RESPONSES TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

SFPUC Alameda Creek Recapture Project

Volume 3

PLANNING DEPARTMENT
CASE NO. 2015-004827ENV
STATE CLEARINGHOUSE NO. 2015062072
JUNE 7, 2017

	Draft EIR Publication Date:	November 30, 2016
	Draft EIR Public Hearing Date:	January 5, 2017
	Draft EIR Public Comment Period:	November 30, 2016 through January 30, 2017
	Responses to Comments Publication Date:	June 7, 2017
	Final EIR Certification Hearing Date:	June 22, 2017

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To: Members of the Planning Commission and Interested Parties

From: Lisa Gibson, Environmental Review Officer

Re: Responses to Comments on the Draft Environmental Impact Report for Case No. 2015-004827ENV, SFPUC Alameda Creek Recapture Project

Attached for your review please find a copy of the Responses to Comments document on the Draft Environmental Impact Report (EIR) for the above-referenced project. **This document, along with the Draft EIR**, constitute the Final EIR on this project. The Planning Commission will receive public testimony on the Final EIR certification at the June 22, 2017 hearing. Please note that the public review period for the Draft EIR ended on January 30, 2017; any comments received after that date, including any comments provided orally or in writing at the Final EIR certification hearing, will not be responded to in writing.

The Planning Commission does not conduct a hearing to receive comments on the Responses to Comments document, and no such hearing is required by the California Environmental Quality Act. Interested parties, however, may write to Commission members or to the President of the Commission at 1650 Mission Street and express an opinion on the Responses to Comments document, or the Commission's decision to certify the Final EIR for this project.

Please note that if you receive the Responses to Comments document in addition to the Draft EIR, you technically have the Final EIR. If you have any questions concerning the Responses to Comments document or the environmental review process, please contact Chelsea Fordham at (415) 575-9071 or Chelsea.Fordham@sfgov.org

Thank you for your interest in this project and your consideration of this matter.

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CHAPTER 9
Introduction to Responses to Comments

9.1 Purpose of the Responses to Comments Document

The purpose of this Responses to Comments (RTC) document is to present comments on the Draft Environmental Impact Report (Draft EIR) for the proposed Alameda Creek Recapture Project (ACRP or project), to respond in writing to comments on environmental issues, and to revise the Draft EIR as necessary to provide additional clarity. Pursuant to the California Environmental Quality Act (CEQA) Public Resource Code Section 21091(d)(2)(A) and (B), the San Francisco Planning Department has considered the comments received on the Draft EIR, evaluated the issues raised and is providing written responses that address each substantive environmental issue that has been raised by the commenters. In accordance with CEQA, the responses to comments focus on clarifying the project description and addressing physical environmental issues associated with the proposed project. In addition, this RTC document includes text changes to the Draft EIR initiated by Planning Department staff.

None of the comments received provide new information that warrants recirculation of the Draft EIR. The comments do not identify new significant impacts or a substantial increase in the severity of previously identified impacts or feasible project alternatives or mitigation measures that are considerably different from those analyzed in the Draft EIR and/or that the project sponsor has not agreed to implement.

This RTC document completes the final project-level environmental impact report (EIR) analyzing potential environmental effects that would occur with implementation of the ACRP as proposed by the San Francisco Public Utilities Commission (SFPUC). The ACRP is a component of the SFPUC's Water System Improvement Program (WSIP), which the SFPUC adopted in 2008, and this EIR tiers off of the WSIP Program EIR[1] in accordance with CEQA Guidelines Section 15168(c). The Draft EIR on the ACRP together with this RTC document constitute the project-level Final EIR on the proposed project in fulfillment of requirements of CEQA and the San Francisco Administrative Code Chapter 31 and consistent with CEQA Guidelines Section 15132.

[1] San Francisco Planning Department, *San Francisco Public Utilities Commission's Water System Improvement Program, Final Program Environmental Impact Report*, File No. 2005.0159E, State Clearinghouse No. 2005092026, Certified October 30, 2008. Available online at http://www.sf-planning.org/index.aspx?page=1829.

The San Francisco Planning Department, Environmental Planning Division, published the Draft EIR on the ACRP on November 30, 2016 and distributed it to public agencies and interested organizations and individuals for their review and comment.[2] In response to requests received during the public review period, the Planning Department extended the close of the public review period from January 17 to January 30, 2017, resulting in a 62-day public review period on the Draft EIR.

This RTC document provides written responses to all substantive comments received during the public review period. It contains the following: (1) a list of persons, organizations, and public agencies commenting on the Draft EIR; (2) copies of comments received on the Draft EIR; (3) written responses to those comments; and (4) revisions to the Draft EIR to clarify or correct information in the Draft EIR. See Section 9.3, below, for a description of the overall contents and organization of the combined Draft EIR and RTC document.

The Final EIR has been prepared in compliance with CEQA (California Public Resources Code, Sections 21000 *et seq.*), the CEQA Guidelines, and Chapter 31 of the San Francisco Administrative Code. It is an informational document for use by (1) governmental agencies and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of proposed projects and identifying possible ways of reducing or avoiding their potentially significant impacts; and (2) the SFPUC prior to a decision to approve, disapprove, or modify the proposed project. If the SFPUC approves the proposed project, the SFPUC will be required to adopt CEQA findings and the Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures identified in the Final EIR are implemented as part of the project. See Section 9.2, below, for further description of the environmental review process.

9.2 Environmental Review Process

9.2.1 Notice of Preparation and Public Scoping

The Planning Department sent a Notice of Preparation (NOP) to governmental agencies, organizations, and persons interested in the proposed project on June 24, 2015 (see Appendix NOP of the EIR, Vol. 2). During a 34-day public scoping period that ended on July 27, 2015, the Planning Department received 12 written comments from agencies and interested parties identifying environmental issues that should be addressed in the EIR. The comment letters received in response to the NOP are summarized in EIR Chapter 2, Table 2-3 and are included in Appendix NOP of the EIR, Vol. 2. In addition, a public scoping meeting was held on July 9, 2015 at Sunol Glen School in Sunol, Alameda County, California to receive oral comments on the scope of the EIR. The Planning Department has considered all comments made by the public and agencies during the scoping period in preparing the EIR on the proposed project.

[2] The San Francisco Planning Department is the lead agency responsible implementing CEQA for all projects located within San Francisco or sponsored by the City and County of San Francisco, including the SFPUC.

9.2.2 Draft EIR Public Review

The Draft EIR on the ACRP was published on November 30, 2016 and circulated to local, state, and federal agencies and to interested organizations and individuals. In response to requests by agencies and interested organizations, the Planning Department extended the required 45-day public review period to 62 days, starting on November 30, 2016 and ending on January 30, 2017. Paper copies of the Draft EIR were made available for public review at the following locations: (1) San Francisco Planning Department, 1660 Mission Street, 1st Floor, Planning Information Counter, San Francisco, California; (2) San Francisco Main Library, 100 Larkin Street, San Francisco, California; (3) Alameda County Library, Dublin Branch, 200 Civic Plaza, Dublin, California; (4) Alameda County Library, Fremont Branch, 2400 Stevenson Boulevard, Fremont, California; (5) Livermore Public Library, 1188 S. Livermore Avenue, Livermore, California, and (6) Pleasanton Library, 400 Old Bernal Avenue, Pleasanton, California. Electronic copies of the Draft EIR could be accessed through the internet on the Planning Department website, Environmental Impacts and Negative Declarations webpage at the following address: http://sf-planning.org/sfpuc-negative-declarations-eirs. On November 30, 2016, the Planning Department also distributed notices of availability of the Draft EIR, published notification of its availability in a newspaper of general circulation in San Francisco, and posted notices at the project site.

During the public review period, the Planning Department conducted a public hearing to receive oral comments on the Draft EIR. The public hearing was held before the Planning Commission on January 5, 2017 at San Francisco City Hall. A court reporter present at the public hearing transcribed the oral comments verbatim and prepared a written transcript. See Appendix PH of this RTC document for the public hearing transcript. During the Draft EIR public review period, the Planning Department received comments from six public agencies, two non-governmental organizations, and no private individuals. See Chapter 10 for a complete list of persons, agencies, and organizations commenting on the Draft EIR.

9.2.3 Responses to Comments Document and Final EIR

The Planning Department distributed this RTC document for review to the Planning Commission and in compliance with CEQA Guidelines Section 15088. The Planning Commission will hold a public hearing on June 22, 2017 at San Francisco City Hall to consider the adequacy of the Final EIR (comprised of the combined Draft EIR and RTC document) in complying with the requirements of CEQA. If the Planning Commission finds that the Final EIR complies with CEQA requirements, it will certify the Final EIR.

If the Final EIR is certified, the SFPUC will then review and consider the certified Final EIR before making a decision to approve the proposed project. If the SFPUC decides to approve the project, it will adopt CEQA findings, including adopting or rejecting mitigation measures and alternatives to avoid or reduce significant impacts, and a mitigation monitoring and reporting program (MMRP) (CEQA Guidelines Sections 15091 and 15092). Consistent with CEQA Guidelines Section 15097, the MMRP is a program designed to ensure implementation of the mitigation measures identified in the Final EIR to reduce or avoid the project's significant environmental effects, and which, as part of the CEQA process, has been adopted by decision-makers and made conditions of project approval.

Because the ACRP EIR does not identify any significant adverse impacts that cannot be mitigated to less-than-significant levels, the project approval findings for this project will not need to include a statement of overriding considerations if identified mitigation measures or alternatives are adopted that mitigate all significant effects (CEQA Guidelines Section 15093[b]).

9.3 Document Organization

This RTC document is organized to complement the Draft EIR and follows the sequential numbering of chapters in the Draft EIR. The Draft EIR consists of Chapters 1 through 8 plus appendices as follows:

- **Chapter 1, Summary.** This chapter presents a summary of the proposed project, identifies potentially significant environmental impacts and mitigation measures, and describes the alternatives considered in this EIR. It also addresses areas of controversy and issues to be resolved.

- **Chapter 2, Introduction and Background.** This chapter provides project background information and describes the purpose and organization of the EIR, as well as the environmental review process.

- **Chapter 3, Project Description.** This chapter describes the proposed project, including the project objectives, project components, project construction, and project operations. The chapter also lists required permits and approvals.

- **Chapter 4, Plans and Policies.** This chapter describes applicable land use plans and policies and their relevance to the project, and then discusses the project's consistency with those plans.

- **Chapter 5, Environmental Setting, Impacts, and Mitigation Measures.** This chapter is divided into sections covering each environmental resource topic. Each section describes the environmental and regulatory setting, the criteria used to determine impact significance, and the approach to the analysis for that resource topic. The section then presents an analysis of potential environmental impacts and the project-specific mitigation measures that have been developed to address significant and potentially significant impacts. Each resource section also includes an evaluation of cumulative impacts with respect to that resource topic. The criteria used to determine the significance of project impacts are based primarily on the San Francisco Planning Department's Initial Study Checklist,[3] which in turn, is based on CEQA Guidelines Appendix G. In order to address the specific hydrologic issues pertinent to the ACRP, the Planning Department included one additional criterion to address the potential for ACRP operations to affect downstream water users in a manner that would result in adverse environmental effects.

- **Chapter 6, Other CEQA Issues.** This chapter discusses growth-inducing effects, summarizes the cumulative impacts, identifies the significant environmental effects that cannot be avoided if the proposed project is implemented, and describes the significant irreversible impacts.

[3] San Francisco Planning Department, 2015. *Environmental Review Guidelines, Appendix B: Initial Study Checklist.* Revised August 10, 2015.

- **Chapter 7, Alternatives.** This chapter describes the alternatives to the proposed project and compares their impacts to those of the proposed project. This chapter also identifies the environmentally superior alternative and summarizes the alternatives that were considered but screened from further analysis.

- **Chapter 8, EIR Authors and Consultants.** This chapter lists the EIR authors, consultants, project sponsors, and organizations and persons consulted.

- **Appendices.** The appendices include the Notice of Preparation and supporting technical information for the EIR in the areas of air quality, biology and hydrology. There is also an appendix that describes the applicability of programmatic mitigation measures identified in the WSIP Program EIR to the ACRP.

This RTC document consists of Chapters 9 through 12 plus supplemental appendices, as follows:

- **Chapter 9, Introduction to Responses to Comments.** This chapter describes the purpose of the RTC document, the environmental review process, and the organization of the entire EIR.

- **Chapter 10, List of Persons Commenting.** This chapter lists the persons, agencies, and organizations that submitted comments on the Draft EIR and describes the coding and organization of comments.

- **Chapter 11, Responses to Comments.** This chapter presents the substantive comments received on the Draft EIR together with responses to those comments. The comments and responses in this chapter are organized by topic, covering several of the environmental topics addressed in Chapter 5 of the EIR. Similar comments on the same topic received from multiple commenters are grouped together, for which a single comprehensive response is provided.

- **Chapter 12, Draft EIR Revisions.** This chapter presents changes and revisions to the Draft EIR. The Planning Department has made changes and revisions to the Draft EIR either in response to comments received on the Draft EIR and/or as necessary to clarify statements and conclusions made in the Draft EIR. In all cases, changes are provided to clarify or correct content in the Draft EIR or to add information received after the release of the Draft EIR. None of the changes and revisions in Chapter 12 affect the analysis or conclusions presented in the Draft EIR.

- **Responses to Comments Appendices.** The appendices include full copies of the written comments received on the Draft EIR (Appendix COM, Comment Letters and Emails) and transcripts of the public hearing on the Draft EIR (Appendix PH, Public Hearing Transcripts). Appendix COM and Appendix PH also show, in the margin of each letter or transcript, the bracketing and comment code used to identify comments and the corresponding response code.

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CHAPTER 10
List of Persons Commenting

This Responses to Comments document provides written responses to comments received on the Draft EIR during the public review period, including all written comments submitted either by letter or email and all oral comments presented at the public hearing on the Draft EIR. This chapter lists all persons who submitted comments on the Draft EIR. Persons who submitted written comments are grouped according to whether they represent a public agency or non-governmental organization or spoke at the public hearing, as shown in **Table 10-1**. The complete set of written and oral comments received on the Draft EIR is contained in Appendix COM, Comment Letters and Emails, and Appendix PH, Public Hearing Transcripts.

For each commenter, Table 10-1 identifies the person's name, agency or organization as applicable, comment format, comment date, and a commenter code. The commenter codes were assigned to facilitate the preparation of responses, and there is a unique commenter code for each comment letter, email, and public hearing transcript based on the name of the agency, organization, or individual submitting the comment. Comments submitted by mail, email, or orally at the public hearing (as transcribed in the official public hearing transcript) are all coded and numbered the same way. The commenter code begins with a prefix indicating whether the commenter represents a public agency (A), a non-governmental organization (O), or a speaker at the public hearing (PH). This is followed by a hyphen and the acronym of the agency or organization, or the individual's last name. Within each category, commenters are listed in alphabetical order by code.

As described further in Chapter 11, the commenter codes are used to identify individual comments on separate topics within each comment letter, email, or public hearing transcript. Each individual comment from each commenter are bracketed and numbered sequentially following the commenter code. The bracketed comments and corresponding comment codes are shown in the margins of the comments in Appendices COM and PH. There is a unique comment code for each distinct substantive comment.

TABLE 10-1
PERSONS COMMENTING ON THE DRAFT EIR

Commenter Code	Name of Person and Agency Submitting Comments	Comment Format	Comment Date
Federal and State Agencies			
A-Caltrans	Patricia Maurice, District Branch Chief, California Department of Transportation	Letter	01/17/2017
A-NMFS	Gary Stern for Alecia Van Atta, Assistant Regional Administrator, National Marine Fisheries Service (U.S. Department of Commerce, National Oceanic and Atmospheric Administration)	Letter	01/30/2017
A-RWQCB	Brian Wines, Water Resources Control Engineer, San Francisco Bay Regional Water Quality Control Board	Letter	01/17/2017
Regional and Local Agencies			
A-ACPW	Kwablah Attiogbe, Alameda County Public Works Agency	Email	01/30/2017
A-ACWD1	Robert Shaver, General Manager, Alameda County Water District	Letter	01/10/2017
A-ACWD2	Robert Shaver, General Manager, Alameda County Water District	Letter	01/30/2017
PH-Ash	Leonard Ash, Water Resources Planning Engineer, Alameda County Water District	Transcript	01/05/2017
A-BAWSCA1	Tom Francis, Water Resources Manager, Bay Area Water Supply & Conservation Agency	Email	01/27/2017
A-BAWSCA2	Thomas B. Francis, Water Resources Manager, Bay Area Water Supply & Conservation Agency	Letter	01/27/2017
PH-Moore	Kathrin Moore, Commissioner, San Francisco Planning Commission	Transcript	01/05/2017
Non-Governmental Organizations			
O-ACA	Jeff Miller, Director, Alameda Creek Alliance	Letter	01/04/2017
O-CNPS	Karen Whitestone, Conservation Analyst, East Bay California Native Plant Society	Letter	01/17/2017

CHAPTER 11
Responses to Comments

11.1 Organization of Responses to Comments

The San Francisco Planning Department, as lead agency for the California Environmental Quality Act (CEQA) environmental review process for the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or proposed project), has reviewed all letters, emails, and oral testimony presenting comments received on the Draft EIR, as listed in Chapter 10, List of Persons Commenting. This chapter presents all substantive comments received on the Draft EIR and responses to those comments, organized by topic. The substantive comments contained in the letters, emails, and public hearing transcripts have been bracketed and numbered, and this chapter groups together comments on the same topic and provides a comprehensive response on that topic. Substantive comments are those comments that relate to the proposed project, the adequacy or accuracy of the EIR, or the environmental review process, and do not include comments such as a description of an agency or organization's mission or a reiteration of the ACRP project description. All comments and written materials submitted during the public review period, however, are considered by the Planning Department and provided to the decision-makers for their consideration.

Appendices COM and PH contain the full text of all comments received on the ACRP Draft EIR and show the bracketing and associated comment code. Each bracketed comment is assigned a unique comment code that corresponds to the type of commenter (i.e., public agency [A], non-governmental organization [O], and public hearing speaker [PH]); an acronym for the agency or organization; and the sequentially numbered, bracketed comment from that commenter. For example, the comment letter from the National Marine Fisheries Service is coded A-NMFS, and the first comment in the letter is coded A-NMFS-1, the second comment on a different topic is coded A-NMFS-2, and so on.

This chapter is organized generally in the same order as the topics presented in the Draft EIR. The topics of the comments and responses included in this chapter are shown below, and the prefix of the response code[1] used to cross-reference the responses with the comment code is shown in parenthesis:

[1] The bracketed comments in Appendices COM and PH also include a response code beneath the comment code so that a commenter can readily locate the response to individual comments within this chapter.

Within each section of this chapter under each topic area, similar comments are grouped together by subtopic. Subtopics are assigned a response code prefix and then numbered sequentially for each subtopic in that resource area. For example, Biological Resources comments (BI) are listed as BI-1, BI-2, BI-3, and so on. For each subtopic, there is a list of the comments addressed showing the unique comment code that identifies the commenter and the specific comment. Following the list of comment codes for each subtopic, the comments are presented verbatim.

Following each comment or group of comments on a specified subtopic, a comprehensive response is provided that addresses issues raised in the comments and clarifies or augments information in the Draft EIR as appropriate. Each response is assigned a response code that reflects the topic; for example, the response to comments on topic BI-1 is provided under Response BI-1. In some cases, where a comment addresses more than one topical subject, the response includes a cross-reference to other responses. As appropriate, the responses also provide clarification of the information presented in the Draft EIR and may also include revisions or additions to the Draft EIR. Revisions to the Draft EIR are shown as indented text. New or revised text is <u>underlined</u>; deleted material is shown in strikethrough (~~strikethrough~~). Chapter 12 of this document presents all changes and revisions to the Draft EIR, including those made as part of a response to comments.

11.2 Environmental Review Process and Project Description

11.2.1 Overview of Environmental Review Process

The comments and corresponding responses in this section address topics related to various aspects of the environmental review process under the California Environmental Quality Act (CEQA), which is generally discussed in Chapter 2 (Sections 2.4, 2.5, and 2.6) and Chapter 5 (Section 5.1) of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project), and topics related to the project description, which is discussed in Chapter 3 of the EIR. This section responds to comments on the following topics:

- ERP-1: Draft EIR Extension Request
- ERP-2: Responding to Scoping Comments
- ERP-3: Scope of the EIR
- ERP-4: Coordination with Interested Agencies
- ERP-5: CEQA Piecemealing
- ERP-6: Project Description
- ERP-7: Baseline Conditions
- ERP-8: Required Permits and Approvals

11.2.2 Draft EIR Extension Request (ERP-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-ACWD1-1 A-ACWD2-1 O-ACA-1 PH-Ash

ACWD staff is reviewing the Draft EIR, which at over 700 pages with technical appendices is a long and complex document. While the California Environmental Quality Act (CEQA) provides for a public review period of not be less than 45 days and the notice for the Draft EIR provided a comment deadline of January 17, 2017, ACWD is requesting an extension of time, allowing for 60 days to adequately review the Draft EIR. (CEQA Guidelines § 15203; San Francisco Administrative Code§ 31.14(b)(1).) The technical analysis in the Draft EIR requires a thorough review by highly specialized professionals who have knowledge of the Alameda Creek system and ACWD's operations. The release of the Draft EIR in late November has resulted in limited time for a number of key ACWD staff to adequately review the highly technical data and analysis covered in the Draft EIR due to multiple holidays occurring during the public review period. (Robert Shaver, General Manager, Alameda County Water District, January 10, 2017, A-ACWD1-1)

ACWD is also appreciative of the San Francisco Planning Department (Planning Department) Staff for extending the comment period on this important project. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-1)

The Alameda Creek Alliance requests that the public comment period for the draft EIR be extended past January 17 to give the public and regulatory agencies a full opportunity to examine the potential impacts of the project, due to the complexity of the hydrology impacts from the project, and to digest the technical information in the 700+ page document. We also request that a public hearing and presentation on the project be held in Sunol for the benefit of local residents in the vicinity of the project who have concerns about potential impacts on groundwater and wells in the area. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-1)

Accordingly, ACWD previously provided a detailed comment letter on the Notice of Preparation of an Environmental Impact Report for the Alameda Creek Recapture Project. The EIR with appendices, is a long and complex document, and we are still in the process of reviewing the study in its entirety. (Leonard Ash, Water Resources Planning Engineer, Alameda County Water District, January 5, 2017, PH-Ash-1)

Response ERP-1: Draft EIR Extension Request

These comments relate to the review period for the Draft EIR and request that the public comment period be extended beyond the CEQA-required 45 days.

The Draft EIR was published on November 30, 2016 for a 49-day public review period ending on January 17, 2017. On January 12, 2017, the San Francisco Planning Department extended the close of the public review period for the Draft EIR to January 30, 2017, adding 13 days to the original 49-day public review period. The San Francisco Planning Department determined that under the circumstances of this project, while the 49-day period should be adequate time for the public to provide meaningful comment on the Draft EIR, the additional 13 days would sufficiently account for the holidays that occurred during the review period.

CEQA Guidelines Section 15105(a) provides that "[t]he public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except in unusual circumstances." Consistent with these guidelines, the City's standard public review period for a draft EIR that is submitted to the State Clearinghouse for review by state agencies is 45 days. The San Francisco Planning Department determined that the conditions under which the public review period for the Draft EIR on the proposed project occurred are not considered "unusual circumstances" for the following reasons: (1) the project would not affect multiple sites in various locations or an area larger than a single site; (2) there were no particular circumstances in which a population that might have interest in the project would, as a group, have difficulty accessing or reviewing the Draft EIR (i.e., the project is not located in an area with a high concentration of non-English speakers or parties with limited online access); and (3) the public review period did not need to align with other review periods, such as review under the National Environmental Policy Act. Thus, the San Francisco Planning Department has determined that the total public review period of 62 days is adequate time for the public to provide meaningful comments on the Draft EIR, and no further extension was warranted.

11.2.3 Responding to Scoping Comments (ERP-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-BAWSCA1-1 A-BAWSCA2-2

As noted in our letter, we have reviewed the Draft EIR and have concluded that the document adequately addresses our scoping comments as raised in our letter dated July 27, 2015, prepared in response to your Notice of Preparation (NOP) of the EIR. (Tom Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA1-1)

BAWSCA has reviewed the Draft EIR and has concluded that the document adequately addresses our scoping comments as raised in our letter dated July 27, 2015, prepared in response to your Notice of Preparation (NOP) of the EIR. (Thomas B. Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA2-2)

Response ERP-2: Responding to Scoping Comments

This group of comments relates to the responses to scoping comments. The commenter acknowledges that their scoping comments were adequately addressed in the Draft EIR.

The scoping period began on June 24, 2015 with the issuance of the Notice of Preparation (NOP). The San Francisco Planning Department held a scoping meeting on July 9, 2015 and accepted written comments through July 27, 2015. The purpose of the scoping process was to solicit input from the public, interested parties, and agencies with discretionary authority over the project on the appropriate scope, focus, and content of the EIR. A summary of comments received is described in EIR Section 1.7, Areas of Controversy and Issues to be Resolved (pp. 1-9 to 1-10). The EIR also includes a scoping report in Appendix NOP, which describes the scoping process and includes the comments received during the scoping period. EIR Section 2.5, Notice of Preparation and Public Scoping Process (pp. 2-15 to 2-22) provides further detail on the scoping comments received and includes Table 2-3, which provides a cross-reference to where each comment is addressed in the EIR.

11.2.4 Scope of the EIR (ERP-3)

Issues Raised by Commenters

This response addresses all or part of the following comment, which is quoted below:

A-ACWD2-4

The DEIR must adequately address issues associated with protection of Alameda Creek, and the Alameda Creek Watershed, as well as address the project's potential impacts to downstream water users. An EIR must identify and focus on the ”significant environmental effects" of the proposed project (Public Resources Code § 21100(b); CEQA Guidelines §§ 15126(a), 15126.2(a), 15143.) A significant effect on the environment is defined as a substantial or potentially substantial change in the environment. (Public Resources Code §§ 21068, 21100 (d)(b); CEQA Guidelines§ 15382.) ACWD requests these comments be incorporated and addressed in the final EIR for this project to ensure a sufficient level of detail in the analysis of the potential environmental impacts from the construction and operation of the ACRP. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-4)

Response ERP-3: Scope of the EIR

Comment A-ACWD2-4 requests that the EIR adequately address protection of Alameda Creek, the Alameda Creek Watershed, and the project's potential impacts to downstream water users. The commenter also states that the EIR must identify and focus on the significant environmental effects of the proposed project and request that these comments be incorporated and addressed in the Final EIR. The ACRP EIR addresses the requests raised in this comment.

The commenter correctly cites sections of CEQA and the CEQA Guidelines regarding the EIR's need to address significant environmental effects of the project, including, the effects on Alameda Creek, the Alameda Creek watershed, and downstream users. The ACRP EIR is consistent with the CEQA Guidelines and addresses all 17 resource topics listed in CEQA Guidelines Appendix G plus one additional category (Wind and Shadow) as required by Chapter 31 of the San Francisco Administrative Code. As defined in EIR Section 5.1.3 (pp. 5.1-4 to 5.1-5), significant effects on the environment are identified under each of the resource areas with respect to the relevant significance criteria as identified under each resource area in the 18 sub-sections of Chapter 5. In particular, environmental effects resulting from the proposed project to Alameda Creek and the Alameda Creek watershed are addressed in Section 5.14, Terrestrial Biological and Fishery Resources, and Section 5.16, Hydrology and Water Quality, with four appendices providing supporting details on Terrestrial Biological Resources, Fisheries Resources, Surface Water Hydrology, and Groundwater Hydrology. The project's impact to downstream water users is addressed in EIR Section 5.16, Impact HY-5 (pp. 5.16-73 to 5.13-77). This analysis has also been supplemented in Section 11.5, Response HY-4 of this Responses to Comments document.

The Final EIR on the ACRP is comprised of the Draft EIR, published on November 30, 2016, together with this Responses to Comments document. This Responses to Comments document includes copies of all written and oral comments received on the Draft EIR together with responses to all

substantive comments. Complete copies of all comments are contained in Appendices COM and PH. All substantive comments are also reproduced in Chapter 11 of this document, grouped by topic.

11.2.5 Coordination with Interested Agencies (ERP-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-ACWD1-2 A-BAWSCA1-2 A-BAWSCA2-3

ACWD review of the analysis in the Draft EIR has also been constrained by the incomplete release of modeling information. ACWD identified in its July 27, 2015, comment letter for the Notice of Preparation for the Draft EIR that "while annual [flow] totals may be the same, the actual daily rate of releases or bypass flows will be quantifiably different from the recapture rate provided by the ACRP," and that, "[t]he disparity in the release and recapture rates may have impacts in a variety of areas of concern and will need to be analyzed in sufficient detail for potential impacts to be understood and ultimately mitigated if necessary." In order to evaluate potential impacts, ACWD requests an opportunity to review the daily flow rates provided by the modeling. Upon review of this additional data, ACWD requests a meeting with San Francisco staff to further discuss potential impacts of the ACRP prior to providing comments on the Draft EIR. Therefore, ACWD further requests an extension of time to more fully review the requested data, meet with San Francisco, and comment on the Draft EIR. (Robert Shaver, General Manager, Alameda County Water District, January 10, 2017, A-ACWD1-2)

While our comments have been addressed, we are aware that one of our member agencies, Alameda County Water District (ACWD), may also be submitting a comment letter. If they express concerns with the Draft EIR and associated analyses, we encourage the planning department together with the SFPUC to apply a constructive approach toward addressing their concerns. We've also encouraged ACWD to take a similar constructive, collaborate approach, should they view outstanding issues remain (both the SFPUC and ACWD have a history of collaboration). (Tom Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA1-2)

BAWSCA is also aware that one of our member agencies, Alameda County Water District (ACWD), plans on submitting a comment letter detailing its concerns with the Draft EIR and associated analyses. The SFPUC and ACWD have worked constructively together over the years to resolve their respective concerns on similar projects and efforts. BAWSCA encourages the SFPUC to apply a similar constructive approach toward addressing ACWD's concerns on this matter. (Thomas B. Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA2-3)

Response ERP-4: Coordination with Interested Agencies

This response addresses the portion of these comments that relate to coordination with interested agencies as part of the environmental review process. As part of its standard practice, the Planning Department encourages coordination between the project sponsor and interested agencies, and with respect to the ACRP, the department has participated in and facilitated specific discussions between the SFPUC and Alameda County Water District (ACWD) on the EIR.

Comment A-ACWD1-2 requests the opportunity for ACWD to review the daily flow rates provided by the modeling used in the hydrological analysis and references the letter submitted during the scoping period in response to the Notice of Preparation. ACWD also requests a meeting with the Planning Department staff as well as an extension of the public review period on the Draft EIR to review the requested data. The Planning Department responded to ACWD on January 12, 2017, granting the request to extend the public review period until January 30, 2017, and also indicated that the Planning Department can only accept and respond to comments on the Draft EIR through this public process.[1]

With respect to the request to review the daily flow rates provided by the modeling, Appendices HYD1 and HYD2 of the EIR provide extensive explanation and data used in the EIR hydrological analysis of the ACRP, including the SFPUC's Alameda System Daily Hydrologic Model (ASDHM) data output. All data and reference materials cited in the EIR are available for review as part of the administrative record located at the Planning Department. In addition, the SFPUC provided to the ACWD on January 19 and January 20, 2017, the complete daily data sets of the ACRP modeling, that the SFPUC provided to the Planning Department and its consultants for use in preparation of the Draft EIR.[2] Following a review of the modeling data, the SFPUC met with ACWD on January 25, 2017 for further discussion on the ACRP. The SFPUC has also met with the ACWD on numerous occasions to discuss the ACRP, including meetings in April 2015, February 2016, June 2016, and July 2016 to present updates on the ACRP. On October 17, 2016 (prior to publication of the Draft EIR), Planning Department staff accompanied the SFPUC to a meeting at the ACWD offices to discuss preliminary results of the environmental impact analysis.

It should be noted that the EIR provides information from two daily flow rates data sets, the data set from the SFPUC modeling[3] and the same data set with adjustments made by the EIR consultants.[4] The consultants revised the modeling data provided by the SFPUC to the Planning Department as part of the hydrological analysis for the EIR, as described in Appendix HYD1, Section 4. In brief, for the EIR analysis, the EIR consultants adjusted the ASDHM outputs downstream of San Antonio Creek to incorporate the gains from NPDES quarry discharges and losses to the subsurface between

1 Gibson, Lisa, San Francisco Planning Department, Acting Environmental Review Officer, 2017. Letter to Robert Shaver, General Manager, Alameda County Water District, regarding Response to Request to Extend the Draft EIR Comment Period, January 12, 2017.

2 Dhakal, Amod, SFPUC, 2017. Various emails sent to Steven Inn, Thomas Niesar, Evan Buckland, Ed Stevenson, Toni Lyons, Leonard Ash, and Sara Maatta, Alameda County Water District. January 19 and 20, 2017.

3 SFPUC, 2016. Simulated Stream flows for different scenarios at 5 nodes and pond elevation for Alameda Creek Recapture Project. Excel spreadsheet provided by Amod Dhakal on July 7, 2016.

4 ESA/Orion & SFPUC, 2016. Simulated Stream flows for different scenarios at 5 nodes and pond elevation for Alameda Creek Recapture Project. Updated by ESA/Orion to reflect historical quarry discharge from SMP-24 and loss of surface flow to groundwater between San Antonio Creek confluence and the confluence with Arroyo de la Laguna. Completed for Alameda Creek Recapture Project Draft EIR, November 30, 2016.

San Antonio Creek and Arroyo de la Laguna. The Planning Department and the EIR consultants determined these refinements to the model output were necessary for the EIR to analyze the biological resources effects of the ACRP downstream of the NPDES quarry discharge point. However, these changes present minor differences in streamflow farther downstream of the Arroyo de la Laguna (Node 7), including farther downstream at the Niles Gage (Node 9).[5] This is because the gains from the NPDES quarry discharges are generally less than the losses in the reach between San Antonio Creek and the Arroyo de la Laguna under the existing, pre-2001, and with-project conditions, but more often somewhat greater under the with-CDRP condition.[6] Both daily flow rates data sets are included and available as part of the Planning Department's administrative record for this project. Please see Section 11.5, Responses HY-1 and HY-4, for response to the issues raised concerning use of daily flow rates data and how the data sets are used in the hydrologic analysis in the EIR.

The Bay Area Water Supply and Conservation Agency (BAWSCA) represents the wholesale customers located in Alameda, Santa Clara, and San Mateo Counties that purchase water from the San Francisco regional water system, which is managed by the SFPUC. In this comment, BAWSCA encourages the Planning Department and SFPUC to work collaboratively with ACWD, one of its member agencies, to address their concerns with the EIR. As described above, the Planning Department and the SFPUC met with ACWD in October 2016 for the purpose of discussing the ACRP EIR.

Specific comments that related to the adequacy of information and analysis in the Draft EIR are addressed in the responses in Sections 11.5, Response HY-1, regarding use of daily flow rates in the EIR hydrological analysis and Response ERP-1, above, regarding extension of the public review period on the Draft EIR. Additionally, the concerns raised in these comments will be transmitted to City decision-makers as part of the project approval process.

———————————————

[5] EIR Appendix HYD1, Section 8, Tables HYD8-1 to HYD8-4, includes a comparison of the ASDHM data as modified for the EIR analysis with the ASDHM data used in the National Marine Fisheries (NMFS) Biological Opinion.

[6] As indicated in Appendix HYD1, Table HYD4-2, estimated annual volume of NPDES quarry discharges for for pre-2001, existing, with-CDRP, and with-project conditions are 2,796 acre-feet per year, 3,436 acre-feet per year, 6,620 acre-feet per year, and 2,532 acre-feet per year, respectively. This is equivalent to daily average NPDES quarry discharges of 3.9 cfs, 4.7 cfs, 9.1 cfs and 3.5 cfs, respectively. Losses in the Alameda Creek reach where the NPDES quarry discharge point is located (between the San Antonio Creek confluence and the Arroyo de la Laguna confluence) are 7.5 cfs.

11.2.6 CEQA Piecemealing (ERP-5)

Issues Raised by Commenters

This response addresses all or part of the following comment, which is quoted below:

A-ACWD2-12

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a. The ACRP project is in conflict with the stated expectations from the National Marine Fisheries Service on the operation of the CDRP project. The ACRP is a project that is dependent on the Calaveras Dam Replacement Project (CDRP) and associated flow schedule, and was previously identified in the CDRP EIR as the "Filter Gallery Project." An accurate, stable, and finite project description is an indispensable component of an informative and legally sufficient EIR (CEQA Guidelines § 15124.) A "project" is the "whole of an action" that has the potential to result in a physical change to the environment "directly or indirectly" (CEQA Guidelines § 153 78(a).) An agency cannot subdivide a project into multiple components to avoid analyzing and discussing in the EIR the sum of environmental impacts resulting from the project (Christward Ministry v. Superior Court (1986) 184 Cal.App.3d 180, 193.) In 2009, ACWD provided comments on the DEIR of the CDRP stating that:

> " ... meeting the primary objectives of the CDRP is dependent on implementation of the Filter Gallery Project, the DEIR should consider the Filter Gallery Project as part of the overall Calaveras Dam Replacement Project, and include it in the DEIR's project description of the CDRP. Without including the Filter Gallery as part of the CDRP Project Description, the primary objective of water supply reliability may not be met, and the SFPUC would be 'piecemealing' the environmental analyses of these two projects ... "

Because the CDRP and the ACRP (formally the Filter Gallery Project) components were not analyzed together, inconsistencies exist between the stated goals of the ACRP and the Biological Opinion issued to the SFPUC for take coverage associated with operation of the CDRP. For example, the CDRPBO (pages 49 through 52) states that bypass flows at the ACDD are intended to provide suitable migration conditions from Alameda Creek below the ACDD through Niles Canyon and out to the Bay. Furthermore, page 52 of the CDRPBO states, "CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence of Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration." Since the ACRP project has been analyzed separately from the CDRP project, the fundamental concept of recapturing CDRPBO flow releases and ACDD bypasses is in conflict with the stated expectations from the National Marine Fisheries Service (NMFS) on the operation of the CDRP project. The DEIR must analyze the impacts that operation of the ACRP will have on the future flow and habitat conditions described in the CDRPBO, and fully analyze the whole of the action taken by SFPUC (CEQA Guidelines § 15378(a).) Without this analysis the separate approval of these related projects could lead to severe impacts on flow and habitat conditions in Alameda Creek (CEQA Guidelines§ 15130.) (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-12)

Response ERP-5: CEQA Piecemealing

The commenter asserts that the ACRP EIR does not consider the whole of the project (i.e., engaged in piecemealing) under CEQA and that the project is in conflict with the assumptions of the National Marine Fisheries Service (NMFS) Biological Opinion (BO) for the Calaveras Dam Replacement Project (CDRP). This response addresses the portion of the comment concerning CEQA piecemealing. Please refer to Section 11.4, Response BI-16, and to Section 11.5, Response HY-5, regarding

consistency of the ACRP with the NMFS BO for the CDRP with respect to fisheries resources and hydrologic analysis, respectively.

The ACRP EIR adequately analyzes the whole of the action under CEQA. As described in Chapter 2 of the EIR, the ACRP EIR tiers from the Program EIR (PEIR) on the SFPUC's Water System Improvement Program (WSIP).[7] The WSIP PEIR, certified in 2008, provided environmental review of the WSIP — the "whole" of the action — including 22 key facility improvement projects, which included both the ACRP (referred to at that time as the Alameda Creek Fishery Enhancement project) and the CDRP. In the WSIP PEIR, the environmental impacts of implementing these facility improvement projects were analyzed at a program-level, consistent with CEQA Guidelines 15168. In addition, the WSIP PEIR analyzed the water supply program and systemwide operations at a project-level of detail. The WSIP PEIR, therefore, conducted analysis of precisely what the commenter requests—it analyzed the CDRP, ACRP, and 20 other facility improvement projects, all in one CEQA document, and it looked in detail at the water supply impacts of all of these projects considered as a whole. The PEIR addresses at a program-level the overall impacts of the WSIP facility improvement projects, both individually and cumulatively, and identifies programmatic mitigation measures for significant impacts for all of the facility improvement projects, including both the CDRP and ACRP. The ACRP EIR summarizes the water supply program and systemwide operations impacts that were identified in the WSIP PEIR (see Section 5.1.4 of the ACRP EIR, pp. 5.1-5 to 5.1-27) and incorporates the WSIP PEIR analysis by reference. The ACRP EIR also discloses the applicability of the WSIP PEIR mitigation measures to the ACRP as currently designed and proposed (see Appendix WSIP of the ACRP EIR). Therefore, the combined impacts of the ACRP and CDRP project were analyzed in the WSIP PEIR.

Additionally, both the CDRP EIR and ACRP EIR, which tier off the WSIP PEIR, describe and analyze the interrelationship between the two projects as part of the project-level and cumulative impact analysis of each project. The ACRP EIR describes in detail the relationship of the ACRP to the CDRP (see EIR Chapter 2, Section 2.3, pp. 2-9 to 2-13; and Chapter 3, Section 3.2.2, pp. 3-4 to 3-7). In addition, as explained in Section 5.1.2, Baseline Condition for Evaluation of Project Impacts (pp. 5.1-3 to 5.1-4), where the interrelationship of the CDRP and ACRP could affect the impact analysis (e.g., flow-related impacts such as hydrology, fisheries, and riparian impacts), the ACRP EIR analyzes the operational impacts relative to both the existing condition (before the CDRP is in operation) and the "with-CDRP" conditions. The ACRP EIR also includes the CDRP in the cumulative impact analysis. The CDRP is described in Section 5.1.5, Cumulative Impacts, Table 5.1-6 (page 5.1-31) and considered in the ACRP cumulative impact analyses under the various resource areas in Chapter 5 as appropriate.

Like the ACRP EIR, the CDRP EIR[8] (certified in 2011) provided a project-level analysis of the site-specific impacts of the CDRP and also summarized and incorporated by reference the water supply

[7] San Francisco Planning Department, 2008. *San Francisco Public Utilities Commission's Water System Improvement Program, Final Program Environmental Impact Report.* San Francisco Planning Department File No. 2005.0159E, State Clearinghouse No. 2005092026, Certified October 30, 2008.

[8] San Francisco Planning Department, 2011. *San Francisco Public Utilities Commission Calaveras Dam Replacement Project, Final Environmental Impact Report*. San Francisco Planning Department File No. 2005.0161E, State Clearinghouse No. 2005102102. Certified January 27, 2011.

program and systemwide operations impact analysis from the WSIP PEIR. In the CDRP EIR, the ACRP (referred to at that time as the Upper Alameda Creek Filter Gallery Project) was included as part of the cumulative analysis. Table 6.1 of the CDRP EIR includes a description of the ACRP at that time, and the CDRP provides a cumulative impact analysis of implementation of the CDRP in combination with the ACRP, specifically with respect to the impacts of fisheries resources and hydrology (see CDRP EIR, Vol. 2, Chapter 6).

> The commenter includes an excerpt of a comment that was submitted on the CDRP EIR. The CDRP Final EIR provided the following response to that comment which, with the exception of the project's name (Alameda Creek Recapture Project instead of the Filter Gallery Project), remains applicable:"…the CDRP and Filter Gallery Project have already been reviewed together in the PEIR as part of the WSIP. The PEIR provides a comprehensive review of the combined effects of implementing all of the facility improvement projects, including an analysis of potential stream flow, geomorphology, and water quality impacts on Alameda Creek…. Contrary to the assertion of "piecemealing," the San Francisco Planning Department has completed a comprehensive analysis of the WSIP in the PEIR and is now proceeding with subsequent, site-specific environmental analyses of components projects, including the CDRP and the Filter Gallery Project, through individual CEQA documents."
>
> (CDRP Final EIR, Vol. 3, Chapter 11, p. 11.1.8-2)

11.2.7 Project Description (ERP-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-ACPW-1 A-ACWD2-3 A-BAWSCA2-1

The Alameda County Public Works Agency has the following comments on the SFPUC Draft Environmental Impact Report (dEIR) for the Alameda Creek Recaptured Project. The project proposes to recapture annually an average of up to 9,820 acre-feet per year (ac ft./yr.) (or 3,200 million gallons per year [mgal/yr.]) of water releases from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam during future operation of Calaveras Reservoir into storage pits in Sunol Valley approximately 6 miles downstream of Calaveras Reservoir and 0.5-mile south of the Interstate 680/State Route 84 interchange. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-1)

The DEIR describes that the intent of the ACRP is to recapture the volume of water released from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam (ACDD) as part of the future operations plan described in the Calaveras Dam Replacement Project Biological Opinion (CDRPBO) (Page 3-7, Section 3.2.2 of the DEIR.) The ACRP will rely on the slow and steady percolation of surface water from Alameda Creek into the Sunol Groundwater Basin, and into a former quarry pit referred to as Pit F2. Water from Pit F2 will be pumped to surface storage in San Antonio Reservoir or treatment at the Sunol Valley Water Treatment Plant (SVWTP). (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-3)

BAWSCA member agencies are highly dependent on the RWS [Regional Water System] to provide a reliable supply of potable drinking water. The average annual recapture volume of 7,178 Acre-Feet that the ACRP will provide when implemented will go toward helping the RWS achieve supply reliability and the SFPUC's adopted Water Supply Level of Service goal. (Thomas B. Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA2-1)

Response ERP-6: Project Description

These comments reiterate various aspects of the ACRP project description. However, comment A-ACPW-1 incorrectly states the proposed annual average recapture rate; the correct rate as identified in the EIR is 7,178 acre-feet per year (see EIR Chapter 3, pp. 3-25 to 3-26). The 9,820 acre-feet per year rate stated in comment A-ACPW-1 was the rate identified in the NOP, and the Draft EIR updated this recapture rate because estimated recapture volumes were refined to limit the average annual water supply loss to the available storage in Calaveras Reservoir. The recapture volumes were refined using historical hydrology for the period October 1995 to September 2013. The refined annual average estimate of 7,178 acre-feet per year takes into account variations from year to year in precipitation, requirements of flow schedules, and Calaveras Reservoir storage capacity. It is equivalent to the volume of water that is the loss of yield to the SFPUC regional water system when all of these factors are considered.

The other two comments accurately represent the proposed project, as described in Chapter 3 of the EIR.

11.2.8 Baseline Conditions (ERP-7)

Issues Raised by Commenters

This response addresses all or part of the following comment, which is quoted below:

A-ACWD2-20

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7. The DEIR does not analyze current conditions as a separate alternative to the No Action Alternative. CEQA guidelines provide that the environmental setting as it exists when the EIR is being prepared should be treated as the baseline for gauging the changes to the environment that will be caused by the proposed action (CEQA Guidelines § I 5125(a).) While comparisons to current conditions are referred to occasionally in the Draft EIR, use of baseline conditions is incomplete, including omission of comparisons in the vital categories of effects on water resources and biological resources. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-20)

Response ERP-7: Baseline Conditions

The commenter contends that the EIR does not analyze impacts relative to current conditions, including omission of comparison of effects on water resources and biological resources.

EIR Section 5.1.2 (pp. 5.1-3 to 5.1-4) explains that the EIR uses the physical conditions in the project area at the time of publication of the Notice of Preparation (June 2015)—referred to as "existing conditions"— against which project conditions are compared in order to determine the changes or impacts that would occur if the project is implemented. The existing conditions are used to evaluate all construction and operational impacts of the ACRP under all resource categories, consistent with CEQA Guidelines Section 15125.

However, as noted in EIR Section 5.1.2, in some cases, an additional baseline condition is used to determine operational impacts. This is because the existing hydrologic conditions do not reflect the conditions that will occur when the ACRP would be implemented, because operation of the ACRP is predicated on implementation of the CDRP instream flow schedules. If the conditions that are anticipated to occur during ACRP operations (i.e., both the CDRP and ACRP operating) are compared to the existing conditions (i.e., neither the CDRP nor the ACRP operating), the comparison would show the combined flow-related changes caused by *both* the ACRP and CDRP operations. This comparison would make it difficult, if not impossible, to discern the project-specific effects of the ACRP from those of the CDRP. Since it is not possible to identify the severity of a flow-related impact or to substantiate the efficacy of flow-related mitigation measures for the ACRP without first isolating the potential impacts of the ACRP, use of an additional alternate baseline is needed in specific cases. For fishery resources, and certain aspects of hydrology and terrestrial biological resources, the operational impacts of the ACRP cannot be fully discerned with use of the existing baseline conditions. Therefore, where appropriate, in addition to using the "existing conditions" to evaluate impacts, the EIR also analyzes potential impacts relative to “with-CDRP” conditions, which include the predicted hydrologic conditions in the project vicinity with implementation of the CDRP instream flow schedules.

The commenter states that, "comparisons to current conditions are referred to occasionally in the Draft EIR." However, the use of existing conditions is included under every resource topic in Chapter 5 as the basis for the impact analysis. The existing conditions for ACRP are described in the setting section of each Chapter 5 resource section, and where appropriate the "with-CDRP" conditions are also described. In particular, existing conditions for Terrestrial Biological Resources are described in Section 5.14.2.1 (pp. 5.14-2 to 5.14-63), for Fisheries Resources in Section 5.14.5 (pp. 5.14-119 to 5.14-136), and for Hydrology in Section 5.16.2 (pp. 5.16-4 to 5.16-53); additional detail on all of these resources is provided in Appendices BIO1, BIO2, and HYD1, respectively. These existing conditions are then used in the impact analyses for biological resources, fisheries resources, and hydrology.

The commenter also states that the EIR "does not analyze current conditions as a separate alternative to the No Action Alternative." As explained above, the EIR does describe in detail all relevant aspects of the current conditions under all resource topics. However, the current conditions are not appropriate to analyze as the No Project (or No Action) Alternative; the No Project Alternative, as

provided for in CEQA Guidelines Section 15126.6(e)(2), are the conditions that "would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." The EIR describes the No Project Alternative in Chapter 7, Section 7.3.1 (pp. 7-14 to 7-15), consistent with CEQA Guidelines. Further, the current conditions are not appropriate to analyze as an alternative to the project because they would not "feasibly attain most of the basic objectives of the project" as provided by CEQA Guidelines Section 15126.6(a).

In response to this comment, the following text on page 5.1-3 of the Draft EIR was clarified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> This EIR uses the physical conditions in the project area at the time of NOP publication (June 2015)—referred to as "existing conditions"—as the baseline conditions to evaluate all construction ~~impacts~~ and ~~most~~ operational impacts of the ACRP. However, the comparison of existing baseline conditions to conditions with the ACRP does not adequately capture the operational effects of the ACRP because the ACRP operation relies on implementation of instream flows as part of future operations under the Calaveras Dam Replacement project (CDRP). For the flow-dependent resources (e.g., fisheries), an adjusted baseline condition that assumes implementation of the CDRP — referred to as "with-CDRP conditions" — is additionally used in the impact analysis for reasons explained below.

11.2.9 Required Permits and Approvals (ERP-8)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-ACPW-8 A-ACWD2-18 O-ACA-6

Additionally, the Agency requests that SFPUC obtain an encroachment permit for operating large equipment on county roadways prior to the project construction. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-8)

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5. The DEIR does not consider consultation and permits with the appropriate agencies. ACWD agrees with the January 4, 2017, comment from Alameda Creek Alliance that SFPUC should consult with NMFS regarding impacts to Steelhead and required permits for the project, with the Army Corps of Engineers regarding required Clean Water Act permits, and the California Department of Fish and Wildlife regarding coverage under California Fish and Game Code section 1602. Consultation and permits issued by these agencies will ensure that the goals of the ACRP are consistent with the environmental restoration efforts being carried out by the SFPUC, ACWD, and other watershed stakeholders. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-18)

The project may require consultation with the National Marine Fisheries Service due to potential impacts to Central California Coast steelhead trout. The project may also require a permit under the Clean Water Act, since Pit F-2 may qualify as "waters of the United States" under the Clean Water Rule (80 FR 37054). The project may also require notification of the project to California Department of Fish and Wildlife under California Fish and Game Code section 1602. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-6)

Response ERP-8: Required Permits and Approvals

This group of comments relates to required permits and approvals for the project. Comment A-ACPW-8 requests that the SFPUC obtain an encroachment permit for operating large equipment on Alameda County roadways. The other commenters assert that the project may require additional permits from the National Marine Fisheries Service, U.S. Army Corps of Engineers, and the California Department of Fish and Wildlife and that the EIR does not consider consultation and permits with the appropriate agencies.

Consistent with CEQA Guidelines Section 15124(c), the EIR lists permits and approvals that may be required for the proposed project in Section 3.7, Required Permits and Approvals (EIR page 3-33). With respect to comment A-ACPW-8 regarding an encroachment permit for operating large equipment on Alameda County roadways, the SFPUC would not be doing any road work on Alameda County roadways as part of the ACRP, and therefore an encroachment permit is not expected to be required. SFPUC would continue to work in coordination with Alameda County to obtain permits, as necessary, through the existing Memorandum of Agreement between the SFPUC and Alameda County for the use of county roads for the transport of construction materials and equipment.[9] Regardless, the SFPUC would obtain all regulatory approvals and permits as required by law.

The EIR (p. 3-33) states that this is a list of "permits and authorizations likely to be required from federal, state, and local agencies." Subsequent to project approval, the SFPUC may be required to obtain additional permits, but that would be determined through the permitting process.

In response to these comments, the following text on page 3-33 of the Draft EIR was clarified as follows (deleted text is shown as ~~strikethrough~~ and new text is <u>underlined</u>):

> The permits and authorizations likely to be required from federal, state, and local agencies are listed below. <u>The SFPUC would also obtain any other regulatory approvals as required by law.</u>

This revision does not affect the analysis or conclusions of the EIR.

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[9] City and County of San Francisco and County of Alameda, 2010. Programmatic Memorandum of Agreement between the City and County of San Francisco acting through its Public Utilities Commission and the County of Alameda (Sunol Valley Regional Projects).

11.3 Cultural Resources

11.3.1 Overview of Cultural Resources

The comments and corresponding responses in this section address topics related to Cultural Resources, as presented in Chapter 5, Section 5.5, of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project). These include the following sub-topics:

- CP-1: Records Search
- CP-2: Native American Outreach
- CP-3: Archeological Resources Impacts

11.3.2 Record Search (CP-1)

Issues Raised by Commenters: Records Search

This response addresses all or part of the following comment, which is quoted below:

A-Caltrans-1

Section 5.5.1.4 states that a records search at the Northwest Information Center (NWIC) was conducted on June 15, 2010, however it is a professional standard to update record searches every five years to capture new information. We recommend that the records search be updated and that the DEIR cite the technical studies from which the information in Section 5.5.1.4 was excerpted. (Patricia Maurice, District Branch Chief, Department of Transportation, January 7, 2017, A-Caltrans-1)

Response CP-1: Records Search

This comment states that the records search at the Northwest Information Center (NWIC) is more than five years old and that it is a professional standard to update records searches to capture new information.

In response to this comment, an additional record search was completed at the NWIC on February 15, 2017 (File No. 16-1219) to support the EIR on the ACRP.[1] The February 15, 2017 record search updated a 2010 records search that was completed on a previous project in the same vicinity as the ACRP project area.[2] The updated 2017 records search indicated several studies have been completed within and adjacent to the ACRP CEQA Area of Potential Effects (ACRP C-APE, defined in the EIR section as the area of direct and indirect impact, Section 5.5, pp. 5.5-1 to 5.5-2) since the 2010 records

[1] Northwest Information Center (NWIC), California Historical Resources Information System. Records search (File No. 16-1219) on file at the San Francisco Planning Department, Suite 400, in Case No 2015-0004827ENV. February 15, 2017.

[2] Koenig, Heidi, Historic Context and Archaeological Survey Report, Upper Alameda Creek Filter Gallery. Prepared for San Francisco Planning Department and San Francisco Public Utilities Commission. On file at the San Francisco Planning Department, Suite 400, in Case No 2015-0004827ENV. April 2011.

search. No new archeological resources have been recorded in the ACRP C-APE or within a ½ mile radius.[3] A ranch complex (P-01-011546), a PG&E substation (P-01-011547), and a transmission line (P-01-011548) have been recorded within the records search radius but outside the C-APE since the 2010 records search. All three resources have been recommended as "not eligible" for listing in the California Register of Historical Resources and the National Register of Historic Places. As these resources are all outside of the ACRP C-APE, they would not be directly or indirectly impacted by the proposed project. Taking into account the updated information from the current record search the conclusions of the Draft EIR, as described in the EIR (Section 5.5, p. 5.5-21) would not change. Further, the same Mitigation Measure M-CUL-1: Accidental Discovery of Archeological Resources would still apply, which would reduce potential impacts to less than significant.

11.3.3 Native American Outreach (CP-2)

Issues Raised by Commenters: Native American Outreach

This response addresses all or part of the following comment, which is quoted below:

A-Caltrans-2

Section 5.5.1.4 also states stated letters were sent to Native American parties provided by the Native American Heritage Commission (NAHC) and that no responses were received. We recommend that follow up emails and phone calls be made as the use of multiple forms of contact is the professional standard for ensuring that Native Americans are provided adequate opportunities to consult on a project. (Patricia Maurice, District Branch Chief, Department of Transportation, January 7, 2017, A-Caltrans-2)

Response CP-2: Native American Outreach

This comment recommends that additional attempts be made to contact Native Americans groups with regard to opportunities to consult on the project.

In response to a request from a Native American group on an earlier iteration of the ACRP, the Upper Alameda Creek Filter Gallery project (see EIR pp. 2-12 to 2-14 and 7-28 to 7-40), archeological survey and testing were completed that determined it is unlikely for deeply buried archeological resources to be present in the Upper Alameda Creek Filter Gallery project C-APE, and no additional work regarding archeological resources was required. The results of this investigation are also relevant to the ACRP C-APE. Nevertheless, the EIR does identify Mitigation Measure M-CUL-1, Accidental Discovery of Archeological Resources, which provides recommendations in the event of an inadvertent discovery of archeological resources and/or human remains during ground disturbing activities associated with the project.

[3] Ibid.

In response to this comment, the following text on pages 5.5-10 to 5.5-11 of the Draft EIR was clarified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> ***Native American Contacts***
>
> ESA contacted the Native American Heritage Commission requesting a search of Sacred Lands files and information regarding any local Native Americans who might have knowledge of cultural resources in the project area. The Commission indicated that no sacred lands are recorded on the Sacred Lands files within or near the project area. The Commission also provided a list of Native American individuals and organizations in Alameda County that might have additional information or concerns about the proposed project. ESA sent a letter that described the project and requested information to each Native American individual/organization on the contact list as well as to the Alameda County Historical Society. In response to a request from a Native American group on an earlier iteration of the ACRP, the Upper Alameda Creek Filter Gallery project (see EIR pp. 2-12 to 2-14 and 7-28 to 7-40), archeological survey and testing were completed that determined it is unlikely for deeply buried archeological resources to be present in the C-APE relevant to the ACRP. No additional responses were received.

The above revision does not affect the analysis or conclusions of the EIR.

11.3.4 Archeological Impacts (CP-3)

Issues Raised by Commenters: Archeological Impacts

This response addresses all or part of the following comment, which is quoted below:

A-Caltrans-3

While in most cases, the CEQA Area of Potential Effects (C-APE) has low potential to encounter buried archaeological deposits, the proposed anchor blocks in the southwestern corner are in an area composed of Late Holocene sediments, which hold high potential to contain buried archaeological deposits. Section 5.5.1.4 incorrectly states that areas of artificial fill do not have the potential to contain deeply buried cultural resources. Even if the area has been disturbed by quarrying activities and/or capped with artificial fill, natural buried landforms may be intact underneath. Given the 30-foot depth of excavation required for the anchor blocks, Caltrans recommends that SFPUC conduct a subsurface survey in this portion of the C-APE to identify buried archaeological deposits. (Patricia Maurice, District Branch Chief, Department of Transportation, January 7, 2017, A-Caltrans-3)

Response CP-3: Archeological Impacts

This comment states that the proposed anchor blocks in the southwestern corner are in an area composed of late Holocene sediments, which hold a high potential to contain buried archeological

deposits, and the commenter recommends that the SFPUC conduct a subsurface survey in this portion of the C-APE to identify buried archeological deposits.

The commenter is correct that this geologic unit has a high potential to contain stable landforms on which archeological deposits may have developed. However, the southwestern anchor blocks are in an area mapped as modern stream channel deposits. There is the potential that Holocene-age deposits underlie modern deposits and artificial fill (as the commenter indicates). The results of the geoarcheological trenching completed within the C-APE for the nearby SABPL[4] project did identify Holocene-age buried soil. However, the researchers concluded that "(1) the weakly developed profile of this soil indicates that it did not remain at the surface for a substantial time period; (2) this buried soil has been eroded in portions of this area; and (3) no archeological materials were identified in seven trenches excavated across this area." They thus concluded that it is unlikely that a buried archeological deposit is present in the C-APE (at the location of the geoarcheological trenches), which are approximately 1,000 feet east of the proposed southwestern anchor blocks.

The SABPL researchers also examined the northeastern and northwestern walls of Quarry Pit F3-East for buried soils and artifacts. Quarry pit walls showed deep beds of Pleistocene-age gravels and cobbles at depths of 13 to 16 feet below the ground surface. Above the cobbles, the reddish brown silt loams in the exposures showed no evidence of midden, artifacts, or fire-altered rock typical of archeological sites in the region, and also lacked darkened layers typical of buried soils.

Based on the extensive previous disturbance in the project C-APE, including the varying amounts of excavation, grading, and fill associated with the quarrying activities and the existing facilities, as well as the results of previous geoarcheological investigations in the immediate vicinity, the Planning Department has concluded that a geoarcheological testing program for the ACRP is not warranted.

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[4] Far Western Anthropological Research Group, Inc., Addendum Historic Context and Archaeological Survey Report for the San Antonio Backup Pipeline Project, Alameda County, California. Prepared by Eric Wohlgemuth. Prepared for San Francisco Public Utilities Commission. On file (S-39892), Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California, April 2011.

11.4 Biological Resources

11.4.1 Overview of Biological Resources

The comments and corresponding responses in this section address topics related to Biological Resources, which are presented in Chapter 5, Section 5.14, and Appendices BIO1 and BIO2 of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project). This section responds to comments on the following topics:

- BI-1: General Comments on Biological Resources
- BI-2: Existing Vegetation Conditions
- BI-3: Construction of a Riparian Meander Corridor
- BI-4: Sunol Long Term Improvement Project
- BI-5: California Native Plant Society (CNPS) Resources
- BI-6: Effects of Hydrologic Changes on Terrestrial Biological Resources
- BI-7: Vegetation Mitigation Measures
- BI-8: Measures for Reducing Construction Impacts
- BI-9: Priority of Alameda Creek for Protection of Riparian Resources
- BI-10: Effects on Changes in Plant Assemblages to Steelhead
- BI-11: Impacts on Wildlife Corridors
- BI-12: Jurisdictional Status of Pit F2
- BI-13: Jurisdictional Status of Alameda Creek
- BI-14: Wetlands Significance Criterion
- BI-15: Fisheries Regulatory Framework
- BI-16: Effects of Hydrologic Changes on Fisheries Resources

11.4.2 General Comments on Biological Resources (BI-1)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-1

Overall, we suggest that SFPUC reevaluate the detailed biological resources reports with an eye for more appropriate characterization of impacts as significant on biological resources within the project area. We noticed and detail below several biological resource categories needing greater attention. We also recommend considering improvement of remnant native habitat in the project area. Due to this area's apparent utilization by diverse and rare wildlife as documented in the dEIR wildlife as well as vegetation surveys, and known difficulties with mitigating potential project impacts away from a known critical wildlife corridor, impacts brought by this project may irrevocably fragmenting the space and create significant impacts. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-1)

Response BI-1: General Comments on Biological Resources

Comment O-CNPS-1 raises several issues related to the significance of impacts of the project on biological resources, and suggests that "SFPUC reevaluate the detailed biological resource reports with an eye for more appropriate characterization of impacts as *significant* on biological resources within the project area." The commenter states that several resource categories need greater attention in the EIR, and recommends improvement of remnant native habitat in the project area to avoid habitat fragmentation and retain a known critical wildlife corridor. Please see Response BI-11 for a response to the issues concerning wildlife habitat fragmentation and maintenance of a wildlife corridor.

As an important point of clarification regarding impacts and significance determinations, the San Francisco Planning Department is responsible for the preparation of environmental review documents under the California Environmental Quality Act (CEQA) for the City and County of San Francisco (San Francisco Administrative Code Section 31.104). The Planning Department directed the preparation of the referenced reports in the ACRP EIR, not the SFPUC. Before the SFPUC decides whether to approve the ACRP, the Planning Commission will be asked to certify the ACRP Final EIR for completeness and at that time will determine if in its judgment it is adequate, accurate and objective, reflecting the independent judgment and analysis of the Planning Commission (San Francisco Administrative Code Section 31.15).

Regarding the request for "more appropriate characterization of impacts as *significant* on biological resources," EIR Section 5.14 (pp. 5.14-1 to 5.14-151) provides a detailed and comprehensive analysis of the potential impacts of the ACRP on biological resources. The EIR analysis includes an in-depth description of the existing conditions of biological resources in the project area (supported by Appendices BIO1 and BIO2), a complete list of significance criteria, an explanation of the approach to determining impact significance, and a thorough analysis of potential impacts on terrestrial biological resources that would result from construction and operation of the ACRP. The impact analysis identified six *significant* impacts (Impacts BI-1, BI-2, BI-3, BI-6, BI-8, and C-BI-1), all of which could be mitigated to a less-than-significant level with implementation of identified mitigation measures.

The commenter notes that SFPUC has an opportunity to retain and protect vegetation in the project area. It is not within the purview of the ACRP EIR to require the SFPUC to restore vegetation unless the baseline condition would be affected by the physical environmental impacts of proposed project. As described in EIR Section 5.14, upland areas that would be affected by the project include areas that would be used as temporary staging or construction areas for the ACRP. Accordingly, the EIR identifies these areas to be subject to mitigation requirements for restoration with upland vegetation similar to existing vegetation (see Mitigation Measures M-BI-1a to M-BI-1i and M-BI-2, pp. 5.14-77 to 5.14-89). Similarly, the EIR identifies potential operational impacts on riparian vegetation and corresponding mitigation measures within the potentially affected reach of Alameda Creek (see Mitigation Measure M-BI-6, pp. 5.14-102 to 5.14-103). Any restoration efforts beyond those areas and resources affected by project construction or operations identified in the ACRP EIR are not warranted by impacts caused by the project. As described in Response BI-9 below, such efforts may be undertaken as a part of SFPUC's separate ongoing restoration efforts in the Sunol Valley.

Finally, Comment O-CNPS-1 states that the site is utilized by diverse and rare wildlife, and "known difficulties with mitigating potential project impacts away from a critical wildlife corridor…resulting in fragmenting the space and creating significant impacts." The statement that the site is utilized by a variety of wildlife including rare species is consistent with the information presented in the EIR Setting, Section 5.14.2. Although the site is utilized by wildlife, there are limited records of rare species occurring in or near the project site and on-going quarry activities limit wildlife use. As such, and as discussed in Impact BI-1, Section 5.14.4, temporary upland impacts due to project construction would be mitigated on-site with appropriate revegetation (see Mitigation Measure M-BI-1e, pp. 5.14-81 to 5.14-84), thereby restoring the existing capacity for wildlife movement. Similarly, if project operations result in impacts on riparian vegetation, the EIR identifies feasible mitigation that would be implemented in the potentially affected reach of Alameda Creek (see Mitigation Measure M-BI-6, pp. 5.14-102 to 5.14-103). Thus, the EIR appropriately identifies the potential for the project to affect habitat movement corridors as well as mitigation measures to restore affected habitat to avoid fragmentation thereby restoring the existing capacity for wildlife movement.

For the reasons described above, the Planning Department finds that the analysis in the EIR meets CEQA requirements and the information as analyzed in the EIR is adequate.

11.4.3 Existing Vegetation Conditions (BI-2)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-2

Historical descriptions of the natural water flows and community types as described in the dEIR Section 5.14 Biological Resources and Appendix BIO1, are obviously and vastly different to current conditions. No longer a meandering and braided floodplain, this area of Alameda Creek is now more like a structured and built channel. SFPUC has the opportunity to retain and protect vegetation which, although artificial in the history of this area, serves an indisposable [*sic*] function to wildlife and remnant vegetative communities as a key link left remaining from years of other project area impacts decreasing the area's natural usefulness. Habitats in and around the project area that had previously been destroyed by past development, appear excellent candidates for restoration, possibly resulting in recolonizing rare plants no longer found during survey efforts and the natural reappearance of locally rare plant species. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-2)

Response BI-2: Existing Vegetation Conditions

The commenter states that this area of Alameda Creek is modified from its historical condition and that it is now more like a structured and built channel. The commenter suggests that the SFPUC has an opportunity to retain and protect existing vegetation in this reach, which serves as a wildlife and vegetation link. The commenter suggests that habitats in and around the project area could be candidates for restoration, including providing habitat for rare and locally rare plant species.

The commenter is correct that current conditions differ from the historical hydrology, topography, and community types. The commenter's statement is consistent with the description in EIR Section 5.14 (page 5.14-36), which states "the broad braided channel has been narrowed and realigned, the hydrologic regime has been dramatically altered by upstream diversions and by quarry operations, and the creek is crossed by utility corridors, roads, highways, and quarry facilities." The realigned channel upstream from Interstate 680 within the project area (Subreach A) currently contains grade controls and other infrastructure features that protect the water pipelines, gas pipelines, transmission lines, a freeway crossing, quarry pit walls, and quarry discharge features, although the channel in this reach is not concrete-lined. Downstream (Subreaches B, C1, and C2), the Alameda Creek floodplain has been altered, but the constructed levee is generally situated outside the natural floodplain, which retains a more natural character than the constructed channel in Subreach A and farther upstream.

This description of the existing conditions in the Draft EIR — albeit previously-disturbed — reflects the general baseline conditions at the project site. Impacts of the project are evaluated compared to these baseline conditions, consistent with CEQA Guidelines Section 15125(a). (See Impacts BI-1 through BI-7 (pp. 5.14-75 to 5.14-104).) Mitigation measures in the EIR for potentially affected habitat identifies restoration measures that would return temporary use areas to a condition comparable to or better than the baseline conditions. Any other restoration efforts beyond those areas affected by project construction or operations are not warranted as mitigation for project impacts under the ACRP EIR.

As described in the EIR (Section 5.14.2.5, page 5.14-32), the SFPUC is developing a Sunol Valley Restoration Report that seeks to protect and enhance its Alameda watershed on a greater scale, outside the scope of this project.

The commenter suggests that the project area is an opportunity area for recolonizing rare and locally rare plants in and around the project area. With respect to rare plants, this is inconsistent with the information presented in the setting and the biological resources technical report. EIR page 5.14-63, states, "No special-status plants were found in the survey area during seasonally-appropriate, floristic surveys. Based on the habitats present, no special-status plants are expected to occur there due to the highly disturbed nature of much of the project area, and the relatively common habitats and soil types found there." As described in Appendix BIO1, Table 2 and Section 2.4, special-status species known from the region are not known to occur in the soils, vegetation, and microhabitats found in the project area. Thus, the potential to support any special-status plants in the project area was concluded to be very limited. Since no impacts on special-status plants were found, CEQA does not require the EIR to identify mitigation for special-status plants. Further, restoration would be constrained given the lack of suitable site conditions for any of the special-status plants known from the region.

Several East Bay CNPS-ranked unusual and significant plants were present in the survey area; however, the EIR determined these plants would not be impacted by the project. As stated in Appendix BIO1 page 2-43, five A- and B-ranked plants were observed in Subreaches B and C1 of Alameda Creek. These are species characteristic of the sparsely vegetated floodplain (and hence, the historical hydrologic patterns) rather than the dense willow- and mulefat-dominated vegetation that has developed along the low-flow channel as a result of NDPES quarry discharges. As stated on EIR

page 5.14-101, "any decrease in tree-supporting woody riparian vegetation is predicted to result in an increase in non-tree-supporting vegetation such as mulefat scrub." The sparsely-vegetated floodplain, and hence the plant species found there, would not be adversely impacted by the proposed project.

11.4.4 Construction of a Riparian Meander Corridor (BI-3)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-3

EBCNPS asks that planners consider facilitating the construction of a riparian meander corridor and appropriate plant habitat in current project location on Alameda Creek, as area enhancement for the existing concrete drainage. This riparian area would be a wonderful feature improvement for the area from a habitat perspective. It could include walking pathways that could educate visitors about the natural history of the site. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-3)

Response BI-3: Construction of a Riparian Meander Corridor

The commenter requests consideration of construction of a riparian meander corridor and appropriate plant habitat enhancement in the project location on Alameda Creek, along with public access. The comment does not directly address the adequacy or accuracy of information contained in the Draft EIR.

As a point of clarification, the Alameda Creek channel is not concrete lined in the project area and is not considered to be a concrete drainage. Moreover, neither construction nor operation of the ACRP would have a direct effect on the Alameda Creek channel; all construction would be outside of the creek channel and ACRP operations would be restricted to pumping activities within and around Pit F2. The only potential indirect effect of project operations would be on changes in existing NPDES quarry discharges as a result of Pit F2 withdrawals. Predicted changes in discharges from Pit F2 would not substantially alter the geomorphology of the creek channel. Therefore, restoration of the creek channel, such as construction of a riparian meander corridor as suggested by the commenter, is not warranted as mitigation for project impacts under the ACRP EIR.

In Subreaches B, C1, and C2, the Alameda Creek floodplain has been altered but the constructed levee is generally situated outside the natural floodplain, which retains a more natural character than the constructed channel in Subreach A and farther upstream. Since the project would have no impact on the ability of Alameda Creek to meander, no mitigation (i.e., grading or physical restoration of this portion of the creek) is required under CEQA.

As stated in Mitigation Measure M-BI-6, if impacts on the tree-dominated woody riparian vegetation are detected in Subreaches A, B, and C1, mitigation would be implemented in Subreaches B or C1 and shall consist of a combination of plantings such as valley oaks and California sycamores in the floodplain. Once established, these plantings are expected to be able to grow and persist under the prevailing hydrologic conditions in this portion of Alameda Creek. In response to the portion of the comment regarding "walking pathways," public access is infeasible in the project area or in this portion of Alameda Creek, since both the project area and Subreaches B and C1 are within an active mining site. Additionally, the concerns raised in these comments will be transmitted to City decision–makers as part of the project approval process.

11.4.5 Sunol Long Term Improvement Project (BI-4)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-5

Address other conjoined SFPUC anticipated projects within and nearby the project area
A January 2017 job announcement for a "California Native Plant Propagation Internship," describes a position assisting on a project with apparent overlapping project objectives. Please address the Sunol Long Term Improvements Project in Sunol, CA, which includes "upgrading the Sunol Yard operations and maintenance facilities and the construction of the Alameda Creek Watershed Center, an interpretive facility showcasing the natural cultural, scenic, and recreational resources of the Alameda Creek watershed" (Personal correspondence, January 19, 2017). There are plans for the Center to include a watershed discovery garden, trail that demonstrates the plant communities of the surrounding watershed, bioswales, and regionally appropriate California native plants. Where will the Center be located? EBCNPS would like to know if additional facilities are already being planned on the project area described in this dEIR. If so, these anticipated impacts should be accounted for and acknowledged here. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-5)

Response BI-4: Sunol Long Term Improvement Project

The commenter requests that the ACRP EIR address the Sunol Long Term Improvements Project as a related project.

The Sunol Long Term Improvements Project is identified in the ACRP EIR in Table 5.1-6 (page 5.1-37) as the Alameda Creek Watershed Center in Sunol and is considered in the EIR with respects to its potential to contribute to cumulative impacts. The commenter is correct in noting that the Sunol Long Term Improvements Project consists of improving the Sunol corporation yard and developing a new interpretive center, including a proposed Watershed Center interpretive facility, garden, and interpretive trail. The Sunol Long Term Improvements Project is located at the Sunol Corporation Yard and in the vicinity of the Sunol Water Temple, which is located off Paloma Way, approximately 0.5 miles north of the ACRP project site. Its footprint does not overlap with any part of the proposed

project, and no work or facilities to be constructed for the Sunol Long Term Improvements Project are proposed within the ACRP project area. The objectives of the two projects are separate and do not overlap. The purpose of the ACRP is recapture of water for municipal purposes, while the purpose of the Sunol Long Term Improvements Project is a combination of improvements to existing facilities at the Sunol Corporation Yard and development of a new interpretive center nearby. The Sunol Long Term Improvements Project would have no impact on riparian vegetation in Alameda Creek. Areas of potential, overlapping cumulative impacts between the Sunol Long Term Improvements Project and the ACRP would be restricted only to construction-related traffic and air quality impacts. The cumulative impact analyses in the ACRP EIR for these resources areas do consider and evaluate the potential for overlapping construction impacts from the ACRP with construction impacts of the Sunol Long Term Improvements Project.

11.4.6 CNPS Resources (BI-5)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-6

Please also consider our organization's resources (www.cnps.org) for selecting regionally appropriate native plants, best management practices for reducing spread of invasive plant species, as well as documenting presence of *Phytophthora*. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-6)

Response BI-5: CNPS Resources

The commenter requests consideration of their organization's resources for selecting regionally appropriate native plants, best management practices for reducing spread of invasive plant species, and documenting the presence of *Phytophthora*.

The Planning Department has referred the information provided by the commenter to the SFPUC. Using regionally-appropriate plant materials and best management practices for reducing spread of invasive plant species and preventing the spread of *Phytophthora* pathogens are consistent with current SFPUC practices. Due to concerns regarding *Phytophthora*, the SFPUC has halted the use of nursery stock and has restricted the importation of soils and fill, mulches, and organic erosion materials onto SFPUC lands during restoration projects. The commenter's recommendations are consistent with current SFPUC practices, which include use of native species in revegetation, use of local ecotypes for woody plantings, maintenance, monitoring, and performance criteria to limit invasive plants, and use of seed instead of container stock to reduce the risk of spread of *Phytophthora*.

11.4.7 Effects of Hydrologic Changes on Terrestrial Biological Resources (BI-6)

Issues Raised by Commenter

This response addresses the following comments, which are quoted below:

O-CNPS-4 O-CNPS-8

We are concerned that dEIR interpretation of impact to current conditions, does not take into account the important vegetation and wildlife services this area already provides despite years of releases and management differing from its historical existance [*sic*]. As the dEIR is currently written, higher fluctuation to water flows may allow for unacceptable destruction and decreased health of currently thriving vegetative alliance communities. Potential impacts to documented plant communities, where changes in water releases and flows may lead to collapse of these communities, is partly acknowledged but must be further analyzed and shown accurately as a significant biological impact. If unavoidable, mitigation for these impacts must show how SFPUC will provision for vegetation and wildlife corridor enhancement, at this same critical corridor location. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-4)

Preserve vegetative alliances and sensitive natural communities
Effects of changes in surface water and subsurface water levels on biological resources, need further analysis, such as impacts to rare California sycamore alliance, and sycamore alluvial woodlands resulting from groundwater and surface water changes. Mixed riparian forest may increase in the survey area, according to the dEIR. But, what would happen if this hugely valuable resource decreased in health or extant? This analysis is needed. Portions of riparian woodlands in the project area are considered rare, and impacts to them (including usage change impacts during drought periods, which are not yet sufficiently analyzed by this dEIR) are considered significant and should be primarily avoided. Excellent contextual examples of the significance of these vegetative alliances in the geographic area (outside the project area, survey area) are found throughout the Biological Resources section, and Appendix BIO1-f. Impacts from project facility construction, as well as the many years following of successful project operation, are all necessarily part of the impacts from this proposed project, and need tandem consideration for a complete picture of understanding. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-8)

Response BI-6: Effects of Hydrologic Changes on Terrestrial Biological Resources

These comments assert that further analysis is needed regarding the effects on biological resources due to changes in water flows and releases caused by the project. For the reasons described below, the EIR adequately analyzed the biological resources impacts of the proposed project consistent with CEQA requirements, and no further analysis or evaluation of biological resources is warranted. These comments are addressed individually below and include specific responses to all parts of each comment.

Comment O-CNPS-4 expresses concern that the EIR does not take into account the important vegetation and wildlife services this area already provides. The commenter states that higher fluctuation in water flows may allow for unacceptable destruction and decreased health of currently thriving vegetation alliance communities, and potential impacts to documented plant communities

must be further analyzed and shown accurately as a *significant* biological impact. The comment also states that the mitigation for these impacts must show how the SFPUC will provide for vegetation and wildlife enhancement. The EIR accounts for and addresses all of these issues, as described below.

EIR Section 5.14.2 describes in detail the current riparian conditions, including the species supported in these habitats, which fully reflects the recent "years of releases and management" along the affected reach of Alameda Creek and the resulting development of tree-dominated riparian vegetation and increased pooled water. The "releases and management" referred to by the commenter are assumed to be the combination of existing upstream diversions, quarry operations, and various other utility corridors, infrastructure, and anthropogenic changes that have affected this portion of the Alameda Creek watershed. Consistent with CEQA Guidelines Section 15125(a), the baseline used in the impact analysis uses current conditions as a basis for determining project impacts. Although the commenter suggests that the baseline does not take into account vegetation and wildlife services *despite* years of releases and management, a number of the resources present (e.g., tree-dominated woody riparian habitats, CRLF, western pond turtle) are in fact the *result of* years of releases and management. Thus, the EIR identifies the current conditions and considers the potential impact of the project on current conditions.

The commenter's statement that "higher fluctuation in water flows may allow for unacceptable destruction and decreased health of currently thriving vegetation alliance communities" is not supported by the EIR analysis. The EIR fully analyzes the impacts to woody riparian vegetation and habitats caused by any changes in water flows due to the ACRP project. The commenter is referred to EIR Section 5.14.1 and specifically to Table 5.14-1 (page 5.14-9) for clarification and analysis of the relationship between biological resource conditions and hydrologic conditions under three scenarios: existing conditions, with-CDRP conditions (e.g., the CDRP in operation) and with-project conditions (e.g., both the CDRP and the project in operation). Impact BI-6 (pp. 5.14-98 to 5.14-103) analyzes the potential impacts of changes in Alameda Creek flows due to the project on woody riparian vegetation and habitats. The EIR states under Impact BI-6, "several changes would occur to the pattern and quantity of surface flow that could alter the location and extent of various types of woody riparian vegetation," and that "both a reduction in quarry NPDES discharges and an increase in the variability of those discharges could have a substantial impact on the extent of woody riparian types most dependent on surface flows." The impact analysis concludes that this would be a *potentially significant* impact and identifies mitigation to reduce this impact to less than significant by restoring the woody vegetation along Alameda Creek, if affected by the ACRP project.

The commenter suggests that changes in water releases and flows may lead to collapse of plant communities and must be further analyzed and shown as a significant impact. The EIR fully analyzes the impacts of changes in flows caused by the ACRP project. As described in EIR Section 2.3 (pp. 2-9 to 2-11), upon completion of the Calaveras Dam Replacement Project (CDRP), the SFPUC will implement instream flow releases from Calaveras Reservoir and bypasses at the Alameda Creek Diversion Dam. The impacts of these changes in releases and bypass flows were analyzed as a part of the CDRP EIR and have accordingly been permitted in that project's California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement and National Marine Fisheries Service (NMFS) Biological Opinion (BO). CDRP flow changes are not impacts caused by the ACRP project because the CDRP releases and bypasses would be in existence at the start of ACRP operations. The

ACRP EIR addresses how operation of the ACRP would alter any of the flow conditions that would occur under with-CDRP conditions (see Table 5.14-1, p. 5.14-9). As described above, EIR Impact BI-6 identified potential impacts on woody riparian vegetation due to changes in Alameda Creek surface water flows that could be indirectly attributed to the ACRP. This analysis determined the project's impact to be potentially significant, consistent with the comment, and the EIR identified mitigation to reduce this impact to a less-than-significant level.

The final statement in O-CNPS-4 requests mitigation to show how SFPUC would provide for vegetation and wildlife corridor enhancement. Mitigation Measure M-BI-6, Riparian Habitat Monitoring and Enhancement Mitigation, identifies a three-step process in which the SFPUC would be required to map, monitor, and provide habitat enhancement if needed in order to ensure that there will be no net loss of tree-supporting riparian alliances due to ACRP operations.

For the reasons described above, the EIR provides an adequate analysis of the environmental impacts of the proposed project consistent with CEQA requirements. Additionally, the commenter offers no evidence to conclude that the project would result in more severe impacts to biological resources than identified in the EIR.

Comment O-CNPS-8 states that effects of changes in surface water and subsurface water levels on biological resources need further analysis, such as impacts to rare California sycamore alliance and sycamore alluvial woodland; that mixed riparian forest impacts should be considered; and that construction and operational impacts on sensitive riparian natural communities should be analyzed together.

As described above, Impact BI-6 provides a detailed analysis of surface and subsurface water patterns, under both baseline and with-project conditions, and the resulting effects on biological resources, with particular attention given to dry-season patterns because this is when riparian trees are in their most active growth and consequently most dependent on surface and subsurface water. As discussed on EIR pages 5.14-31 and 5.14-32, this analysis identifies the location and types of vegetation most likely to be potentially affected by project operation—the farthest downstream area where willow and mulefat thickets have developed during the past 30 years as a consequence of NPDES quarry discharges. Only this area and these vegetation types experienced stress and dieback during especially low discharges in Water Year 2012. This conclusion is based on the best available information, and the commenter offers no new information that would suggest any further analysis is necessary.

With respect to the comment on California sycamore alliance and sycamore alluvial woodland, this rare and sensitive natural community is recognized as occurring in the region but, as shown on Figure 5.14-1 (EIR pp. 5.14-3 to 5.14-4) and discussed on page 5.14-22, sycamore alluvial woodland is not present within the project area. Along with other large, mature trees, a few California sycamore trees are present as a minor component in the riparian woodland habitat along San Antonio Creek, and some California sycamores are present in the mixed riparian forest mapping unit in Subreach C2 near the confluence of Alameda Creek and the Arroyo de la Laguna, but they are not present in sufficient numbers for the area to be characterized as California sycamore alliance and sycamore alluvial woodland communities. As shown in Table 5.14-1 on EIR pages 5.14-9 through 5.14-14 and discussed in detail in Section 5.16, Hydrology, neither area is expected to experience changes to

hydrologic conditions as a result of the proposed project. Hydrology along San Antonio Creek is determined by overall groundwater elevations in the Sunol Valley and by flows in San Antonio Creek originating well upstream. Surface hydrology in Subreach C2 of Alameda Creek is determined by the seasonal rise and fall of groundwater in the Sunol Valley, not the NPDES quarry discharges. The massive size and maturity of the California sycamores are evidence that conditions in these areas have remained relatively constant for many decades, independent of the construction and operation of Calaveras Dam, the Sunol quarries, NPDES quarry discharges, and the Sunol filter galleries.

The commenter questions what would happen if mixed riparian forest decreased in health or extent within the project area. To the extent the project operations could cause this impact, the EIR analyzed and addressed the impact in Impact BI-6 and Mitigation Measure M-BI-6 (EIR pp. 5.14-97 to 5.14-103). The impact states, "Project operations could have a substantial adverse effect on riparian habitat or other sensitive natural community, including wetland habitats," and identifies this impact as a potentially significant impact that could be reduced to less than significant with implementation of the identified mitigation measure. Mitigation Measure M-BI-1a calls for baseline riparian habitat mapping in Subreaches A, B, and C1, the areas predicted to be potentially affected by reductions in NPDES quarry discharges indirectly attributable to the project. Mitigation Measure M-BI-6b calls for annual monitoring to document the extent of tree-supporting riparian alliances. A reduction in extent of tree-supporting riparian alliances from the baseline would trigger implementation of habitat enhancement measures as described in Mitigation Measure B-BI-6c on a 1:1 ratio based on extent. Mitigation Measure M-BI-6c calls for the SFPUC to develop and implement a plan for restoration and shall consist of a combination of plantings such as valley oaks and sycamores, which would compensate for any decrease in health and loss of extent of riparian vegetation in the project area. Thus, the impact analysis and conclusions presented in the EIR are consistent with the comment that these impacts should be considered *significant*, and the mitigation measure addresses the commenter's concerns regarding what would happen if the project were to results in adverse effect on the mixed riparian forest.

The commenter states that portions of the riparian woodlands in the project are considered rare and impacts to them, "including usage change impacts during drought periods" have not yet sufficiently been analyzed. As stated on EIR page 5.14-22, the EIR analysis considered all riparian vegetation, including tree-dominated types, to be sensitive under CEQA guidance, whether or not they were identified as sensitive or rare by CNDDB. The analysis considered any loss to be a significant impact. Therefore, the commenter's concerns are addressed in the EIR and no further analysis is needed.

The second part of Comment O-CNPS-8 deals with whether impacts to sensitive riparian communities were analyzed with respect to usage changes during drought periods. Please see Section 11.5, Response HY-6, for a detailed response concerning impacts during dry years. In brief, this response explains that due to the hydrogeologic conditions in the project area, both surface flows and subsurface flows during drought years under with-project conditions would be similar to conditions under with-CDRP conditions. Nevertheless, Mitigation Measure M-BI-6 would require monitoring changes in the extent of tree-supporting riparian alliances and mitigation if a net loss is sustained, as the EIR assumes that if a change were to occur, it would be attributable to the ACRP project.

The commenter notes that "excellent contextual examples of these vegetation alliances in the geographic area are described" in Appendix BIO1 and Section 5.14. The commenter accurately

describes information found in these sections. As the EIR indicates, different kinds of riparian vegetation are found upstream and downstream from the project area due to differing hydrologic conditions.

Finally, O-CNPS-8 suggests that construction and operational impacts should be considered together to gain a complete picture of project impacts. The EIR presents a complete analysis of the project impacts. The EIR analyzed construction impacts and concludes that impacts on all riparian vegetation would be less than significant with identified mitigation measures (Impact BI-3, pp. 5.14-90 to 5.14-91). The EIR analyzed impacts from project operations and concludes the project could have a significant adverse effect on riparian habitat or other sensitive natural communities, including wetland habitats. The impact was determined to be less than significant with identified mitigation measures (Impact BI-6, pp. 5.14-97 to 5.14-103). The analysis assumes that operational and construction impacts would occur sequentially, with construction necessarily occurring prior to operation. However, even when construction and operational impacts are analyzed together, the impact conclusion would remain the same, and the impacts would be reduced to a less-than-significant level with identified mitigation measures.

For the reasons described above, the Planning Department determined that the analysis in the EIR meets CEQA requirements and that no further analysis or evaluation of effects of hydrologic changes on biological resources is warranted.

11.4.8 Vegetation Mitigation Measures (BI-7)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-9

Improve vegetation mitigation requirements for project impacts
Replacement requirements are only applicable for trees at 6" diameter at base height (dbh) and above, where true actual impacts to habitat exist for removal of even a 3" dbh tree. We suggest decreasing the number of trees removed, and replacement for all trees removed as part of the project implementation. EBCNPS recommends the use of native species for revegetation wherever possible. In the event that native plants are used for landscaping and restoration, we request that a requirement be added to the plans to ensure that local ecotypes of native plants are used to prevent genetic contamination of any existing populations at the site and in the area of the project.

Invasive weed control measures in the dEIR also need improvement to show clear communication with contractors, and ultimately, for most effective restoration. Movement of equipment and personnel between these five staging areas, also should be recognized as a way to spread invasive plant populations, and needs to be addressed in the impacts and avoided. Monitoring measures should include invasive monitoring and mitigation for new populations potentially occurring downstream of construction sites. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-9)

Response BI-7: Vegetation Mitigation Measures

In Comment O-CNPS-9, the commenter suggests that the number of trees removed by the project should be decreased, and replacement for all trees (not just those greater than 6 inches diameter) should be incorporated into mitigation. The comment recommends local genotypes of native species for revegetation. Suggestions were made for improvement of monitoring and management of invasive weeds, including implementing control measures between staging areas and conducting monitoring and mitigation for new invasive plant populations potentially occurring downstream of the construction sites.

With respect to tree replacement, Mitigation Measure M-BI-1e (EIR page 5.14-83) specifies that "for each isolated locally native tree removed that is 6 inches in diameter at breast height…, one replacement planting shall be installed per inch of diameter of trees removed. Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case a suitable native species shall be installed." This requirement takes into account the size of the tree in determining the quantity of replacement trees to be planted. Only one tree would be removed as a result of construction activities, if the project is implemented. As stated on EIR page 3-15, "one mature tree that exists near the proposed electrical control building and electrical transformer would be removed." This tree is a California sycamore that re-sprouted from a 4-foot tall stump in a disturbed portion of the quarry, and its removal would require implementation of Mitigation Measure M-BI-1e. The project design required the control building and transformer to be near the power supply and pumps on the floating barges, and these in turn must be situated at the deepest part of Pit F2, the central-western side of the pit.

The commenter recommends the use of native species for revegetation whenever possible, and the use of local ecotypes to prevent genetic contamination of any existing populations at the site and in the area of the project. Consistent with Alameda Watershed Master Plan Policy V2, prohibit the planting of exotic plant species, SFPUC only uses native species for seeding. When feasible, for planting woody species, local ecotypes are used. EIR Mitigation Measure M-BI-1e (page 5.14-83) specifies that "replacement trees shall be the same native species as those removed unless site conditions are unsuitable, in which case another suitable native species shall be installed instead." And, "Replacement trees shall be planted in or near the location from where trees were removed as feasible and in locations suitable for the replacement species." As indicated at the end of this response, this mitigation measure has been clarified to define "suitable" species as those native to the Sunol Valley and capable of growing, once established, under prevailing site conditions without additional inputs of water or other chemicals. Therefore, the California sycamore discussed in the above paragraph would be replaced with California sycamores—the number proportional to the diameter of the existing tree—unless the site conditions are unsuitable, in which case the replacement sycamores would need to be situated on a nearby floodplain with appropriate hydrology or else other suitable native species would be installed instead. As stated in Mitigation Measure M-BI-1e, seeds shall be used at tree replacement planting sites rather than container stock.

With regard to invasive weed control measures, SFPUC Watershed Management Plan policy (EIR page 5.14-68) Policy V1 calls for an integrated pest management program; Policy V3 prohibits the planting of exotic plant species; and Policy V4 is designed to reduce the occurrence of noxious weeds

and invasive exotic plant species through eradication and control practices. This project would be consistent with Watershed Management Plan guidance. The policy of not planting exotic plant species means that revegetation would use native species.

Mitigation Measure M-BI-1e (EIR pp. 5.14-81 to 5.14-84) contains a section addressing invasive weed control measures. It identifies invasive weed species occurring extensively in the project area, and specifies ten measures to reduce the influx, on-site growth, and off-site spread of weeds, including treatment of the work areas to minimize seed set in the growing season prior to the start of construction. Surface soil, which already contains a substantial seed bank of weeds, would *not* be conserved and spread. No invasive species shall be used in any restoration seeding. Performance criteria are established for maximum cover of target invasives. Monitoring and maintenance are carried out for a minimum of five years to ensure that performance standards are met. Because the project area is relatively small and compact, with extensive weed infestations surrounding it, the focus of control measures would be on avoiding on- and off-site movement of weeds by ensuring that equipment is clean when it enters and leaves the site and preventing the introduction of new weed species not already present in the area. The spread downstream of invasive species would be limited by best management practices described in Mitigation Measure M-BI-1e (EIR pp. 5.14-81 to 5.14-84), which would limit soil movement and spread of invasive species; see also discussion in Response BI-8, below. Vehicular activity is already limited to upland areas. Thus, monitoring for invasive plant species would be limited to the project footprint.

In response to this comment, the following text under Mitigation Measure M-BI-1e on page 5.14-83 of the Draft EIR was modified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

- For each isolated locally native tree removed that is 6 inches in diameter at breast height [dbh] or 10 inches aggregate dbh for multi-trunk trees, one replacement planting shall be installed per inch of diameter of trees removed. ~~Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case a suitable native species shall be installed.~~ For example, eight planting basins shall be planted with coast live oak acorns to replace one 8-inch coast live oak tree. Seeds shall be used at planting sites rather than container stock to prevent the spread of soil-borne pathogens such as phytophthora. Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case either the replacement plantings shall be located in proximity to the project area where site conditions are suitable for that species or a suitable native species shall be installed. "Suitable" species are defined as those native to the Sunol Valley and capable of growing, once established, under prevailing site conditions without additional inputs of water or other chemicals.

The above revision does not affect the analysis or conclusions of the EIR.

Thus, as described above, the EIR presents appropriate analysis and identifies mitigation measures that satisfy CEQA requirements.

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11.4.9 Measures for Reducing Construction Impacts (BI-8)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-10

Protect watershed from runoff at construction sites
Mitigation measures to minimize or avoid impacts on biological resources during construction activities, should include more robust provisions for filtering runoff and protecting riparian resources from silt and invasive plant seed bank spread. Staging areas need to be placed further away from riparian corridor, with a stated buffer of at least 300' from documented riparian areas. Although much of this area is considered previously disturbed and ruderal, all riparian and wetland areas require enhanced consideration for impacts even for temporary construction activity. Especially with construction planned to start in Fall 2017 and occurring partially during the 2017-18 and 2018-19 rainy seasons, this dEIR needs to include more protection measures for avoiding direct and indirect disturbance of existing vegetative communities. Uncontrolled silt movement from construction sites will increase stream turbidity, create new microenvironments for flora, and redistribute water movement, possibly impacting aquatic wildlife downstream.

Staging areas currently total 8.8 acres in previously disturbed areas; however, we think this total could be reasonably reduced, and that placement of these areas should also account for preserving the relative health of some once-disturbed areas over other severely degraded areas. Have any of these previously disturbed areas served as previous mitigation or experienced beneficial restoration attempts? Determining how long an area has had to recover, may be as easy as reporting the year when the area last experienced disturbance from other projects. It is critical that SFPUC consider effective protections for Alameda Creek buffering from construction activities, including selection of staging area placement. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-10)

Response BI-8: Measures for Reducing Construction Impacts

Comment O-CNPS-10 states that mitigation measures should include more robust provisions for filtering runoff and protecting resources from silt and invasive plant seed bank spread. The commenter recommends that staging areas be placed at least 300 feet from documented riparian areas. The commenter notes that wetland and riparian habitats should have enhanced consideration for impacts. The commenter recommends more protection measures for avoiding direct and indirect disturbance of existing vegetation communities and preventing uncontrolled silt movement from construction sites. The commenter also recommends reducing the extent of staging areas, and placing them in the most seriously degraded areas.

With respect to minimizing the movement of silt and invasive plants into riparian areas, as stated in Section 5.16, Hydrology and Water Quality, Impact HY-1 (EIR pp. 5.16-65 to 5.16-66), "The proposed project is subject to regulatory requirements protecting water quality, and project construction activities would include implementation of protection measures required to comply with these requirements. SFPUC or its contractors must develop and submit a Stormwater Pollution Prevention Plan (SWPPP) and implement site-specific best management practices (BMPs) to prevent discharges of pollutants in construction-related stormwater runoff or from dewatering activities into downstream water bodies,

including Alameda and San Antonio Creeks." Implementation of the SWPPP would ensure that erosion and sediment control BMPs are site-specific and continually maintained, which would prevent uncontrolled silt movement—as well as weed seeds—into Alameda or San Antonio Creeks.

The suggested 300-foot buffer from the riparian zone is not feasible in all cases because the project itself and several of the proposed constructed facilities are located adjacent to the Alameda Creek floodplain. As described in Response BI-7 above, the proposed floating barges and pumps must be situated over the deepest portion of Pit F2, which is on the central-western side of the pit near Alameda Creek, and the power supply and control building must be situated as near to the pumps as possible. As a result, several of the permanent features of the project have been sited 100 to 200 feet from the Alameda Creek riparian zone, and the relatively small Staging Areas 4 and 5 are nearby. Mitigation Measure M-BI-1a (EIR page 5.14-78) specifies that all staging areas shall be located at least 50 feet from riparian habitat, creeks, and wetlands. As shown in Figure 1-2 (EIR page 1-4), the larger Staging Areas 1, 2, and 3 would be located much farther than 50 feet from Alameda Creek because quarry pits and other infrastructure occupy most of the area nearer. The EIR analysis found that use of the staging areas where located would have a less-than-significant impact on Alameda Creek with implementation of the SWPPP and Mitigation Measure M-BI-1a.Therefore, requiring relocation of the staging areas is not warranted under CEQA.

The commenter states that all riparian and wetland areas require special consideration for impacts, even for temporary construction activity. The project is designed to avoid all such areas during construction. As stated on EIR page 5.14 -78, all staging and vehicle fueling/maintenance would be limited to a distance of at least 50 feet from riparian vegetation and protective fencing would be installed outside the dripline of trees; thus, no direct impact on riparian vegetation or habitat would occur as a result of the proposed project.

The commenter states that more protection measures are needed to avoid direct and indirect disturbance of existing vegetative communities. This comment is noted. The Planning Department has determined that implementation of the required SWPPP (see EIR pp. 5.16-66 to 5.16-69 for best management practices included in the SWPPP) and the restoration of affected areas per Mitigation Measure M-BI-1e (see EIR pp. 5.14-81 to 5.14-85 for details) would minimize direct and indirect disturbance of existing vegetation to a less-than-significant level and that no additional measures are required by CEQA.

As described in the EIR project description (pp. 3-15 to 3-16), the proposed five staging areas totaling 8.8 acres are all within previously disturbed areas on City and County of San Francisco (CCSF)-owned Alameda Watershed lands. All of these areas have been disturbed as part of quarrying operations and prior SFPUC projects. Although some of the staging area were affected by other SFPUC projects, some staging areas have been revegetated as recently as 2015 as part of the San Antonio Backup Pipeline Project.[1] As stated in Mitigation Measure M-BI-1a (EIR page 5.14-77), "Construction contractors shall limit the extent of the construction disturbance area to that necessary for project construction and avoid outside areas by posting signage delineating the construction

[1] San Antonio Backup Pipeline Project Environmental Impact Report, San Francisco Planning Department Case No. 2007.0039E, September 2012.

disturbance area with flags, stakes, or fencing." Therefore, the construction footprint may be smaller than the proposed extent, if feasible, and in any event, the disturbed area would not exceed the extent described in the EIR. Pursuant to Mitigation Measure M-BI-1e, vegetation in areas temporarily affected by the project, such as for staging, would be restored to baseline or better conditions. Where areas were previously restored, restoration of those areas would start again upon completion of ACRP. On the basis of the EIR impact analysis and the conclusion that construction impacts on biological resources can be reduced to a less-than-significant level with implementation of identified mitigation measures, no further changes in placement of staging areas are warranted.

Therefore, the Planning Department concludes that the information presented in the EIR, as clarified by this response, addresses all of the commenter's concerns regarding measures for reducing construction impacts on biological resources.

11.4.10 Priority of Alameda Creek for Protection of Riparian Resources (BI-9)

Issues Raised by Commenters

This response addresses part of the following comment, which is quoted below:

O-CNPS-11

Demonstrate impact analysis for diversion and recapture under drought conditions
During this transitional time of planning for an Alameda Creek Watershed Center concept as well as organizing jurisdictional and management authority over water rights throughout different project sections, EBCNPS requests that special consideration be given to ensure that this remnant of Alameda Creek watershed is prioritized for protection. (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-11)

Response BI-9: Priority of Alameda Creek for Protection of Riparian Resources

Comment O-CNPS-11 requests special consideration to ensure that this remnant of Alameda Creek watershed is prioritized for protection. The subheading of this comment refers to impact analysis for diversion and recapture under drought conditions; please refer to Section 11.5, Response HY-6 for the response that demonstrates the adequacy of the EIR's impact analysis during dry years. The text of the comment, which is responded to below, does not address the adequacy or accuracy of information contained in the Draft EIR.

As described in the EIR, existing plans and policies have identified Alameda Creek for protection. The Alameda Creek floodplain is protected by Policies 110, 122, 123, 125, 126, and 129 in the Alameda County's East County Area Plan (EIR pp. 5.14-67 to 5.14-68). The Alameda Creek floodplain is also protected by Policy V8 in the SFPUC's Alameda Watershed Management Plan (EIR page 5.14-68),

which states the goal to, "Protect, conserve and enhance wetlands and riparian communities", including arroyo willow, coast live oak riparian forest, valley oak woodland, and sycamore alluvial woodland. Watershed Management Plan Policy W1 identifies "Alameda Creek and adjacent land through the entire survey area as an area of high ecological sensitivity" (EIR page 5.14-69). Construction of the ACRP would not directly affect Alameda Creek. If effects were to occur to the riparian vegetation along Alameda Creek during operation, Mitigation Measure M-BI-6c (Habitat enhancement, Subreaches B and C1 to achieve no net loss of tree-supporting riparian alliances) would be implemented to reduce the operational impacts of the project to a less-than-significant level. Implementation of the project would not preclude future restoration opportunities that may occur in the Alameda watershed separate from this project. Thus, the EIR provides information on the plans and policies relevant to protecting the Alameda Creek watershed. The commenter's request for prioritizing these areas for protection is noted and will be transmitted to City decision-makers as part of the project approval process.

11.4.11 Effects on Changes in Plant Assemblages to Steelhead (BI-10)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

A-ACPW-7

- Change in plant assemblages i.e.; from woody riparian trees to shrubbery could also result in habitat conditions that are not conducive to steelhead recovery. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-7)

Response BI-10: Effects on Changes in Plant Assemblages to Steelhead

The commenter states that change in plant assemblages, i.e., from woody riparian trees to shrubbery (in the lower Alameda Creek flood control channel) could also result in habitat conditions that are not conducive to steelhead recovery.

As discussed in Impact BI-6 (EIR pp. 5.14-97 to 5.14-100), potential operational impacts on riparian trees and shrubs were concluded to be limited to Subreaches A, B, and C1 in Alameda Creek in the lower Sunol Valley, directly downstream from Pit F-2. The potential impact in this area is due to the localized effect of a potential reduction in dry-season NPDES quarry discharges indirectly attributable to the project. In recent decades, NPDES quarry dry-season discharges into Alameda Creek have resulted in development of a narrow corridor of dense woody riparian trees and shrubs along the low-flow channel for a distance of nearly one mile. The proposed project could indirectly reduce the dry-season NPDES quarry discharges, thus potentially impacting this local development of riparian vegetation. Riparian vegetation downstream from Subreach C1 is supported by larger and

more consistent water supplies, such as groundwater and flows in Arroyo de la Laguna, and is not expected to be affected by the project, either directly or indirectly.

Currently, steelhead are prevented from migrating upstream through Niles Canyon by water supply and flood control infrastructure in lower Alameda Creek.[2] The potential impact on steelhead of any changes in riparian vegetation along Subreaches A, B, and C1would be less than significant because, as described in EIR Section 5.14.5 (pp. 5.14-144 to 5.14-136), when restored to the creek, migrating steelhead would only pass through this section of Alameda Creek and not depend on it for spawning or rearing.

As described in Impact BI-6 (page 5.14-100), the effect of the NPDES quarry discharges on woody riparian vegetation becomes undetectable in Subreach C2 immediately downstream in the Sunol Valley where depth to groundwater has always been shallow, water is present within the stream channel year-round, and riparian vegetation is large and mature. No effect would result from the proposed project farther downstream where year-round flows are typical and are the result of other, larger hydrologic influences from the Arroyo de la Laguna.

Thus, the EIR adequately identified any potential changes in plant assemblages in Subreaches A, B, and C1 due to project operations and determined that the project would not affect habitat conditions for steelhead recovery.

11.4.12 Impact on Wildlife Corridors (BI-11)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

O-CNPS-7

Recognize and reduce significant impacts to terrestrial wildlife corridor connection
Native plant landscapes, even when impacted by invasive colonization and even when not containing a keystone rare plant species, are still vitally important to wildlife corridors; examples include mulefat scrub, coyote brush scrub, and willow thickets as documented (especially when associated with riparian areas, these are considered sensitive natural communities in need of enhanced protections). In fact, the Bay Area Open Space Council publishes several tools which demonstrate the Alameda Creek Recapture Project Area as both a "Critical Linkage," and an "Area Essential to Conservation Goals." Both classifications ("critical" and "essential") are the highest ranking selections, contrasting on the other end of the conservation priority spectrum with fragmented areas. Especially important to consider is the existence of close by Highway 84, which serves as an additional hurdle to wildlife utilizing this critical corridor. It makes sense that wildlife travelling between Pleasanton Ridge Regional Park or Vargas Plateau Regional Park, and Sunol Regional Wilderness, as well as their respective neighboring open space areas, would favor riparian locations such as the project area. Please consider impacts to this area, as it effects the corridor travel.

[2] http://ca-alamedacountywater.civicplus.com/index.aspx?NID=456

We recommend SFPUC closely examine the Bay Area Open Space Council's Conservation Lands Network resources, which are designed for land managers. According to the Council's description, the "Conservation Lands Network (CLN) is the recommended configuration of interconnected habitats for preserving biodiversity in the Bay Area. Many factors were considered… including the conservation targets…, land use, proximity to existing protected lands, conservation suitability (ecological integrity) of the landscape, in addition to the expert opinion of focus team scientists" (http://www.bayarealands.org/explorertool.html, accessed January 20, 2017). (Karen Whitestone, Conservation Analyst, California Native Plant Society, January 17, 2017, O-CNPS-7)

Response BI-11: Impact on Wildlife Corridors

The commenter asserts that vegetation communities within the survey area serve as an important wildlife corridor and requests that project impacts to this wildlife travel corridor be recognized and reduced. The commenter also requests that the SFPUC examine the Bay Area Open Space Council's Conservation Lands Network resources.

The EIR acknowledges that wildlife corridors exist within the survey area and addresses project construction and operational impacts to wildlife corridors in Section 5.14.4.3, Impact BI-4 (pp. 5.14-91 to 5.14-92) and in Section 5.14.4, Impact BI-7 (pp. 5.14-103 to 5.14-104), respectively.

As stated in Impact BI-4, wildlife movement is currently limited in the proposed construction areas due to active quarry operations. Construction activities would occur in largely developed and disturbed areas as shown on Figure 3-3 in Chapter 3, and would not occur in the Alameda Creek channel. The EIR acknowledges that construction activities could temporarily impede the movement of wildlife within the construction area. However, under Mitigation Measure M-BI-1e (pp. 5.14-81 to 5.14-84), the SFPUC would be required to restore the project site to pre-project conditions following construction, and wildlife would be able to utilize the site as they did prior to construction.

As described in Impact BI-7, "Alameda Creek within the survey area currently provides a movement corridor for many native wildlife species that utilize riparian corridors." The proposed project would not add any obstructions to the creek that would interfere with wildlife movement, and as discussed in Section 5.14.4.4, Impact BI-5 (pp. 5.14-92 to 5.14-97), project operations are not expected to significantly reduce habitat for special status species. As discussed in Section 5.14.4.4, Impact BI-6 (pp. 5.14-97 to 5.14-102), project operations could result in a loss in the extent or condition of riparian habitat. As described in Impact BI-7, wildlife that currently migrate through the entire Alameda Creek corridor already migrate through a long segment of sparsely vegetated riparian habitat upstream of the survey area. Although a reduction in NPDES quarry discharges indirectly due to project operations may result in significant losses or changes of riparian habitat, these potential losses or changes would not prevent or substantially interfere with wildlife movement through the creek corridor as this type of habitat currently exists within the movement corridor upstream of the survey area.

The commenter also requests that the SFPUC review the Bay Area Open Space Council's Conservation Lands Network resources. This comment does not directly address the adequacy or accuracy of information contained in the Draft EIR. Additionally, these comments will be transmitted to City decision-makers as part of the project approval process. As described above, the proposed project would not result in long term impacts to wildlife corridors. Therefore, no mitigation for wildlife

corridors impacts, including any modifications to land management, is required under CEQA as part of the ACRP EIR.

11.4.13 Jurisdictional Status of Pit F2 (BI-12)

Issues Raised by Commenter

This response addresses the following comments, which are quoted below:

A-RWQCB-1 O-ACA-6

Comment 1. Jurisdictional status of Pit F-2.

Text in Section 5.14.2.7, Site Conditions, Wetlands, and Other Waters, assumes that Pit F2 would be considered non-jurisdictional by the Water Board. Pit F2 meets the definition of waters of the State in the Porter-Cologne Act and the DEIR acknowledges in Table 5.16-9 that the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) includes beneficial uses for Alameda Creek Quarry Ponds. Therefore, the SFPUC should assume that Pit F2 will be treated as a jurisdictional water of the State. This comment also applies to the discussion of Impact BI-3 on page 5.14-90. (Brian Wines, Water Resource Control Engineer, San Francisco Bay Regional Water Quality Control Board, January 17, 2017, A-RWQCB-1)

The project may require consultation with the National Marine Fisheries Service due to potential impacts to Central California Coast steelhead trout. The project may also require a permit under the Clean Water Act, since Pit F-2 may qualify as "waters of the United States" under the Clean Water Rule (80 FR 37054). The project may also require notification of the project to California Department of Fish and Wildlife under California Fish and Game Code section 1602. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-6)

Response BI-12: Jurisdictional Status of Pit F2

This group of comments asserts that Pit F2 meets the definition of waters of the state in the Porter-Cologne Act and that the SFPUC should assume that Pit F2 will be treated as a jurisdictional water of the state.

As described in the EIR, Section 5.14.2.7, Site Conditions, Wetlands and Other Waters (pp. 5.14.-38 to 5.14-39), for the purposes of this EIR, based on prior jurisdiction determinations by the U.S. Army Corps of Engineers[3] and the Regional Water Quality Control Board (RWQCB)[4] for adjacent quarry pits (Pit F3-West and Pit F3-East), it is assumed that Pit F2 would not be considered a water of the state since it has been used to store and manage water to support active mining on Surface Mining

[3] USACE, Letter to YinLan Zhang, San Francisco Public Utilities Commission from Jane Hicks, U.S. Army Corps of Engineers verifying the jurisdictional delineation maps submitted on June 14, 2010 entitled "USACE File # 08-00207S, San Francisco Public Utilities Commission, San Antonio Backup Pipeline." July 8, 2011.

[4] RWQCB, Conditional Water Quality Certification for the San Antonio Backup Pipeline Project, Alameda County, February 5, 2013.

Permit (SMP) 32 since 2006. Pit F2 was excavated in an upland area as a result of quarry mining activities and is currently being maintained to function as a treatment system as part of SMP-32 quarry operations. The component of Alameda Creek that naturally permeates into the subsurface and seeps into the SMP-32 pit across Interstate 680 is routed to Pit F2 by the quarry operator for settling and is subsequently used for dust control, irrigation, and for processing sand and gravel at its processing plant.

Comment A-RWQCB-1 also states that "the DEIR acknowledges in Table 5.16-9 that the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) includes beneficial uses for Alameda Creek Quarry Ponds." In Section 5.16.3.1, Basin Plan — Beneficial Uses and Water Quality Objectives (pp. 5.16-53 to 5.16-54), the EIR does describe the beneficial uses of the Alameda Creek Quarry Pits as described in the Basin Plan. However, in Table 5.16-9 (p. 5.16-54), the Draft EIR incorrectly included the Alameda Creek Quarry Ponds, which refer to the abandoned and retired quarry ponds located in Fremont that are operated as recreational facilities by the East Bay Regional Park District. These quarry ponds are not located in the Sunol Valley and are not relevant to the ACRP.

Given the information provided above, for purposes of this EIR, it is assumed that Pit F2 would not be considered a water of the state. The jurisdictional status of Pit F2 may be revised as part of the permitting process. Nevertheless, the EIR provides a full analysis of impacts to wetlands, waters, and riparian areas, including Pit F2, in Impact BI-2 in Section 5.14.4.3 (pp. 5.14-88 to 5.14-89), Impact BI-3 in Section 5.15.4.3 (pp. 5.14-90 to 5.14-91), and in Impact BI-6 in Section 5.14.4.4 (pp. 5.14-97 to 5.14-102).In response to these comments, the following text on pages 5.14-38 and 5.14-39 of the Draft EIR was modified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> Pit F3-West and Pit F3-East were not considered jurisdictional by the Corps,[58] RWQCB,[59] or CDFW[60] under permits issued for the SABPL project so it is assumed that Pit F2 would also be considered non-jurisdictional, since it is also part of SMP-24 (consisting of Pits F2, F3-West, and F3-East), which since 2006 has been used to store and manage water to support active mining on SMP-32. Pit F2 was excavated in an upland area as a result of quarry mining activities and is maintained to function as a treatment system as part of SMP-32 quarry operation. Groundwater that seeps into the SMP-32 pit across Interstate 680 is routed to Pit F2 by the quarry operator for settling and is subsequently used for dust control, irrigation, and for processing sand and gravel at its processing plant. Pit F2 is not currently considered a water of the state since it is part of a treatment system for an active quarry operator.

[58] USACE, Letter to YinLan Zhang, San Francisco Public Utilities Commission from Jane Hicks, U.S. Army Corps of Engineers verifying the jurisdictional delineation maps submitted on June 14, 2010 entitled "USACE File # 08-00207S, San Francisco Public Utilities Commission, San Antonio Backup Pipeline." July 8, 2011.

[59] RWQCB, Conditional Water Quality Certification for the San Antonio Backup Pipeline Project, Alameda County, February 5, 2013.

[60] CDFW, Final Lake or Streambed Alteration Agreement Notification No. 1600-2012-0277-R3 San Antonio Backup Pipeline Project, December 19, 2012.

Additionally, in response to the RWQCB comment, the following text on page 5.16-54 of the EIR was clarified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> ~~The beneficial uses of the quarry pits include groundwater recharge, commercial and sports fishing, warm and cold freshwater habitat, wildlife habitat, and body-contact and non-body-contact recreation.~~

TABLE 5.16-9
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE SUNOL VALLEY

Water Body	Designated Beneficial Uses
Alameda Creek	AGR, COLD, GWR, COMM, MIGR, RARE, REC-1, REC-2, SPWN, WARM, WILD
Arroyo de la Laguna	GWR, COLD, MIGR, SPWN, WARM, WILD, REC-1, REC-2
Calaveras Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
San Antonio Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
Sunol Valley Groundwater Basin	MUN, PROC, IND, AGR
~~Alameda Creek Quarry Pits~~	~~GWR, COMM, COLD, WARM, WILD, REC-1, REC-2~~

BENEFICIAL USES KEY:

MUN (Municipal and Domestic Supply); AGR (Agriculture); IND (Industrial Service Supply); REC-1 (Water Contact Recreation); REC-2 (Noncontact Water Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat); FRSH (Freshwater Replenishment); MIGR (Fish Migration); SPWN (Fish Spawning); WILD (Wildlife Habitat); GWR (Groundwater Recharge); PROC (Industrial Process Supply); COMM (Commercial and Sport Fishing); RARE (Preservation of Rare and Endangered Species)

SOURCE: SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* March 20, 2015. (Tables 2-1 and 2-2)

The above revisions do not affect the analysis or conclusions of the EIR.

11.4.14 Jurisdictional Status of Alameda Creek (BI-13)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

A-RWQCB-2

Comment 2. Jurisdictional status of Alameda Creek.

Text in Section 5.14.2.7, Site Conditions, Wetlands, and Other Waters, states that, "Alameda Creek would continue to be potentially jurisdictional by the Corps, RWQCB, and CDFW under with-CDRP conditions." The adjective "potentially" is not necessary. Alameda Creek is subject to Water Board jurisdiction. (Brian Wines, Water Resource Control Engineer, San Francisco Bay Regional Water Quality Control Board, January 17, 2017, A-RWQCB-2)

Response BI-13: Jurisdictional Status of Alameda Creek

This commenter states that Alameda Creek is considered jurisdictional by the RWQCB and it is not necessary to label it "potentially" jurisdictional in Section 5.14.2.7.

Comment noted, and the Final EIR is clarified to note this correction.

In response to this comment, the following text on page 5.14-39 of the Draft EIR was clarified as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> Alameda Creek would continue to be considered ~~potentially~~ jurisdictional by the Corps, RWQCB, and CDFW under with-CDRP conditions.

The above revision does not affect the analysis or conclusions of the EIR.

11.4.15 Wetlands Significance Criterion (BI-14)

Issues Raised by Commenter

This response addresses the following comment, which is quoted below:

A-RWQCB-3

Comment 3. Significance criteria.

Section 5.14.4.1, includes the significance criteria for assessing impacts to terrestrial biological resources. The third bullet in this section refers to "substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act." This criteria should be revised to include wetlands that are not protected by federal laws, but are protected as waters of the State. CEQA is a State law and CEQA review should assess impacts to all resources subject to State jurisdiction. (Brian Wines, Water Resource Control Engineer, San Francisco Bay Regional Water Quality Control Board, January 17, 2017, A-RWQCB-3)

Response BI-14: Wetland Significance Criterion

The commenter requests that the significance criterion that evaluates "substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act" should be revised to include wetlands that are not protected by federal laws, but are protected as waters of the state.

The EIR addresses potential project impacts related to significance criteria that are included in San Francisco Planning Department Initial Study Checklist, which is a modified version of the checklist in Appendix G of the CEQA Guidelines. The checklist item pertaining to jurisdictional wetlands requires that the CEQA document evaluate whether a project would "have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling,

hydrological interruption, or other means?" Appendix G of the CEQA Guidelines (section IV.c) specifies "federally protected wetlands" should be analyzed, and it does not state that impacts to wetlands that are protected as waters of the state should be analyzed.

Although the significant criterion cited by the commenter does not specifically address impacts to wetlands protected as waters of the state, the EIR fully analyzes impacts to wetlands and waters that may be considered jurisdictional by the state, including CDFW and/or RWQCB. EIR Section 5.14.4.1, Significance Criteria (pp. 5.14-71 to 5.14-72) includes significance criteria that require evaluation of adverse effects on any riparian habitat. The EIR addresses these effects in Impacts BI-2, Impact BI-3, and Impact BI-6. Impact BI-2 in Section 5.14.4.3 (pp. 5.14-88 to 5.14-89) analyzes potential project construction impacts to riparian habitat, Impact BI-3 in Section 5.15.4.3 (pp. 5.14-90 to 5.14-91) analyzes potential project construction impacts to wetlands that may be considered jurisdictional by the Corps and/or RWQCB, and Impact BI-6 in Section 5.14.4.4 (pp. 5.14-97 to 5.14-102) analyzes potential project operational impacts to riparian and wetland habitats.

Therefore, although the CEQA significance criterion cited by the commenter does not specifically state that impacts to wetlands and waters of the state need to be analyzed, the ACRP EIR fully addresses waters that may be subject to both federal and state jurisdiction.

11.4.16 Fisheries Regulatory Framework (BI-15)

Issues Raised by Commenters

This response addresses all or part of the following comment, which is quoted below:

A-RWQCB-4

Comment 4. The Basin Plan should be referenced in the discussion of the regulatory framework for fisheries resources.

The *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) defines the beneficial uses of waters of the State. The beneficial uses defined for Alameda Creek include fish migration and fish spawning (See Table 5.16-9 in the DEIR). Therefore, the Basin Plan should be included in the discussion of State Regulations in Section 5.14.6.2 of the DEIR. (Brian Wines, Water Resource Control Engineer, San Francisco Bay Regional Water Quality Control Board, January 17, 2017, A-RWQCB-4)

Response BI-15: Fisheries Regulatory Framework

This comment states that the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) should be included in the Fisheries Resources regulatory framework section.

EIR Section 5.16.3.1 (pp. 5.16-53 to 5.16-54) includes a discussion of the Basin Plan in the context of the Hydrology and Water Quality impact analysis, and identifies designated beneficial uses of surface water bodies and groundwater in the Sunol Valley; shown in Table 5.16-9, including fish

migration and fish spawning in Alameda Creek. Section 5.14.6 of the EIR includes the Regulatory Framework for Fisheries Resources (pp. 5.14-136 to 5.14-139). The commenter is correct in noting that the beneficial uses identified in the Basin Plan are also relevant to the Fisheries impact analysis.

In response to this comment, the following text on page 5.14-137 of the Draft EIR was added after the second full paragraph in Section 5.14.6.2 (deleted text is shown as ~~strikethrough~~ and new text is underlined):

San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)—Beneficial Uses

The Water Quality Control Plan for the San Francisco Bay Region, or Basin Plan,[57a] designates the beneficial uses supported by the surface water bodies in the proposed project area. The designated beneficial uses of surface water bodies in the Sunol Valley as they pertain to fisheries resources are shown in **Table 5.14-5**. See Section 5.16, Hydrology and Water Quality, for further discussion of the Basin Plan.

TABLE 5.14-5
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE SUNOL VALLEY RELEVANT TO FISHERIES RESOURCES

Water Body	Designated Beneficial Uses
Alameda Creek	AGR, COLD, GWR, COMM, MIGR, RARE, REC-1, REC-2, SPWN, WARM, WILD
Arroyo de la Laguna	GWR, COLD, MIGR, SPWN, WARM, WILD, REC-1, REC-2
Calaveras Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
San Antonio Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2

BENEFICIAL USES KEY:
MUN (Municipal and Domestic Supply); AGR (Agriculture); REC-1 (Water Contact Recreation); REC-2 (Noncontact Water Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat); MIGR (Fish Migration); SPWN (Fish Spawning); WILD (Wildlife Habitat); GWR (Groundwater Recharge); COMM (Commercial and Sport Fishing); RARE (Preservation of Rare and Endangered Species)

SOURCE: SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). March 20, 2015. (Tables 2-1 and 2-2)

[57a] SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* March 20, 2015.

These revisions do not change the analysis or the conclusions in the EIR.

11.4.17 Effects of Hydrologic Changes on Fisheries Resources (BI-16)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-NMFS-1	A-ACPW-2	A-ACPW-3	A-ACPW-4
A-ACPW-5	A-ACPW-6	A-ACWD2-7	A-ACWD2-12

Based on the NMFS review of the DEIR, additional information is needed to conclude the proposed ACRP will not significantly impact native fish in upper Alameda Creek, including threatened CCC steelhead. The DEIR indicates predicted changes in the flow regime are expected to be small and the long-term operation is not anticipated to result in substantial changes to flows or aquatic habitat conditions. Given the dynamic nature of surface flow in central California streams, NMFS recommends the hydrological analysis presented in the DEIR include information regarding day-to-day changes in the surface flow of Alameda Creek. The presentation of day-to-day changes in surface flows will provide information critical to assessing the ACRP's potential effects on steelhead migration and the duration of flows for seasonal rearing of juvenile steelhead in the Sunol Valley. In particular, the operation of the ACRP could lead to fewer days of surface flow connection through the Sunol Valley. NFMS recommends a hydrologic analysis that includes an evaluation of the number of days that streamflow in Alameda Creek remains connected to flow in Niles Canyon under the expected range water year conditions with and without the ACRP. (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-1)

Figure 2 of the ESA Report in the EIR identified Steelhead study reach extending from upstream of Calaveras Dam to SF Bay. However, there is limited discussion of the effects of recapturing the entire bypassed flows at ACRP in Sunol on the downstream segment of Alameda Creek. Given that there is significant evapo-transpiration loss of flows between the diversion dam and the recapture project in Sunol, it is possible that SFPUC would be diverting significantly more flows beyond the bypass flow releases from the Diversion dam. Ultimately, this will result in even less flows from the southerly Alameda Creek watershed reaching the flood control channel downstream with disastrous consequences to migratory fish. The evapo-transpiration loss of flows, recapture of flows in exceedance of the amount bypassed at the Dam is not clearly analyzed in the EIR. The District suggests providing data clarifying flow losses between the diversion dam and the flood control channel and how much flows is expected to reach the lower Alameda Creek below the recapture facility in Sunol. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-2)

ACWD and the Flood Control District anticipate construction start of the fish ladder at the BART Weir/RD1 structures by 2019. The Flood Control District is also g modifying the existing low-flow channel and removing existing grade control structures to support fish migration through the reach downstream of the BART Weir. The proposed changes are based on modeling results calling for minimum flows of 40 cfs during critical migration periods in the lower Alameda Creek (flood control segment) to adequately transport sediment and provide a viable flow depth in the proposed low flow channel. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-3)

The proposed ACRP significantly changes the flow equation. The recapture of flows in Sunol is inconsistent with National Marine Fisheries Service March 5, 2011 Biological Opinion on the Calaveras Dam Replacement Project:

> *"CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence with the Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration. These flows will arrive at the upstream end of the Alameda Creek Flood Control Channel and ACWD will provide bypass flows at their water diversion facilities for fish passage through the Flood Channel".* (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-4)

Flows that should be reaching lower Alameda Creek from the southerly watershed would no longer be available. The ACRP unfortunately, is now relying on flows from the north watershed (Arroyo De La Laguna) and ACWD flow releases to meet the downstream needs of sediment transport and the low flow channel optimal conditions needed to support steelhead migration. SFPUC should identify how they propose to provide adequate flows to prevent standing in the lower Alameda Creek. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-5)

The following effects of the project on future conditions in lower Alameda Creek flood control channel were not adequately addressed:

- Loss/changes in pool sizes and numbers. Pools are important part of the Alameda Creek; these features play significant role in species survival especially during periods of drought. Reduction in size and numbers as a result of the ACRP project would have detrimental effects on steelhead fish utilization/presence in the upper watershed post fish ladder construction. These improved future conditions in the lower reach not been addressed inadequately. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-6)

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c. **The ASDH Model does not analyze impacts to the environment during critically dry periods.** The SFPUC's Blue Ribbon Panel also identified deficiencies in the ASHD Model by stating, "[a] limitation of the empirical modeling approach, based on such short and fragmented records, is that the resulting model cannot represent well an important feature of California hydrology, which is the occurrence of enduring droughts... Because of the potential importance of multi-year droughts on fish populations... there seems to be some value in continuing to re-visit a process-based streamflow modeling strategy..." (Review of the Alameda Creek Habitat Conservation Plan Modeling Strategy, Aug. 2012). The ASDH Model only covers the hydrologic period between Water Year 1996 and 2013, which does not incorporate periods of extreme drought, therefore the Analysis conclusions in the DEIR does not analyze impacts of operations of the ACRP to the environment during these times. ACWD recommends that the model and analysis framework in the DEIR be revised to incorporate a range of historic droughts, or at the very least through 2015 which would capture the recent, critically dry rain year 2013-2014.

   The DEIR proposes an accounting methodology to dictate the amount of water the SFPUC is allowed to pump from Pit F2 for recapture based on the premise that average annual volume of water proposed for recapture is less than average inflow from bypasses and releases. Page 3-27 of the DEIR states that this might not be the case during dry years; during these years, recapture operations would account for carryover water released and bypassed and collected in Pit F2 during prior years. Given the conclusions of the Blue Ribbon Panel on limitations of the ASDH Model in dry years, and the proposed carryover accounting methodology, the current evaluation of impacts to surface water hydrology should be expanded to include historic drought periods, in order to adequately analyze the impacts of the project. For example, increased extraction of water out of Pit F2 during dry periods will draw the Sunol Valley Groundwater Basin down, and increase the loss rate of surface water flow from Alameda Creek in the location of the project. This in turn may reduce the number of days that the surface water flow in Alameda Creek in Sunol remains

connected to flow in Niles Canyon, which could impact fish and other species located downstream of the CDRP when comparing 1) the With-CDRP Conditions and 2) the With-Project Conditions scenarios. For fish migration, the hydrologic analysis needs to include an evaluation on how the ACRP will change the available migration periods compared to the selected baseline conditions. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-7)

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a. **The ACRP project is in conflict with the stated expectations from the National Marine Fisheries Service on the operation of the CDRP project.** The ACRP is a project that is dependent on the Calaveras Dam Replacement Project (CDRP) and associated flow schedule, and was previously identified in the CDRP EIR as the "Filter Gallery Project." An accurate, stable, and finite project description is an indispensable component of an informative and legally sufficient EIR (CEQA Guidelines § 15124.) A "project" is the "whole of an action" that has the potential to result in a physical change to the environment "directly or indirectly" (CEQA Guidelines § 153 78(a).) An agency cannot subdivide a project into multiple components to avoid analyzing and discussing in the EIR the sum of environmental impacts resulting from the project (Christward Ministry v. Superior Court (1986) 184 Cal.App.3d 180, 193.) In 2009, ACWO provided comments on the DEIR of the CORP stating that:

> "...meeting the primary objectives of the CDRP is dependent on implementation of the Filter Gallery Project, the DEIR should consider the Filter Gallery Project as part of the overall Calaveras Dam Replacement Project, and include it in the DEIR's project description of the CDRP. Without including the Filter Gallery as part of the CDRP Project Description, the primary objective of water supply reliability may not be met, and the SFPUC would be 'piecemealing' the environmental analyses of these two projects..."

Because the CDRP and the ACRP (formally the Filter Gallery Project) components were not analyzed together, inconsistencies exist between the stated goals of the ACRP and the Biological Opinion issued to the SFPUC for take coverage associated with operation of the CDRP. For example, the CDRPBO (pages 49 through 52) states that bypass flows at the ACDD are intended to provide suitable migration conditions from Alameda Creek below the ACDD through Niles Canyon and out to the Bay. Furthermore, page 52 of the CDRPBO states, "CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence of Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration." Since the ACRP project has been analyzed separately from the CDRP project, the fundamental concept of recapturing CDRPBO flow releases and ACDD bypasses is in conflict with the stated expectations from the National Marine Fisheries Service (NMFS) on the operation of the CDRP project. The DEIR must analyze the impacts that operation of the ACRP will have on the future flow and habitat conditions described in the CDRPBO, and fully analyze the whole of the action taken by SFPUC (CEQA Guidelines § 15378(a).) Without this analysis the separate approval of these related projects could lead to severe impacts on flow and habitat conditions in Alameda Creek (CEQA Guidelines§ 15130.) (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-12)

Response BI-16: Effects of Hydrologic Changes on Fisheries Resources

These comments all relate to the effects of ACRP on streamflow and associated effects on fisheries habitat and resources, and specifically steelhead. Please also refer to the following responses in Section 11.5 that additionally address hydrologic changes: Response HY-5, for discussion and clarification of hydrologic effects and changes to Lower Alameda Creek flows; Response HY-6, regarding hydrologic impacts during dry years; and Response HY-1, regarding day-to-day changes in surface water flow in Alameda Creek and information on the number of days there is a surface water flow connection through the Sunol Valley.

This response focuses on the portion of these comments relating to fisheries resources rather than to the hydrologic changes.

Comment A-ACPW-2 states that "Figure 2 of the ESA Report in the EIR identified Steelhead study reach extending from upstream of Calaveras Dam to SF Bay." The commenter is mistaken that the study reach begins upstream of Calaveras Dam. The correct figure number that the comment appears to reference is Figure 2-2 in Appendix BIO2 of the EIR, which identifies the study area as the Alameda Creek reaches starting adjacent to and downstream of the Pit F2 and extending to San Francisco Bay. EIR Section 5.14.5 provides further description of the fisheries study area.

Comment A-ACPW-2 further states that there is limited discussion of the effects of recapturing the entire bypassed flows and that the SFPUC would be diverting significantly more flows beyond the bypass flow releases. This statement is false, as the project would not recapture more flows beyond the bypasses and releases but rather, would recapture less. Please see Draft EIR Section 3.6.1 (pp. 3-25 to 3-27) and Section 11.5, Response HY-5, for the detailed explanation regarding the bypassed and released flows that the ACRP proposes to recapture. In summary, on average, the project would only recapture about half of the bypassed and released flows that will occur when CDRP commences operations (see Draft EIR, Table 3-5, page 3-26). The ACRP relies on passive and natural infiltration of water to Pit F2; this natural infiltration process occurs under existing conditions. Under existing conditions, up to 17 cubic feet per second (cfs) of flows in Alameda Creek in the Sunol Valley area migrate into permeable gravels below the creek and seep into Pit F2. The CDRP hydrologic analysis assumed this volume of water was lost from the Alameda system. Both the CDRP and the ACRP CEQA hydrologic analyses assume that this loss occurs in Alameda Creek between the Welch Creek and San Antonio Creek confluences. Therefore, both hydrologic analyses assume this water does not contribute to surface flow in this reach of Alameda Creek. The ACRP proposes to recapture an estimated annual average volume of 7,178 acre-feet per year of the water that seeps into Pit F2.

The hydrologic analysis conducted for the ACRP EIR determined that, on an average annual basis, implementation of the ACRP would increase the southern watershed's contribution to surface flow in Alameda Creek below the Arroyo de la Laguna confluence when compared to with-CDRP conditions. The recapture of flows in the Sunol Valley by the ACRP would have minimal effect on average annual or daily flows at the Niles gage and consequently would have minimal effect farther downstream at the flood control channel. In other words, operation of the ACRP would not affect the CDRP flow assumptions used in the National Marine Fisheries (NMFS) Biological Opinion (BO) with respect to "CDRP minimum flows from the southern watershed when combined with flows from the northern water (at the confluence with the Arroyo de la Laguna) through Niles Canyon,"[5] and the recapture operations of the ACRP would continue to "provide suitable conditions for adult upstream migration and smolt downstream migration,"[6] consistent with the NMFS BO.

5 National Marine Fisheries Biological Opinion, Calaveras Dam Replacement Project, March 5, 2011, with respect to Effects to Steelhead Migration in Niles Canyon and Lower Alameda Creek (Flow through Niles Canyon and Lower Alameda Creek to San Francisco Bay), page 52.

6 *Ibid*.

Several comments, including Comment A-NMFS-1, assert that additional information is needed for the impact analysis on steelhead and "to conclude the proposed ACRP will not significantly impact native fish in upper Alameda Creek, including threatened CCC steelhead." The EIR provides a detailed and comprehensive analysis of impacts on steelhead (EIR Section 5.14.7.4 and Appendix BIO2) that is based on a detailed and comprehensive analysis of surface and groundwater hydrologic effects (see Appendices HYD1 and HYD2), both of which are summarized below. Based on these predicted changes in hydrologic conditions, the EIR determines that the impact to steelhead would be less-than-significant, and no additional information is needed to support this determination.

As described in the EIR, Section 5.14.7.2, "Approach to Analysis" (pp. 5.14-140 to 5.14-141), the analysis of long-term, operational impacts on fisheries resources was made assuming the baseline conditions are with implementation of CDRP releases and bypasses in effect. These baseline conditions are the conditions under which the ACRP would necessarily operate, because the ACRP is reliant on implementation of the CDRP instream flow schedules. Specifically, the with-CDRP conditions in Alameda Creek include completion of the CDRP, restoration of the historical capacity of Calaveras Reservoir, and implementation of the instream flow schedules required by the CDRP NMFS BO. Therefore, contrary to the assertion that "the ACRP project has been analyzed separately from the CDRP project" (Comment A-ACWD2-12), the hydrologic analysis for the ACRP EIR builds from the analysis and outcome of the CDRP.

In addition, as described in Impact BI-11 (pp. 5.14-144 to 5.14-148), the analysis is conservative in that it assumed the presence of steelhead in the upper Alameda Creek watershed at the time of the ACRP implementation. The EIR assumed that the existing human-made barriers to anadromous steelhead migration would be removed or other measures would be taken to allow fish migration and steelhead access to the upper Alameda Creek watershed prior to or concurrent with ACRP operations, even though these actions have not yet occurred and it is uncertain when these actions will occur. In other words, the analysis assumed that steelhead will have returned to the Alameda Creek watershed prior to or concurrent with ACRP operations and the CDRP bypasses and released are in effect. Additionally, Appendix BIO2, Alameda Creek Fisheries Habitat Assessment Report, includes Table 2-1, which clearly describes all the assumptions used in the analysis for the with-CDRP condition (see Appendix BIO2, pages 2-5 to 2-6).

For the analysis of long-term, operational impacts, the analysis compares Alameda Creek surface water flows in the study area under with-CDRP conditions to those that would occur under the proposed project and assesses the associated effects on the native fish community and future occurring CCC steelhead DPS. For the native fish community, the analysis considers basic habitat requirements for those species that are expected to occur within the reaches of Alameda Creek in the study area (downstream of the project site). For special status species, namely CCC steelhead DPS, the analysis considers the species life history tactics that are expected to be used in the Alameda Creek watershed and the associated life stage and seasonal habitat requirements for the reaches of Alameda Creek in the study area; specifically, the analysis focuses on migration requirements for adult and juvenile steelhead under the with-CDRP conditions.

The analysis of long-term, operational impacts is based on hydrologic modeling conducted to simulate operational effects of the proposed project on Alameda Creek surface water flows (as

described in Appendix HYD1) and analysis of surface and subsurface water interactions in the Sunol Valley (as described in Appendix HYD2). Impact conclusions are based on an assessment of project-related changes expected with implementation of the ACRP compared to the with-CDRP conditions in the context of the expected seasonal, life-stage specific habitat requirements of CCC steelhead distinct population segment (DPS). The analysis concluded that long-term operation of the proposed project would not result in substantial changes to winter and spring flows or associated aquatic habitat conditions for migrating steelhead in Alameda Creek compared to with-CDRP conditions. As stated in the EIR Section 5.14, Impact BI-11 (pp. 5.14-147 to 5.14-148), the analysis concluded that the proposed ACRP is not expected to affect flows to an extent that habitat functions for steelhead would be limited, and therefore, project operations would have a less-than-significant impact on steelhead.

EIR Section 5.14.5.3, "Alameda Creek Fish Habitat" (pp. 5.14-119 to 5.14-130) addresses fisheries-related issues raised in three comments: Comment A-ACPW-6, regarding loss and/or changes in pools that are important for steelhead; Comment A-ACWD2-7, regarding impacts on the migration period during critically dry periods; and Comment A-NMFS-1, regarding the need for analysis of daily flows. EIR Section 5.14.5.3, "Alameda Creek Fish Habitat" provides estimates of daily flows in Alameda Creek under the with-CDRP conditions by using the Alameda System Daily Hydrologic Model (ASDHM) daily output as described in Appendix HYD1. Hydrographs of estimated *daily* flows were developed for a range of water year types[7] focusing on the specific period for steelhead migration in Alameda Creek (December through June), based on life stage timing described in the Draft EIR (see Table 5.14-4; page 5.14-135). Figures 5.14-8 and 5.14-9 in the Draft EIR are December through June hydrographs under with-CDRP conditions for Very Wet (2006), Wet (2003), Dry (2008), and Very Dry (2007) Water Year Types for Nodes 6 and 7, respectively. These plots show predicted hydrologic conditions at a daily time-step that migrating steelhead would be anticipated to experience in Alameda Creek in the primary study area under a range of conditions, including very dry hydrologic conditions (water-year 2007). As depicted in the plots, precipitation-generated streamflows in Alameda Creek are predicted to regularly exceed several hundred cubic feet per second (cfs) during the December through June migration period. The analysis concludes that during the period when steelhead are present in the study area (winter through spring), changes in pool sizes and numbers is not a limiting factor because streamflow is generally present and providing hydrologic connectivity and a suitable migration corridor. Outside of the winter to spring period, steelhead are not expected to be present because of life history traits and/or unsuitable water temperatures.

Thus, Comment A-ACPW-6, which asserts that "reduction in size and numbers [of pools] as a result of the ACRP project would have detrimental effects on steelhead fish utilization/presence in the upper watershed post fish ladder construction," is not supported by the analysis in the EIR. As explained earlier in this response, Impact BI-11 assumed that the existing human-made barriers to anadromous steelhead migration would be removed or other measures would be taken to allow fish migration and steelhead access to the upper Alameda Creek watershed prior to or concurrent with ACRP operations even though these actions have not occurred. Therefore, the Planning Department believes that the EIR adequately addresses "improved future conditions in the lower reach" and that no further analysis is warranted. Similarly, the assertion in Comment A-AWCD2-7 that "for fish

[7] Water Year types were defined based on flow exceedance probabilities.

migration, the hydrologic analysis needs to include an evaluation on how the ACRP will change the available migration periods compared to the selected baseline conditions" is appropriately analyzed in the EIR and no further analysis is warranted.

Please refer to Section 11.2, Response ERP-5, for a response to the assertion regarding CEQA piecemealing.

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11.5 Hydrology and Water Quality

11.5.1 Overview of Hydrology and Water Quality

The comments and corresponding responses in this section address topics related to Hydrology and Water Quality, which is presented in Chapter 5, Section 5.16, and Appendices HYD1 and HYD2 of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project). This section responds to comments on the following topics:

- HY-1: Daily Surface Water Flow Data
- HY-2: Alameda System Daily Hydrologic Model
- HY-3: Pit F2 Water Levels and Alameda Creek Flow
- HY-4: Impacts on Downstream Water Users
- HY-5: Lower Alameda Creek Flows
- HY-6: Impact During Dry Years
- HY-7: Mass Balance Issues
- HY-8: Surface Water and Groundwater Interactions
- HY-9: Effects of Proposed Cut-off Walls
- HY-10: Water Temperatures in Niles Canyon
- HY-11: Water Quality Impacts on Sunol Valley Water Treatment Plant (SVWTP)

11.5.2 Daily Surface Water Flow Data (HY-1)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-NMFS-1 A-ACWD2-8

Based on the NMFS review of the DEIR, additional information is needed to conclude the proposed ACRP will not significantly impact native fish in upper Alameda Creek, including threatened CCC steelhead. The DEIR indicates predicted changes in the flow regime are expected to be small and the long-term operation is not anticipated to result in substantial changes to flows or aquatic habitat conditions. Given the dynamic nature of surface flow in central California streams, NMFS recommends the hydrological analysis presented in the DEIR include information regarding day-to-day changes in the surface flow of Alameda Creek. The presentation of day-to-day changes in surface flows will provide information critical to assessing the ACRP's potential effects on steelhead migration and the duration of flows for seasonal rearing of juvenile steelhead in the Sunol Valley. In particular, the operation of the ACRP could lead to fewer days of surface flow connection through the Sunol Valley. NFMS recommends a hydrologic analysis that includes an evaluation of the number of days that streamflow in Alameda Creek remains connected to flow in Niles Canyon under the expected range water year conditions with and without the ACRP. (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-1)

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d. **The DEIR does not provide modeling results in an appropriate time-step needed to analyze downstream impacts.** In addition to the comments above, the ASDH Model uses a daily time-step to calculate the movement of water throughout the Alameda Creek Watershed, but the results of the modeling work are

presented in terms of average annual volumes. Given the dynamic nature of surface water flows in Alameda Creek, the hydrologic analysis needs to include a discussion about day to day changes in surface flows within Alameda Creek in order to fully identify potential impacts to fisheries as well as downstream water users. To illustrate, ACWD recently published a mitigated negative declaration for a series of fish passage projects within the Alameda Creek Flood Control Channel where detailed daily evaluations of proposed flow releases are documented, published, and used to determine potential impacts (Joint Lower Alameda Fish Passage Improvements MND, 2016.) The ACRP DEIR must discuss how the ACRP may impact these future conditions, and to do so, needs to provide an additional level of detail in the hydrologic analysis.

The volume of water that ACRP intends to recapture is approximately equal to the average annual water to be released and/or bypassed. However, while annual totals may be the same, the actual daily rate of releases and/or bypass flows will be markedly different from the slow and steady recapture provided by the ACRP. Real-time releases and bypasses will be on the order of tens to thousands of cubic feet per second (cfs), while the recapture will likely be on the order of ones to tens of cfs. Thus, when releases and/or bypasses are high, a substantial amount of the actual flows will exit Sunol Valley rather than percolate into the ground. Conversely, when releases and/or bypasses are low or are not occurring, the ACRP may continue to capture flows from Alameda Creek that are neither releases nor bypasses. This time-step discrepancy can lead to environmental impacts from operations of the ACRP that are not identified or discussed in the DEIR for the project. The DEIR's hydrologic analysis should be refined to determine the environmental impacts of operations of the ACRP on a daily basis, instead of discussing the magnitude of impacts using average annual or monthly values. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-8)

Response HY-1: Daily Surface Water Flow Data

Comment A-NMFS-1 requests that the ACRP EIR include information regarding day-to-day changes in surface water flow in Alameda Creek, how these changes alter the number of days of surface flow connections through Sunol Valley, and their effects on native fish. Comment A-ACWD2-8 asserts that the EIR does not provide modeling results in an appropriate time-step for analysis of downstream impacts on fisheries and downstream users. The EIR, as further augmented by this Responses to Comments document, contains the information requested by the commenters. Please see Section 11.4, Response BI-16, for the response to how ACRP flow changes would impact fishery resources, including steelhead.

The Alameda System Daily Hydrologic Model (ASDHM) was used in the EIR impact analysis to make estimates of daily surface water flow rates at numerous locations along Alameda Creek under four scenarios: pre-2001 conditions, existing conditions, with-CDRP[1] conditions, and with-project conditions.[2,3] The modeling generated daily hydrology flow estimates over an 18-year period for the four scenarios. The Planning Department's technical consultants with hydrology expertise determined that the most useful form in which to present the daily surface water flow data for the 18-year period to

[1] CDRP = Calaveras Dam Replacement Project. The with-CDRP conditions represent the conditions that will occur upon completion of the CDRP when the instream flow releases and bypasses are implemented as required by the biological opinion for the CDRP issued by the National Marine Fisheries Service.

[2] SFPUC, 2016. Simulated Stream flows for different scenarios at 5 nodes and pond elevation for Alameda Creek Recapture Project. Excel spreadsheet provided by Amod Dhakal on July 7, 2016.

[3] ESA/Orion & SFPUC, 2016. Simulated Stream flows for different scenarios at 5 nodes and pond elevation for Alameda Creek Recapture Project. Updated by ESA/Orion to reflect historic quarry discharge from SMP-24 and loss of surface flow to groundwater between San Antonio Creek confluence and the confluence with Arroyo de la Laguna. Completed for Alameda Creek Recapture Project Draft EIR, November 30, 2016.

decision makers and the public was in the form of flow-duration curves, which are contained in the EIR Section 5.16 (pp. 5.16-13 to 5.16-16) and Appendix HYD1 (pp. 63 to 66, 86 to 88, and 114). The flow-duration curves were constructed from daily flow estimates and show the estimated percent of time that streamflow equaled or exceeded a particular value. The associated narrative in the EIR and Appendix HYD1 discusses and compares the frequency of certain daily flows under existing, pre-2001, with-CDRP, and with-project conditions at various locations along Alameda Creek.

The daily flow estimates for with-project conditions were used to assess the potential effects of the proposed ACRP on native fish including Central California Coast steelhead. The results of the assessment are included in Section 5.14 of the EIR, Biological Resources – Fisheries, and described further in RTC Section 11.4, Response BI-16.

Surface Water Flow Connection

Comment A-NMFS-1 requests information on the number of days there is a surface water flow connection through the Sunol Valley to assist in assessing the ACRP's potential effects on steelhead migration and the duration of flows for seasonal rearing of juvenile steelhead in the Sunol Valley. The number of days of surface water flow connection through Sunol Valley is not stated explicitly in the EIR but can be deduced from information provided in the EIR itself and Appendix HYD1 (Figures 5.16-3, 5.16-4, 5.16-5 in the EIR, pp. 5.16-13 to 5.16-16, and Section 5.16.2.4, pp. 5.16-11 to 5.16-18 in Chapter 5; and Section 5.3, pp. 61 to 76; and Section 5.3, pp. 61 to 76, Section 6.2, pp. 80 to 98, and Figures HYD5-5, HYD5-6, HYD5-7, HYD6-3, HYD6-4 and HYD6-5, pp. 63, 64, 66, 86 to 88, in Appendix HYD1). The results of the analysis of when there is a surface water connection through the Sunol Valley are shown in **Table 5.11-1**. For there to be continuous flow through Sunol Valley, there would need to be flow at both Nodes 5 and 7 on the same day, regardless of the flow at Node 4. An explanation of how the results were arrived at is provided below.

TABLE 11.5-1
PERCENTAGE OF TIME FLOW IS PRESENT IN ALAMEDA CREEK AT VARIOUS LOCATIONS IN THE SUNOL VALLEY

Location / Scenario	Pre-2001 Conditions	Existing Conditions	With-CDRP Conditions	With-Project Conditions
Below Welch Creek (Node 4)	48	58	100	100
Above San Antonio Creek (Node 5)	18	25	36	36
Above Arroyo de la Laguna (Node 7)	19	27	66	34
Days when Flow at Both Nodes 5 and 7 is Greater than Zero (i.e., continuous flow occurs through the Sunol Valley)	18	25	37	32

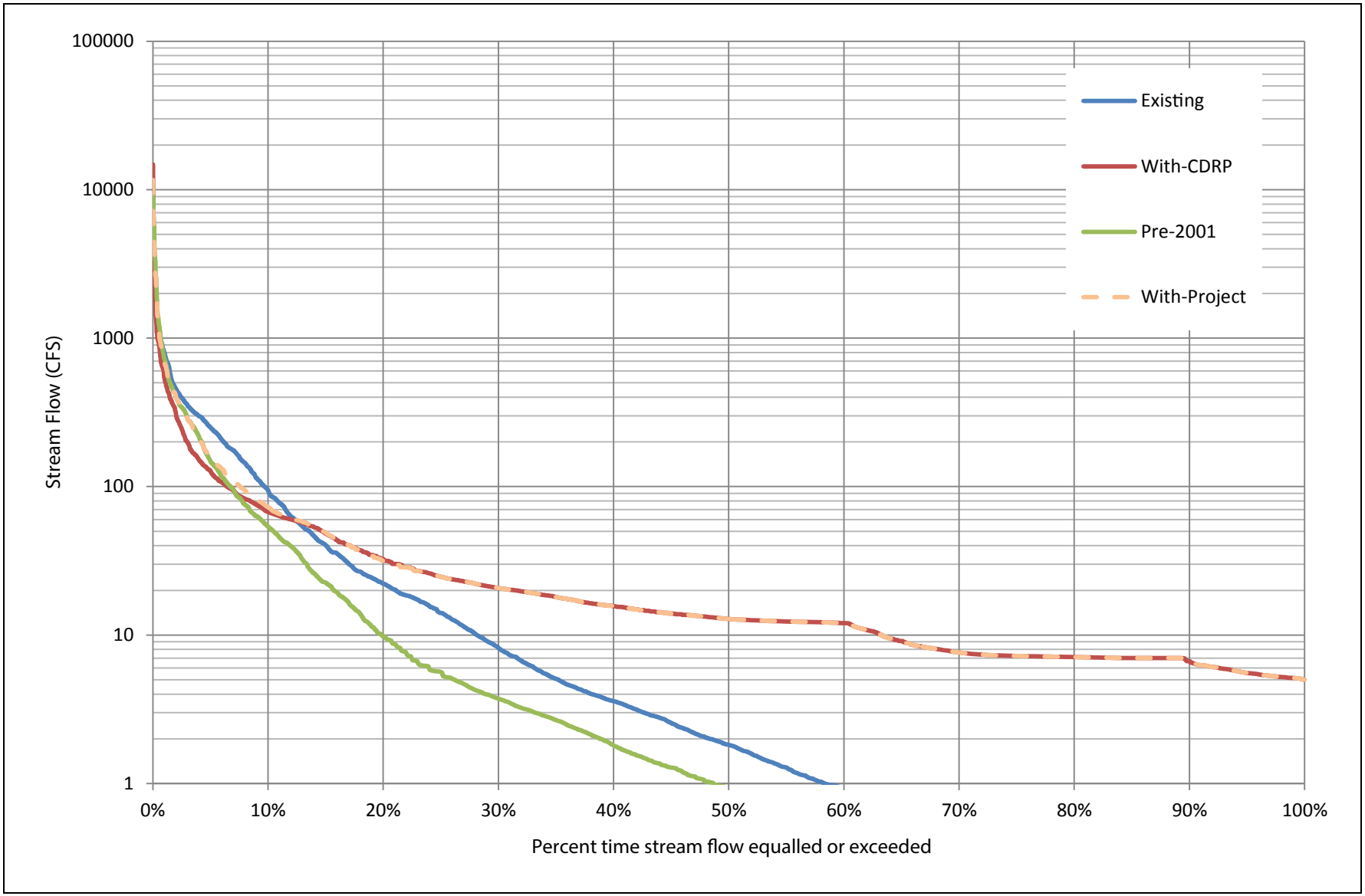
SOURCE: ESA and Orion, 2017.

Alameda Creek is an ephemeral stream; some sections of its channel are dry for part of the year. Daily flows were estimated at several locations (or nodes) along Alameda Creek between the Calaveras Creek confluence and the USGS gage at Niles (see Table 11.5-1, above and EIR Appendix HYD1, Figure HYD4-2), which provides information necessary to determine changes in surface water

flow connection in the Sunol Valley. The Calaveras Creek confluence is south of the Sunol Valley and the USGS gage at Niles is at the downstream end of Niles Canyon, north of the Sunol Valley. Flow-duration curves constructed from daily flow estimates were plotted for most of the locations, including at the Welch Creek confluence at the south end of the Sunol Valley (Node 4) and at the Arroyo de la Laguna confluence at the north end of the valley (Node 7). The flow-duration curves show when there is little or no flow at a particular point on the stream.

Figure HYD5-5 in Appendix HYD1 (p. 63) shows flow-duration curves for pre-2001 conditions, existing conditions, and with-CDRP conditions at the Alameda Creek/Welch Creek confluence (Node 4). **Figure 11.5-1** shows the same information, but with the addition of a flow-duration curve for with-project conditions. The figure shows that on about 52 percent of the days under pre-2001 conditions and on about 42 percent of the days under existing conditions, Alameda Creek is dry, or almost dry, at the Welch Creek confluence; or conversely, as indicated in Table 11.5-1, there would flow in the creek on 48 percent of the days under pre-2001 conditions, and 58 percent of the days under existing conditions. Under pre-2001 conditions, the SFPUC operated Calaveras Reservoir in accordance with the SFPUC's pre-1914 appropriative water rights and continues to do so under existing conditions. Under both with-CDRP and with-project conditions, flow would continue past the Welch Creek confluence every day and the creek channel would never be dry. This is a result of the releases at Calaveras Reservoir and the bypasses at the Alameda Creek Diversion Dam that are a part of with-CDRP and with-project conditions.

Figure HYD5-6 in the Appendix HYD1 (p. 64) shows flow-duration curves for pre-2001 conditions, existing conditions, and with-CDRP conditions at a location on Alameda Creek just upstream of the San Antonio Creek confluence (Node 5). **Figure 11.5-2** shows the same information, but with the addition of a flow-duration curve for with-project conditions. In all four scenarios, pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions, flow in Alameda Creek at the San Antonio Creek confluence is less than it is at the Welch Creek confluence. This is because the condition of the streambed of Alameda Creek under all four scenarios is made up of permeable gravels downstream of the Welch Creek confluence in the alluvial deposits of Sunol Valley. Project construction and operation will not change this condition. As a result, surface water is lost under existing conditions, and will continue to be lost under with-project conditions, to the subsurface between the Welch Creek and San Antonio Creek confluences at a maximum rate of 17 cubic feet per second (cfs). Under pre-2001 conditions, Alameda Creek just upstream of the San Antonio Creek confluence was dry, or almost dry, about 82 percent of the time; under existing conditions it is dry, or almost dry, about 75 percent of the time. Stated conversely, this portion of the channel has continuous flow 7 percent more often under existing conditions than under conditions before 2001 when the Calaveras Reservoir operated at full capacity, reflecting the inability of the SFPUC to fully utilize the entire storage volume of Calaveras Reservoir under the 2001 DSOD order. Under with-CDRP and with-project conditions, the creek would be dry, or almost dry, about 64 percent of the time. Thus, in the reach of Alameda Creek upstream of the San Antonio Creek confluence, continuous flow occurred about 18 percent of the time under pre-2001 conditions, under existing conditions it occurs about 25 percent, of the time, and under with-CDRP and with-project conditions it would occur about 36 percent of the time.



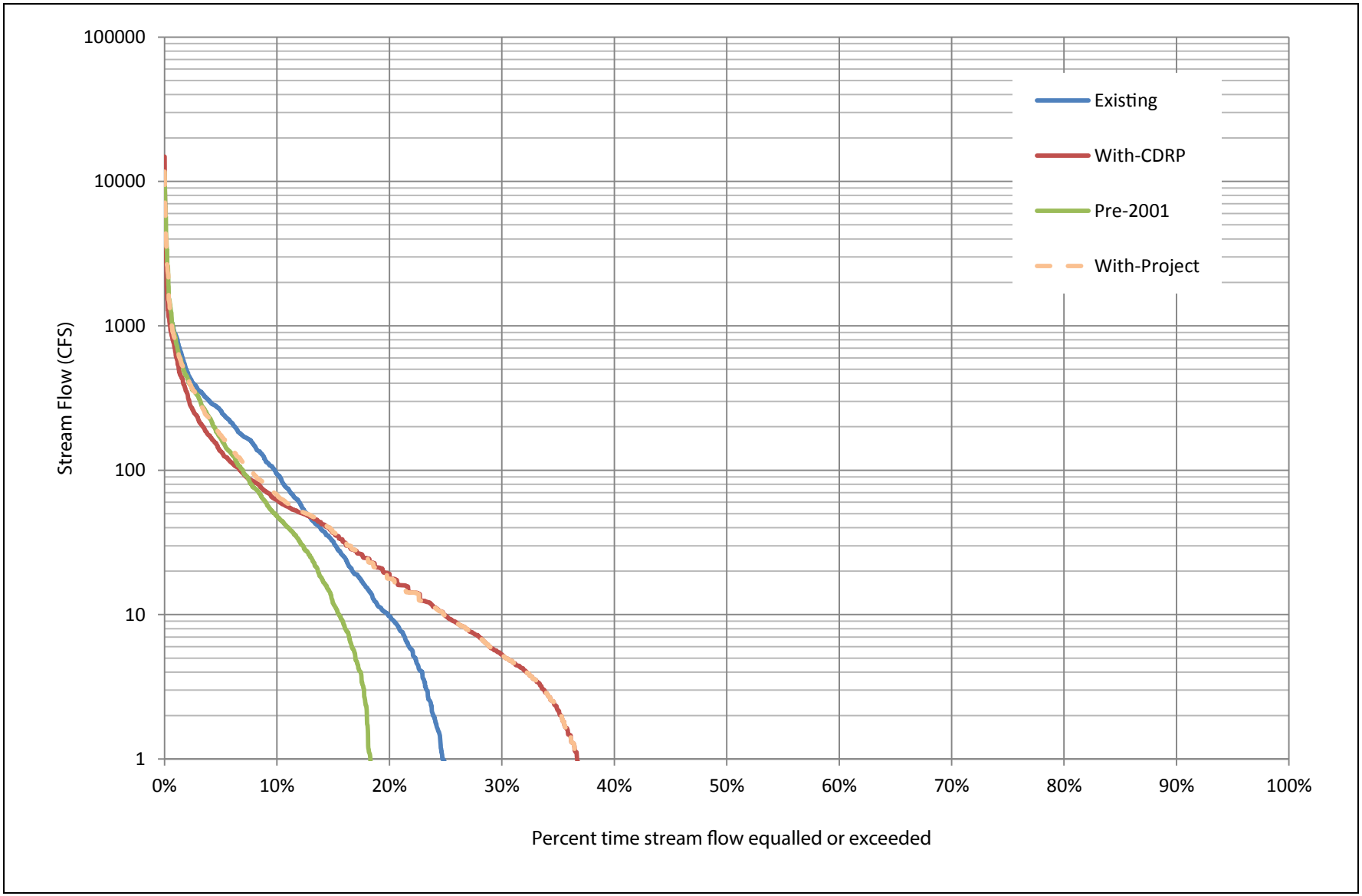
SOURCE: SFPUC, 2016. Simulated stream flows for different scenarios at 5 nodes and pond elevation for ACRP. Excel spreadsheet file provided by Amod Dhakal on July 7, 2016.

NOTE: Data presented are derived from the Alameda System Daily Hydrologic Model (ASDHM) using from Water Years (1996 – 2013)

SFPUC Alameda Creek Recapture Project

Figure 11.5-1

Flow Duration Curves for Node 4 (Alameda Creek below Welch Creek) for Existing, Pre-2001, with-CDRP, and with-Project Conditions



SOURCE: SFPUC, 2016. Simulated stream flows for different scenarios at 5 nodes and pond elevation for ACRP. Excel spreadsheet file provided by Amod Dhakal on July 7, 2016.

NOTE: Data presented are derived from the Alameda System Daily Hydrologic Model (ASDHM) using from Water Years (1996 – 2013)

SFPUC Alameda Creek Recapture Project

Figure 11.5-2

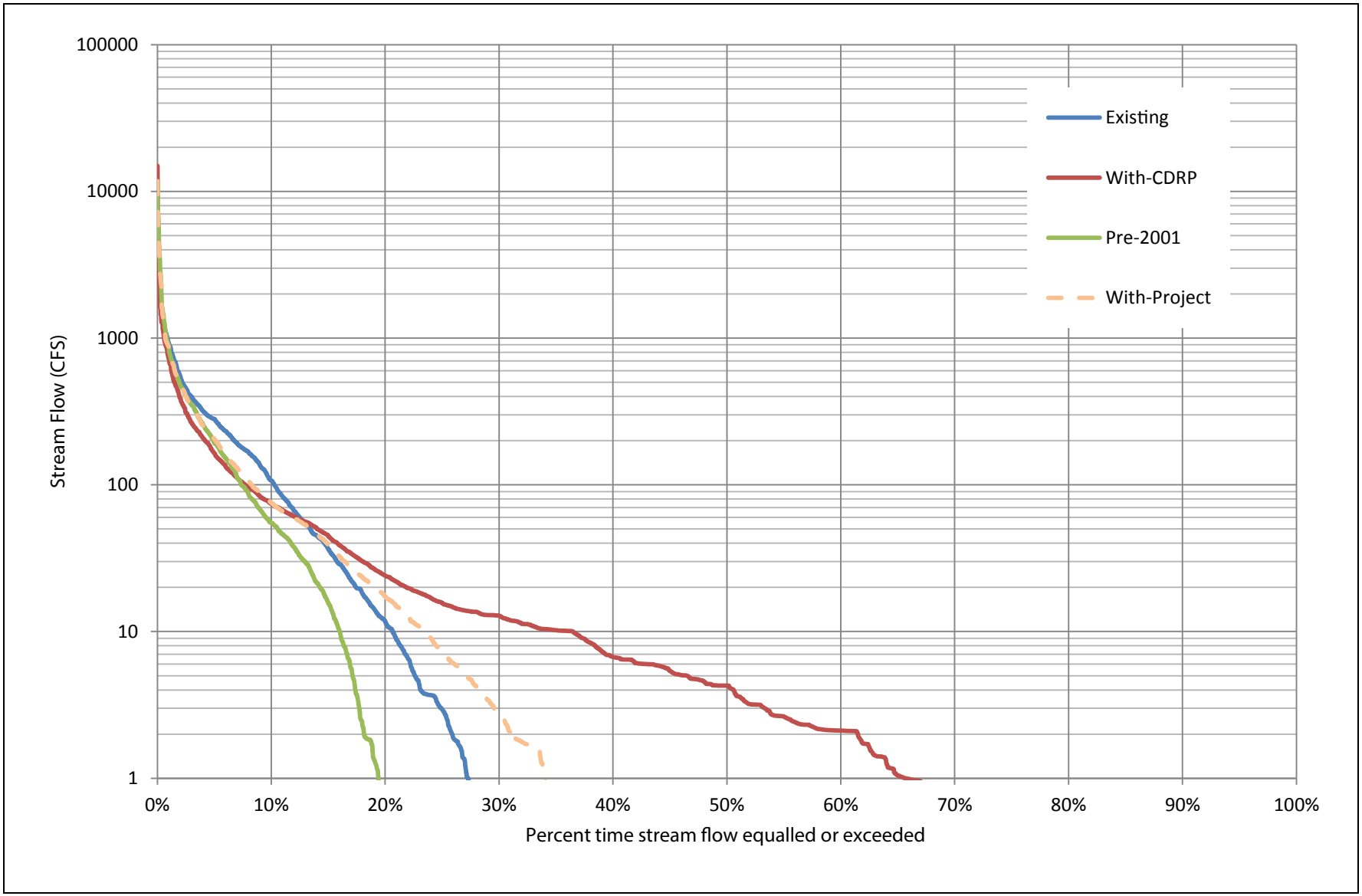
Flow Duration Curves for Node 5 (Alameda Creek above San Antonio Creek) for Existing, Pre-2001, with-CDRP, and with-Project Conditions

NPDES discharges from the quarries currently add water to Alameda Creek downstream of the San Antonio Creek confluence and will continue to do so in the future. Water is lost to the subsurface at a maximum rate of 7.5 cfs between the San Antonio Creek confluence and the Arroyo de la Laguna confluence. The flow-duration curves for Alameda Creek just upstream of the Arroyo de la Laguna confluence reflect the addition of water by the quarries and the loss of water to the subsurface.

Figure HYD5-7 in Appendix HYD1 (p. 66) shows flow-duration curves for Alameda Creek just above the Arroyo de la Laguna confluence (Node 7) for pre-2001 conditions, existing conditions, and with-CDRP conditions**. Figure 11.5-3** shows the same information, but with the addition of a flow-duration curve for with-project conditions. The flow-duration curves in the two figures were constructed from daily flow estimates that incorporate a pattern of daily discharges from the quarries that is based on historical records. Figure 11.5.3 shows that under pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions flows in Alameda Creek just above the Arroyo de la Laguna will occur on 19 percent, 27 percent, 66 percent, and 34 percent of the days, respectively. Quarry NPDES discharges, which are expected to be greater under with-CDRP conditions than under project conditions, is the primary reason for the differences in the greater frequency of days with flow under the with-CDRP conditions.

The percentage of days with flow at certain locations on Alameda Creek does not alone indicate whether surface flow connectivity exists through the entire Sunol Valley. Surface flow connectivity depends on the amount of surface flow, the rate of loss of surface water to the subsurface in different reaches of the creek, and the amount of NPDES quarry discharges on a given day. The NDPES quarry discharges are highly variable due to changes in market demand for aggregates, the variability of the amount of indirect accumulation of water entering the pits from Alameda Creek depending on water year type, changes in mining operations, and operational changes in the movement of water between quarry pits by quarry operators. For example, if flow in Alameda Creek at the Welch Creek confluence is less than 17 cfs on a certain day, the reach between Welch Creek and just above San Antonio Creek would be dry. Similarly, on a day when quarry discharges are less than 7.5 cfs, the Alameda Creek channel just above the Arroyo de la Laguna confluence would be dry. Daily average NPDES quarry discharges for pre-2001, existing, with-CDRP, and with-project conditions are 3.9 cfs, 4.7 cfs, 9.1 cfs and 3.5 cfs, respectively.[4] If the quarry discharges occurred steadily at their annual average then water from the discharges would not reach the Arroyo de la Laguna confluence under pre-2001, existing and with-project conditions and would always reach the confluence under with-CDRP conditions. In fact, the quarry discharges do not occur steadily but vary from hour-to-hour and day-to-day. In the hydrologic analysis conducted for the EIR, the quarry discharges under existing conditions are represented by historical values and under pre-2001, existing, and with-project conditions are represented by adjusted historical values as explained in Section 4 of Appendix HYD1. The EIR analysis determined there are days with above average flows under pre-2001, existing, and with project conditions when some water from the quarry discharges

[4] As indicated in Appendix HYD1, Table HYD4-2, estimated annual volume of NPDES quarry discharges for pre-2001, existing, with-CDRP, and with-project conditions are 2,796 acre-feet per year, 3,436 acre-feet per year, 6,620 acre-feet per year, and 2,532 acre-feet per year, respectively. This is equivalent to daily average NPDES quarry discharges of 3.9 cfs, 4.7 cfs, 9.1 cfs and 3.5 cfs, respectively.



SOURCE: SFPUC, 2016. Simulated stream flows for different scenarios at 5 nodes and pond elevation for ACRP. Excel spreadsheet file provided by Amod Dhakal on July 7, 2016.

NOTE: Data presented are derived from the Alameda System Daily Hydrologic Model (ASDHM) using from Water Years (1996 – 2013)

SFPUC Alameda Creek Recapture Project

Figure 11.5-3

Flow Duration Curves for Node 7 (Alameda Creek above Arroyo de la Laguna) for Existing, Pre-2001, with-CDRP, and with-Project Conditions

will reach the Arroyo de la Laguna confluence. Under with-CDRP conditions, some water from the quarry discharges will reach the Arroyo de la Laguna confluence on most days.

Using daily flow data at Node 5 (above San Antonio Creek) and Node 7 (above Arroyo de la Laguna) for the modeling period between Water Year 1996 and Water Year 2013, the number of days when flow at both Nodes 5 and 7 was greater than zero was determined. At such times, there would be continuous flow through the Sunol Valley. Continuous flow would occur under pre-2001 conditions, existing conditions, with-CDRP conditions and with-project conditions on 18 percent, 25 percent, 37 percent, and 32 percent of the days, respectively. As shown in Table 11.5-1, the number of days with continuous flow through the Sunol Valley under with-CDRP and ACRP conditions would be greater than under existing or pre-2001 conditions due to summertime releases from Calaveras Reservoir; the difference between the with-CDRP and ACRP scenarios is attributable to the increased NPDES discharges from the quarries that would be expected under with-CDRP conditions.

Effects on Downstream Users

Comment A-ACWD2-8 asserts that the EIR does not provide modeling results in an appropriate time-step for analysis of downstream impacts. As explained above, the ASDHM was used to estimate *daily* flows in Alameda Creek at numerous locations under four different scenarios over the 18-year period of historical hydrology. The daily flow data presented in the EIR and Appendix HYD1 in the form of flow-duration curves, together with monthly and annual summaries of daily data, were used to assess the impacts of the proposed ACRP on downstream environmental resources and water-users. However, in response to comments from the Alameda County Water District (ACWD), additional, more detailed analysis of the of the daily flow estimates at the USGS gage at Niles (Node 9) was conducted to augment the analysis presented for Impact HY-5 (pp. 5.16-73 to 5.16-77) and to provide more details on ACRP effects on daily flows during ACWD key operating periods. Please see Response HY-4, below, for a description of the additional daily flow analysis and potential impacts on downstream users.

11.5.3 Alameda System Daily Hydrologic Model (HY-2)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-ACWD2-5 A-ACWD2-11 O-ACA-2 O-CNPS-12

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a. **The ASDH Model was identified to have shortcomings by the SFPUC's Blue Ribbon Panel.** The DEIR uses the ASDH Model to perform the assessment of impacts to surface water flow and groundwater elevations in the vicinity of the project. This model was originally developed in 2011 as an empirically derived mass balance model of existing conditions, and in coordination with all partners from the Alameda Creek Fisheries Workgroup, to analyze the effects of the flow releases described in the CDRPBO on Alameda Creek from the location of Calaveras Dam and the ACDD out to the San Francisco Bay. The SFPUC commissioned a Blue Ribbon Panel in August 2012 to provide an independent scientific review of this model in order to validate its usage for development of a Habitat Conservation Plan (HCP) for operation

of SFPUC's facilities in the Alameda Creek watershed (Review of the Alameda Creek HCP Modeling Strategy, Aug 2012.) The Blue Ribbon Panel concluded that "a groundwater modeling study will be necessary to evaluate the effects of both continued lowering of Pit F2 elevations and several designs of the seepage cutoff walls, which have been proposed to minimize flow losses." These modifications were not made to the ASDH Model and, given the independent review and recommendation of the panel, the current use of this model is insufficient to perform the environmental analysis required. ACWD recommends that the DEIR incorporate the recommendation of the Blue Ribbon Panel and re-evaluate the impacts of the ACRP on surface and groundwater flows within the Alameda Creek watershed. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-5)

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g. **The DEIR does not analyze surface water-groundwater interactions.** The use of the ASDH Model does not provide a sufficient degree of analysis to provide the Planning Department with information that enables them to adequately take account of the environmental consequences or adequately determine feasible alternative or mitigation measures (CEQA Guidelines §15151, 15126.4, 15126.6.) The DEIR's hydrologic analysis, based on the recommendations of the SFPUC's Blue Ribbon Panel, must be performed with a proper surface water to groundwater process-based model with an adequate level of detail to fully identify the impacts the operation of the ACRP will have to the surface water and groundwater hydrology within the Alameda Creek Watershed (CEQA Guidelines §15144.) ACWD recommends the development of this model to occur collaboratively with other watershed stakeholders prior to using it to determine levels of impacts from the ACRP.

To address the deficiencies of the ASDH Model and this DEIR, ACWD recommends that the SFPUC work to develop a new, more robust, and appropriate tool to study the potential impacts of the proposed ACRP and the Planning Department to not adopt this DEIR until a detailed analysis is performed. ACWD proposes to collaborate in this effort and to contribute both financially and through in-kind services to the development of a new model. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-11)

The draft EIR relies on an Alameda System Daily Hydrologic (ASDH) Model to analyze very complex interactions between groundwater and surface water and to assess impacts to groundwater and surface flow in the Sunol Valley and downstream in Alameda Creek. However, the ASDH Model was designed for accounting of surface water flow and it is not clear whether use of this model is appropriate to analyze the interaction of groundwater and surface water. The ASDH Model appears to be insufficient to accurately model surface to groundwater dynamics, which will change with implementation of the Alameda Creek Recapture Project. We request that the EIR include a more rigorous hydrologic analysis, which could benefit from a new or improved model that can accurately model surface to groundwater interactions. We suggest that such a model could be developed in a collaborative format through the Alameda Creek Fisheries Restoration Workgroup. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-2)

We invite you to read Alameda Creek Alliance's letter regarding this project, dated January 4, 2017, which brings up valid, unanswered concerns regarding dEIR assumption of adequacy of the Alameda System Daily Hydrologic Model for analyzing impacts to groundwater and surface water, … (Karen Whitestone, Conservative Analyst, California Native Plant Society, January 17, 2017, O-CNPS-12)

Response HY-2: Alameda System Daily Hydrologic Model

These comments assert that the ASDHM used in the EIR has shortcomings for analyzing surface water and groundwater interactions, that the shortcomings should be corrected, and that the analysis for the ACRP EIR should be repeated using a modified ASDHM. The Planning Department has determined that the existing ASDHM is adequate for the purposes it was used for in the ACRP EIR: that is, to estimate daily surface water flows in Alameda Creek at various locations under various scenarios.

The commenter is correct in noting that several years ago, at the SFPUC's request, a Science Panel of independent experts reviewed the physical and biological models that were used to inform preparation of the SFPUC's Alameda Creek Habitat Conservation Plan. The ASDHM, a mass balance-based spreadsheet model developed by the SFPUC, Alameda County Water District, and a consultant, was used to estimate surface flows in Alameda Creek. HEC-RAS, a public domain model developed by the US Army Corps of Engineers, was used to estimate water temperatures, and a biological model was used to estimate the availability of fish habitat. The Science Panel reviewed all three models but only their comments on the ASDHM are relevant to this response.

The Science Panel concluded that although limited hydrologic data are available for the Alameda Creek watershed, the spreadsheet model is unlikely to cause large errors in the estimation of surface water flows in Alameda Creek for existing and future conditions. It notes, however, that the surface water/subsurface water interactions below the Welch Creek confluence are not well understood, and consequently flow estimates downstream of the San Antonio Creek confluence are subject to uncertainty. It recommended as an improvement, the development of a physical model of the surface water/subsurface water interaction.

The Planning Department and its technical consultants responsible for preparing the hydrology section of the EIR reached many of the same conclusions as the Science Panel. It was apparent that in addition to use of the ASDHM to estimate surface flows, some way to simulate the surface water/subsurface water interaction and subsurface water levels was needed for the hydrologic analysis in the EIR. To conduct this analysis for the EIR, the Planning Department relied on a conceptual model of geohydrology in the vicinity of the project. The conceptual model was developed using the relationship between known surface water flows and the water levels documented in a series of subsurface water level monitoring wells in the Alameda Creek channel. The conceptual model and its development are described in Appendix HYD2 to the EIR. A conceptual model was deemed to be more suitable for this application than a mathematical model because the portion of the aquifer in Sunol Valley that can store water in the Sunol Valley is small, as it is limited to shallow alluvium overlying older non-water bearing materials. Water enters and leaves the shallow alluvium rapidly because it has a very limited capacity to store water. The technical analysis in the EIR is consistent with the recommendations of the Science Panel in that the analysis of surface water flow using the ASDHM was supplemented by an analysis of the surface/subsurface interface and subsurface water levels using a conceptual model of geohydrology. See also Response HY-8, for more discussion regarding the analysis of surface water and groundwater interactions.

Three other comments, A-ACWD2-1, O-ACA-2, and O-CNPS-12, also question the suitability of the ASDHM as a tool for analyzing the impacts of the ACRP because it does not include a groundwater component. The ASDHM model was supplemented by the conceptual model referred to above and

discussed in Response HY-8 below, provided the information required to determine the impacts of the ACRP.

11.5.4 Pit F2 Water Levels and Alameda Creek Flow (HY-3)

Issues Raised by Commenters

This response addresses the following comment, as quoted below:

A-NMFS-2

The hydrologic analysis in the EIR would also benefit from additional information regarding the following:

(1) Surface and groundwater interactions to better understand the relationship between water levels in Pit F2 and flow in Alameda Creek; … (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-2)

Response HY-3: Pit F2 Water Levels and Alameda Creek Flow

This comment states that the EIR would benefit from additional information regarding the relationship between water levels in Pit F2 and surface water flow in Alameda Creek. This relationship is discussed in Section 5.14 of the EIR under Impact BI-11 and sub-heading "Surface and Subsurface Water Interactions" (pp. 5.14-144 to 5.14-148). More detail is provided in Section 6.2.1 of Appendix HYD1 to the EIR. The EIR analysis concluded that there is no direct relationship between water levels in Pit F2 and flow in Alameda Creek, as summarized below. Please see Response HY-8 for further discussion on surface water and groundwater interactions.

Water surface elevations in Pit F2 were monitored during a large storm that occurred on December 2 and 3, 2012. Water level data for Pit F2 are available for the period from late 2012 to mid-2016. Flow data for Alameda Creek in the vicinity of the project is also available for that period. The December 2 and 3, 2012 storm produced one of the highest flows in the creek during the period when water level data for Pit F2 are available.

Data from the December 2 and 3, 2012 storm are shown in Table HYD6-1 in Appendix HYD1 (p. 83). Flow in Alameda Creek peaked at 733 cfs, and 1,769 acre-feet of water passed by the quarries as surface flow in the creek channel during the storm. While the two-day period of high flow in the creek may have had some influence on the water surface elevation in Pit F2, it did not result in a sharp rise in the water surface elevation during the storm itself. In fact, Pit F2 gained only 17 acre-feet of water during the storm, much less than the amount of water that had flowed past Pit F2 in the Alameda Creek channel, and some or all of the gain could be attributed to rainfall into the pit.

Data from the December 2 and 3, 2012 storm demonstrated that because there is no direct physical connection between the Alameda Creek channel and Pit F2, there is no simple or direct relationship between flow in the creek and the water surface elevation in Pit F2. High flows in the creek eventually affect the water surface elevation in Pit F2, but only after a considerable length of time. This is because surface water from the creek channel must first percolate into the stream channel gravels under the creek, migrate from the gravels into one of the gravel pits, and seep into Pit F2, before the water surface elevation in Pit F2 begins to rise.

Therefore, the information currently contained in the EIR on the relationship between water levels in Pit F2 and surface water flow in Alameda Creek is sufficient for purposes of CEQA environmental review, and no additional information is needed.

11.5.5 Impacts on Downstream Water Users (HY-4)

Issues Raised by Commenters

This response addresses the following comment, as quoted below:

A-ACWD2-9

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e. The DEIR conclusion that there are no significant impacts to ACWD's downstream operations is unsupported. The DEIR concludes that the operation of the ACRP will not have a significant impact on ACWD's downstream recharge operations by describing an average annual change in the volume of water available at the Niles gage. This is an insufficient level of detail to conclude that there are no impacts to ACWD. ACWD's recharge operations function in a real-time manner, and are highly dependent on the daily fluctuation of flow at the Niles gage. ACWD requests that the SFPUC work with ACWD to identify potential impacts from operation of the ACRP before the Planning Department adopts the EIR for this project. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-9)

Response HY-4: Impacts on Downstream Water Users

Comment A-ACWD2-9 asserts that the EIR conclusion that there are no significant impacts to Alameda County Water District's (ACWD's) downstream operations is unsupported because the analysis relies on average annual flow estimates. In fact, the EIR analysis relies on estimated daily flow estimates as well as average monthly and average annual estimates that were calculated from the daily flow estimates. The flow estimates using data on daily flows are presented in Section 8 of Appendix HYD1 to the EIR, with additional data and augmented analysis presented below in this response. As discussed in Impact HY-5 (pp. 5.16-73 to 5.16-77), the conclusion that the ACRP would have a less-than-significant impact on ACWD's operations was based on an analysis of daily, average monthly, and average annual flows, and remains valid with the augmented analysis presented in this response and described below.

In assessing whether the project would cause ACWD to alter its operations or the way it uses its sources of water in a manner that would result in significant adverse environmental effects, the EIR analysis included information on four scenarios — pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. ACWD's current operations reflect the historical and existing conditions, namely pre-2001 and existing conditions. Project conditions similar to those conditions would not be expected to cause ACWD to need to change its operations, or the way it uses sources of water in a manner that would result in significant adverse environmental effects.

ACWD's diversion point, where it has two inflatable dams, is just downstream of the Niles gage. The ACWD is able to divert water from Alameda Creek between October 1 to May 31. Figure HYD8-1 in Appendix HYD1 (p. 121) shows flow-duration curves during this eight-month period for Alameda Creek at the Niles gage constructed from daily flow estimates for pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. The flow-duration curves for pre-2001 conditions, existing conditions, and with-project conditions are similar. For example, flows greater than 10 cfs would occur at the Niles gage on more than 90 to 92 percent of the days in the 18-year hydrologic period under pre-2001 conditions, existing conditions, and with-project conditions. Flows greater than 25 cfs would occur at the Niles gage on more than 65 percent of the days under pre-2001 conditions, existing conditions, and with-project conditions. The EIR concluded that because there would be little change in daily flows at the Niles gage under with-project conditions compared to pre-2001 and existing conditions, any project effects on ACWD operations would be negligible.

Under with-CDRP conditions, flows greater than 10 cfs at the Niles gage would occur on about 97 percent of the days and flows greater than 25 cfs would occur on about 75 percent of the days. The reason for the greater frequency of days on which flows would exceed 10 cfs and 25 cfs under with-CDRP conditions is primarily the greater volume of NPDES discharges from the quarry operators under this scenario as compared to the other scenarios. The with-CDRP conditions do not reflect the conditions under which the ACWD currently operates. If the ACRP is approved, the SFPUC intends to complete construction and begin operation of the CDRP and the proposed ACRP at about the same time (spring 2019). Thus, the with-CDRP conditions will occur only if the ACRP is not approved, or if approved, its operation is delayed past the time the CDRP begins operation. The with-CDRP scenario, if it occurs without the ACRP, is not expected to represent long-term conditions.

When instantaneous flow in Alameda Creek exceeds 1,200 cfs, ACWD deflates its inflatable dams to protect them from damage. It inflates them again when flow drops below 700 cfs; this is a key operating criterion for ACWD. The number of days in which flows in excess of 400 cfs occur at the Niles gage are about the same for pre-2001 conditions, existing conditions, with CDRP conditions, and with-project conditions.

Table HYD8-1 in Appendix HYD1 (p.122) shows estimated average annual flow in Alameda Creek at the Niles gage during ACWD's eight-month diversion period for four scenarios, pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. Average annual flow in the creek at the Niles gage under pre-2001, existing, and with CDRP conditions will be 96,264, 100,005, and 94,575 acre-feet, respectively; under with-project conditions it would be 97,797 acre-feet, about 2 percent greater than under pre-2001 conditions, about 2 percent less than under existing conditions, and about 3 percent greater than under with-CDRP conditions.

Under pre-2001 conditions, the SFPUC operated Calaveras Reservoir at its full capacity of 96,580 acre-feet. In 2001, the DSOD imposed restrictions that required the SFPUC to limit water storage in the reservoir to 12,400 acre-feet. Because of these restrictions, the SFPUC could divert less water from Alameda Creek into Calaveras Reservoir than it did formerly, and so, under conditions that have prevailed since 2001 (existing conditions), more water has continued down the creek. The increase in water flowing down the creek is reflected in the estimates of average annual flow at the Niles gage; estimated average annual flow under existing conditions is greater than under pre-2001 conditions.

When the CDRP is completed and becomes operational, the SFPUC will again operate Calaveras Reservoir at its full capacity. However, unlike under pre-2001 and existing conditions, under with-CDRP conditions, the SFPUC will make releases of water from Calaveras Reservoir and bypasses of water at the Alameda Creek Diversion Dam to meet in-stream flow schedules. Under with-CDRP conditions, the SFPUC will draw down Calaveras Reservoir in the summer and fall to meet seasonal peak water demands in its service area as it did under pre-2001 conditions, but also to provide water for the releases. Consequently, due to the releases and bypasses, the SFPUC will draw water down further than it did under pre-2001 conditions. The reservoir will fill again in the rainy months of the following winter but the probability of spills from the reservoir in the following winter will be lower than under pre-2001 conditions because the reservoir will have a greater amount of capacity to accommodate winter runoff. The decrease in water flowing down the creek under with-CDRP conditions relative to pre-2001 conditions is reflected in the estimates of average annual flow at the Niles gage; estimated average annual flow under with-CDRP conditions is less than under pre-2001 conditions.

With the ACRP in operation, the SFPUC would meet a portion of its summer and fall water demand with water pumped from Pit F2 by the ACRP. The SFPUC would not have to draw down Calaveras Reservoir as far under with-project conditions as it would under with-CDRP conditions. With less available space in Calaveras Reservoir when the winter rains begin, the probability of spills in normal and wet years would be greater with the project than under with-CDRP conditions. Consequently, on average, a greater volume of water would flow down Alameda Creek downstream of Calaveras Reservoir under with-project conditions than it would under with-CDRP conditions. This is despite the fact that the quarry operators would discharge less water into Alameda Creek under with-project conditions than they will under with-CDRP conditions.

In response to this comment, additional analysis of the daily flow estimates at the USGS gage at Niles (Node 9) was conducted to augment the analysis presented in Impact HY-5 and displayed in Figure 5.16-23 (pp. 5.16-73 to 5.16-77). The additional analysis did not alter the flow estimates themselves; it expands upon the daily flow information shown in Figure 5.16-23 and provides more details on the project impacts on daily flows during ACWD key operating periods, described below. The results of the additional analysis are summarized below, and the detailed analysis is contained in an Excel spreadsheet on file with the Planning Department.[5] The additional analysis was designed to provide

[5] ESA/Orion & SFPUC, 2017. Simulated Stream flows for Node 9 (Niles) for the Alameda Creek Recapture Project. Summarized to reflect potential changes to Alameda County Water District operations as a result of ACRP implementation. Excel spreadsheet completed for Alameda Creek Recapture Project Responses to Comments document, June 7, 2017.

more detailed characterization of potential effects on ACWD operations during high and low flow periods critical to its operations. The analysis described in Impact HY-5 concluded that any effects on ACWD operations were minor and would not cause ACWD to alter its operations in a way that would produce potentially significant environmental impacts. This additional analysis further substantiates this same conclusion.

Effects During High Flows

ACWD diverts water from Alameda Creek downstream of the Niles gage using inflatable dams. The source of most of the water reaching this location on Alameda Creek is the northern drainage of the Alameda Creek watershed; that is, the portion of the watershed drained by the Arroyo de la Laguna. The SFPUC's Alameda Creek water supply facilities are located in the southern drainage of the Alameda Creek watershed.

Flows at the Niles gage rise and fall rapidly when storms pass over the watershed. ACWD takes its inflatable dams down when instantaneous flow in Alameda Creek exceeds 1,200 cfs or average daily flow exceeds 700 cfs. Flows exceeding 700 cfs can occur for extended periods in wet years but usually only occur during, and in the immediate aftermath of storms, in dry years. An ACRP-caused change in average daily flow at around 700 cfs could affect the decision to inflate or deflate the dams. This could affect ACWD's ability to divert water. It should be noted that even when the dams are up, ACWD may not divert water because it only does so when source water turbidity is acceptable.

ACWD is permitted to divert water from Alameda Creek from October 1 to May 31, a period of 243 days each year. The number of days in the 18-year period of record when the ACRP would affect the timing of dam inflation and deflation was determined for pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. Using the daily flow data for four scenarios, the analysis identified the number of days during the October 1 to May 31 period for each of the 18 years when flows exceed 700 cfs; then for each hydrologic year, the analysis determined the number of days ACRP-caused flow changes would affect ACWD's dam deployment compared to pre-2001, existing, and with-CDRP conditions, as summarized in **Table 11.5-2** and shown in **Figure 11.5-4**.

In a typical diversion season, the ACRP would increase or decrease the amount of time the dams were in place by a day or two relative to pre-2001conditions, existing conditions, and with-CDRP conditions; that is one or two days in a 243-day diversion season. Compared to pre-2001 and existing conditions, the ACRP would increase slightly the number of days when the dams could be in place. Compared to with-CDRP conditions, the ACRP would decrease slightly the number of days when the dams could be in place. Thus, the ACRP would be expected to have very little effect on ACWD's ability to divert water during high flows.

Effects During Low Flows

As described in Appendix HYD1, Section 8.2, ACWD is currently required to make releases of water downstream of its rubber dams to support aquatic life, but there is no set minimum flow rate. ACWD recently proposed a schedule of releases of water from its dams to support in-migrating steelhead from January 1 to May 31, a 151-day period each year. The proposed schedule of releases to support

TABLE 11.5-2
ESTIMATED NUMBER OF DAYS ACRP-CAUSED INCREASES AND DECREASES IN FLOW AT NILES (NODE 9) ABOVE THRESHOLD (700 CFS) FOR THE ACWD DIVERSION PERIOD (OCTOBER 1 TO MAY 31) THAT COULD AFFECT DAM DEPLOYMENT* (DAYS)

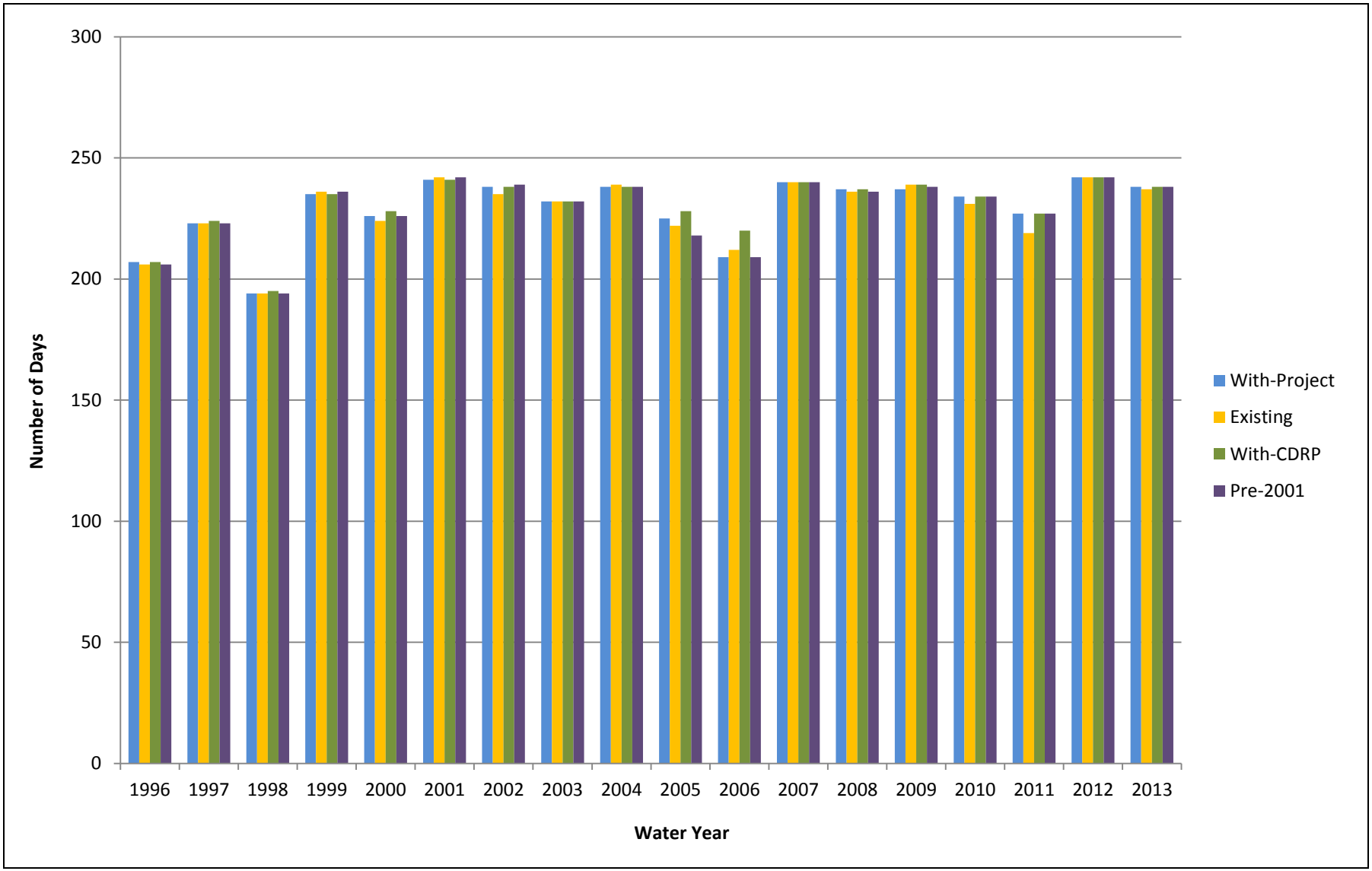
	Compared to Pre-2001 Conditions		Compared to Existing Conditions		Compared to With-CDRP Conditions	
Water Year	Increase	Decrease	Increase	Decrease	Increase	Decrease
1996	1	0	1	0	0	0
1997	0	0	0	0	0	1
1998	1	1	1	1	0	1
1999	1	2	1	2	0	0
2000	1	1	3	1	0	2
2001	0	1	0	1	0	0
2002	0	1	3	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	1	0	0
2005	7	0	3	0	0	3
2006	0	0	2	5	0	11
2007	0	0	0	0	0	0
2008	1	0	1	0	0	0
2009	0	1	0	2	0	2
2010	0	0	4	1	1	1
2011	0	0	8	0	0	0
2012	0	0	0	0	0	0
2013	0	0	1	0	0	0
Average	*0.7*	*0.4*	*1.6*	*0.8*	*0.1*	*1.2*

SOURCE: ESA and Orion, 2017.

migrating steelhead is described in ACWD and Alameda County Flood Control and Water Conservation District (ACFCD)'s "Joint Lower Alameda Creek Fish Passage Improvements, Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impacts"[6]; adopted by ACWD and ACFCD on December 6, 2016, at which time these agencies also approved the Joint Lower Alameda Creek Fish Passage Improvements project.[7]

6 Hanson Environmental, December 2016, *Alameda County Water District and Alameda County Flood Control and Water Conservation District, Joint Lower Alameda Creek Fish Passage Improvements, Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impacts, Final*. Prepared for; Alameda County Water District and Alameda County Flood Control and Water Conservation District.

7 Alameda County Water District and Alameda County Flood Control and Water Conservation District, 2016. Notice of Determination, ACWD-ACFCD Joint Lower Alameda Creek Fish Passage Improvements, December 6, 2016.



SOURCE: ESA/Orion, 2017.

NOTE: Data presented are derived from the Alameda System Daily Hydrologic Model (ASDHM) using from Water Years (1996 – 2013)

SFPUC Alameda Creek Recapture Project

Figure 11.5-4

Number of days with flow at Node 9 when ACWD could deploy dam for Existing, Pre-2001, With-CDRP and With-Project Conditions

Under the proposed schedule of releases, the amount of the release depends on measured flow in Alameda Creek at the Niles USGS gage. Between January 1 and March 31 when creek flow exceeds 30 cfs, ACWD proposes to release 25 cfs. Between January 1 and March 31 when creek flow is less than 30 cfs, ACWD proposes to release 20 cfs. If creek flow is less than 20 cfs, whatever flow is present would be released. Between April 1 and May 31 in wet or normal years, releases would not be dependent on flow at the Niles gage. During that period in dry and critically dry years, releases would be dependent on flow at the Niles gage. If creek flows at the gage exceed 25 cfs, 12 cfs would be released. If creek flows are less than 25 cfs, 5 cfs or available flow would be released. In the ACRP Draft EIR, based on advice provided by ACWD, the EIR hydrology consultants used 25 cfs as the threshold for evaluating project effects on ACWD's water system. In the additional analysis conducted for this RTC document, the values of 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31) were used as thresholds for impact evaluation in order to be consistent with ACWD/ACFCD's Final Initial Study and Mitigated Negative Declaration.

The number of days in the 18-year period of record when the ACRP would affect ACWD's release requirements was determined using ASDHM data, as adjusted for the EIR hydrological analysis, for pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. The results are shown in **Table 11.5-3.** Table 11.5-3 shows the total number of days when the ACRP causes flows to rise or fall above or below the threshold values of 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31). Relative to pre-2001 conditions, the ACRP would affect ACWD's release requirements on an average of about 9.3 days (8.8 days of increase and 0.5 days of decrease) of the 151-day steelhead in-migration season. Relative to existing conditions, the ACRP would affect release requirements on an average of about 9.4 days(5.3 days of increase and 4.1 days of decrease) of the 151-day steelhead in-migration season. Relative to with-CDRP conditions, the ACRP would affect releases requirements on an average of about 14.9 days (0.8 days of increase and 14.1 days of decrease) of the 151-day steelhead in-migration season.

Compared to pre-2001 and existing conditions, the effect of the ACRP would be primarily to increase flow at the Niles gage above the thresholds of 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31). Under pre-2001 and existing condition, on average, the effect of the ACRP would be to increase flow at the Niles gage above the thresholds of 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31) about 8.8 days and 5.3 days, respectively, and therefore raise the amount of the required release on those days. Compared to with-CDRP conditions, the ACRP would not increase flow but instead decrease flow at the Niles gage below the thresholds of 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31) on an average of about 14.1 days.

ACRP-caused increases in flow at Niles above the 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31) thresholds would increase the availability of water for diversion by ACWD but would also increase the amount of the required releases. ACRP-caused decreases in flow at Niles below the 25 cfs (January 1 to March 31) and 30 cfs (April 1 to May 31) thresholds, which would occur if the with-CDRP conditions went into effect for a period of time, would decrease the availability of water for diversion by ACWD but would also decrease the amount of the required releases. The net effect of these phenomena on ACWD diversions in the few days over the 151-day steelhead migration period when the ACRP would causes any changes compared to past, present, and possible future conditions would be expected to have a minor effect on ACWD's operations.

TABLE 11.5-3
ESTIMATED NUMBER OF DAYS ACRP-CAUSED INCREASES AND DECREASES IN FLOW AT NILES (NODE 9) ABOVE THRESHOLD (25 CFS AND 30 CFS) DURING THE STEELHEAD MIGRATION PERIOD (JANUARY 1 TO MAY 31) THAT COULD AFFECT ACWD RELEASES* (DAYS)

	Compared to Pre-2001 Conditions		Compared to Existing Conditions		Compared to With-CDRP Conditions	
Water Year	Increase	Decrease	Increase	Decrease	Increase	Decrease
1996	4	0	4	0	0	1
1997	0	3	0	3	0	5
1998	0	0	0	0	0	0
1999	4	0	4	0	0	0
2000	5	0	3	0	0	3
2001	7	3	6	3	0	63
2002	26	0	10	14	0	28
2003	11	0	6	0	0	29
2004	7	0	5	7	0	34
2005	23	0	13	0	0	7
2006	0	0	0	0	0	0
2007	12	0	9	2	0	25
2008	11	1	3	25	0	13
2009	4	2	3	2	0	30
2010	11	0	7	0	0	7
2011	10	0	1	6	0	2
2012	21	0	21	0	14	0
2013	2	0	0	12	0	7
Average	*8.8*	*0.5*	*5.3*	*4.1*	*0.8*	*14.1*

SOURCE: ESA and Orion, 2017.

Summary of ACRP Effects on Day-to-Day ACWD Operations

As described in Impact HY-5 and above, the ACRP would directly affect flow in Alameda Creek as a result of proposed recapture operations and changes in Calaveras Reservoir operations, and would result in changes to NPDES quarry discharges, indirectly affecting flow in Alameda Creek at Niles. ACRP-caused changes in flow in the vicinity of 700 cfs would affect whether the inflatable dams could be kept in place on one or two days, on average, during the 243-day diversion season of each water year compared to pre-2001, existing, and with-CDRP conditions. The changes would have a negligible effect on ACWD's ability to divert water during high flows.

ACRP-caused changes in flow in the vicinity of 25 cfs and 30 cfs would affect ACWD's proposed release requirements on about 9.3 days on average, during the 151-day steelhead in-migration season of each water year compared to pre-2001 conditions. On about 8.8 days, the ACRP would both increase flow and release requirements compared to pre-2001 conditions. ACRP-caused changes in

flow in the vicinity of 25 cfs and 30 cfs would affect ACWD's release requirements on about 9.4 days on average during the 151-day steelhead in-migration season compared to existing conditions. On about 5.3 days, the ACRP would both increase flow and release requirements compared to existing conditions. ACRP-caused changes in flow in the vicinity of 25 cfs and 30 cfs would affect ACWD's release requirements on about 14.9 days on average during the 151-day steelhead in-migration season compared to with-CDRP conditions. On about 14.1 days, the ACRP would both decrease flow and release requirements. The changes resulting from the ACRP compared to any of these condition would be expected to have a minor effect on ACWD's ability to divert water during low flows.

Conclusions

The commenter suggests that there is an insufficient level of detail to conclude that there are no impacts to ACWD. The significance determination for Impact HY-5 is based on the following significance criterion: "Cause downstream water users, as a result of project-induced flow changes, to alter their operations in a way that would result in significant environmental impacts." (See EIR p. 5.16-61.) The analysis presented in the EIR and augmented above determined that any effects of the proposed ACRP on ACWD operations in Alameda Creek would be too minor to cause ACWD to make substantial changes in the way it operates and uses its various sources of water. The explanation for the conclusion reached is consistent with the conclusion reached by ACWD and ACFCD in their recently published Joint Lower Alameda Creek Fish Passage Improvements, Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact.[8] In this document, ACWD and ACFCD concluded there was no impact from bypass of flow for fish due to ACWD's ability to recoup any lost water in one year by the ability to store water in other years using the Niles Cone aquifer. Likewise, the ACRP Draft EIR concluded that the environmental impacts that could stem from ACRP-caused changes in ACWD operating practices, if any, would be minor, and this impact would continue to be considered *less than significant.*

Therefore, the analysis presented in the EIR and augmented by the additional analysis presented in this response regarding potential impacts on ACWD's operations represents the best science available and is adequate for disclosing project-related impacts for the purposes of the environmental review under CEQA.

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[8] Hanson Environmental, December 2016, *Alameda County Water District and Alameda County Flood Control and Water Conservation District, Joint Lower Alameda Creek Fish Passage Improvements, Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impacts, Final*. Prepared for; Alameda County Water District and Alameda County Flood Control and Water Conservation District.

11.5.6 Lower Alameda Creek Flows (HY-5)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-ACPW-2 A-ACPW-3 A-ACPW-4 A-ACPW-5 A-ACPW-6

Figure 2 of the ESA Report in the EIR identified Steelhead study reach extending from upstream of Calaveras Dam to SF Bay. However, there is limited discussion of the effects of recapturing the entire bypassed flows at ACRP in Sunol on the downstream segment of Alameda Creek. Given that there is significant evapo-transpiration loss of flows between the diversion dam and the recapture project in Sunol, it is possible that SFPUC would be diverting significantly more flows beyond the bypass flow releases from the Diversion dam. Ultimately, this will result in even less flows from the southerly Alameda Creek watershed reaching the flood control channel downstream with disastrous consequences to migratory fish. The evapo-transpiration loss of flows, recapture of flows in exceedance of the amount bypassed at the Dam is not clearly analyzed in the EIR. The District suggests providing data clarifying flow losses between the diversion dam and the flood control channel and how much flows is expected to reach the lower Alameda Creek below the recapture facility in Sunol. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-2)

ACWD and the Flood Control District anticipate construction start of the fish ladder at the BART Weir/RD1 structures by 2019. The Flood Control District is also g modifying the existing low-flow channel and removing existing grade control structures to support fish migration through the reach downstream of the BART Weir. The proposed changes are based on modeling results calling for minimum flows of 40 cfs during critical migration periods in the lower Alameda Creek (flood control segment) to adequately transport sediment and provide a viable flow depth in the proposed low flow channel. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-3)

The proposed ACRP significantly changes the flow equation. The recapture of flows in Sunol is inconsistent with National Marine Fisheries Service March 5, 2011 Biological Opinion on the Calaveras Dam Replacement Project:

> *"CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence with the Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration. These flows will arrive at the upstream end of the Alameda Creek Flood Control Channel and ACWD will provide bypass flows at their water diversion facilities for fish passage through the Flood Channel".* (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-4)

Flows that should be reaching lower Alameda Creek from the southerly watershed would no longer be available. The ACRP unfortunately, is now relying on flows from the north watershed (Arroyo De La Laguna) and ACWD flow releases to meet the downstream needs of sediment transport and the low flow channel optimal conditions needed to support steelhead migration. SFPUC should identify how they propose to provide adequate flows to prevent standing in the lower Alameda Creek. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-5)

The following effects of the project on future conditions in lower Alameda Creek flood control channel were not adequately addressed:

- Loss/changes in pool sizes and numbers. Pools are important part of the Alameda Creek; these features play significant role in species survival especially during periods of drought. Reduction in size and numbers as a result of the ACRP project would have detrimental effects on steelhead fish utilization/presence in the upper watershed post fish ladder construction. These improved future conditions in the lower reach not been addressed inadequately. (Kwablah Attiogbe, Alameda County Public Works Agency, January 30, 2017, A-ACPW-6)

Response HY-5: Lower Alameda Creek Flows

The commenter states that the EIR does not provide sufficient information on the effects of the ACRP on the lower reaches of Alameda Creek in the vicinity of the BART weir and the low-flow flood control channel, and raises related issues including the flows at the BART weir fish ladder, whether the project is consistent with the Biological Opinion (BO), effects of evapo-transpiration on flow and recapture estimates, and effects of the project on pools in the lower Alameda Creek channel. Please also refer to Section 11.4, Response BI-16, for discussion and clarification of the portion of these comments relating to fisheries resources.

Proposed Recapture Operations

Comment A-ACPW-2 refers to the "effects of recapturing the *entire* bypassed flows at ACRP in Sunol" and also infers "it is possible that the SFPUC would be diverting significantly more flows beyond the bypass flow releases from the diversion dam." due to evapo-transpiration that could occur between the bypass and release points and Pit F2. These statements are incorrect representations of project operations, and the EIR addresses these flow issues, as summarized below. The project would recapture a portion of the bypassed and released flows that will occur when CDRP commences operations. As shown in Table 3-5 of the EIR (p. 3-26), the annual average volume of bypasses and releases that will occur under CDRP operations is 14,695 acre-feet per year, while the annual average ACRP recapture volume would be 7,178 acre-feet per year, or about one half of the bypassed and released flows. As explained in EIR Section 3.6, the SFPUC would only recapture the portion of bypasses and releases that correspond to a loss of water supply yield, which takes into account available but unused storage in Calaveras Reservoir when bypasses and releases occur.

The ACRP would rely on passive infiltration of water into Pit F2. This phenomenon occurs under existing conditions, but the volume of water available for infiltration will increase when the CDRP is implemented. The source of the recapture volume is the up to 17 cfs of Alameda Creek flow that percolates into the subsurface in the Sunol Valley between the Welch Creek and San Antonio Creek confluences. This subsurface flow was assumed to be lost from the Alameda Creek system in the CDRP BO hydrologic analysis; likewise, the ACRP hydrologic analysis also assumes this loss.

Flow from the Southerly Watershed

As shown in Figure 5.16-1 (p. 5.16-5), Alameda Creek drains two major watersheds upstream of the Alameda Creek/Arroyo de la Laguna confluence. The southerly watershed, which contains the SFPUC's water supply facilities, including the proposed ACRP, is drained by upper Alameda Creek.

The larger northerly watershed is drained by the Arroyo de la Laguna. Below the Alameda Creek/Arroyo de la Laguna confluence, lower Alameda Creek flows through Niles Canyon and then across the Bay Plain to San Francisco Bay. Comment A-ACPW-5 states that "flows that should be reaching lower Alameda Creek from the southerly watershed would no longer be available" because of the proposed ACRP.

Table HYD5-9 in Appendix HYD1 to the EIR (pp. 72 to 73) shows estimated average annual flow in Alameda Creek just upstream of its confluence with Arroyo de la Laguna for four scenarios, pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions. Under pre-2001 conditions and existing conditions, average annual flows are estimated to be 34,452 acre-feet and 38,274 acre-feet, respectively. With-CDRP conditions serve as the baseline for the ACRP EIR analysis of operational impacts on flow-related resources such as fisheries. Average annual flow in the creek just upstream of the Arroyo de la Laguna confluence, under with-CDRP conditions will be 32,752 acre-feet; under with-project conditions it would be 35,934 acre-feet, about 10 percent greater because of changes in operation at Calaveras Reservoir that SFPUC will implement with the project. Under with-project conditions, the SFPUC would keep water levels in Calaveras Reservoir at a higher elevation than they will under with-CDRP conditions, and consequently spills would be more frequent. Thus, in response to Comment A-ACPW-5, implementation of the ACRP would increase the southern watershed's contribution to surface flow in Alameda Creek below the Arroyo de la Laguna confluence on an average annual basis when compared to with-CDRP conditions.

The increase in average annual flow in Alameda Creek under with-project conditions compared to with-CDRP conditions is also apparent several miles downstream at the Niles gage. The reason for the average annual increase in flow at the Niles gage is the same as the reason for the average annual increase just upstream of the Arroyo de la Laguna confluence, which is briefly explained in the preceding paragraph and explained in more detail in Response HY-4, above.

Figure HYD6-5 in Appendix HYD1 (p. 88) shows flow-duration curves for Alameda Creek just above the Arroyo de la Laguna confluence constructed from daily flow estimates for, existing conditions, with-CDRP conditions, and with-project conditions. Figure 11.5-3 above shows similar information but with the addition of pre-2001 conditions. Figure 11.5-3 shows that under pre-2001 conditions and existing conditions, surface water from the southern watershed (upper Alameda Creek) flows to lower Alameda Creek 19 and 27 percent of the time, respectively. Under with-CDRP conditions and with-project conditions, flows will occur about 66 percent of the time and 34 percent of the time, respectively. The reason for the greater frequency of days on which flow from upper Alameda Creek would reach lower Alameda Creek under with-CDRP conditions is primarily the greater volume of water predicted to be discharged by the quarry operators under this scenario as compared to with-project conditions. The with-CDRP conditions are not expected to represent long-term conditions. The CDRP and the proposed ACRP are proposed to be commissioned at about the same time (spring 2019) and thus CDRP conditions would occur only if the ACRP is not approved, or it is approved and its operation delayed beyond the planned implementation date.

To summarize, on an average annual basis the southern watershed would contribute slightly more water to lower Alameda Creek under with-project conditions compared to pre-2001 conditions and with-CDRP conditions and slightly less than under existing conditions. There would be flow from the

southern watershed to lower Alameda Creek on slightly more days with the ACRP in place than under existing conditions, substantially more days than under pre-2001 conditions, and substantially fewer days than under with-CDRP conditions. The fact that, on an average annual basis, there would be slightly more flow entering lower Alameda Creek at the Arroyo de la Laguna confluence under with-project conditions than under with-CDRP conditions does not necessarily translate into increased or decreased flows in lower Alameda Creek at the BART weir and in the low-flow channel for the reasons noted below.

Flows at the BART Weir Fish Ladder and the Existing Low Flow Channel

Comment A-ACPW-3 raises the issue of flows at the BART weir and in the low-flow channel. The EIR contains estimates of daily flow in Alameda Creek at the Niles gage together with estimates of average monthly and average annual flows calculated from daily flows. The conclusions reached with respect to the ACRP's effect on flows at the Niles gage are summarized in Response HY-4, above. ACWD diverts water from Alameda Creek just downstream of the Niles gage and upstream of the BART weir and low flow channel, referred to in Comment A-ACPW-3. ACWD is permitted to divert water from Alameda Creek between October 1 and May 30. During that period, regardless of the effect of the ACRP on flow in Alameda Creek, flow below ACWD's diversion point, including at the BART weir fish ladder and in the low flow channel, depends on the rate at which ACWD chooses to divert water from Alameda Creek.

From June 1 to September 30, ACWD may not divert Alameda Creek water from Alameda Creek under the season of diversion for its post-1914 appropriative water right. During this period, and as explained above, almost all the water that reaches the Niles gage under pre-2001 conditions, existing conditions, with-CDRP conditions, and with-project conditions comes from the Arroyo de la Laguna because Alameda Creek upstream of the arroyo confluence is dry or almost dry.[9] Consequently, during the summer, the ACRP would have little or no effect on flow in Alameda Creek downstream of the arroyo confluence, including at the BART weir and in the low flow channel.

Consistency with Biological Opinion

Comment A-ACPW-4 quotes a passage from the National Marine Fisheries Services' Biological Opinion on the CDRP dated March 5, 2011 and suggests that the recapture of flows at Sunol is inconsistent with it. The passage is as follows:

> "CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence with the Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration. These flows will arrive at the upstream end of the Alameda Creek Flood Control Channel and the ACWD will provide bypass flows at their water diversion facilities for fish passage through the Flood Channel."

[9] Much of the summer flow in the Arroyo de la Laguna is comprised of water imported from the Delta by ACWD that is discharged into the Arroyo from the Vallecitos turnout of the South Bay Aqueduct.

As shown on Table HYD8-1 and Figure HYD8-1 in Appendix HYD1 to the EIR, the recapture of flows in the Sunol Valley by the ACRP would have minimal effect on average annual or daily flows at the Niles gage and consequently would have little effect further downstream at the flood control channel. Tables HYD8-1 and HYD8-2 show, respectively, estimated annual flows at the Niles gage used in the analysis for the ACRP EIR and annual flows used in the analysis for the Biological Opinion. The estimated annual flows are very similar. Therefore, operation of the ACRP would be consistent with the passage from the National Marine Fisheries Services' Biological Opinion quoted above.

Effects of Evapo-transpiration on Flow

Comment A-ACPW-2 notes the effects of evapo-transpiration between the Alameda Creek Diversion Dam and the ACRP in the Sunol Valley and suggests that the combined effects of evapo-transpiration and recapture could affect flows in lower Alameda Creek. Because the ASDHM is a mass balance model based on measured flows at several USGS gages on Alameda Creek, it integrates the effects of evapo-transpiration along the creek as they occurred during the hydrologic period used to construct and calibrate the model. Thus, the analysis presented in the EIR, which is based on the ASDHM, includes the effects of evapo-transpiration on streamflow.

It is possible that evapo-transpiration, which occurs primarily in the spring and summer, could be greater under with-CDRP conditions and with-project conditions than it is under pre-2001 and existing conditions, primarily because there would be greater surface water flow in the reach of Alameda Creek between the Calaveras Creek and San Antonio Creek confluences. Greater summertime flow in this reach could lead to more abundant growth of riparian vegetation and greater evapo-transpiration, which would not be reflected in the ASDHM. On the other hand, more abundant riparian vegetation would likely increase shading of the water surface and reduce water temperature, which could in turn reduce evaporation from the stream itself. It is doubtful that these phenomena would have much effect on surface water flow in this reach compared to other influences, and whatever effect there is, it would be the same for with-CDRP conditions and with-project conditions. Any effects of altered rates of evapo-transpiration and evaporation from the stream above the Alameda Creek/Arroyo de la Laguna confluence would not likely have any effects on lower Alameda Creek because, during the summer, upper Alameda Creek contributes very little flow to the creek below the Arroyo de la Laguna confluence.

Importantly, Comment A-ACPW-2 incorrectly assumes all bypassed and released water would be recovered. For reasons previously stated, the SFPUC proposes to recover only a portion of the bypassed and released water.

Pools in the Lower Alameda Creek Channel

Comment A-ACPW-4 requests information on the effects of the ACRP on pools in the lower Alameda Creek channel. As noted above, the ACRP would have minimal effect on flow in Alameda Creek from the Arroyo de la Laguna confluence to the mouth of the creek at San Francisco Bay. Consequently, the ACRP would have little or no effect on pools in the channel in that reach of the creek.

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11.5.7 Impacts During Dry Years (HY-6)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-NMFS-4 A-ACWD2-7 O-ACA-3 O-ACA-4
O-CNPS-14

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(3) effect on surface flows in Alameda Creek associated with dry year operation when ACRP operations would account for carryover released and bypassed during prior wet years; and … (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-4)

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c. **The ASDH Model does not analyze impacts to the environment during critically dry periods.** The SFPUC's Blue Ribbon Panel also identified deficiencies in the ASHD Model by stating, "[a] limitation of the empirical modeling approach, based on such short and fragmented records, is that the resulting model cannot represent well an important feature of California hydrology, which is the occurrence of enduring droughts... Because of the potential importance of multi-year droughts on fish populations... there seems to be some value in continuing to re-visit a process-based streamflow modeling strategy..." (Review of the Alameda Creek Habitat Conservation Plan Modeling Strategy, Aug. 2012). The ASDH Model only covers the hydrologic period between Water Year 1996 and 2013, which does not incorporate periods of extreme drought, therefore the Analysis conclusions in the DEIR does not analyze impacts of operations of the ACRP to the environment during these times. ACWD recommends that the model and analysis framework in the DEIR be revised to incorporate a range of historic droughts, or at the very least through 2015 which would capture the recent, critically dry rain year 2013-2014.

The DEIR proposes an accounting methodology to dictate the amount of water the SFPUC is allowed to pump from Pit F2 for recapture based on the premise that average annual volume of water proposed for recapture is less than average inflow from bypasses and releases. Page 3-27 of the DEIR states that this might not be the case during dry years; during these years, recapture operations would account for carryover water released and bypassed and collected in Pit F2 during prior years. Given the conclusions of the Blue Ribbon Panel on limitations of the ASDH Model in dry years, and the proposed carryover accounting methodology, the current evaluation of impacts to surface water hydrology should be expanded to include historic drought periods, in order to adequately analyze the impacts of the project. For example, increased extraction of water out of Pit F2 during dry periods will draw the Sunol Valley Groundwater Basin down, and increase the loss rate of surface water flow from Alameda Creek in the location of the project. This in turn may reduce the number of days that the surface water flow in Alameda Creek in Sunol remains connected to flow in Niles Canyon, which could impact fish and other species located downstream of the CDRP when comparing l) the With-CDRP Conditions and 2) the With-Project Conditions scenarios. For fish migration, the hydrologic analysis needs to include an evaluation on how the ACRP will change the available migration periods compared to the selected baseline conditions. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-7)

The draft EIR states that the hydrology used in the ASDH Model analysis was for the 18-year period from Water Year 1996 to Water Year 2013, and that the draft EIR assumes future water years, on average, will be similar to the modeled hydrologic period. However, limitations to the ASDH Model have been identified by the SFPUC's blue ribbon panel which was commissioned to review the model. The panel concluded that the model does not have a long enough analysis period to adequately characterize surface water hydrology in extended drought periods. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-3)

We have major concerns with the potential impacts from "banking" water to be recaptured during dry years under the project. The draft EIR (page 3-27) states that during dry years recapture operations would collect "carryover" water released and bypassed during prior wet years. The draft EIR does not appear to evaluate or describe the potential impacts to groundwater and surface water from "carryover" pumping during these dry years. The draft EIR does not analyze what will happen to groundwater elevations in the Sunol Valley and to surface water flows in Alameda Creek under extended drought conditions, given the proposal in the EIR to carryover water volumes from year to year. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-4)

Most important to our other concerns, is more complete analysis for understanding banking and use of "carryover" water and pumping in drought years. It is likely California will experience drought conditions again. Further outlining how use will differ those exceptional times is needed in this analysis. For example, "with- project conditions" as described in Table 5.14-1, should take into account the reasonable range of anticipated hydrologic conditions including drought. (Karen Whitestone, Conservative Analyst, California Native Plant Society, January 17, 2017, O-CNPS-14)

Response HY-6: Impacts During Dry Years

Several comments question whether the analysis in the EIR adequately addresses the impacts of the ACRP in dry periods and extended droughts. Comment A-ACWD2-7 requests that the ASDHM be modified to include hydrology from Water Year 2013–14 because it was a critically dry year. The EIR technical analysts believe that the comment intended to refer to Water Year 2014 since that year was dryer than any of the years in the 18-year period of hydrology used in the model. The comments also question the adequacy of the EIR's analysis of impacts on surface water and groundwater during dry years and of use of carryover water during dry years. The comments also question whether modeling took into account the effect of the project during extended droughts, and on fish migration during dry years. Each of these topics are addressed below, with the exception of the impact on fish migration, which is addressed in Section 11.4, Response BI-16.

Impacts on Surface Water Flows in Very Dry Years

Figure HYD5-1 in Appendix HYD1 to the EIR (p. 51) shows the classification of year types in the 18-year period of hydrology based on flows at the USGS gage on Arroyo Hondo, a tributary of Calaveras Creek. There were eight water years in the 18-year period of hydrology used in the model but none were as dry as Water Year 2014. Three years in the 18-year period of hydrology had exceedence probabilities greater than 80 percent. They include Water Years 2012 and 2013, which had exceedance probabilities of about 85 and 80 percent respectively, and occurred in sequence. They also include a sequence of four dry years from 2001 to 2004. Forty-four percent of the years in the 18-year sequence are classified as dry; over the entire historical record 40 percent of the years are classified as dry. The 18-year period of hydrology used in the EIR analysis is adequate for CEQA purposes and including an additional year of data, albeit a very dry year, will not substantially alter the conclusions in the EIR, for the reasons described below.

Although Water Year 2014 was not included in the 18-year period of hydrology used in the model, an estimate of surface water flow in Alameda Creek in that year can be made. As indicated in Section 6.2.1 of Appendix HYD1 to the EIR and in Response HY-3 regarding the relationship between

flow in Alameda Creek in the vicinity of the quarries and the water level in Pit F2, there is no direct connection between Pit F2 (the site of the ACRP) and flow in the adjacent Alameda Creek channel. The water level in Pit F2 does not rise directly in response to high flows in the creek and conversely flow in the creek is not directly diminished by loss of water to Pit F2. In a very dry year like Water Year 2014 and under existing conditions (2015), the Alameda Creek channel at the Welch Creek confluence was dry year-round, except during and just after the few short-duration storms that occurred that year. The creek channel remained dry from the Welch Creek confluence to just below the San Antonio Creek confluence where the discharges from the quarries enter the channel. Under with-CDRP conditions, there will be a small continuous flow, less than 17 cfs, at the Welch Creek confluence as a result of the required releases from Calaveras Reservoir. Between the Welch Creek and San Antonio Creek confluence, up to 17 cfs percolates into the subsurface and so the small flow at the Welch Creek confluence will percolate into the subsurface in its entirety (see Section 4.2.1 of Appendix HYD1 to the EIR for an explanation). The creek channel at the San Antonio Creek confluence will be dry during these periods. Under with-project conditions, the water level in Pit F2 would be pumped down as a result of ACRP operations, but, as noted above, the water level in Pit F2 has no direct effect on flow in the creek channel. Consequently, in a very dry year, under with-project conditions, circumstances would be the same as under with-CDRP conditions; there will be a small continuous flow in the creek at the Welch Creek confluence and the creek channel at the San Antonio Creek confluence would be dry. Thus, adding Water Year 2014 to the period of hydrologic analysis in the ASDHM would not change the conclusions regarding surface flow in Alameda Creek in the project area.

Impacts on Groundwater in Very Dry Years

The ASDHM does not take account of hydrologic data from Water Year 2014, however, the conceptual model used to assess the impacts of the ACRP on groundwater does. As indicated in EIR Section 5.16.2.5 (pp. 5.16-34 to 5.16-37) and Appendix HYD2, groundwater monitoring data from 2006 through 2015 were used in the analysis. Figure 2 in Appendix HYD2 shows groundwater levels in monitoring wells in the vicinity of Pit F2 and the proposed ACRP site for this period. Monitoring Well 4 (MW4) is located just upstream of the quarries. Water levels in MW4 vary seasonally. Winter time high flows in Alameda Creek fill the shallow alluvial aquifer and then, as flows decline, the shallow alluvial aquifer empties to downstream stream channel gravels and the gravel pits. The filling and emptying of the shallow alluvial aquifer is reflected in the rise and fall of the water level in MW4. In wet years, Water Year 2011 for example, the shallow alluvial aquifer remains full for several weeks sustained by creek flows. In dry years, Water Years 2012, 2013 and 2014, for example, the shallow alluvial aquifer is only full for a short period of time and may not ever reach its maximum capacity.

As stated in the EIR (p. 5.16-34), "the monitoring well data reflect processes of groundwater recharge, storage, and discharge in the project area. Recharge is seen in the strong correlation between Alameda Creek flow and groundwater levels. The rapid recession of groundwater after peak streamflow events indicates limited available aquifer storage and that discharge from the system occurs continuously as evident in the steep drop off in water levels after streamflow/recharge declines in the late spring to early summer months."

Almost all of the water that seeps into the gravel pits percolates into them from the shallow alluvial aquifer through the stream channel gravels underlying Alameda Creek. Water that seeps into Pit F2 does so from permeable strata around its perimeter between elevations 224 and 242 feet, as detailed in Appendix HYD2. Under existing conditions, the amount of water that seeps into Pit F2 in a given water year depends on whether the water year is wet or dry. Table HYD4-1 in Appendix HYD1 of the EIR shows losses of surface water to the subsurface between the Welch Creek and San Antonio Creek confluences over the 18-year hydrologic period between Water Year 1996 and Water Year 2013. The losses provide an indication of the amount of water that could percolate into Pit F2 from Alameda Creek. Under existing conditions, the maximum loss of surface water to the subsurface was 6,765 acre-feet in 2006, a wet year; the minimum loss to the subsurface was 2,249 acre-feet in a dry year. The difference in volume of water that could make its way into Pit F2 in wet and dry years is attributable to the length of time that the shallow alluvial aquifer is full.

As shown in Table HYD4-1, losses to the subsurface under with-CDRP conditions will be much greater than under existing conditions, on average about twice as much, and the difference between the maximum losses in wet years and the minimum losses in dry years will be much smaller than under existing conditions. This is because with the CDRP in place, flow in the creek at the Welch Creek confluence will be continuous due to required releases from Calaveras Reservoir, and a greater volume of water will be lost to the subsurface between the Welch Creek and San Antonio Creek confluence. Even in dry years, the shallow alluvial aquifer will receive water through the dry months from upstream releases, providing more opportunity for water to seep into the gravel pits. With the CDRP in place, groundwater levels as measured at MW4 will be higher than they were in Water Year 2014 under existing conditions.

With the ACRP in place, conditions in the vicinity of Pit F2 would be similar to those described above for with-CDRP conditions. Losses to the subsurface between the Welch Creek and San Antonio Creek confluences would be the same for the two conditions. Subject to the SFPUC's operating protocols for Calaveras Reservoir and the ACRP, and consistent with SFPUC's water rights, the amount of water available for pumping from Pit F2 by the ACRP depends on the amount of water that seeps into the pit in relation to the total available storage space in Calaveras Reservoir. In a very dry year like Water Year 2014, less water can be expected to seep into Pit F2 than in a wet year and consequently less water would be available for pumping if no water carried over from the previous year remained in Pit F2 (the effects of carryover storage are addressed below). Thus, the EIR analysis does account for impacts on groundwater during dry years.

Effects of Carryover Storage

As described in the EIR (pp. 3-25 to 3-27), the SFPUC would not recapture all of the water stored in Pit F2 in every year. Generally in wet and normal years, more water will percolate into Pit F2 than the SFPUC would pump out, consistent with its operating protocols based on the total available storage space in Calaveras Reservoir — if the reservoir fills and spills, the amount available for recapture from Pit F2 is zeroed out, followed by the gradual accumulation of pumping credits based on subsequent bypass of flow and releases from storage. Water carried over in Pit F2 from prior wet or normal water years would be available for pumping from Pit F2 in dry years, consistent with the historical pre-2001 carryover operation of Calaveras Reservoir. Thus, in dry years, the SFPUC may pump more from Pit F2

than enters the pit in that particular year. Operation of the ACRP, in accordance with its operating protocols, would have no effect on flow in Alameda Creek because (as explained in Response HY-3, above, and in Section 6.2.1 of Appendix HYD1) there is no direct relationship between surface water flow in Alameda Creek in the vicinity of the quarry pits and water levels in Pit F2. Thus, the EIR analysis considers and accounts for recapture of carryover storage during dry years.

Impacts in Extended Droughts

As described in the EIR (pp. 3-25 to 3-27), the amount of water available for pumping by the ACRP would depend on the amount of water that migrates into Pit F2. In turn, the amount of water that migrates into Pit F2 depends on the amount of water lost to the subsurface between the Welch Creek and San Antonio Creek confluences. As shown in Table HYD4-1 in Appendix HYD1, less water would be lost to the subsurface in dry years like Water Year 2012 than in wet years like Water Year 1998, so less water would be available for pumping by the ACRP in dry years than wet years. In an extended drought, the SFPUC would be able to recapture less water each year than in a normal sequence of runoff years. Any water carried over from a wet year that preceded the first year of the drought would be used early in the drought. Water levels in Pit F2 would likely be lower during the drought than they would be in a normal sequence of hydrologic years, but this would have no effect on flow in Alameda Creek because there is no direct relationship between surface water flow in Alameda Creek in the vicinity of the quarry pits and water levels in Pit F2, as described in Response HY-3 above.

Conclusions

In conclusion, the existing analysis in the EIR, supplemented by this response, adequately addresses potential impacts of the ACRP in critically dry years and the ASDHM does not need to be modified to include data from Water Year 2014.

11.5.8 Mass Balance Issues (HY-7)

Issues Raised by Commenters

This response addresses the following comment, as quoted below:

A-ACWD2-6

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b. The with-Project Conditions scenario appears to create water, which is not possible. The scenario analysis, based on the ASDH Model and published in the DEIR, indicates a violation of conservation of mass, which in turn renders the analysis flawed and thus the conclusions of the analysis unsupported. The ASDH Model was developed to analyze the effects of the flow releases from the CDRPBO on fish populations, and a key assumption in the original ASDH Model is that there is a fixed loss rate from Alameda Creek in the Sunol Valley (between Nodes 4 and 5), and that the lost mass does not reappear anywhere else in the model. The fixed loss rate was a conservative assumption made to evaluate impacts in the CDRPBO on downstream flows needed for fish passage. However, when using the ASDH Model to evaluate multiple scenarios, as was done in this DEIR, in order to satisfy the conservation of mass requirement, this fixed lost mass of water cannot reappear in some scenarios while remaining lost in others. Unfortunately, the with-CDRP Conditions

scenario indicates significant lost mass relative to the with-Project Conditions scenario, and thus violates conservation of mass. Analyzing the scenarios from a mass-balance perspective, either the with-CDRP Conditions scenario has a significant loss of water (a.k.a. an "infinite sink"), or the with-Project Conditions scenario has a significant addition of water from an unknown source (an "infinite source"). Infinite sinks and sources are significant sources of error in mass balance analyses, and two scenarios cannot be compared if one scenario has one and the other does not. The end result, and in layperson's terms, is that the with-Project Conditions scenario creates water, which is not possible.

The primary evidence of violation of conservation of mass appears in Table HYD8-1 on page 122 of the HYD-1 appendix. The total mass of water exiting the ASDH Model at Node 9 is larger in the with-Project Conditions scenario (average of 97,797 AF/year) than in the with-CDRP Conditions baseline (average of 94,575 AF/year). Since the stated Project Goals and Objectives (Page 3-8 of the DEIR) include "[m]aximize the use of local watershed supplies," it must be assumed that the other significant outflow from the system above Node 9 (i.e., exports to SFPUC's drinking water system) are at least equivalent between the two scenarios, if not higher in the with-Project Conditions scenario. Page 3-27, Section 3.6.1.2, Operating Parameters, of the DEIR states: "It is anticipated that, in most cases, the water withdrawn from Pit F2 would be conveyed to the SVWTP and thereby reduce the volume of water conveyed from Calaveras Reservoir to SVWTP, enabling the SFPUC to conserve water in the Calaveras Reservoir and maintain the historical annual transfers from the Alameda Watershed system to the regional water system." According to this statement, as well as the Project Goals and Objectives, it must be assumed that in the with-Project Conditions scenario, there is no equivalent decrease in mass outflows in another part of the system to balance out the increase in mass outflows at Node 9. Meanwhile, the mass inflow to the "SFPUC Alameda Watershed" system (i.e., rainfall-generated runoff into Calaveras reservoir and rainfall-generated flow above the ACDD) must, by reasonable assumption, be the same in all scenarios evaluated. The combination of these mass flows results in significant mass imbalances, indicating either a significant infinite sink in the with-CDRP Conditions baseline or a significant infinite source in the with-Project Conditions scenario. The lack of consistency in assumptions between these scenarios results in a violation of conservation of mass and renders the conclusions of the analysis in the DEIR unsupported (CEQA Guidelines§ 15151.) (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-6)

Response HY-7: Mass Balance Issues

This comment states that the with-project scenario appears to create water," and that therefore the EIR analysis is flawed and conclusions are unsupported. It points to Table HYD8-1 in Appendix HYD1 to the EIR and states that the average annual flow volume at the Niles gage for the with-project condition is 97,797 acre-feet, about 3,000 acre-feet greater than the average annual flow volume for the with-CDRP condition at the same location. The comment argues that because the amount of water entering the system under the two scenarios is the same but the amounts of water leaving the system under the two scenarios are different, the law of conservation of mass is violated. The commenter has misinterpreted the information in Table HYD8-1. Table HYD8-1 does not indicate that the law of conservation of mass is violated because it presents information for only one isolated element out of numerous elements comprising the complex hydrologic system for Alameda Creek between the Alameda Creek Diversion Dam and Calaveras Reservoir and the Niles gage, as explained below.

The reason for the difference in average annual flow between the with-CDRP and with-project conditions in Table HYD8-1 is described below. As the comment notes, the same volume of water enters the Alameda Creek system from the Alameda Creek watershed above the Alameda Creek Diversion Dam and from Arroyo Hondo and other streams tributary to Calaveras Reservoir in the two scenarios. However, because operation of the SFPUC's water supply facilities differs between

scenarios, the volume of water passing down Alameda Creek below the facilities differs in the scenarios as shown in **Table 11.5-4**. Table 11.5-4 shows annual flow volumes in Alameda Creek just below the Calaveras Creek confluence, the most upstream location on Alameda Creek that reflects the SFPUC's water system operations at the Alameda Creek Diversion Dam and Calaveras Reservoir. The average annual flow volume under with-project conditions is greater than average annual flow volume under with-CDRP conditions, and the difference between the two conditions is maintained in a downstream direction as shown in Table HYD5-7, Table HYD5-8, Table HYD5-9 (pp. 71 to 73) and Table HYD8-1 (p. 122) in Appendix HYD1 of the EIR and in Figure 5.16-23 in the EIR (p. 5.16-75).

TABLE 11.5-4
ESTIMATED ANNUAL FLOW VOLUME IN ALAMEDA CREEK BELOW CALAVERAS CREEK CONFLUENCE (NODE 3) FOR WY1996-WY2013 (acre-feet)

Water Year	Pre-2001 Conditions	Existing Conditions	With-CDRP Conditions	With-Project Conditions	Year Type
1996	74,858	74,858	79,950	81,021	Wet
1997	67,995	67,995	67,890	76,946	Wet
1998	115,235	115,235	113,715	120,396	Wet
1999	15,999	15,999	20,824	22,176	Wet
2000	23,538	28,062	20,822	30,078	Wet
2001	1,363	883	10,089	10,089	Dry
2002	1,372	28,216	11,444	11,444	Dry
2003	3,180	11,559	16,845	16,845	Dry
2004	2,200	3,500	12,103	12,103	Dry
2005	43,147	50,141	21,316	41,146	Wet
2006	61,266	71,610	42,000	67,254	Wet
2007	1,096	5,296	9,733	9,733	Dry
2008	4,689	8,487	12,096	12,096	Dry
2009	13,907	7,365	12,538	18,144	Wet
2010	14,367	11,313	16,455	21,862	Wet
2011	45,077	48,354	28,285	50,528	Wet
2012	712	2,378	8,816	8,816	Dry
2013	1,930	15,039	9,965	9,965	Dry
Average	27,329	31,461	28,605	34,480	
Maximum	115,235	115,235	113,715	120,396	
Minimum	712	883	8,816	8,816	

SOURCE: SFPUC, 2016. Simulated streamflows for different scenarios. Excel spreadsheet provided by Amod Dhakal on July 7, 2016.

The reason for the differences in streamflow in Alameda Creek below the Calaveras Creek confluence under with-CDRP and with-project conditions is explained in the EIR under Impact HY-5; it is as follows. The CDRP includes a schedule of releases of water from Calaveras Reservoir and bypasses of water at the Alameda Creek Diversion Dam. Under the with-CDRP scenario, the SFPUC will draw down Calaveras Reservoir in the summer and fall to meet seasonal peak water demands in its service area and to provide water for the releases. The reservoir will fill again in the rainy months of the following winter. The probability of spills from the reservoir in the following winter is fairly low because the reservoir has capacity to accommodate a considerable volume of water when winter runoff begins. With the ACRP in operation, the SFPUC would meet a portion of its summer and fall

water demand with water pumped from Pit F2 by the ACRP. The SFPUC would not have to draw down Calaveras Reservoir as far under with-project conditions as it would under with-CDRP conditions. With less available space in Calaveras Reservoir when the winter rains begin, the probability of spills in normal and wet years would be greater with the project than under with-CDRP conditions. Consequently, on average, more water would flow down Alameda Creek downstream of Calaveras Reservoir under with-project conditions than it would under with-CDRP conditions. This is despite the fact that the quarry operators would discharge less water into Alameda Creek under with-project conditions than they will under with-CDRP conditions.

The comment also states that "it must be assumed that in the with-project conditions scenario, there is no equivalent decrease in mass outflows in another part of the system to balance out the increase in mass outflows at Node 9." In fact, there is an equivalent decrease in outflow in another part of the system. Water enters the Alameda Creek surface water system between its headwaters and Node 9 at the Niles gage in the form of surface runoff from the entire watershed, including that portion drained by the Arroyo de la Laguna, discharges from the quarries, and an inter-basin transfer; that is, water released from the State Water Project. Water leaves the surface water system by diversion to the SFPUC's municipal water system, consumptive use by the quarries, evapo-transpiration, and percolation into the groundwater. The inputs to the surface water system must equal the outputs. As noted in the comment, slightly more water leaves the system at Node 9 under with-project conditions than does under with-CDRP conditions. Consumptive use by the quarries, evapo-transpiration and percolation into the groundwater are the same or about the same in the two scenarios, so the slight increase in water volume leaving the system at the Niles gage must be balanced by a slight decrease in the amount abstracted by the SFPUC.

The commenter's assertion that the EIR analysis violates the law of conservation of mass is unfounded, and the information presented in Table HYD8-1 is valid for use in the impact analysis.

11.5.9 Surface Water and Groundwater Interactions (HY-8)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-NMFS-2 A-ACWD2-11

The hydrologic analysis in the EIR would also benefit from additional information regarding the following:

(1) Surface and groundwater interactions to better understand the relationship between water levels in Pit F2 and flow in Alameda Creek; … (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-2)

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g. **The DEIR does not analyze surface water-groundwater interactions.** The use of the ASDH Model does not provide a sufficient degree of analysis to provide the Planning Department with information that enables them to adequately take account of the environmental consequences or adequately determine feasible alternative or mitigation measures (CEQA Guidelines §15151, 15126.4, 15126.6.) The DEIR's hydrologic analysis, based on the recommendations of the SFPUC's Blue Ribbon Panel, must be performed with a proper surface water to groundwater process-based model with an adequate level of detail to fully identify the impacts the operation of the ACRP will have to the surface water and groundwater hydrology within the Alameda Creek Watershed (CEQA Guidelines §15144.) ACWD recommends the development of this model to occur collaboratively with other watershed stakeholders prior to using it to determine levels of impacts from the ACRP.

To address the deficiencies of the ASOH Model and this DEIR, ACWD recommends that the SFPUC work to develop a new, more robust, and appropriate tool to study the potential impacts of the proposed ACRP and the Planning Department to not adopt this DEIR until a detailed analysis is performed. ACWD proposes to collaborate in this effort and to contribute both financially and through in-kind services to the development of a new model. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-11)

Response HY-8: Surface Water and Groundwater Interactions

These comments assert that the EIR needs more analysis on surface water and groundwater interactions. The National Marine Fisheries (NMFS) indicates that the hydrologic analysis would benefit from additional information on surface water and groundwater interactions in understanding relationships between levels in Pit F-2 and flow in Alameda Creek. The Alameda County Water District (ACWD) indicates that surface water to groundwater process-based model must be developed and used to identify impacts on surface water and groundwater hydrology in the Alameda Creek Watershed. See also Responses HY-2 and HY-3 for further discussion regarding the Alameda System Daily Hydrologic Model (ASDHM) and the relationship between Pit F2 water levels and Alameda Creek flow, respectively.

As described in EIR Section 5.16.2.5 (pp. 5.16-24 to 5.16-43) and Appendix HYD2, the analysis and findings concerning groundwater and inter-related surface water features were based on a detailed conceptualization and hydraulic model of the area potentially affected by the project. The conceptualization characterized subsurface geologic conditions encountered in boreholes. The boreholes were drilled to install monitoring wells and directly observe hydraulic connections between streamflow, mining activities such as dewatering and storage, and groundwater flow. The model presented in the EIR is reflected in the hydrogeologic conceptualization and robust hydraulic dataset of field observations made over a 10-year period.

The method to evaluate potential impacts of the ACRP recapture operations considered the nature of the aquifer system in Sunol Valley. Among factors considered were that groundwater occurrence is of limited extent within shallow alluvium and that groundwater resources in the project setting have a Very Low priority ranking[10] as assigned by the Department of Water Resources (DWR) under the 2014 Sustainable Groundwater Management Act. It was recognized that the fate and pathways of

[10] Department of Water Resources http://www.water.ca.gov/groundwater/casgem/basin_prioritization.cfm, Accessed February 2017.

groundwater in the basin are governed by topography and thin and narrowly distributed alluvium material.

Besides limited extent, the groundwater system in the ACRP study area is isolated from the Niles Cone Groundwater Subbasin managed by ACWD. Surface water enters the groundwater system below Welch Creek where a portion of it seeps into alluvial material. Ultimately, water exits the shallow alluvium in Sunol Valley as surface water below the confluence of Alameda Creek and Arroyo de la Laguna. Thus, model selection and analysis methods focused on delineating hydraulic connections within the Sunol Valley as they relate to potential impact on biological resources—specifically, flow of the live stream, seepage into and out of quarry pits, and groundwater movement as underflow to Alameda Creek, all of which contribute to supporting the existing biological habitats, both for terrestrial biological and fisheries resources.

Consistent with Best Management Practices for hydrogeologic conceptualization and groundwater modeling by DWR,[11] the analysis in the EIR relies on a detailed characterization of the aquifer system and direct measurements and correlations of groundwater, streamflow, and storage levels in quarry pits. In support of the analysis method, the conceptualization and hydraulic model used in the EIR analysis reflect the following aspects of the physical system:

- The groundwater system directly responds to surface water inputs.
- Continuous water level measurements directly reflect recharge, storage, and discharge processes of the aquifer system.
- Groundwater and surface water interactions are evident in groundwater and streamflow data. Below Welch Creek, streamflow splits into subsurface and surface components as surface water percolates to groundwater in the underlying shallow alluvium. Water in the saturated portion of the shallow alluvium flows under the prevailing down-valley gradient governed by the hydraulic properties of the sand and gravel aquifer materials.
- Monitoring data span variable water-year types, seasonal variations in streamflow, and reflect influences of water management practices by quarry operators in the study area. The limited groundwater storage in Sunol Valley empties at the end of each hydrologic year irrespective of water year type.
- Water level data precisely delineate vertical boundaries of the shallow alluvium aquifer system, i.e., the base and upper limit of groundwater storage.
- No evidence was found that indicate other sources, such as the older bedrock formations tapped for local domestic and irrigation supply, provide significant recharge to the aquifer system in the study area.
- The model delineates pathways for subsurface flow through the study area, including seepage into quarry pits and underflow past the quarry reaches, consistent with observations in past fishery studies.
- Water that seeps into the quarry pits generally has no outlet and is stored unless removed by pumping through operator discharges to the creek and consumptive use through processing,

[11] California Department of Water Resources Best Management Practices for the Sustainable Management of Groundwater, Modeling, and Hydrogeologic Conceptual Model BMPs, December 2016.

with some fraction lost through evaporation, and/or seepage out of the pits when levels rise above the groundwater elevation in the shallow alluvium.

The above findings are consistent with the characterization of groundwater occurrence in an independent peer review study made in 2012.[12] Specifically, the 2012 study identified segmented hydrogeology as a factor affecting flows in the Alameda Creek watershed, which is an overarching feature of the conceptual model used in the EIR analysis.

Therefore, the Planning Department has determined that use of the ASDHM supplemented with the detailed conceptualization and hydraulic model of subsurface geologic conditions described above and in the EIR (Section 5.16 and Appendix HYD2) provides appropriate technical basis for the analysis and conclusions for the flow-related impacts identified in the EIR. Development of a new surface water-groundwater model is not warranted for this EIR.

11.5.10 Effects of Proposed Cut-off Wall (HY-9)

Issues Raised by Commenters

This response addresses the following comments, as quoted below:

A-NMFS-3 A-ACWD2-10

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(2) effect of future proposed cutoff walls on surface flow and ground water; … (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-3)

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f. **The DEIR cumulative impacts do not include effects of cutoff walls.** Figure 1-1 of the DEIR displays existing cutoff walls around Pit F2, which were installed to minimize seepage of Alameda Creek surface water into the groundwater basin and into Pit F2. The figure also displays proposed future cutoff walls around sections of Pit F6. Installation of this future cutoff wall will likely provide additional protection from surface streamflow losses to the Sunol groundwater basin. The hydrologic analysis must be refined to include the proposed cutoff wall, and any associated changes in streamflow loss rate to determine cumulative impacts and adequately model future streamflow conditions through this reach (CEQA Guidelines §§ 15065(a)(3), 15130). (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-10)

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[12] Review of the Alameda Creek Habitat Conservation Plan Modeling Strategy, Independent Science Review Panel Members (multiple), Prepared for San Francisco Public Utilities Commission, August 2012.

Response HY-9: Effects of Proposed Cut-off Wall

Both commenters state that the effects of the future proposed cutoff wall on surface flow and groundwater needs to be provided, and ACWD states that the hydrologic analysis must be refined to include the proposed cutoff wall.

The EIR describes the SMP-30 Cutoff Wall and Creek Restoration Project as one of the projects considered in the cumulative impact analysis (see EIR Table 5.1-6, page 5.1-38 and page 5.1-46). As part of this project, a cutoff wall is expected to be built in the future between the Alameda Creek channel and the quarry pits on SMP-30. The SMP-30 Cutoff Wall and Creek Restoration Project is included in cumulative impact analysis described in Section 5.14 (pp. 5.14-110 to 5.14-113) for biological resources and in Section 5.16 (pp. 5.16-77 to 5.16-79) for hydrology and water quality. However, the EIR did not quantitatively analyze the effects of the SMP-30 cutoff wall because the cutoff wall has not yet been designed and no schedule has been established for its construction. Timing of the implementation of the cutoff wall would be determined once the PG&E Line 303 Alameda Creek Relocation project timeline is known. The SFPUC will notify Oliver De Silva and require that the quarry operator begin design and implementation of the cutoff wall once the timing of the PG&E Line 303 Alameda Creek Relocation project is known. The timing of the cutoff wall project is currently unknown, but it is considered a reasonably foreseeable project because its implementation is a condition of the SFPUC's lease with Oliver De Silva for the SMP-30 area. This project is included in the Conservation Plan for Sunol Quarry SMP-30 Site/Revised SMP-30 Improvements prepared by Oliver De Silva, Inc. Therefore, any quantitative analysis of the effects of the cutoff wall would be speculative at this time due to the lack of design details.

Comment A-ACWD-10 also requests that the ASDHM model should be modified to incorporate the effects of the proposed future cutoff wall. For the same reasons described above, the incorporation of the future cutoff wall into the ASDHM model at this time would be speculative. However, the EIR does provide a qualitative analysis of the effects of the proposed cutoff wall in the relevant cumulative impact analyses of the EIR (pp. 5.14-110 to 5.14-113 and pp. 5.16-77 to 5.16-79), based on the role of cutoff walls in the Sunol Valley around the quarry pits (i.e., to reduce the amount of water infiltrating from Alameda Creek to the quarry pits) and the conceptual model of groundwater and inter-related surface water features through the quarry reach (as described in Response HY-8, above). The EIR determined that the project, in combination with past, present, and probable future projects, including the proposed future cut-off walls would result in less-than-significant cumulative impact to biological resources and to hydrology and water quality.

Comment A-NMFS-3 requests additional information of the effects of the cutoff wall on surface water flow and groundwater. As stated previously, the location and schedule of the proposed cutoff wall is unknown; however, the general purpose of the cutoff wall is to reduce the infiltration of surface and groundwater water into Pit F6 from the Alameda Creek channel. Under this assumption, once the cutoff wall is completed it can be expected that less water from Alameda Creek will infiltrate into Pit F6 and more water will flow in the Alameda Creek channel in the vicinity of Pit F6 either as surface water flow or as underflow in the streambed gravel deposits. Therefore, with the reduced infiltration of Alameda Creek water to Pit F6, the qualitative analysis in the EIR determined that the ACRP with the SMP-30 cutoff wall in place would have environmental impacts of a similar

nature to those presented in the EIR but of a reduced extent. Thus, any environmental impacts associated with the project with SMP-30 cutoff wall in place would fit within the envelope of impacts described in the EIR and the EIR provides the most conservative impact analysis of downstream, flow-related environmental effects. For both biological resources (pp. 5.14-110 to 5.14-113) and hydrology and water quality (pp. 5.16-77 to 5.16-79), the EIR determined that the cumulative impact including consideration of the future cutoff wall would be less than significant.

For this reason, the Planning Department has determined that for purposes of the ACRP EIR, the existing level of information is sufficient to analyze potential cumulative effects of proposed ACRP operations in combination with past, present and reasonably foreseeable future projects—including the proposed cutoff wall—and that no additional hydrologic analysis is warranted.

In response to this comment, Figure 1-1 and Figure 3-2 in the EIR (identical figures) have been revised to remove the proposed cutoff wall because it currently does not exist. This revision does not change the analysis or conclusions of the EIR.

11.5.11 Water Temperatures in Niles Canyon (HY-10)

Issues Raised by Commenters

This response addresses the following comment, as quoted below:

A-NMFS-5

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(4) effect on water temperatures in Niles Canyon during summer and fall months. (Gary Stern for Alecia Van Atta, Assistant Regional Administrator, US Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service, January 30, 2017, A-NMFS-5)

Response HY-10: Water Temperatures in Nile Canyon

The comment requests additional information regarding the effect on water temperatures in Niles Canyon during summer and fall months.

As described in EIR Section 5.14.5.3, "Alameda Creek Fish Habitat," (page 5.14-123) historically, Alameda Creek in Niles Canyon was likely an intermittent to perennial stream characterized by low flows during late summer and fall that may have been relatively cool due to the limited exposure to warm atmospheric conditions in the shady canyon. During this low flow condition, some pools may have thermally stratified and provided critical thermal refuge (cool water layer on the bottom of pools) during summer months (June to August), but overall this reach likely would not have provided desirable habitat for juvenile steelhead to reside over the last half of summer and early fall. Currently, Alameda Creek through Niles Canyon serves as a conveyance for imported water supply from the South Bay Aqueduct turnout in Vallecitos Creek, which is tributary to Arroyo de la Laguna just

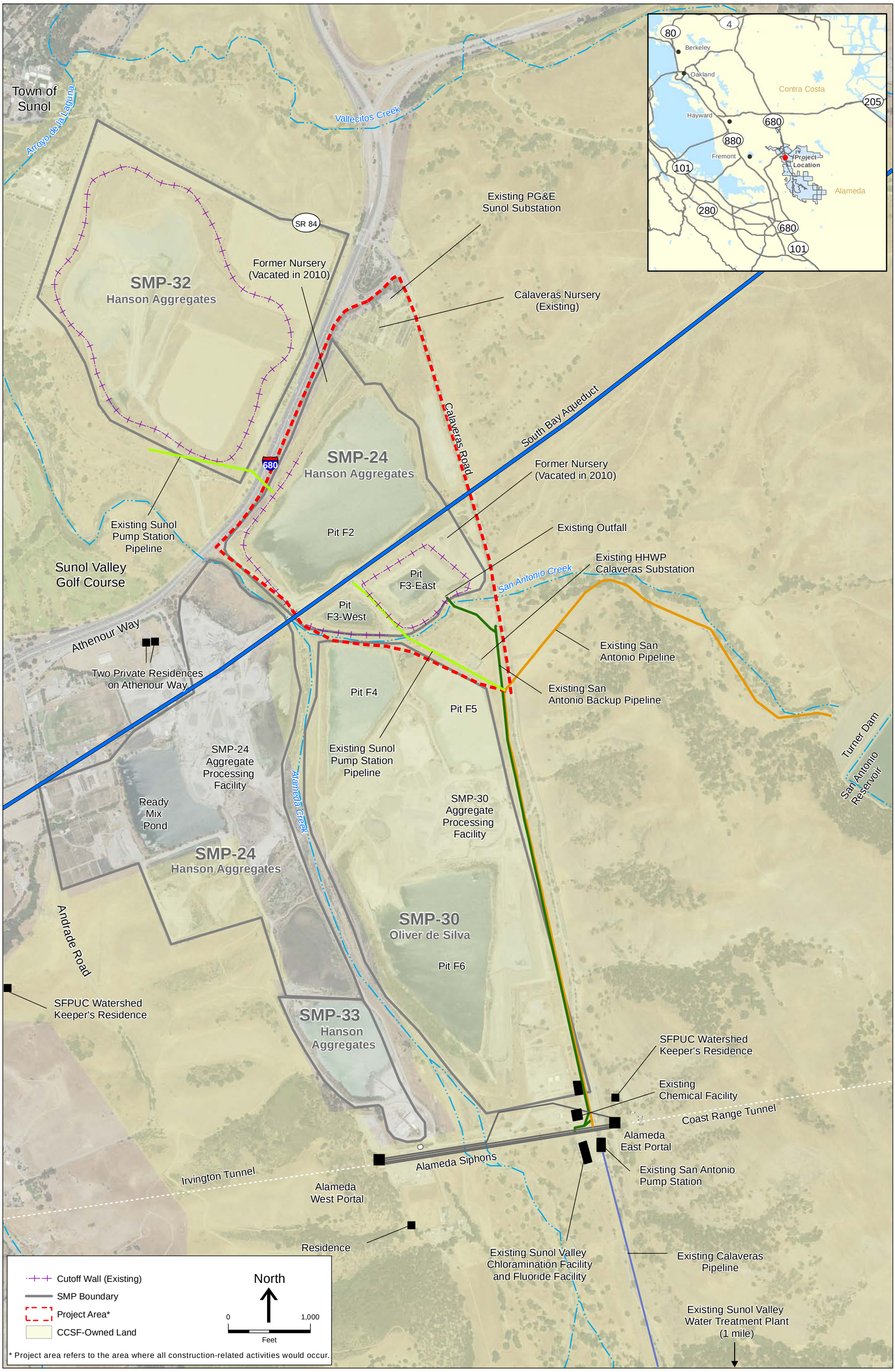
upstream from the Alameda Creek confluence. As a result, summer base flows in Niles Canyon have increased and become less variable, thereby increasing overall water temperatures, reducing thermal buffering that historically occurred with subsurface flows, reducing potential pool stratification, and subsequently reducing potential rearing habitat for steelhead. This condition would be expected to continue under both the with-CDRP and with-project conditions.

Operation of the ACRP would not involve the direct discharge of water into Alameda Creek, so neither water temperature nor any other water quality characteristics in Alameda Creek would be affected by a direct discharge from the ACRP itself. Operation of the ACRP, however, would indirectly alter the amount of water that the quarry operators must manage and the amount of water that they would discharge to Alameda Creek. It would not alter the temperature of the water that the quarry operators discharge. The quarry operators pump water from near the surface of quarry pits to Alameda Creek and would be expected to continue to do so in the future.

As described in Appendix HYD1 (Table HYD-4-2, p. 45), under pre-2001 conditions, the quarry operators discharged an annual average of 2,796 acre-feet of water to Alameda Creek just downstream of the San Antonio Creek confluence; under existing conditions they discharge an annual average of 3,436 acre-feet of water to the creek. Under with-CDRP and with-project conditions, they would discharge estimated annual averages of 6,620 acre-feet and 2,532 acre-feet of water to the creek, respectively. Because Alameda Creek loses surface water to the subsurface between the San Antonio and Arroyo de la Laguna confluences, very little of the water discharged by the quarries to a dry creek in the summer months under the four conditions reaches the Arroyo de la Laguna confluence. In the months of July, August, September and October, flow upstream of the confluence under-pre-2001, existing, with-CDRP, and with-project conditions would average 0.03 cfs, 0.2 cfs, 2.4 cfs and 0.2 cfs respectively. As noted elsewhere, with-CDRP conditions will not exist for long because the CDRP and the ACRP are expected to be implemented within a few months of each other.

Flow in the creek channel downstream of the Arroyo de la Laguna confluence is much greater than flow upstream. In the months of July, August, September and October, flow in Alameda Creek downstream of the confluence averages between 26 and 29 cfs. Consequently, flow from Alameda Creek upstream of the arroyo confluence has currently and would in the future have little or no influence on water temperature in the creek downstream of the arroyo, including in Niles Canyon. In Niles Canyon, potential changes in stream flows associated with the ACRP, if any, would continue to be diminished by operations of other water resource management entities in the watershed that supplies the Arroyo de la Laguna and would not be expected to result in changes to the extent that habitat conditions are currently limited in lower Alameda Creek for the native fish community (or future occurring steelhead). For more information, see Appendix BIO2, Section 3.1.1 (p. 3-6).

The Arroyo de la Laguna is the source of almost all the surface water in Alameda Creek as it enters Niles Canyon in the summer and fall. Consequently, water temperature in Niles Canyon in the summer and fall is primarily a function of water temperature in the Arroyo de la Laguna and would not be substantially affected by ACRP operations. Therefore, no additional information or hydrologic analysis in the EIR is necessary on water temperature effects in Niles Canyon.



SOURCE: ESA, 2015; Date of aerial photo is 2014.

SFPUC Alameda Creek Recapture Project

Revised Figure 1-1

Project Vicinity Map

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11.5.12 Water Quality Impacts on SVWTP (HY-11)

Issues Raised by Commenters

This response addresses the following comment, as quoted below:

A-ACWD2-17

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a. **The source water to the Sunol Valley Water Treatment Plant and other related issues need to be fully evaluated before adopting the DEIR.**

1.) In Figure 1-1 of the DEIR, it appears that surface water flow originating from rainfall has the ability to run directly into Pit F2. Former nurseries are located immediately adjacent to the north and south of Pit F2. The DEIR must include a comprehensive analysis and assessment at this location to ensure that surface soil is not contaminated in the vicinity of Pit F2. Contaminated surface soil could impact the water quality of surface runoff to Pit F2.

2.) The DEIR must provide a discussion about the impacts this new source of water may have on algae, taste and odor concerns, and the potential for cyanotoxins in Pit F2, as well as discuss current treatment processes that are in place or will be implemented to address these potential source water quality issues.

3.) ACWD recommends a pilot study of straight and blended treatment of water from Pit F2 before adopting the DEIR. Page 3-11 of the DEIR states that "monitoring data generally indicates that with the possible exception of total coliform levels" the water in Pit F2 meets the drinking water standards found in Title 22 of the California Code of Regulations. The word "generally" is too vague. The DEIR must contain a table with the available data, including results for metals, radionuclides, and total organic carbon (TOC). The DEIR should also compare TOC levels and turbidity between San Antonio Reservoir and water in Pit F2. The water quality in Pit F2 may be sufficient, but different enough from San Antonio Reservoir water that treatment at SVWTP is more difficult or requires additional or upgraded treatment processes. For example, straight Pit F2 water or Pit F2/San Antonio Reservoir water may be more easily treated with a different coagulant, may produce more solids, or may require additional pretreatment. ACWD recommends that the Planning Department not adopt this DEIR until a pilot study of this treatment plant source water quality change can be carried out.

4.) Pit F2 is in close proximity to the South Bay Aqueduct (SBA) and a PG&E Gas Pipeline. The DEIR does not account for how water quality in Pit F2 will be protected if the SBA, the PG&E pipeline, or embankment were to fail during a seismic event. Changes in source water quality can be very disruptive to treatment plant operations and end users of this water. It is unclear if the project proposes to develop a disaster recovery plan to restore water quality to acceptable levels for treatment at the SVWTP. Such a plan must be incorporated into the project. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-17)

Response HY-11: Water Quality Impacts on SVWTP

The comment raises a number of issues that deal with the safety and practicality of using water from Pit F2 as a source of municipal water supply. These issues include whether contaminated runoff would affect water quality in Pit F2, whether treatment facilities are adequate to treat water from Pit F2, and whether seismic events could cause contamination of water in Pit F2.

Contaminated Runoff Could Affect Water Quality in Pit F2

The comment states that surface runoff from former nurseries near Pit F2 could contaminate water in Pit F2.

Title 22 of the California Code of Regulations requires that public water systems that use surface water must conduct a comprehensive sanitary survey of its watersheds. The SFPUC has complied with this regulation.

The SFPUC conducted an update to its sanitary survey for the Alameda Creek watershed that covered the period 2006 to 2010. The survey dated April 2011 did not include gravel pits in the Sunol Valley as a potential source of raw water. In 2014, the SFPUC conducted a sanitary survey for Pit F2 and F3-East and published a report entitled *Watershed Sanitary Survey for Quarry Ponds F2 and F3 East*. The sanitary survey of Pits F2 and F3-East was incorporated into the SFPUC's latest sanitary survey update for the Alameda Creek watershed, which is entitled *Watershed Sanitary Survey Update for Alameda Watershed* and is dated June 2016.

The sanitary survey for Pits F2 and F3-East included an examination of the lands tributary to the ponds. The area directly tributary to Pit F2 comprises 84.3 acres. It includes the water surface in the pit, the side slopes of the pit and approximately half of the berm that surrounds the pit. No surface drainage from outside the berm, including the areas occupied by former nurseries, is routed to Pit F2. Therefore, no runoff from nursery operations would affect the quality of water in Pit F2.

Compliance with drinking water standards and need for treatment and a pilot study

SFPUC has determined that water contained in Pit F2 is a suitable source of water for use as municipal supply based on the results of a two-year sampling program. Water from Pit F2 would be treated at the Sunol Valley Water Treatment Plant. The SFPUC does not expect that supplying raw water from Pit F2 to the Sunol Valley Water Treatment Plant will cause operational difficulties at the plant or require the employment of additional treatment process units. The SFPUC does not believe that pilot testing of the treatment of water from Pit F2 is necessary, but may conduct pilot tests if it concludes in the future that they would be useful.

Standards for drinking water quality have been established by the California Department of Health and the State Water Resource Control Board. They are based on nationwide standards set by the US Environmental Protection Agency, pursuant to the Safe Drinking Water Act. The standards are contained in Title 22 of the California Code of Regulations and are referred to as primary and secondary maximum contaminant levels. The primary maximum contaminant levels were established to protect the public from contaminants in water that pose a threat to public health and compliance with them is mandatory. The secondary maximum contaminant levels were established to encourage water agencies to remove substances from water that, while they do not pose a threat to public health, may make water unappealing to consumers because of color, taste, or odor.

The SFPUC periodically sampled water quality at two locations within Pit F2 over a two-year period from June 2014 to July 2016, analyzed the samples, and compared them to the maximum contaminant levels for chemical and radiological substances. The results are contained in a report prepared by the

SFPUC, entitled *Alameda Creek Recapture Project, Pond F2 Engineering Report*, and dated November 2016. Appendix G to the report contains the results of the sampling program. In response to the commenter's request, the water quality data are reproduced below in **Tables 5.11-5 through 5.11-11**. No regulated chemicals or radiological substances exceeded their primary or secondary contaminant levels, except for one sample where total dissolved solids exceeded its secondary maximum contaminant level and four samples where color exceeded their secondary maximum contaminant levels. The results indicate that the chemical and radiological characteristics of water from Pit F2 are such that if Pit F2 water was used as a drinking water source it would pose no risk to public health. The exceedances of the secondary maximum contaminant levels for total dissolved solids and color would not be expected to have much effect on the aesthetic qualities of the SFPUC's treated water supply from the Sunol Valley Water Treatment Plant because the exceedances occur only occasionally and because the SFPUC would often blend water from Pit F2 with other water sources to the treatment plant.

The samples taken from Pit F2 were also analyzed for microbiological constituents. The results for total coliform and *E. Coli* bacteria levels were unremarkable for surface waters and indicate that the SFPUC would have no difficulty in meeting drinking water standards for bacteria after treatment at the Sunol Valley Water Treatment Plant. Giardia and Cryptosporidium are parasites that can cause disease in humans. Giardia and Cryptosporidium cysts and oocysts were detected in some of the samples from Pit F2, but their concentrations were much too low to trigger requirements for water treatment technology beyond that already in place at the Sunol Valley Water Treatment Plant.

Disaster Recovery Plan

The comment points out that Pit F2, the site of the ACRP, is close to the South Bay Aqueduct, a component of the State Water Project, and a Pacific Gas and Electric Company (PG&E) gas pipeline. Should either the aqueduct or the pipeline rupture in an earthquake and compromise water quality in Pit F2, the SFPUC would take the ACRP out-of-service if it had not already automatically shut down in response to ground tremors. The ACRP would be a relatively small part of the SFPUC's regional water system and its temporary loss would not seriously affect the SFPUC's ability to serve its customers.

The City and County of San Francisco has an Emergency Management Program that plans the city's response to various emergencies. It prepares and updates an administrative plan, a preparedness plan, a hazard mitigation plan, an emergency response plan and a recovery plan. All city departments prepare their own emergency response plans, which must be consistent with the plans prepared by the overall Emergency Management Program. If the ACRP raises any new issues with respect to emergency response, they will be addressed in future updates to the SFPUC's emergency response plans.

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TABLE 11.5-5
PIT F2 INORGANIC CHEMICALS

Parameter	MCL	DLR	Pond F2-Sample Site A				Pond F2-Sample Site B			
Inorganic Chemical (IOCs) mg/L			*25-Jun-14*	*24-Sept-14*	*28-Jan-15*	*22-Apr-15*	*25-Jun-14*	*24-Sep-14*	*1-Jan-15*	*22-Apr-15*
Aluminum	1	0.05	0.007	0.00719	0.00659	0.00252	0.014	0.00654	0.00277	0.00449
Antimony	0.006	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	0.01	0.002	0.00189	0.002	0.0018	0.00159	0.00189	0.00198	0.00188	0.00163
Asbestos (> 10 µm length)	7 MFL	0.2 MFL	<0.20	<0.4	<0.20	<0.20	<0.20	<0.2	<0.2	<1.8
Barium	1	0.1	0.993	0.106	0.100	0.100	<0.100	<0.105	0.102	0.0987
Beryllium	0.004	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0005
Cadmium	0.005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium VI	0.01		0.00011	0.00011	0.00011	0.00013	0.00011	0.00010	0.00011	0.00012
Chromium, Total	0.05	0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cyanide	0.15	0.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Fluoride	2	0.1	0.2	0.22	0.19	0.2	0.18	0.21	0.21	0.19
Mercury (inorganic)	0.002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	0.1	0.01	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Perchlorate	0.006	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Selenium	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; MFL = million fibers per liter

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016.

TABLE 11.5-6
PIT F2 VOLATILE ORGANIC CHEMICALS

Parameter	MCL	DLR	Average Maximum		Pond F2-Sample Site A				Pond F2-Sample Site B			
Volatile Organic Chemicals (VOCs) mg/L					*25-Jun-14*	*24-Sept-14*	*28-Jan-15*	*22-Apr-15*	*25-Jun-14*	*24-Sep-14*	*28-Jan-15*	*22-Apr-15*
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	0.001	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	0.01	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2,4-Trichlorobenzene	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	0.6	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloropropane	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichloropropane	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichloropropene	0.0005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Benzene	0.001	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Carbon tetrachloride	0.0005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cis-1,2-Dichloroethylene	0.006	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane (Methylene chloride)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	0.3	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl tertiary butyl ether (MTBE)	0.013	0.003	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Monochlorobenzene (Chlorobenzene)	0.07	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	0.1	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethylene (PCE)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	0.15	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,2-Dichloroethylene	0.01	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

TABLE 11.5-6 (Continued)
PIT F2 VOLATILE ORGANIC CHEMICALS

Parameter	MCL	DLR	Average Maximum		Pond F2-Sample Site A				Pond F2-Sample Site B			
Volatile Organic Chemicals (VOCs) mg/L					*25-Jun-14*	*24-Sept-14*	*28-Jan-15*	*22-Apr-15*	*25-Jun-14*	*24-Sep-14*	*28-Jan-15*	*22-Apr-15*
Trichloroethylene (TCE)	0.005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichloroflouromethane (Freon 11)	0.15	0.005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Vinyl chloride	0.0005	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylenes (m,p-Xylene)	1.75	0.00005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
o-Xylenes	1.75	0.0005	ND	ND	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; ND = None Detected

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

TABLE 11.5-7
PIT F2 SYNTHETIC ORGANIC CHEMICALS

Parameter	MCL	DLR	Pond F2-Sample Site A				Pond F2-Sample Site B			
Synthetic Organic Chemicals (SOCs) mg/L			*25-Jun-14*	*24-Sept-14*	*28-Jan-15*	*22-Apr-15*	*25-Jun-14*	*24-Sep-14*	*28-Jan-15*	*22-Apr-15*
Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
2,3,7,8-TCDD (dioxin)	3x10-8	5x10-9	0.000000005	0.000000005	0.000000005	0.000000002	0.000000005	0.0000000019	0.000000005	0.000000002
2,4,5-TP (Silvex)	0.05	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Alachlor	0.002	0.001	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.0001
Atrazine	0.001	0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bentazon	0.018	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Benzon(a)pyrene	0.0002	0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Carbofuran	0.018	0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlordane	0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dalapon	0.2	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Di(2-ethylhexyl)adipate	0.4	0.005	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Di(2- ethylhexyl)phthalate (DEPH)	0.004	0.003	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Dinoseb	0.007	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Diquat	0.02	0.004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Endothal	0.1	0.045	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Endrin	0.002	0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Ethylene dibromide (EDB)	0.00005	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Glyphosate	0.7	0.025	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Heptachlor	0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Heptachlor epoxide	0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Hexachlorobenzene	0.001	0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Hexachlorocyclopentadiene	0.05	0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lindane (gamma-BHC)	0.0002	0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001

TABLE 11.5-7 (Continued)
PIT F2 SYNTHETIC ORGANIC CHEMICALS

Parameter	MCL	DLR	Pond F2-Sample Site A				Pond F2-Sample Site B			
Synthetic Organic Chemicals (SOCs) mg/L			*25-Jun-14*	*24-Sept-14*	*28-Jan-15*	*22-Apr-15*	*25-Jun-14*	*24-Sep-14*	*28-Jan-15*	*22-Apr-15*
Methoxychlor	0.03	0.01	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molinate	0.02	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Oxamyl	0.05	0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Pentachlorophenol	0.001	0.0002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004
Picloram	0.5	0.001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Simazine	0.004	0.004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Thiobencarb	0.07	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Toxaphene	0.003	0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

TABLE 11.5-8
PIT F2 NITRATES AND NITRITES, SAMPLE SITE A

Parameter	MCL	DLR	Pond F2-Sample Site A														
Inorganic Chemicals (IOCs) mg/L			*25-Jun-14*	*23-Jul-14*	*27-Aug-14*	*24-Sept-14*	*22-Oct-14*	*19-Nov-14*	*28-Jan-15*	*25-Feb-15*	*25-Mar-15*	*22-Apr-15*	*27-May-15*	*29-Jun-15*	*26-Aug-15*	*23-Sept-15*	*28-Oct-15*	*17-Nov-15*
Nitrate (as NO3)	45	2	<0.3	<0.02	<0.3	<0.3	<0.3	<0.2	<0.88	0.15	0.385	<0.3	<0.3	<0.3	<0.3	<0.1	<.<0.3	<0.07
Nitrite(as N)	1 as N	0.4	<0.02	<0.10	<0.02	<0.02	<0.02	<0.1	<0.1	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; NO3 = nitrate; N = nitrogen

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

TABLE 11.5-9
PIT F2 NITRATES AND NITRITES, SAMPLE SITE B

Parameter	MCL	DLR	Pond F2-Sample Site B									
Inorganic Chemicals (IOCs) mg/L			*27-Aug-14*	*24-Sep-14*	*22-Oct-14*	*19-Nov-14*	*28-Jan-15*	*25-Feb-15*	*25-Mar-15*	*22-Apr-15*	*27-May-15*	*29-Jun-15*
Nitrate (as NO3)	45	2	<0.3	<0.3	<0.3	<0.2	<0.88	0.15	0.389	<0.3	<0.3	<0.3
Nitrite(as N)	1 as N	0.4	<0.02	<0.02	<0.02	<0.1	<0.1	<0.05	<0.02	<0.02	<0.02	<0.02

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; NO3 = nitrate; N = nitrogen

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

TABLE 11.5-10
PIT F2 GENERAL MINERAL/PHYSICAL CHARACTERISTICS AND MICROBIOLOGICAL AND RADIOLOGICAL CONTAMINANTS, SAMPLE SITE A

Parameter	MCL	DLR	Pond F2 Sample Site A (Center of Pond)																								
Secondary Standards (mg/L)			*25-Jun-14*	*23-Jul-14*	*27-Aug-14*	*24-Sep-14*	*22-Oct-14*	*19-Nov-14*	*28-Jan-15*	*25-Feb-15*	*25-Mar-15*	*22-Apr-15*	*27-May-15*	*29-Jun-15*	*22-Jul-15*	*26-Aug-15*	*23-Sep-15*	*28-Oct-15*	*17-Nov-15*	*16-Dec-15*	*20-Jan-16*	*17-Feb-16*	*16-Mar-16*	*20-Apr-16*	*18-May-16*	*15-Jun-16*	*20-Jul-16*
Chloride	250		28.2	29.5	29.9	29.9	30.7	31.1	30.4	29.2	29.9	30.6	30.4	31.3	30.7	33	33.3	33.3	32.8	32	31	31	30.1	26.6	26.5	25.6	27.2
Color (CU)	15		10	6	8	-	8	8	7	8	9	12	9	10	11	11	7	8	20	20	15	10	7	6	14	17	12
Copper	1	0.05	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
Iron	0.3		0.0756	0.0145	0.0114	0.00647	0.0111	0.0144	0.0177	<0.001	0.0178	0.0328	0.0185	0.0258	0.0254	0.0217	0.0339	0.0217	0.109	0.0827	0.0764	0.0422	0.0165	0.00918	0.0225	0.0588	0.0404
Lead	0.015	0.005	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
Manganese	0.05		0.00338	0.00257	0.00321	<0.00303	0.00215	0.00249	0.00286	0.00806	0.00899	0.00421	0.00266	0.00358	0.0032	0.00347	0.00232	0.00232	0.0226	0.0217	0.0175	0.0202	0.0213	0.0202	0.0202	0.0202	0.0207
Silver	0.1		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Specific Conductance (µS/cm)	900		567	569	569	572	574	575	574	572	580	579	585	592	596	598	603	600	597	596	597	590	576	559	539	536	551
Sulfate	250		75	80	78.5	77	78.1	83	80	82	82.9	83.1	83.5	83.2	84.2	85.7	82.4	82.4	84.7	84.9	84.5	82.9	80.6	80	79.7	74	82.2
Total Dissolved Solids	500		322	332	338	338	334	334	341	320	337	330	341	592	344	367	350	358	355	350	356	326	341	322	296	294	318
Turbidity (NTU)	5		0.81	0.62	0.54	0.47	0.41	0.41	0.53	0.61	0.60	0.87	0.55	0.65	0.81	0.8	0.62	0.54	1.61	1.72	1.31	0.72	0.4	0.3	1.31	1.73	1.29
Zinc	5		<0.002	<0.002	<0.002	<0.002	0.00441	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00367	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
General Mineral/Physical (mg/L)																											
Alkalinity (as CaCO3)			173	171	172	167	172	169	172	168	170	166	167	170	173	169	169	170	174	171	173	177	170	166	162	158	164
Calcium			55	53.6	50.7	50.8	47.9	50.4	55.2	51.4	56.4	50.8	52.9	57	51.1	52.4	61.3	52.4	55.7	48.4	51.4	46.5	50.3	47.4	47.7	45	45.9
Total Hardness (CaCO3)			221	219	220	212	223	219	227	224	227	227	220	225	225	225	220	227	176	229	229	221	233	212	211	194	219
Magnesium			22	20.6	21.5	21.5	21.6	22.7	22.6	22.8	23.1	23.1	23.3	22.4	22.9	23.1	23.3	23.3	23	21.7	17.5	20.2	21.3	20.2	20.2	20.2	20.7
Organic Carbon (Total)			1.96	2.14	2.24	2.29	2.39	2.33	2.15	2.22	2.27	2.62	2.41	2.41	2.47	2.28	2.10	1.86	1.99	1.85	1.83	1.72	1.71	1.86	2.43	2.56	2.18
pH (ph units)			8.44	8.44	8.43	8.38	8.33	8.31	8.09	8.20	8.39	8.44	8.35	8.48	8.43	8.47	8.3	8.2	8.13	8.17	8.11	8.14	8.17	8.31	8.53	8.44	8.49
Phosphate			<0.3	<0.010	<0.3	<0.3	<0.3	<0.010	<0.01	0.011	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.031	<0.3	<0.031	<0.3
Potassium			2.12	2.13	2.15	2.15	2.24	2.22	2.10	2.22	2.13	2.11	2.23	2.21	2.23	2.24	2.57	2.57	2.37	2.07	1.88	1.82	1.99	2.03	2.05	1.87	2.04
Silica			12.5	12.1	12.1	12.2	12.2	12.5	18.4	9.76	9.56	11.5	11.3	11.2	11.8	13.4	13.1	13.1	13.2	11.4	10.3	11.1	11.3	11	9.85	7.53	8.49
Sodium			31.9	29.5	30.8	29.8	30.9	30.6	31.7	31.8	31.5	31.4	32.3	38.3	37.4	37.5	38.1	38.1	35.8	34.4	31.9	27.8	32	30.8	29.6	28.3	29.9
Microbiological-																											
Cryptosporidium (Total per L)			<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giardia (Total per L)			<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (MPN/100mL)	*		57	62	19	>2420	114	23	18	56	58	15	45	88	326	67	649	90	166	81	150	260	64	629	>2420	>2420	78
E. Coli (MPN/100mL)			<1	<1	<1	<1	<1	1	<1	<1	1	<1	<1	<1	<1	2	1	2	3	3	4	15	<1	<1	<1	<1	<1
Radiological (pCi/L)																											
Gross alpha Particle activity	15	3	<3.0	-	-	<3.0	-	-	<3.0	-	-	<3.0	-	-	<3	-	-	<3	-	-	6.8	-	-	<3	-	-	-
Gross beta particle activity	50	4	<3.0	-	-	<3.0	-	-	<3.0	-	-	4.8	-	-	<3	-	-	<3	-	-	<3	-	-	<3	-	-	-
Radium-226	--	1	<1.0	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	-
Radium-228	--	1	<1.0<.58	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	<1	-	-	-
Strontium-90	8	2	<220	-	-	<1.1	-	-	<0.36	-	-	<0.41	-	-	<1.4	-	-	<0.5	-	-	<1.2	-	-	<0.46	-	-	-
Tritium	20,000	1,000	<1.0	-	-	<220	-	-	<160	-	-	<200	-	-	<1000	-	-	<250	-	-	<370	-	-	<340	-	-	-
Uranium	20	1			-	<0	-	-	<0	-	-	<1.0	-	-	<0.7	-	-	<0.7	-	-	<1.0	-	-	<0.7	-	-	-

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; CU = color units; µS/cm = micro-siemens per centimeter; NTU = nephelometric turbidity units; CaCO3 = calcium carbonate; Total per L = Total per liter; MPN/100 mL = Most Probable Number per 100 milliliters; pCi/L = picocuries per liter

* treatment requirements through filtration and disinfection may be increased (from 3-log to 4-log reduction for Giardia) if source level total coliform concentrations are consistently above 1,000 MPN/100mL pursuant to Appendix B of the SWTR Guidance Manual

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

TABLE 11.5-11
PIT F2 GENERAL MINERAL/PHYSICAL CHARACTERISTICS AND MICROBIOLOGICAL AND RADIOLOGICAL CONTAMINANTS, SAMPLE SITE B

Parameter	MCL	DLR	Pond F2 Sample Site B (Center of Pond)																						
Secondary Standards (mg/L)			*25-Jun-14*	*23-Jul-14*	*27-Aug-14*	*24-Sep-14*	*22-Oct-14*	*19-Nov-14*	*28-Jan-15*	*25-Feb-15*	*25-Mar-15*	*22-Apr-15*	*27-May-15*	*29-Jun-15*	*22-Jul-15*	*26-Aug-15*	*23-Sep-15*	*28-Oct-15*	*17-Nov-15*	*16-Dec-15*	*20-Jan-16*	*17-Feb-16*	*16-Mar-16*	*20-Apr-16*	*18-May-16*	*15-Jun-16*	*20-Jul-16*
Chloride	250		28.6	29.7	29.7	30.2	30.5	30	30.7	29.5	30.4	31	30.4	30.8	-	-	-	-	-	-	-	-	-	-	-	-
Color (CU)	15		12	8	8	8	7	7	14	8	9	17	9	10	-	-	-	-	-	-	-	-	-	-	-	-
Copper	1	0.05	<0.001	-	-	<0.001	-	-	<0.001	-	-	0.00128	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	0.3		0.0942	0.0174	0.0135	0.0075	0.0106	0.0168	0.0984	0.0072	0.0179	0.0531	0.0225	0.289	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	0.005	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05		0.00345	0.00294	0.00325	0.00311	0.00208	0.00256	0.0039	0.00592	0.00912	0.0055	0.00382	0.0174	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.1		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-
Specific Conductance (µS/cm)	900		569	569	570	569	573	573	575	571	581	577	583	594	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	250		75.2	79	77.1	76.2	78.6	83	79	82	78.9	81.3	83.9	84.8	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids	500		328	337	311	332	337	318	334	319	347	340	346	594	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity (NTU)	5		1.04	0.60	0.55	0.44	0.36	3.9	1.33	0.68	0.69	1.37	0.64	0.66	0.83	1.01	0.69	0.53	1.89	2.26	2.01	2.53	0.57	0.4	1.5	5.21	0.76
Zinc	5		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00225	<0.002	-	-	-	-	-	-	-	-	-	-	-	-
General Mineral/Physical (mg/L)																										
Alkalinity (as CaCO3)			175	174	170	169	172	166	176	169	173	166	167	169	-	-	-	-	-	-	-	-	-	-	-	-
Calcium			54.2	52.4	50.8	49.4	48.9	51.4	53.0	52.5	56.5	49.3	52.2	62	-	-	-	-	-	-	-	-	-	-	-	-
Total Hardness (CaCO3)			220	218	220	217	223	213	227	226	228	226	222	70.1	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium			21.4	21.3	21.7	22.3	21.4	23.2	22.5	23.6	23.8	23.3	23.5	23.1	-	-	-	-	-	-	-	-	-	-	-	-
Organic Carbon (Total)			2.12	2.23	2.28	2.48	2.38	2.49	2.15	2.38	2.14	2.63	2.49	2.42	-	-	-	-	-	-	-	-	-	-	-	-
pH (ph units)			8.43	8.42	8.40	8.38	8.33	8.25	8.17	8.18	8.37	8.44	8.32	8.51	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate			<0.3	<0.010	<0.3	<0.3	<0.3	<0.01	<0.01	0.012	0.611	<0.3	<0.3	<0.3	-	-	-	-	-	-	-	-	-	-	-	-
Potassium			2.10	2.18	2.20	2.30	2.23	2.20	2.11	2.33	2.17	2.04	2.18	2.22	-	-	-	-	-	-	-	-	-	-	-	-
Silica			12.1	12.0	12.3	12.1	12.0	12.3	19.8	9.92	9.18	11.4	11.5	10	-	-	-	-	-	-	-	-	-	-	-	-
Sodium			30.6	30.9	31.4	32.5	30.6	31.3	30.4	31.6	33.2	30.9	32.6	37.8	-	-	-	-	-	-	-	-	-	-	-	-
Microbiological-																										
Cryptosporidium (Total per L)			<0.01	<0.01	0.01	<0.01	0.10	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Giardia (Total per L)			<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.0	0.01	0.02	<0.01	<0.01	0.01	0.01	0.03	0.02	<0.01	<0.01	0.03	<0.01	0.02	<0.01	<0.01
Total Coliform (MPN/100mL)			461	152	52	>2420	125	148	186	52	161	185	1986	222	>2420	153	727	90	299	249	248	24	248	124	>2420	1733	236
E. Coli (MPN/100mL)			<1	<1	1	<1	<1	<1	3	1	3	9	19	<1	4	3	1	2	4	99	4	<1	9	2	6	10	23
Radiological (pCi/L)																										
Gross alpha Particle activity	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross beta particle activity	50	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radium-226-	--	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radium-226 + Radium 228	5	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radium-228	--	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium-90	8	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tritium	20,000	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	20	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MCL = Maximum Contaminant Level; DLR = Detection Limit for purposes of Reporting; mg/L = milligram per liter; CU = color units; µS/cm = micro-siemens per centimeter; NTU = nephelometric turbidity units; CaCO3 = calcium carbonate; Total per L = Total per liter; MPN/100 mL = Most Probable Number per 100 milliliters; pCi/L = picocuries per liter

SOURCE: San Francisco Public Utilities Commission (SFPUC), 2016. Pond F2 Engineering Report. November 2016

11.6 Alternatives

11.6.1 Overview of Alternatives

The comments and corresponding responses in this section address topics related to the Alternatives, as presented in Chapter 7 of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project). This includes the following sub-topics:

- AL-1: Reasonable Range of Alternatives
- AL-2: Reduced Impact Alternative

11.6.2 Reasonable Range of Alternatives (AL-1)

Issues Raised by Commenters: Range of Alternatives

This response addresses the following comment, as quoted below:

A-ACWD2-19

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6. The DEIR does not analyze reasonable alternatives to the project. A major function of the EIR is to preview and ensure that all reasonable alternatives are thoroughly assessed by the responsible official or board (Inyo County v. City of Los Angeles, (1977) 71 Cal.App.3d 185). "An EIR shall describe a range of reasonable alternatives to the project ... which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (CEQA Guidelines § 15126.6(a).) The DEIR evaluates only I) the no Project Alternative and 2) the Regional Desalination Alternative. ACWD recommends the Planning Department not adopt this DEIR until a detailed alternatives analysis is performed. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-19)

Response AL-1: Reasonable Range of Alternatives

This comment asserts that the EIR does not analyze reasonable alternatives to the proposed project and that a more detailed alternatives analysis should be performed.

The commenter does not identify any additional alternatives that would avoid or reduce the environmental impacts of the project while meeting most of the project sponsor's objectives, or that would offer substantial environmental advantages, or be more feasible than the alternatives analyzed in the Draft EIR (CEQA Guidelines, Section 15204[a]). As described in the EIR, Chapter 7, (p. 7-2), the alternative analysis was prepared consistent with California Environmental Quality Act (CEQA) Guidelines, Section 15126.6(a), which states that an environmental impact report (EIR) must describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project's basic objectives but would avoid or substantially lessen any identified significant adverse environmental effects of the project. This means that the selection of alternatives to be analyzed in the EIR is limited to those that (1) would avoid or substantially lessen any of the

significant effects of the project; (2) are feasible; and (3) would attain most of the basic objectives of the project. Any strategy or alternative that does not meet *all three* of these criteria was eliminated for consideration as a CEQA alternative.

EIR Chapter 7, Section 7.2, Alternatives Selection (pp. 7-5 to 7-10), reviews the project objectives, provides a comprehensive examination of all significant impacts of the project that were identified in Chapter 5, and presents an evaluation of potential strategies to avoid or substantially lessen any of those significant impacts. The alternatives screening and selection process assesses all possible strategies for avoiding or lessening significant impacts, and determined that in addition to the No Project Alternative, only one other alternative—Regional Desalination Alternative—was available that could meet the CEQA requirements for alternatives analysis.

As indicated in that alternatives selection analysis, the nature of the ACRP requires that the project *must* be located on or near Alameda Creek downstream of the confluence of Alameda and Calaveras Creeks and in the vicinity of existing water supply infrastructure to which the ACRP would connect. The analysis determined that no alternative location or project within the Alameda Creek Watershed would be feasible and substantially lessen or reduce the identified construction and operational impacts of the project. This analysis is further described in Section 7.5, Alternatives Considered but Eliminated from Further Analysis (pp. 7-26 to 7-43).

Section 7.5 provides a robust analysis of options/alternatives considered for the CEQA analysis, but the Planning Department determined all of these options/alternatives to either be infeasible or to result in the same or more severe environmental impacts compared to those of the project. Altogether 36 alternative recapture options/alternative are examined in Section 7.5, including the following:

- One option involving an inflatable dam in Alameda Creek downstream of the Sunol Valley Water Treatment Plant
- Twelve options involving in-stream infiltration gallery at various locations along Alameda Creek
- Six options involving shallow wells (well fields) that would pump groundwater from the shallow alluvium
- Ten options involving near stream or in-stream horizontal drains
- Two options involving pumping from quarry pits (one of which ultimately became the ACRP)
- One option involving deep wells in the Livermore Gravels
- One option involving extra local sources, based on recovering water from tributaries to Alameda Creek
- One option involving recirculation of surface water and construction of a diversion or retention facility downstream of the Sunol Valley Water Treatment Plant
- One option involving rehabilitation of the existing Sunol Filter Gallery
- One option involving a cooperative agreement with the Alameda County Water District

In addition to a detailed analysis and comparison of two alternatives to the ACRP in the EIR, the CEQA alternatives analysis also describes and discusses a total of 38 alternatives considered and the reasons they were determined not to avoid or lessen significant impacts or were otherwise infeasible. Therefore, the Draft EIR evaluated a reasonable range of alternatives, as required by CEQA that allows the City decision-makers and the public to evaluate and compare the potential impacts of the proposed project with alternatives designed to avoid or lessen the project's environmental effects.

11.6.3 Reduced Impacts Alternative (AL-2)

Issues Raised by Commenters: Reduced Impacts Alternative

This response addresses the following comment, as quoted below:

O-CNPS-15

Provide reasonable project alternative selection through addition of reduced impact alternative, environmentally superior alternative

Currently, only two alternatives exist for this proposed project, one of which is the mandatory "no project" alternative. The options appear to be only: allowing ACRP proposal as written; no ACRP project; or, approval of a desalination treatment facility to substitute for system needs not met if ACRP is not built. The issues with this presentation are two-fold. The SFPUC may remain under obligation to fill its water rights requirements, accommodate federally listed steelhead release requirements, and meet both seismicity requirements and future public demand. Even considering this ACRP dEIR tiers from the Water System Improvement Program EIR, this is insufficient reason for provisioning what appears as a virtual guarantee within this project's alternatives for implementation of another enormous project that has not yet benefitted from CEQA impact analysis. Confusingly, it appears that selection of this alternative is wholesale permission to move forward with a separate project with separate impacts, and only described in one paragraph. Other descriptions of this desalination facility were not discovered by the time this letter was submitted. No CEQA documentation was referenced for more reading. Perhaps this alternative should more appropriately state that this option will be considered, given results of future CEQA analysis which would decide appropriateness.

Ideally, a reduced- impacts alternative will be included in a revised EIR for this project, and this is what we recommend. The current dEIR alternatives selection indicates an insufficient analysis of the potential varied impacts (both benefits and drawbacks) of a partial implementation of this ACRP project proposal. The public is unable to understand from this presentation, anything else besides an all-or-nothing approach. (Karen Whitestone, Conservative Analyst, California Native Plant Society, January 17, 2017, O-CNPS-15)

Response AL-2: Reduced Impacts Alternative

The commenter raises a number of issues and asserts that the EIR does not provide a reasonable selection of project alternatives, that a reduced impacts alternative should be included in the EIR, and that the EIR does not analyze a partial implementation of the ACRP. The commenter also infers that the EIR provides a guarantee of implementation of the regional desalination project.

With respect to the EIR providing a reasonable range of alternatives, please see Response AL-1 above.

The commenter recommends that the EIR analyze a reduced-impacts or a partial implementation alternative, but fails to specify what such an alternative would be. Regardless, implementation of the mitigation measures identified in the EIR would reduce all construction-related and operational impacts of the project to less than significant. These measures are described in detail in EIR Chapter 5, Environmental Setting, Impacts, and Mitigation Measures. As discussed above in Response AL-1, EIR Chapter 7 presents an evaluation of potential strategies to avoid or substantially lessen the project's significant impacts and concludes that the two identified alternatives represents a reasonable range of alternatives as required by CEQA.

Furthermore, a reduced impacts or a partial implementation alternative would, by definition, fail to meet most of the basic project objectives, including:

- Recapture the water that would have otherwise been stored in Calaveras Reservoir due to the release and bypass of flows from Calaveras Dam and the Alameda Creek Diversion Dam, respectively, to meet instream flow requirements, thereby maintaining the historical annual transfers from the Alameda Watershed system to the SFPUC regional water system.
- Minimize impacts on water supply during drought, system maintenance, and in the event of water supply problems or transmission disruptions in the Hetch Hetchy system.
- Maximize local watershed supplies.
- Maximize the use of existing SFPUC facilities and infrastructure.
- Provide a sufficient flow rate to the SVWTP to meet its minimum operating requirements.

Therefore, for the reasons described above, analysis of a reduced impacts or partial implementation alternative in the EIR is not warranted.

The commenter makes the following statement: "The SFPUC may remain under obligation to fill its water rights requirements, accommodate federally listed steelhead release requirements, and meet both seismicity requirements and future public demand." In the absence of specific concerns on these issues, the commenter is referred to the following: EIR Section 2.3.2 (pp. 2-11 to 2-12) and Section 11.7 of this document (Response GC-3) for discussion regarding the SFPUC's water rights; Section 11.4 of this document (Response BI-16) for discussion regarding federally listed steelhead release requirement; and EIR Chapter 2, Section 2.2.2 (pp. 2-5 to 2-8) for discussion of the SFPUC's Water System Improvement Program, including seismic reliability and water supply goals.

The commenter also infers that the alternatives analysis of the Regional Desalination Alternative in this EIR serves as the CEQA environmental review for that project or that it "guarantees" implementation of that project. Consistent with CEQA Guidelines Section 15126.6(b), the purpose of the alternatives analysis in the EIR is to "identify ways to mitigate or avoid the significant effects that project may have on the environment…. even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly." As described above in Response AL-1, the ACRP is required to be located on or near Alameda Creek downstream of the confluence of Alameda and Calaveras Creeks, but after review of the extensive studies conducted by the SFPUC, the Planning Department determined that no alternative location or project within the Alameda

Creek watershed would meet the requirements for an appropriate CEQA alternative of avoiding or reducing environmental impacts of the project, while meeting most of the project sponsor's objectives. Therefore, as described in Chapter 7, Section 7.2.3 (p. 7-10), in order to fulfill the CEQA requirements for alternatives analysis, this EIR examines potential alternatives at off-site locations outside of the Alameda Creek watershed that would meet the ACRP's second objective, which is to "minimize impacts on water supply during drought, system maintenance, and in the event of water supply problems or transmission disruptions in the Hetch Hetchy system." To achieve this objective, such an alternative would be required to offset the loss of water supply to the regional water system that would occur if the ACRP were not implemented. The Planning Department identified the Regional Desalination Alternative as a feasible alternative that would meet the ACRP's second objective and would avoid all significant construction and operational impacts identified for the proposed project, thus meeting the criteria for a CEQA alternative.

The alternatives analysis of the Regional Desalination Alternative (see EIR Section 7.3.2, pp. 7-18 to 7-21) provides a conceptual description of the Bay Area Regional Desalination Project (BARDP) along with a commensurate conceptual-level analysis of potential environmental impacts for the purpose of providing a comparison of physical environmental impacts of the BARDP with those of the ACRP. This analysis does not intend to serve as CEQA environmental review for the BARDP. The EIR states "given that neither preliminary design nor CEQA environmental review of the BARDP has been completed, the above conclusions can only be considered preliminary indications of the potential impacts of the BARDP project. Detailed environmental review will be required prior to project approval to identify the project- and site-specific environmental impacts of this alternative." Thus, the ACRP EIR makes clear that approval of a regional desalination alternative instead of the ACRP, would need to be preceded by additional, detailed environmental review of the regional desalination alternative.

Furthermore, the EIR does provide the reference citation to the BARDP website (http://www.regionaldesal.com/) for more information on the desalination project and its environmental review. When preliminary design of the BARDP is completed, the CEQA lead agency for the BARDP will conduct environmental review. Therefore, the ACRP EIR adequately analyzed a reasonable range of alternatives, as required by CEQA, that allows decision-makers and the public to evaluate and compare the potential impacts of the proposed project to a reasonable range of alternatives.

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11.7 General Comments

11.7.1 Overview of General Comments

The comments and corresponding responses in this section address topics not directly related to the adequacy or accuracy of the environmental impact report (EIR) on the Alameda Creek Recapture Project (ACRP or project) or to the environmental review process under the California Environmental Quality Act (CEQA). However, these responses are provided for informational purposes for the public and interested agencies and for consideration by decision makers. This section responds to comments on the following topics:

- GC-1: Project Sponsor Relationship with Other Agencies
- GC-2: Project Variant
- GC-3: Water Rights
- GC-4: Opinions

11.7.2 Project Sponsor Relationship with Other Agencies (GC-1)

Issues Raised by Commenters

This response addresses all or part of the following comment, which is quoted below:

A-ACWD2-2

ACWD has a strong interest in protecting and preserving water quality and water supply in Alameda Creek and the Alameda Creek watershed. ACWD staff has carefully reviewed the DEIR and we are particularly concerned with potential impacts the ACRP may have on ACWD's water supplies, as well as ongoing projects related to fisheries restoration in Alameda Creek. With a service area located downstream of the proposed project location, ACWD uses water from the Alameda Creek watershed for drinking water supply to over 349,000 residents in the cities of Fremont, Newark, and Union City. ACWD relies on flow in Alameda Creek for groundwater recharge and its subsequent use as a potable drinking water supply. Additionally, ACWD, together with the SFPUC and other watershed stakeholders, is actively involved in the ongoing efforts to restore the federally-threatened Central California Coast (CCC) steelhead (Oncorhynclzus mykiss) in Alameda Creek. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-2)

Response GC-1: Project Sponsor Relationship with Other Agencies

This comment provides background information describing the SFPUC's relationship with the Alameda County Water District (ACWD). The Planning Department acknowledges this information, and the commenter is also referred to Section 11.2, Response ERP-4, regarding coordination with interested agencies.

The ACWD indicates that its service area is located downstream of the proposed project location, that it relies on flow in Alameda Creek to augments its drinking water supply, and that it is actively

involved in ongoing efforts to restore steelhead in Alameda Creek. All of these points are disclosed in the EIR. EIR Section 5.16.2.8 (pp. 5.16-52 to 5.16-53) and Section 7.5.4 (pp. 7-40 to 7-42) describe ACWD as a downstream water user and how it uses flow in Alameda Creek for its water supply system. Section 5.14.6.3 (p. 5.14-136) describes the Alameda Creek Fisheries Restoration Workgroup, including the SFPUC and ACWD's roles as participating agencies.

11.7.3 Project Variant (GC-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-BAWSCA1-3 A-BAWSCA2-4

Finally, BAWSCA would be supportive of a project variant that achieved the project goals while offering the flexibility to address project impacts identified through the public review process. (Tom Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA1-3)

If, as part of that interaction, or as part of interactions the SFPUC staff may have with other commenters, a variant of the preferred alternative is required, BAWSCA would be supportive of a project variant that achieved the project goals while offering the flexibility to address project impacts identified through the public review process. (Thomas B. Francis, Water Resources Manager, Bay Area Water Supply and Conservation Agency, January 27, 2017, A-BAWSCA2-4)

Response GC-2: Project Variant

The commenter indicates its support of a project variant that would achieve the project goals while offering the flexibility to address project impacts through the public review process.

The Planning Department appreciates the commenter's suggestion for a project variant, but without further description of what such a project variant would consist, it is impossible to include a project variant in the ACRP EIR. However, the commenter should note that EIR Chapter 7 includes a robust analysis of project alternatives, consistent with California Environmental Quality Act (CEQA) Guidelines, Section 15126.6(a). In this chapter, 38 potential project alternatives (or variants) are considered, including one alternative that would involve a cooperative agreement with the Alameda County Water District (ACWD). See EIR Chapter 7 and Response ALT-1 for a more detailed description of the alternatives analysis for the ACRP. The Planning Department has determined that the alternatives analysis in Chapter 7 meets the applicable CEQA requirements and that inclusion of another, albeit undefined, project variant in the EIR is not warranted.

11.7.4 Water Rights (GC-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-ACWD2-13	A-ACWD2-14	A-ACWD2-15	A-ACWD2-16
O-ACA-5	O-CNPS-13		

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3. Source of Project Water and Potential Impacts to ACWD's Water Rights

   a. **The SFPUC needs to seek authorization from the State Water Resources Control Board before it can proceed with the project.** The DEIR claims the source of the recapture water is SFPUC's existing pre-1914 appropriative water rights. A pre-1914 appropriative right can be maintained only by continuous beneficial use of the water. The amount of water and scope of the right is fixed by the amount that can be shown to be actually beneficially used as to both amount and season of diversion.

   Under California Water Code section 1706, the point of diversion, place of use, or purpose of use of a pre-1914 appropriative surface water right can be changed if others are not injured by that change. Under the "no injury rule," a transfer of this type would not be authorized to the extent that it reduced the availability of water for downstream users, regardless of the water priority of those users. California water law protects junior water right holders who would be harmed if seniors could increase the amount of water they divert under their senior priority. Likewise, juniors could be hurt if seniors could change their point of diversion, place of use, or purpose of use in a manner that reduces the quantity or quality of water relied upon by juniors for their diversion.

   The DEIR on page 2-11 claims that SFPUC would recapture the subject water "without expanding the CCSF's existing water rights" which is presumably determined from modeling based on historical hydrological data (see also DEIR at p. 3-25.) However, the DEIR does not adequately describe the actual historic beneficial use of the water as to both amount and season of diversion at the time of vesting required to determine if the SFPUC's water right is expanded as a result of the recapture project. It is unclear from the DEIR how the point of diversion/re-diversion for these surface waters is changed to divert water into Pit F2. Page 3-27 of the DEIR indicates there might be "carry over released" during dry years. There is no information in the DEIR that these pre-1914 water rights include carryover storage or how they operate as to timing and volume of capture, release, and consumptive use. Further, there is no information indicating the timing and rate of diversion of these water rights at the time of vesting and how this is changed through the ACRP. Finally, additional water originating from sources other than Calvarias Reservoir and the ACDD, such as Welch Creek, may be also recaptured in Pit F2. Any new appropriation of surface water requires State Water Resources Control Board approval and a finding that the change will not injure any legal water user (including any water right holders who are junior in priority and anyone who contracts with a legal water user) and that the change will not harm fish or wildlife. The Planning Department should not adopt the DEIR until a thorough evaluation of impacts to downstream water rights holders can be performed. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-13)

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   b. **The DEIR analysis is insufficient to determine impacts to other's water rights.** As described above, given the dynamic nature of surface water flows in Alameda Creek, the hydrologic analysis needs to include a discussion about day to day changes in surface flows within Alameda Creek in order to determine the source of the water pumped from Pit F2 (surface water or groundwater) and to fully identify potential impacts to fisheries and downstream water users. Any groundwater captured in Pit F2 through the

project is not authorized as a change in SFPUC's pre-1914 surface water rights under California Water Code section 1706. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-14)

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c. **The Project constitutes an expansion of San Francisco's water rights claim for Calaveras Reservoir.** The DEIR states that the source water which flows into Pit F2 will be comprised of flows released from Calaveras Dam, flows bypassed around the ACDD, and flow from other tributaries downstream of those two facilities. Since the ACRP operations do not physically distinguish which of these three sources is being extracted, the proposed operations of the ACRP constitute an expansion of San Francisco's water rights claim for Calaveras Reservoir. An expansion of the SFPUC's claimed water right to Arroyo Hondo and Alameda Creek may cause an impact or injury to other legal downstream users in the Alameda Creek Watershed. The SFPUC must work with the State Water Resources Control Board to legally acquire the necessary water rights for operation of the ACRP. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-15)

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d. **The DEIR concludes that downstream users will not have to alter operations without completing a sufficient analysis.** The DEIR determines that there will be no significant impacts because the ACRP would not cause ACWD, a downstream water user, to alter it operation in a way that would result in significant adverse environmental impacts. However, this analysis is insufficient because it is predicated on the unproven premise that the water being recaptured is exclusively SFPUC's pre-1914 surface water right and that the recapture operation does not expand these rights. (Robert Shaver, General Manager, Alameda County Water District, January 30, 2017, A-ACWD2-16)

The draft EIR states that water being extracted from Pit F-2 will originate from Calaveras Reservoir, bypasses around the diversion dam, and other local tributaries upstream of the pit. Pumping and using water that originates from other tributaries may constitute development of a new water right, and may not fall under the SFPUC's Calaveras water right, as claimed in the draft EIR. (Jeff Miller, Director, Alameda Creek Alliance, January 4, 2017, O-ACA-5)

…as well as points on development of new water rights. (Karen Whitestone, Conservative Analyst, California Native Plant Society, January 17, 2017, O-CNPS-13)

Response GC-3: Water Rights

This group of comments raise issues related to water rights. The comments question whether the SFPUC is proposing to expand its water rights, whether existing water rights include carryover storage, and whether Pit F2 would recapture water from other sources than Calaveras Reservoir and the Alameda Creek Diversion Dam, such as Welch Creek and groundwater. One comment states that the analysis of downstream water user impacts is insufficient because it presumes SFPUC will recapture only existing water rights, which it asserts is unproven. Please see Section 11.5, Response HY-4, for a response regarding environmental impacts on downstream water users.

Proposed Recapture Operation and SFPUC Water Rights

As the comments acknowledge, the Draft EIR states that the SFPUC intends to operate the ACRP within its existing pre-1914 appropriative water rights. The nature and extent of these water rights, and compliance with provisions of the California Water Code Section 1706, cited in Comments A-ACWD2-13 and A-ACWD2-14, do not relate to the analysis of environmental impacts of the project under CEQA. The Draft EIR describes the impacts of the project as SFPUC intends to carry it out. While the Draft EIR did not need to discuss the nature of the SFPUC's water rights, it does provide information on the water rights basis for the proposed project. Water rights considerations are described in Draft EIR Section 2.3.2 (pp. 2-11 to 2-12). In Chapter 3, Project Description, Section 3.6.1 (pp. 3-25 to 3-27), the Draft EIR also discusses the operational limitations self-imposed by the SFPUC to ensure that the project would not expand the SFPUC's existing water rights. In addition to the explanations in the Draft EIR as to how the project would operate, and as further described in this response, the SFPUC and its engineering consultants met with Alameda County Water District (ACWD) staff in July 2016 prior to publication of the Draft EIR to address any concerns the agency had about project operations. This review included the PowerPoint presentation, that was prepared by the SFPUC's hydrological and water rights consultant to explain and depict the water right accounting rules for water pumped from Pit F2 under the project.[1] Under these water rights accounting and operations rules, the SFPUC's project pumping would be constrained not only by the volume and rate of water released and bypassed upstream as a result of the National Marine Fisheries Service's Biological Opinion (NMFS BO), but also by the volume of available storage at Calaveras Reservoir that would otherwise have been available to store water diverted under SFPUC's pre-1914 water rights *had the release and bypass conditions in the NMFS BO not been imposed*. In other words, the SFPUC understands that in any given year or period, the maximum extent of SFPUC's pre-1914 appropriative rights is a full Calaveras Reservoir, consistent with the historically documented occasional filling of the reservoir since the completion in 1930 of the plan of development for the reservoir and the Alameda Creek Diversion Dam and Tunnel. If Calaveras Reservoir fills and spills, the ACRP operational rules confirm that the SFPUC would not pump water from Pit F2 unless and until sufficient withdrawal credits in Pit F2 accumulate again as a result of bypasses made at the Alameda Creek Diversion Dam and/or release of flow directly from Calaveras Reservoir and available storage capacity exists in Calaveras Reservoir.

The purpose of the ACRP is to recover or recapture for municipal uses the water bypassed around the Alameda Creek Diversion Dam or released from Calaveras Reservoir as a result of the NMFS BO, to the extent that the water could otherwise have been stored at Calaveras Reservoir under the SFPUC's pre-1914 water rights. The bypasses and releases that SFPUC seeks to recover or recapture were required as conditions in the NMFS BO for the Calaveras Dam Replacement Project (CDRP). The new dam, now under construction downstream of the old dam, will restore the existing reservoir storage of 96,850 acre-feet, as described in the Draft EIR on pp. 1-1; 1-5; Section 1.4.3 (page 1-7); pp. 2-1, 2-11, and 2-12; Section 3.2.2 (page 3-7, carryover storage function of Calaveras Reservoir); and Section 3.3 (page 3-7, project goals and objectives).

[1] MBK Engineers, Alameda Creek Recapture Project Analysis, PowerPoint Presentation, May 2, 2016.

Prior to a 2001 order by the California Division of Safety of Dams (DSOD), which restricted SFPUC's ability to store water in Calaveras Reservoir due to seismic concerns, and prior to the 2011 NMFS BO conditions, the SFPUC was under no obligation or legal requirement to release or bypass any flow for the benefit of fish life downstream of the Alameda Creek Diversion Dam or Calaveras Reservoir. Since the completion of Calaveras Reservoir and the perfection of the Upper Alameda Creek and Calaveras Dam water rights, the SFPUC may divert water to storage in Calaveras Reservoir at the Alameda Creek Diversion Dam and at Calaveras Dam, up to the full 650 cfs capacity of the Alameda Creek diversion tunnel and the full capacity of Calaveras Reservoir. The SFPUC's pre-1914 water right did not require any bypass of water from the Alameda Creek Diversion Dam or the release of water from storage in Calaveras Reservoir to benefit fisheries resources.

Upon completion of the CDRP, the NMFS BO will require the SFPUC to release 5 to 12 cubic feet per second (cfs) at Calaveras Dam, depending on the time of year and the type of year (wet or dry), as described in the Draft EIR on pp. 1-5; 2-9; and Section 3.2.2, (page 3-4). These releases from storage will average 7,545 acre-feet in normal and wet years and 5,540 acre feet in dry years, as described in the Draft EIR in Section 5.16.2.4 (page 5.16-9). The NMFS BO also will limit the SFPUC's diversions at the Alameda Creek Diversion Dam and Tunnel. These new limitations include (a) limiting the season of diversion to the period from December through March, (b) bypassing the first 30 cfs of flow around the diversion dam, and (c) only diverting flows between 30 and 370 cfs as a consequence of restrictions on diversion capacity associated with the required installation of a fish screen barrier on the tunnel entrance.

As a result of these new diversion restrictions in the NMFS BO, SFPUC's average annual bypass at the Alameda Creek Diversion Dam and release of stored water from Calaveras Reservoir are estimated to be 14,695 acre-feet per year greater than before the NMFS BO, with an average of 10,133 acre feet per year in dry years and 18,345 acre feet in wet years, as described in the Draft EIR, Section 5.16.2.4 (page 5.16-10). As a direct result of the NMFS BO, the SFPUC will be bypassing and releasing an average annual volume of 14,695 acre-feet of water, as described in Draft EIR Table 3-5 (page 3-26); and Section 15.16.1 (page 15.16-2). As a direct result of this release and bypass of flow following completion of the CDRP, more water will seep into the quarry pits in Sunol Valley due to losses from the stream channel in that location, including seepage into Pit F2, site of the proposed pumping facilities, as described in Draft EIR Section 15.16.2.4 (p. 5.16-24).

Under the accounting rules described on Draft EIR pp. 3-26 to 3-27, the amount of water recaptured in Pit F2 will not exceed the total available storage capacity at Calaveras Reservoir. Other sources of water that may flow into the Alameda Creek alluvium and the quarry pits from tributary areas downstream of Calaveras Reservoir are not factored into the calculation of water that may be pumped from Pit F2 as part of project operations. In wet and normal water years, the average amount of water available for recapture, after applying the ACRP water rights and accounting rules described above and in the Draft EIR, is *less than* the average inflow from bypasses and releases from the same period. In dry years, recapture operations "account for carryover released and bypassed water collected in Pit F2 during prior wet years, consistent with the existing operations of Calaveras Reservoir storage," as noted in the Draft EIR on page 3-27.

Recovery in dry years of released and bypassed water collected in Pit F2 in wet years mirrors what has occurred historically with the operation of Calaveras Reservoir prior to the NMFS BO release and bypass requirements. In reference to text on page 3-27 of the Draft EIR, the commenter states, "*Page 3-27 of the DEIR indicates there might be "carry over released" during dry years. There is no information in the DEIR that these pre-1914 water rights include carryover storage or how they operate as to timing and volume of capture, release, and consumptive use.*"

The Draft EIR at page 3-27 explains the information presented in Draft EIR Table 3-5 on page 3-26. The table shows that the simulated ACRP recapture volume in dry years, applying the water rights accounting and operations rules can exceed Pit F2 inflow from bypasses and releases in dry years. The EIR states this can occur because ACRP recapture volume can include released and bypassed water collected and carried over from prior wet years and stored in Pit F2. This ACRP operation would mirror what would have occurred historically with the operation of Calaveras Reservoir, prior to the release and bypass agreements that are part of the CDRP. The pre-1914 water rights for Calaveras Reservoir allow for collection to storage up to the original capacity of the reservoir. There are no requirements or terms in the pre-1914 water rights that limit or restrict the ability to carryover water collected to storage in Calaveras Reservoir into future years. The ACRP will allow this historical practice to continue. SFPUC intends to operate the ACRP in a manner designed to recover the required fishery flow releases and bypasses that the SFPUC would otherwise have historically been able to retain in Calaveras Reservoir, including the ability to carryover water from one year to the next. However, the recapture of the ACRP would be conducted within SFPUC's existing pre-1914 appropriative water rights without expanding those rights. Consideration of the available storage space in Calaveras Reservoir in the accounting methodology prevents expansion of the existing pre-1914 water rights and could limit the volume of water that might be carried over in Pit F2. Consideration of the available storage space in Calaveras Reservoir will limit the combined carryover in both Calaveras Reservoir and Pit F2 to the historical capacity of Calaveras Reservoir.

The ACRP water accounting rules make clear that the SFPUC will not be expanding its pre-1914 water rights, as contended by the ACWD. Project operations therefore cannot cause injury to ACWD.

Source of Recaptured Water

The commenter asserts that the SFPUC would recapture water from other sources than Calaveras Reservoir and the Alameda Creek Diversion Dam, such as Welch Creek and groundwater. As explained above, and as further explained in Section 11.5, Response HY-5: Lower Alameda Creek Flows, the project would only recapture a fraction of the volume of bypassed and released flows that will occur when CDRP commences operations as shown in Table 3-5 of the Draft EIR, (page 3-26). The fact that water from other sources (e.g., tributaries downstream of Calaveras Dam) may commingle with bypassed and released water and eventually seep into the quarry pits does not limit SFPUC's right, under well-established water law principles, to divert or redivert (i.e., recapture) the volume of water released and bypassed at its upstream facilities in order to implement instream flow requirements below those facilities. This right to recapture does not attach only to the corpus of water physically released or bypassed, and SFPUC is entitled to commingle its water with other sources provided the project does not result in the expansion of SFPUC's water rights or injury to other legal

users of the water. Water Code §7075; *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 260, 264. The SFPUC did not forfeit or abandon its rights to the bypassed or released water when it agreed to such conditions in the NMFS BO, and has been actively pursuing a recapture project since the conditions were established in 2011.

The accounting rules for the project aptly demonstrate that the proposed project operation will not enlarge the City's long-standing upstream pre-1914 water right, nor cause injury to downstream water users such as ACWD. ACWD has no basis to assert injury under Water Code §1706 because the Draft EIR discloses no such impact to its water supply operations. As the Draft EIR concludes, "It is expected that any effects of the proposed ACRP on ACWD operations in Alameda Creek would be too minor to make substantial changes in the way it operates and uses its various sources of water" (Draft EIR, Section 5.16, Impact HY-5,pp. 5.16-76 to 5.16-77). The analysis in this section of the Draft EIR demonstrates that project operations will cause no injury to ACWD under Water Code §1706.

See Section 11.5, Response HY-1, regarding use of daily flow rates in the EIR hydrological analysis.

See Section 11.4, Response BI-16, regarding impacts to fisheries resources.

See Section 11.5, Response HY-4, regarding impacts on downstream water users.

See Section 11.5, Response HY-8, regarding surface water and groundwater interactions.

11.7.5 Opinions (GC-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

PH-Moore-1

This is technically very challenging for us. However, over the many years, this Commission has been briefed and debriefed on the many stages of the improvements of the water system. And I am confident that the same amount of thoroughness has gone into the document in front of us.

In addition to that, in the previous discussion regarding the reinstatement of steelhead trout in that area, we were very, very thoroughly debriefed. There were lots of challenges of how it's being done. So I assume that I am personally at a point where I am in full support that this Draft EIR has addressed those issues which so many people have spent technical expertise and passion on. So I am in full support of what's in front of me at this stage. (Commissioner Moore, January 5, 2017, PH-Moore-1)

Response GC-4: Opinions

This comment, consisting of opinions and observations expressing support for the EIR, is noted.

CHAPTER 12
Draft EIR Revisions

12.1 Introduction

This chapter presents revisions to the Alameda Creek Recapture Project (ACRP) Draft Environmental Impact Report (EIR) that was published on November 30, 2016. These revisions include both (1) changes made to text, tables, or figures in response to comments on the Draft EIR as discussed and presented in Chapter 11, as well as (2) staff-initiated text changes to correct minor inconsistencies, to add minor information or clarification related to the project, and to provide updated information where applicable. None of the revisions or corrections in this chapter substantially change the analysis and conclusions presented in the Draft EIR.

The chapter includes all revisions by reproducing the relevant excerpt of the Draft EIR in the sequential order by the chapter, section, and page that it appears in the document. Preceding each revision is a brief explanation for the text change, either identifying the corresponding response codes, such as Response HY-9, where the issue is discussed in Chapter 11 or indicating the reason for a staff-initiated change. Deletions in text and tables are shown in strikethrough (~~strikethrough~~) and new text is shown in underline (<u>underline</u>). Figures and tables are noted as "(Revised)" next to the figure or table number, and the revised figures are presented on the next page following the description of the revision.

12.2 Changes to the Draft EIR

12.2.1 Front Matter and Chapter 1: Summary

To complete the list of acronyms, the following text has been added to page xix:

<u>RTC</u> <u>Responses to Comments</u>

As discussed in Response HY-9, Figure 1-1, page 1-3 has been revised to remove the proposed cutoff wall because it currently does not exist, as shown on page 12-3. See Revised Figure 1-1.

The access road leading into Pit F2 has been revised on Figure 1-2, page 1-4 to clarify the proposed construction scenario, as shown on page 12-4. See Revised Figure 1-2.

To correct a minor error on page 1-19, Table 1-1, the following text change was made:

Mitigation Measure M-BI-1c: Prevent Movement of Sensitive Wildlife Species through the Work Areas.

To prevent CTS, CRLF, and AWS, western pond turtles, and American badgers from moving through the project area, the SFPUC or its contractors shall install temporary wildlife exclusion fencing along the work area boundaries (including access roads, staging areas, spoils sites, etc.) prior to the start of project construction activities. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed and that construction equipment is confined to the designated work areas. The fencing shall be made of suitable material that does not allow any of the animals listed above to pass through, and the bottom shall be buried to a depth of 6 inches (or to a sufficient depth as specified by the applicable resource agencies) so that these species cannot crawl under the fence. Fencing shall be equipped with exit funnels at least every 200 feet. To provide wildlife refugia and minimize CTS and CRLF mortality during construction, ~~2-foot by 4-foot~~ plywood coverboards (approximately 3 feet by 3 feet) shall be placed adjacent to the exclusion fence at a minimum interval of 200 feet, alternating inside and outside of the fence.

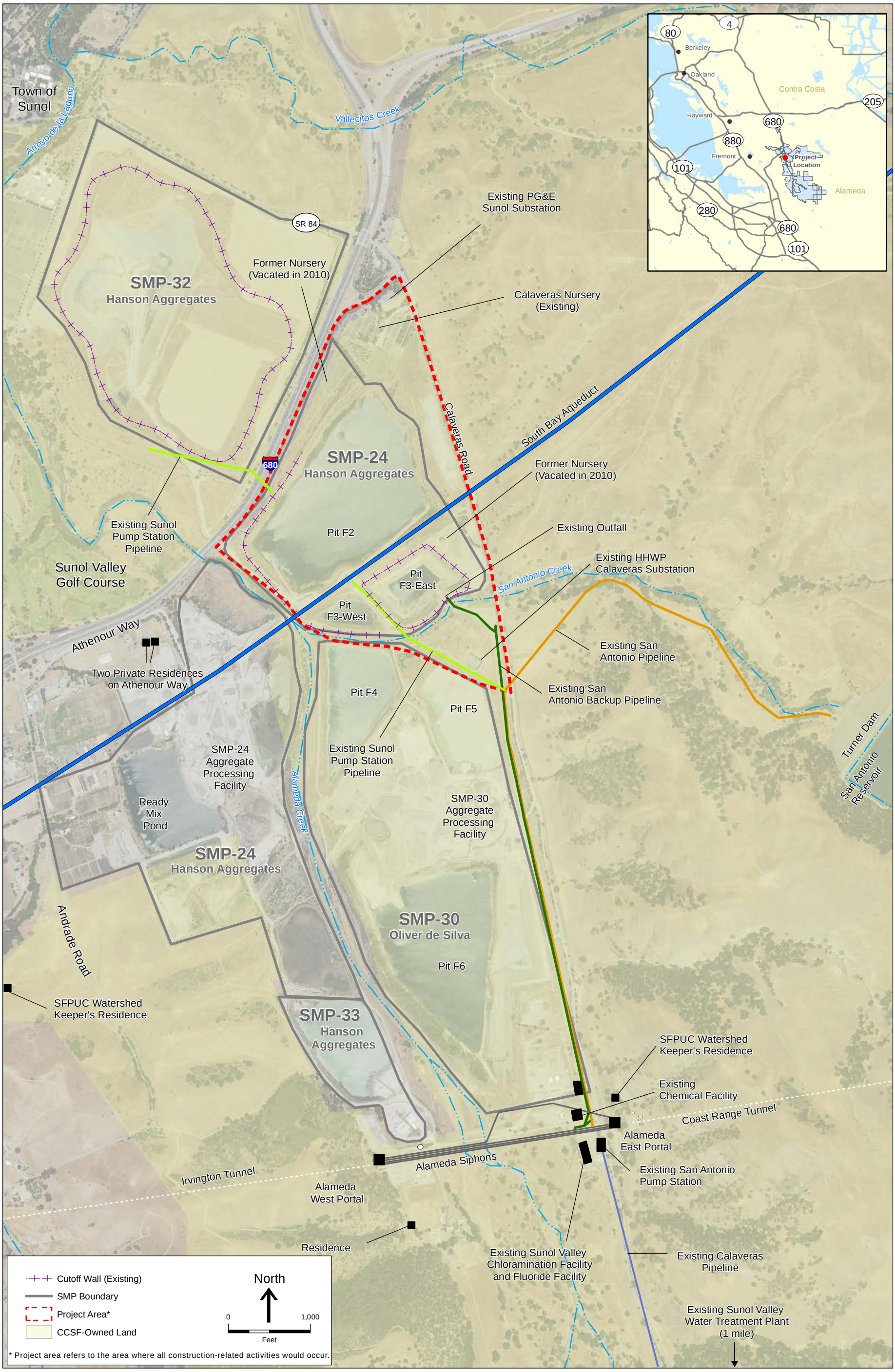
During fence installation and immediately prior to any initial ground-disturbing or vegetation removal activities, a biologist who is experienced in special-status species and sensitive habitat identification shall be present onsite to monitor for any special-status species present in suitable habitat within the fence installation area. If a special-status species is present within the fence installation area, work shall cease in the vicinity of the animal, and the animal shall be allowed to relocate of its own volition unless relocation is permitted by state and/or federal regulatory agencies. After construction is completed, the exclusion fencing and cover boards shall be removed.

To clarify text on page 1-22, Table 1-1, the following text change was made to the last sentence of Mitigation Measure M-BI-1d: Preconstruction Surveys and Construction Monitoring and Protocols for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake:

All observations of federally and state-listed species shall be ~~recorded in~~ reported to the CNDDB.

As discussed in Response BI-7, the following reorganized and clarifying text and under Mitigation Measure M-BI-1e on page 1-24, Table 1-1, of the Draft EIR was made:

– For each isolated locally native tree removed that is 6 inches in diameter at breast height [dbh] or 10 inches aggregate dbh for multi-trunk trees, one replacement planting shall be installed per inch of diameter of trees removed. ~~Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case a suitable native species shall be installed.~~ For example, eight planting basins shall be planted with coast live oak acorns to replace one 8-inch coast live oak tree. Seeds shall be used at planting sites rather than container stock to prevent the spread of soil-borne pathogens such as phytophthora. Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case either the replacement plantings shall be located in proximity to the project area where site conditions are suitable for that species or a suitable native species shall be installed. "Suitable" species are defined as those native to the Sunol Valley and capable of growing, once established, under prevailing site conditions without additional inputs of water or other chemicals.

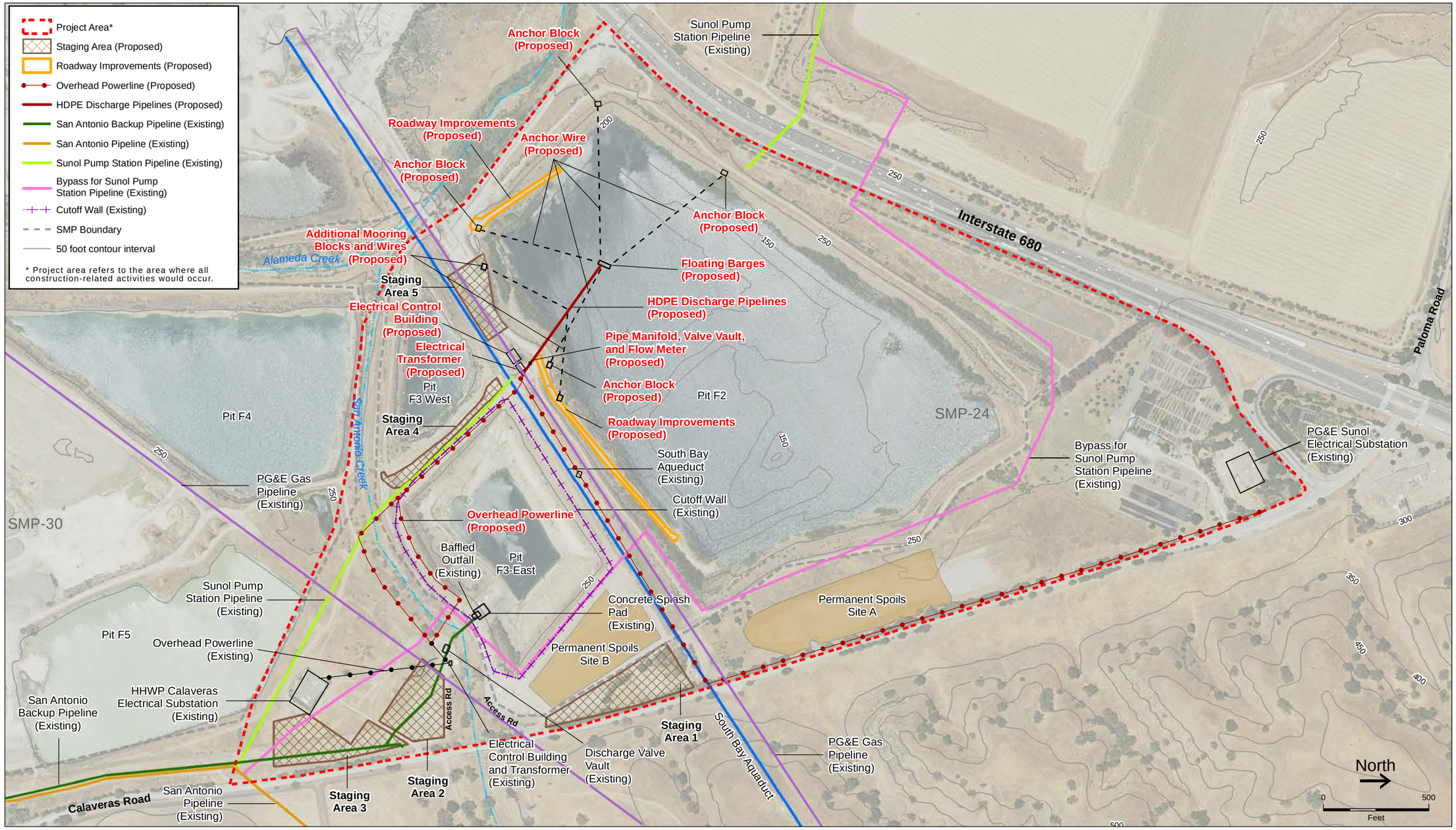


SOURCE: ESA, 2015; Date of aerial photo is 2014.

SFPUC Alameda Creek Recapture Project

Revised Figure 1-1

Project Vicinity Map



SOURCE: SFPUC, 2014a

SFPUC Alameda Creek Recapture Project

Revised Figure 1-2

Preliminary Site Plan

12.2.1 Chapter 2: Introduction and Background

No revisions were made to this chapter.

12.2.2 Chapter 3: Project Description

As discussed in Response HY-9, Figure 3-2, page 3-5, has been revised to remove the proposed cutoff wall because it currently does not exist, as shown on page 12-7. See Revised Figure 3-2.

The access road leading into Pit F2 has been revised on Figure 3-3, page 3-6, to clarify the proposed construction scenario, as shown on page 12-8. See Revised Figure 3-3.

To clarify the proposed construction scenario as presented on page 3-11, the following change has been made to the last paragraph in Section 3.4.1, Pumps on Floating Barges:

> The access road leading into Pit F2 (approximately 1,200 linear feet) along the southwest side of the pit would be developed with a 12-inch gravel subbase to improve access to the pond, particularly for ~~heavy~~ construction equipment.

To clarify the drainage for the proposed electrical control building as presented on page 3-12, the following change has been made to the first paragraph in Section 3.4.6, Electrical Control Building (no changes were made to the footnotes, so the footnotes are not shown):

> A pre-engineered metal electrical control building would be located on the south side of Pit F2 and would house the electrical equipment and instrumentation for the proposed project. The building would be approximately 28 feet wide, 66 feet long, and 28 feet tall set on an approximately 34 feet by 75 feet concrete pad. In order to provide proper drainage around the electrical control building and prevent ponding at the site, the building would be placed about 3 feet above the existing ground elevation. Approximately 832 cubic yards of imported fill would be required for the site grading around the electrical control building. Spoils from the Pond F2 roadway, vault, and mooring anchor excavation would be reused for fill around the electrical control building; if needed, any imported fill would likely come from Hanson.
>
> A portion of the existing access road along the south side of Pit F2 would be paved for the driveway and parking area for the electrical control building. Chain-link security fencing would enclose an approximately 16,700-square-foot area around the electrical control building and transformer. The fencing would be 8 feet tall. Exterior lighting fixtures would be either compact fluorescent or LED light controlled by a time clock/photocell and light switch. Exterior lights would face downward and would be shielded.[17,18] Six madrone trees would be planted around the building: five on the south side for shading and one on the north side. The building would be designed to include space for future solar equipment and for the roof to support future solar panels.

As discussed in Response ERP-8 and to correct an error, the following text on page 3-33 of the Draft EIR was clarified as follows:

> The permits and authorizations likely to be required from federal, state, and local agencies are listed below. The SFPUC would also obtain any other regulatory approvals as required by law.

3.7.3 Local

- San Francisco Planning Commission – Certification of the Final EIR ~~and General Plan consistency findings~~.

12.2.3 Chapter 4: Plans and Policies

No revisions were made to this chapter.

12.2.4 Chapter 5: Environmental Setting, Impacts, and Mitigation Measures

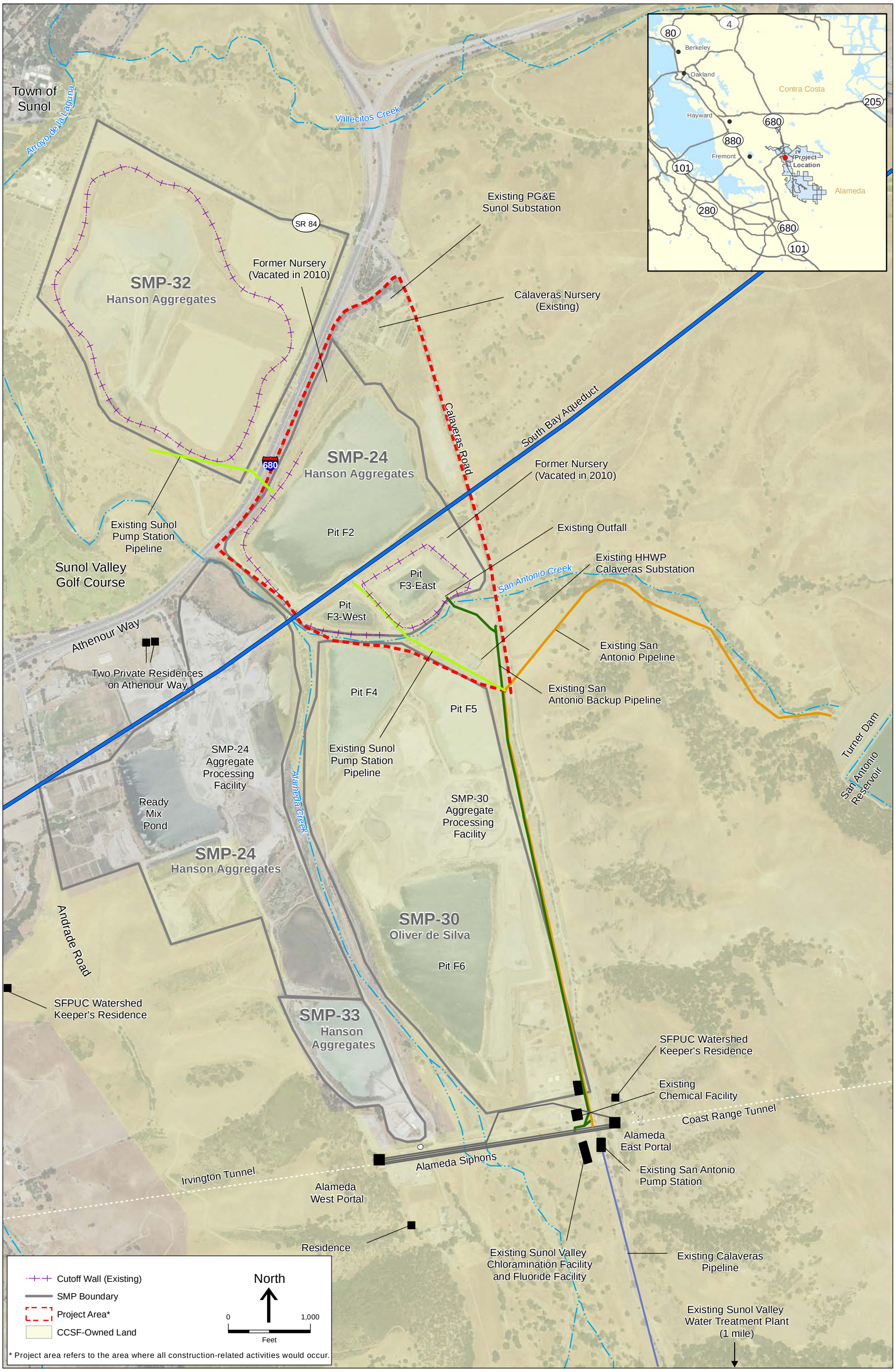
As discussed in Response ERP-7, the following text on page 5.1-3 of the Draft EIR was clarified as follows:

> This EIR uses the physical conditions in the project area at the time of NOP publication (June 2015)—referred to as "existing conditions"—as the baseline conditions to evaluate all construction ~~impacts~~ and ~~most~~ operational impacts of the ACRP. However, the comparison of existing baseline conditions to conditions with the ACRP does not adequately capture the operational effects of the ACRP because the ACRP operation relies on implementation of instream flows as part of future operations under the Calaveras Dam Replacement project (CDRP). For the flow-dependent resources (e.g., fisheries), an adjusted baseline condition that assumes implementation of the CDRP — referred to as "with-CDRP conditions" — is additionally used in the impact analysis for reasons explained below.

As discussed in Response HY-9, Figure 5.7-1, page 5.7-5, has been revised to remove the proposed cutoff wall because it currently does not exist, as shown on page 12-9.

To correct a minor error on page 5.8-3, the title of Table 5.8-1 has been revised as follows:

TABLE 5.8-1
LIVERMORE MONITORING STATION – AMBIENT AIR QUALITY SUMMARY (~~2010–2014~~ 2011–2015)

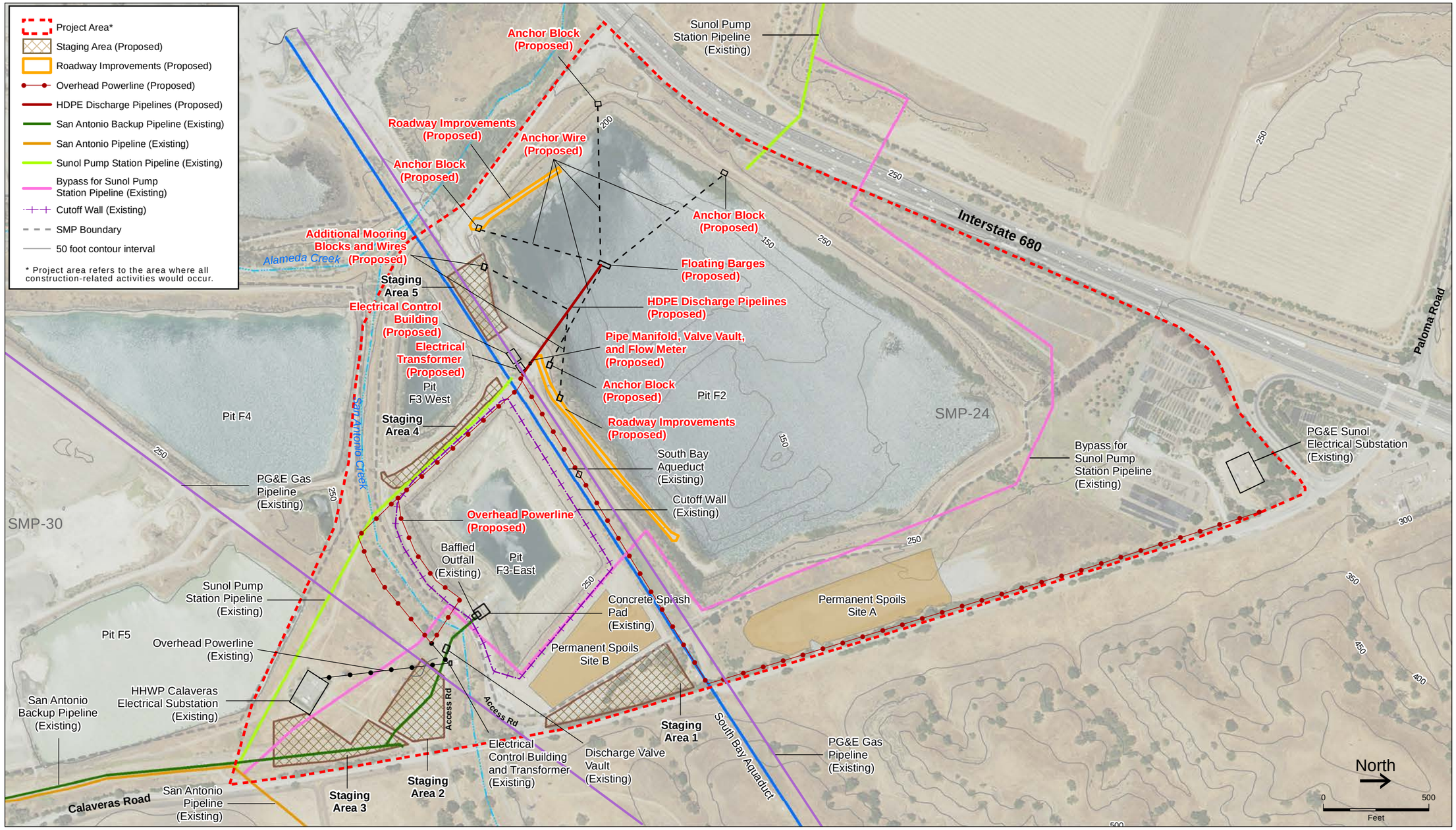


SOURCE: ESA, 2015; Date of aerial photo is 2014.

SFPUC Alameda Creek Recapture Project

Revised Figure 3-2

Project Vicinity Map

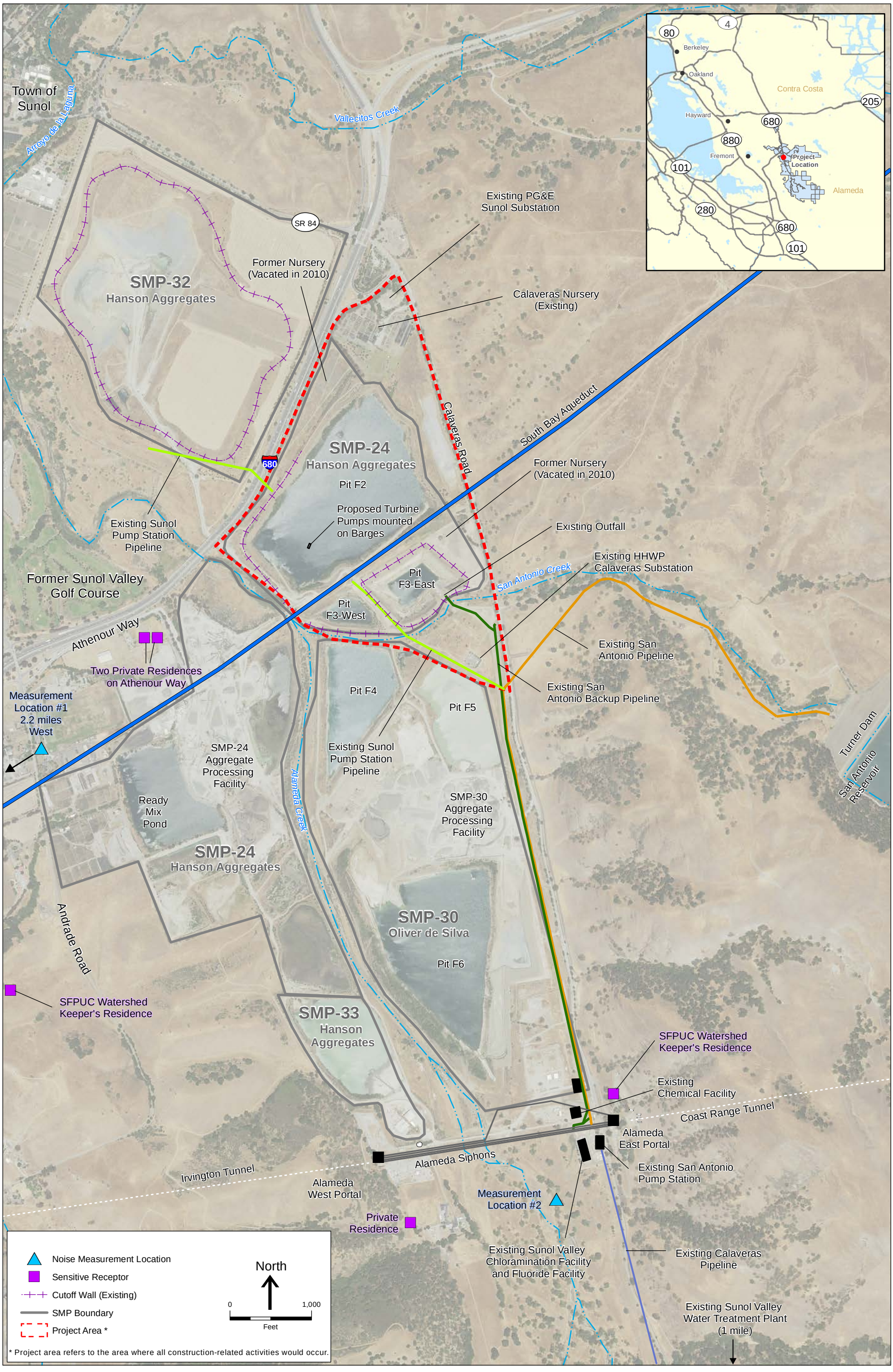


SOURCE: SFPUC, 2014a

SFPUC Alameda Creek Recapture Project

Revised Figure 3-3

Preliminary Site Plan



SOURCE: ESA, 2015; Date of aerial photo is 2014.

SFPUC Alameda Creek Recapture Project

Revised Figure 5.7-1

Noise Measurement Locations and Sensitive Receptors

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As discussed in Response CP-2, the following text on pages 5.5-10 to 5.5-11 of the Draft EIR was clarified as follows:

> ***Native American Contacts***
>
> ESA contacted the Native American Heritage Commission requesting a search of Sacred Lands files and information regarding any local Native Americans who might have knowledge of cultural resources in the project area. The Commission indicated that no sacred lands are recorded on the Sacred Lands files within or near the project area. The Commission also provided a list of Native American individuals and organizations in Alameda County that might have additional information or concerns about the proposed project. ESA sent a letter that described the project and requested information to each Native American individual/organization on the contact list as well as to the Alameda County Historical Society. In response to a request from a Native American group on an earlier iteration of the ACRP, the Upper Alameda Creek Filter Gallery project (see EIR pp. 2-12 to 2-14 and 7-28 to 7-40), archeological survey and testing were completed that determined it is unlikely for deeply buried archeological resources to be present in the C-APE relevant to the ACRP. No additional responses were received.

As discuss in Response BI-12, the following text on pages 5.14-38 and 5.14-39 of the Draft EIR was clarified as follows (no changes were made to the footnotes, so the footnotes are not shown):

> Pit F3-West and Pit F3-East were not considered jurisdictional by the Corps,[58] RWQCB,[59] or CDFW[60] under permits issued for the SABPL project so it is assumed that Pit F2 would also be considered non-jurisdictional, since it is also part of SMP-24 (consisting of Pits F2, F3-West, and F3-East), which since 2006 has been used to store and manage water to support active mining on SMP-32. Pit F2 was excavated in an upland area as a result of quarry mining activities and is maintained to function as a treatment system as part of SMP-32 quarry operation. Groundwater that seeps into the SMP-32 pit across Interstate 680 is routed to Pit F2 by the quarry operator for settling and is subsequently used for dust control, irrigation, and for processing sand and gravel at its processing plant. Pit F2 is not currently considered a water of the state since it is part of a treatment system for an active quarry operator.

As discussed in Response BI-13, the following text on page 5.14-39 of the Draft EIR was clarified as follows:

> Alameda Creek would continue to be considered ~~potentially~~ jurisdictional by the Corps, RWQCB, and CDFW under with-CDRP conditions.

As discussed in Response BI-7, the following text under Mitigation Measure M-BI-1e on page 5.14-83 of the Draft EIR was reorganized and clarified as follows:

> – For each isolated locally native tree removed that is 6 inches in diameter at breast height [dbh] or 10 inches aggregate dbh for multi-trunk trees, one replacement planting shall be installed per inch of diameter of trees removed. ~~Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case a suitable native species shall be installed.~~ For example, eight planting basins shall be

planted with coast live oak acorns to replace one 8-inch coast live oak tree. Seeds shall be used at planting sites rather than container stock to prevent the spread of soil-borne pathogens such as phytophthora. Replacement plantings shall be of the same species as that removed, unless site conditions are unsuitable, in which case either the replacement plantings shall be located in proximity to the project area where site conditions are suitable for that species or a suitable native species shall be installed. "Suitable" species are defined as those native to the Sunol Valley and capable of growing, once established, under prevailing site conditions without additional inputs of water or other chemicals.

As discuss in Response BI-12, in response to the RWQCB comment, the following text on page 5.16-54 of the EIR was clarified as follows:

~~The beneficial uses of the quarry pits include groundwater recharge, commercial and sports fishing, warm and cold freshwater habitat, wildlife habitat, and body-contact and non-body-contact recreation.~~

TABLE 5.16-9
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE SUNOL VALLEY

Water Body	Designated Beneficial Uses
Alameda Creek	AGR, COLD, GWR, COMM, MIGR, RARE, REC-1, REC-2, SPWN, WARM, WILD
Arroyo de la Laguna	GWR, COLD, MIGR, SPWN, WARM, WILD, REC-1, REC-2
Calaveras Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
San Antonio Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
Sunol Valley Groundwater Basin	MUN, PROC, IND, AGR
~~Alameda Creek Quarry Pits~~	~~GWR, COMM, COLD, WARM, WILD, REC-1, REC-2~~

BENEFICIAL USES KEY:

MUN (Municipal and Domestic Supply); AGR (Agriculture); IND (Industrial Service Supply); REC-1 (Water Contact Recreation); REC-2 (Noncontact Water Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat); FRSH (Freshwater Replenishment); MIGR (Fish Migration); SPWN (Fish Spawning); WILD (Wildlife Habitat); GWR (Groundwater Recharge); PROC (Industrial Process Supply); COMM (Commercial and Sport Fishing); RARE (Preservation of Rare and Endangered Species)

SOURCE: SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* March 20, 2015. (Tables 2-1 and 2-2)

To correct a minor error on page 5.14-79, the following text change was made:

Mitigation Measure M-BI-1c: Prevent Movement of Sensitive Wildlife Species through the Work Areas.

To prevent CTS, CRLF, and AWS, western pond turtles, and American badgers from moving through the project area, the SFPUC or its contractors shall install temporary wildlife exclusion fencing along the work area boundaries (including access roads, staging areas, spoils sites, etc.) prior to the start of project construction activities. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed and that construction equipment is confined to the designated work areas. The fencing shall be made of suitable material that does not allow any of the animals listed above to pass through, and the bottom shall be buried to a depth of 6 inches (or to a sufficient depth as specified by the applicable resource agencies) so that these species cannot crawl under the fence. Fencing shall

be equipped with exit funnels at least every 200 feet. To provide wildlife refugia and minimize CTS and CRLF mortality during construction, ~~2 foot by 4 foot~~ plywood coverboards (approximately 3 feet by 3 feet) shall be placed adjacent to the exclusion fence at a minimum interval of 200 feet, alternating inside and outside of the fence.

During fence installation and immediately prior to any initial ground-disturbing or vegetation removal activities, a biologist who is experienced in special-status species and sensitive habitat identification shall be present onsite to monitor for any special-status species present in suitable habitat within the fence installation area. If a special-status species is present within the fence installation area, work shall cease in the vicinity of the animal, and the animal shall be allowed to relocate of its own volition unless relocation is permitted by state and/or federal regulatory agencies. After construction is completed, the exclusion fencing and cover boards shall be removed.

To clarify text on page 5.14-81, the following text change was made to the last sentence of Mitigation Measure M-BI-1d: Preconstruction Surveys and Construction Monitoring and Protocols for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake:

All observations of federally and state-listed species shall be ~~recorded in~~ reported to the CNDDB.

As discussed in Response BI-15, the following text on page 5.14-137 of the Draft EIR was added after the second full paragraph in Section 5.14.6.2:

San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)—Beneficial Uses

The Water Quality Control Plan for the San Francisco Bay Region, or Basin Plan,[57a] designates the beneficial uses supported by the surface water bodies in the proposed project area. The designated beneficial uses of surface water bodies in the Sunol Valley as they pertain to fisheries resources are shown in **Table 5.14-5**. See Section 5.16, Hydrology and Water Quality, for further discussion of the Basin Plan.

TABLE 5.14-5
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE SUNOL VALLEY RELEVANT TO FISHERIES RESOURCES

Water Body	Designated Beneficial Uses
Alameda Creek	AGR, COLD, GWR, COMM, MIGR, RARE, REC-1, REC-2, SPWN, WARM, WILD
Arroyo de la Laguna	GWR, COLD, MIGR, SPWN, WARM, WILD, REC-1, REC-2
Calaveras Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2
San Antonio Reservoir	MUN, COLD, RARE, SPWN, WARM, WILD, REC-1 (limited), REC-2

BENEFICIAL USES KEY:

MUN (Municipal and Domestic Supply); AGR (Agriculture); REC-1 (Water Contact Recreation); REC-2 (Noncontact Water Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat); MIGR (Fish Migration); SPWN (Fish Spawning); WILD (Wildlife Habitat); GWR (Groundwater Recharge); COMM (Commercial and Sport Fishing); RARE (Preservation of Rare and Endangered Species)

SOURCE: SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). March 20, 2015. (Tables 2-1 and 2-2)

[57a] SF Bay Regional Water Quality Control Board (SF Bay RWQCB), 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* March 20, 2015.

12.2.5 Chapter 6: Other CEQA Issues

No revisions were made to this chapter.

12.2.6 Chapter 7: Alternatives

No revisions were made to this chapter.

12.2.7 Chapter 8: EIR Authors and Consultants

To update the information from the Draft EIR, the following change was made on page 8-1 in Section 8.1, EIR Authors:

Planning Department, City and County of San Francisco
Environmental Planning Division

1650 Mission Street, Suite 400
San Francisco, CA 94103

- Chris Thomas and Chelsea Fordham – EIR Coordinator
- Chris Kern – Senior Environmental Review Coordinator
- Lisa Gibson – ~~Acting~~ Environmental Review Officer

To update the information from the Draft EIR, the following change was made on page 8-3 in Section 8.4, Organizations and Persons Consulted:

Alameda County Water District

- Steven Inn
- Robert Shaver
- Thomas Niesar
- Evan Buckland

MBK Engineers

- Lee C. Bergfield

Sonoma State University

- Adrian Praetzellis

12.2.8 Appendices

To update the information from the Draft EIR, the following change was made to the cover page of Appendix HYD1:

~~**DRAFT**~~
Surface Water Hydrology Report
for the
SFPUC Alameda Creek Recapture Project
Prepared for
San Francisco Planning Department
Prepared by
Orion Environmental Associates
with Environmental Science Associates
November 2016

To correct a minor error, the following change has been made on page 41 of Appendix HYD1:

TABLE HYD4-1
LOSS OF ALAMEDA CREEK SURFACE WATER TO THE SUBSURFACE AND GAIN FROM QUARRY NPDES DISCHARGES (ACRE-FEET PER YEAR)

	Pre-2001 Conditions	Existing Conditions	With-CDRP Conditions	With-Project Conditions
Loss between Welch Creek and San Antonio Creek				
Average Annual	3,610	4,526	9,033	9,033
Maximum (water year)	6,460 (1998)	6,765 (2006)	10,747 (1998)	10,747 (1998)
Minimum (water year)	1,462 (2012, 2013)	2,249 (2001)	7,164 (2012)	7,164 (2012)
Gain in Flow at San Antonio Creek Confluence from quarry NPDES discharge				
Average Annual	~~3,612~~ 2,796	3,436	6,620	2,532
Maximum (water year)	4,460 (2010)	5,328 (2010)	12,480 (2001)	6,411 (1998)
Minimum (water year)	68 (2012)	103 (2012)	310 (2012)	632 (2013)
Loss between San Antonio Creek and Arroyo de la Laguna				
Average Annual	3,078	3,693	4,641	2,267
Maximum (water year)	4,511 (2006)	5,217 (2006)	5,433 (several)	3,418 (1998)
Minimum (water year)	215 (2012)	430 (2012)	916 (2012)	1,106 (2012)

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APPENDIX COM
Written Comments on Draft EIR, Coded

This appendix contains copies of all written comments received on the Draft environmental impact report (EIR) on the San Francisco Public Utilities Commission (SFPUC) Alameda Creek Recapture Project (ACRP). It includes comments submitted either by letter, fax, or email. Transcripts of oral comments presented at the public hearing on the Draft EIR are included in a separate appendix, Appendix PH.

Written comments are grouped under two categories: public agencies or non-governmental organization. A tables summarizing all of the commenters in these categories are presented in Chapter 10 of the Responses to Comments document, which is repeated at the beginning of this appendix as **Table COM-1**. Within each category, commenters are organized in alphabetical order by code.

To facilitate the commenter in locating the responses to his or her comments, the EIR assigns a unique comment code plus one or more response code to each individual comment, as explained below. Both the comment and response codes are shown in the margin of each written comment, with the unique comment code shown first and the response code(s) in square brackets beneath the comment code. This information is shown in the margins of each written comment and serves as the cross-reference guide for the comment and response codes.

Comment Codes

This document assigns a code to each comment letter, email, and public hearing transcript based on the name of the agency, organization, or individual submitting the comment. Comments submitted by mail, email, facsimile, or orally at the public hearing (as transcribed in the official public hearing transcript) are all coded and numbered the same way. Each commenter code has three parts. It begins with a prefix indicating whether the commenter represents a public agency (A), a non-governmental organization (O), or a speaker at the public hearing (PH). This is followed by a hyphen and the acronym of the agency or organization, or the individual's last name. The third part of the comment code is the sequential numbering of individual comments within a letter or email that represents a distinct topic. The first two parts of the comment codes is shown in bold at the top of each page of every written comment, and the third part is shown in the margin alongside the individual bracketed comment. Only substantive comments received on the Draft EIR are bracketed; for example, comments that describe an agency's or organization's mission or that describe an individual's biographical background are not bracketed.

As an example of the comment coding system, the comment letter from the California Department of Transportation is coded A-Caltrans, and the first comment in the letter is coded A-Caltrans-1, the second comment on a different topic is coded A-Caltrans-2, etc. If a single agency, organization, or individual submitted comments more than once, a number is inserted at the end of the identifying initials. For example, the Alameda County Water District submitted two separate comment letters, one on January 10, 2017 and a second on January 30, 2017; the first letter is coded A-ACWD1 and the second letter is coded A-ACWD2.

Response Codes

The prefixes for the response codes used in the organization of Chapter 11, Responses to Comments, are shown below:

Environmental Review Process (ERP)
Cultural Resources (CP)
Biological Resources (BI)
Hydrology and Water Quality (HY)
Alternatives (AL)
General Comments (GC)

Within each topic area, similar comments are grouped together, and Chapter 11 provides a comprehensive response to those related comments under one response code. Response codes are numbered sequentially using the response code prefix and sequential numbering for each subtopic. For example, General Comments [GC] are listed as [GC-1], [GC-2], [GC-3], and so on. Chapter 11 lists all of the comment codes that are addressed under each response code as a cross-reference. As described above, response codes are shown in this appendix in the margin of each written comment in square brackets underneath the comment code.

TABLE COM-1
PERSONS SUBMITTING WRITTEN COMMENTS ON THE ACRP DRAFT EIR

Commenter Code	Name of Person and Agency Submitting Comments	Comment Format	Comment Date
Federal and State Agencies			
A-Caltrans	Patricia Maurice, District Branch Chief, California Department of Transportation	Letter	01/17/2017
A-NMFS	Gary Stern for Alecia Van Atta, Assistant Regional Administrator, National Marine Fisheries Service (U.S. Department of Commerce, National Oceanic and Atmospheric Administration)	Letter	01/30/2017
A-RWQCB	Brian Wines, Water Resources Control Engineer, San Francisco Bay Regional Water Quality Control Board	Letter	01/17/2017
Regional and Local Agencies			
A-ACPW	Kwablah Attiogbe, Alameda County Public Works Agency	Email	01/30/2017
A-ACWD1	Robert Shaver, General Manager, Alameda County Water District	Letter	01/10/2017
A-ACWD2	Robert Shaver, General Manager, Alameda County Water District	Letter	01/30/2017
A-BAWSCA1	Tom Francis, Water Resources Manager, Bay Area Water Supply & Conservation Agency	Email	01/27/2017
A-BAWSCA2	Thomas B. Francis, Water Resources Manager, Bay Area Water Supply & Conservation Agency	Letter	01/27/2017
Non-Governmental Organizations			
O-ACA	Jeff Miller, Director, Alameda Creek Alliance	Letter	01/04/2017
O-CNPS	Karen Whitestone, Conservation Analyst, East Bay California Native Plant Society	Letter	01/17/2017

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DEPARTMENT OF TRANSPORTATION
DISTRICT 4
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GTS # 04-ALA-2016-00085
ALA-VAR-PM VAR

Mr. Chris Thomas
Planning Department
City and County of San Francisco
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

San Francisco Public Utilities Commission (SFPUC) Alameda Creek Recapture Project – Draft Environmental Impact Report

Dear Mr. Thomas:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the SFPUC Alameda Creek Recapture Project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), the Caltrans *Strategic Management Plan 2015-2020* includes targets to reduce Vehicle Miles Travelled (VMT), in part, by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the Draft Environmental Impact Report (DEIR).

Project Understanding

The proposed project would recapture water that the SFPUC will release from the Calaveras Reservoir and bypass around the Alameda Creek Diversion Dam when the SFPUC implements the instream flow schedule required as part of the regulatory permits for future operations of Calaveras Reservoir. The proposed project is one component of the SFPUC's water system improvement program, which has the overall objective of improving the reliability of the regional water system that serves drinking water to 2.6 million people in the bay area.

The project is located in Alameda County, within the Sunol Valley on watershed lands owned by the City and County of San Francisco and managed by the SFPUC. The project site is adjacent to Interstate 680 (I-680) and Calaveras Road, south of the I-680/State Route 84 interchange.

Cultural Resources

Section 5.5.1.4 states that a records search at the Northwest Information Center (NWIC) was conducted on June 15, 2010, however it is a professional standard to update record searches every five years to capture new information. We recommend that the records search be updated and that the DEIR cite the technical studies from which the information in Section 5.5.1.4 was excerpted.

1 [CP-1]

Section 5.5.1.4 also states stated letters were sent to Native American parties provided by the Native American Heritage Commission (NAHC) and that no responses were received. We recommend that follow up emails and phone calls be made as the use of multiple forms of contact is the professional standard for ensuring that Native Americans are provided adequate opportunities to consult on a project. 2 [CP-2]

While in most cases, the CEQA Area of Potential Effects (C-APE) has low potential to encounter buried archaeological deposits, the proposed anchor blocks in the southwestern corner are in an area composed of Late Holocene sediments, which hold high potential to contain buried archaeological deposits. Section 5.5.1.4 incorrectly states that areas of artificial fill do not have the potential to contain deeply buried cultural resources. Even if the area has been disturbed by quarrying activities and/or capped with artificial fill, natural buried landforms may be intact underneath. Given the 30-foot depth of excavation required for the anchor blocks, Caltrans recommends that SFPUC conduct a subsurface survey in this portion of the C-APE to identify buried archaeological deposits. 3 [CP-3]

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Jesse Schofield at 510-286-5562 or jesse.schofield@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

A-NMFS

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

January 30, 2017

Lisa M. Gibson
Acting Environmental Review Officer
San Francisco Planning Department
City and County of San Francisco
1650 Mission Street, Suite 400
San Francisco, California 94103

Re: Comments on Draft Environmental Impact Report for the SFPUC Alameda Creek Recapture Project

Dear Ms. Gibson:

This letter transmits NOAA's National Marine Fisheries Service's (NMFS) comments on the San Francisco Planning Department's Draft Environmental Impact Report (DEIR) for the San Francisco Public Utilities Commission's (SFPUC) Alameda Creek Recapture Project (ACRP) (Planning Department File No. 2015-004827ENV) on Alameda Creek in Alameda County, dated November 30, 2016. NMFS is submitting these comments for the Planning Department's consideration in finalizing the project's DEIR.

The ACRP would recapture water released from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam (ACDD) through percolation in a former quarry pit referred to as Pit F2. Water collected in Pit F2 would be pumped to existing SFPUC water supply facilities. The ACRP would be operated in conjunction with the future operation of Calaveras Reservoir. Upon completion of the Calaveras Dam Replacement Project (CDRP), the SFPUC is required to comply with the final reservoir release schedule for Calaveras Reservoir and the ACDD bypass flow requirements that were incorporated into the CDRP and assessed by NMFS in the biological opinion for the CDRP issued to the Army Corps of Engineers on March 5, 2011. These in-stream flow schedules were developed for the protection of federally-threatened Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*) and other native fish in upper Alameda Creek including the portion of Alameda Creek affected by the ACRP.

Based on the NMFS review of the DEIR, additional information is needed to conclude the proposed ACRP will not significantly impact native fish in upper Alameda Creek, including threatened CCC steelhead. The DEIR indicates predicted changes in the flow regime are

1
[HY-1]

expected to be small and the long-term operation is not anticipated to result in substantial changes to flows or aquatic habitat conditions. Given the dynamic nature of surface flow in central California streams, NMFS recommends the hydrological analysis presented in the DEIR include information regarding day-to-day changes in the surface flow of Alameda Creek. The presentation of day-to-day changes in surface flows will provide information critical to assessing the ACRP's potential effects on steelhead migration and the duration of flows for seasonal rearing of juvenile steelhead in the Sunol Valley. In particular, the operation of the ACRP could lead to fewer days of surface flow connection through the Sunol Valley. NMFS recommends a hydrologic analysis that includes an evaluation of the number of days that streamflow in Alameda Creek remains connected to flow in Niles Canyon under the expected range water year conditions with and without the ACRP.

1 [HY-1] cont.

The hydrologic analysis in the EIR would also benefit from additional information regarding the following:

2 [HY-3, HY-8]

(1) surface and groundwater interactions to better understand the relationship between water levels in Pit F2 and flow in Alameda Creek;

3 [HY-9]

(2) effect of future proposed cutoff walls on surface flow and groundwater;

4 [HY-6]

(3) effect on surface flows in Alameda Creek associated with dry year operations when ACRP operations would account for carryover released and bypassed during prior wet years; and

5 [HY-10]

(4) effect on water temperatures in Niles Canyon during summer and fall months.

NMFS appreciates the opportunity to comment on the DEIR for the ACRP. If you have any questions regarding these comments, please contact Gary Stern at 707-575-6060 or by email at Gary.Stern@noaa.gov.

Sincerely,

FCR Gary Stern

Alecia Van Atta
Assistant Regional Administrator
California Coastal Office

cc: Katerina Galacatos, Corps, Regulatory Division, San Francisco, CA
Brian Wines, RWQCB, San Francisco Bay Region, Oakland, CA
Marcia Grefsrud, CDFW, Yountville, CA
Ryan Olah, USFWS, Sacramento, CA
Copy to Chron File

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

January 17, 2017
CIWQS Place ID No. 816770

City and County of San Francisco
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco CA 94103-2479

Attn.: Steve Smith (steve.smith@sfgov.org)

Subject: Draft Environmental Impact Report for the San Francisco Public Utilities Commission Alameda Creek Replacement Project.
SCH No. 2015062072

Dear Mr. Smith:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff has reviewed the *Draft Environmental Impact Report for the San Francisco Public Utilities Commission Alameda Creek Replacement Project* (DEIR). The San Francisco Public Utilities Commission (SFPUC) is proposing to implement the Alameda Creek Recapture Project (Project) on SFPUC Alameda watershed lands in unincorporated Alameda County. The Project would recapture an annual average of up to 9,820 acre-feet per year (or 3,200 million gallons per year) of water that will be released from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam during future operation of Calaveras Reservoir. Water would be recaptured from a quarry pit, Pit F2, in the Sunol Valley located approximately 6 miles downstream of Calaveras Reservoir and 0.5-mile south of the I-680/State Route 84 interchange. Water Board staff have the following comments on the DEIR.

Comment 1. Jurisdictional status of Pit F-2.

Text in Section 5.14.2.7, *Site Conditions, Wetlands, and Other Waters*, assumes that Pit F2 would be considered non-jurisdictional by the Water Board. Pit F2 meets the definition of waters of the State in the Porter-Cologne Act and the DEIR acknowledges in Table 5.16-9 that the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) includes beneficial uses for Alameda Creek Quarry Ponds. Therefore, the SFPUC should assume that Pit F2 will be treated as a jurisdictional water of the State. This comment also applies to the discussion of Impact BI-3 on page 5.14-90.

1 [BI-12]

Comment 2. Jurisdictional status of Alameda Creek.

Text in Section 5.14.2.7, *Site Conditions, Wetlands, and Other Waters*, states that, "Alameda Creek would continue to be potentially jurisdictional by the Corps, RWQCB, and CDFW under

2 [BI-13]

with-CDRP conditions." The adjective "potentially" is not necessary. Alameda Creek is subject to Water Board jurisdiction. 2 [BI-13] cont.

Comment 3. Significance criteria.

Section 5.14.4.1, includes the significance criteria for assessing impacts to terrestrial biological resources. The third bullet in this section refers to "substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act." This criteria should be revised to include wetlands that are not protected by federal laws, but are protected as waters of the State. CEQA is a State law and CEQA review should assess impacts to all resources subject to State jurisdiction. 3 [BI-14]

Comment 4. The Basin Plan should be referenced in the discussion of the regulatory framework for fisheries resources.

The *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) defines the beneficial uses of waters of the State. The beneficial uses defined for Alameda Creek include fish migration and fish spawning (See Table 5.16-9 in the DEIR). Therefore, the Basin Plan should be included in the discussion of State Regulations in Section 5.14.6.2 of the DEIR. 4 [BI-15]

Please contact me at (510) 622-5680 or brian.wines@waterboards.ca.gov if you have any questions.

Sincerely,

Brian Wines

Digitally signed by Brian Wines
DN: cn=Brian Wines, o=Regional Water Quality Control Board, ou=Watershed Division, email=brian.wines@waterboards.ca.gov, c=US
Date: 2017.01.17 15:36:24 -08'00'

Brian Wines
Water Resource Control Engineer

Attachment

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)
San Francisco Public Utilities Commission, Kelley Capone (kcapone@sfwater.org)

From: Attiogbe, Kwablah <kwablah@acpwa.org>
Sent: Monday, January 30, 2017 8:25 PM
To: Gibson, Lisa (CPC)
Cc: Ackerman, Hank
Subject: Comments on SFPUC Recapture Project EIR SCH 201506072

Ms. Lisa Gibson
Acting Environmental Review Officer
1650 Mission Street, Suite 400,
San Francisco Ca 94103-2479
Fax: 415:558-609

Email: Lisa.Gibson@sfgov.org

Subject: Comments on the SFPUC Recapture Project EIR – Planning Department Case # 2015-004827; SCH # 201506072

The Alameda County Public Works Agency has the following comments on the SFPUC Draft Environmental Impact Report (dEIR) for the Alameda Creek Recaptured Project. The project proposes to recapture annually an average of up to 9,820 acre-feet per year (ac ft./yr.) (or 3,200 million gallons per year [mgal/yr.]) of water releases from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam during future operation of Calaveras Reservoir into storage pits in Sunol Valley approximately 6 miles downstream of Calaveras Reservoir and 0.5-mile south of the Interstate 680/State Route 84 interchange.

1 [ERP-6]

Figure 2 of the ESA Report in the EIR identified Steelhead study reach extending from upstream of Calaveras Dam to SF Bay. However, there is limited discussion of the effects of recapturing the entire bypassed flows at ACRP in Sunol on the downstream segment of Alameda Creek. Given that there is significant evapo-transpiration loss of flows between the diversion dam and the recapture project in Sunol, it is possible that SFPUC would be diverting significantly more flows beyond the bypass flow releases from the Diversion dam. Ultimately, this will result in even less flows from the southerly Alameda Creek watershed reaching the flood control channel downstream with disastrous consequences to migratory fish. The evapo-transpiration loss of flows, recapture of flows in exceedance of the amount bypassed at the Dam is not clearly analyzed in the EIR. The District suggests providing data clarifying flow losses between the diversion dam and the flood control channel and how much flows is expected to reach the lower Alameda Creek below the recapture facility in Sunol.

2 [HY-5, BI-16]

ACWD and the Flood Control District anticipate construction start of the fish ladder at the BART Weir/RD1 structures by 2019. The Flood Control District is also g modifying the existing low-flow channel and removing existing grade control structures to support fish migration through the reach downstream of the BART Weir. The proposed changes are based on modeling results calling for minimum flows of 40 cfs during critical migration periods in the lower Alameda Creek (flood control segment) to adequately transport sediment and provide a viable flow depth in the proposed low flow channel.

3 [HY-5, BI-16]

The proposed ACRP significantly changes the flow equation. The recapture of flows in Sunol is inconsistent with National Marine Fisheries Service March 5, 2011 Biological Opinion on the Calaveras Dam Replacement Project:

"CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence with the Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration. These flows will arrive at the upstream end of the Alameda Creek Flood Control Channel and ACWD will provide bypass flows at their water diversion facilities for fish passage through the Flood Channel".

4 [HY-5, BI-16]

Flows that should be reaching lower Alameda Creek from the southerly watershed would no longer be available. The ACRP unfortunately, is now relying on flows from the north watershed (Arroyo De La Laguna) and ACWD flow releases to meet the downstream needs of sediment transport and the low flow channel optimal conditions needed to support steelhead migration. SFPUC should identify how they propose to provide adequate flows to prevent standing in the lower Alameda Creek.

5 [HY-5, BI-16]

Page 5.14.9 – Table 5.14.1:

The following effects of the project on future conditions in lower Alameda Creek flood control channel were not adequately addressed:

- Loss/changes in pool sizes and numbers. Pools are important part of the Alameda Creek; these features play significant role in species survival especially during periods of drought. Reduction in size and numbers as a result of the ACRP project would have detrimental effects on steelhead fish utilization/presence in the upper watershed post fish ladder construction. These improved future conditions in the lower reach not been addressed inadequately.

6 [HY-5, BI-16]

- Change in plant assemblages i.e.; from woody riparian trees to shrubbery could also result in habitat conditions that are not conducive to steelhead recovery.

7 [BI-10]

Additionally, the Agency requests that SFPUC obtain an encroachment permit for operating large equipment on county roadways prior to the project construction.

8 [ERP-8]

Please include the Agency on your mailing list to receive copies of the final EIR including comments and responses

Thanks for the opportunity to comment.

Kwablah Attiogbe
Alameda County Public Works Agency
399 Elmhurst St
Hayward Ca 94544
(510) 670-5772

A-ACWD1

ALAMEDA COUNTY WATER DISTRICT
43885 SOUTH GRIMMER BOULEVARD • P.O. BOX 5110, FREMONT, CALIFORNIA 94537-5110
(510) 668-4200 • FAX (510) 770-1793 • www.acwd.org

January 10, 2017

Lisa M. Gibson
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear Ms. Gibson:

Subject: Request for Extension of Time - Draft Environmental Impact Report for the Alameda Creek Recapture Project

The Alameda County Water District (ACWD) wishes to thank you for the opportunity to comment on the Draft Environmental Impact Report for the Alameda Creek Recapture Project (ACRP) located in the Sunol Valley (Draft EIR).

ACWD staff is reviewing the Draft EIR, which at over 700 pages with technical appendices is a long and complex document. While the California Environmental Quality Act (CEQA) provides for a public review period of not be less than 45 days and the notice for the Draft EIR provided a comment deadline of January 17, 2017, ACWD is requesting an extension of time, allowing for 60 days to adequately review the Draft EIR. (CEQA Guidelines § 15203; San Francisco Administrative Code § 31.14(b)(1).) The technical analysis in the Draft EIR requires a thorough review by highly specialized professionals who have knowledge of the Alameda Creek system and ACWD's operations. The release of the Draft EIR in late November has resulted in limited time for a number of key ACWD staff to adequately review the highly technical data and analysis covered in the Draft EIR due to multiple holidays occurring during the public review period.

1 [ERP-1]

ACWD review of the analysis in the Draft EIR has also been constrained by the incomplete release of modeling information. ACWD identified in its July 27, 2015, comment letter for the Notice of Preparation for the Draft EIR that "while annual [flow] totals may be the same, the actual daily rate of releases or bypass flows will be quantifiably different from the recapture rate provided by the ACRP," and that, "[t]he disparity in the release and recapture rates may have impacts in a variety of areas of concern and will need to be analyzed in sufficient detail for

2 [ERP-4]

potential impacts to be understood and ultimately mitigated if necessary." In order to evaluate potential impacts, ACWD requests an opportunity to review the daily flow rates provided by the modeling. Upon review of this additional data, ACWD requests a meeting with San Francisco staff to further discuss potential impacts of the ACRP prior to providing comments on the Draft EIR. Therefore, ACWD further requests an extension of time to more fully review the requested data, meet with San Francisco, and comment on the Draft EIR.

2 [ERP-4] cont.

Thank you again for the opportunity to comment on the Draft EIR. For further discussions about these comments or about ACWD's Alameda Creek water supply and downstream operations, please contact Steven Inn, Manager of Water Resources, at (510) 668-4441. We look forward to coordinating further with you on this project.

Sincerely,

Robert Shaver
General Manager

la/tf
By E-mail
cc: Steven Inn, ACWD
Michael Carlin, SFPUC
Steve Ritchie, SFPUC

A-ACWD2

ALAMEDA COUNTY WATER DISTRICT

43885 SOUTH GRIMMER BOULEVARD • P.O. BOX 5110, FREMONT, CALIFORNIA 94537-5110
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January 30, 2017

Lisa M. Gibson
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear Ms. Gibson:

Subject: Comments on the Draft EIR for the Alameda Creek Recapture Project

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report (DEIR) for the proposed Alameda Creek Recapture Project (ACRP) during the environmental review phase. The Alameda County Water District (ACWD) acknowledges and appreciates the significant accomplishments of the San Francisco Public Utilities Commission (SFPUC) to date in the implementation of the Water Supply Improvement Program (WSIP). ACWD is a customer and a beneficiary of the high quality water that SFPUC currently provides and the water supply reliability improvements that the SFPUC is achieving through the overall implementation of the WSIP.

ACWD is also appreciative of the San Francisco Planning Department (Planning Department) Staff for extending the comment period on this important project. 1 [ERP-1]

ACWD has a strong interest in protecting and preserving water quality and water supply in Alameda Creek and the Alameda Creek watershed. ACWD staff has carefully reviewed the DEIR and we are particularly concerned with potential impacts the ACRP may have on ACWD's water supplies, as well as ongoing projects related to fisheries restoration in Alameda Creek. With a service area located downstream of the proposed project location, ACWD uses water from the Alameda Creek watershed for drinking water supply to over 349,000 residents in the cities of Fremont, Newark, and Union City. ACWD relies on flow in Alameda Creek for groundwater recharge and its subsequent use as a potable drinking water supply. Additionally, ACWD, together with the SFPUC and other watershed stakeholders, is actively involved in the ongoing efforts to restore the federally-threatened Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*) in Alameda Creek. 2 [GC-1]

The DEIR describes that the intent of the ACRP is to recapture the volume of water released from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam (ACDD) 3 [ERP-6]

as part of the future operations plan described in the Calaveras Dam Replacement Project Biological Opinion (CDRPBO) (Page 3-7, Section 3.2.2 of the DEIR.) The ACRP will rely on the slow and steady percolation of surface water from Alameda Creek into the Sunol Groundwater Basin, and into a former quarry pit referred to as Pit F2. Water from Pit F2 will be pumped to surface storage in San Antonio Reservoir or treatment at the Sunol Valley Water Treatment Plant (SVWTP).

3 [ERP-6] cont.

ACWD Comments

The DEIR must adequately address issues associated with protection of Alameda Creek, and the Alameda Creek Watershed, as well as address the project's potential impacts to downstream water users. An EIR must identify and focus on the "significant environmental effects" of the proposed project (Public Resources Code § 21100(b); CEQA Guidelines §§ 15126(a), 15126.2(a), 15143.) A significant effect on the environment is defined as a substantial or potentially substantial change in the environment. (Public Resources Code §§ 21068, 21100(d)(b); CEQA Guidelines § 15382.) ACWD requests these comments be incorporated and addressed in the final EIR for this project to ensure a sufficient level of detail in the analysis of the potential environmental impacts from the construction and operation of the ACRP.

4 [ERP-3]

1. Hydrologic Analysis and Use of the Alameda System Daily Hydrologic (ASDH) Model

   a. **The ASDH Model was identified to have shortcomings by the SFPUC's Blue Ribbon Panel.** The DEIR uses the ASDH Model to perform the assessment of impacts to surface water flow and groundwater elevations in the vicinity of the project. This model was originally developed in 2011 as an empirically derived mass balance model of existing conditions, and in coordination with all partners from the Alameda Creek Fisheries Workgroup, to analyze the effects of the flow releases described in the CDRPBO on Alameda Creek from the location of Calaveras Dam and the ACDD out to the San Francisco Bay. The SFPUC commissioned a Blue Ribbon Panel in August 2012 to provide an independent scientific review of this model in order to validate its usage for development of a Habitat Conservation Plan (HCP) for operation of SFPUC's facilities in the Alameda Creek watershed (Review of the Alameda Creek HCP Modeling Strategy, Aug 2012.) The Blue Ribbon Panel concluded that "a groundwater modeling study will be necessary to evaluate the effects of both continued lowering of Pit F2 elevations and several designs of the seepage cutoff walls, which have been proposed to minimize flow losses." These modifications were not made to the ASDH Model and, given the independent review and recommendation of the panel, the current use of this model is insufficient to perform the environmental analysis required. ACWD recommends that the DEIR incorporate the recommendation of the Blue Ribbon Panel and re-evaluate the impacts of the ACRP on surface and groundwater flows within the Alameda Creek watershed.

5 [HY-2]

b. **The with-Project Conditions scenario *appears* to create water, which is not possible.** The scenario analysis, based on the ASDH Model and published in the DEIR, indicates a violation of conservation of mass, which in turn renders the analysis flawed and thus the conclusions of the analysis unsupported. The ASDH Model was developed to analyze the effects of the flow releases from the CDRPBO on fish populations, and a key assumption in the original ASDH Model is that there is a fixed loss rate from Alameda Creek in the Sunol Valley (between Nodes 4 and 5), and that the lost mass does not reappear anywhere else in the model. The fixed loss rate was a conservative assumption made to evaluate impacts in the CDRPBO on downstream flows needed for fish passage. However, when using the ASDH Model to evaluate multiple scenarios, as was done in this DEIR, in order to satisfy the conservation of mass requirement, this fixed lost mass of water cannot reappear in some scenarios while remaining lost in others. Unfortunately, the with-CDRP Conditions scenario indicates significant lost mass relative to the with-Project Conditions scenario, and thus violates conservation of mass. Analyzing the scenarios from a mass-balance perspective, either the with-CDRP Conditions scenario has a significant loss of water (a.k.a. an "infinite sink"), or the with-Project Conditions scenario has a significant addition of water from an unknown source (an "infinite source"). Infinite sinks and sources are significant sources of error in mass balance analyses, and two scenarios cannot be compared if one scenario has one and the other does not. The end result, and in layperson's terms, is that the with-Project Conditions scenario *creates* water, which is not possible.

6
[HY-7]

The primary evidence of violation of conservation of mass appears in Table HYD8-1 on page 122 of the HYD-1 appendix. The total mass of water exiting the ASDH Model at Node 9 is larger in the with-Project Conditions scenario (average of 97,797 AF/year) than in the with-CDRP Conditions baseline (average of 94,575 AF/year). Since the stated Project Goals and Objectives (Page 3-8 of the DEIR) include "[m]aximize the use of local watershed supplies," it must be assumed that the other significant outflow from the system above Node 9 (i.e., exports to SFPUC's drinking water system) are at least equivalent between the two scenarios, if not higher in the with-Project Conditions scenario. Page 3-27, Section 3.6.1.2, Operating Parameters, of the DEIR states: "It is anticipated that, in most cases, the water withdrawn from Pit F2 would be conveyed to the SVWTP and thereby reduce the volume of water conveyed from Calaveras Reservoir to SVWTP, enabling the SFPUC to conserve water in the Calaveras Reservoir and *maintain the historical annual transfers from the Alameda Watershed system to the regional water system.*" According to this statement, as well as the Project Goals and Objectives, it must be assumed that in the with-Project Conditions scenario, there is no equivalent decrease in mass outflows in another part of the system to balance out the increase in mass outflows at Node 9. Meanwhile, the mass inflow to the "SFPUC Alameda Watershed" system (i.e., rainfall-generated runoff into Calaveras reservoir and rainfall-generated flow above the ACDD) must, by reasonable assumption, be the same in all scenarios evaluated. The combination of these mass flows results in significant mass imbalances,

indicating either a significant infinite sink in the with-CDRP Conditions baseline or a significant infinite source in the with-Project Conditions scenario. The lack of consistency in assumptions between these scenarios results in a violation of conservation of mass and renders the conclusions of the analysis in the DEIR unsupported (CEQA Guidelines § 15151.)

6 [HY-7] cont.

c. **The ASDH Model does not analyze impacts to the environment during critically dry periods.** The SFPUC's Blue Ribbon Panel also identified deficiencies in the ASHD Model by stating, "[a] limitation of the empirical modeling approach, based on such short and fragmented records, is that the resulting model cannot represent well an important feature of California hydrology, which is the occurrence of enduring droughts... Because of the potential importance of multi-year droughts on fish populations… there seems to be some value in continuing to re-visit a process-based streamflow modeling strategy..." (Review of the Alameda Creek Habitat Conservation Plan Modeling Strategy, Aug. 2012). The ASDH Model only covers the hydrologic period between Water Year 1996 and 2013, which does not incorporate periods of extreme drought, therefore the Analysis conclusions in the DEIR does not analyze impacts of operations of the ACRP to the environment during these times. ACWD recommends that the model and analysis framework in the DEIR be revised to incorporate a range of historic droughts, or at the very least through 2015 which would capture the recent, critically dry rain year 2013-2014.

The DEIR proposes an accounting methodology to dictate the amount of water the SFPUC is allowed to pump from Pit F2 for recapture based on the premise that average annual volume of water proposed for recapture is less than average inflow from bypasses and releases. Page 3-27 of the DEIR states that this might not be the case during dry years; during these years, recapture operations would account for carryover water released and bypassed and collected in Pit F2 during prior years. Given the conclusions of the Blue Ribbon Panel on limitations of the ASDH Model in dry years, and the proposed carryover accounting methodology, the current evaluation of impacts to surface water hydrology should be expanded to include historic drought periods, in order to adequately analyze the impacts of the project. For example, increased extraction of water out of Pit F2 during dry periods will draw the Sunol Valley Groundwater Basin down, and increase the loss rate of surface water flow from Alameda Creek in the location of the project. This in turn may reduce the number of days that the surface water flow in Alameda Creek in Sunol remains connected to flow in Niles Canyon, which could impact fish and other species located downstream of the CDRP when comparing 1) the With-CDRP Conditions and 2) the With-Project Conditions scenarios. For fish migration, the hydrologic analysis needs to include an evaluation on how the ACRP will change the available migration periods compared to the selected baseline conditions.

7 [HY-6]

d. **The DEIR does not provide modeling results in an appropriate time-step needed to analyze downstream impacts.** In addition to the comments above, the ASDH

8 [HY-1]

Model uses a daily time-step to calculate the movement of water throughout the Alameda Creek Watershed, but the results of the modeling work are presented in terms of average annual volumes. Given the dynamic nature of surface water flows in Alameda Creek, the hydrologic analysis needs to include a discussion about day to day changes in surface flows within Alameda Creek in order to fully identify potential impacts to fisheries as well as downstream water users. To illustrate, ACWD recently published a mitigated negative declaration for a series of fish passage projects within the Alameda Creek Flood Control Channel where detailed daily evaluations of proposed flow releases are documented, published, and used to determine potential impacts (Joint Lower Alameda Fish Passage Improvements MND, 2016.) The ACRP DEIR must discuss how the ACRP may impact these future conditions, and to do so, needs to provide an additional level of detail in the hydrologic analysis.

The volume of water that ACRP intends to recapture is approximately equal to the average annual water to be released and/or bypassed. However, while annual totals may be the same, the actual daily rate of releases and/or bypass flows will be markedly different from the slow and steady recapture provided by the ACRP. Real-time releases and bypasses will be on the order of tens to thousands of cubic feet per second (cfs), while the recapture will likely be on the order of ones to tens of cfs. Thus, when releases and/or bypasses are high, a substantial amount of the actual flows will exit Sunol Valley rather than percolate into the ground. Conversely, when releases and/or bypasses are low or are not occurring, the ACRP may continue to capture flows from Alameda Creek that are neither releases nor bypasses. This time-step discrepancy can lead to environmental impacts from operations of the ACRP that are not identified or discussed in the DEIR for the project. The DEIR's hydrologic analysis should be refined to determine the environmental impacts of operations of the ACRP on a daily basis, instead of discussing the magnitude of impacts using average annual or monthly values.

8 [HY-1] cont.

e. **The DEIR conclusion that there are no significant impacts to ACWD's downstream operations is unsupported.** The DEIR concludes that the operation of the ACRP will not have a significant impact on ACWD's downstream recharge operations by describing an average annual change in the volume of water available at the Niles gage. This is an insufficient level of detail to conclude that there are no impacts to ACWD. ACWD's recharge operations function in a real-time manner, and are highly dependent on the daily fluctuation of flow at the Niles gage. ACWD requests that the SFPUC work with ACWD to identify potential impacts from operation of the ACRP before the Planning Department adopts the EIR for this project.

9 [HY-4]

f. **The DEIR cumulative impacts do not include effects of cutoff walls.** Figure 1-1 of the DEIR displays existing cutoff walls around Pit F2, which were installed to minimize seepage of Alameda Creek surface water into the groundwater basin and

10 [HY-9]

into Pit F2. The figure also displays proposed future cutoff walls around sections of Pit F6. Installation of this future cutoff wall will likely provide additional protection from surface streamflow losses to the Sunol groundwater basin. The hydrologic analysis must be refined to include the proposed cutoff wall, and any associated changes in streamflow loss rate to determine cumulative impacts and adequately model future streamflow conditions through this reach (CEQA Guidelines §§ 15065(a)(3), 15130).

10 [HY-9] cont.

g. **The DEIR does not analyze surface water-groundwater interactions.** The use of the ASDH Model does not provide a sufficient degree of analysis to provide the Planning Department with information that enables them to adequately take account of the environmental consequences or adequately determine feasible alternative or mitigation measures (CEQA Guidelines §15151, 15126.4, 15126.6.) The DEIR's hydrologic analysis, based on the recommendations of the SFPUC's Blue Ribbon Panel, must be performed with a proper surface water to groundwater process-based model with an adequate level of detail to fully identify the impacts the operation of the ACRP will have to the surface water and groundwater hydrology within the Alameda Creek Watershed (CEQA Guidelines §15144.) ACWD recommends the development of this model to occur collaboratively with other watershed stakeholders prior to using it to determine levels of impacts from the ACRP.

11 [HY-2, HYD-11]

To address the deficiencies of the ASDH Model and this DEIR, ACWD recommends that the SFPUC work to develop a new, more robust, and appropriate tool to study the potential impacts of the proposed ACRP and the Planning Department to not adopt this DEIR until a detailed analysis is performed. ACWD proposes to collaborate in this effort and to contribute both financially and through in-kind services to the development of a new model.

2. CEQA Piecemealing and Consistency with CDRPBO

a. **The ACRP project is in conflict with the stated expectations from the National Marine Fisheries Service on the operation of the CDRP project.** The ACRP is a project that is dependent on the Calaveras Dam Replacement Project (CDRP) and associated flow schedule, and was previously identified in the CDRP EIR as the "Filter Gallery Project." An accurate, stable, and finite project description is an indispensable component of an informative and legally sufficient EIR (CEQA Guidelines § 15124.) A "project" is the "whole of an action" that has the potential to result in a physical change to the environment "directly or indirectly" (CEQA Guidelines § 15378(a).) An agency cannot subdivide a project into multiple components to avoid analyzing and discussing in the EIR the sum of environmental impacts resulting from the project (*Christward Ministry v. Superior Court* (1986) 184 Cal.App.3d 180, 193.) In 2009, ACWD provided comments on the DEIR of the CDRP stating that:

12 [ERP-5, BI-16 HY-5]

> "...meeting the primary objectives of the CDRP is dependent on implementation of the Filter Gallery Project, the DEIR should consider the Filter Gallery Project as part of the overall Calaveras Dam Replacement Project, and include it in the DEIR's project description of the CDRP. Without including the Filter Gallery as part of the CDRP Project Description, the primary objective of water supply reliability may not be met, and the SFPUC would be 'piecemealing' the environmental analyses of these two projects..."

Because the CDRP and the ACRP (formally the Filter Gallery Project) components were not analyzed together, inconsistencies exist between the stated goals of the ACRP and the Biological Opinion issued to the SFPUC for take coverage associated with operation of the CDRP. For example, the CDRPBO (pages 49 through 52) states that bypass flows at the ACDD are intended to provide suitable migration conditions from Alameda Creek below the ACDD through Niles Canyon and out to the Bay. Furthermore, page 52 of the CDRPBO states, "CDRP minimum flows from the southern watershed when combined with flows from the northern watershed (at the confluence of Arroyo de la Laguna) through Niles Canyon are expected to provide suitable conditions for adult upstream migration and smolt downstream migration." Since the ACRP project has been analyzed separately from the CDRP project, the fundamental concept of recapturing CDRPBO flow releases and ACDD bypasses is in conflict with the stated expectations from the National Marine Fisheries Service (NMFS) on the operation of the CDRP project. The DEIR must analyze the impacts that operation of the ACRP will have on the future flow and habitat conditions described in the CDRPBO, and fully analyze the whole of the action taken by SFPUC (CEQA Guidelines § 15378(a).) Without this analysis the separate approval of these related projects could lead to severe impacts on flow and habitat conditions in Alameda Creek (CEQA Guidelines § 15130.)

12 [ERP-5, BI-16 HY-5] cont.

3. Source of Project Water and Potential Impacts to ACWD's Water Rights

   a. **The SFPUC needs to seek authorization from the State Water Resources Control Board before it can proceed with the project.** The DEIR claims the source of the recapture water is SFPUC's existing pre-1914 appropriative water rights. A pre-1914 appropriative right can be maintained only by continuous beneficial use of the water. The amount of water and scope of the right is fixed by the amount that can be shown to be actually beneficially used as to both amount and season of diversion.

      Under California Water Code section 1706, the point of diversion, place of use, or purpose of use of a pre-1914 appropriative surface water right can be changed if others are not injured by that change. Under the "no injury rule," a transfer of this type would not be authorized to the extent that it reduced the availability of water for downstream users, regardless of the water priority of those users. California water law protects junior water right holders who would be harmed if seniors could increase the amount of water they divert under their senior priority. Likewise, juniors could be

13 [GC-3]

hurt if seniors could change their point of diversion, place of use, or purpose of use in a manner that reduces the quantity or quality of water relied upon by juniors for their diversion.

The DEIR on page 2-11 claims that SFPUC would recapture the subject water "without expanding the CCSF's existing water rights" which is presumably determined from modeling based on historical hydrological data (*see also* DEIR at p. 3-25.) However, the DEIR does not adequately describe the actual historic beneficial use of the water as to both amount and season of diversion at the time of vesting required to determine if the SFPUC's water right is expanded as a result of the recapture project. It is unclear from the DEIR how the point of diversion/re-diversion for these surface waters is changed to divert water into Pit F2. Page 3-27 of the DEIR indicates there might be "carry over released" during dry years. There is no information in the DEIR that these pre-1914 water rights include carryover storage or how they operate as to timing and volume of capture, release, and consumptive use. Further, there is no information indicating the timing and rate of diversion of these water rights at the time of vesting and how this is changed through the ACRP. Finally, additional water originating from sources other than Calvarias Reservoir and the ACDD, such as Welch Creek, may be also recaptured in Pit F2. Any new appropriation of surface water requires State Water Resources Control Board approval and a finding that the change will not injure any legal water user (including any water right holders who are junior in priority and anyone who contracts with a legal water user) and that the change will not harm fish or wildlife. The Planning Department should not adopt the DEIR until a thorough evaluation of impacts to downstream water rights holders can be performed.

13 [GC-3] cont.

b. **The DEIR analysis is insufficient to determine impacts to other's water rights.** As described above, given the dynamic nature of surface water flows in Alameda Creek, the hydrologic analysis needs to include a discussion about day to day changes in surface flows within Alameda Creek in order to determine the source of the water pumped from Pit F2 (surface water or groundwater) and to fully identify potential impacts to fisheries and downstream water users. Any groundwater captured in Pit F2 through the project is not authorized as a change in SFPUC's pre-1914 surface water rights under California Water Code section 1706.

14 [GC-3]

c. **The Project constitutes an expansion of San Francisco's water rights claim for Calaveras Reservoir.** The DEIR states that the source water which flows into Pit F2 will be comprised of flows released from Calaveras Dam, flows bypassed around the ACDD, and flow from other tributaries downstream of those two facilities. Since the ACRP operations do not physically distinguish which of these three sources is being extracted, the proposed operations of the ACRP constitute an expansion of San Francisco's water rights claim for Calaveras Reservoir. An expansion of the SFPUC's claimed water right to Arroyo Hondo and Alameda Creek may cause an impact or injury to other legal downstream users in the Alameda Creek Watershed.

15 [GC-3]

The SFPUC must work with the State Water Resources Control Board to legally acquire the necessary water rights for operation of the ACRP.

15 [GC-3] cont.

d. **The DEIR concludes that downstream users will not have to alter operations without completing a sufficient analysis.** The DEIR determines that there will be no significant impacts because the ACRP would not cause ACWD, a downstream water user, to alter it operation in a way that would result in significant adverse environmental impacts. However, this analysis is insufficient because it is predicated on the unproven premise that the water being recaptured is exclusively SFPUC's pre-1914 surface water right and that the recapture operation does not expand these rights.

16 [GC-3]

4. Sunol Valley Water Treatment Plant Source Water Quality

a. **The source water to the Sunol Valley Water Treatment Plant and other related issues need to be fully evaluated before adopting the DEIR.**

1.) In Figure 1-1 of the DEIR, it appears that surface water flow originating from rainfall has the ability to run directly into Pit F2. Former nurseries are located immediately adjacent to the north and south of Pit F2. The DEIR must include a comprehensive analysis and assessment at this location to ensure that surface soil is not contaminated in the vicinity of Pit F2. Contaminated surface soil could impact the water quality of surface runoff to Pit F2.

2.) The DEIR must provide a discussion about the impacts this new source of water may have on algae, taste and odor concerns, and the potential for cyanotoxins in Pit F2, as well as discuss current treatment processes that are in place or will be implemented to address these potential source water quality issues.

3.) ACWD recommends a pilot study of straight and blended treatment of water from Pit F2 before adopting the DEIR. Page 3-11 of the DEIR states that "monitoring data generally indicates that with the possible exception of total coliform levels" the water in Pit F2 meets the drinking water standards found in Title 22 of the California Code of Regulations. The word "generally" is too vague. The DEIR must contain a table with the available data, including results for metals, radionuclides, and total organic carbon (TOC). The DEIR should also compare TOC levels and turbidity between San Antonio Reservoir and water in Pit F2. The water quality in Pit F2 may be sufficient, but different enough from San Antonio Reservoir water that treatment at SVWTP is more difficult or requires additional or upgraded treatment processes. For example, straight Pit F2 water or Pit F2/San Antonio Reservoir water may be more easily treated with a different coagulant, may produce more solids, or may require additional pretreatment. ACWD recommends that the Planning Department not adopt this DEIR until a pilot study of this treatment plant source water quality change can be carried out.

17 [HY-11]

4.) Pit F2 is in close proximity to the South Bay Aqueduct (SBA) and a PG&E Gas Pipeline. The DEIR does not account for how water quality in Pit F2 will be protected if the SBA, the PG&E pipeline, or embankment were to fail during a seismic event. Changes in source water quality can be very disruptive to treatment plant operations and end users of this water. It is unclear if the project proposes to develop a disaster recovery plan to restore water quality to acceptable levels for treatment at the SVWTP. Such a plan must be incorporated into the project.

17 [HY-11] cont.

5. **The DEIR does not consider consultation and permits with the appropriate agencies.** ACWD agrees with the January 4, 2017, comment from Alameda Creek Alliance that SFPUC should consult with NMFS regarding impacts to Steelhead and required permits for the project, with the Army Corps of Engineers regarding required Clean Water Act permits, and the California Department of Fish and Wildlife regarding coverage under California Fish and Game Code section 1602. Consultation and permits issued by these agencies will ensure that the goals of the ACRP are consistent with the environmental restoration efforts being carried out by the SFPUC, ACWD, and other watershed stakeholders.

18 [ERP-8]

6. **The DEIR does not analyze reasonable alternatives to the project.** A major function of the EIR is to preview and ensure that all reasonable alternatives are thoroughly assessed by the responsible official or board *(Inyo County v. City of Los Angeles*, (1977) 71 Cal.App.3d 185). "An EIR shall describe a range of reasonable alternatives to the project … which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (CEQA Guidelines § 15126.6(a).) The DEIR evaluates only 1) the no Project Alternative and 2) the Regional Desalination Alternative. ACWD recommends the Planning Department not adopt this DEIR until a detailed alternatives analysis is performed.

19 [AL-1]

7. **The DEIR does not analyze current conditions as a separate alternative to the No Action Alternative.** CEQA guidelines provide that the environmental setting as it exists when the EIR is being prepared should be treated as the baseline for gauging the changes to the environment that will be caused by the proposed action (CEQA Guidelines § 15125(a).) While comparisons to current conditions are referred to occasionally in the Draft EIR, use of baseline conditions is incomplete, including omission of comparisons in the vital categories of effects on water resources and biological resources.

20 [ERP-7]

Thank you again for the opportunity to comment during this review period. ACWD is appreciative of staff from the SFPUC and Planning Department for working to address these comments, and welcomes opportunities to collaborate to resolve the issues identified in this letter. If you have any questions about these comments, please contact Steven Inn, Manager of Water Resources, at (510) 668-4441.

Sincerely,

Robert Shaver
General Manager

eb/tf
cc: Steven Inn, ACWD
Steve Ritchie, SFPUC
Ellen Levin, SFPUC
Christopher Thomas, SFPUC
Nicole Sandkulla, BAWSCA

From: Tom Francis [mailto:tfrancis@bawsca.org]
Sent: Friday, January 27, 2017 2:12 PM
To: Thomas, Christopher; Gibson, Lisa
Cc: Terry Roberts; Levin, Ellen; Allison C. Schutte (aschutte@hansonbridgett.com); Thomas Niesar; Wade, Dan; Ritchie, Steve; Nicole Sandkulla; Adrianne Carr; Jean Gardner
Subject: BAWSCA Comments to Case No. 2015-004827ENV –SFPUC Alameda Creek Recapture Project

Dear Ms. Gibson and Mr. Thomas (cc to others interested):

Thank you for the opportunity to allow the Bay Area Water Supply and Conservation Agency (BAWSCA) to provide comments to the Draft Environmental Impact Report (DEIR) for the SFPUC Alameda Creek Recapture Project (ACRP), which your agency released for public review on November 30, 2016. We've attached a scanned version of the letter we're submitting (a hard copy is in the mail).

As noted in our letter, we have reviewed the Draft EIR and have concluded that the document adequately addresses our scoping comments as raised in our letter dated July 27, 2015, prepared in response to your Notice of Preparation (NOP) of the EIR. While our comments have been addressed, we are aware that one of our member agencies, Alameda County Water District (ACWD), may also be submitting a comment letter. If they express concerns with the Draft EIR and associated analyses, we encourage the planning department together with the SFPUC to apply a constructive approach toward addressing their concerns. We've also encouraged ACWD to take a similar constructive, collaborate approach, should they view outstanding issues remain (both the SFPUC and ACWD have a history of collaboration). Finally, BAWSCA would be supportive of a project variant that achieved the project goals while offering the flexibility to address project impacts identified through the public review process.

1 [ERP-2]
2 [ERP-4]
3 [GC-2]

Feel free to contact me if you have questions or if our presence moving forward could prove constructive.

Regards,

Tom Francis

Tom Francis
Water Resources Manager
Bay Area Water Supply and Conservation Agency
155 Bovet Road, Suite 650
San Mateo, CA 94402
Ph: 650-349-3000

BAWSCA
Bay Area Water Supply & Conservation Agency

January 27, 2017

Ms. Lisa M. Gibson
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Subject: **Case No. 2015-004827ENV –SFPUC Alameda Creek Recapture Project, State Clearinghouse No. 2015062072**

Dear Ms. Gibson,

Thank you for the opportunity to provide the following comments from the Bay Area Water Supply & Conservation Agency (BAWSCA). BAWSCA represents the interests of 24 cities and water districts, an investor-owned utility, and a university, that purchase water wholesale from the San Francisco Regional Water System (RWS). These agencies, in turn, provide water to 1.78 million people, businesses, and community organizations in Alameda, Santa Clara, and San Mateo Counties. These comments are in reference to the Draft Environmental Impact Report (DEIR) for the SFPUC Alameda Creek Recapture Project (ACRP) released for public review on November 30, 2016.

BAWSCA member agencies are highly dependent on the RWS to provide a reliable supply of potable drinking water. The average annual recapture volume of 7,178 Acre-Feet that the ACRP will provide when implemented will go toward helping the RWS achieve supply reliability and the SFPUC's adopted Water Supply Level of Service goal. 1 [ERP-6]

BAWSCA has reviewed the Draft EIR and has concluded that the document adequately addresses our scoping comments as raised in our letter dated July 27, 2015, prepared in response to your Notice of Preparation (NOP) of the EIR. 2 [ERP-2]

BAWSCA is also aware that one of our member agencies, Alameda County Water District (ACWD), plans on submitting a comment letter detailing its concerns with the Draft EIR and associated analyses. The SFPUC and ACWD have worked constructively together over the years to resolve their respective concerns on similar projects and efforts. BAWSCA encourages the SFPUC to apply a similar constructive approach toward addressing ACWD's concerns on this matter. If, as part of that interaction, or as part of interactions the SFPUC staff may have with other commenters, a variant of the preferred alternative is required, BAWSCA would be supportive of a project variant that achieved the project goals 3 [ERP-4] 4 [GC-2]

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while offering the flexibility to address project impacts identified through the public review process. 4 [GC-2] cont.

BAWSCA continues to appreciate the SFPUC's efforts to move this work forward such that a Final EIR can be prepared in a timely, efficient manner. If you have any questions regarding our comments or if the SFPUC desires our input as draft EIR comments are addressed, please feel free to contact me at (650) 349-3000.

Sincerely,

Thomas B. Francis, P.E.
Water Resources Manager

cc:
Thomas Neisar, ACWD
Allison Schutte, Hanon Bridgett
Dan Wade, SFPUC
Terry Roberts, Terry Roberts Consulting
File

Alameda Creek Alliance

P.O. Box 2626 • Niles, CA • 94536
Phone: (510) 499-9185
E-mail: alamedacreek@hotmail.com
Web: www.alamedacreek.org

January 4, 2017

Lisa M. Gibson
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
lisa.gibson@sfgov.org

Tim Ramirez
Director of Natural Resources, Water Enterprise
San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102
tramirez@sfwater.org

Comments on Draft Environmental Impact Report for Alameda Creek Recapture Project

These are the comments of the Alameda Creek Alliance on the draft Environmental Impact Report for the SFPUC Alameda Creek Recapture Project.

The Alameda Creek Alliance requests that the public comment period for the draft EIR be extended past January 17 to give the public and regulatory agencies a full opportunity to examine the potential impacts of the project, due to the complexity of the hydrology impacts from the project, and to digest the technical information in the 700+ page document. We also request that a public hearing and presentation on the project be held in Sunol for the benefit of local residents in the vicinity of the project who have concerns about potential impacts on groundwater and wells in the area. 1 [ERP-1]

The draft EIR relies on an Alameda System Daily Hydrologic (ASDH) Model to analyze very complex interactions between groundwater and surface water and to assess impacts to groundwater and surface flow in the Sunol Valley and downstream in Alameda Creek. However, the ASDH Model was designed for accounting of surface water flow and it is not clear whether use of this model is appropriate to analyze the interaction of groundwater and surface water. The ASDH Model appears to be insufficient to accurately model surface to groundwater dynamics, which will change with implementation of the Alameda Creek Recapture Project. We request that the EIR include a more rigorous hydrologic analysis, which could benefit from a new or improved model that can accurately model surface to groundwater interactions. We suggest that such a model could be developed in a collaborative format through the Alameda Creek Fisheries Restoration Workgroup. 2 [HY-2]

The draft EIR states that the hydrology used in the ASDH Model analysis was for the 18-year period from Water Year 1996 to Water Year 2013, and that the draft EIR assumes future water years, on average, will be similar to the modeled hydrologic period. However, limitations to the ASDH Model have been identified by the SFPUC's blue ribbon panel which was commissioned to review the model. The panel concluded that the model does not have a long enough analysis period to adequately characterize surface water hydrology in extended drought periods. 3 [HY-6]

We have major concerns with the potential impacts from “banking” water to be recaptured during dry years under the project. The draft EIR (page 3-27) states that during dry years recapture operations would collect “carryover” water released and bypassed during prior wet years. The draft EIR does not appear to evaluate or describe the potential impacts to groundwater and surface water from “carryover” pumping during these dry years. The draft EIR does not analyze what will happen to groundwater elevations in the Sunol Valley and to surface water flows in Alameda Creek under extended drought conditions, given the proposal in the EIR to carryover water volumes from year to year.

4 [HY-6]

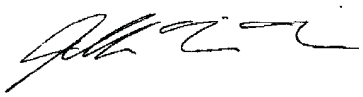
The draft EIR states that water being extracted from Pit F-2 will originate from Calaveras Reservoir, bypasses around the diversion dam, and other local tributaries upstream of the pit. Pumping and using water that originates from other tributaries may constitute development of a new water right, and may not fall under the SFPUC’s Calaveras water right, as claimed in the draft EIR.

5 [GC-3]

The project may require consultation with the National Marine Fisheries Service due to potential impacts to Central California Coast steelhead trout. The project may also require a permit under the Clean Water Act, since Pit F-2 may qualify as "waters of the United States" under the Clean Water Rule (80 FR 37054). The project may also require notification of the project to California Department of Fish and Wildlife under California Fish and Game Code section 1602.

6 [ERP-8, BI-12]

Sincerely,



Jeff Miller
Director

CALIFORNIA NATIVE PLANT SOCIETY
East Bay Chapter, www.ebcnps.org
PO Box 5597, Elmwood Station, Berkeley, CA 94705

January 17, 2017

San Francisco Planning Department
Attn: Lisa M. Gibson, Acting Environmental Review Officer; Chelsea Fordham, Planner
1650 Mission Street, Suite 400
San Francisco, CA 94103

Submitted by email to: lisa.gibson@sfgov.org ; Chelsea.fordham@sfgov.org ; ASivyer@sfwater.org ; christopher.thomas@sfgov.org

RE: San Francisco Public Utilities Commission (SFPUC) Alameda Creek Recapture Project (ACRP) Draft Environmental Impact Report (dEIR), Case No. 2015-004827ENV

Dear Officer Lisa Gibson, San Francisco Planning Department, and SFPUC,

The following are the comments of the East Bay California Native Plant Society (EBCNPS) in regard to the proposed Alameda Creek Recapture Project and its California Environmental Quality Act (CEQA) analysis provided in this draft Environmental Impact Report (dEIR).

The California Native Plant Society (CNPS) is a non-profit organization of more than 10,000 laypersons and professional botanists organized into 34 chapters throughout California. Our local East Bay chapter (EBCNPS) covers Alameda and Contra Costa Counties, inclusive of approximately 1000 members. The mission of CNPS is to increase the understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education, and conservation. We appreciate the opportunity to comment on this dEIR outlining the effects of the proposed project, especially on biological resources such as vegetative alliances, for its role within the SFPUC's Water System Improvement Program (WSIP). Pursuant to the mission of protecting California's native flora and vegetation, EBCNPS submits the following comments:

General Considerations

Overall, we suggest that SFPUC reevaluate the detailed biological resources reports with an eye for more appropriate characterization of impacts as *significant* on biological resources within the project area. We noticed and detail below several biological resource categories needing greater attention. We also recommend considering improvement of remnant native habitat in the project area. Due to this area's apparent utilization by diverse and rare wildlife as documented in the dEIR wildlife as well as vegetation surveys, and known difficulties with mitigating potential project impacts away from a known critical wildlife corridor, impacts brought by this project may irrevocably fragmenting the space and create significant impacts. 1 [BI-1]

Historical descriptions of the natural water flows and community types as described in the dEIR Section 5.14 Biological Resources and Appendix BIO1, are obviously and vastly different to current conditions. No longer a meandering and braided floodplain, this area of Alameda Creek is now more like a structured and built channel. SFPUC has the opportunity to retain and protect vegetation which, although artificial in the history of this area, serves an indisposable function to wildlife and remnant vegetative communities as a key link left remaining from years of other project area impacts decreasing the area's natural usefulness. Habitats in and around the project area that had previously been destroyed by past development, appear excellent candidates for restoration, possibly resulting in recolonizing rare plants no longer found during survey efforts and the natural reappearance of locally rare plant species. 2 [BI-2]

EBCNPS asks that planners consider facilitating the construction of a riparian meander corridor and appropriate plant habitat in current project location on Alameda Creek, as area enhancement for the existing concrete drainage. This riparian area would be a wonderful feature improvement for the area from a habitat perspective. It could include walking pathways that could educate visitors about the natural history of the site. 3 [BI-3]

We are concerned that dEIR interpretation of impact to current conditions, does not take into account the important vegetation and wildlife services this area already provides despite years of releases and management differing from its historical existance. As the dEIR is currently written, higher fluctuation to water flows may allow for unacceptable destruction and decreased health of currently thriving vegetative alliance communities. Potential impacts to documented plant communities, where changes in water releases and flows may lead to collapse of these communities, is partly acknowledged but must be further analyzed and shown accurately as a *significant* biological impact. If unavoidable, mitigation for these impacts must show how SFPUC will provision for vegetation and wildlife corridor enhancement, at this same critical corridor location. 4 [BI-6]

Other considerations:

Address other conjoined SFPUC anticipated projects within and nearby the project area

A January 2017 job announcement for a "California Native Plant Propagation Internship," describes a position assisting on a project with apparent overlapping project objectives. Please 5 [BI-4]

address the Sunol Long Term Improvements Project in Sunol, CA, which includes "upgrading the Sunol Yard operations and maintenance facilities and the construction of the Alameda Creek Watershed Center, an interpretive facility showcasing the natural cultural, scenic, and recreational resources of the Alameda Creek watershed" (Personal correspondence, January 19, 2017). There are plans for the Center to include a watershed discovery garden, trail that demonstrates the plant communities of the surrounding watershed, bioswales, and regionally appropriate California native plants. Where will the Center be located? EBCNPS would like to know if additional facilities are already being planned on the project area described in this dEIR. If so, these anticipated impacts should be accounted for and acknowledged here.

5 [BI-4] cont.

Please also consider our organization's resources (www.cnps.org) for selecting regionally appropriate native plants, best management practices for reducing spread of invasive plant species, as well as documenting presence of *Phytophthora*.

6 [BI-5]

Recognize and reduce significant impacts to terrestrial wildlife corridor connection
Native plant landscapes, even when impacted by invasive colonization and even when not containing a keystone rare plant species, are still vitally important to wildlife corridors; examples include mulefat scrub, coyote brush scrub, and willow thickets as documented (especially when associated with riparian areas, these are considered sensitive natural communities in need of enhanced protections). In fact, the Bay Area Open Space Council publishes several tools which demonstrate the Alameda Creek Recapture Project Area as both a "Critical Linkage," and an "Area Essential to Conservation Goals." Both classifications ("critical" and "essential") are the highest ranking selections, contrasting on the other end of the conservation priority spectrum with fragmented areas. Especially important to consider is the existence of close by Highway 84, which serves as an additional hurdle to wildlife utilizing this critical corridor. It makes sense that wildlife travelling between Pleasanton Ridge Regional Park or Vargas Plateau Regional Park, and Sunol Regional Wilderness, as well as their respective neighboring open space areas, would favor riparian locations such as the project area. Please consider impacts to this area, as it effects the corridor travel.

We recommend SFPUC closely examine the Bay Area Open Space Council's Conservation Lands Network resources, which are designed for land managers. According to the Council's description, the "Conservation Lands Network (CLN) is the recommended configuration of interconnected habitats for preserving biodiversity in the Bay Area. Many factors were considered… including the conservation targets..., land use, proximity to existing protected lands, conservation suitability (ecological integrity) of the landscape, in addition to the expert opinion of focus team scientists" (http://www.bayarealands.org/explorertool.html, accessed January 20, 2017).

7 [BI-11]

Preserve vegetative alliances and sensitive natural communities
Effects of changes in surface water and subsurface water levels on biological resources, need further analysis, such as impacts to rare California sycamore alliance, and sycamore alluvial

8 [BI-6]

woodlands resulting from groundwater and surface water changes. Mixed riparian forest may increase in the survey area, according to the dEIR. But, what would happen if this hugely valuable resource decreased in health or extant? This analysis is needed. Portions of riparian woodlands in the project area are considered rare, and impacts to them (including usage change impacts during drought periods, which are not yet sufficiently analyzed by this dEIR) are considered *significant* and should be primarily avoided. Excellent contextual examples of the significance of these vegetative alliances in the geographic area (outside the project area, survey area) are found throughout the Biological Resources section, and Appendix BIO1-f. Impacts from project facility construction, as well as the many years following of successful project operation, are all necessarily part of the impacts from this proposed project, and need tandem consideration for a complete picture of understanding.

8 [BI-6 cont.]

Improve vegetation mitigation requirements for project impacts

Replacement requirements are only applicable for trees at 6" diameter at base height (dbh) and above, where true actual impacts to habitat exist for removal of even a 3" dbh tree. We suggest decreasing the number of trees removed, and replacement for all trees removed as part of the project implementation. EBCNPS recommends the use of native species for revegetation wherever possible. In the event that native plants are used for landscaping and restoration, we request that a requirement be added to the plans to ensure that local ecotypes of native plants are used to prevent genetic contamination of any existing populations at the site and in the area of the project.

Invasive weed control measures in the dEIR also need improvement to show clear communication with contractors, and ultimately, for most effective restoration. Movement of equipment and personnel between these five staging areas, also should be recognized as a way to spread invasive plant populations, and needs to be addressed in the impacts and avoided. Monitoring measures should include invasive monitoring and mitigation for new populations potentially occurring downstream of construction sites.

9 [BI-7]

Protect watershed from runoff at construction sites

Mitigation measures to minimize or avoid impacts on biological resources during construction activities, should include more robust provisions for filtering runoff and protecting riparian resources from silt and invasive plant seed bank spread. Staging areas need to be placed further away from riparian corridor, with a stated buffer of at least 300' from documented riparian areas. Although much of this area is considered previously disturbed and rudereal, all riparian and wetland areas require enhanced consideration for impacts even for temporary construction activity. Especially with construction planned to start in Fall 2017 and occurring partially during the 2017-18 and 2018-19 rainy seasons, this dEIR needs to include more protection measures for avoiding direct and indirect disturbance of existing vegetative communities. Uncontrolled silt movement from construction sites will increase stream turbidity, create new microenvironments for flora, and redistribute water movement, possibly impacting aquatic wildlife downstream.

10 [BI-8]

Staging areas currently total 8.8 acres in previously disturbed areas; however, we think this total could be reasonably reduced, and that placement of these areas should also account for preserving the relative health of some once-disturbed areas over other severely degraded areas. Have any of these previously disturbed areas served as previous mitigation or experienced beneficial restoration attempts? Determining how long an area has had to recover, may be as easy as reporting the year when the area last experienced disturbance from other projects. It is critical that SFPUC consider effective protections for Alameda Creek buffering from construction activities, including selection of staging area placement.

10 [BI-8] cont.

Demonstrate impact analysis for diversion and recapture under drought conditions

During this transitional time of planning for an Alameda Creek Watershed Center concept as well as organizing jurisdictional and management authority over water rights throughout different project sections, EBCNPS requests that special consideration be given to ensure that this remnant of Alameda Creek watershed is prioritized for protection. We invite you to read Alameda Creek Alliance's letter regarding this project, dated January 4, 2017, which brings up valid, unanswered concerns regarding dEIR assumption of adequacy of the Alameda System Daily Hydrologic Model for analyzing impacts to groundwater and surface water, as well as points on development of new water rights. Most important to our other concerns, is more complete analysis for understanding banking and use of "carryover" water and pumping in drought years. It is likely California will experience drought conditions again. Further outlining how use will differ those exceptional times is needed in this analysis. For example, "with-project conditions" as described in Table 5.14-1, should take into account the reasonable range of anticipated hydrologic conditions including drought.

11 [BI-9]

12 [HY-2]

13 [GC-3]

14 [HY-6]

Provide reasonable project alternative selection through addition of reduced impact alternative, environmentally superior alternative

Currently, only two alternatives exist for this proposed project, one of which is the mandatory "no project" alternative. The options appear to be only: allowing ACRP proposal as written; no ACRP project; or, approval of a desalination treatment facility to substitute for system needs not met if ACRP is not built. The issues with this presentation are two-fold. The SFPUC may remain under obligation to fill its water rights requirements, accommodate federally listed steelhead release requirements, and meet both seismicity requirements and future public demand. Even considering this ACRP dEIR tiers from the Water System Improvement Program EIR, this is insufficient reason for provisioning what appears as a virtual *guarantee* within this project's alternatives for implementation of another enormous project that has not yet benefitted from CEQA impact analysis. Confusingly, it appears that selection of this alternative is wholesale permission to move forward with a separate project with separate impacts, and only described in one paragraph. Other descriptions of this desalination facility were not discovered by the time this letter was submitted. No CEQA documentation was referenced for more reading. Perhaps this alternative should more appropriately state that this option will be considered, given results of future CEQA analysis which would decide appropriateness.

15 [AL-2]

Ideally, a reduced- impacts alternative will be included in a revised EIR for this project, and this is what we recommend. The current dEIR alternatives selection indicates an insufficient analysis of the potential varied impacts (both benefits and drawbacks) of a partial implementation of this ACRP project proposal. The public is unable to understand from this presentation, anything else besides an all-or-nothing approach.

15 [AL-2] cont.

In conclusion, EBCNPS looks forward to continuing to follow this project and commenting in the future. If you have any questions, please contact me at conservation@ebcnps.org. or 510-734-0335.

Sincerely,

Karen Whitestone
Conservation Analyst
East Bay California Native Plant Society

ATTACHMENT
ADDITIONAL EBCNPS RECOMMENDED PUBLICATIONS

- "A Guidebook to the Botanical Priority Protection Areas in the East Bay." East Bay Chapter of the California Native Plant Society. 2010. Bartosh et al. <http://ebcnps.org/publications/guidebook-to-botanical-priority-protection-areas/>.
- "Rare, unusual and significant plants of Alameda and Contra Costa Counties." East Bay Chapter of the California Native Plant Society. 2016. Lake. <http://ebcnps.org/native-plants/database-of-rare-unusual-and-significant-plants-of-alameda-and-contra-costa-counties/>. Online database.
- "Annotated Checklist of the East Bay Flora, 2nd ed." East Bay Chapter of the California Native Plant Society. 2013. Ertter et al.
- "Manual of California Vegetation, 2nd ed." California Native Plant Society. 2009. Sawyer et al. <http://vegetation.cnps.org/ >. Online database.
- Bay Area Open Space Council Conservation Lands Network <http://openspacecouncil.org/programs/protect/ >.
- California Native Plant Society < http://www.cnps.org/ >.
- East Bay California Native Plant Society < http://www.ebcnps.org/ >.

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APPENDIX PH
Public Hearing Transcripts, Coded

This appendix contains the complete transcripts of the public hearing on the Draft environmental impact report (EIR) on the San Francisco Public Utilities Commission (SFPUC) Alameda Creek Recapture Project (ACRP), which was held before the San Francisco Planning Commission on January 5, 2017.

The public hearing transcripts include commenter codes, which designate "PH" followed by the person's last name. The public transcript presents all oral comments chronologically, in the order in which they were presented at the public hearing. **Table PH-1** lists all of the commenters who presented oral comments at the public hearing alphabetically, indicates the corresponding comment code prefix for each commenter, and provides the page numbers of the transcript where their comments are located.

To facilitate the commenter in locating the responses to his or her comments, the EIR assigns a unique commenter code plus one or more response code to each individual comment, as explained below. Both the commenter and response codes are shown in the margin of the transcript, with the unique commenter code shown first and the response code(s) in square brackets beneath the commenter code. This information is shown in the margins of the public hearing transcript and serves as the cross-reference guide for the comment and response codes.

Commenter Codes

This document assigns a code to each person that provided oral comment at the public hearing transcript based on the name of the individual submitting the comment. Each commenter code begins with the prefix "PH" followed by the individual's last name. The second part of the code is the sequential numbering of individual comments within the transcript that represents a distinct topic. In the public hearing transcript, the comment codes are shown in the margin alongside the individual bracketed comment. Only substantive comments received on the Draft EIR are bracketed; for example, oral testimony that describe an agency's or organization's mission or a person's biographical history are not bracketed as comments for the purposes of this document.

As an example of the commenter coding system, the public hearing transcript for Leonard Ash is coded PH-Ash, and his first comment in the transcript is coded PH-Ash-1.

Response Codes

The prefixes for the response codes used in the organization of Chapter 11, Responses to Comments, are shown below:

Environmental Review Process (ERP)	Hydrology and Water Quality (HY)
Cultural Resources (CP)	Alternatives (AL)
Biological Resources (BI)	General Comments (GC)

Within each topic area, similar comments are grouped together, and Chapter 11 provides a comprehensive response to those related comments under one response code. Response codes are numbered sequentially using the response code prefix and sequential numbering for each subtopic. For example, General Comments [GC] are listed as [GC-1], [GC-2], [GC-3], and so on. Chapter 11 lists all of the comment codes that are addressed under each response code as a cross-reference. As described above, response codes are shown in this appendix in the margin of the transcript in square brackets underneath the comment code.

TABLE PH-1
PERSONS WHO PRESENTED ORAL COMMENTS ON THE ACRP DRAFT EIR AT THE PUBLIC HEARING, JANUARY 5, 2017

Commenter Code	Name of Individual Submitting Comments	Comment Format	Comment Date	Page No. in Transcript
PH-Ash	Ash, Leonard, Water Resources Planning Engineer, Alameda County Water District	Transcript	01/05/2017	12
PH-Moore	Moore, Kathrin, Commissioner, San Francisco Planning Commission	Transcript	01/05/2017	13

SAN FRANCISCO PLANNING COMMISSION

ALAMEDA CREEK RECAPTURE PROJECT

PUBLIC HEARING ON THE

DRAFT ENVIRONMENTAL IMPACT REPORT

Thursday, January 5, 2017

San Francisco City Hall

One Dr. Carlton B. Goodlett Place

Commission Chambers, Room 400

San Francisco, California

Item No.: 7

Case No.: 2015-004827ENV

Reported By: DEBORAH FUQUA, CSR #12948

APPEARANCES:

San Francisco Planning Commission:

President Rodney Fong

Vice President Dennis Richards

Commissioner Kathrin Moore

Commissioner Joel Koppel

Commissioner Myrna Melgar

Commission Secretary: Jonas Ionin

Planning Staff Director: John Rahaim

Planning Staff:

Chris Thomas, Coordinator, SFPUC Alameda Creek Recapture Project EIR

Ellen Levin, Deputy Assistant Manager, SFPUC Water Enterprise

Thursday, January 5, 2017 12:21 p.m.

--o0o--

P R O C E E D I N G S

SECRETARY IONAS: For Item 7, Case No. 2015-004827ENV, the Alameda Creek Recapture Project. This is a Draft Environmental Impact Report. Please note that written comments will be accepted at the Planning Department until 5:00 p.m. on January 17th, 2017.

CHRIS THOMAS: Good afternoon, President Fong, Members of the Commission. Chris Thomas, Planning Department Staff and Coordinator for the San Francisco Public Utility Commission's Alameda Creek Recapture Project Environmental Impact Report or EIR.

Joining me is Chris Kern, Senior Environmental Planner, and members of the SFPUC project team, including Ellen Levin, who is Deputy Assistant Manager of the SFPUC Water Enterprise and who will provide you with a brief overview of the project after I finish.

The item before you is review and comment on the Alameda Creek Recapture Project Draft EIR, Case No. 2015-004827ENV. The proposed project which is located in Alameda County on watershed lands owned by the City and County of San Francisco and managed by the SFPUC would involve the recapture of water to be

released from Calaveras Reservoir and bypassed around the Alameda Creek Diversion Dam by the SFPUC as part of a multi-agency effort to reestablish a viable population of Central Coast steelhead in Alameda Creek.

The Draft EIR found that the proposed project would not result in any significant and unavoidable impacts and found that potential impacts to archeological resources, air quality, biological resources, and energy resources could be mitigated to a less-than-significant level.

The Draft EIR was published on November the 30th, 2016, and the public review period closes on January 17th, 2017, a period of 48 days.

To date, we have received one comment letter that was from the Alameda Creek Alliance. It expressed two concerns, the first regarding the analysis of interactions between surface water and groundwater and the second regarding the proposed dry year recapture operations of the project.

The Alameda Creek Alliance letter also requests an extension of the comment period beyond January 17th to provide more review time and also requests that a public hearing and presentation on the project be held in the Sunol Valley.

Chapter 31 of our Administrative Code provides

the Environmental Review Officer, or ERO, and your Commission with the discretion to extend a draft EIR comment period. Staff reviewed this request with the Acting ERO and believe it's not warranted because the current comment period at 48 days is already longer than the 45 days required by the California Environmental Quality Act, or CEQA and, we believe, adequate for review of the Draft EIR for this project, including the hydrologic analysis and its technical information.

Neither CEQA nor our Administrative Code addresses requirements for more than a single public hearing on a Draft EIR. We believe this hearing and the 48-day comment period are adequate for the public to review and comment on the Draft EIR for this project, and staff does not support an additional hearing in Sunol. We should note that the SFPUC did make a public presentation before the Sunol Citizen Advisory Committee regarding the proposed project on November 11th, 2016.

During today's hearing, staff will receive and record comments but will not respond to them. Comments made today and all comments received during the comment period will be transcribed and responded to in writing in the Responses to Comments document which will

include revisions to the Draft EIR as appropriate.

Comments today should be directed towards the adequacy and accuracy of the information contained in the Draft EIR. For members of the public who wish to comment at this hearing today, please state your name for the record. For those who not wish to speak at today's hearing, we have comment cards that may be filled out and given to staff.

For those who are interested in commenting on the Draft EIR in writing by mail or e-mail, they may submit their comments to the Environmental Review Officer at 1650 Mission Street, Suite 400, San Francisco by 5:00 p.m. on January 17th.

When the Responses to Comments document is complete, the Planning Department will provide copies to those who have made comments on the Draft EIR. We will then return to the Commission to request certification of the EIR. If the EIR is certified, the Planning Commission may consider approval of the project.

I'm going to hand the presentation off to Ellen Levin now, with the SFPUC. She's going to provide a brief overview of the proposed project. After Ms. Levin's presentation, we recommend that the Commission open the public hearing on this item, unless

you have questions. Thank you.

We also could use the screen, please.

ELLEN LEVIN: Good afternoon, Commissioners. I'm Ellen Levin. I'm a Deputy Manager of the SFPUC's Water Enterprise, and I'm here today, as Chris said, to give you an overview of the Alameda Creek Recapture Project.

The Alameda Creek Recapture Project is part of the SFPUC's Water System Improvement Program. This Commission actually certified a program environmental impact report that this project was included in in October of 2008.

The project was initially created to recapture in-stream flows released from Calaveras Dam to support resident fish below the dam per a Memorandum Of Understanding with the California Department of Fish and Wildlife.

The in-stream flows were revised through the permitting of the Calaveras Dam Replacement Project and resulted in a revised recapture project as well.

So the key objectives of the project are to recapture a portion of future in-stream flows from Calaveras Reservoir and bypasses at Alameda Creek Diversion Dam that are required under the permits to operate the Calaveras Dam Replacement Project.

The Alameda Creek Diversion Dam -- I'll show you a picture of that that depicts its location. But it's a facility that's used to divert water into Calaveras Reservoir from Alameda Creek. And the bypasses are basically allowing us to move water around that facility so the water stays in the creek. The releases and bypasses are intended to provide habitat benefits upstream of recapture, and the permit compliance locations are consistent with that.

As I've said, the Alameda Creek Recapture Project is dependent on the Calaveras in-stream flow schedules, so that will be implemented as part of the future operation of the Calaveras Reservoir.

The releases from the reservoir together with the bypasses are estimated at an average of about 14,700 acre-feet per year. The range is about 8200 to 26,200 acre-feet per year. And the recapture volume is estimated to be about 7200 acre-feet per year on average with a range of about 4800 to 9200 acre-feet per year. So you'll note that the recapture volume is less than half of the amount of water that's being released and bypassed.

The water is recaptured through natural infiltration to an existing water storage pond that's currently being used by quarry operators on PUC

property. They're leasing the land.

So where is this project located.

The project is located in the East Bay south of the City of Pleasanton near the town of Sunol. In the larger image, you see a view of the current quarry operations. Mostly you're seeing water storage ponds of various colors. The darkest pond is where the water from this project would be recaptured.

In the image, at the bottom right of the picture, you see Calaveras Reservoir. And I'm sorry for the audience; this is a difficult image to see. But the bottom right of the picture you see Calaveras Reservoir. There's a dark solid line that's going to further right, and that's where the Alameda Creek Diversion Dam is. The blue arrows are indicating the flow of Alameda Creek. And the red triangle at the top of the image is the location of the Recapture Project.

I just want to note that the project does not involve any construction or facilities in Alameda Creek or the banks of the creek.

So, the project components. There will be four vertical turbine pumps that are mounted on barges. This is depicted in the image here. And it includes a mooring system. There will be four flexible discharge pipes that are extending from each pump to a new pipe

manifold that's going to be located on the shoreline of the pond. And from that new pipe manifold, there will be a hundred-foot-long, 36-inch-diameter pipeline that will connect to our existing Sunol Pump Station pipeline.

The project components also include throttling valves and a flow meter, an electrical control building as depicted here, mature trees will be planted to employ shade and screening, electrical transformers, power facilities, and battery power.

In terms of project operation, we're going to operate the pond as we do all of our reservoirs. It will fill in the wintertime and drop down in the dry season, generally April through December.

This image here depicts the annual operation with the pond. It's showing that the pond rises in the winter and starts to be drawn down in late April, climbing back up in early December. Note here the pond is never drawn down completely, even in very dry years.

Generally, we plan to operate the pond within a 90-foot range, 150 to 240 feet above mean sea level. The pumping rate is 19.4 million gallons per day. For a matter of perspective, San Francisco uses about 60 gallons -- million gallons per person per day [sic]. 30 feet per second would be the rate of the pumping.

And the pumped water would be sent through that existing Sunol Pump Station pipeline to the regional water system via our treatment plant out in Sunol or San Antonio Reservoir.

The anticipated construction schedule has us starting construction in the fall of this year and lasting about 18 months, until spring of 2019.

If you have any questions about the project, I'm happy to answer them. Thank you for having me.

PRESIDENT FONG: Thank you.

Is there any additional from staff?

(No response)

PRESIDENT FONG: Okay. Opening up to public comment then. Leonard Ash.

LEONARD ASH: Good afternoon, President Fong and Members of the Commission. My name is Leonard Ash. I'm a water resources planning engineer with Alameda County Water District.

The Alameda County Water District acknowledges and congratulates the SFPUC on its accomplishments and progress on the ambitious Water Supply Improvement Program over the past decade.

As a customer of the SFPUC, ACWD relies on the Regional Water System for 20 percent of our water supply. The Regional Water System supplies ACWD with

high quality water which has consistently been one of our most reliable and resilient sources of water.

In addition to being a customer, ACWD has a long history of working together with SFPUC on our shared interest in the Alameda Creek watershed. And our agencies both have reputations as being progressive water agencies in California.

In fact, our agencies have worked cooperatively since 1997 through the Alameda Creek Fisheries Work Group to reestablish an anadromous steelhead fishery to this valued watershed in the Central Coast region.

Accordingly, ACWD previously provided a detailed comment letter on the Notice of Preparation of an Environmental Impact Report for the Alameda Creek Recapture Project. The EIR with appendices, is a long and complex document, and we are still in the process of reviewing the study in its entirety.

PH-Ash-1 [ERP-1]

ACWD appreciates the opportunity to speak today, and we look forward to many years of future collaboration with the SFPUC. Thank you.

PRESIDENT FONG: Thank you.

Is there any additional public comment?

(No response)

PRESIDENT FONG: Okay. Not seeing any, public

comment is closed.

Commissioners, comments? Commissioner Moore.

COMMISSIONER MOORE: This is technically very challenging for us. However, over the many years, this Commission has been briefed and debriefed on the many stages of the improvements of the water system. And I am confident that the same amount of thoroughness has gone into the document in front of us.

In addition to that, in the previous discussion regarding the reinstatement of steelhead trout in that area, we were very, very thoroughly debriefed. There were lots of challenges of how it's being done. So I assume that I am personally at a point where I am in full support that this Draft EIR has addressed those issues which so many people have spent technical expertise and passion on. So I am in full support of what's in front of me at this stage.

PH-Moore-1 [GC-4]

PRESIDENT FONG: Okay. Thank you.

Anything further, Commissioners?

(No response)

PRESIDENT FONG: Not seeing anything, next item.

(Whereupon, the proceedings on Item 7 concluded at 12:35 p.m.)

STATE OF CALIFORNIA)
) ss.
COUNTY OF MARIN)

I, DEBORAH FUQUA, a Certified Shorthand Reporter of the State of California, do hereby certify that the foregoing proceedings were reported by me, a disinterested person, and thereafter transcribed under my direction into typewriting and is a true and correct transcription of said proceedings.

I further certify that I am not of counsel or attorney for either or any of the parties in the foregoing proceeding and caption named, nor in any way interested in the outcome of the cause named in said caption.

Dated the 17th day of January, 2017.

DEBORAH FUQUA

CSR NO. 12948