeting one of the evaluation criteria, a property must also retain integrity to convey that significance. Although the evaluation of integrity is sometimes subject to judgment, it must always be grounded in an understanding of the property's physical features and how they relate to its significance. The NRHP recognizes seven aspects of integrity, which are listed below.

- *Location:* The place where the historic property was constructed or the place where the historic event occurred.
- *Design:* The combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting:* The physical environment of a historic property.

- *Materials:* The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship:* The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling:* A property's expression of the aesthetic or historic sense of a particular period of time.
- *Association:* The direct link between an important historic event or person and a historic property.

California Environmental Quality Act

According to the California Environmental Quality Act (CEQA) Guidelines (Section 15064.5[a][3]), a resource is generally considered historically significant if it meets the criteria for listing in the CRHR (Public Resources Code [PRC] Section 5024.1; California Code of Regulations [CCR], Title 14, Section 4852). A historical resource is defined as any site that:

- Is listed in or determined to be eligible by the State Historical Resources Commission for listing in the CRHR, or is determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and
- Is eligible for listing in the CRHR; or
- Is included in a local register of historical resources, as defined by PRC Section 5020.1(k), or is identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).

The CRHR includes resources that are listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for the purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC 5024.1, 14 CCR 4850). The eligibility criteria for listing in the CRHR are like those for the NRHP listing but focus on the importance of the resources to California history and heritage. A cultural resource may be eligible for listing in the CRHR if:

1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master, or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The CRHR definition of integrity and the special considerations for certain properties differ slightly from those for the NRHP. Integrity is defined as “the authenticity of any historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The CRHR also states that eligible resources must “retain enough of their historic character or appearance to be recognizable as historical resources to convey the reasons for their significance,” and lists the same seven aspects of integrity used to evaluate properties under the NRHP criteria. The CRHR’s special considerations for certain property types are limited to moved buildings, structures, or objects; historical resources achieving significance within the past 50 years; and reconstructed buildings.

Findings

Description

The recorded segment of the Sierra Northern Railway is oriented in a north/south direction adjacent to Old River Road and the Sacramento River and extends along the Sacramento Weir. Weeds and other vegetation growing near the track indicate a lack of regular maintenance. The ties and track are mostly uniform, rest on weathered basalt rock ballast, and also exhibit some wear and weathering. Only one small area of fresh basalt rock ballast was observed. Many of the ties have been replaced with pressure-treated wood and the rail is date-marked to 1955 or later. A portion of the track travels along the Sacramento Weir and is elevated and supported by a wood timber trestle with steel siding. The tracks on the weir rest on gravel and asphalt and the ties also show moderate wear. The alignment extending through the intersection of Road 126 just north of the weir has been partially paved over.

Evaluation

The railroad segment being assessed in this memorandum was originally built by S&WRR circa 1912 as part of its Sacramento to Woodland branch line. The interurban line changed hands many times over the years eventually becoming part of the YSLR and then SERA in 2003. The alignment was historically part of a vast 183-mile network of interurban rail operated by SN that extended as far north as Chico and as far south as the Bay Area with branches operating to smaller communities such as Woodland and Clarksburg. Over time, as rail transportation lost its popularity, railroad officials removed the electric rails from the SN alignment and abandoned or removed other segments creating a fragmented set of tracks that no longer function cohesively as an interurban rail. Currently, UPRR, SERA, and other railroad companies operate the remaining alignments.

Segments of the SERA alignment have been evaluated in the past including part of the alignment assessed for this memorandum. Evaluations prepared by ICF International in 2010 and Dr. Scott Crull Ph.D. in 2014 found that the railroad segments lacked integrity and therefore did not meet NRHP significance (ICF 2010; Crull 2014).

The period of significance for this railroad alignment is circa 1912, the period of track installation by the S&WRR. The context for evaluating the line would be that of early 20th century railroad line construction in the Sacramento Valley. A possible argument for eligibility under Criterion A/1 might be made for an association with events that made a significant contribution to the patterns of history in the Sacramento Valley in the area of interurban rail transportation. The original alignment was placed in this area as a means of moving agricultural goods and later passengers throughout the Sacramento region and Bay Area. The alignment was constructed during a time when the valley was expanding rapidly and agricultural farms and markets were springing up throughout the region. It is difficult to make an argument for Criteria B/2 or C/3 as the feature is not known to have any direct association with significant persons, nor as a typical railroad alignment, does it appear to represent a distinctive method of construction. Under Criterion D/4, it also is unlikely to yield information important to history.

The potential argument under Criterion A/1 is of little consequence, however, as the railroad segment lacks integrity of design, materials, and workmanship to its period of historic significance. Although the SERA line follows its historic alignment, the segment from an engineering standpoint bears little resemblance to the route from the early twentieth century. The original track operated by the OA&E and the SNRR was interurban and included an electrified third rail which is what made the alignment unique as a rail line. Segments of the original alignment have been refurbished in Solano County and feature the electric rail, however, the remaining part of the alignment spanning several miles in the Sacramento Valley was converted to diesel decades ago. Portions of this alignment have been abandoned and track has been removed or paved over or converted to public use. Regional Transit of Sacramento is using some segments for its transit service within the City of Sacramento. The segment being assessed in this memorandum is also not well maintained, exhibiting some wear and weathered ties and ballast. It also does not retain any of its original engineering features or materials. This segment includes mostly pressure treated ties and modern rails with date stamps from various years within the past 60 indicating they were recycled from elsewhere. In essence, it is a modern railroad track that happens to follow a historic alignment. In summary, because of a lack of integrity, the SERA railroad segment does not appear to meet NRHP or CRHR eligibility criteria and therefore does not appear to be a Historic Property for the purposes of Section 106 of the NHPA nor does it appear to be a historical resource for the purposes of CEQA.

Conclusion

Due to a lack of integrity, the segment of the SERA evaluated as part of this memorandum does not appear to meet NRHP or CRHR criteria.

Attachments

Attachment A: Project Location Map
Attachment B: Department of Parks and Recreation (DPR) 523 Form

REFERENCES

Crull, Dr. Scott, PhD. 2014. DPR 523 form: “Northern Electric Trestle,” Prepared by Dr. Scott Crull, PhD.

ICF International 2010. DPR 523 form: “Sacramento Northern Railroad,” Prepared by Aisha Rahimi, ICF. Prepared for U.S. Army Corps of Engineers.

Kalmbach Publishing. 2000. *The Historical Guide to North American Railroad*. Kalmbach Publishing Company, Waukesha, WI.

Pacific Historian. 1973. “A Brief History of the Sierra Railway.” *The Pacific Historian*. Volume 17, No. 4. Winter 1973. Valley Oaks Printers, Stockton, CA.

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History: Volume IV, California*. Caxton Printers, Ltd. Caldwell, ID.

Walker, Mike. 1997. *Railroad Atlas of North America: California and Nevada*. Steam Powered Publishing. Kent, UK.

Attachment A: Project Location Map



P1. Other Identifier: Yolo Shortline; Sacramento Northern Railroad; Sacramento Northern Railway; Northern Electric; P-57-00076

***P2. Location:** ☐ Not for Publication ☒ Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County** Yolo

***b. USGS 7.5' Quad** Sacramento West **Date** 1992 **T** 7N; **R** 4E; $\frac{1}{4}$ of Sec ; MD **B.M.**

c. Address None City West Sacramento Zip 95605

d. UTM: (give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

adjacent to the Sacramento River and Old River Road, extends along the Sacramento Weir and travels north

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The segment of the Sierra Northern Railway recorded is oriented in a north/south direction adjacent to Old River Road and the Sacramento River and extends along the Sacramento Weir (**Photograph 2**). The railroad segment extends along an earthen embankment with some weeds and other vegetation growing near the track indicating a lack of regular maintenance. The ties and track are mostly uniform, rest on weathered basalt rock ballast, and also exhibit some wear and weathering. Only one small area of fresh basalt rock ballast was observed. Many of the ties have been replaced with pressure treated wood and the rail is date-marked to 1955 or later. A portion of the track is situated along the Sacramento Weir and is elevated and supported by a wood timber trestle with steel siding (**Photograph 3**). The tracks on the weir rest on gravel and asphalt and the ties also show moderate wear. The alignment extending through the intersection of Road 126 adjacent just north of the weir has been partially paved over. (See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering Structure

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Railroad alignment, camera facing north, August 28, 2019

***P6. Date Constructed/Age and Sources:**

☒ Historic ☐ Prehistoric ☐ Both
ca. 1912 / USGS Topo Maps

***P7. Owner and Address:**

Sierra Northern Railway.

***P8. Recorded by:** (Name, affiliation, address)

Madeline Bowen
GEI Consultants, Inc.
2868 Prospect Park Drive
Rancho Cordova, CA 95670

***P9. Date Recorded:**

August 28, 2019

***P10. Survey Type:** (Describe)

Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") GEI Consultants, Inc. *Inventory and Evaluation of the Sierra Northern Railway Segment*. Memorandum. Prepared for the Sacramento Area Flood Control Agency, 2019.

***Attachments:** NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record
☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record

☐ Other (list)

DPR 523A (1/95)

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____

HRI # _____

Page 2 of 6

*NRHP Status Code 6Z

*Resource Name or # (Assigned by recorder) Sierra Northern Railway segment

B1. Historic Name: Yolo Shortline; Sacramento Northern Railroad; Sacramento Northern Railway, Northern Electric Railway

B2. Common Name: Sacramento Northern Railway

B3. Original Use: Railroad B4. Present Use: Railroad

*B5. Architectural Style: Industrial

*B6. Construction History: (Construction date, alteration, and date of alterations) ca.1912– constructed; ca. 1916-7 segment over weir

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*B8. Related Features: _____

B9. Architect: Unknown b. Builder: Sacramento & Woodland Railway

*B10. Significance: Theme Interurban Railroad Transportation Area Yolo County

Period of Significance ca. 1912 Property Type Railroad Property Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Historic Context

The railroad alignment assessed in this form is part of the Sierra Northern Railway (SERA) which is based in Woodland. Parts of the route have been abandoned and others are currently used for freight operations as well as track maintenance for the Sierra Railroad Company, SERA's parent company. In West Sacramento, SERA extends 17 miles from West Sacramento to Woodland including the Port of Sacramento. The rail line has interchanges with the Burlington Northern Santa Fe Railway and the Union Pacific Railroad (UPRR).

SERA originally started with the Sierra Railway Company of California which incorporated in 1897. The narrow-gauge railroad was established as a cargo line and it eventually added passenger service. Sierra Railroad Company purchased the rail line in 1937 and continued to operate as a passenger and cargo line until the 1960s. In 2003, the Sierra Railroad merged with the Yolo Shortline Railroad (YSLR) to become SERA (Pacific Historian 1973: 48-49; Robertson 1998: 234). (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)

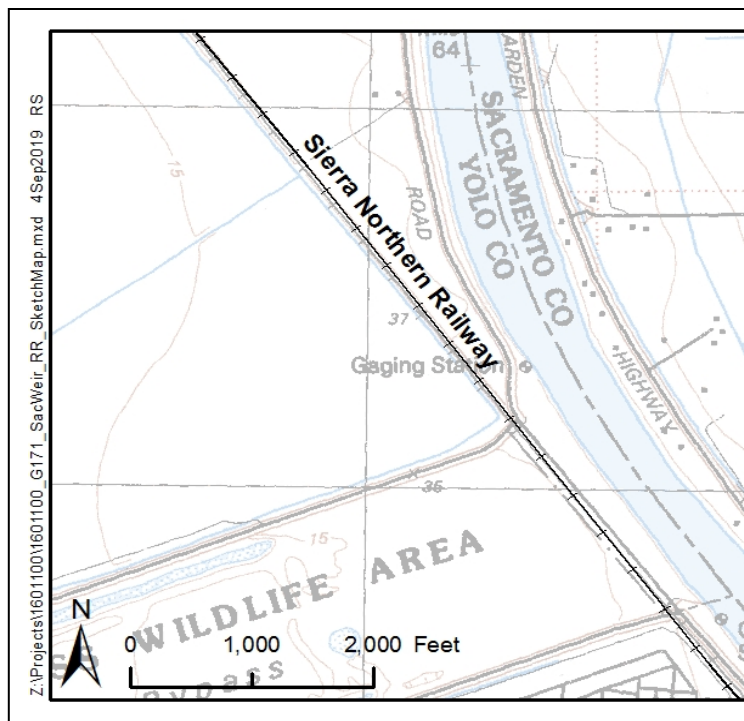
*B12. References: See Continuation Sheet

B13. Remarks:

*B14. Evaluator: Madeline Bowen, MA

*Date of Evaluation: September 3, 2019

(This space reserved for official comments.)



Page 3 of 3

*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update

Significance (cont)

YSLR was incorporated in August 1989 and operated from 1991 to 1995. Its main line extended from Clarksburg to West Sacramento and then Woodland. The Oakland Antioch and Eastern Railway (OA&E) constructed the portion of the alignment extending to Clarksburg and then south circa 1913. The line operated both freight and passenger service. The Sacramento & Woodland Railway (S&WRR), a subsidiary of Northern Electric Railway, constructed the Sacramento to Woodland branch in 1912 to link the Yolo County farming community with the developing city of Sacramento. The alignment was rerouted along the Sacramento Weir in 1916-7 when that structure was built. At one point the Woodland branch operated eight round trip trains from Woodland to Sacramento. The line was mostly electrified by third rail, and used overhead power in Woodland. Sacramento Northern Railroad (SNRR) acquired the OA&E and S&WRR lines in 1918 and in 1925, SNRR sold the alignment to Western Pacific Railroad who merged the lines into the Sacramento Northern Railway (SN), an electric interurban railway company in 1928. SN operated a sprawling network of interurban rail connecting the Sacramento Valley and the northern part of the state with the Bay Area. The Great Depression and the rise in automobile use brought financial burden to the rail company causing it to slowly phase out interurban passenger service with the Woodland Branch which ended its passenger route in 1940 after the State Railroad Commission found electric railways to be unsafe. SN used the lines for freight hauling as late as the 1960s when the former electrified alignment completely switched to diesel. At that time SN pulled out the third rail and removed or abandoned other segments of the interurban alignment. Rail transportation in general suffered during this time as trucking gained increasing support in the world of commerce and shipping. UPRR acquired SN in 1988 and one year later, YSLR incorporated and purchased the 11-mile Clarksburg branch from UPRR followed by the Woodland branch in 1990. YSLR (later SERA) operated excursion trains on both lines for many years, but eventually abandoned and removed portions of the Clarksburg alignment. Parts of the Woodland branch continue to operate as a passenger line running from Broderick, West Sacramento to Woodland (Robertson 1998: 193, 195; Walker: 1997: 16; Kalmbach 2000: 368-370).

Evaluation

The railroad segment being assessed in this memo was originally built by S&WRR circa 1912 as part of its Sacramento to Woodland branch line. The interurban line changed hands many times over the years eventually becoming part of the YSLR and then SERA in 2003. The alignment was historically part of a vast 183-mile network of interurban rail operated by SN that extended as far north as Chico and as far south as the Bay Area with branches operating to smaller communities such as Woodland and Clarksburg. Over time, as rail transportation lost its popularity, railroad officials removed the electric rails from the SN alignment and abandoned or removed other segments creating a fragmented set of tracks that no longer function cohesively as an interurban rail. Currently, UPRR, SERA, and other railroad companies operate the remaining alignments.

Segments of the SERA alignment have been evaluated in the past including part of the alignment assessed for this memo. Evaluations prepared by ICF International in 2010 and Dr. Scott Crull Ph.D. in 2014 found that the railroad segments lacked integrity and therefore did not meet NRHP significance (ICF 2010; Crull 2014).

The period of significance for this railroad alignment is circa 1912, the period of track installation by the S&WRR. The context for evaluating the line would be that of early 20th century railroad line construction in the Sacramento Valley. A possible argument for eligibility under Criterion A/1 might be made for an association with events that made a significant contribution to the patterns of history in the Sacramento Valley in the area of interurban rail transportation. The original alignment was placed in this area as a means of moving agricultural goods and later passengers throughout the Sacramento region and Bay Area. The alignment was constructed during a time when the valley was expanding rapidly and agricultural farms and markets were springing up throughout the region. It is difficult to make an argument for Criteria B/2 or C/3 as the feature is not known to have any direct association with significant persons, nor as a typical railroad alignment, does it appear to represent a distinctive method of construction. Under Criterion D/4, it also is unlikely to yield information important to history.

The potential argument under Criterion A/1 is of little consequence, however, as the railroad segment lacks integrity of design, materials, and workmanship to its period of historic significance. Although the SERA line follows its historic alignment, the segment from an engineering standpoint bears little resemblance to the route from the early twentieth century. The original track operated by the OA&E and the SNRR was interurban and included an electrified third rail which is

Page 4 of 4

*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update

Significance (cont)

what made the alignment unique as a rail line. Segments of the original alignment have been refurbished in Solano County and feature the electric rail, however, the remaining part of the alignment spanning several miles in the Sacramento Valley was converted to diesel decades ago. Portions of this alignment have been abandoned and track has been removed or paved over or converted to public use. Regional Transit of Sacramento is using some segments for its transit service within the City of Sacramento. The segment being assessed in this memo is also not well maintained exhibiting some wear and weathered ties and ballast. It also does not retain any of its original engineering features or materials. It includes mostly pressure treated ties and modern rails with date stamps from various years within the past 60 indicating they were recycled from elsewhere. In essence, it is a modern railroad track that happens to follow a historic alignment. In summary, because of a lack of integrity, the SERA railroad segment does not appear to meet NRHP or CRHR eligibility criteria and therefore does not appear to be a Historic Property for the purposes of Section 106 of the National Historic Preservation Act nor does it appear to be a historical resource for the purposes of CEQA.

References

Crull, Dr. Scott, Ph.D. 2014. DPR 523 form: "Northern Electric Trestle," Prepared by Dr. Scott Crull, Ph.D.

ICF International 2010. DPR 523 form: "Sacramento Northern Railroad," Prepared by Aisha Rahimi, ICF. Prepared for U.S. Army Corps of Engineers.

Kalmbach Publishing. 2000. *The Historical Guide to North American Railroad*. Kalmbach Publishing Company, Waukesha, WI.

Pacific Historian. 1973. "A Brief History of the Sierra Railway." *The Pacific Historian*. Volume 17, No. 4. Winter 1973. Valley Oaks Printers, Stockton, CA.

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History: Volume IV, California*. Caxton Printers, Ltd. Caldwell, ID.

Walker, Mike. 1997. *Railroad Atlas of North America: California and Nevada*. Steam Powered Publishing. Kent, UK.

Page 5 of 5

*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update

Photographs (cont)



Photograph 2: Alignment Extending Across Sacramento Weir (camera facing south)

Page 6 of 6

*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update



Photograph 3: Timber Rail Trestle adjacent to weir (camera facing south)

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



January 28, 2020

Julianne Polanco, State Historic Preservation Officer
California State Parks
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Re: STB Docket No. AB 874 (Sub-No. IX); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

On November 15, 2019, we wrote to you noting that Sierra Northern Railway (“Sierra”) anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board (“STB”) authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

In that prior letter, we stated that Sierra will not perform any salvage activities in connection with this abandonment. To avoid any confusion, we are writing to clarify that Sierra may perform salvage activities, but any such activities would be post-abandonment and would be on behalf of the Sacramento Area Flood Control Agency (“SAFCA”) in support of SAFCA’s flood control plans.

You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in dark ink that reads "Sally Mordi". The signature is written in a cursive, flowing style.

Sally Mordi
Attorney for Sierra Northern Railway

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoel.com



November 15, 2019

Communications and Outreach Branch, NOAA, N/NGS12
National Geodetic Survey, SSMC3 #9340
1315 East-West Highway
Silver Spring, MD 20910-3282

Re: STB Docket No. AB 874 (Sub-No. 1); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

Sierra Northern Railway ("Sierra") anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board ("STB") authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

We are advising you of the proposed abandonment so that you may assist us in determining whether or not any geodetic survey marks may be located in the area described.

For your reference, we have enclosed a map of the subject railroad line. Following consummation of this abandonment, Sierra will sell the property to the Sacramento Area Flood Control Agency, and Sierra will not perform any salvage activities in connection with this abandonment.

Please provide your comments to me at the address above by December 15, 2019. You may contact me by email or telephone with any questions or concerns.

Thank you in advance for your time and contribution.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

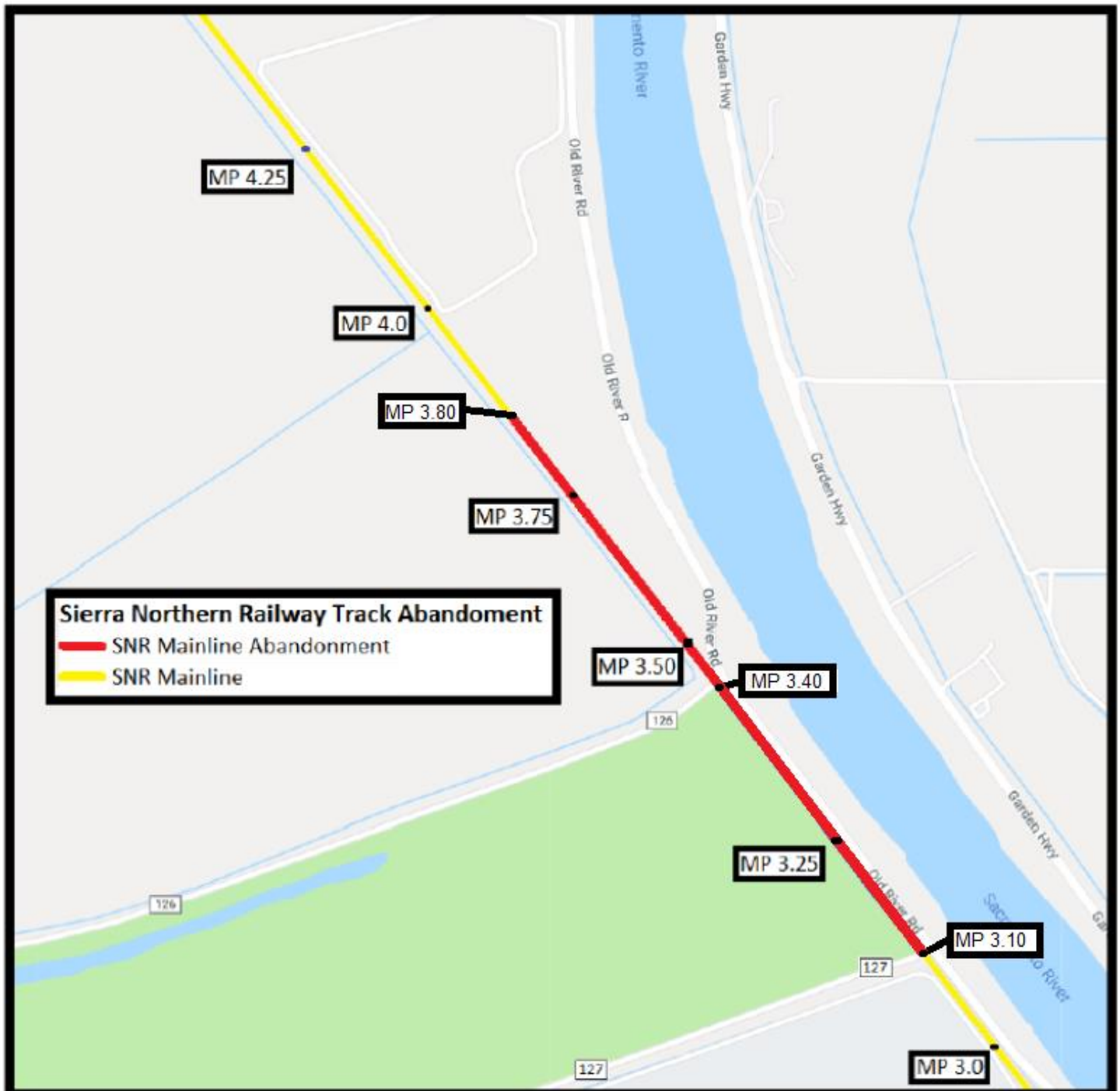
Enclosure as stated



SIERRA NORTHERN RAILWAY

341 Industrial Way
Woodland, CA 9576
Tel: 530-666-9646
Fax: 530-666-2919

SNR SAFCA Track Abandonment



Mordi, Sally

From: deborah.brooks <ngs.infocenter@noaa.gov>
Sent: Monday, November 25, 2019 6:24 PM
To: Mordi, Sally
Subject: [JIRA] (IMOV-6277) NGS Response, STB Docket No. AB 874 (Sub-No. 1)

Thank you for submitting your request. Below is your request summary

(IMOV-6277) NGS Response, STB Docket No. AB 874 (Sub-No. 1)

Components: NGS_Responses

Created: 25 Nov 2019 6:23 PM

National Geodetic Survey

Sally Mordi*
202 429 6287
smordi@steptoe.com

*Admitted in Maryland only and practicing under the supervision of an active member of the District of Columbia Bar.

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



January 28, 2020

Communications and Outreach Branch, NOAA, N/NGS12
National Geodetic Survey, SSMC3 #9340
1315 East-West Highway
Silver Spring, MD 20910-3282

Re: STB Docket No. AB 874 (Sub-No. 1X); Sierra Northern Railway—Abandonment Exemption—in Yolo County, California

On November 15, 2019, we wrote to you noting that Sierra Northern Railway (“Sierra”) anticipates filing in the near future a Petition for Exemption seeking Surface Transportation Board (“STB”) authority in the above-referenced docket to abandon approximately 0.70 miles of track between approximately Milepost 3.10 and approximately Milepost 3.80 in Yolo County, California.

In that prior letter, we stated that Sierra will not perform any salvage activities in connection with this abandonment. To avoid any confusion, we are writing to clarify that Sierra may perform salvage activities, but any such activities would be post-abandonment and would be on behalf of the Sacramento Area Flood Control Agency (“SAFCA”) in support of SAFCA’s flood control plans.

You may contact me by email or telephone with any questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "Sally Mordi".

Sally Mordi
Attorney for Sierra Northern Railway

EXHIBIT L

GEI Consultants, Inc.'s memorandum regarding NRHP/CRHR inventory and evaluation:

Memo



To: Jason Campbell
From: Madeline Bowen
cc: Drew Sutton
Date: September 5, 2019
Re: NRHP/CRHR Inventory and Evaluation of Sierra Northern Railway segment
 Yolo County, California

GEI Consultants, Inc. (GEI) has prepared this memorandum on behalf of Sacramento Area Flood Control Agency (SAFCA) to inventory and evaluate a segment of the Sierra Northern Railway in Yolo County for National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) significance. Inventory efforts included archival research at local repositories and a field survey of the railroad segment. This technical memo describes the methods and results of the cultural resources investigation.

METHODOLOGY

Archival Research

GEI's architectural historian Madeline Bowen, M.A., who meets the Secretary of the Interior's Professional Qualifications Standards in history, conducted archival research at the California State Library, California Room and the California State Railroad Museum, Sacramento. This research was used to develop an appropriate historic context in which to evaluate the railroad segment.

Field Inventory

On August 28, 2019, GEI architectural historian Madeline Bowen conducted a site visit of a segment of the Sierra Northern Railroad located in the vicinity of the Sacramento Weir. The segment was recorded through written notes and digital photography. Information gathered as part of this field effort was recorded on a Department of Parks and Recreation (DPR) 523 form attached to this memo.

Historic Context

The railroad alignment assessed in this memo is part of the Sierra Northern Railway (SERA) which is based in Woodland, CA. Parts of the route have been abandoned and others are currently used for freight operations as well as track maintenance for the Sierra Railroad

Company, SERA's parent company. SERA extends 17 miles from West Sacramento and the Port of Sacramento to Woodland. The rail line has interchanges with the Burlington Northern Santa Fe Railway and the Union Pacific Railroad (UPRR).

SERA originally started with the Sierra Railway Company of California which incorporated in 1897. The narrow-gauge railroad was established as a cargo line and it eventually added passenger service. Sierra Railroad Company purchased the rail line in 1937 and continued to operate it as a passenger and cargo line until the 1960s. In 2003, the Sierra Railroad merged with the Yolo Shortline Railroad (YSLR) to become SERA (Pacific Historian 1973: 48-49; Robertson 1998: 234).

YSLR was incorporated in August 1989 and operated from 1991 to 1995. Its main line extended from Clarksburg to West Sacramento and then Woodland. The Oakland Antioch and Eastern Railway (OA&E) constructed the portion of the alignment extending to Clarksburg and then south circa 1913. The line operated both freight and passenger service. The Sacramento & Woodland Railway (S&WRR), a subsidiary of Northern Electric Railway, constructed the Sacramento to Woodland branch in 1912 to link the Yolo County farming community with the developing city of Sacramento. The alignment was rerouted along the Sacramento Weir in 1916-7 when that structure was built. At one point the Woodland branch operated eight round trip trains from Woodland to Sacramento. The line was mostly electrified by third rail, and used overhead power in Woodland.

Sacramento Northern Railroad (SNRR) acquired the OA&E and S&WRR lines in 1918 and in 1925 SNRR sold the alignment to Western Pacific Railroad who in 1928 merged the lines into the Sacramento Northern Railway (SN), an electric interurban railway company. SN operated a sprawling network of interurban rail connecting the Sacramento Valley and the northern part of the state with the Bay Area. The Great Depression and the rise in automobile use brought financial burden to the rail company causing it to slowly phase out interurban passenger service on the Woodland Branch, which ended its passenger route in 1940 after the State Railroad Commission found electric railways to be unsafe. SN used the lines for freight hauling as late as the 1960s when the former electrified alignment completely switched to diesel. At that time SN pulled out the third rail and removed or abandoned other segments of the interurban alignment. Rail transportation in general suffered during this time as trucking gained increasing support in the world of commerce and shipping. UPRR acquired SN in 1988 and one year later YSLR incorporated and purchased the 11-mile Clarksburg branch from UPRR followed by the Woodland branch in 1990. YSLR (later SERA) operated excursion trains on both lines for many years, but eventually abandoned and removed portions of the Clarksburg alignment. Parts of the Woodland branch continue to operate as a passenger line running from the Broderick area of West Sacramento to Woodland (Robertson 1998: 193, 195; Walker: 1997: 16; Kalmbach 2000: 368-370).

REGULATORY CONTEXT

National Historic Preservation Act Section 106

Section 106 of the National Historic Preservation Act (NHPA) requires that Federal agencies consider the effects of their actions on properties that are listed in the NRHP, or that may be

eligible for such listing. To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, locations of sacred importance to Native Americans, historical, and built environment properties) must be inventoried and evaluated.

NRHP Evaluation Criteria

The NRHP is the nation's master inventory of known historic resources administered by the National Park Service (NPS). The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The NRHP criteria and associated definitions are outlined in the National Register Bulletin *How to Apply the National Register Criteria for Evaluation* (U.S. Department of the Interior, NPS 1997). The following is a summary of that bulletin.

Properties (structures, sites, buildings, districts, and objects) more than 50 years of age can be listed in the NRHP provided they meet one of the evaluation criteria described below; however, properties less than 50 years of age that are of exceptional significance or are contributors to a district, that also meet the evaluation criteria, can be included in the NRHP.

The NRHP uses four criteria under which a property can be considered significant for listing.

- A Properties associated with events that have made a significant contribution to the broad patterns
- B Properties associated with the lives of persons significant in our past
- C Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- D Properties that have yielded or may likely yield information important in prehistory or history

Properties can be listed individually or as contributors to an Historic District. In addition to meeting one of the evaluation criteria, a property must also retain integrity to convey that significance. Although the evaluation of integrity is sometimes subject to judgment, it must always be grounded in an understanding of the property's physical features and how they relate to its significance. The NRHP recognizes seven aspects of integrity, which are listed below.

- *Location:* The place where the historic property was constructed or the place where the historic event occurred.
- *Design:* The combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting:* The physical environment of a historic property.

- *Materials:* The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship:* The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling:* A property's expression of the aesthetic or historic sense of a particular period of time.
- *Association:* The direct link between an important historic event or person and a historic property.

California Environmental Quality Act

According to the California Environmental Quality Act (CEQA) Guidelines (Section 15064.5[a][3]), a resource is generally considered historically significant if it meets the criteria for listing in the CRHR (Public Resources Code [PRC] Section 5024.1; California Code of Regulations [CCR], Title 14, Section 4852). A historical resource is defined as any site that:

- Is listed in or determined to be eligible by the State Historical Resources Commission for listing in the CRHR, or is determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and
- Is eligible for listing in the CRHR; or
- Is included in a local register of historical resources, as defined by PRC Section 5020.1(k), or is identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).

The CRHR includes resources that are listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for the purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC 5024.1, 14 CCR 4850). The eligibility criteria for listing in the CRHR are like those for the NRHP listing but focus on the importance of the resources to California history and heritage. A cultural resource may be eligible for listing in the CRHR if:

1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master, or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The CRHR definition of integrity and the special considerations for certain properties differ slightly from those for the NRHP. Integrity is defined as “the authenticity of any historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The CRHR also states that eligible resources must “retain enough of their historic character or appearance to be recognizable as historical resources to convey the reasons for their significance,” and lists the same seven aspects of integrity used to evaluate properties under the NRHP criteria. The CRHR’s special considerations for certain property types are limited to moved buildings, structures, or objects; historical resources achieving significance within the past 50 years; and reconstructed buildings.

Findings

Description

The recorded segment of the Sierra Northern Railway is oriented in a north/south direction adjacent to Old River Road and the Sacramento River and extends along the Sacramento Weir. Weeds and other vegetation growing near the track indicate a lack of regular maintenance. The ties and track are mostly uniform, rest on weathered basalt rock ballast, and also exhibit some wear and weathering. Only one small area of fresh basalt rock ballast was observed. Many of the ties have been replaced with pressure-treated wood and the rail is date-marked to 1955 or later. A portion of the track travels along the Sacramento Weir and is elevated and supported by a wood timber trestle with steel siding. The tracks on the weir rest on gravel and asphalt and the ties also show moderate wear. The alignment extending through the intersection of Road 126 just north of the weir has been partially paved over.

Evaluation

The railroad segment being assessed in this memorandum was originally built by S&WRR circa 1912 as part of its Sacramento to Woodland branch line. The interurban line changed hands many times over the years eventually becoming part of the YSLR and then SERA in 2003. The alignment was historically part of a vast 183-mile network of interurban rail operated by SN that extended as far north as Chico and as far south as the Bay Area with branches operating to smaller communities such as Woodland and Clarksburg. Over time, as rail transportation lost its popularity, railroad officials removed the electric rails from the SN alignment and abandoned or removed other segments creating a fragmented set of tracks that no longer function cohesively as an interurban rail. Currently, UPRR, SERA, and other railroad companies operate the remaining alignments.

Segments of the SERA alignment have been evaluated in the past including part of the alignment assessed for this memorandum. Evaluations prepared by ICF International in 2010 and Dr. Scott Crull Ph.D. in 2014 found that the railroad segments lacked integrity and therefore did not meet NRHP significance (ICF 2010; Crull 2014).

The period of significance for this railroad alignment is circa 1912, the period of track installation by the S&WRR. The context for evaluating the line would be that of early 20th century railroad line construction in the Sacramento Valley. A possible argument for eligibility under Criterion A/1 might be made for an association with events that made a significant contribution to the patterns of history in the Sacramento Valley in the area of interurban rail transportation. The original alignment was placed in this area as a means of moving agricultural goods and later passengers throughout the Sacramento region and Bay Area. The alignment was constructed during a time when the valley was expanding rapidly and agricultural farms and markets were springing up throughout the region. It is difficult to make an argument for Criteria B/2 or C/3 as the feature is not known to have any direct association with significant persons, nor as a typical railroad alignment, does it appear to represent a distinctive method of construction. Under Criterion D/4, it also is unlikely to yield information important to history.

The potential argument under Criterion A/1 is of little consequence, however, as the railroad segment lacks integrity of design, materials, and workmanship to its period of historic significance. Although the SERA line follows its historic alignment, the segment from an engineering standpoint bears little resemblance to the route from the early twentieth century. The original track operated by the OA&E and the SNRR was interurban and included an electrified third rail which is what made the alignment unique as a rail line. Segments of the original alignment have been refurbished in Solano County and feature the electric rail, however, the remaining part of the alignment spanning several miles in the Sacramento Valley was converted to diesel decades ago. Portions of this alignment have been abandoned and track has been removed or paved over or converted to public use. Regional Transit of Sacramento is using some segments for its transit service within the City of Sacramento. The segment being assessed in this memorandum is also not well maintained, exhibiting some wear and weathered ties and ballast. It also does not retain any of its original engineering features or materials. This segment includes mostly pressure treated ties and modern rails with date stamps from various years within the past 60 indicating they were recycled from elsewhere. In essence, it is a modern railroad track that happens to follow a historic alignment. In summary, because of a lack of integrity, the SERA railroad segment does not appear to meet NRHP or CRHR eligibility criteria and therefore does not appear to be a Historic Property for the purposes of Section 106 of the NHPA nor does it appear to be a historical resource for the purposes of CEQA.

Conclusion

Due to a lack of integrity, the segment of the SERA evaluated as part of this memorandum does not appear to meet NRHP or CRHR criteria.

Attachments

Attachment A: Project Location Map
Attachment B: Department of Parks and Recreation (DPR) 523 Form

REFERENCES

Crull, Dr. Scott, PhD. 2014. DPR 523 form: “Northern Electric Trestle,” Prepared by Dr. Scott Crull, PhD.

ICF International 2010. DPR 523 form: “Sacramento Northern Railroad,” Prepared by Aisha Rahimi, ICF. Prepared for U.S. Army Corps of Engineers.

Kalmbach Publishing. 2000. *The Historical Guide to North American Railroad*. Kalmbach Publishing Company, Waukesha, WI.

Pacific Historian. 1973. “A Brief History of the Sierra Railway.” *The Pacific Historian*. Volume 17, No. 4. Winter 1973. Valley Oaks Printers, Stockton, CA.

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History: Volume IV, California*. Caxton Printers, Ltd. Caldwell, ID.

Walker, Mike. 1997. *Railroad Atlas of North America: California and Nevada*. Steam Powered Publishing. Kent, UK.

Attachment A: Project Location Map



Z:\Projects\1601100\1601100_G172_SacWeir_ProjectArea.mxd
04Sep2019 RS

P1. Other Identifier: Yolo Shortline; Sacramento Northern Railroad; Sacramento Northern Railway; Northern Electric; P-57-00076

***P2. Location:** ☐ Not for Publication ☒ Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County** Yolo

***b. USGS 7.5' Quad** Sacramento West **Date** 1992 **T** 7N; **R** 4E; **¼ of Sec** ; **MD** **B.M.**

c. Address None City West Sacramento Zip 95605

d. UTM: (give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

adjacent to the Sacramento River and Old River Road, extends along the Sacramento Weir and travels north

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The segment of the Sierra Northern Railway recorded is oriented in a north/south direction adjacent to Old River Road and the Sacramento River and extends along the Sacramento Weir (**Photograph 2**). The railroad segment extends along an earthen embankment with some weeds and other vegetation growing near the track indicating a lack of regular maintenance. The ties and track are mostly uniform, rest on weathered basalt rock ballast, and also exhibit some wear and weathering. Only one small area of fresh basalt rock ballast was observed. Many of the ties have been replaced with pressure treated wood and the rail is date-marked to 1955 or later. A portion of the track is situated along the Sacramento Weir and is elevated and supported by a wood timber trestle with steel siding (**Photograph 3**). The tracks on the weir rest on gravel and asphalt and the ties also show moderate wear. The alignment extending through the intersection of Road 126 adjacent just north of the weir has been partially paved over. (See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering Structure

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Railroad alignment, camera facing north, August 28, 2019

***P6. Date Constructed/Age and Sources:**

☒ Historic ☐ Prehistoric ☐ Both
ca. 1912 / USGS Topo Maps

***P7. Owner and Address:**

Sierra Northern Railway.

***P8. Recorded by:** (Name, affiliation, address)

Madeline Bowen
GEI Consultants, Inc.
2868 Prospect Park Drive
Rancho Cordova, CA 95670

***P9. Date Recorded:**

August 28, 2019

***P10. Survey Type:** (Describe)

Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") GEI Consultants, Inc. *Inventory and Evaluation of the Sierra Northern Railway Segment*. Memorandum. Prepared for the Sacramento Area Flood Control Agency, 2019.

***Attachments:** NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record
☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record

☐ Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

Page 2 of 6

*NRHP Status Code 6Z

*Resource Name or # (Assigned by recorder) Sierra Northern Railway segment

B1. Historic Name: Yolo Shortline; Sacramento Northern Railroad; Sacramento Northern Railway, Northern Electric Railway

B2. Common Name: Sacramento Northern Railway

B3. Original Use: Railroad B4. Present Use: Railroad

*B5. Architectural Style: Industrial

*B6. Construction History: (Construction date, alteration, and date of alterations) ca.1912– constructed; ca. 1916-7 segment over weir

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*B8. Related Features: _____

B9. Architect: Unknown b. Builder: Sacramento & Woodland Railway

*B10. Significance: Theme Interurban Railroad Transportation Area Yolo County

Period of Significance ca. 1912 Property Type Railroad Property Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Historic Context

The railroad alignment assessed in this form is part of the Sierra Northern Railway (SERA) which is based in Woodland. Parts of the route have been abandoned and others are currently used for freight operations as well as track maintenance for the Sierra Railroad Company, SERA's parent company. In West Sacramento, SERA extends 17 miles from West Sacramento to Woodland including the Port of Sacramento. The rail line has interchanges with the Burlington Northern Santa Fe Railway and the Union Pacific Railroad (UPRR).

SERA originally started with the Sierra Railway Company of California which incorporated in 1897. The narrow-gauge railroad was established as a cargo line and it eventually added passenger service. Sierra Railroad Company purchased the rail line in 1937 and continued to operate as a passenger and cargo line until the 1960s. In 2003, the Sierra Railroad merged with the Yolo Shortline Railroad (YSLR) to become SERA (Pacific Historian 1973: 48-49; Robertson 1998: 234). (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)

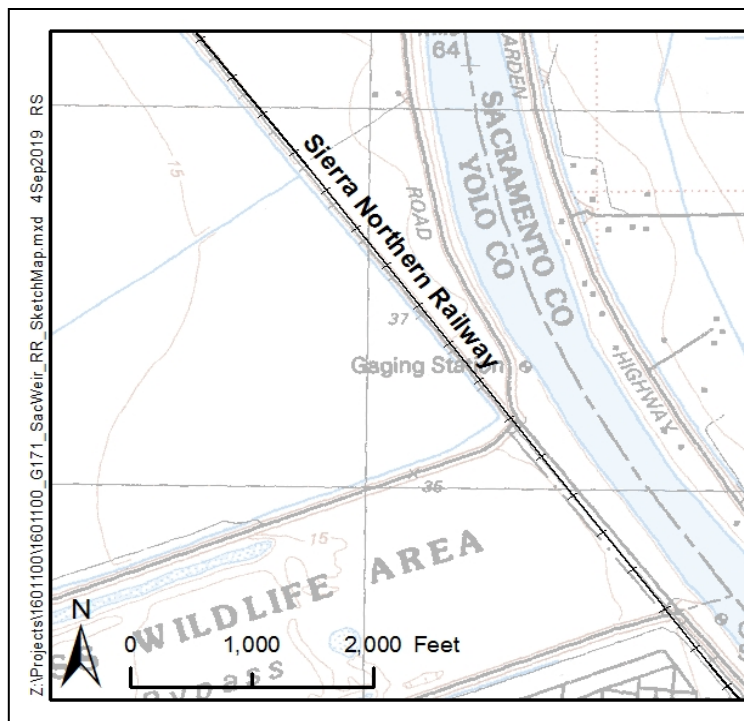
*B12. References: See Continuation Sheet

B13. Remarks:

*B14. Evaluator: Madeline Bowen, MA

*Date of Evaluation: September 3, 2019

(This space reserved for official comments.)



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*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update

Significance (cont)

YSLR was incorporated in August 1989 and operated from 1991 to 1995. Its main line extended from Clarksburg to West Sacramento and then Woodland. The Oakland Antioch and Eastern Railway (OA&E) constructed the portion of the alignment extending to Clarksburg and then south circa 1913. The line operated both freight and passenger service. The Sacramento & Woodland Railway (S&WRR), a subsidiary of Northern Electric Railway, constructed the Sacramento to Woodland branch in 1912 to link the Yolo County farming community with the developing city of Sacramento. The alignment was rerouted along the Sacramento Weir in 1916-7 when that structure was built. At one point the Woodland branch operated eight round trip trains from Woodland to Sacramento. The line was mostly electrified by third rail, and used overhead power in Woodland. Sacramento Northern Railroad (SNRR) acquired the OA&E and S&WRR lines in 1918 and in 1925, SNRR sold the alignment to Western Pacific Railroad who merged the lines into the Sacramento Northern Railway (SN), an electric interurban railway company in 1928. SN operated a sprawling network of interurban rail connecting the Sacramento Valley and the northern part of the state with the Bay Area. The Great Depression and the rise in automobile use brought financial burden to the rail company causing it to slowly phase out interurban passenger service with the Woodland Branch which ended its passenger route in 1940 after the State Railroad Commission found electric railways to be unsafe. SN used the lines for freight hauling as late as the 1960s when the former electrified alignment completely switched to diesel. At that time SN pulled out the third rail and removed or abandoned other segments of the interurban alignment. Rail transportation in general suffered during this time as trucking gained increasing support in the world of commerce and shipping. UPRR acquired SN in 1988 and one year later, YSLR incorporated and purchased the 11-mile Clarksburg branch from UPRR followed by the Woodland branch in 1990. YSLR (later SERA) operated excursion trains on both lines for many years, but eventually abandoned and removed portions of the Clarksburg alignment. Parts of the Woodland branch continue to operate as a passenger line running from Broderick, West Sacramento to Woodland (Robertson 1998: 193, 195; Walker: 1997: 16; Kalmbach 2000: 368-370).

Evaluation

The railroad segment being assessed in this memo was originally built by S&WRR circa 1912 as part of its Sacramento to Woodland branch line. The interurban line changed hands many times over the years eventually becoming part of the YSLR and then SERA in 2003. The alignment was historically part of a vast 183-mile network of interurban rail operated by SN that extended as far north as Chico and as far south as the Bay Area with branches operating to smaller communities such as Woodland and Clarksburg. Over time, as rail transportation lost its popularity, railroad officials removed the electric rails from the SN alignment and abandoned or removed other segments creating a fragmented set of tracks that no longer function cohesively as an interurban rail. Currently, UPRR, SERA, and other railroad companies operate the remaining alignments.

Segments of the SERA alignment have been evaluated in the past including part of the alignment assessed for this memo. Evaluations prepared by ICF International in 2010 and Dr. Scott Crull Ph.D. in 2014 found that the railroad segments lacked integrity and therefore did not meet NRHP significance (ICF 2010; Crull 2014).

The period of significance for this railroad alignment is circa 1912, the period of track installation by the S&WRR. The context for evaluating the line would be that of early 20th century railroad line construction in the Sacramento Valley. A possible argument for eligibility under Criterion A/1 might be made for an association with events that made a significant contribution to the patterns of history in the Sacramento Valley in the area of interurban rail transportation. The original alignment was placed in this area as a means of moving agricultural goods and later passengers throughout the Sacramento region and Bay Area. The alignment was constructed during a time when the valley was expanding rapidly and agricultural farms and markets were springing up throughout the region. It is difficult to make an argument for Criteria B/2 or C/3 as the feature is not known to have any direct association with significant persons, nor as a typical railroad alignment, does it appear to represent a distinctive method of construction. Under Criterion D/4, it also is unlikely to yield information important to history.

The potential argument under Criterion A/1 is of little consequence, however, as the railroad segment lacks integrity of design, materials, and workmanship to its period of historic significance. Although the SERA line follows its historic alignment, the segment from an engineering standpoint bears little resemblance to the route from the early twentieth century. The original track operated by the OA&E and the SNRR was interurban and included an electrified third rail which is

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*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update

Significance (cont)

what made the alignment unique as a rail line. Segments of the original alignment have been refurbished in Solano County and feature the electric rail, however, the remaining part of the alignment spanning several miles in the Sacramento Valley was converted to diesel decades ago. Portions of this alignment have been abandoned and track has been removed or paved over or converted to public use. Regional Transit of Sacramento is using some segments for its transit service within the City of Sacramento. The segment being assessed in this memo is also not well maintained exhibiting some wear and weathered ties and ballast. It also does not retain any of its original engineering features or materials. It includes mostly pressure treated ties and modern rails with date stamps from various years within the past 60 indicating they were recycled from elsewhere. In essence, it is a modern railroad track that happens to follow a historic alignment. In summary, because of a lack of integrity, the SERA railroad segment does not appear to meet NRHP or CRHR eligibility criteria and therefore does not appear to be a Historic Property for the purposes of Section 106 of the National Historic Preservation Act nor does it appear to be a historical resource for the purposes of CEQA.

References

Crull, Dr. Scott, Ph.D. 2014. DPR 523 form: "Northern Electric Trestle," Prepared by Dr. Scott Crull, Ph.D.

ICF International 2010. DPR 523 form: "Sacramento Northern Railroad," Prepared by Aisha Rahimi, ICF. Prepared for U.S. Army Corps of Engineers.

Kalmbach Publishing. 2000. *The Historical Guide to North American Railroad*. Kalmbach Publishing Company, Waukesha, WI.

Pacific Historian. 1973. "A Brief History of the Sierra Railway." *The Pacific Historian*. Volume 17, No. 4. Winter 1973. Valley Oaks Printers, Stockton, CA.

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History: Volume IV, California*. Caxton Printers, Ltd. Caldwell, ID.

Walker, Mike. 1997. *Railroad Atlas of North America: California and Nevada*. Steam Powered Publishing. Kent, UK.

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*Resource Name or # (Assigned by recorder) Sierra Northern Railway

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*Date August 28, 2019 ☒ Continuation ☐ Update

Photographs (cont)



Photograph 2: Alignment Extending Across Sacramento Weir (camera facing south)

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*Resource Name or # (Assigned by recorder) Sierra Northern Railway

*Recorded by Madeline Bowen, GEI Consultants, Inc.

*Date August 28, 2019 ☒ Continuation ☐ Update



Photograph 3: Timber Rail Trestle adjacent to weir (camera facing south)