MATHER SPECIFIC PLAN PROJECT

Final Environmental Impact Statement

Prepared by
U.S. Army Corps of Engineers
Sacramento District

May 2018

TABLE OF CONTENTS

Mather Specific Plan Project
Final Environmental Impact Statement

Appendices

List of Tables

List of Figures

CHAPTER 1
Introduction

This Final Environmental Impact Statement (FEIS) has been prepared to respond to comments received on the Draft EIS (DEIS) and Supplemental Draft EIS (SDEIS) for the Mather Specific Plan Project. The FEIS has been prepared by the U.S. Army Corps of Engineers (USACE), Sacramento District in accordance with the requirements of the National Environmental Policy Act (NEPA). USACE is the lead agency under NEPA.

Under NEPA, the lead agency may request other agencies which have jurisdiction or special expertise with respect to a particular issue to be cooperating agencies (40 CFR §1501.6). The U.S. Environmental Protection Agency (EPA), U.S. Air Force, U.S. Fish and Wildlife Service (USFWS) and Sacramento Metropolitan Air Quality Management District (SMAQMD) are cooperating agencies.

On June 29, 2012, USACE released the DEIS for public review and comment. The 45-day comment period closed on August 13, 2012. The DEIS evaluated the potential environmental effects of the No Action alternative and three large-scale, mixed-use development alternatives. A meeting to receive public input on the DEIS was held in Main Conference Room A at 10590 Armstrong Avenue, Mather, California 95655 on July 25, 2012. Twelve comment letters (including emails) were received, and one speaker submitted comments at the public meeting on July 25, 2012.

Following publication of the DEIS, a re-delineation of waters of the U.S. was conducted within the Mather Specific Plan Area ("project site"), which added aquatic features and revised the shape or size of other aquatic features within the project site. USACE jurisdictional features identified within the project site increased from 198.5 acres to 208.8 acres. On May 1, 2015, USACE released the SDEIS for public review and comment. The 45-day comment period closed on June 15, 2015. Twenty-six comment letters (including emails) were received.

USACE considered the comments received on the DEIS and SDEIS, and has provided responses to these comments in Chapter 3 of this FEIS. This FEIS includes the DEIS and SDEIS by reference with text revisions noted in Chapter 4 of this FEIS.

1.1 Purpose and Intended Uses of the Final Environmental Impact Statement

NEPA requires a lead agency that has completed a DEIS to consult with and obtain comments from public agencies (cooperating, responsible, and/or trustee agencies) that have legal

jurisdiction with respect to the Proposed Action, and to provide the general public with opportunities to comment on the DEIS. The FEIS is a mechanism for responding to these comments. This FEIS has been prepared to respond to comments received from agencies, organizations, and members of the public on the DEIS and SDEIS for the Mather Specific Plan Project, which are reproduced in this document. Additionally, it presents corrections, revisions, and other clarifications and amplifications to the DEIS and SDEIS made in response to these comments. The DEIS, SDEIS and this FEIS will be used to support USACE's Record of Decision (ROD) documenting the conclusion of the NEPA process and the decision whether to issue permits pursuant to Section 404 of the Clean Water Act (CWA).

1.2 Project Requiring Environmental Analysis

The land within the boundaries of the Mather Specific Plan (or project site) includes approximately 5,749 acres in eastern Sacramento County, California (see Figures 1-1 and 1-2 of the DEIS). The Sacramento County Office of Economic Development ("Applicant") originally proposed seven different land uses within the boundaries of the Mather Specific Plan including Airport Commercial, Commercial Development, "Economic Development" i.e., aggregate extraction, University Village/Residential, Parks/Recreation, Regional Sports Park, and Infrastructure.

The DEIS evaluated the seven proposed land uses with a revised alignment of Eagles Nest Road (now renamed Zinfandel Drive) in comparison to previous proposals. The proposed infrastructure improvements were evaluated at a project-level while other proposed land uses were evaluated at a program-level. Proposed land uses evaluated at a program-level are subject to future USACE NEPA review for consistency with the assumptions of the EIS. The amount of proposed fill under the Applicant's Preferred Alternative (Alternative A) was revised from 34.27 acres to 40.25 acres in the DEIS. This change from previous estimates was due to refinements in the Applicant's GIS data, the revision to the proposed alignment of Zinfandel Drive, and a revised jurisdictional delineation which identified additional and expanded jurisdictional features in areas proposed for development.

The project description remained substantially the same in the SDEIS; however, the amount of proposed fill under the Applicant's Preferred Alternative was revised to 48.28 acres. This change was due to a re-delineation of waters of the U.S., which added aquatic features and revised the shape or size of other aquatic features within the project site. Minor modifications to the project description included expanding infrastructure areas to include areas for culverts and proposed improvements adjacent to the existing Douglas-Zinfandel extension.

Following the publication of the DEIS and SDEIS, the Applicant has continued to adjust the proposed project to reduce effects on waters of the U.S and align with County planning efforts. These changes include the addition of Avoided and Preserve areas as well as a revised Zinfandel Drive alignment to avoid aquatic resources. The University Village/Residential and Regional Sports Park areas have been combined into one development area referred to as Residential. Additionally, the County is no longer pursuing aggregate extraction in the Economic Development area. Chapter 2 of the FEIS includes additional description of the modifications to

the Applicant's Preferred Alternative. As modified, the Applicant's Preferred Alternative would result in fill of approximately 35.66 acres of waters of the U.S. USACE will identify the alternative or alternatives that are considered to be environmentally preferable.

1.3 Purpose and Need

USACE has determined that the overall project purpose is:

> *A large scale, mixed use development to promote economic and wetland conservation opportunities within the Mather Specific Plan area.*

Per 40 CFR §1502.13, the stated purpose and need has guided the development of the alternatives.

1.4 Summary Description of the Project Alternatives

The CEQ Regulations for Implementing NEPA (40 CFR §1502.14) require that an EIS:

- Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- Devote substantial treatment to each alternative considered in detail including the "proposed action" so that reviewers may evaluate their comparative merits.
- Include reasonable alternatives not within the jurisdiction of the lead agency.
- Include the alternative of "no action".
- Include appropriate mitigation measures not already included in the "proposed action" or alternatives.

The three alternatives to the Applicant's Preferred Alternative which were evaluated at an equal level of detail within the EIS include the following:

- Alternative B – 2006 Conceptual Land Use Plan Alternative
- Alternative C – Multiple Preserves Alternative
- Alternative D – No Permit Alternative (No Action)

The above alternatives were developed by the U.S. Army Corps of Engineers (USACE), Sacramento District in conjunction with the Applicant and review of the scoping comments received on the Notice of Intent.

1.4.1 Alternative B – 2006 Conceptual Land Use Plan Alternative

The Sacramento County Board of Supervisors conceptually endorsed a land use plan for the project site in 2006. Alternative B is based on the land uses and proposed boundaries of the Preserve and "Avoided Areas" based on the conceptually endorsed plan. Alternative B includes a

1,063-acre Preserve and 27 acres of Riparian Buffer area, which is less than the 1,272-acre Preserve specified in the Biological Opinion for the proposed land transfer from the U.S. Air Force to the County; however, this alternative is still considered viable as the land transfer process has not been completed and the BO terms could be modified. As with Alternative A, this alternative includes the development of a large-scale mixed-use development on the project site. Alternative B would also require permits from the USACE pursuant to Section 404 of the Clean Water Act for the proposed fill of 47.01 acres of waters of the U.S. For the Economic Development area, aggregate extraction was considered in the DEIS and SDEIS; however, the County is no longer pursuing aggregate extraction in this area.

1.4.2 Alternative C – Multiple Preserves Alternative

As with Alternatives A and B, this alternative includes the development of a large-scale mixed-use development on the project site. Alternative C would also require permits from the USACE pursuant to Section 404 of the Clean Water Act for the proposed fill of 40.52 acres of waters of the U.S. This alternative would include additional, small Preserve areas to the east of Zinfandel Drive. For the Economic Development area, aggregate extraction was considered in the DEIS and SDEIS; however, the County is no longer pursuing aggregate extraction in this area.

1.4.3 Alternative D – No Permit Alternative

This alternative avoids the placement of dredged or fill material into waters of the U.S., including wetlands, thus eliminating the need for USACE authorization. A reduced amount of future development could occur without a permit from USACE. This includes infill development at Mather Airport and Economic Development in the southwestern corner of the project site. For the Economic Development area, aggregate extraction was considered in the DEIS and SDEIS; however, the County is no longer pursuing aggregate extraction in this area. Therefore, this alternative assumes these actions could occur at some future time. Because this alternative does not include substantial economic development and related revenue to fund management of a preserve, the level of active management of preserve areas, including the restoration or enhancement of existing wetland resources, is unknown.

1.5 Requirements for Responding to Comments

NEPA requires that the FEIS include and respond to all substantive comments received on the DEIS (40 CFR Section 1503.4). Lead agency responses shall include one or more of the following:

- modify the Proposed Action or alternatives;
- develop and evaluate new alternatives;
- supplement, improve, or modify the substantive environmental analyses;
- make factual corrections to the text, tables, or figures contained in the DEIS; or
- explain why no further response is necessary.

Additionally, the FEIS must discuss any responsible opposing view that was not adequately discussed in the DEIS and must indicate the lead agency's response to the issues raised.

1.6 Requirements for Document Certification and Future Steps in Project Approval

The FEIS is being distributed to interested agencies, stakeholder organizations and individuals, including those that commented on the DEIS and SDEIS. This distribution ensures that interested parties have an opportunity to express their views regarding the effects of the evaluated alternatives, and to ensure that information pertinent to permits and approvals is provided to decision makers.

This document is available for review by the public during normal business hours at the U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Room 1350, Sacramento, California 95814 and at the Rancho Cordova Library, 9845 Folsom Boulevard, Sacramento, California 95827. The FEIS is being circulated for a 30-day review period.

USACE will circulate the FEIS for a minimum of 30 days before taking action on the permit and issuing its ROD. After public review, USACE intends to make a permit decision regarding proposed infrastructure, and other decisions as appropriate, and publish a ROD. The ROD will address the decision, alternatives considered, the environmentally preferred alternative, relevant factors considered in the decision, and mitigation and monitoring.

1.7 Organization and Format of the Final Environmental Impact Statement

This FEIS is organized as follows:

- Chapter 1, Introduction, describes the purpose and content of the FEIS.
- Chapter 2, Modifications to the Applicant's Preferred Alternative, provides a discussion of changes to the Applicant's Preferred Alternative since the release of the DEIS and SDEIS.
- Chapter 3, Comments and Responses, contains a list of all agencies and persons who submitted comments on the DEIS and SDEIS during the public review period and individual responses to the comments.
- Chapter 4, Errata, presents corrections and other revisions to the text of the DEIS and SDEIS based on issues raised by comments, clarifications, or corrections. Changes in the text are signified by strikeouts where text is removed and by underline where text is added.
- Chapter 5, List of Preparers, lists the individuals who assisted in the preparation of this FEIS.
- Appendices. Comment letters and new technical appendices are attached to the back of this FEIS.

This document and its appendices, together with the DEIS and SDEIS, constitute the FEIS.

This page intentionally left blank

CHAPTER 2
Modifications to the Applicant's Preferred Alternative

2.1 Description of the Modified Applicant's Preferred Alternative

A full comparison of changes to the description of the Applicant's Preferred Alternative is included in FEIS Section 4, Errata (see changes to Section 2.3 Alternative A – Applicant's Preferred Alternative). The following is a summary of the changes which have occurred since the release of the DEIS/SDEIS.

2.1.1 Project Level

The Applicant has continued to refine the alignment of roadways within the project site. Roadway and infrastructure improvements have been separated into three phases: 1) Phase I/II Zinfandel improvements, 2) Phase III Zinfandel, and 3) the Douglas extension. Of these phases the Phase I/II Zinfandel improvements is assessed at a project level.

The Phase I/II roadway and infrastructure project includes roadway improvements to Zinfandel Drive and extension of a sewer line along Zinfandel Drive. Zinfandel Drive will be paved to a 36 foot width and will have two travel lanes measuring 12 feet in width and a six foot wide paved multipurpose lane on the east side of the roadway. The depth of the sewer line will vary to allow for gravity flow to the north and will have a maximum cover of 35 feet. Like the remainder of the proposed Zinfandel Drive alignment (Phase III), the sewer line would eventually be extended beyond the currently proposed terminus of the improvements 2,100 feet south of Woodring Road, and the construction of those future improvements are analyzed in the EIS at a programmatic level.

As a part of the roadway construction, four cross-drainage structures (box culverts or large diameter pipe with headwall structures) will be improved or constructed to convey flows beneath the roadway. Small retaining walls on the west side of the roadway where topography fluctuates adjacent to the proposed Zinfandel Drive will be constructed in order to minimize the roadway footprint alignment at several locations. Disturbance areas associated with the culverts have been incorporated into the revised land use plan (Revised Figure 2-1).

Temporary improvements related to the construction of Zinfandel Drive include a temporary gravel access road and a temporary gravel parking area located north of the existing parking lot

for the Mather Regional Park which are included within the revised land use plan (Revised Figure 2-1). The temporary access and parking area is to maintain access and provide suitable parking space for visitors to Mather Golf Course during construction.

Construction disturbance from the northern boundary of the project site to Douglas Boulevard would be limited to the east side of the existing paved roadway and the intersection with Douglas Boulevard as well as an existing paved area west of Zinfandel Drive, north of Douglas Boulevard for construction staging. Thus aquatic features, including suitable vernal pool habitat west of Zinfandel Drive would be largely avoided in the proposed Commercial Development area.

Based on project-level design information, impacts to suitable vernal pool habitat have been refined in areas where hydrological buffers (such as existing roadways, berms, or channels) exist between proposed construction activities and suitable habitat.

A hardpan restoration plan is included as Mather Specific Plan Revised Final EIR Mitigation Measure BR-7, which is considered a project-level commitment for extension of the sewer line along Zinfandel Drive. County staff have consulted with geotechnical experts and registered professional hydrogeologists with Wallace, Kuhl and Associates, Wood Rodgers, and Dudek to develop a plan to perform field infiltration tests, identify the upper soil profile characteristics above the hardpan, and to verify the relatively impervious nature of the hardpan. The hardpan restoration plan would include identification and documentation of the hardpan depths during excavation of the sewer trench, and appropriate backfill material to restore the hardpan functionality. The detailed hardpan restoration plan would be included in the construction specifications for the proposed sewer trunk line.[1]

2.2 Program Level

The University Village/Residential and Regional Sports Park areas have been combined into one development area referred to as Residential. The development would be a mixed-use residential community. For the purposes of the programmatic-level analysis it is assumed that uses would be similar to those originally discussed in the DEIS/SDEIS. This area would undergo future project-level environmental review. Within the Residential development area, the Riparian Buffer has been renamed as an "Avoided Area" and additional "Avoided Areas" have been identified. "Avoided Areas" include Vernal Pool #P43 (referred to locally as the Critter pool).

The Commercial Development area now includes a large "Avoided Area" west of Zinfandel Drive.

Roadway and infrastructure improvements analyzed at a program level include Phase III Zinfandel Drive and the Douglas extension. The Phase III Zinfandel Drive alignment was revised so that Vernal Pool #E52 (referred to locally as the Spadefoot pool) and its associated micro-watershed would be preserved. The hydrologic boundaries of the micro-watershed were determined based on Light Detection and Ranging (LIDAR) and development of a digital terrain

[1] Sacramento County Planning and Environmental Review, 2016. Revised Final Environmental Impact Report for Mather Field. June 2016, pg. 7-54 to 7-55.

model, consistent with methods utilized in the Draft South Sacramento Habitat Conservation Plan.[2] The alignment of the Douglas extension was revised slightly and now extends west through the Economic Development area.

The Preserve has been expanded from 1,272 acres to 1,342.72 acres. The Preserve was expanded to the north and east, resulting in acreage reductions to the Parks and Recreation and Residential development areas. There is no wetland creation proposed within the Preserve.

For the Economic Development area, the County is no longer pursuing aggregate extraction. As the removal of the formerly proposed land use of aggregate extraction would not increase the level of significance of any impact analyzed in the DEIS/SDEIS, the FEIS impact analysis has not been altered to remove the formerly proposed land use of aggregate extraction. This represents a conservative analysis for the Economic Development area, which is assessed at a program level.

2.3 Comparison to the Previous Applicant Preferred Alternative

All environmental resource areas were evaluated by USACE to determine if the modified Applicant Preferred Alternative would create new significant environmental effects not previously evaluated in the DEIS or SDEIS. As conservation areas have increased (reducing development-related impacts), while maintaining the same or less intense uses within development areas analyzed programmatically, the modified Applicant Preferred Alternative would result in the same impact determinations as disclosed in the DEIS/SDEIS. Potential impacts to waters of the U.S have decreased from 40.25 to 35.66 acres. Development assessed at the program level would be subject to future project-level review for consistency with the FEIS and Record of Decision.

The modified Applicant Preferred Alternative would have the same or reduced impacts as summarized below:

- **Geology, Soils and Mineral Resources:** The potential effects related to seismic activity, liquefaction, expansive and corrosive soils, and loss of mineral resources would be the same as or less than those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses in a slightly smaller construction footprint. The removal of the formerly proposed land use of aggregate extraction would reduce impacts associated with ground disturbance.

- **Hydrology, Flooding and Water Quality:** Effects related to changes in drainage and flooding patterns, groundwater depletion, would be as the same or less than those described in the DEIS/SDEIS as the modified Applicant Preferred Alternative proposes the same uses with a slight decrease in impervious surface area. The removal of the formerly proposed land use of aggregate extraction would result in less potential impacts to groundwater.

[2] Friesen, Tyler (Dudek). Memorandum to USFWS regarding SSHCP Vernal Pool Watershed Analysis using LIDAR Data. February 6, 2014.

- **Air Quality:** Construction and operational effects on air quality would be the same or less than those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses in a slightly smaller construction footprint. The removal of the formerly proposed land use of aggregate extraction would result in a reduction in operational emissions.

- **Aquatic/Biological Resources:** The modified Applicant Preferred Alternative includes additional Preserve and "Avoided Areas" and a reduction in development area in comparison to the DEIS/SDEIS. The increase in protected aquatic habitat would result in reduced impacts to aquatic and biological resources. The removal of the formerly proposed land use of aggregate extraction would result in less potential impacts to aquatic resources.

- **Cultural and Historic Resources:** The potential effects related to cultural and historic resources would be the same as or less than those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses in a slightly smaller construction footprint. The removal of the formerly proposed land use of aggregate extraction would result in less potential impacts to unknown, subsurface resources.

- **Socioeconomics and Environmental Justice:** The effects on population growth, housing demand, and minority and low-income populations would be the same as those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses.

- **Transportation and Traffic:** The effects from transportation and traffic would be the same as those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses.

- **Land Use and Agriculture:** Effects related to conversion of farmland and consistency with existing land use plans or land uses would be the same as those described with the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses.

- **Public Services, Utilities and Recreation:** The effects related to increased demand for municipal water service, wastewater service, waste disposal facilities, energy and telecommunications infrastructure, law and fire protection services, and schools would be the same as those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same intensity of uses. The removal of the formerly proposed land use of aggregate extraction would reduce water demands for dust control.

- **Hazards and Hazardous Materials:** The potential effects of exposure of construction workers and the general public to hazardous materials, including stored petroleum products and lead based paints, would be the same or less than those described in the DEIS/SDEIS because the amount and type of construction under the modified Applicant Preferred Alternative would be the same, though within a slightly smaller footprint. The removal of the formerly proposed land use of aggregate extraction would result in less potential impacts associated with potential subsurface discoveries.

- **Noise:** The effects related to construction, operation, and traffic-related noise would be the same as those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses. The removal of the formerly proposed land use of aggregate extraction would result in reduced operational noise effects.

- **Aesthetics:** The impacts to existing visual character, and light and glare would be the same as or less than those described in the DEIS/SDEIS since the modified Applicant Preferred Alternative proposes the same uses in a slightly smaller footprint. The removal of the formerly proposed land use of aggregate extraction would result in a reduction in aesthetic impacts.

This page intentionally left blank

CHAPTER 3
Comments and Responses

3.1 Introduction

This chapter contains the comment letters received on the Draft and Supplemental Draft Environmental Impact Statement (DEIS/SDEIS) for the Mather Specific Plan Project and responses to these comments.

3.2 List of Commenters on the DEIS/SDEIS

Tables 3-1 and 3-2 present the numerical designation for each comment letter received, the author of the comment letter, and the date of the comment letter.

TABLE 3-1
COMMENTS RECEIVED ON THE DRAFT EIS

Comment #	Agency/Organization	Signature	Date
Comment Letters			
1	United States Environmental Protection Agency (U.S. EPA) Region IX	Kathleen Goforth	8/20/2012
2	Sacramento County Water Agency (SCWA)	Darrell Eck	8/14/2012
3	Sacramento Municipal Utility District (SMUD)	Rob Ferrera	8/15/2012
4	California Native Plant Society (CNPS)	Carol Witham	8/12/2012
5	Mather South, LLC	Phil Rodriguez	8/13/2012
6		Jessica Faulk	8/13/2012
7		Scott Faulk	8/10/2012
8		Glen Graham	8/12/2012
9		Kimberlie Ramirez-Grosso and Jeffrey Grosso	8/14/2012
10		Josilyn Preskar	8/13/2012
11		Poppy Smalley	8/10/2012
12		Heather Totten and James Gregory	8/17/2012
Public Meeting Transcript			
13		Michael Preskar	7/25/2012

TABLE 3-2
COMMENTS RECEIVED ON THE SUPPLEMENTAL DRAFT EIS

Comment #	Agency/Organization	Signature	Date
Comment Letters			
14	U.S. Environmental Protection Agency	Kathleen Martyn Goforth	6/15/2015
15	U.S. Department of the Interior	Patricia Sanderson Port	6/15/2015
16	Mather Neighborhood Alliance		6/15/2015
17	Sacramento Splash	Eva Butler	6/15/2015
18		Efrem & Lynn Richardson	5/18/2015
19		Ray & Karen Lucas	6/15/2015
20		Eleanor Averitt	6/5/2015
21		Darcy Coddington	6/15/2015
22		Glen Graham	5/19/2015
23		Glen Graham	6/15/2015
24		Lisa Infusino	6/15/2015
25		Kathy Ramos	6/15/2015
26		Kevin Rodriguez	6/16/2015
27		Jerry Street	6/15/2015
28		Maria White	5/16/2015
29		Gregory G. Olsen	5/16/2015
30		Stacy Adair	5/16/2015
31		Gwen Rubio	5/17/2015
32		Debbie Coffman	5/16/2015
33		Nicole Carr	5/18/2015
34		Renee Link	5/18/2015
35		Eleanor Averitt	6/5/2015
36		Wendy Crook	6/10/2015
37		Katrina De Caro	6/11/2015
38		Daniel Averitt	6/11/2015
39		Oakview School Fifth Grade Class (27 Handwritten Letters)	5/18/2015

3.3 Comments and Responses on the DEIS/SDEIS

The full text of comments received on the DEIS/SDEIS are included within Appendix A. Each letter and each comment within a letter have been given an identification number. Responses are provided below and numbered so that they correspond to the appropriate comment. Where appropriate, responses are cross-referenced.

Number	Response
Comment 1. Kathleen Goforth, United States Environmental Protection Agency (U.S. EPA) Region IX	
1-1	This comment provides a summary of the letter. See Response to Comment 1-2 regarding cumulative impacts, Response to Comment 1-3 through 1-5 regarding impacts to waters of the U.S., Response to Comment 1-6 through 1-10 regarding impacts to air quality; Response to Comment 1-11 regarding climate change, and Response to Comment 1-12 regarding traffic. The Final Environmental Impact Statement (FEIS) will be sent as requested to U.S. EPA during the review period.
1-2	The geographic scope of cumulative impacts varies by issue area and is summarized in Table 4.16-3 of the DEIS. The listed projects are either located within a broad geographic scope where projects are not individually identified (e.g. air quality and traffic impacts) or are outside of the geographic scope (e.g. water quality and habitat impacts). For air quality, the Sacramento Valley Air Basin (SVAB) is the geographic scope. Although all projects to be developed in the SVAB are not listed based on the expansive geographic scope (which includes all or portions of ten counties), the cumulative discussion included in the EIS does consider the impact of the alternatives considered in the context of cumulative growth. The past, present, and reasonably foreseeable future projects and air pollution emissions trends in the air basin were considered in the EIS as appropriate, in the context of air quality attainment planning efforts. Regarding water quality and habitat impacts, the geographic context for cumulative impacts are the Morrison Creek, Laguna Creek, and Lake Greenhaven-Sacramento River watersheds. The projects referenced by the U.S EPA (Sierra Vista Specific Plan, Folsom South of 50, Southport Sacramento River Early Implementation Project, Folsom Dam Modification Project Approach Channel and Natomas Levee Improvement Projects) are not located within these watersheds. These projects are not located within a geographic area that is hydrologically or biologically connected to the extent that it would impact the cumulative analysis of water quality and habitat impacts of the project site. Regarding traffic impacts, a traffic impact analysis was prepared utilizing regional modeling efforts and consultation with Sacramento County planning staff. The geographic scope is the traffic study area which is the area where impacts from Alternatives A, B and C can be meaningfully determined. Analysis outside of this area would be highly speculative as the trips associated with traffic from the project site would be significantly dispersed at these distances. In conclusion, the U.S. Army Corps of Engineers (USACE) has determined that the geographic scope utilized for analysis of cumulative impacts is sufficient and no changes to the DEIS/SDEIS are necessary.
1-3	USACE agrees with U.S. EPA's comment that only the least environmentally damaging practicable alternative (LEDPA) can be authorized by USACE. Thus, to receive authorization to fill waters within USACE jurisdiction, a project applicant must demonstrate that the selected alternative is the LEDPA. The DEIS presents the environmental impacts of a range of reasonable alternatives as required under the National Environmental Policy Act (NEPA) for the project as a whole. As such, it is intended to provide an analysis of all significant impacts for a reasonable range of alternatives at a program-level of analysis for the Mather Specific Plan project as a whole and a project-level analysis for certain infrastructure improvements. Because site-specific and project-level alternatives are not evaluated in the DEIS and are not currently available for each future development area within the Mather Specific Plan project site, the USACE has determined that selection of the LEDPA in the FEIS is not appropriate. The USACE will consider any comments received regarding alternatives to the proposed project, and will make a determination on compliance with the 404(b)(1) Guidelines within the Record of Decision (ROD). In regard to avoiding and minimizing damage to waters to the maximum extent practicable, the Applicant has revised their Preferred Alternative between the SDEIS and FEIS to further reduce adverse effects to waters of the U.S. on the project site, including more preservation of waters as well, for purposes of evaluating a reasonable range of alternatives under NEPA.

Number	Response
1-4	The EIS considered indirect impacts to waters of the U.S. which may include, but are not limited to, polluted runoff and other urban contaminants during construction and operation (DEIS Section 4.3 and 4.5), the introduction of non-native species (DEIS Section 4.5), and hydrologic changes (DEIS Section 4.3 and 4.5). At a program-level, it was assumed that all waters of the U.S. within development areas would be directly impacted and thus the focus on indirect impacts would be within the Preserve and "Avoided Areas". As depicted in Figures 3.5-2 and 3.6-1, most waters of the U.S. within the project area are considered suitable vernal pool habitat and thus a 250 foot buffer consistent with USFWS was used. Aquatic features within 250 feet of proposed activity were assumed to be subject to indirect impacts unless protected by project specific design or existing hydrologic boundaries (e.g. existing roadways, berms). For one specific feature within 250 feet of development, Vernal Pool #E52, the hydrologic boundaries of the contributing vernal pool feature were determined based on light detection and ranging (LIDAR) and development of a digital terrain model to show avoidance of indirect effects. At a project-level, no additional drainage channels (not suitable habitat) are proposed to become fragmented. DEIS Section 4.3 addresses potential construction and operation phase water quality degradation impacts and discusses how these indirect impacts would be effectively minimized by National Pollutant Discharge Elimination System General Construction permit conditions and other mitigation (therefore negating the need for additional compensatory mitigation). SDEIS Section 4.5 contains a detailed indirect effects analysis for vernal pool habitats, and includes proposed mitigation measures to compensate for indirect effects. The USACE is required to ensure that effects are avoided and minimized the extent practicable and will make a final determination on indirect effects and required compensatory mitigation in the ROD.
1-5	The use of mitigation banks is one option available to the Applicant, and proposed use of mitigation banks is currently the highest hierarchical preference for compensatory mitigation methods pursuant to the 2008 Compensatory Mitigation Rule (33 CFR 332). Mitigation bank credit availability was originally discussed in DEIS Section 4.16.2.2. Mitigation banks with available USACE-approved vernal pool establishment credits whose service area covers the Mather Specific Plan project site have been updated in FEIS Chapter 4, Errata. The development areas are proposed to be constructed between 2018 and 2028; it should be noted that availability of mitigation bank credits could change across this time span. Mitigation Measure 6.1 requires that habitat compensation must occur prior to or concurrent with the development subject to a Department of the Army (DA) permit authorization decision, a component of which would be consideration of the Applicant's mitigation proposal. For the relatively small amount of anticipated impacts to vernal pool wetland waters of the U.S. within the Mather Core Recovery Area, the mitigation proposal would need to be consistent with the mitigation-related determinations presented in the ROD for this project, as well as in the Sunridge ROD (for impacts to vernal pool wetlands within the Mather Core Recovery Area). The USACE would assess the project-specific appropriateness of the mitigation proposal as part of the permit application's evaluation. The proposed project's effects to vernal pool wetlands in the Mather Core Recovery Area have decreased since the DEIS/SDEIS, as shown in FEIS Chapter 4, Errata (Table 4.5-3). The findings of the Sunridge ROD state the following: The Corps recognizes the significant cumulative loss of vernal pool wetlands within the Mather Core Recovery Area. For future unavoidable impacts to vernal pool wetlands within the Mather Core Recovery Area, including those associated with the Arista del Sol project, compensatory mitigation shall be: 1) based on a method for assessing the functions of all waters of the U.S. on the project site; 2) accomplished at a ratio of greater than 1:1, after considering direct and indirect impacts, temporal loss and difficulties creating vernal pool wetlands; and 3) located in the Mather Core Recovery Area, unless determined impracticable or inappropriate by the Corps.

Number	Response
1-6	The project must demonstrate conformity with the State Implementation Plan's (SIP's) purpose of fulfilling Clean Air Act requirements. The federal action in question is the evaluation of permit applications for the discharge of fill material into waters of the U.S. for development of the Mather Specific Plan, under Section 404 of the Clean Water Act. The definition for "federal action" states that where the federal action is a permit, license, or other approval for some aspect of a nonfederal undertaking, the relevant activity is the part, portion, or phase of the nonfederal undertaking that requires the federal permit, license or approval (40 CFR 93.152). According to 40 CFR 93.153(b), the General Conformity Rule requirements apply only to the project (or portion of the project) with which the federal agency is directly involved--in this case, the actions pursuant to the Section 404 permit. Ultimately, it is the federal agency granting the permit, in this case, USACE, that determines the scope of the federal action. See *Sierra Club V. United States Army Corps of Eng'rs* (2006) 450 F. Supp. 2d 503, 515–516. According to 40 CFR 93.153, a conformity determination is required only when the direct and indirect emissions of the relevant criteria pollutants and precursor pollutants specifically caused by the federal action equal or exceed certain de minimis thresholds. Direct emissions are defined as those emissions of a criteria air pollutant or its precursors that are caused or initiated by the federal action and occur at the same time and place as the action. As specified in 40 CFR 93.152, indirect emissions are defined as emissions of a criteria pollutant or its precursors that: (1) Are caused by the federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and (2) The federal agency can practicably control and will maintain control over due to a continuing program responsibility of the federal agency. Because USACE would not maintain control over emissions that would result from implementing the proposed land uses (e.g., operational emissions), part 2 of the definition of indirect emissions would not be met for operational emissions. Thus, only direct and indirect emissions associated with construction would be subject to the conformity rule. The reasonable worse-case annual development of the analyzed alternatives would result in overall construction emissions that would be less than the applicable general conformity de minimis thresholds, as described below for Response to Comment 1-9. As such, the federal action would also be considered to conform to the SIP and no conformity determination is required.
1-7	As discussed in Response to Comment 1-6 and 1-9, the federal action would generate emissions that are less than general conformity de minimis thresholds and would be considered to conform to the SIP. Furthermore, Mitigation Measures 4.1a through 4.1c, included in the DEIS, would further limit potential air pollutant emissions and concentrations. As such, dispersion modeling was deemed unnecessary for the alternatives considered.
1-8	The DEIS used SMAQMD's methodologies for evaluating cumulative air quality impacts of development projects to evaluate the proposed project. SMAQMD does not recommend evaluating cumulative impacts by listing all projects that could generate air quality emissions in the region. Rather, the cumulative analysis evaluates the proposed project's contribution to regional emissions through application of SMAQMD's established thresholds, and determines whether that contribution would be cumulatively considerable. In addition, the SVAB is a very large area that includes Butte County, Colusa County, Glenn County, Sacramento County, Shasta County, Sutter County, Tehama County, Yolo County, Yuba County, the western portion of Placer County, and the eastern portion of Solano County. With the size of the SVAB air quality impacts for all projects in the area is not known and cannot be reasonably obtained. As identified in Section 4.16.3.3 of the DEIS, the cumulative air quality impacts of the analyzed alternatives, when combined with other past, present, and reasonably foreseeable future projects is significant. While it may be possible to obtain the air quality impacts of large projects in which USACE has prepared or is preparing an EIS, the time and resources that would be required to compile this data is substantial and would not result in any changes to the analysis or conclusions in the DEIS, and because this would not include those projects that do not require an EIS, obtaining this information would not provide all air quality impacts in the basin. The comment provided by U.S. EPA does not indicate how the inclusion of the specific air quality impacts of each of these projects would change the analysis or conclusions in the EIS. No change to the text of the DEIS is proposed in response to this comment.

Number	Response
1-9	Several of the land use development assumptions for the reasonable worse-case year of construction were reviewed and found to be overly conservative. In addition, since the time the DEIS was published, a new air emissions model, California Emissions Estimator Model (CalEEMod) was released and is currently what the Sacramento Metropolitan Air Quality Management District (SMAQMD) recommends for air quality analyses. The CalEEMod model incorporates the latest EMFAC2011 and OFFROAD2011 emission factors. As such, the annual construction emissions assessment has been re-run with CalEEMod. Updated text and tables for DEIS Section 4.4 are included in FEIS Chapter 4, Errata. Updated modeling is included in FEIS Appendix B. As shown in Revised Table 4.4-3, emissions do not exceed federal de minimus thresholds. The project proponent would still be required to implement mitigation during construction to comply with SMAQMD thresholds.
1-10	The discussion of general conformity regulations in DEIS Section 3.4 has been revised to cite the updated regulations and remove the language regarding regionally significant actions as requested. See FEIS Chapter 4, Errata.
1-11	The potential impacts of climate change are described in DEIS Sections 3.3.1.3 (Hydrology, Flooding and Water Quality), 3.4.1.6 (Air Quality) and 4.16.3.3 (Cumulative Effects). Potential effects of climate change are discussed, including: increased temperature, increased intensity of stormwater runoff and flooding events, increased precipitation variability, loss in snow pack, sea level rise, increased forest fires, agricultural impacts, changes in disease vectors, and intensification of impacts to habitat and biodiversity. The potential effects of climate change are determined to either 1) not have the potential to substantially affect the project vicinity, or 2) be too speculative to reach a meaningful conclusion regarding the significance of the impacts on the project. Sea level rise and forest fires, for example, are not issues which are anticipated to impact the project or the environment in the vicinity of the project site. For the other issues, there is no consensus on the extent and timing of climate change and related environmental impacts in the project vicinity. We have reviewed the list of potential effects and determined that there would be no new effects or effects to the project which would change in level of significance due to climate change. Flooding and habitat impacts were already determined to be significant impacts. While climate change could affect the frequency of flood events, all residential uses would be located outside of the 500-year floodplain and all other uses must be outside of the 100-year floodplain unless they can support seasonal inundation consistent with the County General Plan. No additional mitigation is warranted. While climate change could intensify impacts to habitat loss, mitigation includes monitoring requirements to ensure the long term success of restored and enhanced habitats. No additional mitigation is warranted. Regarding the request for a climate change mitigation and adaptation plan, no reasoning or specific examples are provided. Based on the above discussion, the mitigation for specific issues would be adequate and thus the plan would not be warranted.
1-12	As discussed in DEIS Sections 4.9.1 and 4.16.3.7 and the Traffic Analysis (DEIS Appendix E), mitigation is proposed for the significant impacts to County of Sacramento roadways and intersections, including the mentioned segment of Bradshaw Road from Old Placerville Road to Kiefer Boulevard which would reduce impacts to a less than significant level. The study intersections and roadways within the County would operate at acceptable levels of service or experience only minor deficiencies in level of service (LOS) that would not trigger cumulatively significant impacts. These sections and DEIS Appendix E also disclose impacts to roadway segments and intersections within the City of Rancho Cordova and mitigation to reduce these impacts. It is disclosed that some impacts to City of Rancho Cordova roadway segments would be significant; however, no additional mitigation is feasible as the roadways are widened to six lanes and further widening would be inconsistent with the City General Plan. This is also disclosed in DEIS Section 4.17.2 Significant and Unavoidable Effects. It should also be noted that USACE, as federal lead agency over the EIS, has no authority over the enforcement of mitigation measures that are not under the purview of USACE.
Comment 2. Darrell Eck, Sacramento County Water Agency	
2-1	In response to the comment, DEIS Section 1.6.2.3 Regional and Local Actions/Permits has been revised to note that Sacramento County Water Agency (SCWA) is responsible for approvals associated with the provision of water service and that new water service and discretionary approval of the project may be withheld until compliance with the Endangered Species Act is demonstrated. See FEIS Errata Chapter 4.
2-2	In response to the comment, DEIS Section 2.3.4.1 Water Facilities has been revised in to state that primary service would come from planned infrastructure described in SCWA's Water Supply Master Plan and Water System Infrastructure Plan. See FEIS Chapter 4, Errata.
2-3	The comment that groundwater (other than remediated groundwater) should not be considered as a future source of supplemental water for Mather Lake is noted. Supplemental groundwater for Mather Lake is outside of the scope of the USACE action under consideration.

Number	Response
2-4	In response to the comment, DEIS Section 3.11.1.1 Water, has been revised to reference that the water is supplied from the Anatolia Treatment Plant. References to the water system within the Independence at Mather development have been removed. See FEIS Chapter 4, Errata.
2-5	In response to the comment, DEIS Section 3.12.1.2 Current Land Uses has been revised regarding the number and locations of wells within Independence at Mather and at the commerce center. See FEIS Chapter 4, Errata.
2-6	In response to the comment, the reference to wellhead treatment has been removed from Section 3.12.1.5, Agency Database Review. See FEIS Chapter 4, Errata.
2-7	In response to the comment, the discussion of the water supply system in Section 4.11 has been revised. See FEIS Chapter 4, Errata. A Water Supply Assessment (WSA) pursuant to the California Water Code (Section 10910 et seq.) is required to be prepared for large projects by either the public water system provider or, if no public water system provider, then by the City or County in which the project is located. While it is foreseeable that Sacramento County Water Agency and/or Sacramento County will prepare a WSA for the project, USACE will not be preparing a separate WSA. Proposed uses requiring additional water supply are considered programmatically in the EIS and would be subject to further project-level review.
Comment 3. Rob Ferrera, Sacramento Municipal Utility District	
3-1	In response to the comment, DEIS Section 1.6.2.3 Regional and Local Actions/Permits has been revised to state that the Sacramento Municipal Utility District (SMUD) will be responsible for approvals associated with the provision of electrical utilities. See FEIS Chapter 4, Errata.
3-2	In response to the comment, DEIS Section 2.3.4.3 Electricity, Gas and Telecommunications has been revised to state that all new electrical lines less than 69 kilovolts (kV) would be routed underground within the public utility easements outside of the road rights-of-way of the proposed streets. See FEIS Chapter 4, Errata.
3-3	The energy demands are program-level estimates. Further detailed load factor analysis will be available during project-level planning and will be coordinated with SMUD. It is assumed for the purposes of this analysis that substations and electrical facilities would be located onsite and within proposed development areas.
3-4	The comment that SMUD applications be submitted in a timely manner is noted.
3-5	A copy of the FEIS will be sent to SMUD as indicated.
Comment 4. Carol Witham, California Native Plant Society	
4-1	The FEIS has been produced so that reviewers can see changes made to document in underline/strikethrough format in FEIS Chapter 4, Errata.
4-2	Mitigation Measure 5.1a has been revised and includes the establishment of an on-site Preserve as mitigation for the loss of habitat for federally-listed vernal pool species. Creation of new vernal pools within the Preserve is not permitted per the terms of the South Mather Wetlands Management Plan. Potential enhancement activities within the Preserve are discussed in Response to Comment 4-7. Regarding compensatory mitigation for waters of the U.S., see Response to Comment 4-11. USACE would evaluate specific compensatory mitigation proposals as they are received, in compliance with the provisions of the 2008 Compensatory Mitigation Rule (33 CFR 332) and other applicable USACE guidance. In the case of proposals to utilize mitigation bank credits, the 2008 Compensatory Mitigation rule contains procedures for review and establishment of mitigation banks. As part of bank establishment, the Corps is required to ensure compliance with several environmental laws, including NEPA, ESA and others.
4-3	It is unclear which specific mitigation measures the commenter is referring to. The EIS includes establishment of an on-site Preserve for loss of habitat for federally-listed vernal pool species, describes compensatory mitigation requirements for anticipated impacts to waters of the U.S., discusses several possible options to fulfill compensatory mitigation requirements for waters of the U.S., and (as clarified additionally in the FEIS), describes anticipated timing associated with compensatory mitigation. All proposed compensatory mitigation will be subject to review and approval by the USACE as part of permit application evaluation for proposed development within the Mather Specific Plan project site.

Number	Response
4-4	Mitigation bank credit availability was originally discussed in DEIS Section 4.16.2.2. The EIS text has been updated with regard to information on mitigation banks with available credits at this time (see FEIS Section 4, Errata). As described in the EIS, several options for compensatory mitigation would be available to the project proponent, including purchase of credits at a mitigation bank, and/or other mitigation methods in conformance with the 2008 Federal Mitigation Rule. It is possible that several options may be utilized to meet compensatory mitigation requirements, on a project-by-project basis. See also Responses to Comments 1-5 and 4-2.
4-5	The mitigation measures presented in the EIS include details of how, when and where they should be implemented, or refer to existing guidelines and policies that include additional performance standards. The National Environmental Policy Act does not require description of "measurable outcomes" in response to mitigation measures, per se, however, the EIS discusses the anticipated impacts of actions in consideration of proposed avoidance, minimization and compensatory mitigation measures.
4-6	See Response to Comment 1-5. Mitigation proposals would need to be consistent with the mitigation-related determinations presented in the ROD for this project as well as the Sunridge ROD (for compensatory mitigation for impacts to vernal pool wetlands within the Mather Core Recovery Area). The USACE would assess the project-specific appropriateness of the mitigation proposal as part of each permit application's evaluation.
4-7	EIS text in the referenced section (Mitigation Measure 5.1a, pages 4.5-5 and 4.5-6), has been updated to reflect the most up-to-date compensation proposal to address anticipated impacts to habitat for vernal pool species. On-site creation of new vernal pool wetlands (or other types of waters) to compensate for species habitat and/or loss of waters of the U.S. within the on-site Preserve is neither proposed nor allowed, pursuant to the South Mather Wetlands Management Plan. Enhancement activities described in Chapter 7 of the South Mather Wetlands Management Plan include removal of rubble and gravel, removal of paved areas, removal of invasive nonnative plant species, planting native plants, modifying and/or recontouring wetland basins to encourage wetland hydrology supportive of wetland and vernal pool-obligate plants and animals, recontouring uplands to enhance remnant wetlands degraded by past land uses, or similar actions. Any activity must be conducted in compliance with applicable Agency notification, authorization, and permit requirements including notification requirements for the upcoming year's proposed management activities, and subject to input by the applicable agencies (e.g., USFWS, USACE) on an annual basis.
4-8	In addition to Mitigation 5.5, potential breeding habitat for western spadefoot, including seasonal wetlands and vernal pools, would be preserved and managed for the long term through implementation of Mitigation Measures 5.1a through 5.1e. Mitigation Measure 5.5 minimizes the potential for direct mortalities of this species during project construction by relocating any western spadefoot found during pre-construction surveys. The Applicant's Preferred Alternative has been modified to avoid preserve Vernal Pool #E52 (the "Spadefoot pool"), where western spadefoot have previously been found, which would be a suitable relocation area.
4-9	In addition to Mitigation 5.9a and 5.9b, potential habitat for special-status plant species, including vernal pools, would be preserved and managed for through implementation of Mitigation Measures 5.1a through 5.1e. These measures would provide long-term protection of plant species associated with vernal pools, thus reducing anticipated impacts from the proposed action to less than significant. Mitigation Measure 5.9b specifies that a Mitigation and Monitoring Plan to relocate plants and/or seed banks or reintroduce new populations in suitable habitat and soil types within the on-site Preserve or at a California Department of Fish and Wildlife (CDFW) or USFWS-approved off-site location will be prepared. Text was revised in the SDEIS to clarify that the plan must be approved by the USFWS and CDFW. Regarding western spadefoot, see Response to Comment 4-8. The reference to Mitigation Measure 5.5a was revised to 5.5 in the SDEIS.
4-10	See Response to Comment 4-2.

Number	Response
4-11	In regards to compensatory mitigation, USACE permit evaluation for the land use development applications within the Mather Specific Plan project site would require compensatory mitigation proposals to comply with the 2008 Compensatory Mitigation Rule (33 CFR 332). Submittal requirements for the future applications would include a compensatory mitigation proposal. The EIS provides information about existing (and potential, if finalized via the mitigation bank review process) mitigation banks that may be used to compensate for unavoidable impacts to waters of the U.S., and points out that other types of compensatory mitigation (as allowed for by the 2008 Compensatory Mitigation Rule) may be considered, as appropriate and in compliance with applicable regulations. For these actions, including the proposed Phase I/II Roadways and Infrastructure project under current review, the Corps would make a final determination in the ROD, and supplemental NEPA compliance documentation, on compensatory mitigation requirements to compensate for unavoidable impacts to waters of the U.S. for each proposed project. Regarding the opportunity for future public review and comment on proposed mitigation for future development applications, most of the proposed projects are anticipated to trigger the requirement for a standard permit application, which involves a public notice procedure thus the opportunity for public comment. A few of the projects may qualify for another type of permit, primarily a Letter of Permission (LOP) form of individual permit. The LOP procedures require interagency coordination and noticing, thus providing the opportunity for input by applicable state and federal agencies.
Comment 5. Phil Rodriguez, Mather South, LLC	
5-1	The Mather Air Force Base Transfer Biological Opinion (BO) was added as Appendix H of the SDEIS.
5-2	The project site is currently within the South Sacramento Habitat Conservation Plan (SSHCP) Area as identified in the Draft SSHCP[1]; thus, no revision has been made. USACE acknowledges that participation by project proponents within the SSCHP boundary is voluntary.
5-3	Clean-up of groundwater contamination associated with Aerojet facilities in the vicinity of the project site is occurring. Based on the best available information groundwater between the edge of the contaminant plume and the Aerojet property is expected to be restored to beneficial uses based on remedial actions.[2] The Aerojet plume was determined to be less than significant, as the alternatives in the EIS do not propose to utilize groundwater within the vicinity of the plume and any groundwater extraction would be limited by institutional controls, including land use restrictions on either a lease (for leased property) or deed (for transferred property) for any property currently owned by the U.S. Air Force pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (42 USC §9601 et seq.) and California Department of Toxic Substances Control requirements for land use covenants (22 CCR §67391.1).
5-4	As Mitigation Measure 4.1a applies to construction activities it does not include aggregate extraction activities which are considered operational activities. DEIS Mitigation Measure 4.1a has been revised to clarify that the measure will apply to each land use development area, as each land use area may have a separate permit, project proponent and/or construction schedule. The project proponent would be allowed to grade over 15 acres; however, modeling would be required to substantiate that impacts to sensitive receptors are less than significant. Mitigation has been revised to include that if the Applicant can demonstrate that impacts to sensitive receptors would be reduced to less-than-significant levels with implementation of SMAQMD's Enhanced Fugitive Dust Control Practices these measures may be implemented in lieu of a PM10 Reduction Plan. See FEIS Chapter 4, Errata.
5-5	Potential direct and indirect impacts to critical habitat for vernal pool fairy shrimp and tadpole shrimp are depicted in Figure 4.5-1 of the EIS. To clarify, there are not separate values for fairy shrimp and tadpole shrimp; the impacts described on page 4.5-1 of the EIS describe direct and indirect effects to critical habitat for both species. As shown in Figure 4.5-1, most impacts to critical habitat would occur in the "Airports Commercial" and "Parks/Recreation" land use areas.
5-6	Mitigation Measure 5.1a has been revised and includes the establishment of an on-site Preserve as mitigation for the loss of habitat for federally-listed vernal pool species.
5-7	If the SSHCP is finalized and under implementation, "covered activities" within the SSHCP would have the option of mitigation for biological resource and aquatic resource impacts; however, there is insufficient information regarding the SSHCP at this time to determine if it would provide sufficient mitigation. With the exception of the Phase I/II Roadways and Infrastructure project, the development alternatives are assessed at a programmatic level. Future project-level review would consider the SSHCP if applicable and/or appropriate.

1 Sacramento County et al., 2017. Draft South Sacramento Habitat Conservation Plan, pg. 1-9. February 2017.

2 Aerojet, 2012. Final Remedial Action Report Western Groundwater Operable Unit (OU-2) Aerojet Superfund Site, Sacramento, CA. Approved by EPA Region IX Superfund Division.

Number	Response
5-8	USFWS has withdrawn the proposal to delist the Valley Elderberry Longhorn Beetle (VELB) and thus VELB remains a listed species and no change to mitigation is warranted. See Response to Comments 5-7 regarding the SSHCP.
5-9	Mitigation Measure 5.5 was revised in the SDEIS to specify that surveys would be specific to each development area. This clarification reflects that each land use area may have a separate permit, project proponent and/or construction schedule. See Response to Comments 5-7 regarding the SSHCP.
5-10	Mitigation Measure 5.6 was revised in the SDEIS to specify that surveys would be specific to each development area. This clarification reflects that each land use area may have a separate permit, project proponent and/or construction schedule. See Response to Comments 5-7 regarding the SSHCP.
5-11	See Response to Comments 5-7 regarding the SSHCP.
5-12	Mitigation Measure 5.9a was revised in the SDEIS to specify that surveys would be specific to each development area. This clarification reflects that each land use area may have a separate permit, project proponent and/or construction schedule. See Response to Comments 5-7 regarding the SSHCP.
5-13	The SDEIS revised Mitigation Measure 6.1 to specify that compensation would occur prior to the filling of any jurisdictional waters of the U.S within that phase of the project. This clarification reflects that each land use area may have a separate permit, project proponent and/or construction schedule. See Response to Comments 5-5 and 5-6.
5-14	Consistent with the traffic analysis and Mather Specific Plan Revised Final EIR, Mitigation Measure 9.1 has been revised to specify that the contribution to roadway improvements would be a fair share contribution. See FEIS Chapter 4, Errata.
5-15	Consistent with the traffic analysis and Mather Specific Plan Revised Final EIR, Mitigation Measure 9.2 has been revised to specify that the project proponent would provide fair share contributions to roadway improvements within the City of Rancho Cordova if an agreement between the City and County is implemented prior to construction which provides a mechanism for funding. See FEIS Chapter 4, Errata.
5-16	Consistent with the traffic analysis and Mather Specific Plan Revised Final EIR, Mitigation Measure 9.3 has been revised to specify that the contribution to the Caltrans roadway improvement would be a fair share contribution. See FEIS Chapter 4, Errata.
5-17	The amount of habitat that would be preserved within the Mather Core Recovery Area under Alternative A was quantified on page 4.5-8 of the SDEIS and has been updated in FEIS Chapter 4, Errata (Table 4.5-3). Of the 57.42 acres of on-site suitable habitat for vernal pool species within the Mather Core Recovery Area, 54.37 acres (95%) would be located within the Preserve under Alternative A. The consistency of the alternatives with the USFWS Vernal Pool Recovery Plan for the Mather Core Recovery Area is discussed in SDEIS Impact 5.2, and this discussion has been updated in FEIS Chapter 4, Errata. Mitigation bank credit availability was originally discussed in DEIS Section 4.16.2.2. Mitigation banks with available USACE-approved vernal pool establishment credits whose service area covers the project site have been updated in FEIS Chapter 4, Errata.
5-18	As explained to Section 3.4.2.2 it is estimated that to comply with AB 32's mandate, GHG emission would need to be reduced from 596 million metric tons (MMTs) of CO_2 equivalent (i.e., 2020 "business as usual") to 427 MMTs (the 1990 level), which is a reduction of 30%. Previously local agencies often utilized a 30% reduction standard for a project; however, Sacramento County has adopted their own GHG reduction requirements which are applied to development projects. Mitigation Measure 16.6 has been revised accordingly. See FEIS Chapter 4, Errata.
5-19	The text of Section 4.16 has been revised to clarify that off-site vernal pool function may not fully replace, from a cumulative effects standpoint, the habitat functions of impacted vernal pools at a 1:1 ratio. See FEIS Chapter 4, Errata.
5-20	Section 1.6.2.3 notes that several future discretionary approvals will be required by Sacramento County prior to development. This does not affect the determination in Impact 10.1 that the alternatives are consistent with the County General Plan designation of Special Planning Area.
5-21	See Tables 3.5-3, 4.5-3, 4.5-7 and 4.5-11 for a tabular breakdown of existing and potentially affected critical habitat under each alternative. Table 4.5-3 has been revised and is included in FEIS Chapter 4, Errata.

Number	Response
Comment 6. Jessica Faulk	
6-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives. The Applicant's Preferred Alternative has been modified to preserve one pool utilized by local educational groups (including SPLASH), and to avoid one pool utilized by local educational groups.
Comment 7. Scott Faulk	
7-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 8. Glen Graham	
8-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives. It should be noted that the commenter's statement that Alternative B would include fill of vernal pools and possibly bike/walking paths in "Avoided Areas" next to housing (Independence at Mather) is incorrect. As described in Section 2.4.1, there is no proposed fill or construction of trails/paths in the "Avoided Areas" shown on Figure 2-2.
Comment 9. Kimberlie Ramirez-Grosso and Jeffrey Grosso	
9-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 10. Josilyn Preskar	
10-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 11. Poppy Smalley	
11-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 12. Heather Totten and James Gregory	
12-1	The official public meeting date of July 25, 2012 was made available to the public through publication of a notice of availability in the Federal Register by USACE (77 FR 38779). USACE, Sacramento Regulatory District also publishes regulatory public notices on its website and has a sign-up available for the public to request email notifications for public notices (http://www.spk.usace.army.mil/Media/RegulatoryPublicNotices.aspx). Time extensions for submitting comments are also considered upon request. All who provided comments on the DEIS will receive an electronic copy of the FEIS. The public will also have an opportunity to review the FEIS for 30 days following publication. Public notification will include publication of notices in the Federal Register and through the USACE, Sacramento Regulatory District website and email notifications.
12-2	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
12-3	The commenter requests that aggregate extraction operations be limited to daytime hours. In response, it is unknown at this time what hours the aggregate extraction facility will operate. However, no matter what hours the facility will operate, it will be required to comply with the Sacramento County Noise Ordinance noise standards (Sacramento County Code, Chapter 6.68 – Noise Control) in order to limit potential noise nuisance during the daytime or nighttime hours.
Comment 13. Michael Preskar	
13-1	The commenter's preferences regarding alternatives are noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.

Number	Response
Comment 14. Kathleen Martyn Goforth, U.S. Environmental Protection Agency	
14-1	The introductory comments are noted.
14-2	This comment includes a summary of issues raised within the comment letter submitted by U.S. EPA on the DEIS. This comment letter is included as Comment 1, above. See Responses to Comments 1-1 through 1-12.
14-3	See Response to Comment 1-3 regarding the LEDPA.
14-4	The Final Environmental Impact Statement (EIS) will be sent as requested to U.S. EPA during the review period.
14-5	This letter includes the comment letter submitted by U.S. EPA on the DEIS. This comment letter is included as Comment 1, above. See Responses to Comments 1-1 through 1-12.
Comment 15. Patricia Sanderson Port, U.S. Department of the Interior	
15-1	It is noted that the Department of the Interior reviewed the SDEIS and has no comments to offer.
Comment 16. Mather Neighborhood Alliance	
16-1	Introductory comments are noted.
16-2	The County's public outreach for the Specific Plan area is outside of the scope of the EIS.
16-3	USACE will utilize the EIS, including the analysis of environmental impacts to biological, aquatic and visual resources (aesthetics), to make decisions regarding the alternatives. With the exception of the Phase I/II Roadways and Infrastructure project, development is analyzed within the project site at a programmatic level and will be subject to further project-level review at the time of the development proposal(s). Development within the Mather South area is subject to further public coordination through the CEQA process. A public meeting was held following the release of the DEIS. It was determined that no public hearing would be held following the SDEIS given the limited scope of the SDEIS, which updated biological and aquatic sections to reflect a re-delineation of waters of the U.S. The commenter will be added to the mailing list and will receive a copy of the FEIS for review.
16-4	See Response to Comment 21-2 regarding project-level effects to subsurface hydrology including roadway development and utility trenching. The methodology for assessment of indirect effects to vernal pool habitat has been clarified in FEIS Chapter 4, Errata (Section 4.5.1, Impact 5.1) and is also described below. While indirect effects to suitable vernal pool habitat were considered in all cases where development is proposed within 250 feet of a vernal pool feature, potential indirect effects to suitable habitat also considered the broader landscape and micro-watershed in which the feature occurs in terms of potential hydrology-related impacts. As noted in the paper the commenter cites[3], the configuration of a vernal pool complex's catchment area (or micro-watershed) relative to its confluence to an outlet swale or seasonal stream is important to understand when evaluating potential indirect effects to a perched aquifer that could influence the hydroperiod of a given pool, in response to a proposed activity(ies). When evaluating the potential indirect effects a proposed activity may have on a vernal pool feature, three primary factors were considered: 1) linear distance between the edge of the vernal pool and the edge of the proposed development footprint, 2) the boundaries of the micro-watershed for a given pool or complex, and 3) the landscape position of seasonal streams, swales and similar features relative to the position of potential hydrological barriers, such as roadways, artificial canals, or developed areas. For evaluating potential indirect effects to suitable vernal pool habitat in proximity to proposed activities, a 250-foot linear distance was used, which is consistent with USFWS-accepted methods for evaluating the extent of potential indirect effects including, but not limited to, runoff (with the potential to contain pollutants) and other urban contaminants, the introduction of non-native species, and hydrologic changes.[4] A large portion of the area surrounding and within 250 feet of the proposed preserve is developed or disturbed, including Independence at Mather within the central portion of the Preserve, and areas directly north, east and west of the Preserve. There are existing concrete channels, roadways and/or utility lines in the

[3] Rains, M.C., G.E. Fogg, T. Harter, R.A. Dahlgren, and R.J. Williamson. 2005. The role of perched aquifers in hydrological connectivity and biogeochemical processes in vernal pool landscapes, Central Valley, California.

[4] USFWS, 1996. Correspondence to USACE regarding Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California. February 28, 1996.

Number	Response
	immediate vicinity of the Preserve boundary. Despite this existing development, vernal pools within the Preserve area still have average ecological function with some exhibiting high ecological function (see Section 3.5 of the Draft EIS). In consideration of this, and consistency with the USFWS' accepted methods noted above, it was determined that the linear distance of 250 feet is valid to use when evaluating potential indirect effects. For assessing impacts to the micro-watershed and positioning relative to barriers and channels, vernal pool hydrology references specific to the South Mather Specific Plan were used[5,6] to evaluate the potential impacts of proposed activities to a perched aquifer(s). In addition, potential barriers to subsurface groundwater flows relative to their landscape position to a vernal pool micro-watershed were considered, as well as the type of feature it is (i.e., vernal pool, swale, or stream channel). As noted in Section 3.5 of the DEIS, many non-vernal pool features, such as seasonal stream channels, were also considered in the impact analysis due to their functions in support of conveying stormwater flows and potential dispersal of macroinvertebrates. Based on these factors, each feature was evaluated geospatially to determine if its micro-watershed/catchment area could be affected by a proposed activity. For one specific feature, Vernal Pool #E52, the hydrologic boundaries of the contributing vernal pool feature were determined based on LIDAR and development of a digital terrain model. Therefore, because micro-watershed boundaries were considered in addition to linear distances and potential barriers when evaluating potential indirect effects, the potential impacts associated with the lateral movement of water within a perched aquifer system are in our best professional judgment adequately addressed commensurate with the type and amount of proposed impacts. The methodology used is consistent with that accepted for use by the USFWS (also the case for this project, specifically) in other recent project analyses in the Sacramento region, and integrates methods utilized in the Draft South Sacramento Habitat Conservation Plan.[7]
16-5	See Response to Comment 16-4 above. Regarding long-term management strategies, the South Mather Wetlands Management Plan has been developed, which provides a framework for long-term management of the Preserve.
16-6	A formal Integrated Groundwater and Surface Water Model (IGSM) was not utilized; methodology for evaluating impacts to subsurface hydrology is described in Response to Comment 16-4, above. Subsurface groundwater flows relative to their position to a vernal pool micro-watershed were considered. The methodology used is consistent with other recent project analyses in the Sacramento region, and integrates methods utilized in the Draft South Sacramento Habitat Conservation Plan.
16-7	See Response to Comment 16-4 and 16-6 above. Subsurface hydrology was considered within the impact analysis.
16-8	The ecosystem is evaluated in light of the regulatory requirements and measurable criteria such as individual species impacts and habitat loss. Additionally, both Section 4.5 and 4.16 address the broader Mather Core Recovery Area and greater watershed or larger ecosystem. The Recovery Plan provides an ecosystem-level strategy for recovery and conservation because all of the listed species and species of concern (including the western spadefoot toad) co-occur in the same natural ecosystem and are generally threatened by the same human activities.
16-9	The EIS (Section 2) assesses Zinfandel Drive (formerly Eagles Nest Road) as a two-lane roadway which would become a four-lane roadway in the cumulative horizon, not a six-lane roadway as referenced by the comment. The abandonment or relocation of species is speculative given the existing development within and surrounding the proposed Preserve (Mather Airport and Independence at Mather). The EIS includes an analysis of potential fragmentation-related impacts to wildlife associated with grasslands (such as coyotes and owls) within Section 4.5, Impact 5.8. The amount of grassland within the Preserve area exceeds typical CDFW mitigation guidance for grassland habitat.
16-10	The Preserve would be subject to the South Mather Wetlands Management Plan, which includes long term management and monitoring to address such issues if they arose.

5 Wetland Research Associates. 2004. Mather Field Natural Resources Assessment, Phases I and II. Sacramento, California.

6 Sacramento County. 2016. Mather Field Revised Final Environmental Impact Report (Plate BR-3: Preferred Alignment and Nearby Watersheds). Sacramento, CA.

7 Friesen, Tyler (Dudek). Memorandum to USFWS regarding SSHCP Vernal Pool Watershed Analysis using LIDAR Data. February 6, 2014.

Number	Response
16-11	The Applicant's Preferred Alternative has been modified to preserve Vernal Pool #E52 (see FEIS Section 2.2), which is the location where western spadefoot have previously been found. Mitigation is recommended and considered feasible to reduce potential impacts to western spadefoot in other portions of the project site if discovered. Vernal Pool #E52 would be a suitable relocation area within the Preserve as western spadefoot have been documented at this location.
16-12	See Response to Comment 16-11.
16-13	The EIS addresses both light (Section 4.14) and noise impacts (Section 4.13) and includes mitigation to reduce nighttime light effects, construction noise and operation noise. There could be some disruption for wildlife that use the habitats within the proposed Preserve area; however, this effect cannot be reasonably quantified. There are documented wildlife in the Preserve area which is adjacent to or near existing sources of nighttime lighting and noise (Mather Airport and Independence at Mather). The establishment of a large consolidated Preserve would reduce the potential for indirect effects from lighting and noise.
16-14	Mitigation Measure 5.1a has been revised, and no wetland creation is proposed within the on-site Preserve. The Mather Air Force Base Transfer BO was included in Appendix H of the SDEIS, and addresses both the land transfer and the foreseeable development of areas outside of the Preserve identified by the County. The determination of effects in the "Transfer BO" to vernal pool species anticipated the required establishment of a 1,272-acre Preserve, and effects to vernal pool wetland habitat within the Mather Specific Plan area following the land transfer (direct effects to 34.40 acres and indirect effects to 7.54 acres). The Mather Air Force Transfer BO guided that the Preserve would be established to offset anticipated development within the Mather Specific Plan area, thus the currently proposed project follows through on that regulatory commitment, in contrast to "doubling up" on it. Since the publishing of the SDEIS, the Preserve has been expanded from 1,272 acres to 1,342.72 acres (as described in FEIS Section 2.2). Additionally, impacts to vernal pool habitat from foreseeable development of areas outside of the Preserve have been reduced to direct effects to 27.95 acres and indirect effects to 5.33 acres, as described in FEIS Section 4. Please see Response to Comments 4-2 and 4-11 for information on compensatory mitigation for loss of waters of the U.S., which would occur off-site, and separate from the compensation required by the USFWS for effects to habitat for federally-listed vernal pool species (i.e., establishment of the Preserve). In regards to the comment on mitigation costs for other developments in Sacramento County, mitigation requirements (and related costs) for each project are unique and take into account existing BOs, regional habitat conservation planning, among many other factors.
16-15	The comment is noted. With regard to the subject proposed project, the South Mather Wetlands Management Plan has been developed, and addresses invasive species and would be implemented to guide management of the preserve following recordation of a conservation easement.
16-16	The comment is noted. The South Mather Wetlands Management Plan has been developed, which provides a framework for management of the Preserve. Implementation of the Plan would be done in association with providing an appropriate endowment that would need to be approved by, at minimum, the USFWS.
16-17	See Response to Comment 16-15 and 16-16. The comment regarding the County dissolving the conservation area and developing it is not consistent with the Mather Air Force Base Transfer BO. All development alternatives submitted by the Applicant and considered within the EIS include a Preserve area. Alternatives A and C are consistent with the Preserve location identified within the BO and contain additional areas of preservation and avoidance.
16-18	This comment summarizes the comments addressed above.
Comment 17. Eva Butler, Sacramento Splash	
17-1	The Applicant's Preferred Alternative has been modified to preserve Vernal Pool #E52 (referred to in the letter as the Spadefoot Pool), and to avoid Vernal Pool #P43 (referred to in the letter as the Critter or Bomb Pool), as described in FEIS Section 2.2.
17-2	See Response to Comment 17-1. Vernal Pool #E52 and its contributory watershed would be located within the Preserve under the Applicant's Preferred Alternative. Most of the contributory watershed of Vernal Pool #P43 would be avoided based on the current conceptual design within the Mather South area.
17-3	See Response to Comment 16-11 and 17-1. Mitigation has been included for pre-construction surveys and relocation of any western spadefoot found during surveys at the Preserve area.
Comment 18. Efrem & Lynn Richardson	
18-1	The commenter's preferences regarding alternatives are noted.

Number	Response
Comment 19. Ray & Karen Lucas	
19-1	The commenter's preferences regarding the Mather South development are noted. It should be noted that the Mather South and Mather Specific Plan projects are not USACE's plans and were not developed by USACE. USACE's primary role is to evaluate and make decisions on Section 404 Clean Water Act permit applications.
Comment 20. Eleanor Averitt	
20-1	As shown in SDEIS Appendix H, the Mather Air Force Base Transfer BO, the land use transfer to the County envisions a 1,272-acre Preserve. Both Alternatives A and C are consistent with the Preserve location identified within the BO and contain additional areas of preservation and avoidance.
20-2	The first permit the County is requesting is for the proposed Phase I/II Roadways and Infrastructure project. The impacts to wildlife habitat for the full project are disclosed in Section 4.5, Biological Resources of the EIS. Both Alternatives A, as amended, and C will preserve Vernal Pool #E52 used for educational purposes. Alternative A, as amended, has been revised to avoid Vernal Pool #P43 used for educational purposes.
20-3	Because the overall project purpose is specific to the reuse of land transferred from the Air Force to the County (as discussed in DEIS Section 1.4), off-site alternatives were eliminated from consideration as they would fail to meet the overall project purpose. Impacts to vernal pools are assessed in Section 4.5 and Section 4.6 of the SDEIS and amended in FEIS Section 4, Errata.
Comment 21. Darcy Coddington	
21-1	USACE has not designated the Mather South area as urban. Urban uses are proposed by the project Applicant. The commenter's objection to urban classification and objection to medium and high density housing is noted.
21-2	See Response to Comment 16-4 regarding the UC Davis study.[8] In response to concerns raised about the trenching associated with the sewer line construction to potentially disrupt the hardpan soil layer and affecting the subsurface hydrology of the vernal pools in close proximity to the sewer line construction activity, the County staff has consulted with geotechnical experts and registered professional hydrogeologists with Wallace, Kuhl and Associates, Wood Rodgers, and Dudek to develop a plan to perform field infiltration tests, identify the upper soil profile characteristics above the hardpan, and to verify the relatively impervious nature of the hardpan. The Mather Specific Plan Revised Final EIR Mitigation Measure BR-7 requires the preparation and implementation of a hardpan restoration plan that will incorporate the results of the testing plan described above. The hardpan restoration plan will be implemented during construction of the trunk sewer line to ensure that the functionality of the hardpan layer in maintaining subsurface flow is restored following construction of the sewer trunk line.[9] This measure is considered a project commitment as it has been adopted by the County. Discussion of the hardpan restoration plan as a project-level commitment has been added to FEIS Chapter 4, Errata (Section 2.3.1.6). The methodology for assessment of indirect effects to vernal pool habitat has been clarified in FEIS Chapter 4, Errata (Section 4.5.1, Impact 5.1).
21-3	See Response to Comment 21-1. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 22. Glen Graham	
22-1	It should be noted that the Mather South and Mather Specific Plan projects are not USACE's plans and were not developed by USACE. USACE's primary role is to evaluate and make decisions on Section 404 Clean Water Act permit applications. USACE does not have any jurisdiction in regards to the density of housing which could be constructed. The EIS assesses the Mather South portion of the Specific Plan area at a program level which would be subject to future project-level review. The County is concurrently working on the EIR for the Mather South Community Master Plan and should be contacted regarding questions or concerns related to the proposed number of units and density.
22-2	The attached comment is included as Comment 8, above. See Response to Comment 8-1.
Comment 23. Glen Graham	
23-1	See Response to Comment 22-1 above.

8 Rains, M.C., G.E. Fogg, T. Harter, R.A. Dahlgren, and R.J. Williamson. 2005. The role of perched aquifers in hydrological connectivity and biogeochemical processes in vernal pool landscapes, Central Valley, California.

9 Sacramento County Planning and Environmental Review, 2016. Revised Final Environmental Impact Report for Mather Field. June 2016, pg. 7-54 to 7-55.

Number	Response
Comment 24. Lisa Infusino	
24-1	Because the overall project purpose is specific to the reuse of land transferred from the Air Force to the County (as discussed in DEIS Section 1.4), off-site alternatives were eliminated from consideration as they would fail to meet the overall project purpose. Impacts to vernal pools are assessed in Section 4.5 and Section 4.6 of the SDEIS and amended in FEIS Section 4, Errata.
24-2	See Response to Comment 22-1 regarding County planning efforts.
24-3	The commenter's preference is noted. USACE will utilize the EIS, including the analysis of environmental impacts to biological and aquatic resources, to make decisions regarding the alternatives.
Comment 25. Kathy Ramos	
25-1	See Response to Comment 22-1 regarding County planning efforts. Impacts to vernal pools are assessed in Section 4.5 and Section 4.6 of the SDEIS and amended in FEIS Section 4, Errata.
25-2	The DEIS assesses the consistency of the project with growth forecasts (Section 4.8), existing land use plans (Section 4.10) and existing land uses (Section 4.10). The development proposed under Alternatives, A, B and C would be similar to existing/proposed residential and mixed-use development at Independence at Mather and east of Sunrise Boulevard.
25-3	As shown in SDEIS Appendix H, the Mather Air Force Base Transfer BO, the land use transfer to the County envisions a 1,272-acre Preserve. Both Alternatives A and C are consistent with the Preserve location identified within the BO and contain additional areas of preservation and avoidance.
Comment 26. Kevin Rodriguez	
26-1	The commenter's preference is noted.
Comment 27. Jerry Street	
27-1	See Response to Comment 22-1 regarding County planning efforts.
Comment 28. Maria White	
28-1	Executive Order 11990 is considered as part of the evaluation of permit applications by the USACE, in addition to the USACE Regulatory Program's implementing regulations (33 CFR Parts 320-332) and other related laws and guidance. In accordance with the 404(b) (1) Guidelines, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.
Comment 29. Gregory G. Olsen	
29-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 30. Stacy Adair	
30-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 31. Gwen Rubio	
31-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 32. Debbie Coffman	
32-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 33. Nicole Carr	
33-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
33-2	The comment is noted.
Comment 34. Renee Link	
34-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.

Number	Response
Comment 35. Eleanor Averitt	
35-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 36. Wendy Crook	
36-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 37. Katrina De Caro	
37-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 38. Daniel Averitt	
38-1	See Response to Comment 28-1 regarding Executive Order 11990 and impacts to vernal pool species and critical habitat.
Comment 39. Oakview School Fifth Grade Class (27 Handwritten Letters)	
39-1	The commenters' preferences are noted. It should be noted that USACE is not building on or filling vernal pools within the Mather Specific Plan project area. USACE's role is to review and make decisions on Section 404 Clean Water Act permit applications. The Sacramento County Office of Economic Development (Applicant) has proposed development alternatives within the Mather Specific Plan area and submitted these alternatives to USACE for evaluation. The Applicant's Preferred Alternative has been modified to preserve one vernal pool utilized by local educational groups (Vernal Pool #E52, referred to locally as the Spadefoot pool), and to avoid one pool utilized by local educational groups (Vernal Pool #P43, referred to locally as the Critter pool), as described in FEIS Section 2.2. Regarding off-site alternatives see Response to Comment 20-3.

This page intentionally left blank

CHAPTER 4
Errata

4.1 Introduction

This chapter shows revisions to the DEIS/SDEIS, subsequent to the documents' publication and public review. Changes are shown to the DEIS with the exception of the Aquatic Resources and Biological Resources sections (Sections 3.5, 3.6, 4.5 and 4.6). Changes to the Aquatic Resources and Biological Resources sections are shown to the SDEIS as these sections were revised in the SDEIS. The revisions are presented in the order in which they appear in the DEIS/SDEIS and are identified by page number in respective chapters. These revisions are shown as excerpts from the DEIS/SDEIS with strikethrough (strikethrough) text to indicate deletions and underlined (underlined) text to indicate additions.

4.2 Overall Revisions

The University Village/Residential and Regional Sports Park (or Sports Complex) land use areas were combined to create the Residential land use area for Alternatives A, B and C. All references to the University Village/Residential and Regional Sports Park development areas are hereby changed to the Residential development area. See FEIS Section 2 for additional information regarding the modified Applicant's Preferred Alternative.

All references to the Sacramento County Office of Economic Development and Marketing are hereby changed to the Sacramento County Office of Economic Development due to a departmental name change.

All references to Eagles Nest Road are hereby changed to Zinfandel Drive due to official renaming of the roadway.

For the Economic Development area, the County is no longer pursuing aggregate extraction under Alternatives A, B, C, or D. As the removal of aggregate extraction would not increase the level of significance of any impact analyzed in the DEIS/SDEIS, the FEIS impact analysis has not been altered to remove aggregate extraction. This represents a conservative analysis for the Economic Development area, which is assessed at a program level for all alternatives under consideration.

4.3 Specific Revisions

Chapter 1 Purpose and Need

Section 1.1 Introduction

Page 1-1, the second paragraph is modified as follows:

> The Sacramento County (County) Office of Economic Development ~~and Marketing~~, as the Applicant, ~~submitted~~ will submit to the USACE seven separate permit applications in total for implementation of the Plan (i.e., the Applicant's Preferred Alternative). Each application will cover~~s~~ one of the seven different proposed land uses within the boundaries of the Mather Specific Plan including airport commercial, commercial development, "economic development" ~~i.e. aggregate extraction~~, ~~university village/~~ residential, parks/recreation, ~~regional sports park,~~ Phase I/II Roadways and Infrastructure, and remaining roadways and infrastructure. The applications will describe for each proposed land use the types and amount of dredged or fill material that are proposed to be discharged into waters of the U.S. as a result of the development of the Applicant's Preferred Alternative. The County has also notified the USACE that it may transfer the non-infrastructure land use permits, if and when issued, to other entities.

Section 1.3.1 Mather Specific Plan History

Page 1-6, the second paragraph is modified as follows:

> In April 2004, the Sacramento County Board of Supervisors conceptually endorsed creation of a "Wetlands Preserve" within the project site. The Board directed staff to work with stakeholders to develop a plan for creating the Wetlands Preserve and for addressing other uses, including roadways, economic development, parks, and easement restrictions for conservation and resource protection. In June 2005, stakeholders, representing thirteen outside entities, and seven county departments met to develop alternatives for boundaries of the Wetlands Preserve and to identify other vernal pools to be protected. The group also discussed the alignments of Eagles Nest [now renamed Zinfandel Drive] and Douglas Roads. In February 2006, the Sacramento County Board of Supervisors approved Resolution No. 2006-0209 and the associated Board letter which conceptually endorsed a revised land use plan for the Mather Specific Plan area (Sacramento County, 2006). ~~Subsequent to Board approval of the conceptual land use plan, the Sacramento County Office of Economic Development and Marketing submitted seven permit applications to the USACE to develop the project site. These permit applications include~~The Applicant's Preferred Alternative includes changes from the 2006 conceptual land use plan, including the removal of some "protected areas" and the enlargement of the proposed Preserve.

Section 1.4 Purpose and Need

Page 1-7, the third paragraph, second sentence is modified as follows:

> The Sacramento County Office of Economic Development ~~and Marketing~~, as the Applicant, ~~has~~will submit~~ted~~ applications to USACE for permits under Section 404 of the Clean Water Act for the discharge of dredged or fill material into~~of~~ wetlands and other waters of the U.S. within the project site.

Section 1.5 Clean Water Act Section 404(b)(1) Guidelines

Page 1-9, the first paragraph has been modified as follows:

> ~~The proposed action under NEPA is the USACE consideration of authorization under Section 404 of the Clean Water Act of the Applicant's Preferred Alternative.~~ The Applicant would submit~~ted~~ applications to the USACE for permits under Section 404 of the Clean Water Act for the fill of ~~approximately 34.27 acres of~~ wetlands and other waters of the U.S. within the project site. ~~Since the submission of~~Inclusive of all of the anticipated applications for development of land uses within the Mather Specific Plan project site, the amount of proposed fill has been ~~corrected~~revised to ~~40.25~~35.66 acres. This change from the original proposals is due to refinements in the Applicant's GIS data, ~~a~~ revisions to the proposed alignment of ~~Eagles Nest Road~~Zinfandel Drive, and a revised jurisdictional delineation which identified additional and expanded jurisdictional features in areas proposed for development. The Corps must assess proposed actions under~~apply~~ the Environmental Protection Agency's (EPA) *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (40 CFR Part 230) (hereafter referred to as Section 404(b)(1) Guidelines) when evaluating the individual applications for discharges into waters of the U.S. under the Clean Water Act.

1.6.2.1 Federal Actions/Permits

Page 1-11, the first paragraph is modified as follows:

> #### *U.S. Army Corps of Engineers*
>
> Sacramento County Office of Economic Development ~~and Marketing~~ ("Applicant") ~~has~~will submit~~ted~~ seven separate permit applications for activities that propose the discharge of dredged or fill material into wetlands and other waters of the U.S. Department of the Army (DA) permits under Section 404 of the Clean Water Act are required for these discharges.

1.6.2.3 Regional and Local Actions/Permits

Page 1-12, the following paragraphs have been added to the end of this subsection:

Sacramento County Water Agency

Sacramento County Water Agency (SCWA) is responsible for approvals associated with the provision of water service in the Mather Specific Plan Area. Under the terms of the Water Contract discussed in Section 1.3.1 above, new water service and discretionary approval may be withheld until compliance with the Endangered Species Act is demonstrated.

Sacramento Municipal Utility District

The Sacramento Municipal Utility District is responsible for approvals associated with the provision of electrical utilities.

Chapter 2 Alternatives

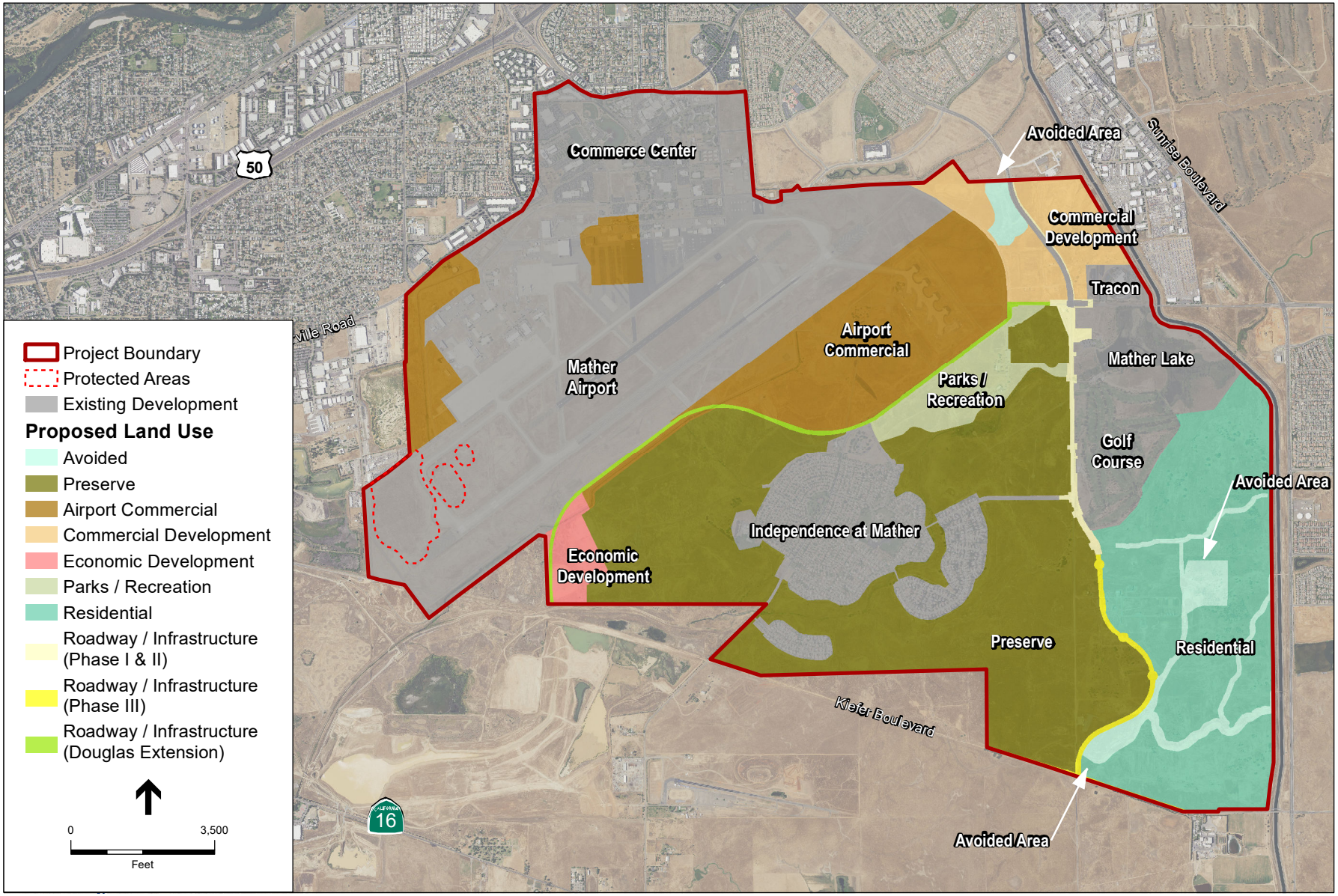
Pages 2-2 to 2-14, Sections 2.3 through 2.5 are modified as follows:

2.3 Alternative A – Applicant's Preferred Alternative

Alternative A, the Applicant's Preferred Alternative, includes the development of a large-scale, mixed-use development within the Mather Specific Plan project site described in **Chapter 1.0**, **Section 1.2**. The Applicant's Preferred Alternative requires permits from the USACE pursuant to Section 404 of the Clean Water Act for proposed fill of ~~40.25~~35.66 acres of waters of the U.S. Additional entitlements required are listed in **Section 1.6.2**.

2.3.1 Proposed Land Uses

Proposed land uses in this alternative are summarized in **Table 2-1** and shown on **Figure 2-1**. This includes airport commercial, commercial, economic development (aggregate extraction), ~~university village/~~residential, parks and recreation, ~~regional sports park,~~ and utilities and infrastructure. **Table 2-2** provides a description of the facilities that the Applicant has proposed within each land use area.



SOURCE: USDA, 2016; Sacramento County, 2016; ESA, 2017

Figure 2-1

Alternative A – Preferred Alternative

REVISED TABLE 2-1
ALTERNATIVE A - LAND USES PROPOSED WITHIN THE PROJECT SITE

Area	Acreage
Proposed Development	
Airport Commercial	~~601~~599
Commercial Development	~~203~~174
Economic Development (Aggregate Extraction)	~~60~~55
~~University Village/~~Residential	~~577~~693
Parks and Recreation	~~133~~115
~~Regional Sports Park~~	~~271~~
Roadways/Infrastructure Subtotal	~~65~~94
Phase I/II (Project Level)	*33*
Phase III	*28*
Douglas Extension	*34*
Proposed Development Total	**~~1,910~~1,730**
Open Space	
Preserve	~~1,272~~1,343*
~~Riparian Buffer~~ Avoided Areas in Commercial and Residential Development Areas	~~13~~126
Proposed Open Space Total	**~~1,285~~1,469**
Existing Development / Other	
Commerce Center	~~343~~344
Douglas-Zinfandel Extension	11
Golf Course	~~154~~152
Independence at Mather	400
Mather Airport	1,451
Mather Lake	~~163~~161
Tracon	~~32~~31
Existing / Other Total	**~~2,554~~2,550**
Project Site Total	**5,749**

NOTES: *Actual Preserve acreage is 1,342.72

This table represents the total acreage for each land use category shown on Figure 2-1.

SOURCE: Sacramento County, ~~2012~~2017

2.3.1.1 Airport Commercial

The primary objective of the Airport Commercial area is to create an airport business park complex oriented to air cargo, aircraft maintenance, general aviation and airport support uses. Alternative A does not include changes to Mather Airport or airport operations. The Airport Commercial development could include aircraft maintenance facilities, facilities for manufacturing small to medium sized aircraft, aircraft sales, aircraft storage, public sector and private industrial and distribution centers, and facilities for aerial photography and survey companies. Developed facilities would include approximately 6,220,368 square feet of light industrial and warehouse space on 357 acres adjacent to and south of the existing Mather Airport runway. Construction is proposed to start in ~~2015~~2018 and be completed by approximately ~~2025~~2028. Approximately ~~480~~622,000 square feet of space would be constructed per year.

REVISED TABLE 2-2
ALTERNATIVE A – PROPOSED FACILITIES WITHIN EACH LAND USE

Land Use	Developed Acreage	Density	Building Area/Units
Airport Commercial			
Light Industrial	238.9	40%	4,162,594 sf
Airport Support	118.1	40%	2,057,774 sf
Subtotal	357		
Commercial Development			
Light Industrial	47.2	40%	822,413 sf
Commercial/Retail	42.0	35%	640,332 sf
Subtotal	89.2		
~~University Village/~~Residential			
~~University~~ Education	~~175~~186		
Low Density Residential	172.1	5 du/acre	860 du
Medium Density Residential	91.3	10 du/acre	913 du
High Density Residential	37.8	20 du/acre	757 du
Neighborhood Town Center	13		
Commercial	8		
Elementary School	11		
Park	31.5		
Recreation	273		600,000 sf
Subtotal	~~539.7~~812.7		~~2,530 du~~
~~Regional Sports Park~~			
~~Sports Village~~	~~52~~		~~380,000 sf~~
~~Event Center~~	~~40~~		~~320,000 sf (5,000 outdoor capacity)~~
~~Sports Fields~~	~~181~~		~~175,000 sf~~
~~Subtotal~~	~~273~~		

This table represents the facility/building acreage that has been proposed within each land use category and thus does not represent the total acreage for each land use. Additional acreage within each land use category could be devoted to buffers, open space, landscaping, roadway infrastructure etc. which is not included within this table.

sf=square feet, du=dwelling units

SOURCE: Balazs, personal communication, 2010; 2016; 2017.

2.3.1.2 Commercial Development

The Commercial Development area would consist of facilities in support of the airport development as well as general commercial facilities such as food and service industries and limited retail facilities. Developed facilities would include approximately 1,462,745 square feet of light industrial and commercial/retail uses on 89.2 acres. Construction is proposed to start in ~~2015~~2018 and be completed by approximately ~~2019~~2022.

2.3.1.3 Economic Development (Aggregate Extraction)

The Economic Development area contains valuable deposits of construction-grade aggregate. It is assumed that this area would be dedicated to an open pit aggregate mine of approximately ~~60~~55 acres for approximately five years. From the ground surface

approximately 10-15 feet of overburden would be stripped with scrapers. Aggregate would be mined with front-end loaders down to approximately 30 feet below the current ground surface. No permanent structures are proposed. Aggregate would be moved to processing centers via a temporary conveyor belt system. It is assumed that overburden would be stored on site. This area is bordered on the west and south by existing aggregate operations including conveyor systems and access roads.

2.3.1.4 ~~University Village/~~Residential

The ~~University Village/~~Residential area is an area where future development may occur and ~~w~~could include ~~a university,~~ mixed-density ~~housing~~residential, retail, educational and recreational uses. Based on information provided by the Applicant, it was assumed that these uses would be developed in three phases. Each phase would include approximately 1/3 of planned development and last approximately three years. ~~an elementary school and park. The university could entail a research and development campus to support businesses and institutions specializing in environmental remediation research and/or the conversion of military and defense technology to civilian, industrial purposes. The residential component would support a live/work campus environment.~~

~~Phase I of construction would include a 175-acre educational facility and approximately 122 acres of residential and retail development and is proposed to break ground in Spring 2015. The construction of Phase I would last approximately three years.~~

~~Following completion of Phase I, Phase II would include the development of another 121 acres of mixed-use development including residential and retail development, over a three year period. Phase III would include the development of the remaining 121 acres mixed-use development, over a three year period. Construction is proposed to be completed by 2023.~~

2.3.1.5 Parks and Recreation

The Parks and Recreation area would provide passive recreation opportunities and developed recreation facilities that could serve the adjacent community. Such facilities might include walking/running/biking trails, soccer fields, baseball and softball fields, basketball courts, tennis courts, and turfed areas for picnicking and other uses.

~~2.3.1.6 Regional Sports Park~~

~~The Regional Sports Park would provide a wide range of recreational opportunities that could serve the region, including organized sports, passive recreation, and commercial recreation, while complementing and building on the scenic character of the existing and adjacent lake and golf course, reinforcing Mather as an attractive visitor destination for the region. The outdoor event center/stadium would have seating capacity for 5,000 people. It is assumed that this facility would be used for sports-related events and would not be utilized for concerts.~~

~~Phase I of construction would include primarily sports fields (baseball, softball, football, soccer, track, tennis). Phase I would be constructed from 2015 to 2020. The sports fields could be used as early as 2016 and build out would continue until 2020. Approximately 20 percent of the total sports fields would be built each year.~~

~~Phase II would consist of primarily event center facilities including swimming, diving, indoor training facilities, and a 5,000 seat stadium. Construction would begin in 2016, with swimming and indoor event facilities (volleyball, indoor training, workout facilities, classrooms). Phasing would include development of 10 – 20 percent of the facilities each year, over an eight year period. Construction of the 5,000 seat stadium is not envisioned to take place prior to 2018.~~

~~Phase III would consist of the development of a "Sports Village". Conceptually this development would begin construction in 2018 with dorm housing units. Over a 10 year period, dorms, supporting retail, live/work spaces, lofts, condos and a hotel would be constructed.~~

~~2.3.1.7~~ 2.3.1.6 Roadways/Infrastructure

The area associated with roadways and infrastructure would be maintained as right-of-way by the Sacramento County Department of Transportation. Proposed roadway modifications and public utility infrastructure are discussed in more detail in **Section 2.3.3** and **Section 2.3.4**.

Roadway and infrastructure improvements have been separated into three phases: 1) Phase I/II Zinfandel improvements, 2) Phase III Zinfandel, and 3) the Douglas extension. Of these phases the Phase I/II Zinfandel improvements is assessed at a project level. The Phase I/II roadway and infrastructure project includes roadway improvements to Zinfandel Drive and extension of a sewer line along Zinfandel Drive.

A hardpan restoration plan is included as Mather Specific Plan Revised Final EIR Mitigation Measure BR-7, which is considered a project-level commitment for extension of the sewer line along Zinfandel Drive. County staff have consulted with geotechnical experts and registered professional hydrogeologists with Wallace, Kuhl and Associates, Wood Rodgers, and Dudek to develop a plan to perform field infiltration tests, identify the upper soil profile characteristics above the hardpan, and to verify the relatively impervious nature of the hardpan. The hardpan restoration plan would include identification and documentation of the hardpan depths during excavation of the sewer trench, and appropriate backfill material to restore the hardpan functionality. The detailed hardpan restoration plan would be included in the construction specifications for the proposed sewer trunk line.

~~2.3.1.8~~ 2.3.1.7 Preserve and Avoided Areas

The ~~1,272~~1,342.72-acre Preserve would provide protection for wetlands (including vernal pools) and endangered species. Several known occurrences of federally listed branchiopods and special-status plant species would be protected within the Preserve,

including vernal pool fairy shrimp, vernal pool tadpole shrimp, and legenere. The Preserve would also protect federally listed critical habitat for vernal pool fairy shrimp, tadpole shrimp, slender Orcutt grass, and Sacramento Orcutt grass.

The allowed uses ~~would ultimately be~~ are prescribed by ~~a~~ the South Mather Wetlands Management Plan, dated July 2014, approved by the USACE and USFWS (per the terms of the Supplemental Record of Decision discussed in **Section 1.3.1** and the 2012 Biological Opinion for the Disposal of the former Mather Air Force Base [Appendix H of the SDEIS]). There is no wetland creation proposed within the Preserve. Allowed uses within the Preserve are prescribed by the South Mather Wetlands Management Plan and include specified enhancement activities.~~It is assumed for the purposes of the EIS that this area would not include active, public uses. Educational tours could also be allowed within the Preserve.~~ Enhancement activities described in Chapter 7 of the South Mather Wetlands Management Plan include removal of rubble and gravel, removal of paved areas, removal of invasive nonnative plant species, planting native plants, modifying and/or recontouring wetland basins to encourage wetland hydrology supportive of wetland and vernal pool-obligate plants and animals, recontouring uplands to enhance remnant wetlands degraded by past land uses, or similar actions. Any activity must be conducted in compliance with applicable Agency notification, authorization, and permit requirements including notification requirements for the upcoming year's proposed management activities, and subject to input by the applicable agencies (e.g., USACE, USFWS) on an annual basis. Continued use of the Preserve for educational tours and public outreach are allowed and subject to the approval of the Wetlands Preserve Manager.

Approximately 126 acres that are not located within the 1,342.72-acre Preserve would be avoided. "Avoided Areas" are not planned for development and would not be disturbed during construction, but no active management is currently proposed, nor would the "Avoided Areas" be associated with long-term land use protection (e.g., a conservation easement). These areas and/or a future project under review would be subject to additional review of on-site avoidance-minimization alternatives, if a future proposal for development is not consistent with the avoidance stipulated in the Record of Decision.

2.3.2 Grading and Drainage

It is anticipated that grading and drainage plans would be developed for each proposed development type and submitted to the Sacramento County Municipal Services Agency for review prior to construction. Drainage features would be designed and maintained in accordance with the Stormwater Quality Design Manual for Sacramento and South Placer Regions (Sacramento County, 2007).

2.3.3 Circulation

Modifications and extensions to existing roads are proposed within the project site ~~are proposed as part of the infrastructure permit application~~. This includes the realignment

and expansion of ~~Eagles Nest Road~~Zinfandel Drive ~~(to be renamed as a continuation of Zinfandel Drive)~~ and an extension of Douglas Road. ~~In addition, the Douglas-Zinfandel Extension is located within the project site but is not part of Alternative A.~~

2.3.3.1 ~~Eagles Nest Road~~Zinfandel Drive

Currently, ~~Eagles Nest Road~~Zinfandel Drive is paved for 2.75 miles south of its intersection with Douglas Road and continues to the south as a graded dirt road. Under Alternative A, ~~Eagles Nest Road~~Zinfandel Drive would be modified from a two-lane to a four-lane road and would be paved from Douglas Road to Kiefer Boulevard for a total of 4.35 miles. ~~The north end of Eagles Nest Road would be realigned to the east to intersect directly with the south end of the extension of Zinfandel Drive, and the realigned roadway would be renamed.~~ Zinfandel Drive will be paved to a 36 foot width and will have two travel lanes measuring 12 feet in width and a six foot wide paved multipurpose lane on the east side of the roadway. The roadway would follow the current roadbed alignment for approximately two miles south and then would curve to the east to avoid habitat and increase Preserve acreage. It would then curve back to the west to match the existing alignment near the intersection with Kiefer Boulevard (**Figure 2-1**). ~~The roadway construction would also expand three existing culverts at tributaries to Morrison Creek; one crossing is near the north end of the roadway and downstream of Mather Lake, the second is near the southern end of Mather Golf Course, and the final is immediately north of the intersection with Kiefer Boulevard. The culverts would be sized to accommodate storm flows.~~ As a part of the roadway construction, four cross-drainage structures (box culverts or large diameter pipe with headwall structures) will be improved or constructed to convey flows beneath the roadway. Small retaining walls on the west side of the roadway where topography fluctuates adjacent to the proposed Zinfandel Drive will be constructed in order to minimize the roadway footprint alignment at several locations. Disturbance areas associated with the culverts have been incorporated into the revised land use plan (Figure 2-1).~~The roadway would be approximately 140 feet in width, including shoulders, and would drain to the east to minimize runoff into the proposed Preserve.~~

Temporary improvements related to the construction of Zinfandel Drive include a temporary gravel access road and a temporary gravel parking area located north of the existing parking lot for the Mather Regional Park, which are included within the land use plan (Figure 2-1). The temporary access and parking area is to maintain access and provide suitable parking space for visitors to Mather Golf Course during construction.

Construction disturbance from the northern boundary of the project site to Douglas Boulevard would be limited to the east side of the existing paved roadway and the intersection with Douglas Boulevard, as well as an existing paved area west of Zinfandel Drive, north of Douglas Boulevard, for construction staging. Thus aquatic features, including suitable vernal pool habitat west of Zinfandel Drive, would be largely avoided in the proposed Commercial Development area.

2.3.3.2 Douglas Road

Douglas Road from the Folsom South Canal west to Excelsior Road (at the north side of the Independence at Mather housing development), would be modified from a two-lane road to a ~~140-foot wide~~ four-lane road. A traffic control device is proposed for the Douglas Road/~~Eagles Nest Road~~Zinfandel Drive intersection.

2.3.4 Public Services and Utilities

Infrastructure, including water, wastewater, electricity, natural gas, and telecommunications, is proposed within roadway rights-of-way. These infrastructure extensions could serve the various land use areas of Alternative A.

2.3.4.1 Water Facilities

The project site is located in Sacramento County Water Agency's (SCWA's) Zone 40 within the North Service Area (NSA). The NSA includes Mather, the Sunrise Corridor, the Sunrise Douglas Community Plan Area and the Rio del Oro Specific Plan Area. Water service to Alternative A would be provided by SCWA's Zone 41, which is the retail water supplier for developments in Zone 40. There is an existing distribution system on the project site which could ~~be utilized~~provide service to portions of Alternative A, such as the 16-inch diameter transmission line which serves Independence at Mather and commercial development north of the airport. There are also 36-inch and 42-inch diameter transmission lines east of the project site and a Zone 40 tank and booster pump station near the Sunrise Boulevard/Douglas Road intersection which could be utilized to provide service to portions of Alternative A. Primary service however would come from planned infrastructure described in SCWA's Water Supply Master Plan and Water System Infrastructure Plan. Water facilities are discussed further in Section 4.11, Public Services, Utilities and Recreation.

2.3.4.2 Wastewater Facilities

Wastewater treatment for Alternative A would be provided by Sacramento Regional County Sanitation District's (SRCSD's) regional wastewater treatment facility. Conveyance would be provided by SRCSD for regional facilities (interceptor pipes) and Sacramento Area Sewer District (SASD) for local facilities (trunk sewers and service mains). There are existing collector and trunk sewer lines within the project site and the Bradshaw Interceptor, just north of Mather Airport which could be utilized to provide service to portions of Alternative A.

The Phase I/II roadway and infrastructure project includes extension of a sewer line along Zinfandel Drive. The depth of the sewer line will vary to allow for gravity flow to the north, and will have a maximum depth of 35 feet. Like the remainder of the proposed Zinfandel Drive alignment (Phase III), the sewer line would eventually be extended beyond the currently proposed terminus of the improvements 2,100 feet south of Woodring Road. The construction of those future improvements are analyzed in the EIS at a programmatic level.

2.3.4.3 Electricity, Gas, and Telecommunications

Electrical service would be provided by Sacramento Municipal Utility District (SMUD). All new electrical lines ~~under~~ less than 69 kilovolts (kV) would be routed underground within the public utility easements outside of the road rights-of-way of the proposed streets. The project proponent(s) would coordinate with SMUD to develop detailed design plans for electrical service to the project site.

Natural gas service would be provided by West Coast Gas and would be routed underground within the rights-of-way of project site streets. The project proponent(s) would coordinate with West Coast Gas to develop detailed design plans for natural-gas service to the project site.

AT&T has existing underground and overhead telephone lines in the vicinity of the project site. AT&T would extend lines and construct facilities to serve the project site concurrently with development phases.

2.3.4.4 Fire Protection and Emergency Medical Services

Fire protection services would be provided by the Sacramento Metropolitan Fire District. The nearest stations which would serve the project site are:

- Station 62 – 3646 Bradshaw Road in Sacramento, west of the project site
- Station 66 - 3180 Kilgore Road in Rancho Cordova, north of the project site
- Station 68 - 4381 Anatolia Drive in Rancho Cordova, east of the project site

2.3.4.5 Law Enforcement

Law enforcement services would be provided by the Sacramento County Sheriff's Department which provides service to the unincorporated areas of Sacramento County. The nearest substation to the project site is the East Division office, located at 10361 Rockingham Drive on the northern edge of the project site.

2.4 Alternative B – 2006 Conceptual Land Use Plan Alternative

As discussed in **Chapter 1.0**, the Sacramento County Board of Supervisors conceptually endorsed a land use plan for the project site in 2006. Alternative B is based on the land uses and proposed boundaries of the Preserve and "Avoided Areas" based on the conceptually endorsed plan. Alternative B includes a ~~1,064~~1,063-acre Preserve and 27 acres of Riparian Buffer area which is less than the 1,272-acre Preserve specified in the Biological Opinion for the proposed land transfer from the U.S. Air Force to the County; however, this alternative is still considered viable as the land transfer process has not been completed and the BO terms could be modified. As with Alternative A, this alternative includes the development of a large-scale mixed-use development on the project site. Alternative B would also require permits from the USACE pursuant to

Section 404 of the Clean Water Act for the proposed fill of ~~39.64~~47.01 acres of waters of the U.S. and additional entitlements listed in **Section 1.6.2**.

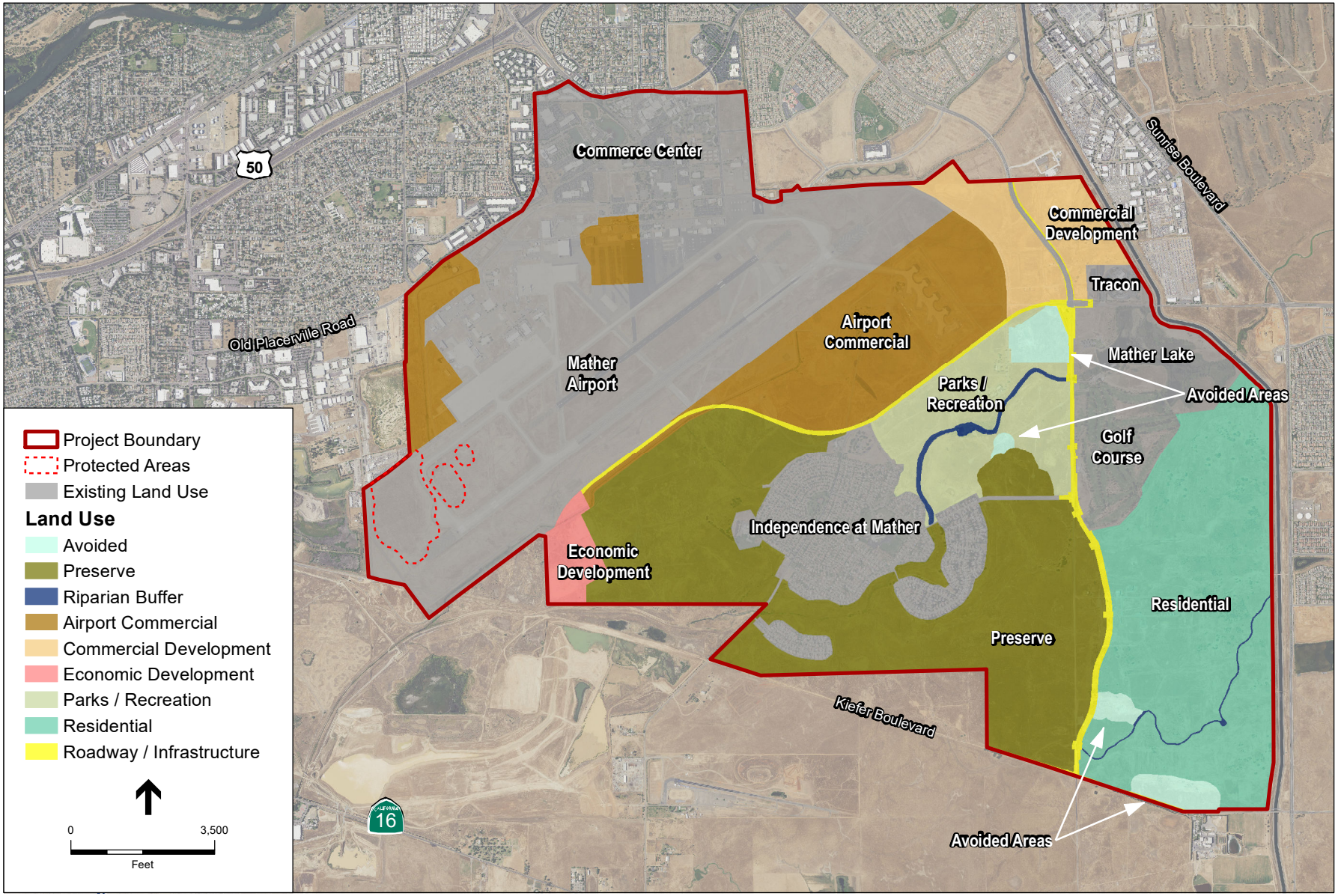
2.4.1 Proposed Land Uses

Proposed land uses under Alternative B are summarized in **Table 2-3** and shown in **Figure 2-2**. Proposed development ~~within the Airport Commercial, Commercial Development, Economic Development, Regional Sports Park and Roadways/~~

REVISED TABLE 2-3
ALTERNATIVE B - LAND USES WITHIN THE PROJECT SITE

Area	Acreage
Proposed Development	
Airport Commercial	~~600~~599
Commercial Development	~~203~~199
Economic Development (Aggregate Extraction)	60
~~University Village/~~Residential	~~527~~793
Parks and Recreation	~~284~~280
~~Regional Sports Park~~	~~271~~
Roadways/Infrastructure	~~65~~86
Proposed Development Total	**~~2,011~~2,017**
Open Space	
Preserve	~~1,064~~1,063
Riparian Buffer	27
Avoidance Areas	~~93~~92
Proposed Open Space Total	**~~1,184~~1,182**
Existing Development / Other	
Commerce Center	~~343~~344
Douglas-Zinfandel Extension	11
Golf Course	~~154~~152
Independence at Mather	400
Mather Airport	1,451
Mather Lake	~~163~~161
Tracon	31~~2~~
Existing / Other Total	**2,~~554~~550**
Project Site Total	**5,749**

SOURCE: Sacramento County, 2013~~2~~



SOURCE: USDA, 2016; Sacramento County, 2016; ESA, 2017

Figure 2-2

Alternative B – 2006 Conceptual Land Use Plan Alternative

~~Infrastructure areas is identical~~ would be similar to that discussed for Alternative A in **Section 2.3.1**. Alternative B differs from Alternative A in the shape and size of the Preserve as well as the establishment of "Avoided Areas" within the Parks and Recreation and ~~University Village~~Residential land use areas. "Avoided Areas" would not be disturbed during construction but no active management is currently proposed. Moreover, the project proponent has proposed no long-term land use protections, such as conservation easements, for these areas. The Commercial Development, Economic Development, Residential, and Parks and Recreation areas would be slightly larger but would otherwise include uses identical to those discussed for Alternative A. ~~The University Village/Residential area is reduced in size in comparison to Alternative A, but proposes similar building/facility development.~~ Due to the similarity in sizing and types of land uses, the proposed facility development shown in **Table 2-2** would also generally apply for Alternative B.

2.4.2 Grading and Drainage

It is anticipated that grading and drainage plans would be developed for each proposed development type and submitted to the Sacramento County Municipal Services Agency for review prior to construction. Drainage features would be designed and maintained in accordance with the Stormwater Quality Design Manual for Sacramento and South Placer Regions (Sacramento County, 2007).

2.4.3 Circulation

~~The Douglas-Zinfandel extension is not part of Alternative B.~~ The proposed traffic modifications are ~~identical~~similar to Alternative~~s~~ A and identical to Alternative C, including changes to ~~Eagles Nest Road~~Zinfandel Drive and Douglas Road. The southern portion of Zinfandel Drive is aligned further west under Alternatives B and C in comparison to Alternative A.

2.4.4 Public Services and Utilities

Infrastructure including water, wastewater, electricity, natural gas, and telecommunications, is proposed within roadway rights-of-way. The service providers would be identical to those discussed for Alternative A.

2.5 Alternative C – Multiple Preserves Alternative

As with Alternatives A and B, this alternative includes the development of a large-scale mixed-use development on the project site. Alternative C would also require permits from the USACE pursuant to Section 404 of the Clean Water Act for the proposed fill of 40.52~~33.65~~ acres of waters of the U.S. and additional entitlements listed in **Section 1.6.2**. This alternative would include additional, small Preserve areas to the east of ~~Eagles Nest Road~~Zinfandel Drive.

2.5.1 Proposed Land Uses

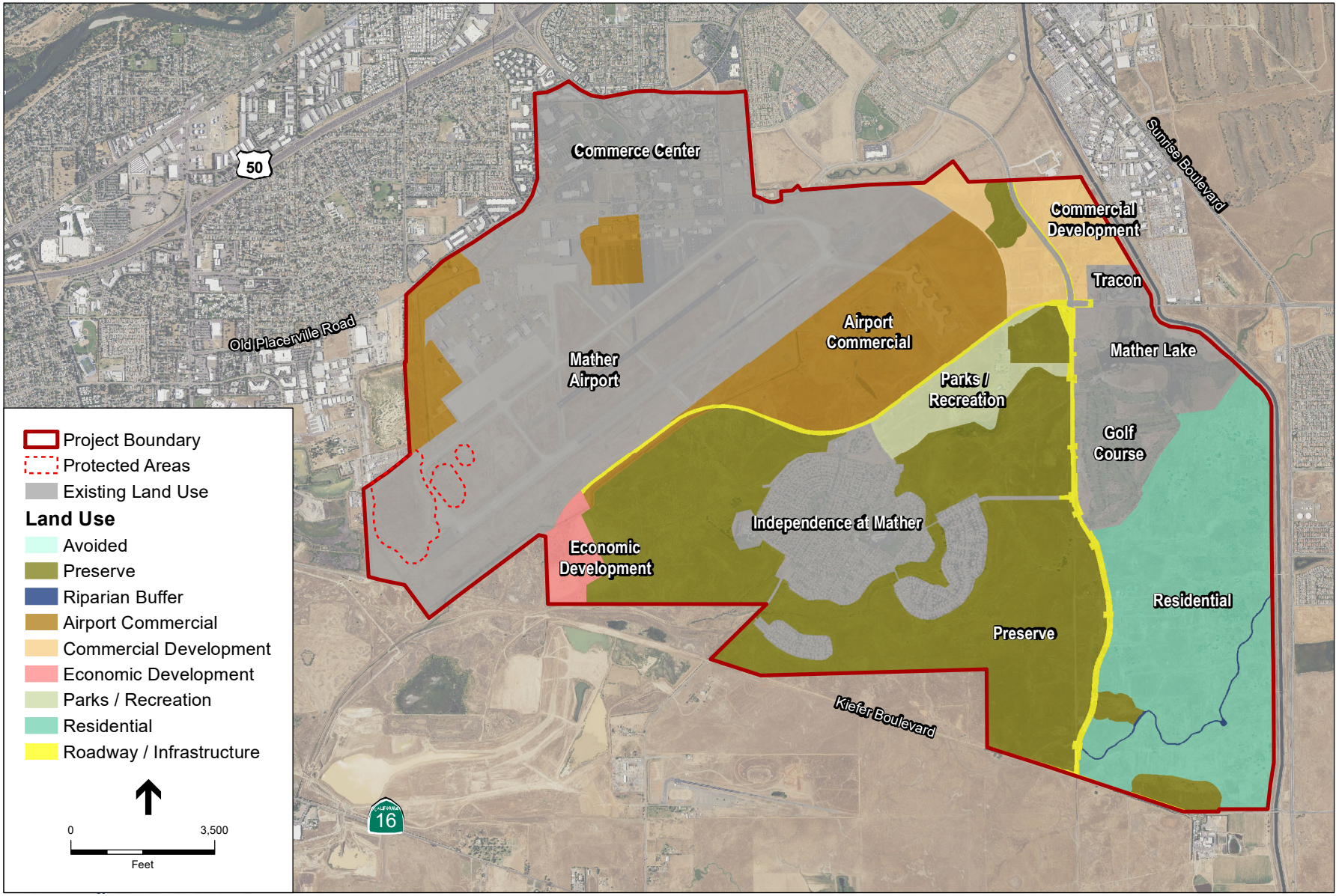
Proposed land uses under Alternative C are summarized in **Table 2-4** and shown in **Figure 2-3**.

Proposed development ~~within the Airport Commercial, Economic Development, Parks and Recreation and Regional Sports Park is identical~~would be similar to that discussed for Alternative A in **Section 2.3.1**. While the Preserve is the same shape and size as Alternative A, there would be additional small Preserves within the Commercial Development and ~~University Village~~Residential land use areas. The Commercial Development, Economic Development, Residential, and Parks and Recreation areas would be slightly larger, but would otherwise include uses identical to those discussed for Alternative A. Due to the similarity in sizing and types of land uses, the proposed facility development shown in **Table 2-2** would also apply for Alternative C.

REVISED TABLE 2-4
ALTERNATIVE C - LAND USES WITHIN THE PROJECT SITE

Area	Acreage
Proposed Development	
Airport Commercial	~~600~~599
Commercial Development	~~179~~175
Economic Development (Aggregate Extraction)	60
~~University Village/~~Residential	~~527~~792
Parks and Recreation	~~133~~130
Regional Sports Park	~~271~~
Roadways/Infrastructure	~~66~~86
Proposed Development Total	**~~1,836~~1,843**
Open Space	
Preserves	~~1,346~~1,343
Riparian Buffer	13
Proposed Open Space Total	**~~1,359~~1,356**
Existing Development / Other	
Commerce Center	~~343~~344
Douglas-Zinfandel Extension	11
Golf Course	~~154~~152
Independence at Mather	400
Mather Airport	1,451
Mather Lake	~~163~~161
Tracon	31~~2~~
Existing / Other Total	**2,~~554~~550**
Project Site Total	**5,749**

SOURCE: Sacramento County, ~~2012~~2013



SOURCE: USDA, 2016; Sacramento County, 2016; ESA, 2017

Figure 2-3

Alternative C – Multiple Preserves Alternative

2.5.2 Grading and Drainage

As with Alternatives A and B, it is anticipated that grading and drainage plans would be developed for each proposed development type and submitted to the Sacramento County Municipal Services Agency for review prior to construction. Drainage features would be designed and maintained in accordance with the Stormwater Quality Design Manual for Sacramento and South Placer Regions (Sacramento County, 2007).

2.5.3 Circulation

~~The Douglas-Zinfandel extension is not part of Alternative C.~~ On-site traffic modifications are ~~identical~~similar to Alternative~~s~~ A and identical to Alternative B, including changes to ~~Eagles Nest Road~~Zinfandel Drive and Douglas Road. ~~The Douglas-Zinfandel extension is not part of Alternative B.~~ The southern portion of Zinfandel Drive is aligned further west under Alternatives B and C in comparison to Alternative A.

2.5.4 Public Services and Utilities

Infrastructure including water, wastewater, electricity, natural gas, and telecommunications, is proposed within roadway rights-of-way. The service providers would be identical to those discussed for Alternatives A and B.

References

Page 2-20, the following references have been added:

Sacramento County, 2013. GIS Data files for the Mather Specific Plan EIS alternatives.

Sacramento County, 2016. GIS Data files for the Mather Specific Plan EIS alternatives.

Sacramento County Planning and Environmental Review, 2016. Revised Final Environmental Impact Report for Mather Field. June 2016, pg 7-54 to 7-55.

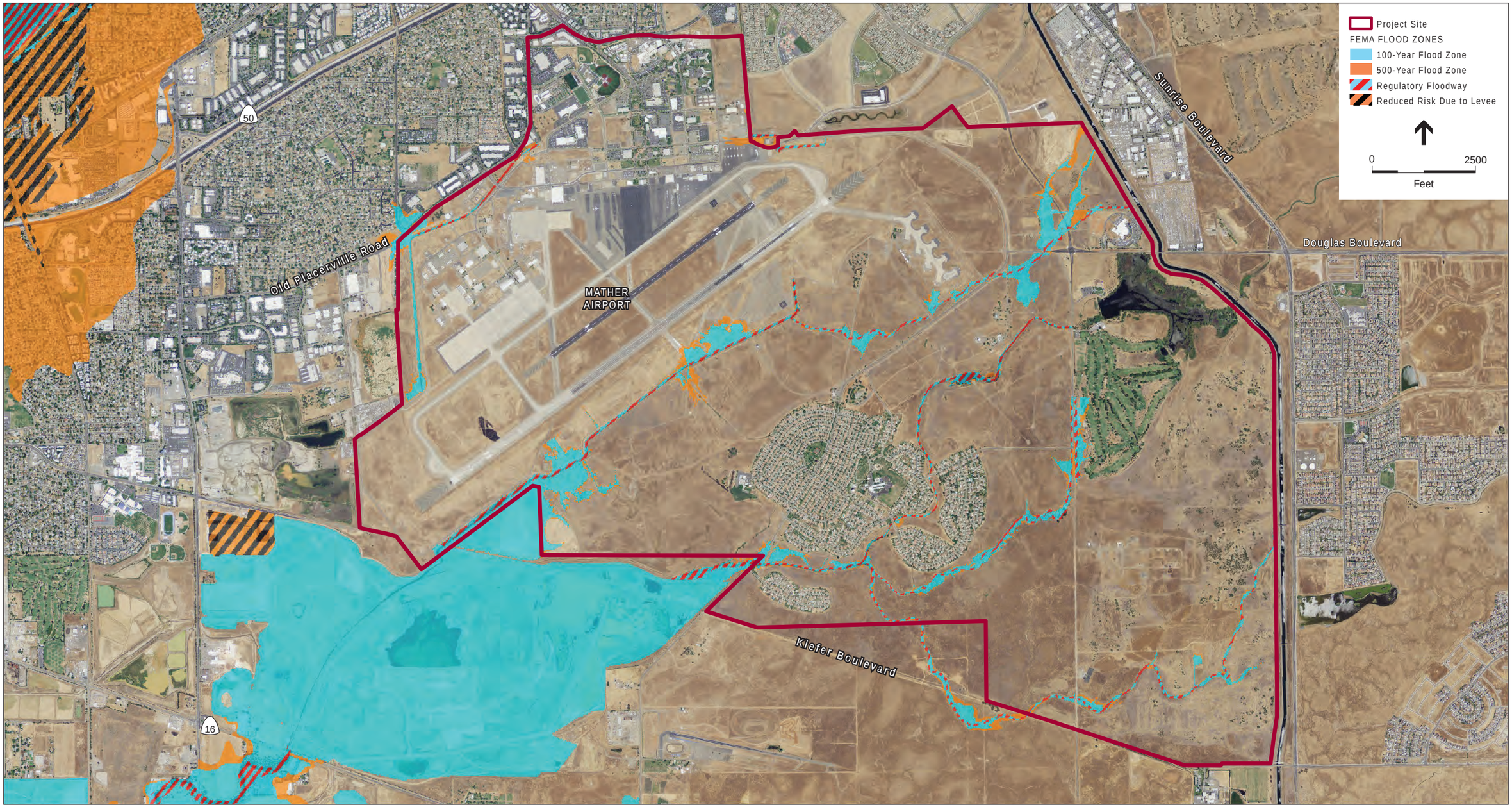
Chapter 3 Affected Environment

Section 3.3 Hydrology, Flooding and Water Quality

3.3.1.3 Flooding

Page 3.3-5, Figure 3.3-2 is revised as shown on the following page.

This page intentionally left blank



SOURCE: NAIP, 2012; FEMA; and ESA, 2013

Figure 3.3-2 (Revised)
FEMA Flood Zones

This page intentionally left blank

Page 3.3-4, the first full paragraph has been modified as follows:

100 Year Flood Zones and Events

The Federal Emergency Management Agency (FEMA) provides information on flood hazard and frequency for cities and counties on its Flood Insurance Rate Maps. FEMA identifies designated zones to indicate flood hazard potential. In general, flooding occurs along waterways, with infrequent localized flooding also occurring due to storm drain system limitations or surface water ponding. FEMA mapping for the project site was completed in 2012. As shown in **Figure 3.3-2**, the project site is largely located outside of the FEMA-defined 100-year flood zone. Flood zones are primarily confined to within the channel of Morrison Creek, and are largely confined within the channels of other existing tributaries to Morrison Creek and other drainages on site. Limited areas of ponding along the minor tributaries and drainages located on site contribute to localized flooding along existing waterways. ~~within an area that has not been mapped by FEMA for the 100-year floodplain because access was previously restricted by the U.S. Air Force.~~ Immediately southwest of the project site~~, however~~, Morrison Creek and adjacent areas, including surface mining operations, are included in the 100-year flood zone. ~~While the project site has not been officially surveyed, it is reasonable to conclude that the 100-year floodplain exists within the project site, in particular along Morrison Creek, its tributaries, and other adjacent low-lying areas.~~

References

Page 3.3-9, the following reference has been modified as follows:

Federal Emergency Management Agency (FEMA), ~~2007~~2012. FEMA 100-year flood GIS data layer.

Section 3.4 Air Quality and Global Climate Change

3.4.2 Regulatory Setting

3.4.2.1 Federal

Federal Conformity Requirements

Page 3.4-5, the first two paragraphs under the above subheading have been modified as follows:

The General Conformity Rule was promulgated in 1993 and most recently revised April 5, 2010. The purpose of the General Conformity Rule ~~(40 CFR Part 51, Subpart W)~~ is to ensure that federal projects conform to applicable SIPs so that they do not interfere with strategies employed to attain the national standards. The rule applies to federal projects in nonattainment areas for national standards and in areas designated as "maintenance" areas (an area with a maintenance plan, meeting the requirements of section 175A of the FCAA).

Before a Federal action is taken, it must be evaluated for conformity with the SIP. All reasonably foreseeable emissions, both direct and indirect, predicted to result from the action are taken into consideration and must be identified as to location and quantity. If it is found that the action would create emissions above *de minimis* threshold levels specified in EPA regulations, the action cannot proceed unless mitigation measures are specified that would bring the project into conformance.~~A federal project that does not exceed the *de minimis* threshold rates specified in USEPA regulations may still be subject to a general conformity determination if the sum of direct and indirect emissions would exceed 10 percent of the emissions of the nonattainment or maintenance area. If emissions would exceed 10 percent, the federal project is considered "regionally significant," and thus general conformity rules apply. If the emissions would not exceed the *de minimis* levels and are not regionally significant, then the project is assumed to conform, and no further analysis or determination is required.~~

3.4.2.3 Local

Page 3.4-8, the following subheading title and subsequent paragraph have been modified as follows:

Sacramento County ~~Draft~~ Climate Action Plan

~~Sacramento County has developed a Draft Climate Action Plan, Phase 1 (Sacramento County, 2009) to provide a framework for reducing GHG emissions. The Draft Climate Action Plan, Phase 1 summarizes actions that the County has taken and action the County is considering for future implementation to comply with AB 32.~~Sacramento County has adopted a Climate Action Plan (CAP) which outlines multiple initiatives intended to help the County achieve its overall goals of reducing emissions from the unincorporated County from 4,987,668 to 4,337,103 (about 650,600) metric tons of CO_2e by the year 2020. The CAP outlines strategies in five sectors to achieve this GHG reduction. These sectors include Transportation and Land Use, Energy, Water, Waste Management and Recycling, and Agriculture and Open Space.

Section 3.7 Cultural and Historic Resources

3.7.1.4 Research Methods

Page 3.7-5, the first sentence of the first paragraph is modified as follows:

An intensive archaeological survey of the accessible portions of the APE, excluding the Preserve and "Avoided Areas," was conducted for areas which were not included within previous surveys conducted between 2006 and 2010.

Page 3.7-6, the following paragraph has been added prior to the subheading Native American Coordination:

Subsequent Survey Efforts and Results

Proposed Preserve and "Avoided~~conservation a~~Areas" were subsequently surveyed by ICF International between January 13 and January 23, 2015 resulting in the identification of 12 cultural resources within proposed Preserve and "Avoided~~conservation a~~Areas" of the APE. USACE evaluated the 12 cultural resources and determined that they are ineligible for inclusion on the NRHP.

Page 3.7-7, the last sentence of the first paragraph is modified as follows:

~~No other responses have been received to date.~~ The NAHC was contacted in early 2014 to request a search of the Sacred Lands File for known sacred sites in the project area and to request a list of Native American organizations and individuals who may have knowledge of cultural resources within the APE. NAHC records indicated that no previously identified sacred lands or areas of cultural importance are located within the APE. Likewise, Native American consultation initiated by USACE on April 3, 2015, has not resulted in the identification of historic properties.

References

Page 3.7-8, the following references have been added:

ESA, 2012. Draft Phase I Cultural Resources Survey Report, Mather Specific Plan Project, Sacramento County, California.

ICF International, 2014. Addendum Cultural Resources Inventory and Evaluation Report for the Mather Specific Plan Project, Sacramento County, California.

ICF International, 2015. Addendum Cultural Resources Inventory and Evaluation Report for the Mather Specific Plan Project (Preserve Area), Sacramento County, California.

Section 3.11 Public Services, Utilities and Recreation

3.11.1 Existing Setting

3.11.1.1 Water

Page 3.11-1, the third and fourth paragraph have been modified as follows:

The Independence at Mather housing area, the commercial development north of the airport and the airport facilities receive water from SCWA through an existing distribution system. Water is supplied from the Anatolia Treatment Plant located on Sunrise Boulevard. ~~the water treatment plant within the Independence at Mather residential development which includes two groundwater wells, a six million gallon per day (MGD)~~

~~water treatment plant (WTP) and a 0.5 MG storage tank. The existing water system was originally built by the Air Force to supply water to base housing. Additionally, there are two storage tanks, with a capacity of 0.3 MG and 0.5 MG, within the commercial development north of the airport.~~

~~It is anticipated that future development within the project site, if authorized, would receive water from the existing treatment plant, with additional supplies from the Anatolia WTP and/or Vineyard Surface Water Treatment Plant (SCWA, 2006).~~ The Anatolia ~~Groundwater~~ Treatment Plant was constructed in 2005 to provide treated groundwater for the Sunridge Specific Plan Area. Three wells from the North Vineyard Well Field currently provide up to 4.3 MGD through a seven-mile long 30-inch diameter raw water pipeline. Four additional wells are anticipated to expand capacity to 13 MGD as needed. The first phase of the Vineyard Surface WTP was completed in 2011 and provides a capacity of 50 MGD. The second phase is anticipated to be completed in 2022 and will increase the capacity to 100 MGD.

Section 3.12 Hazards and Hazardous Materials

3.12.1 Existing Setting

3.12.1.2 Current Land Uses

On-Site Wells

Page 3.12-1, the paragraph under the above subheading has been modified as follows:

> The Sacramento County Water Agency has four operational wells located at Independence at Mather. There is also a non-operational well located at Independence at Mather. Four wells in the commerce center north of the airport are in the process of being destroyed due to contamination issues. ~~According to the Mather AFB Disposal and Reuse Final Environmental Impact Statement (FEIS), the project site contains 10 potable water wells. These wells are located throughout the main base, housing, and Strategic Air Command (SAC)/K-9 areas. Two non-potable wells provide landscaping water for the golf course (U.S. Air Force, 1992).~~

3.12.1.5 Agency Database Review

On-Site Contamination

Page 3.12-3, the last sentence of the first paragraph under the above subheading has been modified as follows:

> Providing an alternate water supply to affected residents ~~and installing wellhead treatment on municipal supply wells~~ has reduced the potential of exposure to contaminated drinking water (U.S. EPA, 2010b).

Chapter 4 Environmental Consequences

Section 4.3 Hydrology, Flooding and Water Quality

4.3.1 Alternative A –Applicant's Preferred Alternative

Pages 4.3-3 to 4.3-4, the following paragraphs have been modified as follows under the subheading title below:

Impact 3.4: Floodplains Values; Interference with Flood Flows

As discussed in **Section 3.3, Hydrology and Water Quality**, the Federal Emergency Management Agency (FEMA) ~~has not~~ completed a floodplain delineation and mapping of the project site in 2012. Areas within the 100-year floodplain include the ~~and thus the extent to which flooding could occur, and the land area that could potentially be inundated, during a 100-year storm event is not presently known. Proposed uses within the action area~~ central-northern and western portions of the proposed Aggregate Extraction area, a portion of the western end of the proposed Airport Commercial area, localized areas within the proposed Residential area, and limited areas along ephemeral drainages in areas zoned for most of the other proposed land uses within the project area (**Figure 3.3-2**). ~~which could potentially be located in the 100-year floodplain include the Parks/Recreation area and Preserve. These land uses are in proximity to Morrison Creek, which is associated with the 100-year floodplain immediately downstream of the project site (**Figure 3.3-2**). No new buildings are proposed in close proximity to Morrison Creek within the Parks/Recreation area or Preserve although passive recreational uses such as trails could be developed, consistent with Sacramento County General Plan Conservation Element Policy discussed below. The tributary of Morrison Creek within the proposed University Village/Residential area is not associated with the 100-year floodplain either upstream or downstream of the project site; thus it is not likely that the areas adjacent to the tributary in the University Village/Residential area would be within the 100-year floodplain.~~

~~The development of facilities in the 100-year floodplain which could not support seasonal inundation would be considered a significant and adverse impact. As the extent of flooding and inundation on the project site is unknown, **Mitigation Measures 3.4** would be required to ensure that impacts remain less than significant.~~

In accordance with Conservation Element Policy CO-94 of the Sacramento County General Plan, development within the 100-year floodplain shall be limited to land uses that can support seasonal inundation. As all proposed development would be required to adhere to this condition, potential flooding associated with the discharge fill under Alternative A is not expected to result in significant, adverse increases in flood heights.

~~**Mitigation Measures**~~

~~**Measure 3.4: 100-Year Flood Extent Investigation.** Prior to project level engineering, design, or construction of the proposed facilities, the project proponent would complete an evaluation of potential 100-year flooding for areas of proposed development. The analysis would include an assessment of potential for flooding along Morrison Creek, its tributaries, and other waterways located on site. The analysis would be completed in accordance with FEMA floodplain delineation and mapping procedures, and would be used as a basis for detailed planning for development within the action area.~~

4.3.3 Alternative D –No Permit Alternative

Pages 4.3-7, the following paragraph has been modified as follows under the subheading below:

Impact 3.4: Floodplain Values; Interference with Flood Flows

Future development that may occur under Alternative D would be outside of the areas susceptible to 100-year flooding, except for the proposed aggregate extraction area. Intermittent flooding may be considered consistent or amenable to the proposed use for aggregate extraction. Aggregate extraction activities could result in localized changes to flooding patterns on site. However, because extraction activities would be centered on removal (rather than fill) of aggregate material, no increase in floodplain extent is anticipated. This impact is considered less than significant. ~~Furthermore, flood flows would not be redirected under this alternative, as any future buildings would be limited to existing built-up areas. No impact would occur under this alternative.~~

Section 4.4 Air Quality and Global Climate Change

Methodology

Pages 4.4-1, the first two paragraphs have been modified as follows:

The following air quality analysis compares emissions from the alternatives to Sacramento Metropolitan Air Quality Management District (SMAQMD) thresholds. SMAQMD thresholds encompass factors taken into account under the National Environmental Policy Act to determine the significance of an action in terms of its context and the intensity of its impacts. Construction emissions are also compared to federal de minimis thresholds~~, though as discussed in **Section 3.4**, general conformity with respect to the federal action will be determined in the Record of Decision~~.

Construction, operation and greenhouse gas emissions were calculated using the Urban Emissions model, version 9.2.4 (URBEMIS 2007; Rimpo and Associates, 2008), SMAQMD's Guide to Air Quality Assessment in Sacramento County (2009), and, when relevant, trip generation data from the traffic analysis (DKS Associates, 2010). Annual construction emissions estimates were updated with the latest version of CalEEMod and are compared with federal standards below. Additional information and model results are

provided below and in FEIS Appendix B~~**Appendix C**~~. Impacts related to greenhouse gas emissions, global climate change, and the effect of off-site odors on proposed development are included in **Section 4.16**, Cumulative Effects. The Applicant's Preferred Alternative and other alternatives would not result in increased air traffic or introduce new sources of lead emissions; consequently, lead emissions are not required to be quantified and are not further discussed in this analysis.

4.4.1 Alternative A –Applicant's Preferred Alternative

Page 4.4-3, the following mitigation measure has been modified as follows:

Measure 4.1a: Limit Daily Grading Activities. The project proponent would require the construction contractors within each land use development area to limit ~~the maximum daily disturbed area throughout the project site~~ active grading within that development area to 15 acres or less. If daily grading is projected to be greater than 15 acres, the project proponent would conduct dispersion modeling of PM10 emissions generated during construction to determine if estimated levels would exceed the California Ambient Air Quality Standard (CAAQS) at the nearest receptor. If significant, adverse PM10 concentrations are identified, a PM10 Reduction Plan would be prepared for approval by the SMAQMD that describes how concentrations would be limited to less-than-significant levels. If the project proponent can demonstrate that impacts to sensitive receptors would be reduced to less-than-significant levels with implementation of SMAQMD's Enhanced Fugitive Dust Control Practices these measures may be implemented in lieu of a PM10 Reduction Plan.

Pages 4.4-4 and 4.4-5, the following paragraphs have been modified as follows under the subheading below:

Impact 4.3: Construction Emissions with Respect to Federal General Conformity

Predicted unmitigated and mitigated construction emissions for the worst-case year (year with most concurrent construction activities) are presented in **Table 4.4-3** and compared to the federal de minimis thresholds. As depicted in **Table 4.4-3**, construction of the project would not exceed any federal de minimis thresholds~~ activities would with respect to ROG would exceed federal de minimis thresholds.~~ and would be considered to conform to the SIP. As such, this impact would be less than significant.

~~Because emissions of ROG would exceed the federal de minimis threshold, construction-generated emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation. This is a significant and adverse impact. Even with implementation of recommended mitigation, the federal de minimis threshold for ROG would be exceeded. This impact remains significant and adverse after implementation of the recommended mitigation.~~

~~**Mitigation Measure**~~

~~**Measure 4.3: Use Low VOC Coatings.** The project proponent would require construction contractors to use low VOC architectural coatings for all buildings in order to reduce ROG emissions.~~

REVISED TABLE 4.4-3
FEDERAL ANNUAL CONSTRUCTION EMISSIONS ESTIMATES - ALTERNATIVES A, B AND C

Pollutant	Construction Emissions[1]				
	ROG	NOx	PM10	PM2.5	CO
Unmitigated Maximum – tons/year	~~37~~22	~~12~~13	~~51~~3	~~11~~1	~~34~~25
~~Mitigated Maximum – tons/year[2]~~	~~33~~	~~12~~	~~51~~	~~11~~	~~34~~
Federal De Minimis Thresholds (tons/year)	25	25	100	~~NA[3]~~100	100
Exceeds Threshold (Yes or No)?	**~~Yes~~No**	**No**	**No**	**No**	**No**

1 Construction emissions estimates were made using ~~URBEMIS 2007~~CalEEMod 2013.2.2. See FEIS Appendix B ~~Appendix C~~ for details.
~~2 Emission reductions incorporated into URBEMIS modeling are described below in Mitigation Measures 4.3 to reduce ROG.~~
~~3 NA = Not Available. There is no established Federal de minimis threshold for PM2.5.~~

Section 4.5 Biological Resources

4.5.1 Alternative A –Applicant's Preferred Alternative

Pages 4.5-1 to 4.5-8, Impact 5.1 is modified as follows:

Impact 5.1: Effects to Federally Listed Vernal Pool Species and Critical Habitat

Vernal pools and seasonal wetlands throughout the project site are known to support populations of the federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp, and provide suitable habitat for conservancy fairy shrimp, Sacramento Orcutt grass, and slender Orcutt grass. This alternative would result in direct and indirect effects to suitable habitat for these species as well as the known populations. Potential direct and indirect effects to suitable habitat for vernal pool species (as defined in Section 3.5) are summarized in **Table 4.5-1** and **Figure 4.5-1**.

For direct effects, it was assumed that all suitable habitat within development areas (airport commercial, commercial, residential, parks and recreation, and roadways/infrastructure) would be directly impacted with the exception of "Avoided Areas" or features designated as avoided within the project-level Section 404 permit application for the Phase I/II Roadway and Infrastructure project. Within the Preserve and "Avoided Areas", direct impacts were typically assumed for features where a substantial portion of the feature would be directly impacted outside of the Preserve or "Avoided Areas".

REVISED TABLE 4.5-1
EFFECTS TO HABITAT FOR VERNAL POOL SPECIES – ALTERNATIVE A

Land Use	Direct Effects (Acres)	Indirect Effects (Acres)
Airport Commercial	~~*6.62*~~*7.66*	~~*0.82*~~*0.20*
Seasonal Wetland	~~4.11~~4.13	0.20
Vernal Pools and Swales	~~2.52~~3.53	~~0.62~~0.00
Commercial Development	~~*6.50*~~*4.37*	*0.00*
Seasonal Wetland	~~3.64~~3.91	0.00
Vernal Pools and Swales	~~2.86~~0.46	0.00
Economic Development	*0.00*	*0.003*
Parks Recreation	~~*1.92*~~*0.48*	~~*0.52*~~*0.45*
Seasonal Wetland	~~0.79~~0.28	~~0.14~~0.32
Vernal Pools and Swales	~~1.13~~0.20	~~0.38~~0.13
Roadways and Infrastructure	~~*3.65*~~*0.74*	~~*2.91*~~*1.97*
Seasonal Wetland	~~1.39~~0.39	~~1.05~~0.93
Vernal Pools and Swales	~~1.84~~0.20	~~1.87~~1.04
Channels and Streams	~~0.42~~0.16	0.00
~~*Regional Sports Park*~~	~~*6.11*~~	~~*0.01*~~
~~Seasonal Wetland~~	~~5.63~~	~~0.01~~
~~Vernal Pools and Swales~~	~~0.20~~	~~0.00~~
~~Channels and Streams~~	~~0.28~~	~~0.00~~
~~*University Village/*~~*Residential*[2]	~~*15.88*~~*14.70*	~~*0.00*~~*2.70*
Seasonal Wetland	~~6.11~~9.55	~~0.00~~0.87
Vernal Pools and Swales	~~9.58~~4.93	~~0.00~~1.83
Channels and Streams	~~0.19~~0.22	0.00
Total	~~40.68~~27.95[1]	~~4.26~~5.33[1]

1. Totals are approximate and subject to rounding.
2. Formerly Regional Sports Park and University Village/Residential
3. This table attributes direct and indirect impacts to the land use area causing the impact based on the order of development within each land use area as the actual location of the impact may be within an adjacent land use. The assumed construction order of development is Phase I/II Zinfandel; followed by Phase III Zinfandel; followed by Airport Commercial, Commercial, Residential, Parks and Recreation and Economic Development; followed by the Douglas Extension.

SOURCE: ESA, 201~~7~~3; Sacramento County, 2013 and 2016.

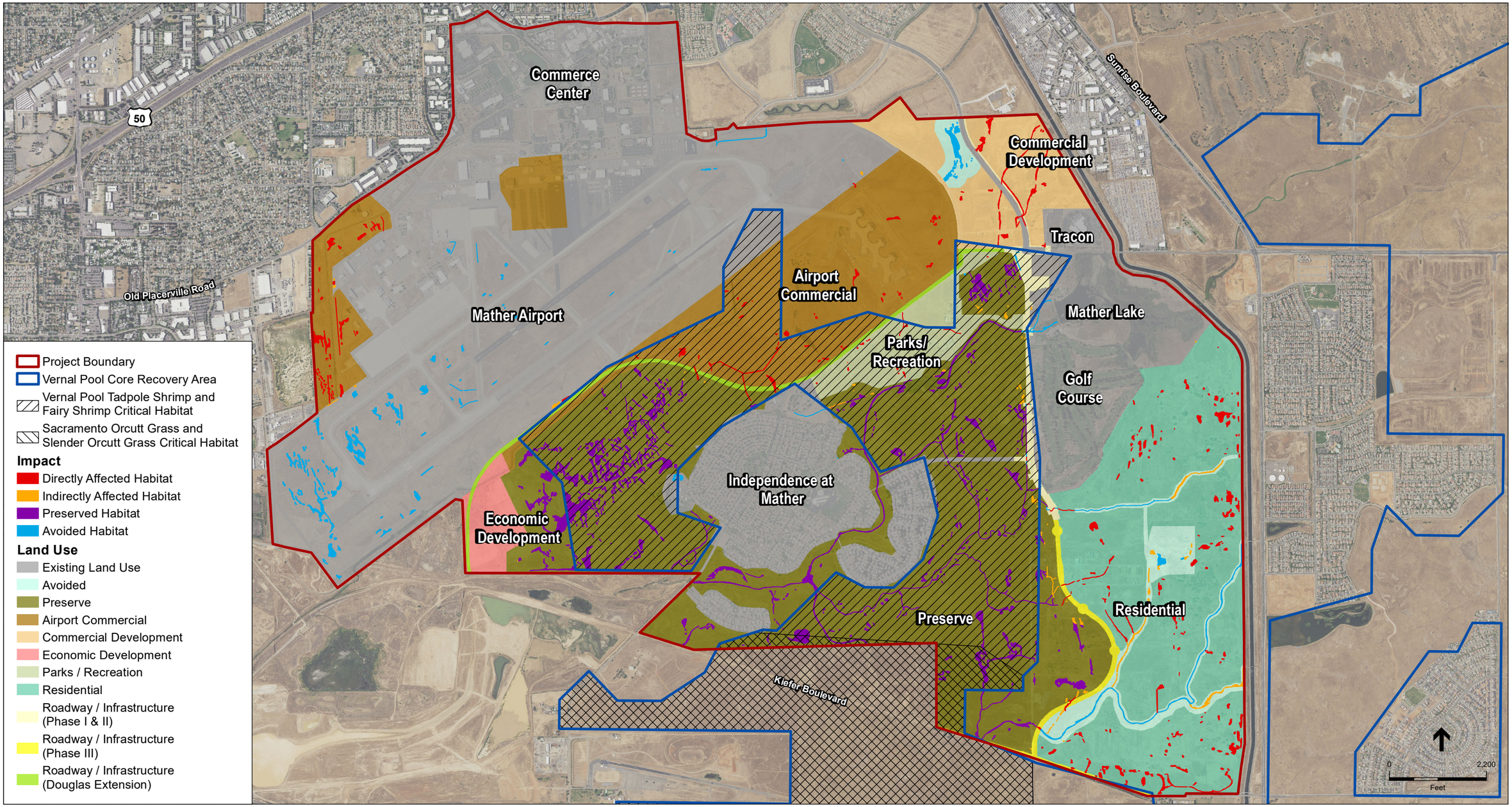
~~Direct effects would occur if a pool or a portion of a pool is affected by site grading or other ground disturbing activities. In calculating direct effects to habitat for vernal pool species, it is assumed that if any portion of a pool is directly affected by site grading or other ground disturbing impacts, then the entire pool is directly affected. This differs from the methodology used to calculate direct impacts to wetlands and other waters of the U.S., as described in Section 4.6.~~ Indirect effects may occur if proposed activities within 250 feet of suitable habitat alter the surface and/or subsurface hydrology of the area (USFWS, 1996a). Indirect impacts were typically assumed for any vernal pool habitat within 250 feet of the edge of a development area (airport commercial, commercial, economic development, residential, parks and recreation, and roadways/infrastructure), but also considered the broader landscape and micro-watershed in which the feature occurs in terms of potential hydrology-related impacts. When evaluating the potential indirect effects a proposed activity may have on a vernal pool feature, three primary factors were considered: 1) linear distance between the edge of the vernal pool and the edge of the proposed development footprint, 2) the boundaries of the micro-watershed for

a given pool or complex, and 3) the landscape position of seasonal streams, swales and similar features relative to the position of potential hydrological barriers, such as roadways, artificial canals, or developed areas.

For assessing impacts to the micro-watershed and positioning relative to barriers and channels, vernal pool hydrology references specific to the Mather Specific Plan area were used (WRA, 2004; Sacramento County, 2016). In addition, potential barriers to subsurface groundwater flows relative to their landscape position to a vernal pool micro-watershed were considered, as well as the type of feature it is (i.e., vernal pool, swale, or stream channel). Based on these factors, each feature was evaluated geospatially to determine if its micro-watershed/catchment area could be affected by a proposed activity. For one specific feature, Vernal Pool #E52, the hydrologic boundaries of the contributing vernal pool feature were determined based on LIDAR and development of a digital terrain model consistent with methods used in the Draft South Sacramento Habitat Conservation Plan (Friesen, 2014). In cases in which a hydrologic barrier existed between habitat and development, the indirect impacts were calculated from the edge of development to the barrier. Such barriers include existing roadways, berms, ditches, and natural drainage features.~~Potential direct and indirect effects to suitable habitat for vernal pool species (as defined in Section 3.5) are summarized in **Table 4.5-1** and **Figure 4.5-1**.~~

Based on this evaluation, development under Alternative A would result in the direct loss of approximately 27.95~~40.68~~ acres of suitable habitat for vernal pool species. Of these acres, approximately 9.32~~18.13~~ acres are classified as vernal pools or swales, with the remainder (18.63~~22.55~~ acres) classified as seasonal wetlands and channels. Furthermore, development under Alternative A would indirectly affect up to 5.33~~4.26~~ acres of habitat for vernal pool species located in the proposed Preserve, "Avoided Areas" and ~~at~~ within existing land use areas (e.g. Mather Airport and Mather Lake). A subset of these impacts is attributed to the Phase I/II Roadway and Infrastructure project. Development of the Phase I/II Roadway and Infrastructure project would result in the direct loss of approximately 0.10 acre of suitable habitat for vernal pool species within seasonal wetlands and channels. Furthermore, development of the Phase I/II Roadway and Infrastructure project would indirectly affect up to 0.62 acre of habitat for vernal pool species. The Phase I/II Zinfandel project avoids, but is within 250 feet of 1.38 acres of suitable habitat in the Commercial area; these features would later be directly impacted by Commercial development and thus have been counted as direct impacts from Commercial development when considered programmatically.

In addition to the above effects, designated critical habitat for vernal pool tadpole shrimp and fairy shrimp would also be affected by Alternative A. Up to 2.75~~4.98~~ acres of critical habitat for vernal pool tadpole shrimp and fairy shrimp would be directly affected and up to 1.09~~2.89~~ acres of critical habitat would be indirectly affected, as discussed under Impact 5.2, below. A subset of these impacts is attributed to the Phase I/II Roadway and Infrastructure project. Up to 0.05 acre of critical habitat for vernal pool tadpole shrimp and fairy shrimp would be directly affected, and up to 0.61 acre of critical habitat would be indirectly affected by development of the Phase I/II Roadway and Infrastructure project.



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.5-1

Program Level - Potential Effect to Habitat for Vernal Pool Species
Alternative A

This page intentionally left blank

The direct loss of suitable habitat for these species, including the direct take of species, represents a significant, adverse impact. In addition, the proximity of proposed activities to habitat for vernal pool species presents the possibility of secondary effects to the habitat due to project-related disturbance. Deterioration of habitat for vernal pool species could result from the introduction of non-native invasive plant species, decreases in water quality due to erosion or sedimentation, changes in surface or subsurface hydrology, and human intrusion. Therefore, potential indirect effects to suitable habitat are also considered a significant, adverse impact.

The Preserve includes 73.83 acres of suitable habitat within the boundaries of the Preserve, of which 0.21 acres of suitable habitat would be directly impacted and 1.73 acres of suitable habitat would be indirectly impacted by surrounding land uses; thus, the remaining 71.89 acres would be preserved without direct or indirect impacts to suitable habitat. As described above, direct effects within the Preserve would occur where a substantial portion of the a suitable habitat feature would be directly impacted outside of the Preserve; indirect effects within the Preserve would occur generally where a suitable habitat feature is within 250 feet of proposed development. Proposed preservation is greater than, and thus consistent with, that discussed in the final Biological Opinion for the disposal of the former Mather Air Force on January 24th, 2012 (Appendix H).

~~Alternative A proposes to protect in perpetuity suitable habitat for vernal pool species, including approximately 65.30 acres of waters within an on-site Preserve and 3.58 acres within Riparian Buffer areas. When combined, this represents a preservation ratio of approximately 1.5:1 for every acre of habitat directly and indirectly affected by proposed activities.~~ An additional 7.96 acres of waters within "Avoided Areas" would be avoided and 14.14 acres of waters within existing development areas would be avoided. Avoided features would not be disturbed during construction, but no active management is proposed as described in **Section 2.3.1.7**.

As described in **Chapter 2.0**, wetlands within the proposed Preserve would be preserved and managed in accordance with the South Mather Wetlands Management Plan, dated July 2014, which was approved by ~~that is subject to final approval by~~ the United States Army Corps of Engineers (USACE)~~,~~ and the United States Fish and Wildlife Service (USFWS)~~, California Department of Fish and Game (CDFG) and Environmental Protection Agency (EPA)~~. The goals described in the plan include enhancing wetland habitat functions and services. These efforts could include ~~restoring~~ enhancing vernal pools that have been damaged by prior activities as discussed in **Section 2.3.1.7**. ~~Nevertheless, without additional compensation and mitigation, t~~The onsite loss of habitat for vernal pool species is considered potentially significant and adverse. With proposed ~~recommended~~ mitigation, it is anticipated that impacts would be reduced to a less-than-significant level. The USACE would review the specific mitigation measures to make a final determination prior to authorizing proposed activities associated with Alternative A.

Mitigation Measures

Implement Measure 3.3: Comprehensive Drainage Plan

Measure 5.1a: Compensate for the Loss of Habitat for Vernal Pool Species. The project proponent proposes on-site habitat preservation in perpetuity ~~and purchase of habitat creation credits at an USACE and USFWS approved mitigation bank and/or to restore/enhance habitat within the designated Preserve areas~~ upon USFWS approval to fully compensate for direct and indirect effects to habitat for federally listed vernal pool species. The Preserve would be 1,342.72 acres in size, and is described in detail in Section 2.3.1.7 of the FEIS. ~~While final ratios would be determined in consultation with USFWS, it is estimated that compensation would be at a minimum 2:1 preservation ratio and 1:1 creation/restoration/rehabilitation ratio for direct effects to habitat for vernal pool species (40.68 acres of direct effects), and a 2:1 preservation ratio for indirect effects to habitat for vernal pool species (4.26 acres of indirect effects).~~

~~Alternative A would include 68.88 acres of on-site habitat for vernal pool species preservation and enhancement. Thus, Alternative A proposes on-site preservation for direct and indirect effects at a 1.5:1 ratio. The level of on-site creation, restoration and/or, rehabilitation activities proposed by the Wetland Management Plan has not yet been quantified.~~

~~To fully compensate for the direct loss of habitat for federally listed vernal pool species, the project proponent proposes to purchase habitat creation credits at an USACE and USFWS approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval at a minimum 1:1 ratio for direct effects to habitat for vernal pool species. In addition, the project proponent would purchase habitat preservation credits at an USACE and USFWS approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval for the direct and indirect effects to habitat for vernal pool species. Combined with the on-site preservation, this is expected to result in a 2:1 preservation component for direct and indirect effects.~~

The project proponent will record a USFWS-approved conservation easement for the Preserve ~~must occur~~ prior to ~~or concurrent with~~ development within 250 feet of suitable habitat for vernal pool species. ~~Programmatic compensation requirements for each land use are summarized in **Table 4.5-2**. Compensation for each land use must be approved by the USACE and USFWS prior to the initiation of construction activities within 250 feet of suitable habitat for vernal pool species.~~

~~Options for habitat compensation are described below. These options may be combined to meet the overall compensation needs for each land use.~~

~~**Option 1: Purchase Vernal Pool Habitat Credits.**~~

~~Prior to the initiation of construction within each development area, the project proponent would purchase the required acreage of vernal pool creation and preservation credits at a USACE and USFWS-approved mitigation bank. The project proponent would provide the USACE proof of the purchase prior to construction of that development area.~~

~~**TABLE 4.5-2**~~
~~**HABITAT COMPENSATION REQUIREMENTS BY LAND USE TYPE – ALTERNATIVE A**~~

~~Land Use~~	~~Habitat for Vernal Pool Species Compensation: 1:1 Creation (Acres)~~	~~Habitat for Vernal Pool Species Compensation: 0.5:1 Preservation (Acres)~~
~~Airport Commercial~~	~~6.62~~	~~3.48~~
~~Commercial Development~~	~~6.50~~	~~3.04~~
~~Economic Development~~	~~0.00~~	~~0.00~~
~~Parks Recreation~~	~~1.92~~	~~1.14~~
~~Roadways and Infrastructure~~	~~3.65~~	~~3.07~~
~~Regional Sports Park~~	~~6.11~~	~~2.86~~
~~University Village/Residential~~	~~15.88~~	~~7.42~~
~~**Total**~~	~~**40.68**~~	~~**21.00**~~

~~SOURCE: ESA, 2013; Sacramento County, 2013~~

~~**Option 2: Implement On-Site Creation/Restoration/Rehabilitation.**~~

~~Prior to construction within each development area, direct effects to habitat for vernal pool species would be compensated through the restoration and/or enhancement of habitat for vernal pool species within on-site Preserve areas. The restoration goal would be to restore and enhance habitat for vernal pool species such that their ultimate functions and services are equal to or greater than the wetland features affected by the implementation of Alternative A. This effort could include restoring vernal pools and/or other suitable aquatic features that have been damaged by prior activities. The plan would include monitoring requirements to ensure the long-term success of restored and enhanced habitats.~~

Measure 5.1b: Use Best Management Practices (BMPs) to Provide Effective Erosion and Sediment Control. Use of BMPs for stormwater control is expected to reduce the potential for preserved and avoided habitat for vernal pool species to be indirectly affected by sediment-laden discharges from construction sites. The performance and effectiveness of these BMPs would be determined either by visual means, where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where the verification of containment reduction or elimination is required to determine the adequacy of the measures. BMPs to be implemented would include, but are not limited to, the following:

- All disturbed surfaces or stockpile areas would be protected with erosion control measures in place during the period of October 1 through April 30, or as appropriate based on weather conditions.
- BMPs for temporary erosion control (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) would be employed per the product specifications for disturbed areas, stockpiled soil, and along culverts and drainage ditches on active construction sites and in downstream areas that may be affected by construction activities. Requirements for the placement and monitoring of the BMPs would be part of the contractor's project specifications. Performance and adequacy of the measures would be determined visually by site construction management and verified by the County Department of Water Resources and Central Valley Regional Water Quality Control Board as appropriate.

- Dirt and debris would be swept from paved areas in construction zones on a daily basis as necessary to remove excessive accumulations of silt, mud or other debris. Sweeping and dust removal would be implemented by the contractor and oversight of these operations the responsibility of the construction site superintendent.
- All exposed/disturbed areas, left barren of vegetation due to project related activities, would be seeded, mulched and fertilized with a blend of native and/or naturalized grass and forb species. Locally obtained native wildflower seeds may be included in the seed mix. Planted areas must achieve an 80% acreage coverage rate to be considered successful. All exposed areas where seeding is considered unsuccessful after 90 days, would receive~~d~~ appropriate soil preparation and a second application of seed/mulch/fertilizer. Quarterly monitoring would be conducted for a period of one year or until the target goal is met. The application, schedule, and maintenance of the vegetative cover would be the responsibility of the contractor and requirements to establish a vegetative cover would be included in the construction contractor's project specifications.
- If discharges of sediment or hazardous substances to drainage ways are observed, construction would be halted until the source of contamination is identified and remediated. Visual indications of such contamination include an oily sheen or coating on water, and noticeable turbidity (lack of clarity) in the water.

Measure 5.1c: Conduct Worker Environmental Awareness Training (WEAP). A Worker Environmental Awareness Program (WEAP) training for construction crews and construction forepersons would be conducted before any construction activities begin. The WEAP training would be conducted by a qualified wildlife biologist. The training would include a brief review of the special status species and other sensitive resources that could occur in the project area and their legal status and protection. The program would also cover all relevant mitigation measures, permit conditions and BMP plans, such as the Stormwater Pollution Prevention Plan (SWPPP) and/or erosion control and sediment plan. During WEAP training, construction personnel would be informed of the importance of avoiding ground-disturbing activities outside of the designated work area. A designated environmental inspector would be responsible for ensuring that construction personnel adhere to the guidelines and restrictions and that all persons working on site have attended a WEAP training session. WEAP training sessions would be conducted as needed for new personnel brought onto the job throughout the duration of construction.

Measure 5.1d: Limit Project Access Routes/Staging Areas. The total number of access routes, number and size of staging areas, and the total area of construction activity would be limited to those areas identified in the approved construction drawings and/or plans or as otherwise approved per permit conditions. Access routes and project boundaries would be clearly marked at all times. Access routes for heavy equipment to and from the project site would be restricted to established roadways to minimize habitat disturbance. The storing of construction equipment, vehicles, and supplies would be restricted to the designated construction staging areas outside of proposed Preserve(s), designated avoided, and riparian buffer areas. All fueling, cleaning and maintenance activities of vehicles and other equipment would be performed only in designated areas and at least 250 feet away from avoided/preserved habitats. As part of WEAP training, all workers would be informed of the importance of preventing spills and appropriate measures to take in the event of a spill. All spills would be cleaned up immediately.

Measure 5.1e: Protect Preserved and Avoided Habitats. Avoided and preserved habitat~~, including habitat within designated Preserve and Riparian Buffer areas,~~ would be protected at all times from construction activities. Habitat protection measures would include the following:

- A USFWS-approved biologist (monitor) would inspect all construction-related activities at the project site to ensure that no unauthorized take of listed species or destruction of their habitat occurs. The biologist would have the authority to stop any activities that may result in such take or destruction until appropriate corrective measures have been completed. The biologist also would be required to report immediately any unauthorized impacts to the USFWS and the CDFW.
- Adequate fencing would be placed and maintained around all avoided and ~~(~~preserved~~)~~ habitat for vernal pool species to prevent direct impacts from construction.

Pages 4.5-8 to 4.5-9, Impact 5.2 is modified as follows:

Impact 5.2: Potential to Conflict with provisions of the USFWS Vernal Pool Recovery Plan

As discussed in **Section 3.5**, the project site is located within the Mather Core Area of the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005), which is a Zone 1 core area having the highest priority for recovery. As stated in the Recovery Plan, the Mather Core Area has specific conservation goals, including protecting 95 percent of suitable habitat for vernal pool tadpole shrimp, slender Orcutt grass, and Sacramento Orcutt grass, and protecting 85 percent of suitable habitat for vernal pool fairy shrimp. Approximately 57.42 acres of suitable habitat for vernal pool species occurs within the area where the Mather Core Area overlaps the project site. These protection goals therefore correspond to preservation of approximately 48.81 acres (85 percent) and 54.55 acres (95 percent) of suitable habitat for vernal pool species where the Mather Core Area overlaps the project site.

Alternative A includes a large preservation component for habitat for vernal pool species. **Tables 4.5-3A and B** summarize the effects of Alternative A on suitable habitat for vernal pool species within the Mather Core Area of the project site. Approximately 54.37~~52.44~~ acres of suitable habitat for vernal pool species within the Mather Core Area would be located within the Preserve and protected in perpetuity ~~within the action area~~ (**Figure 4.5-1**). This corresponds to 95~~91~~ percent of the suitable habitat for vernal pool species within the Mather Core Area of the project site. However, some of this habitat (1.23 acres) may be directly or indirectly affected by construction on and/or operation of adjacent proposed land use areas outside of the Preserve. ~~**Table 4.5-3** summarizes the effects of Alternative A on suitable habitat for vernal pool species within the Mather Core Area of the project site.~~

~~**TABLE 4.5-3**~~
~~**EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE A**~~

~~Habitat Type~~	~~Total Acreage in Mather Recovery Area~~	~~Directly Affected (Acres)~~	~~Potentially Indirectly Affected (Acres)~~	~~Preserved/ Avoided Habitat (Acres) / Percent[1]~~		~~Preserved/ Avoided Habitat which is not Indirectly Impacted (Acres) / Percent[2]~~	
~~Vernal Pools and Swales~~	~~41.96~~	~~2.86~~	~~2.01~~	~~39.10~~	~~93%~~	~~37.09~~	~~88%~~
~~Seasonal Wetlands~~	~~9.94~~	~~1.95~~	~~0.88~~	~~7.99~~	~~80%~~	~~7.11~~	~~72%~~
~~Ephemeral and Intermittent Channels~~	~~5.52~~	~~0.18~~	~~0.00~~	~~5.34~~	~~97%~~	~~5.34~~	~~97%~~
~~**Total[3]**~~	~~**57.42**~~	~~**4.98**~~	~~**2.89**~~	~~**52.44**~~	~~**91%**~~	~~**49.54**~~	~~**86%**~~

~~1 Habitat within the Mather Core Area that is not directly impacted.~~
~~2 Habitat within the Mather Core Area that is 1) not directly impacted and 2) not indirectly affected (i.e. for vernal pools, vernal swales and seasonal wetlands at least 250 feet from proposed land disturbance..~~
~~3 Totals subject to rounding~~

~~SOURCE: ESA, 2013; Sacramento County, 2013.~~

REVISED TABLE 4.5-3A
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE A

Habitat Type	Total Acreage in Mather Recovery Area	Directly Affected (Acres)	Indirectly Affected (Acres)	Avoided	Preserved (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	1.39	0.42	0.00	40.15	96%
Seasonal Wetlands	9.94	1.31	0.67	0.37	7.59	76%
Ephemeral and Intermittent Channels	5.52	0.05	0.00	0.07	5.41	98%
Total[2]	**57.42**	**2.75**	**1.09**	**0.44**	**53.14**	**93%**

1 Acreage of suitable habitat within the Preserve and in the Mather Core Area which is not directly or indirectly affected (250 feet from adjacent development or feature's watershed avoided).
2 Totals subject to rounding.

SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

REVISED TABLE 4.5-3B
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE A

Habitat Type	Total Acreage in Mather Recovery Area	Habitat Located within Preserve including Affected Habitat (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	40.66	97%
Seasonal Wetlands	9.94	8.30	84%
Ephemeral and Intermittent Channels	5.52	5.41	98%
Total[2]	**57.42**	**54.37**	**95%**

1 Acreage of all suitable habitat located within the Preserve boundaries and in the Mather Core Area, including directly and indirectly affected habitat.
2 Totals subject to rounding.

SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

As shown in **Table 4.5-3**, Alternative A would protect suitable habitat for those species targeted for protection within the Mather Core Area, with the majority of that being high quality habitat for vernal pool species. ~~Furthermore, some of this habitat is expected to be~~

~~restored and/or enhanced, thereby increasing habitat suitability for these species.~~ Alternative A would be consistent with the goals of the USFWS recovery plan for vernal pool species as it protects at least 85% of the habitat for vernal pool species within the Mather Core Area. Thus, this impact is considered less-than-significant.

Impact 5.4: Effects to Golden Eagle

Page 4.5-10, the second paragraph under Impact 5.4 is revised as follows:

As noted previously, there are observations of golden eagles foraging within project site grasslands in the winter. Therefore, this species may be affected by the loss of suitable wintering foraging habitat. Potential effects to grassland vegetation, as well as other habitat types present within the project site, are summarized in **Table 4.5-4**. This evaluation indicates that approximately 1,175~~1,327~~ acres of suitable foraging habitat (annual grasslands) may be affected by proposed development. Neighboring habitat types, such as seasonal wetlands and vernal pools, may also contribute towards seasonal foraging opportunities for this species.

Page 4.5-10, Table 4.5-4 is revised as follows:

REVISED TABLE 4.5-4
EFFECTS TO VEGETATION AND HABITATS – ALTERNATIVE A

Habitat Type	Existing (Acres)	Affected (Acres)	Percent Affected
Annual Grassland	2775.8	~~1,327.1~~1,174.7	~~47.8%~~42.3%
Cottonwood Woodland	72.7	~~72.7~~61.0	~~100.0%~~83.9%
Disturbed / Ruderal	87.3	53.3	61.1%
Drainage Ditch (Riverine)	2.5	1.2	56.0%
Lake / Pond (Lacustrine)	40.9	0.0	0.0%
Recreation / Landscaped	216.7	~~2.9~~3.1	~~1.3%~~1.4%
Seasonal Wetland	61.53	~~21.1~~17.7	~~34.3%~~28.8%
Stream Channel (Riverine)	29.9	~~8.3~~7.9	~~27.8%~~26.4%
Urban/Developed	2,373.6	~~410.5~~402.6	~~17.3%~~17.0%
Valley Foothill Riparian	14.4	0.0	0.0%
Vernal Pool and Vernal Swale	73.9	~~17.5~~9.2	~~23.7%~~12.4%
Total	**5,749.4**	**~~1,914.9~~1730.7**	**~~33.3%~~30.1%**

SOURCE: ESA, 2017~~3~~; Sacramento County, 2013 and 2016.

Page 4.5-10, the third paragraph under Impact 5.4 is revised as follows:

Under Alternative A, approximately 1,217~~1,160~~ acres of annual grassland habitat would be preserved within the proposed Preserve ~~and Riparian Buffer areas~~. This represents a grassland preservation to impact ratio of over 1:1~~0.87:1~~.

Impact 5.5: Effects to Western Spadefoot

Page 4.5-11, the first sentence under Impact 5.5 is revised as follows:

> Implementation of Alternative A would directly affect approximately 26.938.6 acres of seasonal wetland and vernal pool habitat, which may provide suitable breeding habitat for western spadefoot.

Impact 5.6: Effects to Western Pond Turtle

Page 4.5-11, the first sentence under Impact 5.6 is revised as follows:

> Implementation of Alternative A would include the filling of approximately 9.19.7 acres of seasonal stream channels and drainage ditches, which may provide suitable aquatic habitat for western pond turtle.

Impact 5.8: Effects to Special-Status Wildlife Associated with Annual Grasslands

Page 4.5-13, the first sentence under Impact 5.8 is revised as follows:

> Construction activities under Alternative A would result in the loss of approximately 1,1751,327 acres of annual grassland.

Page 4.5-13, the third paragraph under Impact 5.8 is revised as follows:

> As noted in Impact 5.4, Alternative A includes the preservation of approximately 1,217 1,160 acres of annual grassland habitat. This amounts to a preservation ratio of over 1:10.87:1, which exceeds CDFW mitigation guidance.

Impact 5.9: Effects to Special-Status Plants

Page 4.5-13, the first sentence under Impact 5.9 is revised as follows:

> Implementation of Alternative A would result in the direct loss of approximately 26.938.6 acres of suitable habitat for special-status plants associated with vernal pools.

4.5.2 Alternative B – 2006 Conceptual Land Use Plan Alternative

Pages 4.5-15 to 4.5-20, Impact 5.1 is modified as follows:

Impact 5.1: Effects to Federally Listed Vernal Pool Species and Critical Habitat

Potential direct and indirect effects to suitable habitat for vernal pool species as a result of Alternative B development are summarized in **Figure 4.5-2** and **Table 4.5-5**.

REVISED TABLE 4.5-5
EFFECTS TO HABITAT FOR VERNAL POOL SPECIES – ALTERNATIVE B

Land Use	Direct Effects (Acres)	Indirect Effects (Acres)
Airport Commercial	*6.62*	*~~0.82~~0.20*
Seasonal Wetland	4.11	0.20
Vernal Pools and Swales	2.52	~~0.62~~0.00
Commercial Development	*~~6.50~~7.49*	0.00
Seasonal Wetland	~~3.64~~4.43	0.00
Vernal Pools and Swales	~~2.86~~3.06	0.00
Economic Development	*0.00*	*0.003*
Parks Recreation	*4.85*	*~~0.61~~0.22*
Seasonal Wetland	1.58	~~0.23~~0.16
Vernal Pools and Swales	3.27	~~0.39~~0.06
Roadways and Infrastructure	*~~3.65~~2.35*	*~~4.06~~2.56*
Seasonal Wetland	~~1.39~~0.44	~~0.77~~0.60
Vernal Pools and Swales	~~1.84~~1.64	~~3.29~~1.95
Channels and Streams	~~0.42~~0.26	0.00
~~*Regional Sports Park*~~	~~*6.11*~~	~~*0.01*~~
~~Seasonal Wetland~~	~~5.63~~	~~0.01~~
~~Vernal Pools and Swales~~	~~0.20~~	~~0.00~~
~~Channels and Streams~~	~~0.28~~	~~0.00~~
~~*University Village/Residential*~~[2]	~~*11.91*~~*18.02*	*0.38*
Seasonal Wetland	~~5.82~~11.45	0.15
Vernal Pools and Swales	~~5.90~~6.10	0.23
Channels and Streams	~~0.19~~0.47	0.00
Total	**~~39.65~~39.34**[1]	**~~5.88~~3.36**[1]

1. Totals are approximate and subject to rounding.
2. Formerly Regional Sports Park and University Village/Residential

SOURCE: ESA, 201~~7~~3; Sacramento County, 2013 and 2016.

Development under Alternative B would result in the direct loss of approximately 39.~~65~~34 acres of suitable habitat for vernal pool species. Of these acres, approximately 16.59 acres are classified as vernal pools or swales, with the remainder (~~23.06~~22.75 acres) classified as seasonal wetlands and channels. Furthermore, development under Alternative B would also indirectly affect approximately ~~5.88~~3.36 acres of habitat for

vernal pool species located in the proposed Preserve, "Aavoided Aareas" and atwithin existing land use areas (e.g. Mather Airport and Mather Lake).

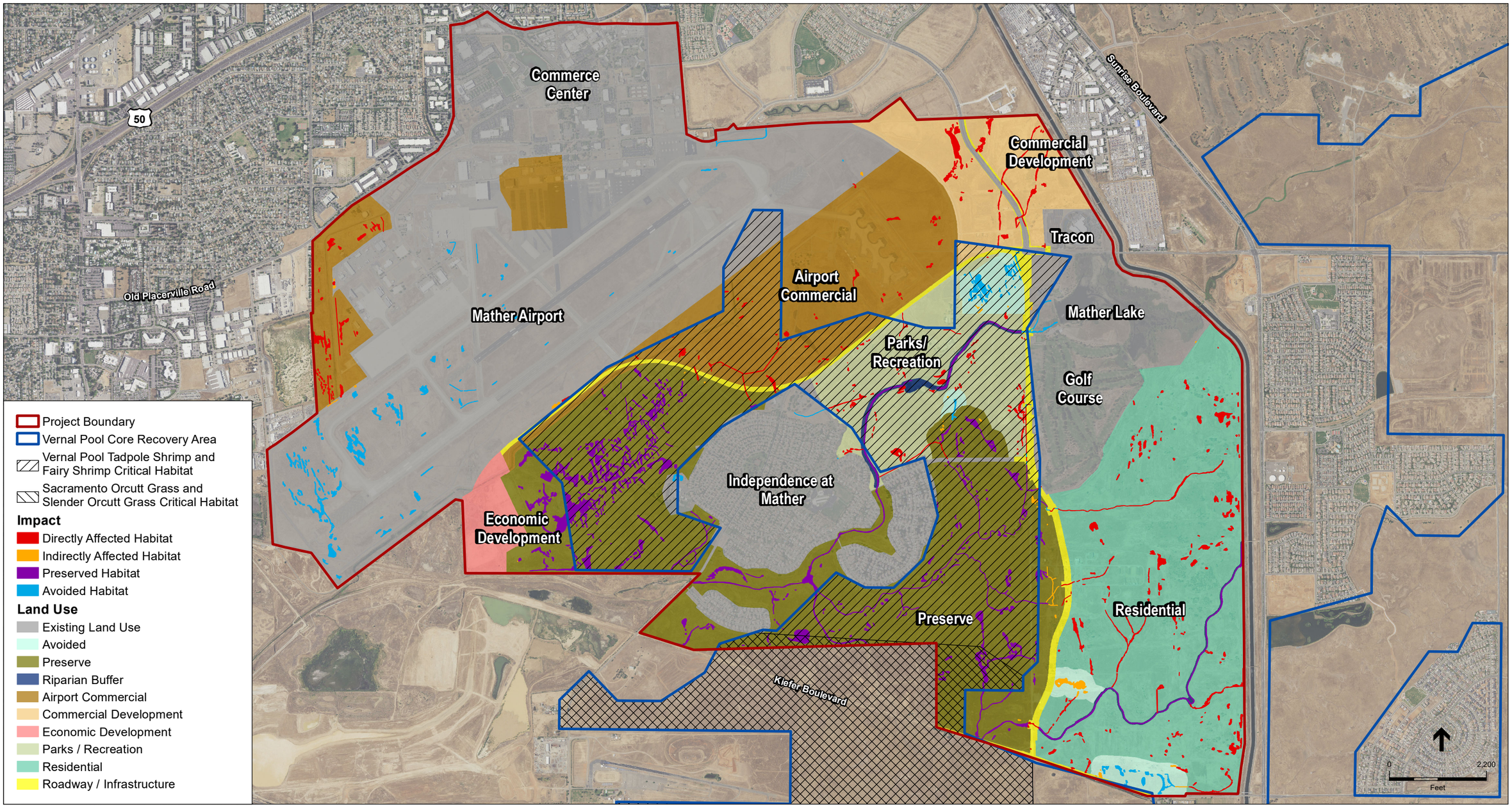
In addition to the these effects, up to 7.6240 acres of critical habitat for vernal pool tadpole shrimp and fairy shrimp would be directly affected and up to 2.440.56 acres of critical habitat would be indirectly affected, as discussed under Impact 5.2, below. No critical habitat for slender Orcutt grass and Sacramento Orcutt grass would be affected by Alternative B.

The direct loss of suitable habitat for these species, including the direct take of species, represents a significant, adverse impact. In addition, the proximity of proposed activities to habitat for vernal pool species presents the possibility of secondary effects as described for Alternative A. Therefore, potential indirect effects to suitable habitat are also considered a significant, adverse impact.

Alternative B also proposes on-site preservation of habitat for vernal pool species, including 57.1083 acres within an on-site Preserve and 6.69 acres within Riparian Buffer areas. This habitat would be protected in perpetuity. When combined, this represents a preservation ratio of 1.4:1 for every acre directly and indirectly affected by activities associated with this alternative. As described previously, wetlands within the proposed Preserve would be preserved and managed in accordance with the South Mather Wetlands Management Plan, dated July 2014, which was approved by that is subject to final approval by the USACE, and USFWS, CDFW and EPA. Nevertheless, without additional compensation and mitigation, the onsite loss of habitat for vernal pool species is considered potentially significant and adverse. Even with recommended mitigation, impacts would remain significant and adverseBecause a final mitigation plan has not been approved by USFWS and USACE, a determination cannot be made on whether the proposed mitigation would reduce these direct and indirect effects to a less than significant level. Therefore, these direct and indirect effects on vernal pool fairy shrimp and vernal pool tadpole shrimp would remain potentially significant and unavoidable. Additionally, proposed preservation is less than, and thus inconsistent with, that discussed in the final Biological Opinion for the disposal of the former Mather Air Force on January 24th, 2012 (Appendix H).

Mitigation Measures

Implement Mitigation Measures 5.1b: Use Best Management Practices (BMPs) to Provide Effective Erosion and Sediment Control, 5.1c: Conduct Worker Awareness Training (WEAP), 5.1d: Limit Project Access Routes/Staging Areas, and 5.1e: Protect Preserved and Avoided Habitats.



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.5-2
Program Level - Potential Effect to Habitat for Vernal Pool Species
Alternative B

This page intentionally left blank

Measure 5.1a: Compensate for the Loss of Habitat for Vernal Pool Species. The project proponent shall identify mitigation acceptable to USFWS (and USACE) for the effects to suitable habitat for federally listed vernal pool invertebrates in such a manner that there will be no net loss of habitat. The project proponent shall complete and implement a wetland mitigation and monitoring plan (MMP) describing how loss of vernal pool and other wetland habitats are proposed to be offset. Compensatory mitigation shall include, where feasible and practicable, establishment, re-establishment, enhancement, rehabilitation, and/or preservation of in-kind wetland habitats at ratios satisfactory to ensure no net loss of habitat functions and services.

The project proponent shall preserve acreage of suitable vernal pool fairy shrimp and vernal pool tadpole shrimp habitat for each wetted acre of any indirectly affected suitable habitat at a ratio approved by USFWS in the Biological Opinion. This mitigation shall occur before the commencement of any construction activities that may adversely affect listed species, as determined by USFWS in the Biological Opinion. ~~The project proponent would provide on-site habitat preservation in perpetuity and purchase habitat creation credits at an USACE and USFWS-approved mitigation bank and/or restore/enhance habitat within the designated Preserve area upon USFWS approval to fully compensate for direct and indirect effects to habitat for federally listed vernal pool species. While final ratios would be determined in consultation with USFWS, it is estimated that compensation would be at a minimum 2:1 preservation ratio and 1:1 creation/restoration/rehabilitation ratio for direct effects to habitat for vernal pool species (39.65 acres) and a 2:1 preservation ratio for indirect effects to habitat for vernal pool species (5.88 acres).~~

~~Alternative B would include 63.79 acres of on-site habitat for vernal pool species preservation and enhancement. Thus, Alternative B would provide on-site preservation for direct and indirect effects at a 1.4:1 ratio.~~

~~To fully compensate for the direct loss of habitat for federally listed vernal pool species, the project proponent would purchase habitat creation credits at an USACE and USFWS-approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval at a minimum 1:1 ratio for direct effects to habitat for vernal pool species. In addition, the project proponent would purchase habitat preservation credits at an USACE and USFWS approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval for the direct and indirect effects to habitat for vernal pool species. Combined with the on-site preservation, this is expected to result in a 2:1 preservation component for direct and indirect effects.~~

~~Habitat compensation for each development area must occur prior to or concurrent with development of that area which is within 250 feet of suitable habitat for vernal pool species. Programmatic compensation requirements for each land use are summarized in **Table 4.5-6**. As noted below, compensation for each land use must be approved by the USACE and USFWS prior to the initiation of construction activities within 250 feet of suitable habitat for vernal pool species.~~

~~Options for habitat compensation are described under Section 4.5.1, Measure 5.1a.~~

~~**TABLE 4.5-6**~~
~~**HABITAT COMPENSATION REQUIREMENTS BY LAND USE TYPE – ALTERNATIVE B**~~

~~Land Use~~	~~Habitat for Vernal Pool Species Compensation: 1:1 Creation (Acres)~~	~~Habitat for Vernal Pool Species Compensation: 0.6:1 Preservation (Acres)~~
~~Airport Commercial~~	~~6.62~~	~~4.46~~
~~Commercial Development~~	~~6.50~~	~~3.90~~
~~Economic Development~~	~~0.00~~	~~0.00~~
~~Parks Recreation~~	~~4.85~~	~~3.27~~
~~Roadways and Infrastructure~~	~~3.65~~	~~4.62~~
~~Regional Sports Park~~	~~6.11~~	~~3.66~~
~~University Village/Residential~~	~~11.91~~	~~7.36~~
~~**Total**~~	~~**39.65**~~	~~**27.27**~~

~~SOURCE: ESA, 2013; Sacramento County, 2013~~

Pages 4.5-20 to 4.5-21, Impact 5.2 is modified as follows:

Impact 5.2: Potential to Conflict with provisions of the USFWS Vernal Pool Recovery Plan

As discussed previously, the project site is located within the Mather Core Area of the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005) which is a Zone 1 core area having the highest priority for recovery. See Section 4.5.1, Impact Discussion 5.2 for details on the specific conservation goals of the Recovery Plan.

Alternative B includes substantial preservation of habitat for vernal pool species. **Tables 4.5-7A and B** summarize the effects of Alternative B on suitable habitat for vernal pool species within the Mather Core Area of the project site. Approximately ~~44.55~~46.20 acres of suitable habitat for vernal pool species within the Mather Core Area would be located within the Preserve and Riparian Buffer and protected in perpetuity ~~within the action area~~ (**Figure 4.5-2**) under this alternative. This corresponds to 80 percent of the suitable habitat for vernal pool species within the Mather Core Area of the project site. An additional ~~2.81~~ 4.14 acres would be avoided by Alternative B through designation of "Avoided A~~a~~reas". "Avoided A~~a~~reas" would not be disturbed during construction but no active management is currently proposed. ~~Combined, there would be 49.80 acres that would be preserved or avoided within the Mather Core Area. This corresponds to 87 percent of the suitable habitat for vernal pool species within the Mather Core Area.~~ However, some of ~~this~~the preserved and avoided habitat (7.96 acres) may be directly or indirectly affected by adjacent proposed land use~~s~~ areas outside of the Preserve and "Avoided Areas". ~~**Table 4.5-7** summarizes the effects of Alternative B on suitable habitat for vernal pool species within the Mather Core Area.~~

~~**TABLE 4.5-7**~~
~~**EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE B**~~

~~Habitat Type~~	~~Total in Mather Recovery Area (Acres)~~	~~Directly Affected (Acres)~~	~~Potentially Indirectly Affected (Acres)~~	~~Preserved/ Avoided Habitat (Acres) / Percent[1]~~	~~Preserved/ Avoided Habitat which is not Indirectly Impacted (Acres) / Percent[2]~~
~~Vernal Pools and Swales~~	~~41.96~~	~~4.87~~	~~1.75~~	~~37.08 / 88%~~	~~35.33 / 84%~~
~~Seasonal Wetlands~~	~~9.94~~	~~2.57~~	~~0.69~~	~~7.37 / 74%~~	~~6.68 / 67%~~
~~Ephemeral and Intermittent Channels~~	~~5.52~~	~~0.18~~	~~0.00~~	~~5.34 / 97%~~	~~5.34 / 97%~~
~~**Total**~~	~~**57.42**~~	~~**7.62**~~	~~**2.44**~~	~~**49.80 / 87%**~~	~~**47.36 / 82%**~~

~~1 Habitat within the Mather Core Area that is not directly impacted.~~
~~2 Habitat within the Mather Core Area that is 1) not directly impacted and 2) not indirectly affected (i.e. for vernal pools, vernal swales and seasonal wetlands at least 250 feet from proposed land disturbance..~~

~~3 Totals subject to rounding~~

~~SOURCE: ESA, 2013; Sacramento County, 2013~~

REVISED TABLE 4.5-7A
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE B

Habitat Type	Total Acreage in Mather Recovery Area	Directly Affected (Acres)	Indirectly Affected (Acres)	Avoided	Preserve and Riparian Buffer (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	4.87	0.09	3.49	33.51	80%
Seasonal Wetlands	9.94	2.42	0.47	0.58	6.47	65%
Ephemeral and Intermittent Channels	5.52	0.11	0.00	0.07	5.34	97%
Total[2]	**57.42**	**7.40**	**0.56**	**4.14**	**45.32**	**79%**

1 Acreage of suitable habitat within the Preserve and Riparian Buffer and in the Mather Core Area which is not directly or indirectly affected (250 feet from adjacent development or feature's watershed avoided).
2 Totals subject to rounding.

SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

REVISED TABLE 4.5-7B
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE B

Habitat Type	Total Acreage in Mather Recovery Area	Habitat Located within Preserve and Riparian Buffer including Affected Habitat (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	33.96	81%
Seasonal Wetlands	9.94	6.90	69%
Ephemeral and Intermittent Channels	5.52	5.34	97%
Total[2]	**57.42**	**46.20**	**80%**

1 Acreage of all suitable habitat located within the Preserve and Riparian Buffer boundaries and in the Mather Core Area, including directly and indirectly affected habitat.
2 Totals subject to rounding.

SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

Alternative B would preserve suitable habitat for those species targeted for protection within the Mather Core Area, with the majority of that being high functioning habitat for vernal pool species. Furthermore, some of this habitat is expected to be ~~restored and/or~~ enhanced, thereby increasing habitat suitability for these species. Nevertheless, without mitigation, Alternative B would conflict with the goals of the recovery plan, as it would fail to protect at least 85 percent of the existing habitat for vernal pool species within the Mather Core Area. Approximately ~~1.45~~2.61 acres of additional habitat would need to be preserved within the Mather Core Area to meet the goals of the recovery plan. This is a significant and adverse impact. In addition, while mitigation is recommended to compensate for this impact (see below), the feasibility of this measure cannot be demonstrated ~~at this time~~ as there are no ~~USACE or~~ USFWS (or USACE) approved mitigation banks within the Mather Core Area at this time. Therefore, this impact would remain significant and adverse.

Mitigation Measures

Measure 5.2: Preserve, Restore or Enhance Additional Habitat for Vernal Pool Species. Additional habitat for vernal pool species (approximately ~~1.45~~2.61 acres) would be preserved or restored/enhanced within the Mather Core Area to meet the 85% minimum goals of the recovery plan. Preservation or restoration/enhancement ~~may occur within or outside of the project site, but~~ must occur within the designated boundaries of the Mather Core Area. Preservation would take the form of either purchasing mitigation credits from a ~~USACE and~~ USFWS approved mitigation bank or through conservation easements and an endowment of preservation lands within the Mather Core Area. As noted above, there are no USFWS ~~and~~(or USACE) approved mitigation banks that have available credits within the Mather Core Area. Proposed restoration/enhancement plans, including associated land use restrictions, would require approval from the USFWS and USACE. Proof of preservation, restoration or enhancement must be provided to the ~~USACE and USFWS~~ USFWS and USACE prior to project construction within 250 feet of suitable habitat for vernal pool species in the Mather Core Area.

Page 4.5-22, Table 4.5-8 is revised as follows:

REVISED TABLE 4.5-8
EFFECTS TO VEGETATION AND HABITATS – ALTERNATIVE B

Habitat Type	Existing (Acres)	Affected (Acres)	Percent Affected
Annual Grassland	2775.8	1,429.0	51.5%
Cottonwood Woodland	72.7	72.7	100.0%
Disturbed / Ruderal	87.3	53.3	61.1%
Drainage Ditch (Riverine)	2.5	1.4	56.0%
Lake / Pond (Lacustrine)	40.9	0.0	0.0%
Recreation / Landscaped	216.7	2.9	1.3%
Seasonal Wetland	61.53	21.~~6~~4	35.1%
Stream Channel (Riverine)	29.9	8.~~4~~0	28.1%
Urban/Developed	2,373.6	411.0	17.3 %
Valley Foothill Riparian	14.4	0.0	0.0%
Vernal Pool and Vernal Swale	73.9	16.~~3~~2	22.1%
Total	**5,749.4**	**2,01~~6.6~~5.9**	**35.1%**

SOURCE: ESA, 201~~7~~3; Sacramento County, 2013 and 2016.

Impact 5.5: Effects to Western Spadefoot

Page 4.5-23, the first sentence under Impact 5.5 is revised as follows:

> Implementation of Alternative B would include filling approximately 37.~~9~~6 acres of seasonal wetland and vernal pool habitat, which may provide suitable breeding habitat for this species.

Impact 5.6: Effects to Western Pond Turtle

Page 4.5-23, the first sentence under Impact 5.6 is revised as follows:

> Implementation of Alternative B would include filling approximately 9.~~8~~4 acres of seasonal stream channels and drainage ditches, which may provide suitable nesting habitat for western pond turtle.

Impact 5.9: Effects to Special-Status Plants

Page 4.5-24, the first sentence under Impact 5.9 is revised as follows:

> Implementation of Alternative B would result in the direct loss of approximately 37.~~9~~6 acres of suitable habitat for special-status plants associated with vernal pools.

4.5.3 Alternative C – Multiple Preserves Alternative

Pages 4.5-24 to 4.5-29, Impact 5.1 is modified as follows:

Impact 5.1: Effects to Federally Listed Vernal Pool Species and Critical Habitat

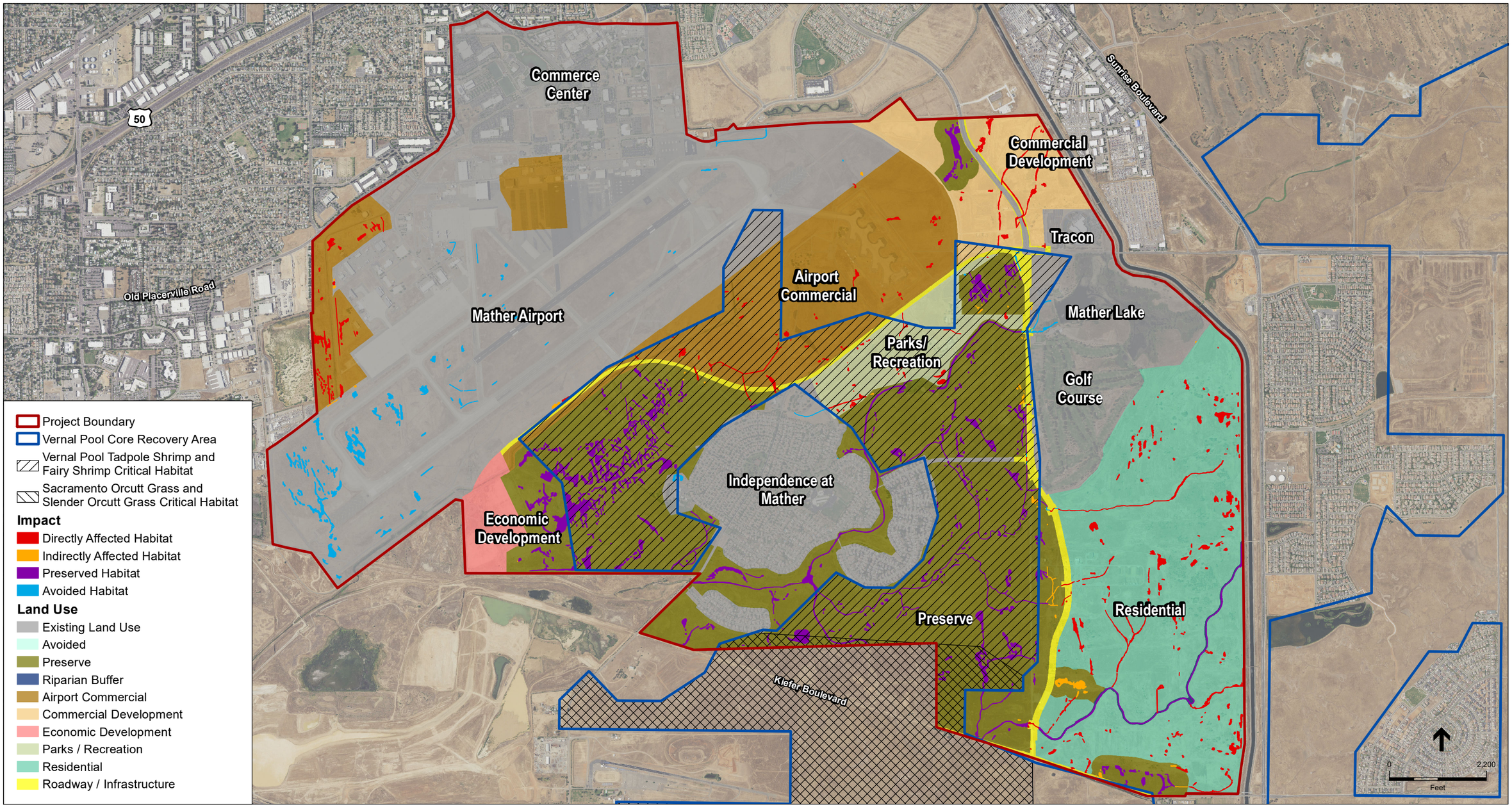
> Alternative C would result in direct and indirect effects to suitable habitat for these species as well as the known populations. Potential direct and indirect effects to suitable habitat for vernal pool species as a result of Alternative C development are summarized in **Table 4.5-9** and **Figure 4.5-3**.
>
> Development under Alternative C would result in the direct loss of approximately ~~33.59~~32.69 acres of suitable habitat for vernal pool species. Of these acres, approximately 11.~~85~~32 acres are classified as vernal pools or swales, with the remainder (21.~~74~~37 acres) classified as seasonal wetlands and channels. Furthermore, development under Alternative C would also indirectly affect approximately ~~8.80~~3.56 acres of habitat for vernal pool species located in the proposed Preserves and ~~at~~ within existing land use areas (e.g. Mather Airport and Mather Lake).
>
> In addition to ~~the~~ these effects, up to 4.17~~98~~ acres of critical habitat for vernal pool tadpole shrimp and fairy shrimp would be directly affected and up to 0.75~~2.89~~ acres of critical habitat would be indirectly affected. No critical habitat for slender Orcutt grass and Sacramento Orcutt grass would be affected by Alternative C.

REVISED TABLE 4.5-9
EFFECTS TO HABITAT FOR VERNAL POOL SPECIES – ALTERNATIVE C

Land Use	Direct Effects (Acres)	Indirect Effects (Acres)
Airport Commercial	*6.62*	*~~0.82~~0.20*
Seasonal Wetland	4.11	0.20
Vernal Pools and Swales	2.52	~~0.62~~0.00
Commercial Development	*~~3.38~~4.37*	*0.00*
Seasonal Wetland	~~3.11~~3.91	0.00
Vernal Pools and Swales	~~0.27~~0.46	0.00
Economic Development	*0.00*	*0.00~~3~~*
Parks Recreation	*1.92*	*~~0.52~~0.12*
Seasonal Wetland	0.79	~~0.14~~0.07
Vernal Pools and Swales	1.13	~~0.38~~0.05
Roadways and Infrastructure	*~~3.65~~1.76*	*~~7.08~~2.85*
Seasonal Wetland	~~1.39~~0.44	~~1.11~~0.64
Vernal Pools and Swales	~~1.84~~1.11	~~5.96~~2.21
Channels and Streams	~~0.42~~0.20	0.00
~~*Regional Sports Park*~~	~~*6.11*~~	~~*0.01*~~
~~Seasonal Wetland~~	~~5.63~~	~~0.01~~
~~Vernal Pools and Swales~~	~~0.20~~	~~0.00~~
~~Channels and Streams~~	~~0.28~~	~~0.00~~
~~*University Village/*~~*Residential*[2]	*~~11.91~~18.02*	*0.38*
Seasonal Wetland	~~5.82~~11.45	0.15
Vernal Pools and Swales	~~5.90~~6.10	0.23
Channels and Streams	~~0.19~~0.47	0.00
Total	**~~33.59~~32.69**[1]	**~~8.80~~3.56**[1]

1. Totals are approximate and subject to rounding.
2. Formerly Regional Sports Park and University Village/Residential

SOURCE: ESA, 201~~3~~7; Sacramento County, 2013 and 2016.



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.5-3
Program Level - Potential Effect to Habitat for Vernal Pool Species
Alternative C

This page intentionally left blank

As with Alternatives A and B, the direct loss of suitable habitat for these species, including the direct take of species, represents a significant, adverse impact. In addition, the proximity of proposed activities to habitat for vernal pool species presents the possibility of secondary effects as described for Alternatives A and B. Therefore, potential indirect effects to suitable habitat are also considered a significant, adverse impact.

Alternative C also proposes on-site preservation of habitat for vernal pool species, including ~~67.85~~72.69 acres within on-site Preserves and 3.58 acres within Riparian Buffer areas, which would not be directly or indirectly affected by surrounding development. This habitat would be protected in perpetuity. Proposed preservation is greater than, and thus consistent with, that discussed in the final Biological Opinion for the disposal of the former Mather Air Force on January 24th, 2012 (Appendix H).~~When combined, this represents a preservation ratio of 1.7:1 for every acre directly and indirectly affected by activities associated with this alternative.~~

As described previously, wetlands within the proposed Preserves would be preserved and managed in accordance with the South Mather Wetlands Management Plan, dated July 2014, which was approved by ~~that is subject to final approval by the~~ USACE~~,~~ and USFWS~~, CDFW and EPA. Nevertheless, without additional compensation and mitigation, t~~The onsite loss of habitat for vernal pool species is considered significant and adverse. With ~~recommended~~proposed mitigation, it is anticipated that impacts would be reduced to a less-than-significant level. The USACE would review the specific mitigation measures to make a final determination prior to authorizing proposed activities associated with Alternative C.

Mitigation Measures

Implement Mitigation Measures 5.1b: Use Best Management Practices (BMPs) to Provide Effective Erosion and Sediment Control, 5.1c: Conduct Worker Awareness Training (WEAP), 5.1d: Limit Project Access Routes/Staging Areas, and 5.1e: Protect Preserved and Avoided Habitats.

Measure 5.1a: Compensate for the Loss of Habitat for Vernal Pool Species. The project proponent would provide on-site habitat preservation in perpetuity ~~and purchase habitat creation credits at an USACE and USFWS approved mitigation bank and/or restore/enhance habitat within the designated Preserve areas~~ upon USFWS approval to fully compensate for direct and indirect effects to habitat for federally listed vernal pool species. The Preserve would be 1,343 acres in size, and is described in detail in Section 2.3.1.7 of the FEIS.~~While final ratios would be determined in consultation with USFWS, it is estimated that compensation would be at a minimum 2:1 preservation ratio and 1:1 creation ratio for direct effects to habitat for vernal pool species (33.59 acres) and a 2:1 preservation ratio for indirect effects to habitat for vernal pool species (8.80 acres).~~

~~Alternative C would include 71.43 acres of on-site habitat for vernal pool species preservation and enhancement. Thus, Alternative C would provide on-site preservation for direct and indirect effects at a 1.7:1 ratio. The level of on-site~~

~~creation, restoration and/or rehabilitation proposed by the Wetland Management Plan has not yet been quantified.~~

~~To fully compensate for the direct loss of habitat for federally listed vernal pool species, the project proponent would purchase habitat creation credits at an USACE and USFWS-approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval at a minimum 1:1 ratio for direct effects to habitat for vernal pool species. In addition, the project proponent would purchase habitat preservation credits at an USACE and USFWS approved mitigation bank and/or create/restore/rehabilitate habitat within the designated Preserve areas upon USFWS approval for the direct and indirect effects to habitat for vernal pool species. Combined with the on-site preservation, this is expected to result in a 2:1 preservation component for direct and indirect effects.~~

~~Habitat compensation for each development area must occur prior to or concurrent with~~ The project proponent will record a USFWS-approved conservation easement for the Preserve prior to development ~~of that area~~ within 250 feet of suitable habitat for vernal pool species. ~~Programmatic compensation requirements for each land use are summarized in **Table 4.5-10**. As noted below, compensation for each land use must be approved by the USACE and USFWS prior to the initiation of construction activities within 250 feet of suitable habitat for vernal pool species.~~

~~Options for habitat compensation are described under Section 4.5.1, Measure 5.1a.~~

~~**TABLE 4.5-10**~~
~~**HABITAT COMPENSATION REQUIREMENTS BY LAND USE TYPE – ALTERNATIVE C**~~

~~Land Use~~	~~Habitat for Vernal Pool Species Compensation: 1:1 Creation (Acres)~~	~~Habitat for Vernal Pool Species Compensation: 0.3:1 Preservation (Acres)~~
~~Airport Commercial~~	~~6.62~~	~~2.35~~
~~Commercial Development~~	~~3.38~~	~~1.07~~
~~Economic Development~~	~~0.00~~	~~0.00~~
~~Parks Recreation~~	~~1.92~~	~~0.77~~
~~Roadways and Infrastructure~~	~~3.65~~	~~3.38~~
~~Regional Sports Park~~	~~6.11~~	~~1.93~~
~~University Village/Residential~~	~~11.91~~	~~3.87~~
~~**Total**~~	~~**33.59**~~	~~**13.37**~~

~~SOURCE: ESA, 2013; Sacramento County, 2013~~

Pages 4.5-29 to 4.5-30, Impact 5.2 is modified as follows:

Impact 5.2: Potential to Conflict with provisions of the USFWS Vernal Pool Recovery Plan

As discussed previously, the project site is located within the Mather Core Area of the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005), which is a Zone 1 core area having the highest priority for recovery.

Tables 4.5-11A and B summarize the effects of Alternative C on suitable habitat for vernal pool species within the Mather Core Area. Approximately 52.9544 acres of suitable habitat for vernal pool species within the Mather Core Area would be located within the Preserve and protected in perpetuity within the project site under Alternative C (**Figure 4.5-3**). This corresponds to 921 percent of the suitable habitat for vernal pool species within the Mather Core Area of the project site. However, some of this habitat (0.90 acre) may be directly or indirectly affected by construction and/or operation of adjacent proposed land uses areas outside of the Preserve. **Table 4.5-11** summarizes the effects of Alternative C on suitable habitat for vernal pool species within the Mather Core Area.

TABLE 4.5-11
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE C

Habitat Type	Total in Mather Recovery Area (Acres)	Directly Affected (Acres)	Potentially Indirectly Affected (Acres)	Preserved/ Avoided Habitat (Acres) / Percent[1]	Preserved/ Avoided Habitat which is not Indirectly Impacted (Acres) / Percent[2]
Vernal Pools and Swales	41.96	2.86	2.01	39.10 / 93%	37.09/ 88%
Seasonal Wetlands	9.94	1.95	0.88	7.99 / 80%	7.11 / 72%
Ephemeral and Intermittent Channels	5.52	0.18	0	5.34/ 97%	5.34 / 97%
Total	**57.42**	**4.98**	**2.89**	**52.44/ 91%**	**49.54 / 86%**

1 Habitat within the Mather Core Area that is not directly impacted.
2 Habitat within the Mather Core Area that is 1) not directly impacted and 2) not indirectly affected (i.e. for vernal pools, vernal swales and seasonal wetlands at least 250 feet from proposed land disturbance.
3 Totals subject to rounding
SOURCE: ESA, 2013; Sacramento County, 2013

REVISED TABLE 4.5-11A
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE C

Habitat Type	Total Acreage in Mather Recovery Area	Directly Affected (Acres)	Indirectly Affected (Acres)	Avoided	Preserved (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	2.33	0.34	0.00	39.29	94%
Seasonal Wetlands	9.94	1.80	0.42	0.37	7.35	74%
Ephemeral and Intermittent Channels	5.52	0.05	0.00	0.07	5.41	98%
Total[2]	**57.42**	**4.17**	**0.75**	**0.44**	**52.05**	**91%**

1 Acreage of suitable habitat within the Preserve and in the Mather Core Area which is not directly or indirectly affected (250 feet from adjacent development or feature's watershed avoided).
2 Totals subject to rounding.
SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

REVISED TABLE 4.5-11B
EFFECTS TO MATHER RECOVERY AREA HABITAT – ALTERNATIVE C

Habitat Type	Total Acreage in Mather Recovery Area	Habitat Located within Preserve including Affected Habitat (Acres) / (Percent)[1]	
Vernal Pools and Swales	41.96	39.72	95%
Seasonal Wetlands	9.94	7.84	79%
Ephemeral and Intermittent Channels	5.52	5.39	98%
Total[2]	**57.42**	**52.95**	**92%**

1 Acreage of all suitable habitat located within the Preserve boundaries and in the Mather Core Area, including directly and indirectly affected habitat.
2 Totals subject to rounding.

SOURCE: ESA, 2017; Sacramento County, 2013 and 2016.

As shown in **Table 4.5-11**, Alternative C would protect suitable habitat for those species targeted for protection within the Mather Core Area, with the majority of that being high quality habitat for vernal pool species. Furthermore, some of this habitat is expected to be restored and/or enhanced, thereby increasing habitat suitability for these species. Based on this evaluation, Alternative C would be consistent with the goals of the USFWS recovery plan for vernal pool species as it protects at least 85% of the habitat for vernal pool species within the Mather Core Area. Thus, this impact is considered less-than-significant.

Page 4.5-31, Table 4.5-12 is revised as follows:

REVISED TABLE 4.5-12
EFFECTS TO VEGETATION AND HABITATS – ALTERNATIVE C

Habitat Type	Existing (Acres)	Affected (Acres)	Percent Affected
Annual Grassland	2,784.6	1,262.0	45.3%
Cottonwood Woodland	73.3	72.7	99.2%
Disturbed / Ruderal	87.3	53.3	61.1%
Drainage Ditch (Riverine)	2.5	1.4	56.0%
Lake / Pond (Lacustrine)	46.3	0.0	0.0%
Recreation / Landscaped	216.7	2.9	1.3%
Seasonal Wetland	52.6	20.02	38.04%
Stream Channel (Riverine)	24.5	8.03	32.733.9%
Urban/Developed	2,374.6	410.3	17.3%
Valley Foothill Riparian	14.4	0.0	0.0%
Vernal Pool and Vernal Swale	72.6	11.2	15.4%
Total	**5,749.4**	**1841.82.4**	**32.0%**

SOURCE: ESA, 20172012; Sacramento County, 2013 and 2016.

Impact 5.5: Effects to Western Spadefoot

Page 4.5-31, the first sentence under Impact 5.5 is revised as follows:

> Implementation of Alternative C would include filling approximately 31.2~~4~~ acres of seasonal wetland and vernal pool habitat, which may provide suitable breeding habitat for this species.

Impact 5.6: Effects to Western Pond Turtle

Page 4.5-32, the first sentence under Impact 5.6 is revised as follows:

> Implementation of Alternative C would include filling approximately 9.4~~7~~ acres of seasonal stream channels and drainage ditches, which may provide suitable nesting habitat for western pond turtle.

Impact 5.9: Effects to Special-Status Plants

Page 4.5-32, the first sentence under Impact 5.9 is revised as follows:

> Implementation of Alternative C would result in the direct loss of approximately 31.2~~4~~ acres of suitable habitat for special-status plants associated with vernal pools.

References

Page 4.5-33, the following reference has been added:

Friesen, Tyler (Dudek). Memorandum to USFWS regarding SSHCP Vernal Pool Watershed Analysis using LIDAR Data. February 6, 2014.

Madrone, 2016. Mather Specific Plan Project Revised Biological Assessment, Control Number: 2006-0151; December 22, 2016.

Section 4.6 Aquatic Resources

4.6.1 Alternative A –Applicant's Preferred Alternative

Pages 4.6-1 to 4.6-6, Impact 6.1 is modified as follows:

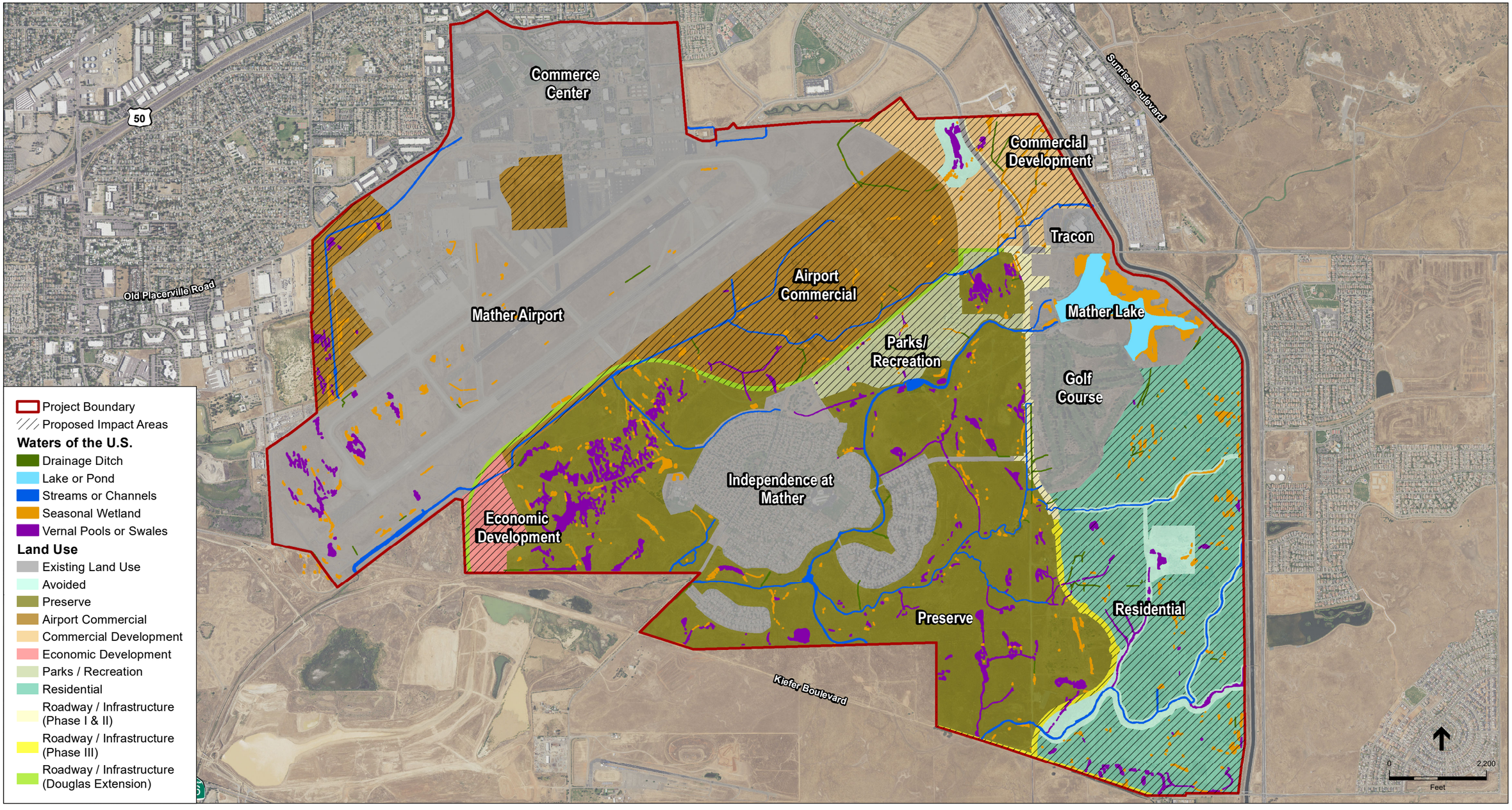
Impact 6.1: Effects to Wetlands and Other Waters of the U.S.

> Approximately ~~48.28~~35.66 acres of jurisdictional waters of the U.S. within the project site would be filled under Alternative A. Impacted features would include approximately 9.15~~17.47~~ acres of vernal pools and swales, 17.65~~21.15~~ acres of seasonal wetland, 1.18 acres of drainage ditches, and 7.69~~8.29~~ acres of ephemeral and intermittent stream channels. A subset of these impacts is attributed to the Phase I/II Roadway and Infrastructure project. Based on the project-level Section 404 permit application, the Applicant proposes 0.176 acre of direct impact to waters of the U.S. and 0.180 acre of temporary impacts. Unlike impacts calculated for vernal pool habitats (see Section 4.5), only those jurisdictional areas that are proposed for fill under Alternative A are included in

these values. Indirect impacts to jurisdictional waters of the U.S. are discussed in detail in Section 4.3 (Hydrology, Water Quality, and Flooding) and Section 4.5 (Biological Resources), as well as Mitigation Measures 5.1b and 5.1c. Potential effects associated with each land use under Alternative A are summarized in **Table 4.6-1** and **Figure 4.6-1**.

The ~~U.S. Army Corps of Engineers (~~USACE~~)~~ considers the functions and services of the wetlands and other waters that would be eliminated or degraded, the functions and services of waters on proposed mitigation sites, and the likelihood of success of proposed mitigation when considering compensatory mitigation for impacts. The purpose of compensatory mitigation is to develop long-term self-sustaining waters that are not dependent on human intervention after the establishment period. In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services. Compensatory mitigation may be achieved through restoration, enhancement, establishment, and in certain circumstances preservation. Restoration is generally favored because the likelihood of success is greater, the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation (33 CFR §332.3).

The amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratio is required~~used~~.
A mitigation ratio greater than one-to-one may be necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site (33 CFR §332.3). Alternative A includes on-site preservation of approximately ~~75.66~~76.90 acres of wetlands and other waters of the U.S. within the on-site Preserve~~ and Riparian Buffer areas~~. Approximately 11.53 acres of wetlands and other waters of the U.S. would also be located in "Avoided Areas" or are designated as avoided within the project-level Section 404 permit application for the Phase I/II Roadway and Infrastructure project. "Avoided Areas" would not be disturbed during construction but no active management is proposed as described in **Section 2.3.1.7**. On-~~-~~site preservation is summarized in **Table 4.6-2**~~,~~ ~~while **Table 4.6-3** summarizes the preservation ratio for each impacted water type.~~ On-site preservation of wetlands and other waters of the U.S., and designated "Avoided Areas" containing wetlands and other waters of the U.S. do not represent compensatory mitigation for proposed impacts to waters of the U.S., however these areas are considered in the USACE's program-level analysis of avoidance and minimization in regards to the proposed project's compliance with U.S. EPA's 404(b)(1) Guidelines.



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.6-1
Potentially Affected Waters of the U.S.
Alternative A

This page intentionally left blank

REVISED TABLE 4.6-1
PROPOSED EFFECTS TO WATERS OF THE U.S. - ALTERNATIVE A

Proposed Land Use	Type Affected	Acres Affected[1]
Airport Commercial	Drainage Ditch	0.31
	Channels and Streams	5.67
	Seasonal Wetland	4.02
	Vernal Pools and Swales	3.33
Subtotal		**13.33**
Commercial Development	Drainage Ditch	0.22
	Channels and Streams	0.62
	Seasonal Wetland	~~4.17~~3.89
	Vernal Pools and Swales	~~3.06~~0.46
Subtotal		**~~8.06~~5.19**
Economic Development	Drainage Ditch	0.01
	Channels and Streams	0.~~37~~32
Subtotal		**0.~~37~~32**
Parks Recreation	Drainage Ditch	0.01
	Channels and Streams	0.52
	Seasonal Wetland	~~0.79~~0.28
	Vernal Pools and Swales	~~1.13~~0.20
Subtotal		**~~2.47~~1.01**
Roadways/Infrastructure	Drainage Ditch	~~0.33~~0.08
	Channels and Streams	~~0.53~~0.36
	Seasonal Wetland	~~0.53~~0.20
	Vernal Pools and Swales	~~0.20~~0.26
Subtotal		**~~1.58~~0.91**
~~Regional Sports Park~~	~~Drainage Ditch~~	~~0.27~~
	~~Channels and Streams~~	~~0.28~~
	~~Seasonal Wetland~~	~~5.63~~
	~~Vernal Pools and Swales~~	~~0.20~~
~~**Subtotal**~~	~~-~~	~~**6.38**~~
~~University Village/~~Residential[2]	Drainage Ditch	~~0.24~~0.55
	Channels and Streams	~~0.30~~0.20
	Seasonal Wetland	~~6.01~~9.25
	Vernal Pools and Swales	~~9.56~~4.90
Subtotal		**~~16.10~~14.90**
TOTAL		**~~48.28~~35.66**

1 Totals are approximate and subject to rounding.
2 Formerly Regional Sports Park and University Village/Residential

SOURCE: ESA, 2017~~3~~; Sacramento County, 2013 and 2016.

REVISED TABLE 4.6-2
PROPOSED ON-SITE PRESERVATION - ALTERNATIVE A

Proposed Land Use	Type Preserved	Acres Preserved[1]
Preserve	Drainage Ditch	0.63
	~~Open Water~~	~~2.10~~
	Other Waters (Channels and Streams)	~~9.99~~12.27
	Seasonal Wetland	~~10.21~~12.02
	Vernal Pools and Swales	~~49.25~~51.98
~~Subtotal~~**Total**		~~**72.18**~~**76.90**
~~Riparian Buffer~~	~~Channels and Streams~~	~~3.46~~
	~~Seasonal Wetland~~	~~0.001~~
	~~Vernal Pools and Swales~~	~~0.01~~
~~**Subtotal**~~	~~-~~	~~**3.48**~~
~~**TOTAL:**~~		~~**75.66**~~

1 Totals are approximate and subject to rounding.
SOURCE: ESA, ~~2013~~2017; Sacramento County, 2013 and 2016

~~**TABLE 4.6-3**~~
~~**PROPOSED PRESERVATION TO IMPACT RATIO - ALTERNATIVE A**~~

~~**Impacted Waters**~~	~~**Acres**[1]~~	~~**Preserved Waters**~~	~~**Acres**[1]~~	~~**Preservation to Impact Ratio**~~
~~Drainage Ditch~~	~~1.37~~	~~Drainage Ditch~~	~~0.63~~	~~0.5:1~~
~~Channels and Streams~~	~~8.29~~	~~Channels and Streams~~	~~13.45~~	~~1.6:1~~
~~Seasonal Wetland~~	~~21.15~~	~~Seasonal Wetland~~	~~10.21~~	~~0.5:1~~
~~Vernal Pools and Swales~~	~~17.47~~	~~Vernal Pools and Swales~~	~~49.27~~	~~2.8:1~~
~~Open Water~~	~~0.00~~	~~Open Water~~	~~2.10~~	~~n/a~~
~~**TOTAL:**~~	~~**48.28**~~		~~**75.66**~~	~~**1.6:1**~~

~~1 Totals are approximate and subject to rounding.~~
~~SOURCE: ESA, 2013; Sacramento County, 2013~~

~~Based upon the calculations summarized in **Table 4.6-3**,~~ Alternative A ~~would include on-site preservation of 1.6 times the acreage impacted by site development. Furthermore, it~~ would preserve the highest functioning waters on the project site according to the results of the Natural Resource Assessment described in **Section 3.5**. This includes the preservation of most Rank 4 and 5 features~~, and a 2.8:1 preservation of vernal pool and swale features, which typically have the highest functions and services~~.

As described in **Chapter 2.0**, wetlands within the on-site Preserve would be actively managed in accordance with ~~a~~ the South Mather Wetlands Management Plan, dated July 2014, that was approved ~~that is subject to final approval~~ by the USACE, and United States Fish and Wildlife Service (USFWS)~~, California Department of Fish and Game (CDFG) and Environmental Protection Agency (EPA)~~. Nevertheless, ~~without additional compensation,~~ the on-site loss of ~~48.28~~35.66 acres of wetlands and other waters of the U.S. is considered a significant, adverse impact.

Mitigation for impacts to vernal pool wetlands within the Mather Core Recovery Area must be consistent with the Sunridge Record of Decision (ROD). The USACE would assess the project-specific appropriateness of the mitigation proposal as part of each permit application's evaluation. The findings of the Sunridge ROD state the following:

> "The Corps recognizes the significant cumulative loss of vernal pool wetlands within the Mather Core Recovery Area. For future unavoidable impacts to vernal pool wetlands within the Mather Core Recovery Area, including those associated with the Arista del Sol project, compensatory mitigation shall be:
>
> 1) based on a method for assessing the functions of all waters of the U.S. on the project site;
>
> 2) accomplished at a ratio of greater than 1:1, after considering direct and indirect impacts, temporal loss and difficulties creating vernal pool wetlands; and
>
> 3) located in the Mather Core Recovery Area, unless determined impracticable or inappropriate by the Corps."

Mitigation Measures

Implement Mitigation Measures 5.1a: Compensate for Loss of Vernal Pool Habitat, 5.1b: Use Best Management Practices (BMPs) to Provide Effective Erosion and Sediment Control, 5.1c: Conduct Worker Environmental Awareness Training (WEAP), 5.1d: Limit Project Access Routes/Staging Areas and 5.1e: Protect Preserved and Avoided Habitats. As Mitigation Measure 5.1a addresses only aquatic resources which contain habitat suitable for vernal pool species, the following mitigation is necessary to ensure no net loss overall of jurisdictional waters of the U.S.

Measure 6.1: Fully Compensate for the Loss of Waters of the U.S.: The project proponent would ensure that any loss of waters of the U.S. would be compensated for by restoration or creation of waters at a ratio no less than 1:1, prior to the filling of any jurisdictional waters of the U.S within that phase of the project. Compensation for loss of vernal pool wetlands within the Mather Core Recovery Area would occur at a ratio of greater than 1:1, consistent with the requirements of the Sunridge ROD described above. Compensation may include ~~on or~~ 1)off-site creation, restoration, or enhancement~~,~~; 2) on-site enhancement consistent with the approved South Mather Wetlands Management Plan; or 3) purchase of appropriate credits from a Corps-approved mitigation bank. ~~On-site or o~~Off-site creation/restoration plans would be prepared by a qualified biologist prior to the filling of any jurisdictional waters of the U.S and approved by the Corps. ~~On- or o~~Off-site creation/ restoration sites would be monitored for at least five years to ensure their success. Any on-site mitigation-related activity must be conducted in compliance with the approved South Mather Wetlands Management Plan, applicable agency notification, authorization, and permit requirements including notification requirements for the upcoming year's proposed management activities, and subject to input by the applicable agencies on an annual basis.

4.6.2 Alternative B – 2006 Conceptual Land Use Plan Alternative

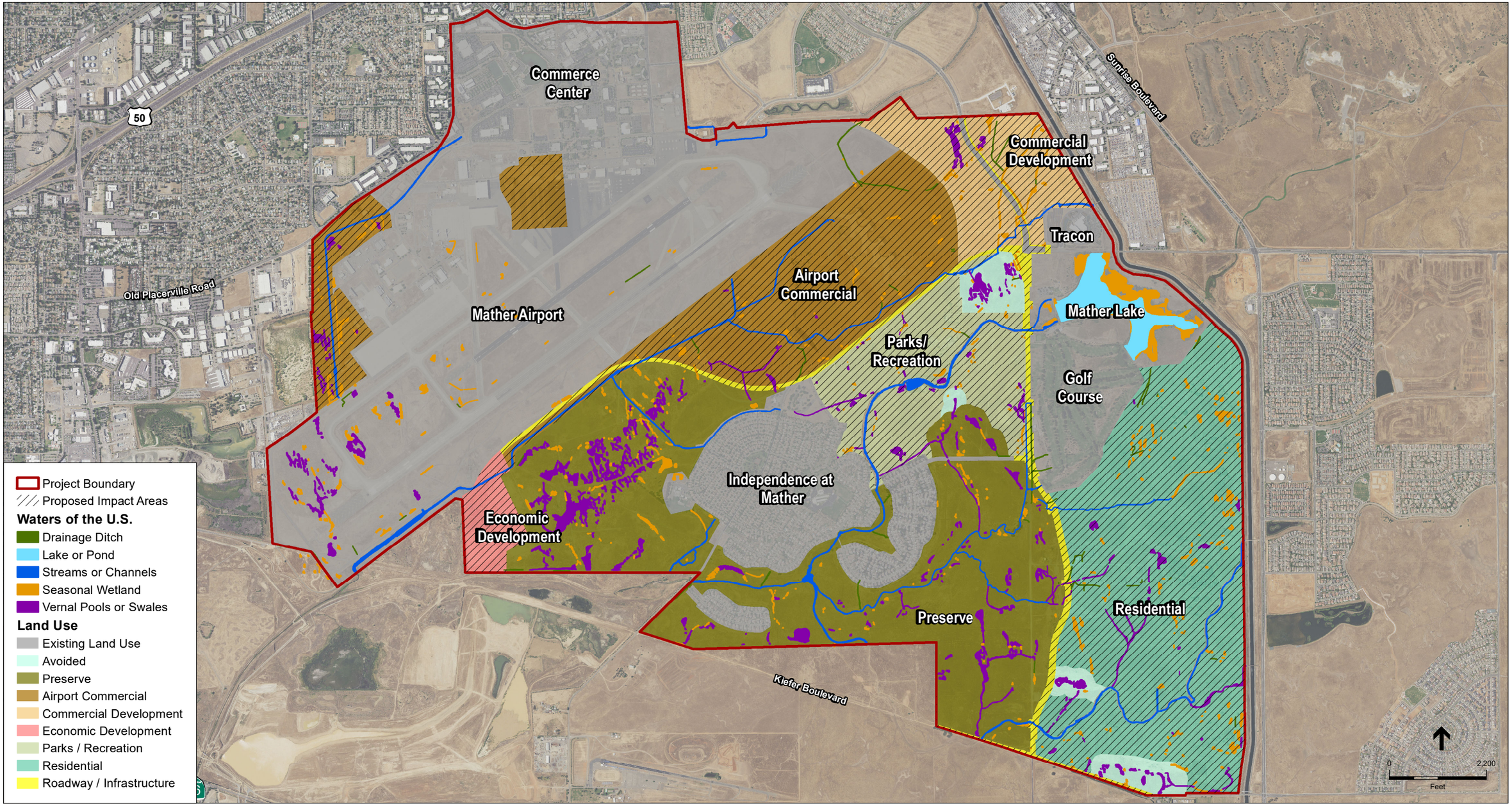
Pages 4.6-6 to 4.6-10, Impact 6.1 is modified as follows:

Impact 6.1: Effects to Wetlands and Other Waters of the U.S.

Approximately 47.~~62~~01 acres of jurisdictional waters of the U.S. within the project site would be filled under Alternative B. Impacted features would include approximately 16.2~~64~~ acres of vernal pools and swales, 21.~~61~~37 acres of seasonal wetland, 1.37 acres of drainage ditches, and 8.~~38~~03 acres of ephemeral and intermittent stream channels. Potential effects associated with each land use under Alternative B are summarized in **Table 4.6-4** and **Figure 4.6-2**.

Alternative B includes on-site preservation of approximately 68.~~52~~79 acres of wetlands and other waters of the U.S. within on-site Preserve and Riparian Buffer areas. Approximately ~~7.80~~8.28 acres of wetlands and other waters of the U.S. would also be located in ~~avoided areas~~"Avoided Areas" or are designated as avoided within the project-level Section 404 permit application for the Phase I/II Roadway and Infrastructure project. Avoided ~~a~~Areas" would not be disturbed during construction but no active management is proposed as described in **Section 2.4.1**. On site preservation is summarized in **Table 4.6-5**.~~, while **Table 4.6-6** summarizes the preservation ratio for each impacted water type. Based upon the calculations summarized in **Table 4.6-6**,~~ On-site preservation of wetlands and other waters of the U.S., and designated "Avoided Areas" containing wetlands and other waters of the U.S. do not represent compensatory mitigation for proposed impacts to waters of the U.S., however these areas are considered in the USACE's program-level analysis of avoidance and minimization in regards to the proposed project's compliance with U.S. EPA's 404(b)(1) Guidelines.

Alternative B~~ would include an overall on-site preservation ratio of 1.4:1. Furthermore, it~~ would preserve some of the highest functioning waters on the project site according to the Natural Resource Assessment described in **Section 3.5**. Wetlands within an on-site Preserve would be actively managed in accordance with ~~a~~ the approved South Mather Wetlands Management Plan~~ that is subject to final approval by the USACE, USFWS, CDFG and EPA~~. Nevertheless, without additional compensation, the on-site loss of 47.~~62~~01 acres of wetlands and other waters of the U.S. is considered a significant, adverse impact.



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.6-2
Potentially Affected Waters of the U.S.
Alternative B

This page intentionally left blank

REVISED TABLE 4.6-4
EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE B

Proposed Land Use	Type Affected	Acres Affected[1]
Airport Commercial	Drainage Ditch	0.31
	Channels and Streams	5.67
	Seasonal Wetland	4.02
	Vernal Pools and Swales	3.33
Subtotal		**13.33**
Commercial Development	Drainage Ditch	0.22
	Channels and Streams	0.62
	Seasonal Wetland	4.17
	Vernal Pools and Swales	3.06
Subtotal		**8.06**
Economic Development	Drainage Ditch	0.01
	Channels and Streams	0.37
Subtotal		**0.37**
Parks Recreation	Drainage Ditch	0.01
	Channels and Streams	~~0.62~~0.58
	Seasonal Wetland	~~1.58~~1.56
	Vernal Pools and Swales	3.60
Subtotal		**~~5.81~~5.75**
Roadways/Infrastructure	Drainage Ditch	0.33
	Channels and Streams	~~0.53~~0.34
	Seasonal Wetland	~~0.53~~0.31
	Vernal Pools and Swales	~~0.20~~0.18
Subtotal		**~~1.58~~1.16**
~~Regional Sports Park~~ Residential	Drainage Ditch	~~0.27~~0.50
	Channels and Streams	~~0.29~~0.46
	Seasonal Wetland	~~5.63~~11.31
	Vernal Pools and Swales	~~0.20~~6.07
Subtotal		**~~6.38~~18.34**
~~University Village/ Residential~~	~~Drainage Ditch~~	~~0.24~~
	~~Channels and Streams~~	~~0.30~~
	~~Seasonal Wetland~~	~~5.68~~
	~~Vernal Pools and Swales~~	~~5.88~~
~~**Subtotal**~~		~~**12.09**~~
TOTAL:		**~~47.62~~47.01**

1 Totals are approximate and subject to rounding.

SOURCE: ESA, ~~2013~~2017; Sacramento County, 2013 and 2016.

REVISED TABLE 4.6-5
ON-SITE PRESERVATION – ALTERNATIVE B

Proposed Land Use	Type Preserved	Acres Preserved[1]
Preserve	Drainage Ditch	0.61
	Channels and Streams	~~7.01~~7.09
	Seasonal Wetland	~~9.11~~9.12
	Vernal Pools and Swales	~~43.31~~43.32
Subtotal		**~~60.05~~60.14**
Riparian Buffer	~~Open Water~~	~~2.10~~
	Drainage Ditch	0.002
	Other Waters (Channels and Streams)	~~6.33~~8.61
	Seasonal Wetland	0.001
	Vernal Pools and Swales	0.04
Subtotal		**~~8.47~~8.65**
TOTAL:		**~~68.52~~68.79**

1 Totals are approximate and subject to rounding.
SOURCE: ESA, ~~2013~~2017; Sacramento County, 2013 and 2016.

~~**TABLE 4.6-6**~~
~~**PRESERVATION TO IMPACT RATIO – ALTERNATIVE B**~~

~~Impacted Waters~~	~~Acres[1]~~	~~Preserved Waters~~	~~Acres[1]~~	~~Preservation to Impact Ratio~~
~~Drainage Ditch~~	~~1.37~~	~~Drainage Ditch~~	~~0.62~~	~~0.5:1~~
~~Channels and Streams~~	~~8.38~~	~~Channels and Streams~~	~~13.35~~	~~1.6:1~~
~~Seasonal Wetland~~	~~21.61~~	~~Seasonal Wetland~~	~~9.12~~	~~0.4:1~~
~~Vernal Pools and Swales~~	~~16.26~~	~~Vernal Pools and Swales~~	~~43.34~~	~~2.7:1~~
~~Open Water~~	~~0.00~~	~~Open Water~~	~~2.10~~	~~n/a~~
~~**TOTAL:**~~	~~**47.62**~~		~~**68.52**~~	~~**1.4:1**~~

~~1 Totals are approximate and subject to rounding.~~
~~SOURCE: ESA, 2013; Sacramento County, 2013.~~

Mitigation Measures

Implement Mitigation Measures 5.1a: Compensate for Loss of Vernal Pool Habitat, 5.1b: Use BMPs to Provide Effective Erosion and Sediment Control, 5.1c: Conduct WEAP, 5.1d: Limit Project Access Routes/Staging Areas, 5.1e: Protect Preserved and Avoided Habitats, and 6.1: Fully Compensate for Loss of Waters of the U.S.

4.6.3 Alternative C – Multiple Preserves Alternative

Pages 4.6-10 to 4.6-14, Impact 6.1 is modified as follows:

Impact 6.1: Effects to Wetlands and Other Waters of the U.S.

Approximately ~~41.11~~40.52 acres of jurisdictional waters of the U.S. within the project site would be filled under Alternative C. Impacted features would include approximately

~~11.20~~11.18 acres of vernal pools and swales, ~~20.25~~20.01 acres of seasonal wetland, 1.37 acres of drainage ditches, and ~~8.29~~7.96 acres of ephemeral and intermittent stream channels. Potential effects associated with each land use under Alternative C are summarized in **Table 4.6-7** and **Figure 4.6-3**.

REVISED TABLE 4.6-7
EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE C

Proposed Land Use	Type Affected	Acres Affected[1]
Airport Commercial	Drainage Ditch	0.31
	Channels and Streams	5.67
	Seasonal Wetland	4.02
	Vernal Pools and Swales	3.33
Subtotal		**13.33**
Commercial Development	Drainage Ditch	0.22
	Channels and Streams	0.62
	Seasonal Wetland	3.64
	Vernal Pools and Swales	0.46
Subtotal		**~~4.94~~4.94**
Economic Development	Drainage Ditch	0.01
	Channels and Streams	0.37
Subtotal		**0.37**
Parks Recreation	Drainage Ditch	0.01
	Channels and Streams	~~0.54~~0.52
	Seasonal Wetland	~~0.79~~0.77
	Vernal Pools and Swales	1.13
Subtotal		**~~2.47~~2.43**
Roadways/Infrastructure	Drainage Ditch	0.33
	Channels and Streams	~~0.53~~0.34
	Seasonal Wetland	~~0.53~~0.31
	Vernal Pools and Swales	~~0.20~~0.18
Subtotal		**~~1.58~~1.15**
~~Regional Sports Park~~Residential	Drainage Ditch	~~0.27~~0.50
	Channels and Streams	~~0.28~~0.46
	Seasonal Wetland	~~5.63~~11.27
	Vernal Pools and Swales	~~0.20~~6.07
Subtotal		**~~6.38~~18.30**
~~University Village/ Residential~~	~~Drainage Ditch~~	~~0.24~~
	~~Channels and Streams~~	~~0.30~~
	~~Seasonal Wetland~~	~~5.64~~
	~~Vernal Pools and Swales~~	~~5.88~~
~~**Subtotal**~~		~~**12.05**~~
TOTAL:		**~~41.11~~40.52**

1 Totals are approximate and subject to rounding.

SOURCE: ESA, ~~2013~~2017; Sacramento County, 2013 and 2016.

Alternative C includes on-site preservation of approximately ~~82.83~~83.40 acres of wetlands and other waters of the U.S. within on-site Preserves and Riparian Buffer areas.

An additional 0.17-acre of wetlands and other waters of the U.S. are designated as avoided within the project-level Section 404 permit application for the Phase I/II Roadway and Infrastructure project; these features would not be disturbed during construction but no active management is proposed. On site preservation is summarized in **Table 4.6-8**~~, while **Table 4.6-9** summarizes the preservation ratio for each impacted water type~~. On-site preservation of wetlands and other waters of the U.S., and designated "Avoided Areas" containing wetlands and other waters of the U.S. do not represent compensatory mitigation for proposed impacts to waters of the U.S., however these areas are considered in the USACE's program-level analysis of avoidance and minimization in regards to the proposed project's compliance with U.S. EPA's 404(b)(1) Guidelines.

REVISED TABLE 4.6-8
ON-SITE PRESERVATION - ALTERNATIVE C

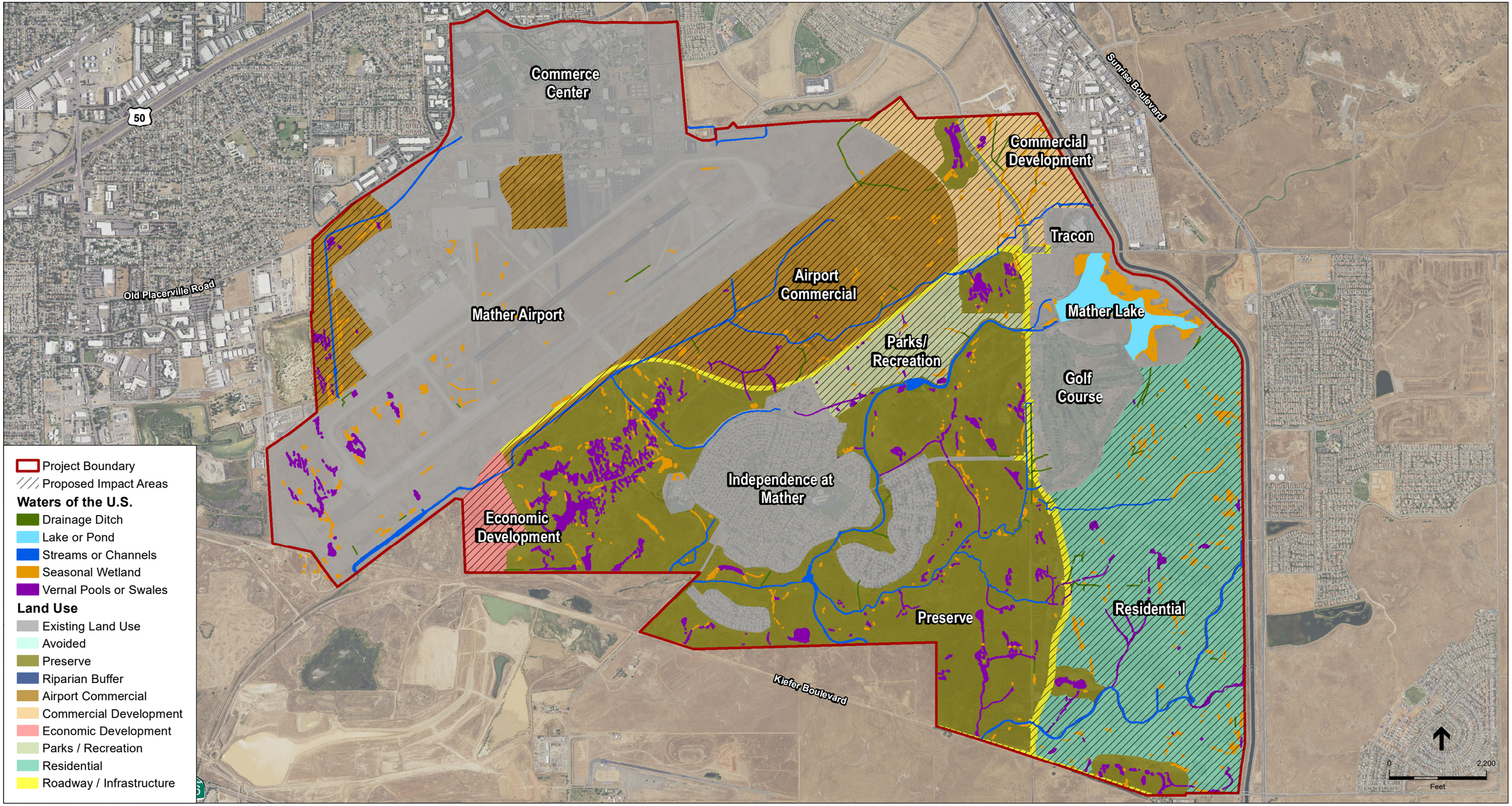
Proposed Land Use	Type Preserved	Acres Preserved[1]
Preserves	Drainage Ditch	0.63
	~~Open Water~~	~~2.10~~
	Other Waters (Channels and Streams)	~~9.99~~12.34
	Seasonal Wetland	~~11.11~~11.32
	Vernal Pools and Swales	~~55.53~~55.50
Subtotal		**~~79.36~~79.79**
Riparian Buffer	Channels and Streams	~~3.46~~3.60
	Seasonal Wetland	0.001
	Vernal Pools and Swales	0.01
Subtotal		**~~3.48~~3.61**
TOTAL:		**~~82.83~~83.40**

1 Totals are approximate and subject to rounding.
SOURCE: ESA, ~~2013~~2017; Sacramento County, 2013 and 2016.

~~**TABLE 4.6-9**~~
~~**PRESERVATION TO IMPACT RATIO - ALTERNATIVE C**~~

~~Impacted Waters~~	~~Acres[1]~~	~~Preserved Waters~~	~~Acres[1]~~	~~Preservation to Impact Ratio~~
~~Drainage Ditch~~	~~1.37~~	~~Drainage Ditch~~	~~0.63~~	~~0.5:1~~
~~Channels and Streams~~	~~8.29~~	~~Channels and Streams~~	~~13.45~~	~~1.6:1~~
~~Seasonal Wetland~~	~~20.25~~	~~Seasonal Wetland~~	~~11.11~~	~~0.5:1~~
~~Vernal Pools and Swales~~	~~11.20~~	~~Vernal Pools and Swales~~	~~55.54~~	~~5.0:1~~
~~Open Water~~	~~0.00~~	~~Open Water~~	~~2.10~~	~~n/a~~
~~TOTAL:~~	~~41.11~~		~~82.83~~	~~2.0:1~~

~~1 Totals are approximate and subject to rounding.~~
~~SOURCE: ESA, 2013; Sacramento County, 2013.~~



SOURCE: NAIP, 2016; Sacramento County, 2016; ESA, 2017

Figure 4.6-3
Potentially Affected Waters of the U.S.
Alternative C

This page intentionally left blank

~~Based upon the calculations summarized in **Table 4.6-9**,~~ Alternative C ~~would include an overall on-site preservation ratio of 2.0:1. Furthermore, it~~ would preserve some of the highest functioning waters on the project site according to the Natural Resource Assessment described in **Section 3.5**. As described in **Chapter 2.0**, wetlands within the on-site Preserves would be actively managed in accordance with ~~a~~ the approved South Mather Wetlands Management Plan ~~that is subject to final approval by the USACE, USFWS, CDFG and EPA~~. Nevertheless, without additional compensation, the on-site loss of ~~41.11~~40.52 acres of wetlands and other waters of the U.S. is considered a significant, adverse impact.

Mitigation Measures

Implement Mitigation Measures 5.1a: Compensate for Loss of Vernal Pool Habitat, 5.1b: Use BMPs to Provide Effective Erosion and Sediment Control, 5.1c: Conduct WEAP, 5.1d: Limit Project Access Routes/Staging Areas, 5.1e: Protect Preserved and Avoided Habitats, and 6.1: Fully Compensate for Loss of Waters of the U.S.

4.7 Cultural and Historic Resources

4.7.1 Alternative A –Applicant's Preferred Alternative

Page 4.7-1, Impact 7.1 is modified as follows:

Impact 7.1: Effects to Historic Properties

USACE has evaluated 57 cultural resources within proposed development areas and 12 cultural resources within proposed Preserve and "Avoided Areas" and determined that they are ineligible for inclusion within the National Register of Historic Places (NRHP). The State Historic Preservation Officer concurred with USACE's determination that no historic properties would be affected by the USACE permit authorizations associated with implementation of the proposed land uses within the Mather Specific Plan project site. A copy of the SHPO's concurrence letter is included in FEIS Appendix C. As such there would be no effect to historic properties.

~~Twenty-three historic-period structures were identified within the area of potential effects (APE, **Figure 3.7-1**). The structures have not yet been comprehensively surveyed and evaluated, and may be considered eligible for the National Register of Historic Places (NRHP) upon further review. In addition to the 23 historic-period structures recorded by ESA, previous surveys have identified two historic sites (infrastructure elements associated with Mather airfield) and a historic structure within the APE. These resources were recommended in previous surveys to be ineligible for the NRHP, but SHPO has not made a determination at this time.~~

~~In the event that any of the historic-period resources are determined to be eligible for the NRHP, implementation of Alternative A could result in the demolition or alteration of these resources, which would be a significant, adverse impact. Mitigation Measure 7.1 would reduce impacts to a less-than-significant level.~~

~~**Mitigation Measures**~~

~~**Measure 7.1. Evaluate Historic-Period Sites and Develop a Historic Properties Treatment Plan.** Historic-period structures within the APE would be comprehensively surveyed and evaluated for NRHP eligibility. In the event that any historic resources are determined eligible for listing in the National Register, a Historic Properties Treatment Plan (HPTP) would be developed in order to resolve adverse effects to any sites that would be affected. The HPTP would provide background information, describe the sites, present treatment measures, and provide a timetable for completion of the proposed measures.~~

4.7.3 Alternative D – No Permit Alternative

Page 4.7-2, Impact 7.1 is modified as follows:

Impact 7.1: Effects to Historic Properties

Under the No Permit Alternative, it is possible for some infill development at Mather Airport and aggregate extraction in the southwestern corner of the project site to occur without the need for USACE Section 404 permit. Any future development would require local environmental approvals, including compliance with the California Environmental Quality Act. Resources were evaluated for eligibility within the area of potential effect (APE) including infill areas which could be developed under Alternative D. The USACE determined that the evaluated resources are ineligible for listing on the NRHP. The SHPO concurred with this finding (FEIS Appendix C). As such there would be no effect to historic properties. ~~The building currently existing in the infill area would be evaluated for NRHP/CRHR eligibility. In the event that this structure is determined eligible for listing in either the National Register or California Register, a mitigation plan would be developed in order to resolve significant, adverse impacts. Based on these considerations, Alternative D would have a less-than-significant impact on historic properties.~~

Section 4.8 Socioeconomics and Environmental Justice

4.8.1 Alternative A –Applicant's Preferred Alternative

Page 4.8-2, the first paragraph has been modified as follows:

Significant, adverse impacts could result if a project is not consistent with planned growth assumptions, providing too little or too much housing for anticipated population growth. Alternative A proposes development of approximately 2,530 dwelling units accommodating approximately 6,580 new residents (**Table 4.8-1**). It is likely that a portion of these future residents would relocate from within the County. Based on future growth assumptions, SACOG anticipates that a total of ~~15,160~~13,844 additional dwelling units would be required in unincorporated Sacramento County during the current planning period (~~2006~~2013~~–2013~~2021) to meet regional housing needs (SACOG, ~~2010~~2012). ~~In 2006 there were approximately 215,916 residential units within the unincorporated area and approximately 220,368 units in January 2012; thus,~~

~~approximately 4,452 dwelling units have been developed since 2006 in the unincorporated area (California Department of Finance, 2010 and 2012).~~ Alternative A would provide approximately 18~~2~~4 percent of the ~~remaining~~ units anticipated within the planning area. ~~Though housing would be developed and occupied after 2013, the~~ As increased housing is within planned growth assumptions, ~~and thus~~ impacts from population growth would be less than significant.

References

Page 4.8-4, the following reference has been added:

SACOG, 2012. 2013-2021. Regional Housing Needs Allocation. Adopted September 2012. Available: http://www.sacog.org/rhnp/rhna.cfm. Accessed December 1, 2014.

Section 4.9 Transportation and Traffic

4.9.1 Alternative A – Applicant's Preferred Alternative

Page 4.9-3, the following mitigation measure has been modified as follows:

Measure 9.1: Intersection Improvements. The project proponent would provide fair share contributions for improvements to the following roadways:

Page 4.9-6, the following mitigation measure has been modified as follows:

Measure 9.2: City of Rancho Cordova Roadway/Intersection Improvements. If an agreement between Sacramento County and the City of Rancho Cordova is implemented prior to construction which provides a mechanism for funding, t~~T~~he project proponent would provide fair share contributions for improvements to the following City of Rancho Cordova roadway network facilities:

Page 4.9-8, the following mitigation measure has been modified as follows:

Measure 9.3: Contribute to Caltrans Roadway Improvements. The project proponent would provide a fair share contribution~~s~~ for improvements to the eastbound diverge to Mather Field Road Off-Ramp through the addition of an auxiliary lane to allow a double lane off ramp.

Section 4.11 Public Services Utilities and Recreation

4.11.1 Alternative A – Applicant's Preferred Alternative

Impact 11.1: Increased Demand for Municipal Water Service and Facilities

Page 4.11-2 has been modified as follows:

The major water distribution and supply facilities proposed for the project site and vicinity are shown in **Figure 4.11-1**, including the various phases of development of the water system. In the near term water would continue to be provided from the Anatolia Water Treatment Plant. The project site is within the North Service Area which will ultimately be served primarily by the Vineyard Surface Water Treatment Plant (WTP). ~~In the near term it is anticipated that water would be provided by the system that supplies the Independence at Mather housing subdivision. In the long term it is anticipated that additional water would be provided from the Vineyard Surface Water Treatment Plant (WTP).~~ The aggregate mining in the Economic Development area would require water for dust control which would be supplied by water trucks. To analyze the maximum potential impact, it was conservatively assumed that the water trucks would obtain water from the North Service Area (NSA).

Near Term Water Supply

~~The total capacity of the Mather Housing WTP is approximately 4,200 gallons per minute (gpm) or 6.05 MGD. Existing development uses approximately 1.18 MGD. Thus, in the near term there is a remaining capacity of 4.87 MGD. This is adequate to supply Alternative A which is anticipated to have a demand of 4.5 MGD at full buildout. Additional on-site water supply storage would be required for peak flows and emergency fire flows.~~

~~The SCWA Water System Infrastructure Plan identifies the Anatolia Groundwater Treatment Plant as a possible source for near term water demand to the eastern portion of the project site.~~ The Anatolia ~~Groundwater~~ Water Treatment Plant, which treats raw water from the North Vineyard Groundwater Well Field, currently has a capacity of ~~4.3~~6.5 MGD. A portion of this capacity serves development within the Sunridge and Mather Specific Plan Areas. Four additional wells are planned to expand capacity to 13 MGD as needed (City of Rancho Cordova, 2011). ~~In the near term~~Thus, there would be at least ~~8.7~~6.5 MGD available to new development ~~(SCWA, 2010)~~. However, this is the proposed water supply for the Arboretum project and other projects in the Sunridge Specific Plan Area. The availability of water will be subject to the timing of development projects and Zone 40 water system improvements. If additional supply is needed for Alternative A prior to the development of the NSA Pipeline (see long term water supply discussion below) there is available capacity within the Mather Housing WTP. The total capacity of the Mather Housing WTP is approximately 4,200 gallons per minute (gpm) or 6.05 MGD. While the WTP is not currently in use, the previous demand from existing development was 1.18 MGD. Thus, there is approximately 4.87 MGD of capacity remaining if this WTP was

used. This is adequate to supply Alternative A which is anticipated to have a demand of 4.4 MGD at full buildout. Additional on-site water supply storage would be required for peak flows and emergency fire flows. ~~and thus it is not anticipated that Alternative A would connect to this system.~~

Long Term Water Supply

While ~~the Mather Housing WTP has~~there is adequate capacity for Alternative A within the existing supply system, ~~SCWA plans to connect areas of the project site to the~~the project site would ultimately be serviced via the NSA Pipeline providing treated surface water from the Vineyard Surface WTP. The first phase of the Vineyard Surface WTP was completed in 2011 and provides a capacity of 50 MGD. ~~However, the project site would not be connected to this system until the NSA pipeline along Eagles Nest Road is installed.~~ Planning efforts currently estimate pipeline construction by 2015. By 2022, the Vineyard Surface WTP is anticipated to have a capacity of 100 MGD. At buildout (including Alternative A and other proposed development), the NSA is anticipated to have a maximum daily demand of 58.9 MGD, which could be accommodated by the expanded 100-MGD Vineyard Surface WTP. SCWA documents available capacity in the near term and long term to serve Alternative A, thus the impacts from increased demand would be less than significant.

4.16 Cumulative Effects

4.16.2.2 Present and Reasonably Foreseeable Actions

Page 4.16-7, the third paragraph is modified as follows:

~~Two vernal pool conservation banks have been approved by the USFWS within the Mather Core Recovery Area for sale of Vernal Pool Ecosystem Preservation credits: Bryte Ranch and the Sunrise Douglas Conservation Bank.~~ There are currently no USACE approved mitigation banks with available compensatory mitigation credits within the Mather Core Recovery Area. The project site is within the primary service area of the following banks approved by the USACE for purposes of providing compensatory mitigation credits for impacts to non-Mather Core Area vernal pool wetlands under Section 404 of the Clean Water Act: Clay Station Mitigation Bank (17.636 vernal pool establishment credits), Elsie Gridley Mitigation Bank (2.748 vernal pool establishment credits), Toad Hill Ranch Mitigation Bank (20.962 vernal pool establishment credits) and the Van Vleck Ranch Mitigation Bank (0.142 vernal pool establishment credits) (USACE, 2017). ~~There are a number of other regional conservation, preservation, and mitigation banks outside of the Mather Core Recovery Area, which have been approved by the USFWS and/or USACE.~~ The proposed 585-acre Deer Creek Mitigation Bank near Kiefer Boulevard and Jackson Highway would be partially located within the Mather Core Recovery Area; however, at this time, the bank is not~~has not yet been approved~~ established and available for use. In the future, if established, the bank may provide another option for wetland compensatory mitigation credits.

4.16.3.3 Air Quality and Global Climate Change

Page 4.6-10, Impact 16.4 is modified as follows:

Impact 16.4: Effects from Operational Emissions

By its very nature, air pollution is largely considered a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the Sacramento Valley Air Basin, and this regional impact is a cumulative impact. Activities associated with development of the project site would result in increased air emissions of ROG, NO_x, and PM_{10}, $PM_{2.5}$ and CO. Emissions from ROG and NO_x would exceed the local thresholds for these pollutants which are also used to evaluate potential cumulative impacts. Alternative A, B and C, in conjunction with other planned development, would result in a cumulatively considerable contribution to long-term increases in emissions. Incorporation of Mitigation Measure 4.2 would reduce operational emissions, but impacts would remain cumulatively considerable.

Page 4.6-11, the following mitigation measure has been modified as follows:

Measure 16.6: GHG Emission Control Measures. The project proponent would incorporate Green Building and Development Measures as listed in **Appendix F**. ~~Each increment of new development within the project site requiring a discretionary approval from the County (e.g., proposed tentative subdivision map, conditional use permit), would demonstrate that GHG emissions from construction and operation would be reduced by 30 percent from business-as-usual 2020 emissions levels.~~ The project proponent shall comply with Sacramento County GHG reduction requirements such as meeting target emissions thresholds and/or preparation of a GHG Reduction Plan in consultation with the Sacramento Metropolitan Air Quality Management District.

Page 4.6-11, Impact 16.7 is modified as follows:

Impact 16.7: Climate Change Impacts

The Intergovernmental Panel on Climate Change (IPCC) reports that mean sea level could rise by approximately 12 to 36 inches by the year 2100 (IPCC, 2007). However, the action area is located a substantial distance from the ocean, and as a result, it is unlikely that erosion or an increase in flooding as a result of climate-induced sea level rise would affect the area. The extent that increased storm severity could contribute to localized flooding is unknown; however, the County does not allow habitable buildings to be constructed within the 100-year floodplain.

~~As discussed in **Section 3.3**, Hydrology and Water Quality, the Federal Emergency Management Agency has not completed floodplain delineation and mapping of the action area. Although it is anticipated that some flooding could occur in the proposed Parks and Recreation area or Preserve(s) areas during a 100-year event, the extent to which such flooding would occur, and the land area that could potentially be inundated, is not presently known. Habitable structures are not proposed for development in the vicinity of~~

~~Morrison Creek where potential flooding could occur.~~ Cumulative impacts of climate change on the action area thus are not anticipated.

Climate change could intensify the cumulative biological and aquatic impacts discussed below.

4.16.3.4 Biological Resources

Impact 16.8: Effects to Federally Listed Vernal Pool Species and Critical Habitat

Page 4.16-12, the second paragraph of Impact 16.8 is modified as follows:

As described in **Section 4.5**, Alternatives A, B and C would directly affect federally-listed species through the permanent loss of ~~31.82~~27.95, ~~31.38~~39.34 and ~~25.11~~32.69 acres of suitable habitat (respectively). These species would also be indirectly affected by Alternatives A, B and C through potential adverse effects to surface water quality and flow, introduction of exotic species, and an increase in human presence and activities on the project site. Of these species, vernal pool fairy shrimp and vernal pool tadpole shrimp are known to occur in the action area. Alternative A would directly affect 2.75 acres of critical habitat for vernal pool tadpole shrimp and fairy shrimp within the USFWS designated Mather Core Recovery Area. Alternative B would directly affect ~~6.36~~7.40 acres of critical habitat within the Mather Core Recovery Area. Alternative~~s A and~~ C would directly affect 4.17~~3.27~~ acres of critical habitat for vernal pool tadpole shrimp and fairy shrimp within the USFWS designated Mather Core Recovery Area. Alternatives A, B and C propose Preserve and/or Riparian buffer areas which would be actively managed under the guidance of ~~a~~ the South Mather Wetlands Management Plan. Proposed preservation under Alternatives A and C is greater than, and thus consistent with, that discussed in the final Biological Opinion for the disposal of the former Mather Air Force on January 24th, 2012 (Appendix H).

Page 4.16-12, the third paragraph of Impact 16.8 is modified as follows:

Loss of habitat for vernal pool species from implementation of the project alternatives in combination with projected losses from past, present and reasonably foreseeable projects constitutes a cumulatively significant reduction in habitat for vernal pool species in the region. While there is mitigation planned to compensate for the loss of vernal pool acreage with constructed vernal pools, two major concerns remain: that ~~the performance of~~ off-site constructed pools ~~would~~ may not ~~adequately~~ fully replace, from a cumulative effects standpoint, the habitat functions of the original vernal pools at a 1:1 ratio, and that, even if the habitat functions were being replaced, the vernal pool complexes may still become degraded. Thus, ~~even with mitigation,~~ the cumulative loss of habitat for vernal pool species that would occur under Alternative A, B or C is cumulatively considerable.

4.16.3.5 Aquatic Resources

Impact 16.10: Effects to Wetlands and Other Waters of the U.S.

Pages 4.16-13 to 4.16-14, the second paragraph under Impact 6.10 is revised as follows:

> Alternatives A, B and C would contribute to the direct loss of wetlands and other waters of the U.S., including vernal pools and swales, seasonal wetlands, ephemeral and intermittent channels, and drainage ditches. There are approximately ~~114.93~~124.07 waters of the U.S. within the action area. Alternative A proposes fill of ~~40.25~~35.66 acres (~~35~~29%) with preservation of ~~74.68~~76.90 acres (62~~5~~%) and avoidance of 11.52 acres (9%). Alternative B proposes fill of 47.01~~39.64~~ acres (3~~8~~4%), preservation of 60.14 ~~67.56~~ acres (48~~59~~%), riparian buffer avoidance of 8.64 acres (7%) and other avoidance of 8.28~~7.72~~ acres (7%). Alternative C proposes fill of 40.52~~33.65~~ acres (~~29~~33%) and preservation of 79.79~~81.28~~ acres (~~71~~64%), riparian buffer avoidance of 3.61 acres (3%) and other avoidance of 0.17 acre (0.1%). The action area when added to the area of present and reasonably foreseeable developments includes approximately ~~688~~697 acres of waters of the U.S.[1] Alternatives A proposes fill of approximately 5~~6~~% of waters within areas of proposed and approved projects (**Table 4.16-2**), Alternative B proposes~~d~~ fill of approximately 7%, and Alternative C proposes fill of approximately ~~5~~6%. This is considered a significant contribution to cumulative impacts to aquatic resources.

Page 4.16-14, Footnote 1 is revised as follows:

> ~~114.93~~124.07 acres within the action area combined with 572.82 acres within present and foreseeable development areas (Table 4.16-2)

Page 4.16-15, the following mitigation measure has been modified as follows:

> **Measure 16.13: Contribute to City of Rancho Cordova Intersection Improvements.** If an agreement between Sacramento County and the City of Rancho Cordova is implemented prior to construction which provides a mechanism for funding, t~~T~~he project proponent would provide fair share contributions for improvements to the following City of Rancho Cordova roadway network facilities (see Appendix E for specific improvements):

Page 4.16-16, the following mitigation measure has been modified as follows:

> **Measure 16.14: Contribute to Caltrans Roadway Facility Improvements.** The project proponent would provide a fair share contribution~~s~~ for improvements to convert the eastbound right turn lane into a free right lane by installing a right turn channelizing island at Zinfandel Drive and US-50 Eastbound Ramps.

References

Page 4.16-20, the following reference has been added:

USACE, 2017. Regulatory In-Lieu Fee and Bank Information Tracking System. Accessed November 2017.

Section 4.17 Required Disclosures

4.17.2 Significant and Unavoidable Effects

Page 4.17-1, the first bullet of the page was removed:

- ~~Effects from Construction Emissions with Respect to Federal General Conformity~~

This page intentionally left blank

CHAPTER 5
List of Preparers

Lead Agency

U.S. Army Corps of Engineers, Sacramento District

Mary Pakenham-Walsh; Senior Project Manager, CA Delta Section, Regulatory Division; 21 years of experience
USACE EIS Project Manager

Lisa M. Gibson; Regulatory Permit Specialist, Regulatory Division; 15 years of experience
USACE EIS Reviewer

Lisa Clay, J.D.; Assistant District Counsel, U.S. Army Corps of Engineers; 21 years of experience
USACE EIS Reviewer

EIS Consultants

Environmental Science Associates

Erich Fischer, Project Director, 27 years of experience
EIS Review, Comments and Responses, and Errata

Jennifer Wade, Project Manager, 12 years of experience
Introduction, Modified Proposed Action, Comments and Responses, and Errata

Erin Higbee-Kollu, Deputy Project Manager; 13 years of experience
Introduction, Modified Proposed Action

Paul Miller, 25 years of experience
Air Quality and Global Climate Change Responses, and Errata

Matthew Morales, 13 years of experience
Air Quality and Global Climate Change Responses, and Errata

Kathy Anderson, 10 years of experience
Cultural and Historic Resources Responses and Errata

Brad Allen, 15 years of experience
GIS

Michael Burns, 30 years of experience
Hydrology, Flooding and Water Quality Responses, and Errata

Robert Eckard, 12 years of experience
Hydrology, Flooding and Water Quality Responses, and Errata

Appendix A

Comment Letters on the Draft EIS and Supplemental Draft EIS

ESA

Comment 1

COPY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUG 20 2012

RECEIVED
AUG 20 2012
Regulatory Division
USACE-Sacramento

Ms. Kathleen Dadey
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922

Subject: Draft Environmental Impact Statement for the Mather Specific Plan Project, Sacramento County, California (CEQ # 20120221)

Dear Ms. Dadey:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the Mather Specific Plan Project (Project) pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Thank you for your agreement to a two-week extension for the EPA to submit comments on this DEIS.

The EPA recognizes the desire to redevelop the former Mather Air Force Base for productive civilian use, and the commitment already demonstrated by the U.S. Army Corps of Engineers (USACE) and Sacramento County to work with the EPA and other federal, State, and local agencies to develop the conservation goals of the Mather Specific Plan Project (Project). We have significant concerns, however, about the potential impacts to waters of the U.S. and air quality associated with the Project, particularly when considered in concert with the multiple housing, transportation, and other development projects proposed in Sacramento County. These impacts represent a daunting cumulative burden that would be extremely difficult to mitigate.

Based on our review of the DEIS, we have rated the preferred alternative and the document as EC-2, Environmental Concerns – Insufficient Information (see enclosed EPA Rating Definitions). Though we acknowledge the inclusion of a 1,272-acre Preserve and 13-acre riparian buffer area in the Applicant's Preferred Alternative (Alternative A) and the commitment to meet the preservation goals of the Mather Recovery Plan, the EPA is concerned about Alternative A's projected significant impacts to waters of the U.S., particularly vernal pools. We also have concerns about projected Project emissions of nitrogen oxides, particulate matter, and other pollutants, and how these emissions would conform to the State Implementation Plans for the nonattainment areas located within the planning area. We recommend that the FEIS identify the Least Environmentally Damaging Practicable Alternative (LEDPA) and include a Draft General Conformity Determination. We also recommend that the FEIS include additional information on the potential effects of climate change on the proposed Project. Our detailed comments are enclosed. 1-1

We appreciate the opportunity to review this DEIS, and are available to discuss our comments. When the FEIS is released for public review, please send one hard copy and one CD to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Jason Gerdes, the lead reviewer for this project. Jason can be reached at 415-947-4221 or gerdes.jason@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosures: Summary of the EPA Rating System
EPA Detailed Comments

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE MATHER SPECIFIC PLAN PROJECT, SACRAMENTO COUNTY, CALIFORNIA, AUGUST 20, 2012

Cumulative Impacts

The EPA has serious concerns regarding the significant cumulative impacts to air quality, water quality, habitat for sensitive species, and traffic in the Mather Specific Plan Project (Project) cumulative effects study area. While Chapter 4 of the Draft EIS (DEIS) identifies several planned development, transportation, and infrastructure improvement projects in the Project cumulative effects study area, the EPA is aware of many additional federal projects in which USACE is involved and that are planned in the study area for the same general time period as the Project. These projects, however, have not been identified in the DEIS. They include the Sierra Vista Specific Plan Project, Folsom South of US Highway 50 Specific Plan, Southport Sacramento River Early Implementation Project, Folsom Dam Modification Project Approach Channel, and the Natomas Levee Improvement projects. It is unclear whether these projects have been considered in the Project cumulative impacts analyses. 1-2

***Recommendation*:**
Additional efforts should be made by the U.S. Army Corps of Engineers (USACE) to coordinate with appropriate agencies and applicants on the multiple projects in the area so that the cumulative effects of past, current, and foreseeable future projects can be more accurately identified, and minimized and/or effectively mitigated for each resource.At minimum, the projects identified above should be considered in the cumulative impacts analysis. Additional comments on the cumulative impacts associated with the Mather Specific Plan Project are included in our resource-specific comments below.

Impacts to Waters of the U.S.

LEDPA Determination

Pursuant to the EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines), only the Least Environmentally Damaging Practicable Alternative (LEDPA) that achieves the overall project purpose, while not causing or contributing to significant degradation of the aquatic ecosystem, can be permitted by the USACE. At this time, the EPA believes that the alternatives analysis in the DEIS does not contain sufficient detailed information for the Corps to identify the LEDPA in compliance with the Guidelines. The DEIS simply states that "prior to issuing a permit, the USACE will make a series of factual determinations with respect to the least environmentally damaging practicable alternative (LEDPA) based on the criteria contained in 40 CFR Part 230" (p. 1-10). The Applicant's Preferred Alternative (Alternative A) would fill approximately 40.25 acres of jurisdictional waters of the U.S. The Multiple Preserves Alternative (Alternative C) would fill 33.65 acres of jurisdictional waters; though reduced, the impacts for this alternative are still significant. It is unclear from the DEIS if Alternative C represents the LEDPA, or if impacts to jurisdictional waters could be reduced even further. 1-3

Recommendation:
The Final EIS (FEIS) should include a detailed evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines and support the identification of the LEDPA by the USACE. The alternatives analysis should demonstrate that the proposed project is avoiding and minimizing damage to waters to the maximum extent practicable.

Indirect Impacts to waters of the U.S.

Another provision of the Guidelines is the requirement that the applicant mitigate for unavoidable impacts to jurisdictional waters. The DEIS, however, lacks a comprehensive discussion of compensation for potential indirect impacts to waters of the U.S. The DEIS states that indirect impacts to jurisdictional waters are discussed in detail in Section 4.3, Section 4.5 and Mitigation Measures 5.1b and 5.1c (p. 4.6-1); but the discussion in these sections is limited to indirect effects to habitat for vernal pool species. 1-4

***Recommendation*:**
The FEIS should include an analysis of all direct and indirect impacts to jurisdictional waters of the U.S.

Compensatory Mitigation

The DEIS states that the project proponent proposes on-site habitat preservation in perpetuity, and to purchase habitat creation credits at an USACE and U.S. Fish and Wildlife Service (USFWS) approved mitigation bank and/or to restore/enhance habitat within the designated Preserve areas (upon USFWS approval), to fully compensate for direct and indirect effects to habitat for federally listed vernal pool species (p. 4.6-6). Similarly, the "project proponent would also ensure that any loss of waters of the U.S. would be compensated for by restoration or creation of waters at a ratio no less than 1:1, prior to construction, and that compensation may include on or offsite creation, restoration, enhancement, or purchase of appropriate credits from a Corps-approved mitigation bank" (p.4.6-6). The reliance on mitigation banks for one form of compensatory mitigation is supported by the EPA, but the mitigation bank(s) that would be used are not identified in the DEIS. This is concerning, as Mather represents just one of the many proposed large-scale development projects in Sacramento County that will require compensatory mitigation from a Corps-approved mitigation bank, and the availability of sufficient credits for all of these projects has not been demonstrated. 1-5

***Recommendations*:**
The FEIS should include information on the supply of existing and proposed mitigation banks within Sacramento County, and the mitigation banks that would be used as compensatory mitigation for the Project.

Air Quality

General Conformity

The project site is located in an area that is federally designated nonattainment for ozone and PM_{10} and $PM_{2.5}$ (particulate matter smaller than 10 or 2.5 microns, respectively). Based on the proposed project's potential construction emissions estimates in the DEIS, it appears that a conformity determination will be needed. 1-6

***Recommendations*:**
The FEIS should demonstrate that the direct and indirect emissions of the project conform to the SIP and do not cause or contribute to violations of the National Ambient Air Quality Standards (NAAQS). We recommend that the USACE work closely with the Sacramento Metropolitan Air Quality Management District on its conformity determination. We also recommend that the Draft

General Conformity Determination be included in the Final EIS, either as a detailed summary or as an appendix. 1-6 cont.

The DEIS provides construction and operational emissions estimates in pounds per day for purposes of comparing them with emissions budgets and general conformity de minimis thresholds. It appears that, with the exception of carbon monoxide, the proposed project's direct and indirect contaminant emissions have not been modeled to show their estimated *concentrations* in the project area. 1-7

***Recommendation*:**
Additional dispersion modeling should be conducted to determine air pollutant concentrations of criteria pollutants from direct, indirect, and cumulative emissions for an accurate comparison with the NAAQS, using comparable units (e.g. micrograms per cubic meter, parts per billion, or parts per million). The results should be presented in the FEIS.

Cumulative Air Impacts

The DEIS (p. 4.16-10) indicates that the proposed action would result in a significant cumulative impact due to operational emissions. According to the DEIS (p. 4.16-8), the study area for cumulative air quality impacts is the Sacramento Valley Air Basin. As stated above, the EPA is aware of multiple federal projects, in which USACE is involved, and that are planned in the Sacramento Valley Air Basin for the same general time period as the proposed Project. Because many of these projects are not identified in the discussion in section 4.16.3.3 of the DEIS, however, it is unclear whether they have been considered in the cumulative air quality impacts analysis. 1-8

***Recommendation*:**
The air quality cumulative impacts analysis should account for all reasonably foreseeable future actions in the Sacramento Valley Air Basin, and evaluate the potential for the cumulative emissions to contribute to violations of the NAAQS. We recommend that the FEIS provide a table that includes the criteria pollutant emissions estimates and totals from all of these sources for both the construction and operational phases of the projects.

Editorial Notes

Table 4.4-3 shows the predicted unmitigated and mitigated construction emissions for the worst-case year and compared to the federal de minimis thresholds. According to the table, only reactive organic gases (ROG) are projected to decrease after mitigation. The values for nitrogen oxide (NOx), PM_{10}, $PM_{2.5}$, and carbon monoxide (CO) are projected to remain unchanged after mitigation. This seems unlikely, and either represents an error in presentation, or is an indication that the mitigation identified is insufficient and needs to be strengthened. 1-9

***Recommendation*:**
The Corps should examine the information presented in Table 4.4-3 of the DEIS and determine if it needs to be corrected in the FEIS.

The DEIS (p. 3.4-5) cites the general conformity rule incorrectly. The general conformity rule was revised April 5, 2010 (75 FR 17257). The EPA deleted the provision in 40 CFR 93.153 that required federal agencies to conduct a conformity determination for regionally significant actions where the direct and indirect emissions of any pollutant represent 10 percent or more of a nonattainment or maintenance area's emissions inventory for that pollutant. 1-10

***Recommendation*:**
The incorrect language should be deleted from the EIS.

1-10 cont.

Climate Change

The EPA commends the USACE for including the commitment, in Appendix F, to incorporate green building and development measures to reduce construction and operational greenhouse gas (GHG) emissions, as well as for providing a general description of potential climate change impacts in California. There are no detailed descriptions, however, of how climate change may affect the projects planned in the preferred alternative, sensitive water resources and species (such as the vernal pool fairy shrimp and vernal pool tadpole shrimp), and wetland restoration efforts.

1-11

Recommendations:
The USACE should describe in the FEIS how climate change may affect the projects planned in the preferred alternative, sensitive species, and wetland restoration efforts. The FEIS should also include a climate change mitigation and adaptation plan.

Traffic

The DEIS states that the addition of traffic volumes generated by Alternative A would degrade operating conditions at several intersections of the segment of Bradshaw Road from Old Placerville Road to Kiefer Boulevard to unacceptable levels of service. Additionally, the DEIS indicates that with the addition of Alternative A, the operation of several City of Rancho Cordova roadway facilities would degrade from acceptable to unacceptable levels of service (p. 4.9-3). These impacts are significant, and when compounded with the anticipated traffic volume increases from other reasonably foreseeable development in Sacramento County, represent cumulative impacts that would be exceedingly difficult to mitigate.

1-12

***Recommendation*:**
The FEIS should include additional measures to reduce and mitigate anticipated traffic volumes generated by Alternative A to the greatest possible extent.

-----Original Message-----
From: Eck. Darrell [mailto:eckd@SacCounty.NET]
Sent: Tuesday, August 14, 2012 2:54 PM
To: Dadey, Kathleen A SPK
Cc: Schmitz. Kerry
Subject: Sacramento County Water Agency Comments on the Draft Environmental Impact Statement (Draft EIS) for the Mather Specific Plan Project

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (Draft EIS) for the Mather Specific Plan Project.

The second paragraph on page 1-5 mentions compliance with provisions of the water service contract between the Sacramento County Water Agency (SCWA) and the Bureau of Reclamation, most commonly known as "Fazio Water." As water service for the project is discussed as part of this Draft EIS it should be mentioned that this same contract indicates that new water service and discretionary approval of the project may be withheld until compliance with the Endangered Species Act is demonstrated. Depending on the source of water, compliance may be demonstrated by the following: Participation in the South Sacramento Habitat Conservation Plan; a letter from the US Fish and Wildlife Service to the project proponent and/or federal agency indicating the project is not likely to adversely affect or result in a take of listed species; incidental take coverage through a biological opinion for the project; or, incidental take coverage through an Endangered Species Act section 10(a)(1)(B) permit for the project. This requirement may be a condition of approval for any discretionary action taken by the local land use authority. 2-1

Description of water facilities, such as in Section 2.3.4.1, indicate that water service to the project could be met by existing facilities that currently serve the Independence housing development and commercial development north of the airport (the former Mather Main Base area). While these facilities could contribute to serve the project, primary service will come from those facilities described in current SCWA planning documents such as the Water Supply Master Plan and the Water System Infrastructure Plan. 2-2

Section 3.3.1.1 discusses the need for supplemental water to maintain water levels in Mather Lake. Historically these levels have been maintained by supplemental water supplies from the Folsom South Canal, a surface water source. More recently, remediated groundwater water has been used as a source of supplemental water. The source of remediated groundwater described in the Draft EIS is available for the next 10 to 15 years. Groundwater (other than remediated groundwater - see Sacramento County General Plan (General Plan) Policy CO-9) should not be considered as a future source of supplemental water for this lake. This is specifically prohibited by the General Plan (Policy CO-17) and is inconsistent with the management directives of the Central 2-3

Sacramento County Groundwater Management Plan. 2-3 cont.

Section 3.11.1.1 indicates that water for the Independence housing project and commercial development north of the airport comes from the treatment facility located at Independence. This is not correct, the primary source of water for these areas comes from the Anatolia Treatment Plant located on Sunrise Boulevard. Additionally, the indication that Vineyard Surface Water Treatment Plant will simply provide "additional supplies" in the future is also incorrect. Once the NSA pipeline is completed, the Vineyard facility will be the primary water service provider for both the project and the entire NSA. 2-4

Section 3.12.1.2 indicates that the project site contains 10 potable water wells. At this time SCWA only has four operational wells at Mather (located at Independence). Four wells, located in the commercial development north of the airport, are in the process of being destroyed because of contamination issues. One well, located at Independence, is non-operational at this time. 2-5

Section 3.12.1.5 mentions the provision of wellhead treatment of municipal supply wells to mitigate on-site contamination. None of SCWA's wells at the Mather facility are equipped with wellhead treatment. 2-6

Section 4.11 of the draft EIS provides a description of how the applicant believes both near-term and long-term water supply will be provided to the proposed project. While the facilities mentioned in this description are part of or will be part of the overall SCWA system, the representation of how they will be employed to meet the water demands of this project is inconsistent with current and projected system operations. While not required for an EIS, the State of California, as part of the Water Code, requires the development of a Water Supply Assessment (WSA). The WSA assists the applicant in the preparation of their environmental document so that there is not only an assurance of the availability of water but also an understanding of how that water supply will be provided to the project. SCWA strongly recommends that a WSA be prepared for this EIS to ensure an accurate description of water supply availability and delivery. 2-7

Darrell K. Eck, Senior Civil Engineer

Water Supply Planning & Development

Sacramento County Water Agency

Tel (916) 874-5039

Fax (916) 874-5698

COUNTY OF SACRAMENTO EMAIL DISCLAIMER:
This email and any attachments thereto may contain private, confidential, and privileged material for the sole use of the intended recipient. Any review, copying, or distribution of this email (or any attachments thereto) by other than the County of Sacramento or the intended recipient is strictly prohibited.

If you are not the intended recipient, please contact the sender immediately and permanently delete the original and any copies of this email and any attachments thereto.

Classification: UNCLASSIFIED
Caveats: NONE

Powering forward. Together.

SMUD™

August 15, 2012

Ms. Kathleen Dadey
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, CA 95814-2922

Subject: Comments on the Draft Environmental Impact Statement (DEIS) for the Mather Specific Plan Project

Dear Ms. Dadey,

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Mather Specific Plan Project. The Sacramento Municipal Utility District (SMUD) is the primary energy provider for Sacramento County, the proposed project location. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce climate change impacts, and lower the cost to serve our region. As a Responsible Agency, SMUD's goal is to ensure that the construction and operation of the proposed Mather Specific Plan Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

SMUD's active participation in the National Environmental Policy Act (NEPA) process ensures that our community power requirements are integrated into the planning and environmental review process. Our NEPA involvement is consistent with SMUD's strategic directives and core values, which call for us to ensure a safe environment for its employees and customers (Policy SD-6) and to promote environmental leadership through community engagement, improved pollution prevention, energy efficiency and conservation, and conservation (Policy SD-7).

Based on SMUD's review of the DEIS and our understanding of the proposed project we have identified the following areas of interest and have provided comments accordingly.

3-1

1.6.2.3 Regional and Local Actions/Permits

Comment: Please include SMUD as an approval agency.

2.3.4.3 Electricity, Gas, and Telecommunications (Page 2-8)
This section reads, "Electrical service would be provided by Sacramento Municipal Utility District (SMUD). All new electrical lines less than 69 kilovolts (kV) would be routed underground within the rights-of-way of proposed streets. The project proponent(s) would coordinate with SMUD to develop detailed design plans for electrical service to the project site."

3-2

Printed on Recycled Paper

Comment: Please change the second sentence to read, “All new electrical lines less than 69 kilovolts (kV) would be routed underground within the public utility easements outside of the road rights-of-way of the proposed streets.” . 3-2 cont.

Impact 11.4: Increased Demand for Energy and Telecommunications Infrastructure
This section reads, “Implementation of Alternative A would increase electrical demands by approximately 185 million kilowatt hours per year in the SMUD service area in Sacramento County (Appendix C). Alternative A would increase natural gas demands by 1.39 million cubic feet per day.”

Comment: The 185 million kilowatt hours appear to be low; with a load factor of approximately 40 percent, it is expected that the energy needs would be in excess of 300 million kilowatt hours. However, from a planning perspective, the demand requirement is the key factor. Based on the land use proposals for Alternative A, B or C, SMUD would need to install three new 69kV to 12kV substations, the associated 69kV overhead sub-transmission lines, and 12kV feeders. There is no mention of substations or their locations within the DEIS. Planning, design and construction of these facilities could take more than two years following receipt of the application. Additionally, any impact associated with offsite improvements necessary to provide the site with electricity needs to be addressed in the DEIS. 3-3

Mitigation Measure 11.4: Undertake Energy Service Agreements.
Mitigation Measure 11.4 reads, **“**The project proponent would submit service applications with design-level demands to SMUD and West Coast Gas to ensure adequate energy services are provided for each land use.”

Comment: As mentioned above, it is very important that the SMUD application is submitted in a timely manner. If major facilities are required (i.e. a new substation and associated 69kV and 12kV feeder), planning and construction may take more than two years prior to energization date. 3-4

SMUD would like to be kept apprised of the planning, development, and completion of this project. Please ensure that the information included in this response is conveyed to the project planners and any project proponents.

Future NEPA documents should be sent to the attention of the Environmental Management Department at the following address: 3-5

Sacramento Municipal Utility District
Attention: Environmental Management
6201 S Street, MS B203
Sacramento, CA 95817

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this project. Again, we appreciate the opportunity to

Printed on Recycled Paper

comment on this DEIS. If you have any questions regarding this letter, please feel free to contact me at (916) 732-6676.

3-5 cont.

Sincerely,

Rob Ferrera
Environmental Specialist
Environmental Management
Legislative & Regulatory Affairs
Sacramento Municipal Utility District

Printed on Recycled Paper

California Native Plant Society

August 12, 2012

Kathleen A. Dadey
U.S. Army Corps of Engineers
Sacramento District
1325 J Street, Room 1350
Sacramento, CA, 95814-2922
Kathleen.a.dadey@usace.army.mil VIA EMAIL

Subject: Mather Specific Plan Project, Draft Environmental Impact Statement
Permit File SPK-2002-00561

Dear Ms. Dadey,

The California Native Plant Society (CNPS) is a statewide non-profit organization of some 10,000 scientists, educators, and laypeople dedicated to the conservation and understanding of the California native flora. As a science-based conservation organization, we believe that good land use decisions must be accompanied by a thorough assessment of the environmental impacts as required by the state and federal Endangered Species Acts, the Clean Water Act, the National Environmental Policy Act (NEPA), the California Environmental Quality Act, and other resource protection laws. CNPS commented on the initial Public Notice for this project on March 15, 2010. We hereby incorporate that letter by reference.

Below are CNPS's procedural, general and specific comments related to the Draft Environmental Impact Statement (DEIS) for the Mather Specific Plan Project: 4-1

Procedural Comments:

CNPS requests that the Final Environmental Impact Statement (FEIS) be produced in such a fashion that reviewers can see exactly what changes have been made to the document. This is usually done in strikeout (for deletions) and underline (for insertions). Although not required by law, providing the FEIS in this fashion is more to the spirit of transparent public disclosure.

General Comments:

Incomplete environmental setting and impact analysis: The Mather Specific Plan DEIS calls for mitigation of loss of endangered species habitat and wetlands. This mitigation may include construction of nearly 32 acres of vernal pool habitat. The environmental impacts of performing the required mitigation are not disclosed in the document. 4-2

Inappropriate deferral of mitigation: The Mather Specific Plan DEIS calls for mitigation measures that are deferred to a future date. It states that the mitigation will occur and provides options for how it might occur, but defers actual determination of exactly what measures in what proportions to some future date. 4-3

Feasibility of proposed wetland mitigation: The Mather Specific Plan DEIS does not identify either a mitigation bank at which credits might be purchased, or a parcel that might be used to develop nearly 32 acres of compensatory mitigation. The option of on-site restoration or enhancement is not going to provide the 32 acres needed. 4-4

Mitigation measures lack measurable outcomes: The mitigation measures need measurable outcomes to determine if they are successful. Simply stating that implementing a mitigation measure will result in less than significant impacts does not make it so. The measures need to be more rigorous, include measurable outcomes and include monitoring to ensure that the outcomes are being met. 4-5

Please provide analysis of conformity with the Sunridge Projects ROD: The U.S. Army Corps of Engineers' (Corps) Record of Decision (dated 25 January 2011) related to the Sunridge Projects in the City of Rancho Cordova states the following: 4-6

> "e. The Corps recognizes the significant cumulative loss of vernal pool wetlands within the Mather Core Recovery Area. For future unavoidable impacts to vernal pools within the Mather Core Recovery Area… compensatory mitigation shall be:
>
> 1) based on a method for assessing the functions of all waters of the U.S. on the project site;
> 2) accomplished at a ratio of greater than 1:1, after considering direct and indirect impacts, temporal loss and difficulties creating vernal pool wetlands; and
> 3) located in the Mather Core Recovery Area, unless determined impracticable or inappropriate by the Corps."

Specific Comments:

Mitigation Measure 5.1a, pages 4.5-5 and 4.5-6: This measure requires compensation for habitat loss for the vernal pool species. One option in this measure is to enhance or restore wetlands within the proposed Preserve. This action would necessarily have indirect effects on nearby wetlands and direct temporal effects on any feature being enhanced or restored. Analysis of and compensation for these impacts is not addressed. 4-7

Mitigation Measure 5.5, page 4.5-11: Exactly how does digging up an occasional adult spadefoot and relocating it, provided one can actually be found using the methods described, reduce impacts to less than significant? Breeding pools are being directly impacted by the Project. More specific mitigation, including measurable outcomes and monitoring needs to be included for Western Spadefoot. 4-8

Mitigation Measures 5.9a and 5.9b, page 4.5-14: Preparation of a plan to relocate plant species is not mitigation per se. A mitigation measure for special-status plant species needs to have goals, measurable results and monitoring. Again, how do these measures, as stated without any specificity, reduce impacts to less than significant? 4-9

Alternative B, pages 4.5-15 through 4.5-23: Comments above apply to the mitigation measures for this alternative. Additionally, the Western Spadefoot mitigation measure on page 4.5-22 is incorrectly cites as Mitigation Measure 5.5a.

Alternative C, pages 4.5-23 through 4.5-31: Comments above apply to the mitigation measures for this alternative. Again the Western Spadefoot mitigation measure on page 4.5-30 is incorrectly cited.

Mitigation Measure 6.1, page 4.6-6: Creation or restoration of 40+ acres of Waters of the US will have environmental consequences that are not discussed in the DEIS. What are the environmental impacts of implementing this mitigation measure? 4-10

Alternative B and Alternative C: The comments above apply to the analysis of these impacts as well.

4-10 cont.

Summary:

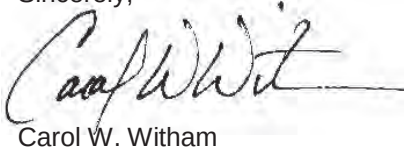
On behalf of CNPS, I appreciate the opportunity to provide comments on the Mather Specific Plan Draft Environmental Impact Statement.

While CNPS understands that this DEIS is project level for the proposed infrastructure components and program level for the remaining development, the lack of specificity in mitigation measures is troubling. Most rely on preparation of future documents which will not be subject to public disclosure and comment. This inappropriately defers mitigation and prevents interested citizens from participating in the process.

If project-level Environmental Assessments are prepared in the future relying on this EIS, the public will have no further opportunity to comment on the appropriateness and feasibility of project specific mitigation measures. This is unfortunate because public participation can and often does have beneficial impacts of project design and mitigation implementation.

4-11

Sincerely,



Carol W. Witham
1141 37th Street
Sacramento CA 95816
cwitham@ncal.net

Mather South, LLC
9216 Kiefer Boulevard / Sacramento, California 95826
Telephone: (916) 363-2617 FAX: (916) 364-9353

August 13, 2012

Kathleen Dadey
U.S. Army Corps of Engineers, Sacramento District
1325 J Street Room 1350
Sacramento, CA 95814-2922

Re: SPK – 2002 – 561 Mather Specific Plan Project Draft EIS

Kathleen.A.Dadey@usace.army.mil

Dear Kathleen:

Thank you for the opportunity to comment upon the draft EIS for the Mather project. Our comments follow.

1. On Page 3.5-27 the EIS mentions that the USFWS issued a Biological Opinion on January 24, 2012 that the disposal of the former Mather AFB was not likely to jeopardize the continued existence of the vernal pool fairy shrimp, vernal pool tadpole shrimp, Sacramento Orcutt grass, and slender Orcutt grass, and was not likely to destroy critical habitat designated for the vernal pool fairy shrimp and vernal pool tadpole shrimp. The EIS did not include a copy of that Biological Opinion in its Appendices or describe what specific mitigation measures or conditions the USFWS recommended be taken to avoid jeopardy to the affected species. Please describe the USFWS' recommended mitigation measures/conditions or include a copy of that Biological Opinion in the Appendices to the Final EIS. 5-1

2. The proposed South Sacramento Habitat Conservation Plan ("SSHCP") is mentioned at Page 3.5-20 as part of the regulatory background of the Project. The EIS needs to state directly that the Project site is outside of the area that would be covered by the SSHCP. 5-2

3. As part of the Project background, the EIS mentioned on Page 3.12-4 the existence of a contaminated groundwater plume associated with the operation of the Aerojet facilities to the north of the Project site. However, the EIS did not describe whether the contaminated plume was migrating toward the Project site or away from the Project site, 5-3

or if the contaminated groundwater plume was not migrating at all due to the ongoing treatment efforts. Please describe in the Final EIS if the groundwater at the Project site is at any risk from the migration of the contaminated groundwater plume.

5-3 cont.

4. Mitigation Measure 4.1a "Limit Daily Grading Activities" on Page 4.4-3 would limit the maximum daily disturbance area throughout the Project site to 15 acres per day in order to control PM10 emissions to a less than significant level. If grading is to take place of more than 15 acres per day, then the project proponent would have to prepare a PM10 dispersion model and a PM10 Reduction Plan to reduce PM10 exposure at sensitive receptors. Given the size of the Project area and the nature of the diverse development activities that will take place, it is not likely to be feasible to limit grading to 15 acres per day. The aggregate harvesting activities in the Economic Development Area of the Project are likely to disturb a large portion, if not all, of the 15 acres per day threshold. In lieu of performing PM10 dispersion modeling and preparing a PM10 Reduction Plan for SMAQMD approval, the project proponent should instead be given the option to implement SMAQMD's Enhanced Fugitive Dust Control Practices to control particulate matter emissions onsite and offsite whenever more than 15 acres per day will be disturbed. Mitigation Measure 4.1a should be amended to provide the option of implementing SMAQMD's Enhanced Fugitive Dust Control Practices

5-4

5. The EIS states that critical habitat for the vernal pool tadpole shrimp and fairy shrimp would be impacted by Alternative A on Page 4.5-1. However, the EIS does not identify where the 3.27 acres of vernal pool tadpole shrimp critical habitat is situated, nor does it describe where the 4.06 acres of fairy shrimp critical habitat is situated at the Project site. Please include a description of the locations or, even better, provide a graphic map of the two critical habitat areas in the Final EIS. In addition, please describe whether these areas of critical habitat overlap or whether they are separate. It may be that the critical habitat for the two cited shrimp types overlaps to some extent and that the total impact is not necessarily 3.27 + 4.06 acres (7.33 acres total), but actually is a smaller number. A tabular presentation and/or a graphic depicting the sites should be provided.

5-5

6. Mitigation Measure 5.1a (on Page 4.5-5) concerning the options of mitigation for the loss of vernal pool habitat needs some fine tuning in order to make its implementation feasible. The Project site consists of seven land use subareas with varying impacts to vernal pools and other wetlands. Construction in those subareas will take place at different times. Consequently, the mitigation for the vernal pools and wetlands being filled in a subarea needs to recognize that wetlands will be filled in phases as the Project area is developed. Instead of requiring mitigation for all impacts "prior to the initiation of construction", Mitigation Measure 5.1a should require compensation to be provided in phases as the fill of the vernal pools or wetland areas takes place, not prior to construction within any land use area in the Project area. It is entirely possible that construction could take place in many places within the Project area without filling any vernal pools or wetlands. Consequently, we suggest revising the fourth paragraph of Mitigation Measure 5.1a on Page 4.5-5, as well as revise Option 1 to read as follows:

5-6

> "Habitat compensation must occur prior to or concurrent with the fill of the habitat for vernal pool species at that phase of the Project. Compensation requirements for the vernal pools in each land use are summarized in Table 4.5-2. Compensation for the fill of the habitat for vernal pool species must be approved by the USACE and USFWS prior to initiation of construction activities to fill them.

5-6 cont.

7. It may be well to expressly provide a South Mather landowner the alternative to mitigate for habitat and wetland fills by way of the SSHCP. We would request that this alternative be addressed as an additional mitigation measure. The language proposed in the suggested amendments to the VELB, Western Spade Foot Toad, Western Pond Turtle, Special Status Birds and Migratory Birds, Special Status Plants and Loss of Wetlands contain, in part, language which might accomplish the SSHCP option.

5-7

8. The EIS should reference that the USFWS has made a determination that the VELB no longer requires listing under the federal Endangered Species Act and that formal action to officially delist the VELB has been delayed due to budget and personnel constraints suffered by the USFWS. As a result, Mitigation Measure 5.3 on Page 4.5-9 should be made conditional, so that if the VELB is delisted prior to the destruction of any elderberry bushes at the Project site, no mitigation for the loss of VELB and its habitat would be necessary. In addition, Mitigation Measure 5.3 should allow for use of the SSHCP to provide mitigation if the SSHCP is adopted and provides coverage for the Project area prior to any impacts to the VELB taking place within a land use type at the Project area. We suggest adding the following to the end of Mitigation Measure 5.3:

5-8

> "If the SSHCP is adopted and provides coverage for the Project site, then the project proponent shall have the option of participating in the SSHCP to mitigate for impacts to the VELB. Such participation shall take place before any alteration or destruction of the habitat for the VELB takes place at that phase of the Project. In the event the USFWS delists the VELB, then compliance with Mitigation Measure 5.3 will no longer be required."

9. Mitigation Measure 5.5 on Page 4.5-11 should be revised to require surveys for the Western Spadefoot only before the fill of wetlands and vernal pools that could be potential habitat for the Western Spadefoot starts, not before any construction anywhere at the Project starts. In addition, should the SSHCP be adopted and provide coverage for the Western Spadefoot at the Project site, the project proponent should have the option to comply with the SSHCP requirements in lieu of the requirements of this mitigation measure. We suggest the following revisions:

5-9

"**Measure 5.5: Perform Pre-construction Surveys for Western Spadefoot**. Prior to the fill of any wetlands or vernal pools, a qualified biologist shall conduct a survey for western spadefoot at the vernal pools and wetlands that would be filled. The survey shall include transecting all suitable habitat that may be affected by proposed activities and identifying suitable burrows that may be used for aestivation. Suitable burrows would be excavated using hand tools. If a spadefoot is found in a construction area, the biologist shall move the spadefoot from the area to suitable habitat within the proposed Preserve.

If the SSHCP is adopted and provides coverage for the Western Spadefoot at the Project site, then the project proponent shall have the option of participating in the SSHCP to mitigate for impacts to the Western Spadefoot in lieu of the above survey and relocation requirements. Such participation shall take place before any fill or alteration of the habitat for the Western Spadefoot at that phase of the Project."

5-9 cont.

10. Mitigation Measure 5.6 on Page 4.5-11 should be revised to require surveys for the Western Pond Turtle only before the fill of creeks and streams that could be potential habitat commences, not before any construction anywhere at the Project is started. In addition, should the SSHCP be adopted and provide coverage for the Western Pond Turtle at the Project site, the project proponent should have the option to comply with the SSHCP requirements in lieu of the requirements of this mitigation measure. We suggest the following revisions:

"**Measure 5.6: Perform Pre-construction Surveys for Western Pond Turtle**. Prior to construction in any potential Western Pond Turtle habitat at that phase of the Project, a qualified biologist shall conduct a survey for western pond turtles within 24 hours of the start of construction activities within 500 feet of streams, ditches, and other watercourses located within the proposed construction areas. If no individuals are identified then no additional measures are required. If a Western Pond Turtle is found in a proposed construction area, the biologist would move the turtle from the area to suitable habitat within the proposed Preserve. If a Western Pond Turtle becomes trapped during construction activities, a biologist would remove the turtle from the work area and place it in a suitable area of the proposed Preserve. If the SSHCP is adopted and provides coverage for the Western Pond Turtle at the Project site, then the project proponent shall have the option of participating in the SSHCP to mitigate for impacts to the Western Pond Turtle in lieu of the above survey and relocation

5-10

requirements. Such participation shall take place before any fill or alteration of the habitat for the Western Pond Turtle at that phase of the Project."

5-10 cont.

10. Mitigation for Nesting Special Status Birds and Migratory Birds. The proposed mitigation for impacts to nesting special status birds and migratory birds should allow the project proponent the option to provide mitigation pursuant to the SSHCP if it is adopted and provides coverage to the Project area. To that end, we suggest adding the following provision to Mitigation Measure 5.7d on Page 4.5-13:

"**Measure 5.7d: Option to Provide Mitigation Pursuant to SSHCP**. .If the SSHCP is adopted and provides coverage for the any of the nesting special status bird species and/or nesting migratory bird species noted above at the Project site, then the project proponent shall have the option of participating in the SSHCP to mitigate for such impacts in lieu of the above requirements. Such participation shall take place before any disturbance or destruction of the nesting habitat for the special status bird species and/or migratory bird species at that phase of the Project."

5-11

11. Special Status Plant Mitigation. Mitigation Measure 5.9a on Page 4.5-14 should be revised to require surveys for special status plants only before the fill of wetlands and vernal pools that could be potential habitat for the special status plants commences in a particular land use, not before any construction anywhere at the Project may start. In addition, should the SSHCP be
adopted and provide coverage for the special status plant species at the Project site, the project proponent should have the option to comply with the SSHCP requirements in lieu of the requirements of Mitigation Measures 5.9a and 5.9b. We suggest the following revisions:

"**Mitigation Measure 5.9a: Perform Preconstruction Surveys for Special Status Plants.** Prior to construction in any potential special status plant habitat, vegetated portions of that phase of the Project, including wetlands, shall be surveyed by a qualified botanist for special status plants following established CDFG Protocols for Surveying and Evaluating impacts to Special Status Native Plant Populations and Natural Communities (CDFG, 2009), which calls for protocol-level surveys during the appropriate flowering/identification period for each potentially affected species.

...

Mitigation Measure 5.9c: Optional SSHCP Compliance. If the SSHCP is adopted and provides coverage for the any of the special status plant species noted above at the Project site, then the project proponent shall have the option of participating in the SSHCP to

5-12

mitigate for such impacts in lieu of the above requirements. Such participation shall take place before any disturbance or destruction of the habitat for the special status plant species at that phase of the Project."

5-12 cont.

12. Aquatic Resources Mitigation. Mitigation Measure 6.1 on Page 4.6-6 should be revised to require compensation for the fill of jurisdictional waters of the U.S. as the Project develops over time in phases, not before any construction within a given land use category may start. In addition, should the SSHCP be adopted and provide permit coverage for the fill of jurisdictional waters of the U.S. at the Project site, the project proponent should have the option to comply with the SSHCP requirements in lieu of the requirements of Mitigation Measure 6.1. We suggest the following revision to Mitigation Measure 6.1:

"**Measure 6.1: Fully Compensate for the Loss of Waters of the U.S.:** The project proponent shall ensure that any loss of waters of the U.S. would be compensated for by restoration or creation of waters at a ratio no less than 1:1, prior to the fill of any waters of the U.S. in that phase of the Project. Compensation may include on or off site creation, restoration, or enhancement, or purchase of appropriate credits from a Corps-approved mitigation bank. Onsite or off site creation/restoration plans would be prepared by a qualified biologist prior to fill of any jurisdictional waters of the U.S. and approved by the Corps. On- or –off site creation/restoration sites would be monitored for at least five years to ensure their success. If the SSHCP is adopted and provides coverage for impacts to jurisdictional waters of the U.S. at the Project site, then the project proponent shall have the option of participating in the SSHCP to mitigate for such impacts in lieu of the above requirements. Such participation shall take place before any fill of waters of the U.S. within that phase of the Project."

5-13

13. Intersection Improvements. Mitigation Measure 9.1 on Page 4.9-3 needs to clarify that the project proponent should make a fair share contribution to the costs of the intersection improvements noted in this Measure, not simply make "a contribution."

5-14

14. City of Rancho Cordova Roadway and Intersection Improvements. There are a number of roadway and intersection improvements that the EIS proposes be made to the City of Rancho Cordova's streets. In the absence of any agreement between Sacramento County and the City of Rancho Cordova, there is no assured means of providing for such improvements, so all the impacts need to be considered significant and adverse. We suggest revising the first paragraph in Mitigation Measure 9.2 to read:

5-15

"**Measure 9.2: City of Rancho Cordova Roadway/Intersection** Improvements. If the City of Rancho Cordova and the County enter into a Reciprocal Funding Agreement and Operational Agreement prior to the commencement of construction in the

> Project area, then the project proponent would provide a fair share contribution for improvements to the following City of Rancho Cordova roadway network facilities: …"

5-15 cont.

15. Caltrans Roadway Improvements. The project proponent's contribution to any Caltrans roadway improvements should be its fair share of the Caltrans improvements. Mitigation Measure 9.3 (on Page 4.9-8) should be revised to read:

> "**Measure 9.3: Contribution to Caltrans Roadway Improvements**. The project proponent shall provide a fair share contribution for improvements to the eastbound diverge to Mather Field road Off-Ramp through the addition of an auxiliary lane to allow a double lane off ramp."

5-16

16. Mather Core Area. On Page 4.16-7 the EIS notes that 1,362 acres of the Project site are located within the Mather Core Area of the Vernal Pool Recovery Plan. However, the EIS fails to mention how many acres of the proposed 1,272 acre Preserve at the Project would be located within the Mather Core Area. Please provide that acreage in the Final EIS. In addition, please state how many acres are contained in the Bryte Ranch and Sunrise Douglas Conservation Banks, which the EIS states are the only two mitigation banks located entirely within the Mather Core Recovery area with vernal pool preservation credits for sale. Without this information, it is difficult to determine how significant the proposed Project's impacts on the Mather Core area would be.

5-17

17. GHG Mitigation. Mitigation Measure 16.1 on Page 4.16-11 of the EIS would require the Project area to achieve a 30% reduction in greenhouse gas emissions from business-as-usual in 2020. We were unable to find an explanation in the EIS of where that target reduction came from for greenhouse gas emissions. Please explain the source of that 30% reduction target.

5-18

18. Offsite Vernal Pools. On page 4.16-12 the EIS makes the statement in regard to vernal pool mitigation "that the performance of off-site constructed pools would not adequately replace the habitat functions of the original pools." Please cite the generally accepted scientific source that supports that statement. The Corps and the USFWS have been requiring the construction of replacement vernal pool habitat as mitigation for close to 20 years.

5-19

19. At page 4.10-1 the discussion concludes with the statement that the project is consistent with the current County General Plan. We believe that the General Plan Land Use map will need to be modified. The underlying reasons for the change need to be described.

5-20

20. A tabular representation that clearly indicates the disposition of critical habitat wetland acres separate from other wetland acres needs to be prepared for the EIS.

5-21

Thank you for the opportunity to provide comment.

Sincerely,
MATHER SOUTH, LLC

Phil Rodriguez
Vice President
Planned Community Development

cc: Clark Whitten, Sacramento County Economic Development Office

-----Original Message-----
From: Jessica Faulk [mailto:jldampier@gmail.com]
Sent: Monday, August 13, 2012 4:58 PM
To: Dadey, Kathleen A SPK
Subject: Comments on the Public Notice SPK-2002-00561

Hello Kathleen,

Please find below my comments on the Public Notice SPK-2002-00561.

Alternative C is my choice. Alternative A is very similar and this one is okay for me also. Alternative B has a dramatic environmental impact not only of the surrounding area but it also has an impact on the community I and the Mather residents live in and the well-being of the nature preserve that surrounds our community. Alternative C has the least impact on the wetland ecosystems that live in this area. Alternative B would destroy the animals, plants and microlife that sustain the area. It would deeply impact the awareness built for water resources and the publics role in protecting them. It would prevent the local children from exploring and learning the values of the nature preserve and it would impact the programs that Sacramento Splash has implemented. Beyond my property line is the nature preserve and this was the reason we moved to the Mather community. If Alternative B is implemented, it will destroy what we moved here for. Please protect our wetlands and my backyard.

6-1

I appreciate your time in reading my comments.

Thank you,
Jessica Faulk
11073 Woodring Dr.
Mather, CA 95655
jldampier@gmail.com

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Scott Faulk [mailto:sdfaulk@gmail.com]
Sent: Friday, August 10, 2012 9:47 AM
To: Dadey, Kathleen A SPK
Subject: Mather Plan

Commenter Name: Scott Faulk
Mailing Address: 11073 Woodring Dr. Mather CA 95655 Email Address:
sdfaulk@gmail.com
Comments:

Dear Kathleen,
I would like to have my voice heard that if (and I do understand it most likely will) change must happen, I would prefer the Alternative C plan. Alternative B could end up destroying vernal pools, damage wildlife and the habitat in the area. This is a special place and the open, undeveloped rural spaces make the area around Mather so special should be protected and treasured. 7-1

Thank you for taking our comments!
Scott Faulk

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: G. Graham [mailto:mail@goglen.com]
Sent: Sunday, August 12, 2012 4:42 PM
To: Dadey, Kathleen A SPK
Subject: Comments on the propose Mather Specific Plan Project

Sorry for my late reply. I attended the talk w/ the Army Corps of Enginneers Wed July 25 in the old Mather AFB (one of like 5 attendees).

I live on Woodring, right along the area that would be impacted. I'm right next to the greenbelt, and across the street is empty behind them.

I've discussed this with my family and neighbors - we are all excited to have the area grow, and very happy that our "seclusion" will be respected. Being surrounded by wetlands was the most major influence of our purchase (new) in 2003 - it gave us the sense of being out in the country while being right next to the city.

We were told the area would always be protected with no development immediately surrounding our neighborhood. That is why we are concerned with "Alternative B" - because that opens us up to having development right across the street from us. Though it is labelled as "avoided areas", we were told Wed 25th that Alternative B included filling in some vernal pools in that area and possible bike & walking paths that could/would come right up to the houses across the street. 8-1

Alternative A is our favorite plan - we feel it balances the wetlands without restricting the development that will help the area greatly.
For that reason, it is better than Alternative C, which imposes a wetland preserve right in the middle of the "Parks/Recreation" and "University Village/Residential" areas. Alternative A has them labeled simply as "avoided" without imposing the added "protected wetland" label.

Alternative D, no changes, will severely limit this area as it does not allow any growth. In order of preference (top to lowest):

Alternative A
Alternative C (a very close 2nd)
Alternative B (much lower)
Alternative D

--
Glen Graham
11030 Woodring Drive, 95655
(916) 366-8969
****
Whatever is not nailed down, is mine.
Whatever I can pry loose... is not nailed down!
****

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Ramirez, Kim [mailto:Kim.Ramirez@morganstanleysmithbarney.com]
Sent: Tuesday, August 14, 2012 3:24 PM
To: Dadey, Kathleen A SPK
Subject: Mather Development Plan

Hi Kathleen:

Regarding the proposed development plans at Mather, we are highly opposed to any option other than D, but do understand, if the area must be developed, we'd prefer Alternative C.

It's extremely important not to damage wildlife and the habitat area, including the vernal pools. Unfortunately, with Zinfandel already being opened through Douglas, we are already seeing an enormous amount of wildlife killed by cars simply traveling to the golf course or Independence at Mather.

9-1

Thank you for your time and taking everyone's opinion into consideration.

Commenter Name: Kimberlie Ramirez-Grosso & Jeffrey Grosso Mailing Address: 4350 Norwalk Circle, Mather, CA. 95655 Email Address: Kim.Ramirez@mssb.com

---

Important Notice to Recipients:
Please do not use e-mail to request, authorize or effect the purchase or sale of any security or commodity. Unfortunately, we cannot execute such instructions provided in e-mail. Thank you.

The sender of this e-mail is an employee of Morgan Stanley Smith Barney LLC. If you have received this communication in error, please destroy all electronic and paper copies and notify the sender immediately. Erroneous transmission is not intended to waive confidentiality or privilege. Morgan Stanley Smith Barney reserves the right, to the extent permitted under applicable law, to monitor electronic communications. This message is subject to terms available at the following link:
http://www.morganstanley.com/disclaimers/mssbemail.html
<http://www.morganstanley.com/disclaimers/mssbemail.html> . If you cannot access this link, please notify us by reply message and we will send the contents to you. By messaging with Morgan Stanley Smith Barney you consent to the foregoing.

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Josilyn Preskar [mailto:jnpreskar@gmail.com]
Sent: Monday, August 13, 2012 12:22 PM
To: Dadey, Kathleen A SPK
Subject: Mather Specific Plan Project

Good Afternoon -

I am writing in respons to the Mather Specific Plan Project Draft EIS to oppose Alternative B. However, I do support Alternative A or C as it devotes the most land for preserve resources. Thank you. 10-1

Josilyn Preskar
11057 Woodring Drive
Mather, 95655

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Poppy Smalley [mailto:poppy@aceplumbing.com]
Sent: Friday, August 10, 2012 10:05 AM
To: Dadey, Kathleen A SPK
Subject: Mather Specific Plan Area Project

Commenter Name: Poppy Smalley

Mailing Address: 11039 Woodring Dr, Mather, Ca 95655

Email Address: Poppy@aceplumbing.com

Comments: My husband and I moved into the Mather area just over 1 year ago. One of the reasons for choosing the Mather area and property that we did was because of the preserved area behind our home. We enjoy the wildlife and openness that this area provides. I was under the impression that this land was "preserved" and would never be built on. The news of these proposed plans is very upsetting to me.

Of course I would prefer no changes be made. In reality, I understand that something will be approved. Out of the 3 alternatives, I would choose Plan C because it offers the most preserved areas. My second choice would be Plan A. The benefit of these plans it that there is still a lot of preserved land, the vernal pools and wildlife will hopefully remain intact. This would also allow schools to continue to educate their children about conservation with field trips to this area. Plan B could destroy the vernal pools and the wildlife. Our area should be protected and cherished for many years to come.

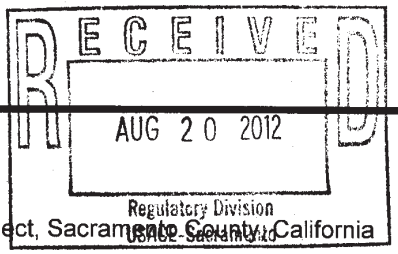
11-1

Thank you for your time and consideration.

Poppy Smalley

Office Manager

Classification: UNCLASSIFIED
Caveats: NONE



Dadey, Kathleen A SPK

From: Heather Totten [heather.totten@sbcglobal.net]
Sent: Friday, August 17, 2012 12:35 PM
To: Dadey, Kathleen A SPK
Subject: Comments regarding: Mather Specific Plan Area Project, Sacramento County, California

Hi Kathleen,

I hope Sacramento County will consider these comments regarding the Mather Specific Plan Area Project regardless if these comments are received after August 13, 2012.

First we do not feel that the neighborhood was properly given notice of the plan. A post card was mailed out to residents of Mather with a meeting date of July 12, 2012. The meeting was cancelled with no notice. I called you that day and you called me back the next day letting me know the meeting was rescheduled for July 25, 2012, however, a notice of the new meeting date was never sent out. 12-1

In regards to the proposed plans, both James P. Gregory and I, owners at 4472 Aubergine Way, prefer plan B. We believe it is important to preserve and protect the area around Mather which includes the wetlands and vernal pools. We also feel that having the riparian buffer area would help protect the endangered species found there. 12-2

In terms of economic development area we are concerned about the aggregate extraction that is done. Specifically, we would ask that operations be kept to normal daytime hours. One of the beauties of Mather is the sound of nature here at night the aggregate mining ruins this affect with operations running at night and the sounds traveling across the neighborhood. 12-3

We hope that Sacramento County considers our comments and gives more consideration in the future to properly notifying residents of future meetings.

Best Regards,

Heather Totten and James Gregory.

MATHER SPECIFIC PLAN PROJECT DRAFT EIS

PROCEEDINGS

July 25, 2012

MERRILL CORPORATION
LegaLink, Inc.
135 Main Street
4th Floor
San Francisco, CA 94105
Phone: 415.357.4300
Fax: 415.357.4301

PUBLIC HEARING

MATHER SPECIFIC PLAN PROJECT

DRAFT EIS

--o0o--

Sacramento County

Environmental Management Department

10590 Armstrong Avenue

Mather, California

Wednesday, July 25, 2012

4:00 p.m.

REPORTED BY: WENDY E. ARLEN, CSR #4355, CRR, RMR
JOB 2001-445107

PRESENT

KATHLEEN DADEY, U.S. Army Corps of Engineers
JOHN PRETTYMAN, U.S. Army Corps of Engineers
RICK BALAZS, County of Sacramento
JENNIFER WADE, ESA
ERICH FISCHER, ESA

--oOo--

Mather, California
Wednesday, July 25, 2012
4:00 p.m.
--oOo--

PUBLIC COMMENT

MR. PRESKAR: Michael Preskar, P-r-e-s-k-a-r. I'm a resident of Independence at Mather. My address is 11057 Woodring Drive.

I'd just like to leave a comment that I am in support of Option A. Should one of the development plans be chosen, I'm in support of Option A. And I am opposed to Option B and C.

I am opposed to Option B because it will fill in additional wetland area that is north of the Independence at Mather neighborhood, and I would rather see that as preserved open wetland. And that's for Option C as well.

(End of Public Comment at 4:45 p.m.)

(End of Public Hearing at 7:00 p.m.)

--oOo--

CERTIFICATE OF CERTIFIED SHORTHAND REPORTER

I, WENDY E. ARLEN, hereby certify that I am a Certified Shorthand Reporter; that I reported in shorthand writing the foregoing matter at the time and place therein stated; that the foregoing pages are a full, true and complete transcript of my said shorthand notes and is a full, true and correct record of the proceedings had in said matter at said time and place.

Dated: July 31, 2012

_____

WENDY E. ARLEN
Certified Shorthand Reporter
California License #4355

13-1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JUN 15 2015

Kathleen Dadey
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922

Subject: Supplemental Draft Environmental Impact Statement for the Mather Specific Plan Area Project, Sacramento County, CA (CEQ # 20150118)

Dear Ms. Dadey,

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

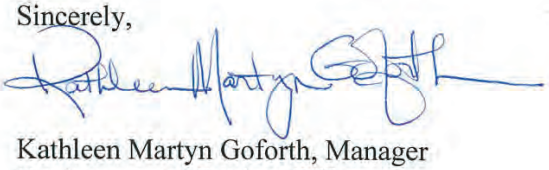
EPA reviewed the Draft EIS for the Mather Specific Plan Area Project and provided comments to the U.S. Army Corps of Engineers in a letter dated August 20, 2012 (enclosed). We rated the Draft EIS as *Environmental Concerns – Insufficient Information (EC-2)*. Our comments expressed concerns regarding impacts to waters of the U.S., determination of the Least Environmentally Damaging Practicable Alternative (LEDPA), and conformance of emissions projections with State Implementation Plans for the non-attainment areas located within the planning area. We appreciate that the Corps has supplemented the Draft EIS to reflect the increased acreage of waters of the U.S. that have been delineated and to include revisions to the shape or size of aquatic features within the project site. 14-1

Based on our review of the Supplemental Draft EIS, we have rated the document as *Environmental Concerns – Insufficient Information (EC-2)* (See attached "Summary of the EPA Rating Definitions"). EPA's detailed comments on the Draft EIS still apply and we remain particularly concerned with the project proponent's ability to identify appropriate compensatory mitigation for project impacts, in terms of location, quantity, and type, in a manner consistent with the 2008 Mitigation Rule and the U.S. Army Corps of Engineers South Pacific Division's standard operating procedures for establishing mitigation ratios. Mitigation must be identified and initiated before or at the same time as impacts, and the proposed amount of impacts are such that it is not clear whether or not this would be possible. The proposed fill of 48.28 acres would require substantial compensatory mitigation, and the applicant must find appropriate areas in which this impact can be offset. Few mitigation bank credits are available in the region, and those credits have already been identified by several large projects in the County. We also note that the South Sacramento Habitat Conservation Plan will also be seeking approval for significant wetland impacts and those must be offset in the area, further limiting availability of mitigation locations. 14-2

In addition, the Supplemental DEIS does not demonstrate that the proposed alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA). According the 404 (b)(1) Guidelines, only the LEDPA can be permitted, and the applicants must rebut the presumption that a less damaging alternative exists. In light of the very large impacts, as shown by the new information on proposed fill into waters of the U.S., we strongly encourage the applicant to avoid additional waters. 14-3

EPA appreciates the opportunity to comment on the Supplemental Draft EIS. When the Final Supplemental EIS is released for public review, please send one hard copy and one electronic copy to the address above (specify Mail Code ENF-4-2) at the same time it is officially filed with our Washington, D.C. Office. If you have any questions, please contact me at 415-972-3521, or contact Phillip Lopez, the lead reviewer for this document, at 415-972-3210 or lopez.phillip@epa.gov. 14-4

Sincerely,



Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating Definitions
Draft EIS Comment Letter

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment

Comment Letter 14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUG 20 2012

Ms. Kathleen Dadey
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922

Subject: Draft Environmental Impact Statement for the Mather Specific Plan Project, Sacramento County, California (CEQ # 20120221)

Dear Ms. Dadey:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the Mather Specific Plan Project (Project) pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Thank you for your agreement to a two-week extension for the EPA to submit comments on this DEIS.

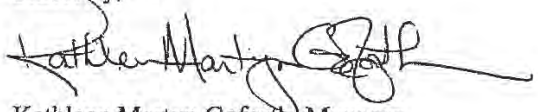
The EPA recognizes the desire to redevelop the former Mather Air Force Base for productive civilian use, and the commitment already demonstrated by the U.S. Army Corps of Engineers (USACE) and Sacramento County to work with the EPA and other federal, State, and local agencies to develop the conservation goals of the Mather Specific Plan Project (Project). We have significant concerns, however, about the potential impacts to waters of the U.S. and air quality associated with the Project, particularly when considered in concert with the multiple housing, transportation, and other development projects proposed in Sacramento County. These impacts represent a daunting cumulative burden that would be extremely difficult to mitigate.

14-5

Based on our review of the DEIS, we have rated the preferred alternative and the document as EC-2, Environmental Concerns – Insufficient Information (see enclosed EPA Rating Definitions). Though we acknowledge the inclusion of a 1,272-acre Preserve and 13-acre riparian buffer area in the Applicant's Preferred Alternative (Alternative A) and the commitment to meet the preservation goals of the Mather Recovery Plan, the EPA is concerned about Alternative A's projected significant impacts to waters of the U.S., particularly vernal pools. We also have concerns about projected Project emissions of nitrogen oxides, particulate matter, and other pollutants, and how these emissions would conform to the State Implementation Plans for the nonattainment areas located within the planning area. We recommend that the FEIS identify the Least Environmentally Damaging Practicable Alternative (LEDPA) and include a Draft General Conformity Determination. We also recommend that the FEIS include additional information on the potential effects of climate change on the proposed Project. Our detailed comments are enclosed.

We appreciate the opportunity to review this DEIS, and are available to discuss our comments. When the FEIS is released for public review, please send one hard copy and one CD to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Jason Gerdes, the lead reviewer for this project. Jason can be reached at 415-947-4221 or gerdes.jason@epa.gov.

Sincerely,



Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosures: Summary of the EPA Rating System
EPA Detailed Comments

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

14-5 cont.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE MATHER SPECIFIC PLAN PROJECT, SACRAMENTO COUNTY, CALIFORNIA, AUGUST 20, 2012

Cumulative Impacts

The EPA has serious concerns regarding the significant cumulative impacts to air quality, water quality, habitat for sensitive species, and traffic in the Mather Specific Plan Project (Project) cumulative effects study area. While Chapter 4 of the Draft EIS (DEIS) identifies several planned development, transportation, and infrastructure improvement projects in the Project cumulative effects study area, the EPA is aware of many additional federal projects in which USACE is involved and that are planned in the study area for the same general time period as the Project. These projects, however, have not been identified in the DEIS. They include the Sierra Vista Specific Plan Project, Folsom South of US Highway 50 Specific Plan, Southport Sacramento River Early Implementation Project, Folsom Dam Modification Project Approach Channel, and the Natomas Levee Improvement projects. It is unclear whether these projects have been considered in the Project cumulative impacts analyses.

> ***Recommendation:***
> Additional efforts should be made by the U.S. Army Corps of Engineers (USACE) to coordinate with appropriate agencies and applicants on the multiple projects in the area so that the cumulative effects of past, current, and foreseeable future projects can be more accurately identified, and minimized and/or effectively mitigated for each resource.At minimum, the projects identified above should be considered in the cumulative impacts analysis. Additional comments on the cumulative impacts associated with the Mather Specific Plan Project are included in our resource-specific comments below.

14-5 cont.

Impacts to Waters of the U.S.

LEDPA Determination

Pursuant to the EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines), only the Least Environmentally Damaging Practicable Alternative (LEDPA) that achieves the overall project purpose, while not causing or contributing to significant degradation of the aquatic ecosystem, can be permitted by the USACE. At this time, the EPA believes that the alternatives analysis in the DEIS does not contain sufficient detailed information for the Corps to identify the LEDPA in compliance with the Guidelines. The DEIS simply states that "prior to issuing a permit, the USACE will make a series of factual determinations with respect to the least environmentally damaging practicable alternative (LEDPA) based on the criteria contained in 40 CFR Part 230" (p. 1-10). The Applicant's Preferred Alternative (Alternative A) would fill approximately 40.25 acres of jurisdictional waters of the U.S. The Multiple Preserves Alternative (Alternative C) would fill 33.65 acres of jurisdictional waters; though reduced, the impacts for this alternative are still significant. It is unclear from the DEIS if Alternative C represents the LEDPA, or if impacts to jurisdictional waters could be reduced even further.

> ***Recommendation:***
> The Final EIS (FEIS) should include a detailed evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines and support the identification of the LEDPA by the USACE. The alternatives analysis should demonstrate that the proposed project is avoiding and minimizing damage to waters to the maximum extent practicable.

Indirect Impacts to waters of the U.S.

Another provision of the Guidelines is the requirement that the applicant mitigate for unavoidable impacts to jurisdictional waters. The DEIS, however, lacks a comprehensive discussion of compensation for potential indirect impacts to waters of the U.S. The DEIS states that indirect impacts to jurisdictional waters are discussed in detail in Section 4.3, Section 4.5 and Mitigation Measures 5.1b and 5.1c (p. 4.6-1); but the discussion in these sections is limited to indirect effects to habitat for vernal pool species.

***Recommendation*:**
The FEIS should include an analysis of all direct and indirect impacts to jurisdictional waters of the U.S.

Compensatory Mitigation

The DEIS states that the project proponent proposes on-site habitat preservation in perpetuity, and to purchase habitat creation credits at an USACE and U.S. Fish and Wildlife Service (USFWS) approved mitigation bank and/or to restore/enhance habitat within the designated Preserve areas (upon USFWS approval), to fully compensate for direct and indirect effects to habitat for federally listed vernal pool species (p. 4.6-6). Similarly, the "project proponent would also ensure that any loss of waters of the U.S. would be compensated for by restoration or creation of waters at a ratio no less than 1:1, prior to construction, and that compensation may include on or offsite creation, restoration, enhancement, or purchase of appropriate credits from a Corps-approved mitigation bank" (p.4.6-6). The reliance on mitigation banks for one form of compensatory mitigation is supported by the EPA, but the mitigation bank(s) that would be used are not identified in the DEIS. This is concerning, as Mather represents just one of the many proposed large-scale development projects in Sacramento County that will require compensatory mitigation from a Corps-approved mitigation bank, and the availability of sufficient credits for all of these projects has not been demonstrated. 14-5 cont.

***Recommendations*:**
The FEIS should include information on the supply of existing and proposed mitigation banks within Sacramento County, and the mitigation banks that would be used as compensatory mitigation for the Project.

Air Quality

General Conformity

The project site is located in an area that is federally designated nonattainment for ozone and PM_{10} and $PM_{2.5}$ (particulate matter smaller than 10 or 2.5 microns, respectively). Based on the proposed project's potential construction emissions estimates in the DEIS, it appears that a conformity determination will be needed.

***Recommendations*:**
The FEIS should demonstrate that the direct and indirect emissions of the project conform to the SIP and do not cause or contribute to violations of the National Ambient Air Quality Standards (NAAQS). We recommend that the USACE work closely with the Sacramento Metropolitan Air Quality Management District on its conformity determination. We also recommend that the Draft

General Conformity Determination be included in the Final EIS, either as a detailed summary or as an appendix.

The DEIS provides construction and operational emissions estimates in pounds per day for purposes of comparing them with emissions budgets and general conformity de minimis thresholds. It appears that, with the exception of carbon monoxide, the proposed project's direct and indirect contaminant emissions have not been modeled to show their estimated *concentrations* in the project area.

Recommendation:
Additional dispersion modeling should be conducted to determine air pollutant concentrations of criteria pollutants from direct, indirect, and cumulative emissions for an accurate comparison with the NAAQS, using comparable units (e.g. micrograms per cubic meter, parts per billion, or parts per million). The results should be presented in the FEIS.

Cumulative Air Impacts

The DEIS (p. 4.16-10) indicates that the proposed action would result in a significant cumulative impact due to operational emissions. According to the DEIS (p. 4.16-8), the study area for cumulative air quality impacts is the Sacramento Valley Air Basin. As stated above, the EPA is aware of multiple federal projects, in which USACE is involved, and that are planned in the Sacramento Valley Air Basin for the same general time period as the proposed Project. Because many of these projects are not identified in the discussion in section 4.16.3.3 of the DEIS, however, it is unclear whether they have been considered in the cumulative air quality impacts analysis.

Recommendation:
The air quality cumulative impacts analysis should account for all reasonably foreseeable future actions in the Sacramento Valley Air Basin, and evaluate the potential for the cumulative emissions to contribute to violations of the NAAQS. We recommend that the FEIS provide a table that includes the criteria pollutant emissions estimates and totals from all of these sources for both the construction and operational phases of the projects.

14-5 cont.

Editorial Notes

Table 4.4-3 shows the predicted unmitigated and mitigated construction emissions for the worst-case year and compared to the federal de minimis thresholds. According to the table, only reactive organic gases (ROG) are projected to decrease after mitigation. The values for nitrogen oxide (NOx), PM_{10}, $PM_{2.5}$, and carbon monoxide (CO) are projected to remain unchanged after mitigation. This seems unlikely, and either represents an error in presentation, or is an indication that the mitigation identified is insufficient and needs to be strengthened.

Recommendation:
The Corps should examine the information presented in Table 4.4-3 of the DEIS and determine if it needs to be corrected in the FEIS.

The DEIS (p. 3.4-5) cites the general conformity rule incorrectly. The general conformity rule was revised April 5, 2010 (75 FR 17257). The EPA deleted the provision in 40 CFR 93.153 that required federal agencies to conduct a conformity determination for regionally significant actions where the direct and indirect emissions of any pollutant represent 10 percent or more of a nonattainment or maintenance area's emissions inventory for that pollutant.

Recommendation:
The incorrect language should be deleted from the EIS.

Climate Change

The EPA commends the USACE for including the commitment, in Appendix F, to incorporate green building and development measures to reduce construction and operational greenhouse gas (GHG) emissions, as well as for providing a general description of potential climate change impacts in California. There are no detailed descriptions, however, of how climate change may affect the projects planned in the preferred alternative, sensitive water resources and species (such as the vernal pool fairy shrimp and vernal pool tadpole shrimp), and wetland restoration efforts.

Recommendations:
The USACE should describe in the FEIS how climate change may affect the projects planned in the preferred alternative, sensitive species, and wetland restoration efforts. The FEIS should also include a climate change mitigation and adaptation plan.

14-5 cont.

Traffic

The DEIS states that the addition of traffic volumes generated by Alternative A would degrade operating conditions at several intersections of the segment of Bradshaw Road from Old Placerville Road to Kiefer Boulevard to unacceptable levels of service. Additionally, the DEIS indicates that with the addition of Alternative A, the operation of several City of Rancho Cordova roadway facilities would degrade from acceptable to unacceptable levels of service (p. 4.9-3). These impacts are significant, and when compounded with the anticipated traffic volume increases from other reasonably foreseeable development in Sacramento County, represent cumulative impacts that would be exceedingly difficult to mitigate.

Recommendation:
The FEIS should include additional measures to reduce and mitigate anticipated traffic volumes generated by Alternative A to the greatest possible extent.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
(ER 15/0272)

Filed Electronically

June 15, 2015

Mary Pakenham-Walsh,
Project Manager
Regulatory Division
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922 E

Subject: Review of the Draft Supplement Environmental Impact Statement (DSEIS) US Army Corps of Engineers (USACE), Mather Specific Project Plan, CA,

Dear Ms. Pakenham-Walsh,

The Department of the Interior has received and reviewed the subject document and has no comments to offer. 15-1

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc: OEPC-Staff Contact: Shawn Alam, 202-208-5465; shawn_alam@ios.doi.gov

THE MATHER NEIGHBORHOOD ALLIANCE

June 15, 2015

US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922

Attn: Kathleen Dadey at Kathleen.A.Dadey@usace.army.mil
Re: Comments on the Mather Specific Plan Project Supplemental Draft Environmental Impact Statement; and Request for Public Hearing
Public Notice: SPK-2002-00561

Ms. Dadey,

The Mather Neighborhood Alliance (Alliance) developed the following comments to address deficiencies found in the Mather Specific Plan Project Supplemental Draft Environmental Impact Statement (SDEIS) as they apply to Sacramento County's (County) proposed amendments to land use designations, boundaries, and transportation alignments in the Mather Specific Plan (project site).

16-1

The Alliance currently represents over 100 Mather residents and includes experts in geology, ecology, civil engineering, media and publicity, environmental and contract law, and many other disciplines. We expect the Alliance to grow substantially as we create awareness of the project specifics and recruit more experts who share an interest in protecting the natural resources at Mather for the benefit of our County and region as a whole. In addition, we expect to continue to share comments and feedback to County and Federal agencies.

Residents in the Mather Field community and surrounding region have known about the County's desire to develop land areas on the project site for several years. Although the County has done did some public outreach events in the past, these would probably be best described as marketing propaganda with very general outlines that presented "potential" projects with huge benefits (e.g. closer shopping, public transportation, bike paths, hiking trails, etc.) while neglecting to mention possible negative aspects (e.g. major increases in traffic loads, substantial losses to habitat, increasing ambient noise and light pollution). Our community has only recently become aware of the full extent and true nature of their planned developments following the release of the County's draft Environmental Impact Report (DEIR) and an updated presentation of development plans for Mather which County staff gave at a recent home owner's association meeting.

16-2

While we recognize that some development within the project is desirable and (in some cases) necessary, we strongly object to the breadth of developments proposed and the unnecessarily destructive implications they will have on the Mather ecosystem. We are distressed by the lack of consideration shown by the County (and other agencies) regarding potential impacts these developments might impose on the overall aesthetic character of the Mather community, especially in the southeastern portion of the project site.

16-3

THE MATHER NEIGHBORHOOD ALLIANCE

Now that the County's scope of development has been more completely revealed, we (the Alliance), respectfully request a Public Hearing to offer community members an opportunity to address the inadequacies of environmental review(s) that have been conducted for the project site and to provide input to the U.S. Army Corps of Engineers (USACE)

16-3 cont.

We offer our comments specific to the SDEIS on the following pages. We respectfully ask that you and other USACE staff give them careful consideration and offer a public hearing before moving forward with approval of any permit applications currently pending for this project.

THE MATHER NEIGHBORHOOD ALLIANCE

Hydrologic Considerations

First and foremost amongst the deficiencies we have identified in the SDEIS is an apparent lack of understanding and/or consideration shown to shallow subsurface hydrology and the potentially significant damage that additional disruptions to it might have on the long term health of vernal pool/seasonal wetland habitats across the entire Mather project site. Sacramento County documents regarding this project state quite clearly that "the future amount of construction activity that could occur consistent with the project proposal is unknown…", yet somehow the authors still conclude that "with mitigation, impacts to waters and wetlands that will result from development are less than significant." Similarly, the SDEIS notes that "indirect effects may occur if proposed activities within 250 feet of suitable habitat alter the surface and/or subsurface hydrology of the area" (pg. 4.5-1), but goes on to state that "with mitigation, impacts would be reduced to a less-than-significant level.". We submit that these conclusions are unwarranted, are based on very little or no real data from the project site and demonstrate a less than adequate understanding of perched aquifer hydrology.

Researchers from UC Davis and the University of South Florida published a 2005 paper[1] detailing results of an investigation into subsurface hydrology around some of the vernal pools at Mather Field. These authors concluded (as many of us have long suspected) that upland areas, vernal pools, and seasonal streams are all part of an integrated surface-water/perched groundwater system that extends laterally beneath the vernal pools and surrounding habitat. In short, the vernal pools at Mather Field are connected by a shallow groundwater table that flows laterally on a subsurface layer of low permeability soil (i.e., a soil hardpan). Groundwater flow across this hardpan surface sustains the pools long after winter rains have ended and provides a source of freshwater recharge through the pools. Many pools are sequentially linked by this groundwater flow, such that pools at the upper end of the subsurface gradient are discharging to pools lower down.

16-4

This research was not included in the SDEIS bibliography and appears to have been overlooked by USACE in their evaluations of the potential impacts and their relative significance. This inadequate consideration of shallow subsurface hydrology has potentially dire implications for the relative "significance" of environmental impacts to vernal pool habitats and water quality throughout the project area and, consequently, the conclusions reached in the SDEIS. It also has substantial ramifications for any of the "proposed" mitigation actions which rely on construction of new pools or improvements to existing habitats.

In their paper, the UC Davis-led research team concluded that "*small changes in local land use, such as the development of irrigated agriculture or parkland, may have considerable impacts on the vernal pools. The degree to which small changes in local land use might affect the vernal pools is poorly understood, because the fundamental hydrogeological characteristics of perched*

[1] Rains, M.C., G.E. Fogg, T. Harter, R.A. Dahlgren, and R.J. Williamson. 2005. **The role of perched aquifers in hydrological connectivity and biogeochemical processes in vernal pool landscapes, Central Valley, California. Hydrological Processes.**

aquifers remain relatively unexplored. The management of perched aquifers should rest on a scientific foundation that provides a general understanding of the conditions necessary to maintain perched aquifers capable of supporting the physical and biological functions of dependent wetland ecosystems." To be clear, what these researchers are saying is that the health of vernal pool ecosystems depends on a solid understanding of the shallow groundwater aquifer. Activity (such as construction of subsurface utilities) which even slightly alters how this groundwater moves beneath the land surface could have potentially large (negative) impacts on the vernal pools. In short, we cannot treat vernal pools as isolated saturation ponds fed by rainfall and surface runoff and expect to mitigate impacts to them by establishing arbitrary setbacks to prevent damage.

16-4 cont.

Utility trenches, drainage channels, sanitary sewer and storm drainage lines are certain to intersect the perched groundwater table within the project area, with some potentially penetrating the hardpan layer into deeper soil strata below. These intrusions pose two obvious potential impacts to vernal pools in the surrounding areas. First, subsurface utilities and deep earthworks could disrupt groundwater flow to the point that some vernal pool areas (even those in the proposed conservation areas) could dry up much faster than normal or potentially never fill in the first place. Second, these subsurface trenches and utilities can act as "sensitive receptors" that allow contaminated surface waters to infiltrate the groundwater table and flow laterally into environmentally sensitive habitats. Volatile organic hydrocarbons (VOCs) found in fuels, solvents, herbicides, and insecticides can infiltrate and spread in shallow groundwater systems. No amount of best management practices (BMPs) or stormwater management efforts can completely eliminate VOC (and similar) contamination from infiltrating shallow groundwater systems and eventually impacting environmentally sensitive habitats. The SDEIS does not address any long term contaminant management strategies or potential impacts associated with residential, business, or industrial activities proposed for development areas.

16-5

Our review of the SDEIS failed to find any reference to an Integrated Groundwater and Surface Water Model (IGSM) for the Mather Field Special Planning Area. A well-executed, multi-year study of shallow groundwater movement throughout the proposed development and conservation areas is essential before any definitive EIS can establish that impacts will not be significant (with or without mitigation). Much of the proposed development areas (identified by Sacramento County planners as Urban Development, and Commercial Recreation, and Public Quasi Public areas east of Eagles Nest/Zinfandel Drive) sit on the up-gradient (uphill) side of seasonal drainages and vernal swales that feed westward toward the Morrison Creek drainage and across the eastern half of proposed conservation areas It stands to reason that in at least some areas, near-surface groundwater gradients will follow a similar pathway.

16-6

Analysis by this SDEIS cannot satisfactorily conclude that environmental impacts to vernal pools are less than significant without having a more complete understanding of the subsurface hydrology and full knowledge of ALL potential construction activities which could intersect and disrupt groundwater flow. We believe that it is essential that the groundwater hydrology in the project is fully mapped and understood before any kind of infrastructural improvements are

16-7

made. Otherwise irreversible long term damage to existing vernal pool habitats may very well be inflicted by proposed developments. 16-7 cont.

Ecologic Considerations

The SDEIS also fails to give any consideration to broader ecosystem-wide consequences of proposed developments on the project site. While the SDEIS does give an account of how impacts to each individually identified species or habitat could be mitigated, there was no discussion about how the interruption/disruption of individual species and habitats might affect the ecosystem as a whole. 16-8

Every good environmental scientist knows that the balance of predators to prey within a system is a delicate one, and scientific literature is awash with examples of how reduction (or removal) of predators from an ecosystem invariably results in a dramatic decline of the overall health of plant and animal communities due to unchecked population increases in prey species. This is certainly a possibility within the Mather project and one that has not been even remotely addressed.

Even with the proposed establishment of a conservation area on the project site, analysis in the SDEIS does not question what effect proposed heavy development (including a 4 to 6 lane extension of Zinfandel Road, transforming it into a major traffic artery) surrounding this conservation area will have on the full range of predatory species found across the site. Owls are particularly susceptible to being killed by moving vehicles and the coyote population will likely be forced to relocate elsewhere given the heavy traffic loads projected. Some predatory species are quite shy as well and tend to avoid heavily trafficked areas. For example, the Great Blue Heron is a commonly seen species around the Mather area and is considered by the CDFW to be a “special animal” and an “at risk” species. These herons (a known predator of voles) are extraordinarily shy and tend to abandon areas subject to heavy construction and high traffic roadway development. Yet the SDEIS makes absolutely no mention of this species and the impacts its disappearance from the site would have on the surrounding ecosystem. 16-9

While it is relatively easy to write off/mitigate individual species loss on a case by case basis, the cumulative effect to the ecosystem could be dramatic. Without adequate predation, vernal pool habitats could be irreparably damaged by rodent outbreaks (which are known to occur in Mather) and the resultant effects up and down the food chain could prove disastrous. The extent of development proposed could effectually make the Mather Field conservation area ecologically unsustainable in the long term. 16-10

Western Spadefoot Toad Mitigation

The SDEIS identifies the Western Spadefoot Toad as a California listed species of concern (CSC) known to be present within the project site and notes that impacts to the species will be significant. However, with the mitigation measures proposed, the SDEIS indicates that impacts would be reduced to a less-than-significant level. 16-11

Unfortunately, the proposed mitigation methods for Western Spadefoot Habitat is almost laughable (and would be if it were not for the fact that it will likely result in the local extinction of the species). The supposed mitigation procedure is to dig up Spadefoot burrows with hand tools and move them elsewhere within the project site. The SDEIS assumes spadefoots can successfully be relocated to vernal pools elsewhere in the preserve and thus reduce impact to the species to less than significant levels. This is tacitly false, on two counts. First off, there is the assumption that suitable Spadefoot habitat can be found elsewhere in the proposed conservation areas. Local naturalists around Mather know full well that spadefoots can only be found in one very limited area adjacent to Eagles Nest Road. No one knows why the Spadefoot population is limited to this location, but there are many biologists and ecologists who suspect that their habitat needs are a bit more specific than just any random vernal pool.

16-11 cont.

The second issue is that the SDEIS proposes excavating every Spadefoot burrow they find by hand in order to relocate them to more suitable habitat. This is a nearly ludicrous suggestion. The claypan soils identified in this area are impossibly hard, especially during the dry season when construction activity would be likely. Anyone living in the Mather area who has ever tried to excavate a hole in these soils can tell you how difficult a task it is to get down even a few inches, and Spadefoot burrows can go down as much as three feet.

Even if someone could dig down that far in a practicable amount of time, how do they move an entire burrow (preserving the soil moisture in the process) without killing the animal inside? There are absolutely no scientific or regulatory guidelines to suggest this mitigation strategy can work. The time and expense required to dig up that many burrows by hand is likely to be astronomic, and thus considered impracticable. The eventual conclusion will be that this species will be taken out entirely at Mather field and no mitigation or preservation will be performed.

16-12

If the project proponents do intend to destroy the species at Mather, they should have the decency to take responsibility for it and not hide behind a knowingly false mitigation proposal. We, the taxpaying members of the general public (and their elementary-aged school children who study these amphibians in local educational programs), will not accept the foregone conclusion that the destruction of the Mather Field Spadefoot population serves the greater public interest. With the glaring lack of a proven mitigation strategy, it is almost a guarantee that Western Spadefoots will disappear from Mather forever if their present habitat is destroyed. We thus urge you to reject plans to “take” the only known habitat for this species in the project site.

Aesthetic Concerns

Many of the residents in our community moved here for the relative quiet and open views that the Mather region affords in contrast to crowded urban environments and noise in the surrounding areas. Indeed, the wildlife found at Mather undoubtedly exists here in part because of these aesthetic qualities. Yet the SDEIS makes no mention of light pollution or noise pollution and potential impacts that the proposed developments/improvements will bring and does not address what impacts these might have on wildlife at Mather or the sensitive wetland habitats

16-13

therein. We fervently believe that introduction of a 4 (possibly 6)-lane major traffic artery through the heart of Mather wildlands and substantial residential development adjacent to the conservation areas will irreparably damage the long term biologic viability, species diversity, ambient noise, and aesthetic value of the entire Mather ecosystem, in direct violation of State and Federal guidelines. Furthermore, we submit that the proposed mitigation strategies are inadequate and do not sufficiently compensate our community and the greater Sacramento region for the potential loss of these valued public resources.

16-13 cont.

Optional Mitigation Measures & Conservation Management

We strongly object to the allowances being granted that give Sacramento County the option to implement on-site creation/restoration/rehabilitation to compensate for habitat loss on the project site. It is our understanding that the agreement with the U.S. Department of Defense (DOD) for land transfer of Mather Air Force Base lands to the County included mandatory establishment of a permanent conservation area as long as wetland habitats on these lands remain functional/viable. Yet in the SDEIS, it appears that the County is excused from mitigating for the loss of habitat in development areas by establishing the conservation area that was already a requisite part of the land transfer agreement.

16-14

To the Alliance, this appears to be double-dipping the value of the planned Mather Vernal Pool Preserve in order to give the County (and their developer) a free pass on vernal pool mitigation. If any developer elsewhere in Sacramento County proposed to fill 36 acres of vernal pools, that developer would be required to preserve 72 acres of vernal pools and create 36 acres of vernal pools for mitigation (i.e., compensation). At a cost of more than $150,000 per acre (perhaps as much as $200,000 per acre, which is a rough price estimate from vernal pool mitigation banks) this would cost a developer more than $16 million. From our perspective, using vernal pools in the Mather Preserve (which are already required to be protected by agreement with the DOD) as a mitigation resource is an unethical and fiscally irresponsible use of a public asset.

We also wish to express our profound dissatisfaction with the way the County has managed preserve lands to date. Years have gone by in which the County has allowed the preserve to degrade as invasive plant species have spread unchecked across the vernal pool areas. In some cases these invasive plants were first introduced by human activity tacitly permitted by the County, but there has been little evidence that they have made a good faith effort to manage the conservation areas adequately.

16-15

Furthermore, it has come to our attention that the County does not intend to institute a full conservation management plan or establish the requisite endowment to provide for its maintenance for another 5 to 10 years! Instead they are (supposedly) hiring a conservation manager and proposing a paltry $80,000 yearly contribution toward conservation efforts in the interim.

16-16

We now recognize that more is at stake than just a few (supposedly innocuous) developments and roadways. Because the County's agreement with the DOD stipulates that they must

16-17

establish and manage a preserve *on those lands for as long as they remain functional/viable,* we are deeply concerned that ongoing mismanagement, absence of a full management plan, and limited interim management funding in conjunction with highly invasive development plans will render the remaining habitats at Mather unsustainable in the near future. If these habitats are degraded to the point that they no longer are considered functional, we anticipate that County development will then move to dissolve the conservation and develop those lands as well. However outrageous this plan might appear, many Mather and County residents suspect that this is a long term goal of County Community Development staff.

16-17 cont.

Conclusions

We submit that SDEIS lacks sufficient information and/or has not fully considered the true and cumulative impacts of the proposed developments for the Mather Specific Plan Project. Thus it follows that the repeated conclusions therein of "less than significant" impact (with or without mitigation) are invalid as well. We urge you to consider the full suite of impacts, including cumulative impacts, that proposed changes in land use designations and infrastructure construction will bring about to the community of Mather and ask that this SDEIS be fully revised to address our concerns before approving any of the permits requested by Sacramento County at this time. Furthermore, we request that a Public Hearing be held to address the adequacy of this SDEIS environmental review and others that have been conducted thus far to allow an opportunity for more community members to provide input now that the County's scope of development has been more completely revealed.

16-18

Respectfully submitted,

The Mather Neighborhood Alliance

Date: June 15, 2015
To: Kathleen Dadey
From: Eva Butler, Sacramento Splash
Re: SPK-2002-00561, NOA SDEIS for the Mather Specific Plan Area Project, Sacramento County, CA

Dear Ms. Dadey:

These comments on the SDEIS are provided in the hope that two vernal pools in Alternative A can be protected. I am providing them as the founder and Board President of Sacramento Splash (Splash) and as Chair of the Mather Preservation Campaign on behalf of the California Native Plant Society (CNPS), Sacramento Valley Chapter.

While CNPS is well known, you might be less familiar with Splash. Splash is a non-profit that helps Sacramento area children understand and value their natural world and take an active role in its protection. Nearly 3000 children study the Splash Elementary curriculum "Investigating Vernal Pools" in school each year. They visit the Mather Field vernal pools for hands-on exposure to this rare and threatened ecosystem.

17-1

In its first 15 years Splash has taught over 32,000 local kids about vernal pools and how to protect water and habitat where they live. In addition public tours hosted by Splash in April bring hundreds of residents each year to explore the flowering vernal pools at Mather Field and experience a precious piece of their natural heritage. As the awareness of vernal pools grows, so too does the commitment of the local population to ensuring viability of the Mather Field Preserve.

Recovery of vernal pool species within the Mather Core Recovery Area will not occur without an educated, dedicated, committed citizenry to support it. This document proposes that a preserve of one configuration or another be established and maintained for mitigation and for the benefit of the habitat and the species it supports. No fences, laws, or regulatory agencies can maintain the ecological function of a vernal pool preserve without the support of its citizens. Splash believes that the educated constituency that it has built and continues to create will be the most critical piece of the conservation puzzle for Mather Field. For this reason we believe that the preserve alternative must maintain key resources used by Splash in the execution of its vernal pool education programs.

The Preferred Alternative (A) proposes to destroy two vernal pools that are essential to Splash: The Splash Critter Pool and the Spadefoot Pool. These two Splash Resource Areas are represented in orange on the map in Figure A, along with an estimation of their contributory watersheds. The Splash Critter Pool (formerly known as "the Bomb Pool" due to its proximity to the weapons storage area) is a unique vernal pool unlike any other at Mather Field. It is occupied habitat for

17-2

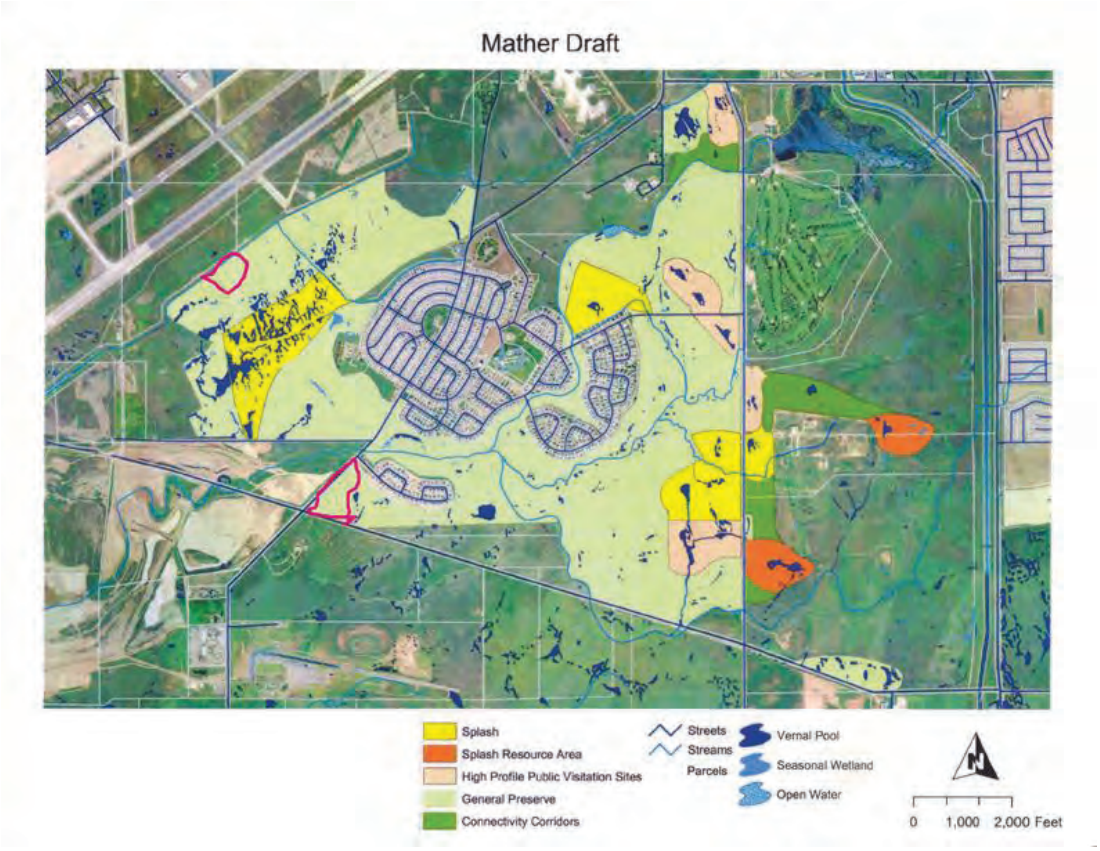


Figure 1. Map of Mather Field showing Splash Critter Pool (northern most orange area) and Spadefoot Pool (southern orange area).

Vernal Pool Tadpole Shrimp. The diversity and abundance of vernal pool invertebrates is the highest of any known vernal pool at Mather Field. It has an extremely long hydroperiod that extends through June or later. Even in the drought of 2015, the Splash Critter Pool contained water well into June. It is also easily accessed for purposes of collecting samples without causing damage or wear to other habitat.

For its unique attributes, Splash has relied on the Splash Critter Pool to supply all the invertebrate specimens for the Microscope Station at the Splash Education Center for over a decade. The Microscope Station is the only opportunity most students have to see the critters they have studied in person. More than half the 86 classes that come to Splash each year on their field trip arrive after most of the vernal pools have dried up. In drought years most students might not get to see vernal pools in their wet phase. The Splash Critter Pool supplies specimens even in the drought years we have recently experienced.

The Splash Critter Pool allows students to connect with their natural heritage in a meaningful way, without impacting the resource itself. It is an essential resource to allow students to personally connect with the critters they come to know and love.

17-2 cont.

If it were to be destroyed, there is no alternate pool Splash can use for this purpose. This is not a resource that can be mitigated or recreated in another location. The conditions that make it unique probably relate to the altered hydrology of that area. The materials dredged from the Folsom South Canal overlay the native soil profile, creating a thicker "sponge" to absorb and convey water to this pool. Several years ago the County of Sacramento, Department of Economic Development commissioned a study to find an alternative. That studied showed that there was no single pool that could substitute for the Splash Critter Pool. That study was summarily scuttled.

For the past decade, Splash and the California Native Plant Society have consistently and persistent advocated to protect this pool, beginning in the earliest discussion of Mather's development until today. In the multi-agency stakeholder groups meetings in 2005, in all of its public hearings and private meetings we have begged the County to incorporate this pool into the broader plans for development. When the County chose a development partner for Mather Field, we talked with the developer to tell them right off that we needed to work out a way to save this pool. Current landuse proposals demonstrate that no effort has been forthcoming to recognize the Splash Critter Pool as a unique and irreplaceable resource for generations of children to learn about vernal pools.

17-2 cont.

Therefore, in responding to this SDEIS, we ask the federal agencies to incorporate an alternative plan that takes this pool and its contributory watershed out of the development area, recognizing long-term education as an essential ingredient for the long-term recovery of vernal pool species.

Spadefoot Pool

The Spadefoot Pool is the only known breeding area for Western Spadefoots on the site. This is a species of special concern and Mather Field is located near the northern limit of distribution for this species. With climate change as a growing concern, these populations at the edges of distribution are recognized as critical to protect.

There are no known mitigation measures for Spadefoots. This species is highly selective in its habitat and researchers have been unable to determine the conditions they need to successfully reproduce. Mather Field could continue to be a place where Spadefoots could be studied and where, with support, their population could recover. Instead, the County proposes to obliterate the only Spadefoots left at Mather. There is no compelling reason why the public cannot expect to maintain occupied habitat for this species on public land.

17-3

On public land there is no imperative to maximize profit at the expense of the public's interest in its natural resources. The simple fact that all these projects and the preserve are occurring on public property by definition means that the public interest must be considered and served at or above the economic interests of the

County and its development partner(s). In the next ten years, another 25,000 students could come to Mather Field. One student from each class will be the class expert on the Western Spadefoot. He/she will have taught the others about this special species and how it is a critical piece of the ecosystem that is a vernal pool. How can we legitimize destruction of the last Spadefoots? The latest proposal from the County is to turn the Spadefoot Pool into ball fields. Elementary school kids see turf everywhere. When they come to Mather Field, they come to see what nature alone can supply.

17-3 cont.

We ask that the agencies recognize the importance of maintaining special species on public land and insist that sufficient habitat to preserved around the Spadefoot Pool to allow it to maintain and recover its population of Western Spadefoots.

Thank you for your interest and attention to protecting these two vernal pools as you make your decisions in this matter.

Truly Yours,

Eva S. Butler

Splash Board President &
Mather Preservation Campaign, Chair

-----Original Message-----
From: Efrem Richardson [mailto:efrem@rdcwest.net]
Sent: Monday, May 18, 2015 1:09 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

We are currently residents of Mather and have been for the past 12 years. We are in support of the Alternative C development plan. 18-1

Thank you,

Efrem & Lynn Richardson

4543 Excelsior Rd

Mather, CA 95655

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Ray Lucas [mailto:r.lucas60@yahoo.com]
Sent: Monday, June 15, 2015 10:32 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather South

We live on Norwalk Circle and opposed the the Mather South development . We want to keep the country environment and that is why we bought out here. Your plan we destroy our beautiful area. 19-1

Ray and Karen Lucas
4376 Norwalk Circle
Mather, Ca.

Sent from my iPad

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Eleanor Averitt [mailto:ladyaveritt@yahoo.com]
Sent: Monday, June 15, 2015 4:58 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather Natural Habitat

I am disappointed that Sacramento Cunty is attempting to put housing and other private sector building on land the federal government entrusted to the county for the purpose of managing the natural habitat on Mather property. 20-1

The first permit the county is requesting will endanger the natural wildlife habitat and will be the beginning of the end. The land is currently used for educational purposes for elementary through university students. Many people from outside Sacramento County come to Mather Wetlands for the many thriving animals and plants. Sacramento County needs to be known for his rich natural habitat, not for destroying natural habitat. 20-2

The land the county says is not viable due to the South Canal construction, has, as nature will given time, become viable again. The other parts have always been viable. The destruction of some of the vernal pools will also damage the majority of many of the other vernal pools that house some endangered species. 20-3

Please do not allow any changes to happen to this area. Sacramento County can build in other parts of the county that do not have viable land, have native habitat that is to be protected, nor used for educational purposes.

Sincerely
Eleanor Averit
Mather, California

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Darcy Coddington [mailto:darcyc1@frontier.com]
Sent: Monday, June 15, 2015 10:58 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather South

Hi Kathleen

I would like to politely object to the classification of Mather South as Urban as much of it is wild and should be maintained as parkland. I also object to medium and high density housing in an area with such dense wildlife and wetlands. 21-1

The destruction that digging water and sewer lines to a new development will cause is really inknown except for the UC Davis study that showed vernal pools that are in some proximity to each other are really all connected by the same ground water. Cutting a 30 foot deep swath down Zinfandel will likely destroy much of this delicate habitat, if not immediately then several years down the road. 21-2

Please reconsider this designation and the degradation that will occur to the wild life and vernal pools. 21-3

Thank you
Darcy Coddington
10086 Woodring Drive
Mather Ca 95655
916-589-0542

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: G. Graham [mailto:mail@goglen.com]
Sent: Tuesday, May 19, 2015 10:03 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Fwd: Comments on the propose Mather Specific Plan Project

Kathleen-

I sent this to you almost 3 years ago, after the proposal presented by you/your team. None of the proposals included this magical new 3,600 housing units in "Mather South" -- the closest was "university village / residential" with a significantly smaller footprint.

Please explain how this went from "village" to 3,600 high-density houses (including 1064 units on 37.94 acres -- 1,547 sq feet PER FAMILY of footprint).

22-1

Please acknowledge.

- Glen

-------- Forwarded Message --------
Subject: Comments on the propose Mather Specific Plan Project
Date: Sun, 12 Aug 2012 16:41:59 -0700
From: G. Graham <mail@goglen.com> <mailto:mail@goglen.com>
To: kathleen.a.dadey@usace.army.mil

Sorry for my late reply. I attended the talk w/ the Army Corps of Enginneers Wed July 25 in the old Mather AFB (one of like 5 attendees).

I live on Woodring, right along the area that would be impacted. I'm right next to the greenbelt, and across the street is empty behind them.

I've discussed this with my family and neighbors - we are all excited to have the area grow, and very happy that our "seclusion" will be respected. Being surrounded by wetlands was the most major influence of our purchase (new) in 2003 - it gave us the sense of being out in the country while being right next to the city.

We were told the area would always be protected with no development immediately surrounding our neighborhood. That is why we are concerned with "Alternative B" - because that opens us up to having development right across the street from us. Though it is labelled as "avoided areas", we were told Wed 25th that Alternative B included filling in some vernal pools in that area and possible bike & walking paths that could/would come right up to the houses across the street.

Alternative A is our favorite plan - we feel it balances the wetlands without restricting the development that will help the area greatly. For that reason, it is better than Alternative C, which imposes a wetland preserve right in the middle of the "Parks/Recreation" and "University Village/Residential" areas. Alternative A has them labeled simply

22-2

as "avoided" without imposing the added "protected wetland" label.

Alternative D, no changes, will severely limit this area as it does not allow any growth. In order of preference (top to lowest): 22-2

Alternative A
Alternative C (a very close 2nd)
Alternative B (much lower)
Alternative D

--
Glen Graham
11030 Woodring Drive, 95655
(916) 366-8969
****
Whatever is not nailed down, is mine.
Whatever I can pry loose... is not nailed down!
****

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Glen Graham [mailto:ggraham@goglen.com]
Sent: Monday, June 15, 2015 1:01 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Fwd: Fwd: Comments on the propose Mather Specific Plan Project

Kathleen-

To be clear: The 2012 proposal included just 4 options. ZERO had anything more than "University and village" in what you now call "Mather South" - the area East of Zinfandel / Eagles' Nest. See below, where I gave my feedback 3 years ago... yet "magically" there radically different plans - ones that include a high-density housing area.

Where did this plan come from, and how was it remotely approved?

As near as I can tell, because the Mather AFB redevelopment area does not require new high-density / Section 8 housing... and that these did not exist in any of the 2012 proposals (again, reference that I am resending previous emails) - it can only seem that the county is "suddenly" including this area "here" so that wealthier developers "https://en.wikipedia.org/wiki/Angelo_Tsakopoulos" <https://en.wikipedia.org/wiki/Angelo_Tsakopoulos> can build more expensive houses and "force" the required economical housing OUTSIDE of their expensive houses... in an area that never in the past was required to host dense and economical housing. 23-1

This is not "NIMBY" - this is simple: We at Mather purchased our houses with the total solution that was proposed. It was reinforced even past 2012, yet now the county is "magically"changing the plan.

There is no reasonable reason any low-economic family could or WOULD want a property in "Mather South" - no walking amenities (shopping, etc), nor bus rides. Yet you must fill a specific area so Tsakoloulous can build his rich houses?

Please explain how this new proposal embodies the old.

-Glen

> On Jun 15, 2015, at 4:17 PM, Lisa <infusinol@gmail.com> wrote:
>
>
> Dear Ms Dadey,
>
> There is no reason for the wetlands to be destroyed. There is plenty of housing and commercial space available for purchase, rent or lease with a few mile radius of Mather. I'm going to keep my email short in the interest of time. 24-1
>
> I came to Mather for the peace and quiet that the area provides.
>
> The County's plan has changed from what was originally planned and communicated to us residents of Mather and feel we have been misled. 24-2
>
> We don't want nor need a development of the magnitude and size of what is being planned.
>
> I urge you to reject all proposals that destroy any and all if the wetlands. 24-3
>
> Thank you,
>
> Lisa Infusino
>
> Sent from my iPhone

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Kathy Ramos [mailto:sras789@sbcglobal.net]
Sent: Monday, June 15, 2015 8:23 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather South Development

Good Morning Ms. Dadey

My name is Kathy Ramos and I am writing to you to voice my concern about the County's Plan to destroy the Mather South Area. I am a veteran of the United States Navy who fought for this country so these County Planners and Politicians could have the privilege of living in a free country. Now I am fighting the same people who I have protected for several years. I moved to Mather to get away from the high density living. Several of us here in Mather went to a Sacramento County Workshop and to no surprise, caught the county planners in many lies. When the county was caught, all they did was hanging their head in shame that they got caught. EIR Plan stated that Wildlife would not be disturb. That is a lie. Between Mather and the entire section north of Sunrise and Jackson to Excelsior and Jackson, there will be over 6000 apartments units, several hundred duplexes, several hundred 0 lot line homes, under 200 bigger homes and of course a possible university. If this type of development is constructed, it will widen the roads of Zinfandel /Eagles Nest and destroy or should I say Murder the wildlife. They will become road kill or people, namely kids will be out shooting what ever is left of the wildlife. 25-1

By constructing this type of development, it is pushing/forcing the existing businesses to close up shop or look for another place to operate. The county is already forcing the Rendering Plant to shut down it's operations and go somewhere else. When I confronted the County about the Sacramento Raceway, Cindy Stonelli, the County Planner stated, "We are building along Jackson Roads, including Mather with the intentsions of the Raceway moving. Personally, I feel like we and the existing businesses are being terrorized. 25-2

Since Mather came into existence, this area has been declared Wildlife Preserve. I respectfully request that the you and your department deny the County's request to development. I also feel that You and your department along with the residents should have a meeting on this issue. We are an HOA and it would be nice to have you and your department come and speak and hear our concerns. 25-3

Thank you and have a Great Day,

Kathy Ramos

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Kevin J Rodriguez [mailto:sac92310@gmail.com]
Sent: Tuesday, June 16, 2015 7:42 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather Project

Please don't let a few nay sayers get in the way of development in south Rancho. Its always the few
who ruins it for the rest. 26-1

Who are they to day that land should remain untouched. They don't own it, but act like they do.

Pass the project.

Thank you.

:)

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Jerry Street [mailto:rjstreet@ucdavis.edu]
Sent: Monday, June 15, 2015 11:17 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather South Development

My wife and I object to the "high / medium" density housing in the Mather South development since it is not required for our Mather housing, and the site is inappropriate of this type of development at this time. This is a rural area 5 miles from any employment domestic residential retail services. The developers indicate bus services will be provided, this is not a viable option because of operational cost and economies of scale. It would create an island without out support needed by the prop Section 8 high density population. 27-1

Please require the high and medium housing components of this development be removed. There are other options for Sacramento County to meet the Section 8 requirements. If this does not pencil out for the developer without medium and high density development this project should not proceed at this site.

Thank you

Sent from my iPhone

Classification: UNCLASSIFIED
Caveats: NONE

Comment Letter 28

From: Maria White [mailto:mrs.maria.white@gmail.com]
Sent: Saturday, May 16, 2015 02:38 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Mather Wetlands: Public Notice SPK-2002-00561

To whom it may concern,

As a Sacramento County resident, I request that the Army Corps of Engineers uphold Executive Order 11990: Protection of Wetlands and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 28-1

The vernal pools are rare, endangered ecosystems that we should support, not landfill.

Maria White
Sacramento County Resident

Comment Letter 29

From: Gregory Olsen [mailto:ggo.dds@gmail.com]
Sent: Saturday, May 16, 2015 06:14 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold Executive Order 11990: Protection of Wetlands and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 29-1
Thank you,

Gregory G. Olsen, DDS

From: Stacy Adair [mailto:sadair27@gmail.com]
Sent: Saturday, May 16, 2015 10:17 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

To whom it may concern,

As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990: Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 30-1

Thank you,
Stacy Adair, Rancho cordova

Comment Letter 31

From: Gwen Rubio [mailto:gwen@rubio-web.com]
Sent: Sunday, May 17, 2015 12:25 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold Executive Order 11990: Protection of Wetlands and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 31-1

Thank you,
Gwen Rubio

-----Original Message-----
From: Dadey, Kathleen A SPK
Sent: Sunday, May 17, 2015 7:12 AM
To: Pakenham-Walsh, Mary R SPK
Subject: Fw: [EXTERNAL] Public Notice SPK-2002-00561

From: coffmands [mailto:coffmands@yahoo.com]
Sent: Saturday, May 16, 2015 01:49 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold Executive Order 11990: Protection of Wetlands and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 32-1

Thank you,

Debbie Coffman

Classification: UNCLASSIFIED
Caveats: NONE

Here's another

Kathleen A. Dadey, PhD
Acting Section Chief, Southwest Permit Section
Regulatory Branch
U.S. Army Corps of Engineers, St. Paul District
180 5th Street East
St. Paul, MN 55101
651-290-5364

We want your feedback! Please complete our survey at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

-----Original Message-----
From: Nicole Carr [mailto:carr.nicole@sbcglobal.net]
Sent: Monday, May 18, 2015 9:29 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

Dear Kathleen,

As a new Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990: Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 33-1

I have just moved from the city of Rancho Cordova to Mather within the last 30 days and one of the reason we picked Mather over other areas was because of everything Mather has to offer. Including being a little out of the way, all the wildlife, etc. 33-2

Thank you,

Nicole Carr, Mather

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Renee Link at Franklin High [mailto:rlink@egusd.net]
Sent: Monday, May 18, 2015 11:08 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

Dear Ms. Dadey
As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990: Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. As an environmental science teacher, I know that wetland habits are one of the fastest disappearing habitats in California, especially in our area!!! Please help preserve the wonderful nature that surrounds us. 34-1
Thank you,
Renee Link
3947 Colonial Way, Sacramento, CA 95817

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Eleanor Averitt [mailto:ladyaveritt@yahoo.com]
Sent: Friday, June 05, 2015 7:07 AM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990:Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 35-1

Thank you
Eleanor Averitt
Mather, California

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Wendy Crook in Student Support & Health Services [mailto:WCROOK@egusd.net]
Sent: Wednesday, June 10, 2015 6:48 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL]

As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990:Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 36-1

Wendy Crook

Elk Grove

-----Original Message-----
From: Katrina De Caro [mailto:katdecaro@gmail.com]
Sent: Thursday, June 11, 2015 8:12 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990:Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 37-1

Thank you
Katrina De Caro
Mather, California

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Daniel Averitt [mailto:danthesquirrel@yahoo.com]
Sent: Thursday, June 11, 2015 8:05 PM
To: Dadey, Kathleen A SPK
Subject: [EXTERNAL] Public Notice SPK-2002-00561

As a Sacramento County resident, I request that the Army Corps of Engineers uphold "Executive Order 11990:Protection of Wetlands" and deny the County's permits to fill in Mather wetlands. According to your Supplemental Draft Environmental Impact Statement, Sacramento County's preferred alternative permit will result in significant, adverse impacts to the federally listed vernal pool species and critical habitat. 38-1

Thank you
Daniel Averitt
Mather, California

Classification: UNCLASSIFIED
Caveats: NONE

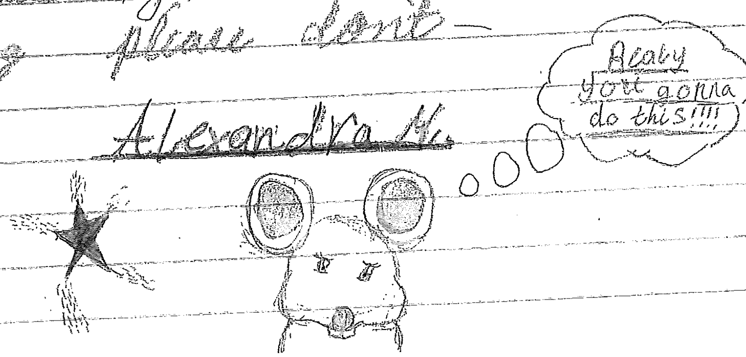
Befor You Read the Letter

Dear ms. Dadley

(Not trying to be Rude Sorry in a Vans)

please dont ever, ever, fill the vernal pools when you do you will be killing thousands Millions Of animals will die, Karma, you will get it. So, we had a 5th grade fild trip to the vernal pools so we got an animal to study and we alsso did food web it said you take one off you take all off and as soon as I heard you had the adoshis never to do your ignorant prosedes you so I'm asking please dont— 39-1

Alexandra M.



Dear Ms. Dadey,

Hi this is a fifth grade student, and id ask you to please Not destroy the vernal pools, they hold many amazing forms of life, you can't just go around destroying their habitats. Their arn't very many of them in the world. And if you do, the depending life will starve, such as birds, and other large animals dependin on them for food, and animals around that need the symbiotic relationship, your basically wrecking the entire ecosystem around it too!!!! This has me and others very angry. id would like it very much if you reconsidered.

This is a very important matter to

Sincerely,

Mya G.

39-1

May 19, 2015

Dear Ms. Dadey,

I am a fifth grade student and I do not want you to build over Vernal Pools. If you build over vernal pools other animals will die. The vernal pool animals have sybiotic relationships. The less vernal pools there are, more animals will die. More and more animals could be endangered because of you building on the vernal pools.

Sincerely,

Aidan N.

39-1

May 18, 2015

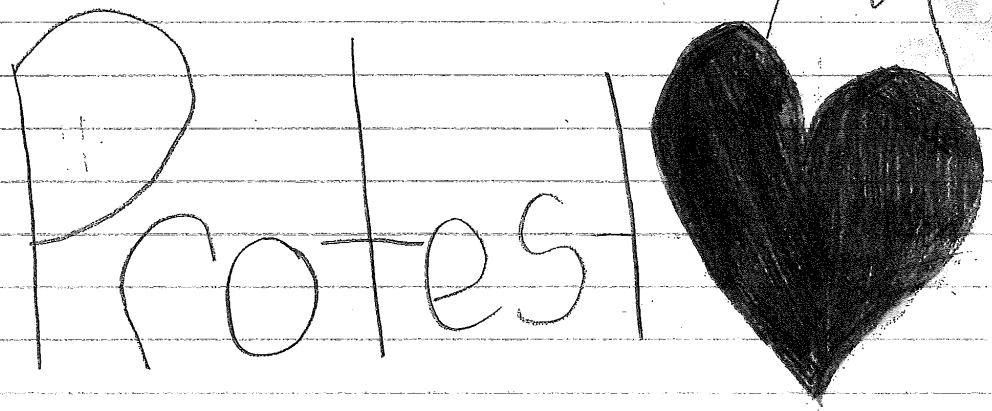
Dear Ms. Dadey,

I am a fifth grader. I am very upset that your are going to fill up the vernal pools. Do you know how Manny animals are going to die beeaves of you. Why did you pick the spot where the vernal pools are, there are so many other places you can build houses. How could you do this. I am very dissapointed. Please don't fill the venals.

Sincerly,

Madison. G

39-1



Dear Mr. Daders, 5-18-15

How could ysou destroy the vernal pool? There are critters that live in the vernal pool. What if ysou where one of the critters that lived in the vernal pool would ysou want ysour habitat to be destroyed? Also do ysou think that the critters that live in the vernal pool want there habitat destroyed? There are only a few vernal pools left because of people building on them. Also now that there are a few vernal pools left if ysou destroy this one then the vernal pools are on the verge of extinction. Also an sorry if I sounded harsh I care about the vernal pools.

from 5th grade student,
Pratik B.

39-1

Dear mis Dadery
Realey you want to end all of those critters lives! Thoes vernal pools have life in them. I am a 5th grader now may think I dont know much, well I do and the seed shrimp needs water and food. And the seed shrimp will be in danger critter if you do this. And I know you want money. And you dont care what we say so lisen we all study thoese critter and we care Pse tell your boss this. Paul. A

P.S.
say your favorit peace of land got killed and some one nose expanding there home.

39-1

Plear dont!

Hi im in 5th grade and I dont think you want to kill but by doing this your killing millionz of animalz. just think why are you doing this your ruining there homez. I mean how ruthlezz can you get. We aren't the only thingz on earth. vernal poolz aren't just puddles they wher here before us. how shallow!

Sean. C

39-1

Dear Ms. Dadey,

I opposed you building house on vernal pools. You have no right to kill many creatures to build houses, shops, etc. If ow would you feel if some giant unknown creature came to earth, covered it with dirt, and built houses on it? I'm a fifth grader who cares much for all the life in vernal pools. I have been there twice, and have done many reports on the life there and know all of the critters will die from suffocation if you fill the vernal pools. So just take a step back, there are so many other places to build things other than a place where you will kill many things!

From,
Luke D.

39-1

Why?! Nooooo!!!

Dear Ms. Daley

Hello, how are you? My name is Siman im in Mrs. Kerns class. I just wanted to let you know DONT LET Them BUILD OVer The vernal pools!!! If they destroy the vernal pools then a lot of animals will die. The whole food web will vanish if we dont have vernal pools. We have to stop this.

From: Siman H.

39-1

Dear Ms. Dadeyn

What are you Doing!
get rid of vernal pools
you guys will killing little
animals. if you do we will
have starving Hawk and
other animals OK. So do not
build houses on top of
vernal pools OK!!!
Now I'm ticked off.
Plus my class went there
this year. why, why here,
why on top of venal pools,
why is it not portected land
iskate, why kill harless
animals OK. so what was that
feiald trip worth to see then
it distrroied.

Steven P

change tone
spelling

~~P.S do not do it!!~~

take off P.S

39-1

Vernal Pools

5-18-15

Dear, Ms. Dadey

I am a fifth grader. I oppose to the fact that you guys are going to fill Vernal Pools with dirt critters live in there and if you fill it with dirt you guys will kill all of the critters and if you guys fill the Vernal Pools with dirt you maybe driving critters extinct you could drive every animal extinct and that makes me and my friends tipt-off we would do anything for you guys not to fill the Vernal Pools with dirt.

Sincerely,
Antonio R

39-1

Dear Mrs. Daday

I am a 5th grader! that is mad that you want to destoy a animals habitat. I AM mad that you are going to fill the vernal pool. if you you will kill thousands of animales! why do you want to kill life forms? If you do there is a effect if wetlands are destoyed then bug will die and the food chain will be destoyed then we'll will starte to die and animals will go extinct.

Sincerely
Kyle W.

39-1

Dear Ms. Sadey,

You can not fill the vernal pools because tons of animals will die like the protozoa. The protozoa only lives in vernal pools and if you destroy these vernal pools where will the protozoa go? Think to yourself, do you want to waste money to help animals? That is all I have to say.

Sincerely,
Vaughn S.

39-1

Ashton . G

Dear ms. Dadey Dont fill the vernal pools here are thausnads of creatue that live in vernal pools they feed the animals around the area and if you fill the vernal pools it will kill every animal in the area and there are almost no more vernal pools in the world so dont fill the vernal pools the vernal pools supplys food for the animal so you will destroy their food source witch they will starve and there will be no more animals there. 39-1

Save the wet lands!

Hi this is Jace Tran
in 5th grade. Save
the wet land dear
Ms. Kathleen we do
not want you to
kill all the animals
just to kill a horse
and the kill a lot
100,000 creatures that
live in wet lands.
it might just look
like a pond but
it is not a pond
it is a wet land
and if you will
kill 100,00 creatres
away then your
will feel sad
I hope we will
see soon, can
you not like a
horse one the
wet areas.

From Jace T

To Ms. Kathleen

39-1

Dear Ms. Dadey May 13, 2015

Let's start, I'm a fifth grader I live in a house. I'm an average fifth grade kid. But if somebody came to destroy my home, wouldn't you be mad? I spent my time to do research and spent a field trip at a vernal pool There are millions of species and they are all endangered. There are two places left in the world where vernal pools are, we are one of them. What if somebody came to your house, wrecked it and built a new home, and you had no control over the whole operation. I don't know about you, but I'd be mad. Please take this into consideration.

39-1

Sincerely,

Brendon T.

Dear Mrs. Dadey,

I'm a 5th graden and I'm so happy that you want to build houses on the vernal pool lots of animals live there we took a field trip there and we did a report on a animal. there is a food web you take 1 out your fishing them all (what I'm saying is clear not "Put three houses on the vernal pool there are not many of them so it might not matter to you but it does matter to us."

- Tierney M.

Please don't

39-1

Dear Mr. Dadey,

I'm a fifth grader and, why the vernal pools? How would you feel if somone destroyed YOUR home and built somthing to replace it? I think you're making a BIG mistake! If you filled the vernal pools with dirt would you CARE about those critters?! Look if theirs anything I've learned this fifth grade year is that in all three phase holds symbiosis. Without the critters at the bottem of the food web the others will starv to death. So find another place to build because vernal pool have LIVING critters. They're not just puddles. They're puddles that hold life! Please don't take something special like that.

I hope my words sink in.

Sincerely,
Angel B.

39-1

Dage

Dage

Dear Ms. Dadey

This is Dage M. a fifth grade student at Oakview Community School and I wanted to ask you why are you guys doing this. Me and my fellow classmates have been to those vernal pools. I bet you guys build there you are harming animals. Would you like it if they built on your property and make you live some where else, that is pretty much what your doing. Those dont do this.

Dage M.

39-1

Taylor H. #16

Dear Ms. Sladey, This is Taylor H. A fifth grader to tell you that we need these vernal pools for great costs it's a lot familys home that live there and need it. And if the vernal pools go away then the whole food web will decrease and it'll be a disaster, if you do built houses or shops right on top of it. So listen to this letter closely! Lots of bugs familys are living in vernal pools and need it as much as we humans need houses because it's the same thing. Some people don't even realize what damage could it cost if you put stuff on it. And plus why do you have to built houses right there, theres blank fields that you can built stuff on. And are you a living creature or are they, the vernal pools to them is the same as houses to us. And aquatic

39-1

beetles need food that lives
in the vernal pools and
if they are extinct than
a whole other bug
could came extinct
again. So please think
about this letter!
I would really appreciate if you
Thanks YOU! looked at this
letter.

39-1

Jayden Kelly
#20

Dear Ms. Sadery
I am emailing you to inform
you of how these vernal pools are
important and how they need
to stay put and not get
filled. I have 3 good reasons
why. 1. If you fill in
the vernal pools you are
making important creatures die,
even if you don't see them
they are there my class
visited the vernal pools and
they were so fascinating,
we did reports on the
creatures and spent much
time doing art work and
studying these amazing
creatures. 2. If you build
houses on the land. you
wont have a nice wildlife
scenery to look at in
the morning when you
wake up to go to work.
you would have regular old
houses. 3. If you fill them
you will have broken puppies

39-1

hearts and us kids especially because we visited the vernal pools in February and did reports on those animals. They are important to everyone else and they should be important to you. They are as important as us humans. Please listen to our messages and take the time to think about what this means. I am a fifth grade student that has seen the vernal pools and I go to Otsuka Community School.

- Thank you for reading

- Jayden K.

39-1

Dear Ms. Dadey

I am a 5th Grade student and I would like to make a statements. I am sorry but you can't fill the vernal pools with dirt. You are not only killing more trees you are also destroying life itself. Humans are not the only living things on earth. You will be killing all the vernal pool creatures in the city, how would you like it if someone just destroyed you with piles of dirt? If you put dirt on them it will not only destory them and the food but it will make it harder on us. What I mean by the food part is it will go backs, if you take out green the tiniest animal everyone will D.E meaning →

39-1

animals.

Sincerely Kira B.

39-1

Save the Vernal Pools!

Dear Ms. Dadey,

It is sad for me to hear this news. We humans are not the only ones here, and some people don't stop to think about it. I would appreciate it if you would try to save the habitat of many creatures. Birds like the Mallards wouldn't have anything to eat, and they would have to find a new home. Don't forget the small things in the water, nothing would survive, the Rotifers wouldn't have any thing to eat and none of the eggs would hatch without any water! I wish people would think, what if we were in their place? How would we like it? We wouldn't, no matter what anybody says, we wouldn't die just because of some selfish people. I don't know how they go to sleep without realizing what they've done to others just to

39-1

make themselves happy. Well, I hope the vernal pools are able to be saved.

Sincerly,
Allison D.

If you would like to discuss further you can reach me at Oakview Community School. My District is San Juan Unified

39-1

Vernal Pools

Dear Ms. Dadey,

I oppose of you building over the vernal pools. I am a dear fifth grader who came to that exact spot and saw many critter living there. If you fill in those vernal pools, you are killing many critters lives, and almost destroy them extinct, and breaking the food web for other animals because they are very important. They are very, very dear to those animals and critters, for we have raised fairy shrimp (a critter who lives in a vernal pool) and also visited the site you planned to build houses on. There are only 3 places on earth that have vernal pools for those creatures to live. If you fill this place, there would only be 2 places for those critters to live,

39-1

go again they would eventually be extinct if this goes. I am not trying to make a choice for you, I am just trying to help those critters out. I know you don't mean harm, but you are harming them by filling the vernal pools with dirt.

From,
Savannah M.

39-1

May 18, 2015

Dear Ms. Dadey

I am a fifth grader at Oakview Community School. And all of the kids in my class did reseserch on a critter in the vernal pools you are about to destroy.

My critter is the water flea. And if you take away the water flea then the critters it eats will produce to much, and the critters that eat the water flea will starve. And if you continue with this project then you will be distroying one of the last three places on Earth with vernal pools.

Please dont continue with this project. Thk you or then you

39-1

will be killing thousands of creatures. It will break all of the fifth graders hearts if you do. So please I'm begging you please do not fill in the vernal pools.

Sincerely

Lauren H.

P.S. If you cried reading any of these letters we are sorry we just love these critters and don't want them to die because we know that they are very important.

39-1

Dear Ms. Dadey,

I am a fifth grade student at Oakview Community School. I am sending you this letter to talk to you about the vernal pool construction. My class and I went on a field trip to Mather Field's vernal pools in February, and we had an assignment to do while we were at the vernal pools. The assignment was, we had to pick a critter that lived in the vernal pools. My critter was the coyote. And it needs all of the space it can get, because it has a huge diet. And it's food range is all over the place. And now to get to the point, if you put dirt in the pools, you will take away the coyote's water →

39-1

supply. If you take the backhoes & bulldozers back into that land you will polute the air and the coyotes won't have any fresh air to breath. And if you pave down all that cement, you will close up all of the gopher holes so then the coyote can't eat its main food source. And to add on to that even more, it will cost the state a fortune, also when you put in the cement that will probably be the last straw for the coyotes. It will probably drive them into the near-by neighborhoods. So really want to threaten the citizens of the community? Please consider my observation.

Thanks - Kai W.

Oakview School
San Juan Unified School District
7229 Beech Avenue
Orangevale, California 95662
Tel: (916) 986-2215
Fax: (916) 986-2219
Email: PHORN@sanjuan.edu

39-1

May 18 201

Dear Ms. Dobey,

My name is Sophia and I am a 5th grade student. I really don't like the idea of building houses and shops on Vernal Pools. There are living organisamas that other livening creatures idepend on that we depend on them. In February we had a feild trip to the Vernal Pools and we saw the livening organisames in the Vernal Pools and under the microscop. Alll of them depend on fresh water in the pools. Imagen you being one of the organisames that depends on water like a water flea or ana aquatic snail and people come and destroyed your

39-1

habitat just to build houses. If the fresh water is going to be taken out it will kill billions of creatures and organisms. So we would be thankful if you don't do that.

From,
Sophia B.

39-1

Appendix B

Revised Air Quality Data

ESA

APPENDIX B

Air Quality Analysis Report

Introduction to the Air Quality Models and Results

Since the time the DEIS was published, a new air emissions model, CalEEMod (California Emissions Estimator Model) has been released and is currently what the SMAQMD recommends for air quality analyses. The CalEEMod model incorporates the latest EMFAC2011 and OFFROAD2011 emission factors. As such, the annual construction emissions assessment (page 4.4-4 of the DEIS) has been rerun with CalEEMod and is included below in Section 1 (Updated Modeling Results for FEIS).

Section 2 (Original Modeling Results for DEIS) includes the original output files from URBEMIS2007, version 9.2.4, model used in the DEIS to calculate emissions of ROG, NOx, CO, PM10, PM2.5, and CO_2 associated with project construction and operations, as well as for the aggregate facility operations. In addition, for CO_2 quantification from electricity usage, GHG emission factors were incorporated from the *Local Government Operations Protocol* (CARB et al., 2008).

SECTION 1: UPDATED MODELING RESULTS FOR FEIS

Mather Specific Plan Construction

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	43.00	Acre	43.00	1,873,080.00	0
General Light Industry	827.60	1000sqft	41.00	827,603.00	0
Strip Mall	160.08	1000sqft	4.20	160,083.00	0
University/College (4Yr)	2,500.00	Student	58.00	459,493.67	0
Elementary School	267.00	Student	4.00	22,322.10	0
Single Family Housing	105.00	Dwelling Unit	21.00	189,000.00	280
Condo/Townhouse	113.00	Dwelling Unit	11.00	113,000.00	302
Apartments Mid Rise	93.00	Dwelling Unit	5.00	93,000.00	248
Racquet Club	35.00	1000sqft	2.00	35,000.00	0
Health Club	64.00	1000sqft	4.00	64,000.00	0
City Park	38.00	Acre	38.00	1,655,280.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2017
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use assumptions based on project description. Note: roadways/infrastructure development of 43 acres represented by parking/other asphalt surface land use

Construction Phase - Adjusted phases and durations to match previous analysis assumptions

Grading - Matched total land use acreage for total acres disturbed

Vehicle Trips - Const only modeling

Woodstoves - Const only modeling

Consumer Products - Const only modeling

Area Coating - Const only modeling

Landscape Equipment - Const only modeling

Energy Use - Const only modeling

Water And Wastewater - Const only modeling

Solid Waste - Const only modeling

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	0	150
tblConstructionPhase	NumDays	330.00	87.00
tblConstructionPhase	NumDays	4,650.00	174.00
tblConstructionPhase	NumDays	465.00	65.00
tblConstructionPhase	NumDays	330.00	44.00
tblConstructionPhase	PhaseEndDate	3/31/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	6/1/2016	3/31/2016
tblConstructionPhase	PhaseStartDate	12/1/2016	11/1/2016
tblConstructionPhase	PhaseStartDate	4/1/2016	2/1/2016

tblEnergyUse	LightingElect	741.44	0.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	3.55	0.00
tblEnergyUse	LightingElect	5.19	0.00
tblEnergyUse	LightingElect	5.19	0.00
tblEnergyUse	LightingElect	5.19	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	6.01	0.00
tblEnergyUse	LightingElect	3.47	0.00
tblEnergyUse	NT24E	2,554.47	0.00
tblEnergyUse	NT24E	3,125.85	0.00
tblEnergyUse	NT24E	2.17	0.00
tblEnergyUse	NT24E	7.20	0.00
tblEnergyUse	NT24E	7.20	0.00
tblEnergyUse	NT24E	7.20	0.00
tblEnergyUse	NT24E	5,098.84	0.00
tblEnergyUse	NT24E	2.98	0.00
tblEnergyUse	NT24E	2.09	0.00
tblEnergyUse	NT24NG	1,716.22	0.00
tblEnergyUse	NT24NG	2,951.00	0.00
tblEnergyUse	NT24NG	0.66	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	NT24NG	5,933.76	0.00
tblEnergyUse	NT24NG	0.93	0.00
tblEnergyUse	NT24NG	0.23	0.00
tblEnergyUse	T24E	322.48	0.00

tblEnergyUse	T24E	301.15	0.00
tblEnergyUse	T24E	2.51	0.00
tblEnergyUse	T24E	4.17	0.00
tblEnergyUse	T24E	4.17	0.00
tblEnergyUse	T24E	4.17	0.00
tblEnergyUse	T24E	729.62	0.00
tblEnergyUse	T24E	3.98	0.00
tblEnergyUse	T24E	4.12	0.00
tblEnergyUse	T24NG	8,261.25	0.00
tblEnergyUse	T24NG	18,960.80	0.00
tblEnergyUse	T24NG	15.37	0.00
tblEnergyUse	T24NG	24.61	0.00
tblEnergyUse	T24NG	24.61	0.00
tblEnergyUse	T24NG	24.61	0.00
tblEnergyUse	T24NG	26,218.01	0.00
tblEnergyUse	T24NG	4.72	0.00
tblEnergyUse	T24NG	27.37	0.00
tblFireplaces	NumberNoFireplace	93.00	0.00
tblFireplaces	NumberNoFireplace	113.00	0.00
tblFireplaces	NumberNoFireplace	105.00	0.00
tblGrading	AcresOfGrading	162.50	231.20
tblLandUse	LandUseSquareFeet	827,600.00	827,603.00
tblLandUse	LandUseSquareFeet	160,080.00	160,083.00
tblLandUse	LotAcreage	19.00	41.00
tblLandUse	LotAcreage	3.67	4.20
tblLandUse	LotAcreage	10.55	58.00
tblLandUse	LotAcreage	0.51	4.00
tblLandUse	LotAcreage	34.09	21.00

tblLandUse	LotAcreage	7.06	11.00
tblLandUse	LotAcreage	2.45	5.00
tblLandUse	LotAcreage	0.80	2.00
tblLandUse	LotAcreage	1.47	4.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSolidWaste	SolidWasteGenerationRate	42.78	0.00
tblSolidWaste	SolidWasteGenerationRate	3.27	0.00
tblSolidWaste	SolidWasteGenerationRate	51.98	0.00
tblSolidWaste	SolidWasteGenerationRate	48.73	0.00
tblSolidWaste	SolidWasteGenerationRate	1,026.22	0.00
tblSolidWaste	SolidWasteGenerationRate	364.80	0.00
tblSolidWaste	SolidWasteGenerationRate	199.50	0.00
tblSolidWaste	SolidWasteGenerationRate	100.80	0.00
tblSolidWaste	SolidWasteGenerationRate	168.08	0.00
tblSolidWaste	SolidWasteGenerationRate	456.25	0.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	ST_TR	1.30	0.00
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	1.29	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblVehicleTrips	WD_TR	2.38	0.00
tblWater	IndoorWaterUseRate	6,059,324.38	0.00
tblWater	IndoorWaterUseRate	7,362,404.90	0.00
tblWater	IndoorWaterUseRate	647,272.08	0.00
tblWater	IndoorWaterUseRate	191,382,500.00	0.00
tblWater	IndoorWaterUseRate	3,785,161.22	0.00
tblWater	IndoorWaterUseRate	2,070,010.04	0.00
tblWater	IndoorWaterUseRate	6,841,172.69	0.00
tblWater	IndoorWaterUseRate	11,857,529.24	0.00
tblWater	IndoorWaterUseRate	5,352,750.00	0.00
tblWater	OutdoorWaterUseRate	3,820,008.85	0.00
tblWater	OutdoorWaterUseRate	45,276,291.29	0.00
tblWater	OutdoorWaterUseRate	4,641,516.13	0.00
tblWater	OutdoorWaterUseRate	1,664,413.92	0.00
tblWater	OutdoorWaterUseRate	2,319,937.52	0.00

tblWater	OutdoorWaterUseRate	1,268,715.83	0.00
tblWater	OutdoorWaterUseRate	4,312,913.22	0.00
tblWater	OutdoorWaterUseRate	7,267,517.92	0.00
tblWater	OutdoorWaterUseRate	8,372,250.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	21.5105	12.7065	24.9302	0.0393	2.3080	0.4317	2.7397	0.6586	0.4007	1.0593	0.0000	3,269.2599	3,269.2599	0.2097	0.0000	3,273.6628
Total	**21.5105**	**12.7065**	**24.9302**	**0.0393**	**2.3080**	**0.4317**	**2.7397**	**0.6586**	**0.4007**	**1.0593**	**0.0000**	**3,269.2599**	**3,269.2599**	**0.2097**	**0.0000**	**3,273.6628**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	21.5105	12.7065	24.9302	0.0393	2.3080	0.4317	2.7397	0.6586	0.4007	1.0593	0.0000	3,269.2594	3,269.2594	0.2097	0.0000	3,273.6623
Total	**21.5105**	**12.7065**	**24.9302**	**0.0393**	**2.3080**	**0.4317**	**2.7397**	**0.6586**	**0.4007**	**1.0593**	**0.0000**	**3,269.2594**	**3,269.2594**	**0.2097**	**0.0000**	**3,273.6623**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.5543	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**21.5543**	**0.0383**	**3.2907**	**1.7000e-004**	**0.0000**	**0.0178**	**0.0178**	**0.0000**	**0.0178**	**0.0178**	**0.0000**	**5.3366**	**5.3366**	**5.5300e-003**	**0.0000**	**5.4528**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.5543	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**21.5543**	**0.0383**	**3.2907**	**1.7000e-004**	**0.0000**	**0.0178**	**0.0178**	**0.0000**	**0.0178**	**0.0178**	**0.0000**	**5.3366**	**5.3366**	**5.5300e-003**	**0.0000**	**5.4528**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2016	3/31/2016	5	65	
2	Paving	Paving	2/1/2016	3/31/2016	5	44	
3	Building Construction	Building Construction	4/1/2016	11/30/2016	5	174	
4	Architectural Coating	Architectural Coating	11/1/2016	12/31/2016	5	87	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 231.2

Acres of Paving: 0

Residential Indoor: 799,875; Residential Outdoor: 266,625; Non-Residential Indoor: 7,645,293; Non-Residential Outdoor: 2,548,431 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,311.00	869.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	462.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3183	0.0000	0.3183	0.1208	0.0000	0.1208	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2106	2.4315	1.5970	2.0100e-003		0.1165	0.1165		0.1072	0.1072	0.0000	189.1361	189.1361	0.0571	0.0000	190.3342
Total	**0.2106**	**2.4315**	**1.5970**	**2.0100e-003**	**0.3183**	**0.1165**	**0.4348**	**0.1208**	**0.1072**	**0.2280**	**0.0000**	**189.1361**	**189.1361**	**0.0571**	**0.0000**	**190.3342**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1800e-003	2.6000e-003	0.0273	6.0000e-005	4.7700e-003	4.0000e-005	4.8100e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.2605	4.2605	2.3000e-004	0.0000	4.2652
Total	**2.1800e-003**	**2.6000e-003**	**0.0273**	**6.0000e-005**	**4.7700e-003**	**4.0000e-005**	**4.8100e-003**	**1.2700e-003**	**3.0000e-005**	**1.3000e-003**	**0.0000**	**4.2605**	**4.2605**	**2.3000e-004**	**0.0000**	**4.2652**

3.2 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3183	0.0000	0.3183	0.1208	0.0000	0.1208	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2106	2.4314	1.5970	2.0100e-003		0.1165	0.1165		0.1072	0.1072	0.0000	189.1359	189.1359	0.0571	0.0000	190.3339
Total	**0.2106**	**2.4314**	**1.5970**	**2.0100e-003**	**0.3183**	**0.1165**	**0.4348**	**0.1208**	**0.1072**	**0.2280**	**0.0000**	**189.1359**	**189.1359**	**0.0571**	**0.0000**	**190.3339**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1800e-003	2.6000e-003	0.0273	6.0000e-005	4.7700e-003	4.0000e-005	4.8100e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.2605	4.2605	2.3000e-004	0.0000	4.2652
Total	**2.1800e-003**	**2.6000e-003**	**0.0273**	**6.0000e-005**	**4.7700e-003**	**4.0000e-005**	**4.8100e-003**	**1.2700e-003**	**3.0000e-005**	**1.3000e-003**	**0.0000**	**4.2605**	**4.2605**	**2.3000e-004**	**0.0000**	**4.2652**

3.3 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0460	0.4925	0.3260	4.9000e-004		0.0277	0.0277		0.0255	0.0255	0.0000	46.2304	46.2304	0.0139	0.0000	46.5232
Paving	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1023**	**0.4925**	**0.3260**	**4.9000e-004**		**0.0277**	**0.0277**		**0.0255**	**0.0255**	**0.0000**	**46.2304**	**46.2304**	**0.0139**	**0.0000**	**46.5232**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	1.3200e-003	0.0138	3.0000e-005	2.4200e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1630	2.1630	1.2000e-004	0.0000	2.1654
Total	**1.1100e-003**	**1.3200e-003**	**0.0138**	**3.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4400e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1630**	**2.1630**	**1.2000e-004**	**0.0000**	**2.1654**

3.3 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0460	0.4925	0.3260	4.9000e-004		0.0277	0.0277		0.0255	0.0255	0.0000	46.2303	46.2303	0.0139	0.0000	46.5232
Paving	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1023**	**0.4925**	**0.3260**	**4.9000e-004**		**0.0277**	**0.0277**		**0.0255**	**0.0255**	**0.0000**	**46.2303**	**46.2303**	**0.0139**	**0.0000**	**46.5232**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	1.3200e-003	0.0138	3.0000e-005	2.4200e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1630	2.1630	1.2000e-004	0.0000	2.1654
Total	**1.1100e-003**	**1.3200e-003**	**0.0138**	**3.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4400e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1630**	**2.1630**	**1.2000e-004**	**0.0000**	**2.1654**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2963	2.4801	1.6101	2.3300e-003		0.1712	0.1712		0.1608	0.1608	0.0000	210.6736	210.6736	0.0523	0.0000	211.7709
Total	**0.2963**	**2.4801**	**1.6101**	**2.3300e-003**		**0.1712**	**0.1712**		**0.1608**	**0.1608**	**0.0000**	**210.6736**	**210.6736**	**0.0523**	**0.0000**	**211.7709**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0099	6.4012	12.4571	0.0158	0.4312	0.1002	0.5313	0.1233	0.0920	0.2152	0.0000	1,426.7194	1,426.7194	0.0114	0.0000	1,426.9590
Worker	0.6742	0.8045	8.4312	0.0177	1.4766	0.0112	1.4879	0.3927	0.0103	0.4031	0.0000	1,317.8393	1,317.8393	0.0704	0.0000	1,319.3185
Total	**1.6841**	**7.2057**	**20.8884**	**0.0335**	**1.9078**	**0.1114**	**2.0192**	**0.5160**	**0.1023**	**0.6183**	**0.0000**	**2,744.5587**	**2,744.5587**	**0.0819**	**0.0000**	**2,746.2775**

3.4 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2963	2.4801	1.6101	2.3300e-003		0.1712	0.1712		0.1608	0.1608	0.0000	210.6734	210.6734	0.0523	0.0000	211.7706
Total	**0.2963**	**2.4801**	**1.6101**	**2.3300e-003**		**0.1712**	**0.1712**		**0.1608**	**0.1608**	**0.0000**	**210.6734**	**210.6734**	**0.0523**	**0.0000**	**211.7706**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0099	6.4012	12.4571	0.0158	0.4312	0.1002	0.5313	0.1233	0.0920	0.2152	0.0000	1,426.7194	1,426.7194	0.0114	0.0000	1,426.9590
Worker	0.6742	0.8045	8.4312	0.0177	1.4766	0.0112	1.4879	0.3927	0.0103	0.4031	0.0000	1,317.8393	1,317.8393	0.0704	0.0000	1,319.3185
Total	**1.6841**	**7.2057**	**20.8884**	**0.0335**	**1.9078**	**0.1114**	**2.0192**	**0.5160**	**0.1023**	**0.6183**	**0.0000**	**2,744.5587**	**2,744.5587**	**0.0819**	**0.0000**	**2,746.2775**

3.5 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.1716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1100e-003	0.0522	0.0415	7.0000e-005		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	5.6172	5.6172	6.6000e-004	0.0000	5.6311
Total	**19.1797**	**0.0522**	**0.0415**	**7.0000e-005**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**5.6172**	**5.6172**	**6.6000e-004**	**0.0000**	**5.6311**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0341	0.0407	0.4262	8.9000e-004	0.0747	5.7000e-004	0.0752	0.0199	5.2000e-004	0.0204	0.0000	66.6205	66.6205	3.5600e-003	0.0000	66.6953
Total	**0.0341**	**0.0407**	**0.4262**	**8.9000e-004**	**0.0747**	**5.7000e-004**	**0.0752**	**0.0199**	**5.2000e-004**	**0.0204**	**0.0000**	**66.6205**	**66.6205**	**3.5600e-003**	**0.0000**	**66.6953**

3.5 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.1716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1100e-003	0.0522	0.0415	7.0000e-005		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	5.6172	5.6172	6.6000e-004	0.0000	5.6311
Total	**19.1797**	**0.0522**	**0.0415**	**7.0000e-005**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**5.6172**	**5.6172**	**6.6000e-004**	**0.0000**	**5.6311**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0341	0.0407	0.4262	8.9000e-004	0.0747	5.7000e-004	0.0752	0.0199	5.2000e-004	0.0204	0.0000	66.6205	66.6205	3.5600e-003	0.0000	66.6953
Total	**0.0341**	**0.0407**	**0.4262**	**8.9000e-004**	**0.0747**	**5.7000e-004**	**0.0752**	**0.0199**	**5.2000e-004**	**0.0204**	**0.0000**	**66.6205**	**66.6205**	**3.5600e-003**	**0.0000**	**66.6953**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
Condo/Townhouse	0.00	0.00	0.00		
Elementary School	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Racquet Club	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
University/College (4Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Elementary School	10.00	5.00	6.50	65.00	30.00	5.00	63	25	12
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3
Health Club	10.00	5.00	6.50	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Racquet Club	10.00	5.00	6.50	11.50	69.50	19.00	52	39	9
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Strip Mall	10.00	5.00	6.50	16.60	64.40	19.00	45	40	15
University/College (4Yr)	10.00	5.00	6.50	6.40	88.60	5.00	91	9	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504380	0.068251	0.178421	0.147199	0.044767	0.006294	0.020809	0.016358	0.002307	0.002286	0.006181	0.000572	0.002175

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.5543	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528
Unmitigated	21.5543	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.4485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1058	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528
Total	**21.5543**	**0.0383**	**3.2907**	**1.7000e-004**		**0.0178**	**0.0178**		**0.0178**	**0.0178**	**0.0000**	**5.3366**	**5.3366**	**5.5300e-003**	**0.0000**	**5.4528**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.4485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1058	0.0383	3.2907	1.7000e-004		0.0178	0.0178		0.0178	0.0178	0.0000	5.3366	5.3366	5.5300e-003	0.0000	5.4528
Total	**21.5543**	**0.0383**	**3.2907**	**1.7000e-004**		**0.0178**	**0.0178**		**0.0178**	**0.0178**	**0.0000**	**5.3366**	**5.3366**	**5.5300e-003**	**0.0000**	**5.4528**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0 / 0	0.0000	0.0000	0.0000	0.0000
Elementary School	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0 / 0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0 / 0	0.0000	0.0000	0.0000	0.0000
Elementary School	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0 / 0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	0.0000	0.0000	0.0000	0.0000
Mitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
University/College (4Yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

SECTION 2: ORIGINAL MODELING RESULTS FOR DEIS

URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATION ACTIVITIES

10/15/2010 12:06:39 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Construction Unmitigated.urb924

Project Name: Mather SP Construction

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	818.85	112.91	374.77	0.54	1,538.50	5.93	1,544.43	321.31	5.45	326.77	57,219.83

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/15/2010 12:06:39 PM

Time Slice 1/2/2012-1/31/2012 Active Days: 22	10.05	84.81	44.63	0.00	1,538.42	3.97	1,542.39	321.29	3.65	324.94	9,274.83
Fine Grading 01/01/2012-03/31/2012	10.05	84.81	44.63	0.00	1,538.42	3.97	1,542.39	321.29	3.65	324.94	9,274.83
Fine Grading Dust	0.00	0.00	0.00	0.00	1,538.40	0.00	1,538.40	321.28	0.00	321.28	0.00
Fine Grading Off Road Diesel	9.94	83.94	42.08	0.00	0.00	3.94	3.94	0.00	3.62	3.62	8,842.87
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.06	0.10	2.27	0.00	0.01	0.01	0.02	0.00	0.00	0.01	279.47
Time Slice 2/1/2012-3/30/2012 Active Days: 43	18.41	**112.91**	59.86	0.03	**1,538.50**	**5.93**	**1,544.43**	**321.31**	**5.45**	**326.77**	12,953.85
Asphalt 02/01/2012-03/31/2012	8.35	28.11	15.23	0.02	0.08	1.96	2.04	0.03	1.80	1.83	3,679.02
Paving Off-Gas	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.86	17.34	10.24	0.00	0.00	1.53	1.53	0.00	1.41	1.41	1,418.81
Paving On Road Diesel	0.77	10.72	3.86	0.02	0.07	0.42	0.50	0.02	0.39	0.41	2,120.47
Paving Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Fine Grading 01/01/2012-03/31/2012	10.05	84.81	44.63	0.00	1,538.42	3.97	1,542.39	321.29	3.65	324.94	9,274.83
Fine Grading Dust	0.00	0.00	0.00	0.00	1,538.40	0.00	1,538.40	321.28	0.00	321.28	0.00
Fine Grading Off Road Diesel	9.94	83.94	42.08	0.00	0.00	3.94	3.94	0.00	3.62	3.62	8,842.87
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.06	0.10	2.27	0.00	0.01	0.01	0.02	0.00	0.00	0.01	279.47
Time Slice 4/2/2012-8/31/2012 Active Days: 110	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building 04/01/2012-11/30/2012	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40

10/15/2010 12:06:39 PM

Time Slice 9/3/2012-11/30/2012 Active Days: 65	**818.85**	103.78	**374.77**	**0.54**	2.28	5.04	7.33	0.81	4.54	5.35	**57,219.83**
Building 04/01/2012-11/30/2012	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Time Slice 12/3/2012-12/31/2012 Active Days: 21	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 3/31/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 307.68

Maximum Daily Acreage Disturbed: 76.92

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 37.88

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/1/2012 - 3/31/2012 - Default Paving Description

Acres to be Paved: 76.92

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/1/2012 - 11/30/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2012 - 12/31/2012 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

10/15/2010 12:05:10 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Construction Mitigated.urb924

Project Name: Mather SP Construction

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	818.85	103.78	374.77	0.54	300.09	5.04	303.62	62.68	4.54	65.93	57,219.83
2012 TOTALS (lbs/day mitigated)	818.85	99.70	374.77	0.54	142.02	4.40	144.17	29.67	3.95	31.65	57,219.83

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/15/2010 12:05:10 PM

Time Slice 1/2/2012-1/31/2012 Active Days: 22	3.79	30.43	17.65	0.00	300.01	1.57	301.58	62.66	1.45	64.10	3,299.71
Fine Grading 01/01/2012-03/31/2012	3.79	30.43	17.65	0.00	300.01	1.57	301.58	62.66	1.45	64.10	3,299.71
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	3.71	29.61	16.24	0.00	0.00	1.54	1.54	0.00	1.42	1.42	3,007.48
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Time Slice 2/1/2012-3/30/2012 Active Days: 43	12.15	58.54	32.88	0.02	**300.09**	3.53	**303.62**	**62.68**	3.25	**65.93**	6,978.73
Asphalt 02/01/2012-03/31/2012	8.35	28.11	15.23	0.02	0.08	1.96	2.04	0.03	1.80	1.83	3,679.02
Paving Off-Gas	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.86	17.34	10.24	0.00	0.00	1.53	1.53	0.00	1.41	1.41	1,418.81
Paving On Road Diesel	0.77	10.72	3.86	0.02	0.07	0.42	0.50	0.02	0.39	0.41	2,120.47
Paving Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Fine Grading 01/01/2012-03/31/2012	3.79	30.43	17.65	0.00	300.01	1.57	301.58	62.66	1.45	64.10	3,299.71
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	3.71	29.61	16.24	0.00	0.00	1.54	1.54	0.00	1.42	1.42	3,007.48
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Time Slice 4/2/2012-8/31/2012 Active Days: 110	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building 04/01/2012-11/30/2012	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40

10/15/2010 12:05:10 PM

Time Slice 9/3/2012-11/30/2012 Active Days: 65	**818.85**	**103.78**	**374.77**	**0.54**	2.28	**5.04**	7.33	0.81	**4.54**	5.35	**57,219.83**
Building 04/01/2012-11/30/2012	17.44	103.42	366.28	0.53	2.24	5.02	7.26	0.79	4.52	5.32	56,174.60
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Time Slice 12/3/2012-12/31/2012 Active Days: 21	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 3/31/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 307.68

Maximum Daily Acreage Disturbed: 15

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 37.88

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

10/15/2010 12:05:10 PM

Phase: Paving 2/1/2012 - 3/31/2012 - Default Paving Description

Acres to be Paved: 76.92

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/1/2012 - 11/30/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2012 - 12/31/2012 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/15/2010 12:05:10 PM

Time Slice 1/2/2012-1/31/2012 Active Days: 22	3.79	24.51	17.65	0.00	141.94	0.88	142.82	29.64	0.81	30.45	3,299.71
Fine Grading 01/01/2012-03/31/2012	3.79	24.51	17.65	0.00	141.94	0.88	142.82	29.64	0.81	30.45	3,299.71
Fine Grading Dust	0.00	0.00	0.00	0.00	141.93	0.00	141.93	29.64	0.00	29.64	0.00
Fine Grading Off Road Diesel	3.71	23.69	16.24	0.00	0.00	0.85	0.85	0.00	0.78	0.78	3,007.48
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Time Slice 2/1/2012-3/30/2012 Active Days: 43	12.15	49.15	32.88	0.02	142.02	2.15	144.17	29.67	1.98	31.65	6,978.73
Asphalt 02/01/2012-03/31/2012	8.35	24.64	15.23	0.02	0.08	1.27	1.35	0.03	1.17	1.19	3,679.02
Paving Off-Gas	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.86	13.87	10.24	0.00	0.00	0.84	0.84	0.00	0.78	0.78	1,418.81
Paving On Road Diesel	0.77	10.72	3.86	0.02	0.07	0.42	0.50	0.02	0.39	0.41	2,120.47
Paving Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Fine Grading 01/01/2012-03/31/2012	3.79	24.51	17.65	0.00	141.94	0.88	142.82	29.64	0.81	30.45	3,299.71
Fine Grading Dust	0.00	0.00	0.00	0.00	141.93	0.00	141.93	29.64	0.00	29.64	0.00
Fine Grading Off Road Diesel	3.71	23.69	16.24	0.00	0.00	0.85	0.85	0.00	0.78	0.78	3,007.48
Fine Grading On Road Diesel	0.06	0.77	0.28	0.00	0.01	0.03	0.04	0.00	0.03	0.03	152.50
Fine Grading Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Time Slice 4/2/2012-8/31/2012 Active Days: 110	17.44	99.34	366.28	0.53	2.24	4.38	6.62	0.79	3.94	4.73	56,174.60
Building 04/01/2012-11/30/2012	17.44	99.34	366.28	0.53	2.24	4.38	6.62	0.79	3.94	4.73	56,174.60
Building Off Road Diesel	3.48	16.34	13.62	0.00	0.00	0.78	0.78	0.00	0.72	0.72	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40

Time Slice 9/3/2012-11/30/2012 Active Days: 65	**818.85**	99.70	**374.77**	**0.54**	2.28	4.40	6.69	0.81	3.95	4.76	**57,219.83**
Building 04/01/2012-11/30/2012	17.44	99.34	366.28	0.53	2.24	4.38	6.62	0.79	3.94	4.73	56,174.60
Building Off Road Diesel	3.48	16.34	13.62	0.00	0.00	0.78	0.78	0.00	0.72	0.72	2,259.28
Building Vendor Trips	6.16	70.88	67.24	0.18	0.67	2.87	3.54	0.23	2.63	2.85	18,771.92
Building Worker Trips	7.81	12.12	285.41	0.35	1.57	0.73	2.30	0.57	0.59	1.16	35,143.40
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Time Slice 12/3/2012-12/31/2012 Active Days: 21	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Coating 09/01/2012-12/31/2012	801.41	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24
Architectural Coating	801.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.23	0.36	8.49	0.01	0.05	0.02	0.07	0.02	0.02	0.03	1,045.24

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2012 - 3/31/2012 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Rubber Tired Dozers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

The following mitigation measures apply to Phase: Paving 2/1/2012 - 3/31/2012 - Default Paving Description

For Pavers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Paving Equipment, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Rollers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

The following mitigation measures apply to Phase: Building Construction 4/1/2012 - 11/30/2012 - Default Building Construction Description

For Cranes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Forklifts, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Generator Sets, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

For Welders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

NOX: 20% PM10: 45% PM25: 45%

10/15/2010 12:06:55 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Construction Unmitigated.urb924

Project Name: Mather SP Construction

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	36.49	12.43	34.19	0.05	50.20	0.61	50.81	10.51	0.55	11.07	5,340.75

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	36.49	12.43	34.19	0.05	50.20	0.61	50.81	10.51	0.55	11.07	5,340.75
Fine Grading 01/01/2012-03/31/2012	0.33	2.76	1.45	0.00	50.00	0.13	50.13	10.44	0.12	10.56	301.43
Fine Grading Dust	0.00	0.00	0.00	0.00	50.00	0.00	50.00	10.44	0.00	10.44	0.00
Fine Grading Off Road Diesel	0.32	2.73	1.37	0.00	0.00	0.13	0.13	0.00	0.12	0.12	287.39
Fine Grading On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.96
Fine Grading Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.08
Asphalt 02/01/2012-03/31/2012	0.18	0.60	0.33	0.00	0.00	0.04	0.04	0.00	0.04	0.04	79.10
Paving Off-Gas	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.37	0.22	0.00	0.00	0.03	0.03	0.00	0.03	0.03	30.50
Paving On Road Diesel	0.02	0.23	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	45.59
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Building 04/01/2012-11/30/2012	1.53	9.05	32.05	0.05	0.20	0.44	0.64	0.07	0.40	0.47	4,915.28
Building Off Road Diesel	0.30	1.79	1.19	0.00	0.00	0.12	0.12	0.00	0.11	0.11	197.69
Building Vendor Trips	0.54	6.20	5.88	0.02	0.06	0.25	0.31	0.02	0.23	0.25	1,642.54
Building Worker Trips	0.68	1.06	24.97	0.03	0.14	0.06	0.20	0.05	0.05	0.10	3,075.05
Coating 09/01/2012-12/31/2012	34.46	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95
Architectural Coating	34.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 3/31/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 307.68

Maximum Daily Acreage Disturbed: 76.92

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

10/15/2010 12:06:55 PM

On Road Truck Travel (VMT): 37.88

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/1/2012 - 3/31/2012 - Default Paving Description

Acres to be Paved: 76.92

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/1/2012 - 11/30/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2012 - 12/31/2012 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

10/19/2010 12:17:30 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Construction Mitigated.urb924

Project Name: Mather SP Construction

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	36.29	10.66	33.32	0.05	9.95	0.53	10.48	2.11	0.48	2.59	5,146.56
2012 TOTALS (tons/year mitigated)	32.84	10.66	33.32	0.05	9.95	0.53	10.48	2.11	0.48	2.59	5,146.56
Percent Reduction	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	36.29	10.66	33.32	0.05	9.95	0.53	10.48	2.11	0.48	2.59	5,146.56
Fine Grading 01/01/2012-03/31/2012	0.12	0.99	0.57	0.00	9.75	0.05	9.80	2.04	0.05	2.08	107.24
Fine Grading Dust	0.00	0.00	0.00	0.00	9.75	0.00	9.75	2.04	0.00	2.04	0.00
Fine Grading Off Road Diesel	0.12	0.96	0.53	0.00	0.00	0.05	0.05	0.00	0.05	0.05	97.74
Fine Grading On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.96
Fine Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.54
Asphalt 02/01/2012-03/31/2012	0.18	0.60	0.33	0.00	0.00	0.04	0.04	0.00	0.04	0.04	79.10
Paving Off-Gas	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.37	0.22	0.00	0.00	0.03	0.03	0.00	0.03	0.03	30.50
Paving On Road Diesel	0.02	0.23	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	45.59
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Building 04/01/2012-11/30/2012	1.53	9.05	32.05	0.05	0.20	0.44	0.64	0.07	0.40	0.47	4,915.28
Building Off Road Diesel	0.30	1.79	1.19	0.00	0.00	0.12	0.12	0.00	0.11	0.11	197.69
Building Vendor Trips	0.54	6.20	5.88	0.02	0.06	0.25	0.31	0.02	0.23	0.25	1,642.54
Building Worker Trips	0.68	1.06	24.97	0.03	0.14	0.06	0.20	0.05	0.05	0.10	3,075.05
Coating 09/01/2012-12/31/2012	34.46	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95
Architectural Coating	34.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 3/31/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 307.68

Maximum Daily Acreage Disturbed: 15

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

10/19/2010 12:17:30 PM

On Road Truck Travel (VMT): 37.88

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/1/2012 - 3/31/2012 - Default Paving Description

Acres to be Paved: 76.92

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/1/2012 - 11/30/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2012 - 12/31/2012 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

10/19/2010 12:17:30 PM

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	32.84	10.66	33.32	0.05	9.95	0.53	10.48	2.11	0.48	2.59	5,146.56
Fine Grading 01/01/2012-03/31/2012	0.12	0.99	0.57	0.00	9.75	0.05	9.80	2.04	0.05	2.08	107.24
Fine Grading Dust	0.00	0.00	0.00	0.00	9.75	0.00	9.75	2.04	0.00	2.04	0.00
Fine Grading Off Road Diesel	0.12	0.96	0.53	0.00	0.00	0.05	0.05	0.00	0.05	0.05	97.74
Fine Grading On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.96
Fine Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.54
Asphalt 02/01/2012-03/31/2012	0.18	0.60	0.33	0.00	0.00	0.04	0.04	0.00	0.04	0.04	79.10
Paving Off-Gas	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.37	0.22	0.00	0.00	0.03	0.03	0.00	0.03	0.03	30.50
Paving On Road Diesel	0.02	0.23	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	45.59
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Building 04/01/2012-11/30/2012	1.53	9.05	32.05	0.05	0.20	0.44	0.64	0.07	0.40	0.47	4,915.28
Building Off Road Diesel	0.30	1.79	1.19	0.00	0.00	0.12	0.12	0.00	0.11	0.11	197.69
Building Vendor Trips	0.54	6.20	5.88	0.02	0.06	0.25	0.31	0.02	0.23	0.25	1,642.54
Building Worker Trips	0.68	1.06	24.97	0.03	0.14	0.06	0.20	0.05	0.05	0.10	3,075.05
Coating 09/01/2012-12/31/2012	31.02	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95
Architectural Coating	31.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.95

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Architectural Coating 9/1/2012 - 12/31/2012 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

10/15/2010 5:36:51 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Alt A Ops Revised 10-14.urb924

Project Name: Mather Specific Plan Ops

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	226.52	58.85	153.82	0.01	0.44	0.44	72,212.99

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	705.94	520.69	6,802.05	12.00	1,911.35	363.56	1,205,522.12

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	932.46	579.54	6,955.87	12.01	1,911.79	364.00	1,277,735.11

10/15/2010 5:36:51 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	4.36	57.45	31.61	0.00	0.11	0.11	72,014.79
Hearth - No Summer Emissions							
Landscape	21.15	1.40	122.21	0.01	0.33	0.33	198.20
Consumer Products	114.21						
Architectural Coatings	86.80						
TOTALS (lbs/day, unmitigated)	226.52	58.85	153.82	0.01	0.44	0.44	72,212.99

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	109.82	83.74	1,123.41	1.94	307.23	58.51	194,766.21
University/college (4 yrs)	140.60	60.23	767.55	1.37	219.42	41.70	137,924.71
City park	44.44	42.74	544.71	0.97	155.72	29.60	97,881.87
Regnl shop. center	85.49	81.04	1,029.02	1.84	294.80	56.03	185,231.15
Strip mall	44.98	42.77	543.05	0.97	155.58	29.57	97,752.62
General light industry	249.19	187.03	2,488.50	4.37	693.07	131.88	437,965.66
Industrial park	31.42	23.14	305.81	0.54	85.53	16.27	53,999.90
TOTALS (lbs/day, unmitigated)	705.94	520.69	6,802.05	12.00	1,911.35	363.56	1,205,522.12

10/15/2010 5:36:51 PM

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 95 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	843.33	8.27	dwelling units	2,530.00	20,923.10	178,886.24
University/college (4 yrs)		2.28	students	7,500.00	17,100.00	127,822.50
City park		44.29	acres	274.00	12,135.46	90,712.57
Regnl shop. center		36.97	1000 sq ft	630.32	23,302.93	171,742.61
Strip mall		38.41	1000 sq ft	320.17	12,297.73	90,634.27
General light industry		7.17	1000 sq ft	6,220.37	44,600.05	403,630.50
Industrial park		6.92	1000 sq ft	822.41	5,691.08	49,811.15
					136,050.35	1,113,239.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	10.0	0.0	97.0	3.0
Light Truck 3751-5750 lbs	22.8	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.2	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.1	0.0	76.2	23.8
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4

10/15/2010 5:36:51 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.6	0.0	18.8	81.2
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5
City park				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0
General light industry				50.0	25.0	25.0

10/15/2010 5:36:51 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Industrial park				41.5	20.8	37.8

10/15/2010 5:37:21 PM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Alt A Ops Revised 10-14.urb924

Project Name: Mather Specific Plan Ops

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	435.50	111.86	2,120.12	6.88	340.97	328.22	147,185.58

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	565.81	778.07	5,736.64	9.56	1,911.35	363.56	964,536.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1,001.31	889.93	7,856.76	16.44	2,252.32	691.78	1,111,722.51

10/15/2010 5:37:21 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	4.36	57.45	31.61	0.00	0.11	0.11	72,014.79
Hearth	230.13	54.41	2,088.51	6.88	340.86	328.11	75,170.79
Landscaping - No Winter Emissions							
Consumer Products	114.21						
Architectural Coatings	86.80						
TOTALS (lbs/day, unmitigated)	435.50	111.86	2,120.12	6.88	340.97	328.22	147,185.58

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	91.59	125.11	944.14	1.55	307.23	58.51	156,042.35
University/college (4 yrs)	70.12	89.88	655.73	1.09	219.42	41.70	110,254.73
City park	45.32	63.78	465.35	0.77	155.72	29.60	78,245.14
Regnl shop. center	86.04	120.89	881.06	1.47	294.80	56.03	148,053.69
Strip mall	45.40	63.80	464.96	0.77	155.58	29.57	78,132.85
General light industry	202.26	279.98	2,069.94	3.48	693.07	131.88	350,590.98
Industrial park	25.08	34.63	255.46	0.43	85.53	16.27	43,217.19
TOTALS (lbs/day, unmitigated)	565.81	778.07	5,736.64	9.56	1,911.35	363.56	964,536.93

10/15/2010 5:37:21 PM

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 50 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	843.33	8.27	dwelling units	2,530.00	20,923.10	178,886.24
University/college (4 yrs)		2.28	students	7,500.00	17,100.00	127,822.50
City park		44.29	acres	274.00	12,135.46	90,712.57
Regnl shop. center		36.97	1000 sq ft	630.32	23,302.93	171,742.61
Strip mall		38.41	1000 sq ft	320.17	12,297.73	90,634.27
General light industry		7.17	1000 sq ft	6,220.37	44,600.05	403,630.50
Industrial park		6.92	1000 sq ft	822.41	5,691.08	49,811.15
					136,050.35	1,113,239.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	10.0	0.0	97.0	3.0
Light Truck 3751-5750 lbs	22.8	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.2	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.1	0.0	76.2	23.8
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4

10/15/2010 5:37:21 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.6	0.0	18.8	81.2
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5
City park				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0
General light industry				50.0	25.0	25.0

10/15/2010 5:37:21 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Industrial park				41.5	20.8	37.8

10/15/2010 5:37:30 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Alt A Ops Revised 10-14.urb924

Project Name: Mather Specific Plan Ops

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	48.79	12.29	102.16	0.28	13.98	13.46	15,537.34

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	120.29	110.68	1,176.58	2.04	348.82	66.35	205,347.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	169.08	122.97	1,278.74	2.32	362.80	79.81	220,885.19

10/15/2010 5:37:30 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.80	10.48	5.77	0.00	0.02	0.02	13,142.70
Hearth	9.41	1.68	85.39	0.28	13.93	13.41	2,376.80
Landscape	1.90	0.13	11.00	0.00	0.03	0.03	17.84
Consumer Products	20.84						
Architectural Coatings	15.84						
TOTALS (tons/year, unmitigated)	48.79	12.29	102.16	0.28	13.98	13.46	15,537.34

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	18.93	17.80	194.12	0.33	56.07	10.68	33,189.13
University/college (4 yrs)	21.37	12.80	133.28	0.23	40.04	7.61	23,488.00
City park	8.16	9.08	94.58	0.17	28.42	5.40	16,668.87
Regnl shop. center	15.63	17.21	178.80	0.31	53.80	10.22	31,543.06
Strip mall	8.23	9.08	94.36	0.17	28.39	5.40	16,646.32
General light industry	42.62	39.79	428.69	0.74	126.49	24.07	74,613.44
Industrial park	5.35	4.92	52.75	0.09	15.61	2.97	9,199.03
TOTALS (tons/year, unmitigated)	120.29	110.68	1,176.58	2.04	348.82	66.35	205,347.85

10/15/2010 5:37:30 PM

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	843.33	8.27	dwelling units	2,530.00	20,923.10	178,886.24
University/college (4 yrs)		2.28	students	7,500.00	17,100.00	127,822.50
City park		44.29	acres	274.00	12,135.46	90,712.57
Regnl shop. center		36.97	1000 sq ft	630.32	23,302.93	171,742.61
Strip mall		38.41	1000 sq ft	320.17	12,297.73	90,634.27
General light industry		7.17	1000 sq ft	6,220.37	44,600.05	403,630.50
Industrial park		6.92	1000 sq ft	822.41	5,691.08	49,811.15
					136,050.35	1,113,239.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	10.0	0.0	97.0	3.0
Light Truck 3751-5750 lbs	22.8	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.2	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.1	0.0	76.2	23.8
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	55.6	44.4

10/15/2010 5:37:30 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.6	0.0	18.8	81.2
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.5	40.0	60.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5
City park				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0
General light industry				50.0	25.0	25.0

10/15/2010 5:37:30 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Industrial park				41.5	20.8	37.8

10/15/2010 5:30:04 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Aggregate.urb924

Project Name: Mather SP Aggregate

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

10/15/2010 5:30:04 PM

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	4.09	39.83	19.68	0.04	300.17	2.15	302.31	62.71	1.97	64.68	6,532.28
2012 TOTALS (lbs/day mitigated)	4.09	39.83	19.68	0.04	142.10	2.15	144.24	29.70	1.97	31.67	6,532.28
2013 TOTALS (lbs/day unmitigated)	3.74	35.80	18.62	0.04	300.17	1.89	302.05	62.71	1.74	64.44	6,532.35
2013 TOTALS (lbs/day mitigated)	3.74	35.80	18.62	0.04	142.10	1.89	143.98	29.70	1.74	31.43	6,532.35
2014 TOTALS (lbs/day unmitigated)	3.42	32.07	17.69	0.04	300.17	1.65	301.81	62.71	1.51	64.22	6,532.41
2014 TOTALS (lbs/day mitigated)	3.42	32.07	17.69	0.04	142.10	1.65	143.74	29.70	1.51	31.21	6,532.41
2015 TOTALS (lbs/day unmitigated)	3.15	28.60	16.87	0.04	300.17	1.46	301.63	62.71	1.34	64.05	6,532.44
2015 TOTALS (lbs/day mitigated)	3.15	28.60	16.87	0.04	142.10	1.46	143.56	29.70	1.34	31.04	6,532.44
2016 TOTALS (lbs/day unmitigated)	2.91	25.52	16.19	0.04	300.17	1.26	301.43	62.71	1.16	63.87	6,532.45
2016 TOTALS (lbs/day mitigated)	2.91	25.52	16.19	0.04	142.10	1.26	143.36	29.70	1.16	30.86	6,532.45

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/15/2010 5:30:04 PM

Time Slice 1/2/2012-12/31/2012 Active Days: 261	**4.09**	**39.83**	**19.68**	**0.04**	**300.17**	**2.15**	**302.31**	**62.71**	**1.97**	**64.68**	6,532.28
Fine Grading 01/01/2012-12/31/2016	4.09	39.83	19.68	0.04	300.17	2.15	302.31	62.71	1.97	64.68	6,532.28
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	2.41	16.81	10.28	0.00	0.00	1.24	1.24	0.00	1.14	1.14	1,849.73
Fine Grading On Road Diesel	1.65	22.97	8.26	0.04	0.16	0.90	1.06	0.05	0.83	0.88	4,542.82
Fine Grading Worker Trips	0.03	0.05	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.73
Time Slice 1/1/2013-12/31/2013 Active Days: 261	3.74	35.80	18.62	**0.04**	**300.17**	1.89	302.05	**62.71**	1.74	64.44	6,532.35
Fine Grading 01/01/2012-12/31/2016	3.74	35.80	18.62	0.04	300.17	1.89	302.05	62.71	1.74	64.44	6,532.35
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	2.21	15.57	10.17	0.00	0.00	1.10	1.10	0.00	1.01	1.01	1,849.73
Fine Grading On Road Diesel	1.51	20.18	7.41	0.04	0.16	0.79	0.95	0.05	0.73	0.78	4,542.82
Fine Grading Worker Trips	0.03	0.04	1.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.80
Time Slice 1/1/2014-12/31/2014 Active Days: 261	3.42	32.07	17.69	**0.04**	**300.17**	1.65	301.81	**62.71**	1.51	64.22	6,532.41
Fine Grading 01/01/2012-12/31/2016	3.42	32.07	17.69	0.04	300.17	1.65	301.81	62.71	1.51	64.22	6,532.41
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	2.02	14.34	10.09	0.00	0.00	0.95	0.95	0.00	0.88	0.88	1,849.73
Fine Grading On Road Diesel	1.37	17.69	6.64	0.04	0.16	0.69	0.85	0.05	0.63	0.69	4,542.82
Fine Grading Worker Trips	0.03	0.04	0.96	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.86

10/15/2010 5:30:04 PM

Time Slice 1/1/2015-12/31/2015 Active Days: 261	3.15	28.60	16.87	**0.04**	**300.17**	1.46	301.63	**62.71**	1.34	64.05	6,532.44
Fine Grading 01/01/2012-12/31/2016	3.15	28.60	16.87	0.04	300.17	1.46	301.63	62.71	1.34	64.05	6,532.44
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	1.87	12.98	9.99	0.00	0.00	0.85	0.85	0.00	0.79	0.79	1,849.73
Fine Grading On Road Diesel	1.26	15.59	6.00	0.04	0.16	0.60	0.76	0.05	0.56	0.61	4,542.82
Fine Grading Worker Trips	0.02	0.04	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.90
Time Slice 1/1/2016-12/30/2016 Active Days: 261	2.91	25.52	16.19	**0.04**	**300.17**	1.26	301.43	**62.71**	1.16	63.87	**6,532.45**
Fine Grading 01/01/2012-12/31/2016	2.91	25.52	16.19	0.04	300.17	1.26	301.43	62.71	1.16	63.87	6,532.45
Fine Grading Dust	0.00	0.00	0.00	0.00	300.00	0.00	300.00	62.65	0.00	62.65	0.00
Fine Grading Off Road Diesel	1.72	11.73	9.93	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,849.73
Fine Grading On Road Diesel	1.16	13.76	5.44	0.04	0.16	0.53	0.69	0.05	0.49	0.54	4,542.82
Fine Grading Worker Trips	0.02	0.03	0.82	0.00	0.01	0.00	0.01	0.00	0.00	0.00	139.90

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 12/31/2016 - Default Fine Site Grading Description

Total Acres Disturbed: 60

Maximum Daily Acreage Disturbed: 15

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 1128.37

Off-Road Equipment:

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

10/15/2010 5:30:26 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mxm\Desktop\Weekend Work Shortcuts\Mather Specific Plan\Mather URBEMIS Data\Mather SP Aggregate.urb924

Project Name: Mather SP Aggregate

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	0.53	5.20	2.57	0.01	39.17	0.28	39.45	8.18	0.26	8.44	852.46
2012 TOTALS (tons/year mitigated)	0.53	5.20	2.57	0.01	18.54	0.28	18.82	3.88	0.26	4.13	852.46
Percent Reduction	0.00	0.00	0.00	0.00	52.66	0.00	52.29	52.64	0.00	51.04	0.00
2013 TOTALS (tons/year unmitigated)	0.49	4.67	2.43	0.01	39.17	0.25	39.42	8.18	0.23	8.41	852.47
2013 TOTALS (tons/year mitigated)	0.49	4.67	2.43	0.01	18.54	0.25	18.79	3.88	0.23	4.10	852.47
Percent Reduction	0.00	0.00	0.00	0.00	52.66	0.00	52.33	52.64	0.00	51.22	0.00
2014 TOTALS (tons/year unmitigated)	0.45	4.18	2.31	0.01	39.17	0.21	39.39	8.18	0.20	8.38	852.48
2014 TOTALS (tons/year mitigated)	0.45	4.18	2.31	0.01	18.54	0.21	18.76	3.88	0.20	4.07	852.48
Percent Reduction	0.00	0.00	0.00	0.00	52.66	0.00	52.37	52.64	0.00	51.40	0.00

2015 TOTALS (tons/year unmitigated)	0.41	3.73	2.20	0.01	39.17	0.19	39.36	8.18	0.18	8.36	852.48
2015 TOTALS (tons/year mitigated)	0.41	3.73	2.20	0.01	18.54	0.19	18.73	3.88	0.18	4.05	852.48
Percent Reduction	0.00	0.00	0.00	0.00	52.66	0.00	52.41	52.64	0.00	51.54	0.00
2016 TOTALS (tons/year unmitigated)	0.38	3.33	2.11	0.01	39.17	0.16	39.34	8.18	0.15	8.33	852.48
2016 TOTALS (tons/year mitigated)	0.38	3.33	2.11	0.01	18.54	0.16	18.71	3.88	0.15	4.03	852.48
Percent Reduction	0.00	0.00	0.00	0.00	52.66	0.00	52.44	52.64	0.00	51.69	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	0.53	5.20	2.57	0.01	39.17	0.28	39.45	8.18	0.26	8.44	852.46
Fine Grading 01/01/2012-12/31/2016	0.53	5.20	2.57	0.01	39.17	0.28	39.45	8.18	0.26	8.44	852.46
Fine Grading Dust	0.00	0.00	0.00	0.00	39.15	0.00	39.15	8.18	0.00	8.18	0.00
Fine Grading Off Road Diesel	0.31	2.19	1.34	0.00	0.00	0.16	0.16	0.00	0.15	0.15	241.39
Fine Grading On Road Diesel	0.22	3.00	1.08	0.01	0.02	0.12	0.14	0.01	0.11	0.12	592.84
Fine Grading Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.24

2013	0.49	4.67	2.43	0.01	39.17	0.25	39.42	8.18	0.23	8.41	852.47
Fine Grading 01/01/2012-12/31/2016	0.49	4.67	2.43	0.01	39.17	0.25	39.42	8.18	0.23	8.41	852.47
Fine Grading Dust	0.00	0.00	0.00	0.00	39.15	0.00	39.15	8.18	0.00	8.18	0.00
Fine Grading Off Road Diesel	0.29	2.03	1.33	0.00	0.00	0.14	0.14	0.00	0.13	0.13	241.39
Fine Grading On Road Diesel	0.20	2.63	0.97	0.01	0.02	0.10	0.12	0.01	0.09	0.10	592.84
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.24
2014	0.45	4.18	2.31	0.01	39.17	0.21	39.39	8.18	0.20	8.38	852.48
Fine Grading 01/01/2012-12/31/2016	0.45	4.18	2.31	0.01	39.17	0.21	39.39	8.18	0.20	8.38	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	39.15	0.00	39.15	8.18	0.00	8.18	0.00
Fine Grading Off Road Diesel	0.26	1.87	1.32	0.00	0.00	0.12	0.12	0.00	0.11	0.11	241.39
Fine Grading On Road Diesel	0.18	2.31	0.87	0.01	0.02	0.09	0.11	0.01	0.08	0.09	592.84
Fine Grading Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.25
2015	0.41	3.73	2.20	0.01	39.17	0.19	39.36	8.18	0.18	8.36	852.48
Fine Grading 01/01/2012-12/31/2016	0.41	3.73	2.20	0.01	39.17	0.19	39.36	8.18	0.18	8.36	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	39.15	0.00	39.15	8.18	0.00	8.18	0.00
Fine Grading Off Road Diesel	0.24	1.69	1.30	0.00	0.00	0.11	0.11	0.00	0.10	0.10	241.39
Fine Grading On Road Diesel	0.16	2.03	0.78	0.01	0.02	0.08	0.10	0.01	0.07	0.08	592.84
Fine Grading Worker Trips	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.26

2016	0.38	3.33	2.11	0.01	39.17	0.16	39.34	8.18	0.15	8.33	852.48
Fine Grading 01/01/2012-12/31/2016	0.38	3.33	2.11	0.01	39.17	0.16	39.34	8.18	0.15	8.33	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	39.15	0.00	39.15	8.18	0.00	8.18	0.00
Fine Grading Off Road Diesel	0.22	1.53	1.30	0.00	0.00	0.09	0.09	0.00	0.09	0.09	241.39
Fine Grading On Road Diesel	0.15	1.80	0.71	0.01	0.02	0.07	0.09	0.01	0.06	0.07	592.84
Fine Grading Worker Trips	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.26

Phase Assumptions

Phase: Fine Grading 1/1/2012 - 12/31/2016 - Default Fine Site Grading Description

Total Acres Disturbed: 60

Maximum Daily Acreage Disturbed: 15

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 1128.37

Off-Road Equipment:

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	0.53	5.20	2.57	0.01	18.54	0.28	18.82	3.88	0.26	4.13	852.46
Fine Grading 01/01/2012-12/31/2016	0.53	5.20	2.57	0.01	18.54	0.28	18.82	3.88	0.26	4.13	852.46
Fine Grading Dust	0.00	0.00	0.00	0.00	18.52	0.00	18.52	3.87	0.00	3.87	0.00
Fine Grading Off Road Diesel	0.31	2.19	1.34	0.00	0.00	0.16	0.16	0.00	0.15	0.15	241.39
Fine Grading On Road Diesel	0.22	3.00	1.08	0.01	0.02	0.12	0.14	0.01	0.11	0.12	592.84
Fine Grading Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.24
2013	0.49	4.67	2.43	0.01	18.54	0.25	18.79	3.88	0.23	4.10	852.47
Fine Grading 01/01/2012-12/31/2016	0.49	4.67	2.43	0.01	18.54	0.25	18.79	3.88	0.23	4.10	852.47
Fine Grading Dust	0.00	0.00	0.00	0.00	18.52	0.00	18.52	3.87	0.00	3.87	0.00
Fine Grading Off Road Diesel	0.29	2.03	1.33	0.00	0.00	0.14	0.14	0.00	0.13	0.13	241.39
Fine Grading On Road Diesel	0.20	2.63	0.97	0.01	0.02	0.10	0.12	0.01	0.09	0.10	592.84
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.24
2014	0.45	4.18	2.31	0.01	18.54	0.21	18.76	3.88	0.20	4.07	852.48
Fine Grading 01/01/2012-12/31/2016	0.45	4.18	2.31	0.01	18.54	0.21	18.76	3.88	0.20	4.07	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	18.52	0.00	18.52	3.87	0.00	3.87	0.00
Fine Grading Off Road Diesel	0.26	1.87	1.32	0.00	0.00	0.12	0.12	0.00	0.11	0.11	241.39
Fine Grading On Road Diesel	0.18	2.31	0.87	0.01	0.02	0.09	0.11	0.01	0.08	0.09	592.84
Fine Grading Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.25

2015	0.41	3.73	2.20	0.01	18.54	0.19	18.73	3.88	0.18	4.05	852.48
Fine Grading 01/01/2012-12/31/2016	0.41	3.73	2.20	0.01	18.54	0.19	18.73	3.88	0.18	4.05	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	18.52	0.00	18.52	3.87	0.00	3.87	0.00
Fine Grading Off Road Diesel	0.24	1.69	1.30	0.00	0.00	0.11	0.11	0.00	0.10	0.10	241.39
Fine Grading On Road Diesel	0.16	2.03	0.78	0.01	0.02	0.08	0.10	0.01	0.07	0.08	592.84
Fine Grading Worker Trips	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.26
2016	0.38	3.33	2.11	0.01	18.54	0.16	18.71	3.88	0.15	4.03	852.48
Fine Grading 01/01/2012-12/31/2016	0.38	3.33	2.11	0.01	18.54	0.16	18.71	3.88	0.15	4.03	852.48
Fine Grading Dust	0.00	0.00	0.00	0.00	18.52	0.00	18.52	3.87	0.00	3.87	0.00
Fine Grading Off Road Diesel	0.22	1.53	1.30	0.00	0.00	0.09	0.09	0.00	0.09	0.09	241.39
Fine Grading On Road Diesel	0.15	1.80	0.71	0.01	0.02	0.07	0.09	0.01	0.06	0.07	592.84
Fine Grading Worker Trips	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.26

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2012 - 12/31/2016 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

GHG QUANTIFICATION FROM PROJECT ELECTRICITY USAGE

Indirect Greenhouse Gas (GHG) Emissions from Project use of Electricity (Power Plant Emissions)

Typical SMUD Residential Customer Annual Household Energy Use:	9250	kWh/yr	per household	per SMAQMD, 2009
Typical SMUD Commercial Customer Annual Energy Use (per square foot):	17	kWh/yr	per square foot	per SMAQMD, 2009
School Annual Energy Use (per student):	941	kWh/yr	per student	DGS, 2007
Water Conveyance Electricity:	2328700	kWh/year		CEC, 2005
Wastewater Conveyance Electricity:	3558750	kWh/year		CEC, 2005
Residential Units:	2901			
Commercial Square Feet:	8868279			
Students:	8300	At all schools proposed		

Estimated Project Annual Electrical Use: 191,292,743 kWh (kilowatt hours)/yr
191,293 mWh (megawatt hours)/yr

Indirect GHG gases	Emission Factor lb/mWh	Annual Project Electricity mWh	Annual GHGs metric tons	CO2 Equivalent Factor	Annual CO2 Equivalent Emissions (metric tons)
Carbon Dioxide (CO2)	555.26	191,293	48,179	1	48179.4
Nitrous Oxide (N2O)	0.011	191,293	1.0	296	282.5
Methane (CH4)	0.029	191,293	2.5	23	57.9

Total Indirect GHG Emissions from Project Electricity Use= 48520 annual average

Notes and References:

Total Emissions from Indirect Electricity Use

CO2, CH4, and N2O Emission Factor Source: Local Government Operations Protocol (CARB et al., 2008)
Specifically Tables G.5 and G.6 (Appendix G)

lbs/metric ton = 2204.62

CALCULATION OF METHANE AND N2O EMISSIONS

Vehicles:

From URBEMIS 2007: 205,347.85 tons per year of CO2

Vehicle Emissions = 186288.43 metric tons per year of CO2

From Table 6 California Greenouse Gas Emisssions and Sink Summary:

in 2004 transportation fossil fuel combustion was	188	MMT CO2	
Mobile source combustion	0.6	MMT CH4	as eCO2
Mobile Source Combustion	11.8	MMT N2O	as eCO2

So for Mobile sources…	CH4 emission =	0.32	percent of CO2 Emissions	
	N2O emissions =	6.28	percent of CO2 Emissions	
	CH4 emissions =	596.12	metric tons/year	as eCO2
	N2O emissions =	11698.91	metric tons/year	as eCO2

Area Sources

From URBEMIS 2007: 15,537.34 tons per year of CO2

Natural Gas = 14095.237 metric tons per year of CO2

From Table 6 California Greenouse Gas Emisssions and Sink Summary:

in 2004 residential fossil fuel combustion was	27.9	MMT CO2	
Stationary source combustion	1.3	MMT CH4	as eCO2
Stationary Source Combustion	0.2	MMT N2O	as eCO2

So for Stationary sources…	CH4 emission =	4.66	percent of CO2 Emissions	
	N2O emissions =	0.72	percent of CO2 Emissions	
	CH4 emissions =	656.84	metric tons/year	as eCO2
	N2O emissions =	101.49	metric tons/year	as eCO2

Appendix C

Section 106 SHPO Concurrence

ESA

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

June 25, 2015 In Reply Refer To: COE_2014_1024_001

Kathleen A. Dadey
Chief, CA South Branch
Department of the Army Corps of Engineers
U.S. Army Engineer District, Sacramento
1325 J Street
Sacramento, CA 95814-2922

Re: Section 106 Consultation for the Mather Specific Plan Project (SPK-2002-00561)

Dear Ms. Dadey:

Thank you for your letter dated May 22, 2015, continuing consultation with regard to the proposed undertaking of the Mather Specific Plan Project (MSPP) in Sacramento County, California. The Army Corps of Engineers (COE) is continuing consultation for this undertaking pursuant to 36 CFR Part 800 (as amended 8-05-04) the regulations implementing Section 106 of the National Historic Preservation Act. Along with your consultation letter, you also provided the following document:

- *Addendum Cultural Resources Inventory and Evaluation Report for the Mather Specific Plan Project (Preserve Area), Sacramento County, California* (IFC International, March 2014)

The COE would issue a permit for the proposed undertaking's activities that fall under Section 404 of the Clean Water Act that will allow the County of Sacramento (Applicant) to develop a large-scale, mixed-use development of approximately 3,195 acres within the 5,749-acre Mather Specific Plan area within Sacramento County, California. The COE has determined that the Area of Potential Effects (APE) is the permit area, which is approximately 3,200 acres including 1,910 acres of development (including areas of rezoning, easements, construction, staging, and access), and a 1,272-acre preserve area.

The COE initiated consultation with my office in a letter dated October 21, 2014 requesting concurrence on their determination of No Historic Properties Affected for the proposed undertaking, and consulting on the possibility of negotiating a programmatic agreement (PA) to allow phased identification of cultural resources within the 1,272 acre preserve area of the MSPP. In my response letter dated December 18, 2014, I suggested that "to streamline Section 106 compliance for the entire proposed undertaking, and to negate the need for a Programmatic Agreement, the 1,272-acre preserve area be surveyed before a finding of effect be determined." The COE, in agreement with the suggested approach, has conducted

identification efforts within the preserve area and is now consulting with me and requesting my review and comment on their determinations of both eligibility and effect for the MSPP.

After reviewing your initial submission I had the following comments, which were conveyed to you in my letter of December 18, 2014:

- Pursuant to 36 CFR 800.4(c)(2), I concur with your determination that all 57 cultural resources identified within the 1,910-acre proposed development area (see attached Table 1) do not meet the National Register Criteria and shall be considered not eligible.

- Pursuant to 36 CFR 800.4(d)(1), I concur with your finding of no historic properties affected within the 1,910-acre proposed development area. However, before a finding of effect for the entire Mather Specific Plan Project can be issued, an attempt needs to be made to identify historic properties within the 1,272-acre preserve area.

Your letter dated May 22, 2015, and the attached cultural resources technical document provided evidence of the efforts made to identify historic properties within the 1,272-acre preserve area. The cultural resources identification effort included a records search, survey, and Native American coordination performed by ICF International (Consultant), and Native American consultation initiated by the COE. A records search completed in April 2014 indicated that no previously recorded cultural resources had been identified within the APE. Archaeological and architectural historical pedestrian surveys conducted in January 2015 identified 12 cultural resources within the 1,272-acrea preserve area of the APE. The Native American Heritage Commission (NAHC) was contacted by the consultant in early 2014 to request a search of the Sacred Lands File for known sacred sites in the project area and to request a list of Native American organizations and individuals who may have knowledge of cultural resources within the APE. NAHC records indicated that no previously identified sacred lands or areas of cultural importance are located within the APE. Likewise, Native American consultation initiated by the COE on April 3, 2015, has not resulted in the identification of historic properties.

The COE evaluated the 12 cultural resources identified within the Preserve Area and determined that they are ineligible for inclusion on the NRHP. The COE is requesting my review and comment on their determinations of both eligibility and effect for the MSPP. After reviewing your letters and supporting documentation, I have the following comments:

- Pursuant to 36 CFR 800.4(b), I find that the COE has made a reasonable and good faith effort to identify historic properties within the area of potential effects.

- Pursuant to 36 CFR 800.4(c)(2), I continue to concur with your determination that all 57 cultural resources identified within the 1,910-acre proposed development area (see attached Table 1) do not meet the National Register Criteria and shall be considered not eligible.

- Pursuant to 36 CFR 800.4(c)(2), I concur with your determination that all 12 cultural resources identified within the 1,272-acre proposed preserve area (see attached Table 2) do not meet the National Register Criteria and shall be considered not eligible.

- Pursuant to 36 CFR 800.4(d)(1), **I concur with your finding that no historic properties will be affected by issuing a permit for the MSPP**.

Thank you for seeking my comments and considering historic properties as part of your project planning. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you have any questions, please contact Patrick Riordan of my staff at (916) 445-7017 or Patrick.Riordan@parks.ca.gov or Ed Carroll at (916) 445-7006 or Ed.Carroll@parks.ca.gov.
Sincerely,

Carol Roland-Nawi, Ph.D.

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

Table 1. Cultural Resources Identified Within the 1,910-acre Mather Specific Plan Development Area

Site Name	Mather Building Number	Description	Proposed Eligibility	SHPO Concurrence
MAMP-03		Concrete foundations, well, and trash area	Not Eligible	X
7001		Shop	Not Eligible	X
7033		Shop	Not Eligible	X
MAMP-04		Trash pit	Not Eligible	X
4376		Aircraft maintenance hanger	Not Eligible	X
4442		Warehouse	Not Eligible	X
4468		Shop/offices	Not Eligible	X
MAMP-01F		Infrastructure at Mather AFB	Not Eligible	X
		Remains of Mather AFB Building (Missile Way)	Not Eligible	X
		SAC B-52 Readiness Area	Not Eligible	X
Building 7965		Picnic area restroom and gazebo	Not Eligible	X
MSP-03		Concrete observation bunker	Not Eligible	X
MSP-04		Munitions dump	Not Eligible	X
MSP-RAB-01		Cinderblock building	Not Eligible	X
MSP-06 and MSP-05		Isolated prehistoric lithic flakes	Not Eligible	X
		Five concrete culverts (Map# 18, #37, #38, #59, and #60)	Not Eligible	X
MSP-RSB-01	Building 10503	Small, abandoned, wooden-frame building	Not Eligible	X
MSP-RSB-02	Building 10550	Abandoned masonry vernacular building	Not Eligible	X
MSP-RSB-07	Building 10410	Masonry and corrugated vernacular building	Not Eligible	X
MSP-RSB-05	Building 10320	Abandoned masonry vernacular building	Not Eligible	X
MSP-RSB-06		Abandoned masonry vernacular building	Not Eligible	X
MSP-07		Foundation remains	Not Eligible	X
MSP-RSB-09	Building 10120	Search radar tower and dome	Not Eligible	X
	Building 10150	Concrete utilitarian dry storage facility	Not Eligible	X
MSP-08		Foundation remains from a radar dome	Not Eligible	X
	Building 10360	Abandoned masonry vernacular building	Not Eligible	X
MSP-RSB-03	Building 10450	Abandoned masonry vernacular building	Not Eligible	X

MSP-RSB-04	Building 10400	Masonry vernacular facility	Not Eligible	X
MSP-RSB-10	Building 10100	Abandoned masonry vernacular building	Not Eligible	X
P-34-1980		Two residential building foundations	Not Eligible	X
P-34-1981		Military warehouse	Not Eligible	X
MSP-02	Building 8505	Earthen-covered bunker	Not Eligible	X
	Buildings 18002 and 18003	Abandoned dog kennel and office	Not Eligible	X
	Building 18005	Abandoned water well	Not Eligible	X
		Remains of Mather AFB Building (Weapons Storage Area)	Not Eligible	X
MSP-MSB-01	Building 18021	Abandoned masonry vernacular guard station	Not Eligible	X
MSP-MSB-10	Building 18010	Abandoned masonry vernacular munitions maintenance building	Not Eligible	X
	Building 18011	Abandoned electrical generator station	Not Eligible	X
	Building 18018	Abandoned concrete-block missile assembly building with associated outbuilding	Not Eligible	X
MSP-MSB-09	Building 18015	Abandoned two-story masonry vernacular munitions inspection building	Not Eligible	X
MSP-MSB-08 and MSP-MSB-03	Buildings 18025 and 18060	Munitions storage buildings	Not Eligible	X
MSP-MSB-07, MSP-MSB-06, MSP-MSB-05, and MSP-MSB-04		Earthen-covered munitions storage bunkers	Not Eligible	X
	Buildings 18042, 18044, and 18046	Earthen-covered munitions storage bunkers	Not Eligible	X
MSP-MSB-02	Building 18070	Abandoned munitions maintenance building	Not Eligible	X
		Remains of Mather AFB Building (WSA-Explosives Facilities)	Not Eligible	X
	Building 18051	Fire team facility	Not Eligible	X
MSP-01		Two wooden fence posts	Not Eligible	X

Table 2. Cultural Resources Identified Within the 1,272-acre Mather Specific Plan Preserve Area

Site Name	Mather Building Number	Description	Proposed Eligibility	SHPO Concurrence
Map #1		Asphalt “Paratrooper Landing Pads”	Not Eligible	X
Map #2		Metal Structure at Woodring Drive	Not Eligible	X
Map #3		Foundation, Remains of Mather AFB Building (Excelsior Rd)	Not Eligible	X
Map #4		Foundation, Remains of Mather AFB Building (Kiefer Blvd)	Not Eligible	X
Map #5		Split Rail/Log Fence (Anders Drive)	Not Eligible	X
Map #6		Foundation, Remains of Mather AFB Building (Excelsior Rd)	Not Eligible	X
Map #7		Footings, Remains of Mather AFB Utility Structure (Aubergine Way)	Not Eligible	X
Map #8	Building 10090	Abandoned concrete masonry vernacular building	Not Eligible	X
Map #9		Board-formed Culvert (Excelsior Road)	Not Eligible	X
Map #10	Building 10060	Abandoned concrete masonry vernacular building	Not Eligible	X
Map #11		Foundation, Remains of Mather AFB Building (Park Rd)	Not Eligible	X
Map #12		Concrete embankment (Excelsior Rd)	Not Eligible	X